



Multnomah County is creating an earthquake-ready downtown river crossing.

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October 18, 2021

Senior Agency Staff Group Meeting #16

Meeting information

Project: Earthquake Ready Burnside Bridge
Subject: Senior Agency Staff Group Meeting #16
Date: Monday, October 18, 2021
Time: 2:00 to 4:00 p.m.
Location: WebEx Virtual Meeting

Attendees: **SASG Members:**
Mark Lear, Portland Bureau of Transportation
Brian Monberg, City of Gresham
Malu Wilkinson, Metro
Steve Witter, TriMet
Sam Hunaidi, ODOT
Brett Horner, Portland Parks, and Recreation

Additional Invites:
Cary Stacey, MultCo
Patrick Sweeney, PBOT
Sharon Daleo, PBOT
Alex Oreschak, Oregon Metro
Mike Baker, DEA
Suzanne Carey, DEA

Project Team Members:
Megan Neill, MultCo
Mike Pullen, MultCo
Steve Drahota, HDR
Christina Tomaselli, HDR
Cassie Davis, CDavis Consulting
Jeff Heilman, Parametrix
Laura Peña, EnviroIssues

Apologies: Chris Deffebach (WashCo), Mike Bezner (City of Gresham), Mike Morrow (FHWA), Katie Morrison (Sen. Taylor's Office), Dan Bower (Streetcar), Greg Theisen (Port of Portland), Liz Smith Currie (MultCo), Chris Fick (MultCo), Jessica Berry (MultCo), Jeston Black (MultCo), Jon Henrichsen (MultCo), Emily Miletich (MultCo), Jamie Waltz (MultCo), Brendon Haggerty (PPR), Emily Cline (FHWA), Shaneka Owens (FHWA), Tate White (PPR)



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Summary Notes

WELCOME AND INTRODUCTIONS

Megan Neill, Multnomah County, welcomed the group and ran through the meeting agenda.

PROJECT UPDATE

Megan reminded the group that the last time they had met, Multnomah County leadership had asked the project team to explore ways to bring the project cost down. At this meeting, the team would run through the range of cost-saving measures being explored.

REVIEW SUITE OF RECOMMENDED PREFERRED ALTERNATIVE REFINEMENTS

Jeff Heilman, Parametrix, shared that the NEPA team has been reviewing the proposed cost-saving measures over the past several months as well as incorporating new information from regulatory agencies in preparation for publication of a Supplemental Draft Environmental Impact Statement (SDEIS) next year. The SDEIS would also include additional information on refining type selection.

Jeff reviewed how the Preferred Alternative (PA) is influenced by permitting. One of the key aspects of the EIS is to document how the PA would comply with several federal regulations. All of the alternatives presented in the DEIS comply with many of these regulations, such as the Endangered Species Act, Clean Water Act, and the Rivers and Harbors Act. However, recent input from National Parks Service cultural staff indicates that a cable-stayed or tied arch bridge in the west approach would likely cause an adverse effect on the Skidmore/Old Town Historic District which also has National Historic Landmark designation. Section 4(f) of the Federal Transportation Act Section 4(f) does not allow avoid adverse effects to these resources if there are reasonable alternatives that would avoid it. This is part of the regulatory rationale for why the girder type is likely to be recommended on the west side.



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Steve Drahota, HDR, shared a table of the refinements to the PA including reducing the overall width by removing a vehicle lane and adjusting the bike and pedestrian space. This would save the project about \$150 million.

Revised Preferred Alternative Refinements	Why?	Cost Savings
1. Bridge width: Reduced by approx. 26 feet	• Cost savings	\$140 – 165M
2. Vehicle Lanes: Reduced from 5 to 4 vehicular lanes (4 Lane configurations under consideration)	• Cost savings	
3. Bike / Ped Space: Reduced from 20' to between 14' - 17'	• Cost savings	
4. West Approach bridge type: Reduced to only Girder type	• Regulatory permitting • Cost savings	\$20 - 40M
5. Movable span bridge type: Select either Lift or Bascule type	• Regulatory permitting • Community preference • Cost savings	\$25 - 35M
6. East Span Bridge Type: Dismiss Truss (Tied Arch and Cable Stayed types advanced to Design Phase)	• Community preference	TBD
Eastside column location for Tied Arch: Advancing option west of NE 2 nd Avenue	• Regulatory permitting • Cost savings	\$0 - 5M
ADA Connections to Bridge: Advance stairs and elevators (dismiss Ramps)	• Cost savings	\$5 -10M

- Sam Hunaidi, ODOT, mentioned that he had heard some concerns about whether a narrower bridge with one less vehicle lane would be able to handle traffic levels.
 - Megan said they would go over more information related to this later in the presentation.
- Brett Horner, Portland Parks, and Recreation was curious about what the team heard from National Parks Service on the 4(f) resources and noted that Portland Parks and Recreation would want to weigh in as well.
 - Jeff confirmed that he was working to set up a meeting with them.

West Approach Bridge Type

Steve reviewed the range of bridge types for the west approach and presented the feedback given by the following groups around the following topics:

Permitting Requirements





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- **NPS** - Above deck elements in the West Approach create an Adverse Effect on the Skidmore/Old Town Historic Districts that is avoided with a girder concept. Since this is an avoidable impact, it isn't reasonable to choose another alternative.
- **Historic Landmarks Commission/Design Commission (DAR)** – Had similar comments to NPS and expressed a preference for the “observable asymmetry” due to distinct differences in urban landscape on the west and east sides.

Cost – The modified girder option is \$20-40 million less expensive than any above deck option.

Community Preferences – Survey results from early 2021 showed that respondents were generally not in favor of the girder option. This was, in part, because most respondents also preferred higher vertical clearance in Waterfront Park. Since the project team has redesigned the support column placements of the girder to increase the vertical clearance, some of these concerns have been mitigated.

UDAWG – Didn't vocalize any opposition to the girder option and also has a preference for asymmetry.

Multnomah County – Recommends the girder option for the west approach.

Steve added that more work would be done to refine the aesthetic design during the next phase of the project beyond what is shown in the current renderings.

- Brett asked how the refined girder design compared to the existing vertical clearance over Waterfront Park.
 - Steve answered that the current clearance is around 22 feet under the section of the bridge closer to the river. The refined girder has a clearance of about 23 feet in that area.

Movable Span

Steve showed all of the existing bridges in downtown Portland, noting the diversity of bridge and span types. He reminded the group of the two movable span options, lift or bascule, and presented the feedback given by the following groups around the following topics:

Permitting Requirements

- **NPS** - Recommends the bascule option to complement the Skidmore/Old Town Historic District.
- **Historic Landmarks Commission/Design Commission (DAR)** – Believes the bascule movable bridge option minimizes impacts to views and expressed preference for the “observable asymmetry”. Also prefers the cable-stayed option for the east approach because it has better visibility and complements the east side architecture.

Cost – Bascule is \$25-35 million less expensive than the lift option.

Community Preferences – Survey results from early 2021 were largely in favor of the bascule option.



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UDAWG – No members are in support of the lift option because the lift towers are too large for the scale of the river.

Multnomah County – Recommends advancing *only* the bascule option.

Steve shared some renderings of what the two movable bridge options would look like looking northeast from Waterfront Park in combination with the two options still under consideration for the east span (see slides 25-28). The decision between a tied arch or cable-stayed structure on the east side will be deferred until final design.

- Patrick Sweeney, PBOT, asked why the lift option is more expensive than a bascule.
 - Steve shared that it was because the lift option has more mass associated with it which calls for more materials and operating machinery than the bascule.

Bridge Width

TRAFFIC LANE REDUCTION

Steve reviewed the existing bridge's cross-section, including the current widths of each lane for context. He shared that a narrower bridge would mean reducing vehicle lanes from five lanes to four and slightly reducing the plans for the bike and pedestrian space from the Draft EIS. This would save the project \$140-\$165 million.

The project team has studied some variations of the reduced bridge width that would slightly decrease the width of each vehicle lane and reallocate that width to the bike and pedestrian lanes. That variation would allow between 14-17 feet for bikes and pedestrians on either side of the bridge with 44-50 feet for vehicle lanes in the center. These variations will be included in the SDEIS.

Steve shared the four traffic configuration options for the 4-lane bridge (see slide 34) and presented the results of traffic modeling for each option.

- **Option 1** includes two westbound and two eastbound vehicle lanes. One of the eastbound lanes would be a bus-only lane.

This option meets the needs for morning rush hour traffic operations, morning and evening transit needs, emergency service, and complies with the City policy of an eastbound bus lane. However, this option may be fatally flawed by significant congestion and queuing during the evening rush hour out of downtown.

- **Option 2** has an eastbound focus. It would have one westbound lane and three eastbound lanes. One of the eastbound lanes would be a bus-only lane. This is the same configuration that was temporarily used during the recent two-year Burnside Bridge maintenance project, with the addition of a dedicated bus-only eastbound lane. This option is feasible because there is much

more traffic going eastbound in the evening than there is going westbound in the morning. Traffic volumes over the bridge are not projected to increase very much over the next 20 years.

This option meets the needs for evening rush hour traffic operations, evening transit needs, emergency services and complies with the City policy of an eastbound bus lane. This option may lead to some congestion during the morning westbound rush hour for cars and transit.

- **Option 3** would have one westbound lane, two eastbound lanes, and a reversible lane in-between that would allow for an additional lane of traffic in the appropriate direction during peak hours. One of the dedicated eastbound lanes would be a bus-only lane. Steve said this option would be ideal so long as the engineering and operations can be worked out. The biggest challenge is making a reversible lane operationally safe so it is clear which way traffic is moving at a particular time without adding permanent barriers that could interfere with emergency vehicles in the event of an earthquake. The team is currently studying these issues.

This option would work well for morning and evening rush hours in both directions for cars and transit, emergency services, and complies with the City policy of an eastbound bus-only lane. There is the possibility of some moderate eastbound traffic congestion in the mornings.

- **Option 4** would have two westbound lanes and two eastbound lanes without a bus-only lane. Instead of one eastbound bus-only lane, there would be a queue jump for buses at the traffic light at each end of the bridge. This would allow the buses exiting the bridge to have priority over vehicle traffic without taking up an entire dedicated lane.

This option is flawed due to transit reliability. Vehicle backups would likely exceed the length of the bus queue lane and render the queue jump ineffective. It would cost an additional \$25-\$50 million to extend the queue lanes far enough to make them effective. It is also not compliant with the City's Rose Lane Policy and could present delays for emergency services.

Steve paused for questions.

- Sam said the information provided was very informative but was unsure if the public would understand these details. He said that it would be important to make the reasoning behind removing a lane clear.
 - Megan agreed with Sam and said that the public outreach in November would try to make this clear. She said that the team anticipates that some people will struggle with the concept of removing a lane especially if this will be the only remaining bridge after an earthquake.
- Patrick asked when they would know more about the specific impacts of the reversible lane option for westbound traffic in the afternoon.
 - Steve said this would be included in the transportation technical report for the SDEIS. A draft will likely be ready for review for some folks sometime in November. It'll be available for the public in April of 2022.



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- Mark Lear, PBOT, asked about the operations of a reversible lane. For example, how much time it would take to switch over, cost, and safety.

Steve said that the project team was in the process of researching Mark's question. He shared some examples of existing reversible lanes including one in Arlington, Texas that uses overhead Intelligent Transportation Signals (ITS). The team is also reaching out to jurisdictions across the country for examples of entry treatments such as gates.

Because the speed limit on the bridge will be 25 mph, it is low enough where physical barriers separating the direction of traffic are not needed. Operations perform fairly well, however, there is anecdotal evidence of an increase in crash rates with reversible lanes. These anecdotes are from areas where there are left and right-hand turning lanes in the same vicinity of the reversible lane. This would not be the case for the Burnside Bridge which helps to simplify the model. The team is looking into how to make a fair comparison between the two scenarios.

Steve showed diagrams of the traffic lanes on the west and east sides of the bridge during morning and evening hours (see slides 40-43) and pointed out where gates could be installed to prevent traffic from entering the reversible lane from the wrong direction during off-hours. Conceptual locations for gates could be in the left-hand lane of the Couch Street S-curve on the east side and between 2nd and 3rd Avenue on the west side.

- Patrick emphasized that reversible lanes on surface streets tend to be more dangerous than on bridges.
 - Steve agreed and explained that bridges are safer because they don't have any additional traffic inputs of people turning on or off mid-span. This makes a bridge a more favorable location for a reversible lane. The team is focusing on how to make the transition into the reversible lane at either end safe and clear.
- Patrick shared that PBOT has concerns about extending the operational changes to the roadway beyond the bridge. A reversible lane would require restriping and adding barriers for the extra block past 2nd Ave on the west side.
 - Steve noted PBOT's preference to have the gates and end treatments placed east of 2nd Ave. and said that the team would continue studying this option.
- Patrick also asked about the westbound bus stop on the west side. He noted that it may need to move to the west side of 2nd Ave. He also said that the diagram shown does not include the current bus dwell area near the University of Oregon building.
 - Steve added context that when the current bridge was built, it included more lanes than there are today. When those lanes were reduced, it created the space that TriMet currently uses as a dwell area. The refined PA would remove that space. Steve said that the team is still learning about what the bus needs are in the area.

- Megan added that the County is open to including width for dwell space on the bridge ends.
- Sharon Daleo, PBOT, commented that even if the bus stop moves, there should still be dwell space where it currently is so there's not any bus and bike conflict.
 - Megan agreed. She said that the dwell space would not conflict with cyclists.
- Alex Oreschak, Metro, thanked the team for putting the graphics together. He seconded Patrick's comments about traffic impacts from the reversible lane on the west side and said that he looked forward to hearing more information about operations.
- Alex also asked if the County is still considering a wider bridge to allow for five vehicle lanes.
 - Megan said they were still considering some narrow five-lane options in the event that the project is able to find additional funding.
 - Jeff added that from a NEPA perspective, a narrow 5-lane option would likely operate very similarly to the option presented in the DEIS. Even if additional funding is found after the Record of Decision in the EIS process, the revaluation would probably be fairly straightforward because there wouldn't be new impacts that aren't already covered in the DEIS or the upcoming SDEIS.
 - Alex responded that Metro is interested in this option for a possible westbound bus-only lane in the future.
- Malu Wilkinson, Metro, shared that it's exciting to have a possibility of a reversible lane and that they could serve the region in other areas as well.

East Approach Support Location

Steve reviewed the refinement to relocate the eastside approach columns further to the east, either within or adjacent to the Burnside Skatepark, in order to avoid some of the unstable soils near the river. This would move the columns from the geotechnical hazard zone (or minimize work in the hazard zone) and reduce the need for expensive groundwork. This option only applies to a tied arch bridge type, not the cable-stayed option.

The project team looked into moving the columns completely outside of the hazard zone to the east side of 2nd Ave. just outside of the Skatepark. However, this option would have required rerouting the sidewalk and closing 2nd Ave. for a period of time. This option was dismissed because of adverse effects to the Pacific Coast Fruit Company and residents of The Yard.

The team has decided to move ahead with moving the support columns for a Tied Arch bridge just west of 2nd Ave. which will result in a savings of about \$5 million.

- Brett asked if this option still includes an additional column in the Skatepark and what the vertical clearance would be.



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- Steve confirmed that it does not require additional columns in the Skatepark and that the vertical clearance would be similar to current conditions.

CONNECTIONS TO SKIDMORE MAX STATION AND EASTBANK ESPLANADE

The County has committed to funding an option to connect the bridge to the Skidmore MAX Station and the Eastbank Esplanade that meets ADA requirements. There were many options studied including switchback ramps, on-bridge signalized crossings, elevators & stairs, sidewalk improvements, or a combination of those options. The County is proposing to advance the concept of stairs and elevators on the east and west sides of the bridge. The County is also proposing making ADA upgrades to sidewalks along the routes from the bridge to the MAX and bus stops so that users can choose to walk around the bridge instead of using stairs or elevators.

Steve reviewed several ramp options that the County had looked into, including a switchback ramp with a more compact footprint as well as a larger ramp that would extend further out over the river. In general, ramps are more expensive than stairs and elevators, but the County is open to ramp options if funding from other agencies can be identified.

Steve shared that TriMet has alerted the project team to two new considerations: a potential bus stop relocation from 1st Ave. to west of 2nd Ave. on the west side of the bridge and closing the Skidmore MAX station in 2024 after studying the ridership patterns. The project team will include assumptions for the stairs and elevators in the SDEIS materials but will remain flexible to other options as more information becomes available.

Megan recognized that there were mixed reactions to stairs and elevators. She emphasized that there will be more conversations with agency partners and stakeholders in the design phase and the County will remain open to further refinements.

- Brett asked if NPS had any recommendations on the connections from a 4(f) standpoint.
 - Jeff responded that NPS' only jurisdiction is the Historic District. He did share that the stairs and elevator option would cause the least harm from a NEPA perspective because it requires a shorter closure of the Eastbank Esplanade and takes up less space. He noted that the project would reach out to PP&R before the SDEIS is published.
- Patrick asked if there would be more renderings of the stairs and elevators available in the SDEIS.
 - Steve said that the current plan is not to include more renderings, but there will be a plan view.



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- Jeff added that the text of the SDEIS will include more information about the range of ramp options and impacts. This will keep options open for future discussions about ramps.
 - Brett added that additional funding could come from a variety of sources, including non-city sources.
- Brett asked who would maintain and operate the bridge.
 - Megan responded that the County would.
- Brett asked if there was additional information available about the expected closures of the Eastbank Esplanade.
 - Steve said that the closures would be intermittent over an 18-month period. Construction of a ramp would increase that timeframe based on placement. The specific timeframes, including time of year, will be determined during the final design phase once the contractor is on board.

WORKPLAN UPDATE AND NEXT STEPS

Megan shared an update of next steps and a general timeline for the next year:

- November / December 2021 –Community Engagement
- January 2022 –Policy Group Approval
- February 2022 –Mult Co Board of County Commissioners Adoption of Revised Preferred Alt
- March / April 2022 -SDEIS Publication (45-day public comment period)
- April 2022 -City Council Adoption for Metro RTP Update
- August 2022 -Metro RTP Adoption
- September 2022 –FEIS / ROD
- Q3 2022 –Final Design Initiated

The next SASG meeting will be held in January 2022 prior to the Policy Group meeting.

Megan explained that the SDEIS in 2022 will have a similar format to the DEIS but with simplified content. The SDEIS will focus on impacts from the refinements that differ from the DEIS Long-span, compare and contrast with the DEIS Long-span and No-Build options, and include updates on any federal regulatory progress. Once the SDEIS is published, there will be another 45-day public comment period that will include an online open house, briefings, in-person hearing by appointment, and several other outreach methods.

ADJOURN

Megan thanked attendees for their attendance and adjourned the meeting.



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SUMMARY OF ALL ACTION ITEMS:

- None