



# Oregon

Kate Brown, Governor

Oregon Transportation Commission

Office of the Director, MS 11

355 Capitol St NE

Salem, OR 97301-3871

**DATE:** December 6, 2019

**TO:** Oregon Transportation Commission

*[Original signature on file]*

**FROM:** Kristopher W. Strickler  
Director

**SUBJECT:** **Consent 10** – Amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to increase construction funding for the *Oregon 38: Umpqua River (Scottsburg) Bridge Replacement* project and cancel the construction phase of *Oregon 126: Willamette River Westbound Bridge painting* project.

**Requested Action:**

Approve amending the 2018-2021 Statewide Transportation Improvement Program (STIP) to increase construction funding for the *Oregon 38: Umpqua River (Scottsburg) Bridge Replacement* project in Region 3 by \$7,473,931 so that the contract can be awarded. This increase is due to higher than expected bids. The total estimated cost of the project will increase from \$40,398,000 to \$47,871,931.

Additional funding will come from (1) the *Oregon 126: Willamette River Westbound Bridge painting* project located in Springfield and (2) the existing House Bill 2017 (2017 Transportation Funding) Discretionary balance. The preliminary engineering and right-of-way phases of the Oregon 126 project will continue as programmed, but the construction phase will be cancelled until future funding becomes available.

**STIP Amendment Funding Summary**

Project	Current Funding	Proposed Funding
Oregon 38: Umpqua River (Scottsburg) Bridge replacement	\$40,398,000	\$47,871,931
Oregon 126: Willamette River WB Bridge painting	\$7,931,600	\$893,200
House Bill 2017 Discretionary Savings	\$560,739	\$0
State Bridge Program	\$0	\$125,208
<b>TOTAL</b>	<b>\$48,890,339</b>	<b>\$48,890,339</b>

**Project to be increase funding:**

<b>Oregon 38: Umpqua River (Scottsburg) Bridge Replacement (KN 18578)</b>			
Phase	Year	Cost	
		Current	Proposed
Preliminary Engineering	2015	\$718,000	\$718,000
Right of Way	2018	\$1,380,000	\$1,380,000
Utility Relocation	2018	\$50,000	\$50,000
Construction	2019	\$38,100,000	\$45,573,931
Other	2020	\$150,000	\$150,000
<b>TOTAL</b>		<b>\$40,398,000</b>	<b>\$47,871,931</b>

**Project to decrease funding:**

<b>Oregon 126: Willamette River WB Bridge Painting (KN 20433)</b>			
<b>Phase</b>	<b>Year</b>	<b>Cost</b>	
		<b>Current</b>	<b>Proposed</b>
Preliminary Engineering	2018	\$888,000	\$888,000
Right of Way	2021	\$5,200	\$5,200
Utility Relocation	N/A	\$0	\$0
Construction	2021	\$7,038,400	\$0
Other	N/A	\$0	\$0
<b>TOTAL</b>		<b>\$7,931,600</b>	<b>\$893,200</b>

**Background:**

The Scottsburg Bridge over the Umpqua River on Oregon 38 was built in 1929. This narrow steel bridge has two 12-foot lanes and no shoulders. The roadway is curved on both ends of the bridge and many trucks have impacted the structure as they transition from the curved roadway onto the bridge. The most severe damage has been repaired and the ends of the bridge have been reinforced to better withstand vehicle impacts. This 90-year-old bridge is in fair condition, but portions of the steel have significant corrosion and minor distortion due to numerous impacts.

In recent years, ODOT has focused on maintaining the existing Scottsburg Bridge and addressing problems with repairs as they arise. However, these repairs have not addressed the more fundamental problems with the bridge—narrow width, sharp approach curves, and low overhead clearance.

ODOT has designed a new replacement structure that will better accommodate modern traffic and will be more likely to withstand a large earthquake or other natural disaster. The multi-year *Oregon 38: Umpqua River (Scottsburg) Bridge* replacement project is funded by House Bill 2017. The project is the most significant bridge replacement in Region 3 since the \$40 million Interstate 5: South Umpqua River and CORP (Shady) OTIA III project was completed in 2011.

The Willamette River Westbound Bridge on Oregon 126 was also built in 1929. It is similar in design to the Scottsburg Bridge, but since it has a wider roadway and is located on a straight alignment, there are fewer issues with vehicle impacts. The paint that protects the steel from corrosion was installed in 1977 and is at the end of its service life. The upper portion of the steel has moss and grime buildup and the lower portion has debris buildup and active corrosion where the steel structural members are connected. There are minor areas of rust throughout the steel truss. Repairs to address corrosion were installed in 1974. Further repairs were completed in 2017 to allow the bridge to remain in service and avoid load posting. In response to the existing deficiencies, the *Oregon 126: Willamette River Westbound Bridge* painting project is programmed for construction in 2021.

**Cost Increase Analysis**

The final engineer's estimate (FEE) completed by Oregon Department of Transportation (ODOT) for the *Oregon 38: Umpqua River (Scottsburg) Bridge* project showed a construction estimate of \$38,127,059 when including biddable items, engineering, anticipated items, and contingency. This was

less than 0.1% higher than the programmed funding of \$38,100,000. The project was advertised on October 10, 2019.

Two bids were publically opened on November 21, 2019. There was a difference of \$13,729,785 between the two bidders. The low and responsive bid of \$39,455,231 (not including engineering, anticipated items, and contingency) was received from Hamilton Construction Company. After including construction engineering, anticipated items, and contingency costs, the total construction cost for the low bidder is estimated at \$45,573,931. This is \$7,473,931 more than currently programmed.

The low bidder was found to have submitted a responsive bid. The ODOT Project Controls Office conducted an independent economic cost analysis of the bid which evaluated individual bid items, the bidding competition, and quality of the bidding documents. This technical analysis supports awarding the contract. ODOT's standard of practice has been to award bids based on this technical review, per the Federal Highway Administration's (FHWA) competitive bid assessment guidelines. (See the following website: <https://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm>.)

ODOT staff also performed a detailed comparison of bid items to evaluate cost overruns. The table below shows the primary bid item increases from FEE to the low bid.

<b>Bid Item</b>	<b>FEE Estimate</b>	<b>Low Bidder</b>	<b>% Increase</b>
0230 - Temporary Work Bridges	\$1,721,000	\$3,900,000	227%
1090 - Shoring, Cribbing, and Cofferdams	\$293,500	\$900,000	307%
1130 - Furnish Drilling Equipment	\$100,000	\$750,000	750%
1230 - Deck Concrete, Class HPC4500	\$1,488,800	\$2,750,000	185%
1240 - General Structural Concrete, Class 4000	\$1,527,000	\$2,000,000	131%

Factors that likely contributed to the high bids include: (1) the additional cost and risk associated with the isolated location of the bridge; (2) the distance from the nearest source of concrete; (3) the coordination required for the concrete pours; and (4) the extensive form work that is required. There is also risk associated with the ground conditions for the portions of the foundation that are located in the river. There was a small bid pool on this project and the nature of the work is unusual since few major bridge replacements have been constructed in Oregon in recent years.

There were no apparent significant problems or anomalies with the bidding documents that would result in significant cost reductions. ODOT's proposes (subject to Commission approval) to award the contract to Hamilton Construction Company in December, 2019.

ODOT would fund the additional \$7,473,931 in construction costs for the *Oregon 38: Umpqua River (Scottsburg) Bridge replacement project* by:

- Cancelling the construction phase of the planned *Oregon 126: Willamette River Westbound Bridge painting project* and transferring (1) \$6,913,192 to the *Oregon 38: Umpqua River (Scottsburg) Bridge replacement project* and (2) \$125,208 back to the State Bridge Program.

Since the Oregon 126 bridge is not located in a severe coastal environment, a delay in removing and replacing the paint system should require only a minor amount of additional repairs to address corrosion damage to the steel structural members. The design phase for the project will continue as scheduled, and the construction can be added later as (1) funding becomes available or (2) as part of the selection process for a future STIP; and

- Applying \$560,739 in House Bill 2017 Discretionary funds (previous project savings at PS&E estimate) to the *Oregon 38: Umpqua River (Scottsburg) Bridge replacement project*.

Options:

With approval, ODOT will proceed to fund, award, and construct the project as described above.

Without approval, ODOT will not have sufficient funds to construct the *Oregon 38: Umpqua River (Scottsburg) Bridge* project. Redesigning and rebidding the project will likely result in higher prices due to project development costs and inflation.

Attachments:

- Attachment 1 – Location and Vicinity Maps

Copies to:

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