EARTHQUAKE READY BURNSIDE BRIDGE

Multnomah County is creating an earthquake-ready downtown river crossing

Multnomah County

BETTER – SAFER – CONNECTED February 2021

Technical Report Summary: Floodplain and River Hydraulics

This summarizes the key findings of the *Draft Environmental Impact Statement* detailed in the *EQRB Hydraulic Impacts Analysis Technical Report*.

Affected Environment

The study area for hydraulics extends along the Willamette River in line with the 500-year floodplain boundary, upstream to the Marquam Bridge and downstream to the Fremont Bridge.

Mitigation

There are limited opportunities to mitigate hydraulic impacts because the offsets need to occur at the same location as the bridge placement. Efforts to minimize hydraulic impacts would focus on limiting an increase in base flood elevation, reducing scour potential, and controlling sediment mobilization. This could accomplished by minimizing the number of in-water piers and streamlining the pier shape.

More information on this topic is available in the Draft Environmental Impact Statement and in the *EQRB Hydraulic Impacts Analysis Technical Report*.

More information

Help shape the future of the Burnside Bridge and visit **BurnsideBridge.org** for more information.

For more information, contact:

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For information about this project in other languages, please call 503-209-4111 or email burnsidebridge@multco.us.

Para obtener información sobre este proyecto en español, ruso u otros idomas, llame al 503-209-4111 o envíe un correo electronico a burnsidebridge@multco.us

Для получения информации об этом проекте на испанском, русском или других языках, свяжитесь с нами по телефону 503-209-4111 или по электронной почте: burnsidebridge@multco.us.

Impacts from the Bridge Alternatives

No-Build Alternative

Would not place additional structures in the channel and would not change the base flood elevation, floodplain width, or scour potential.

Impacts Common to all Build Alternatives

Each build alternative would place a bridge structure larger than the existing bridge in the floodway. As a result, the Project could increase the base flood elevation, with some alternatives having greater impacts than others.

Enhanced Seismic Retrofit Alternative

Similar amounts of surface area in the floodway as the existing bridge piers, but it would have significantly larger footprint lengths that extend along the direction of the flow that could increase local pier scour.

Replacement Alternative with Short-Span Approach

Would place a greater structure area in the floodway than the existing structure area. The Short-Span Alternative with a bascule lift would have the largest footprint in the main channel among all the replacement alternatives.

Replacement Alternative with Long-Span Approach

Would place fewer structures in the main river channel than the other build alternatives, but more than the existing bridge. Impacts from the Long-Span Alternative would vary by bridge type.

Replacement Alternative with Couch Extension

The split configuration of the Couch Extension Alternative results in a larger surface area and foundational footprint than the other replacement alternatives.

Impacts from Construction Traffic Management

Without a Temporary Bridge

The impacts would be the same as described above for the build alternatives.

With a Temporary Bridge

Would include all the construction impacts described for the build alternatives, plus the impacts for placement of an additional temporary detour bridge in the main channel of the river such as potentially increased base flood elevation.