Senior Agency Staff Group Meeting

Department of Community Services Transportation Division

January 18, 2018
1. Introductions
2. Project Update
3. Screening Results
4. Options Evaluation
5. Schedule Review
6. Closing Remarks
2. Project Update

Key Activities

- Board of County Commissioners
- Public
- Stakeholders (Including the Stakeholder Representative Group [SRG])
- Technical Community
- Project Team
- Senior Agency Staff
- Policy Group
2. Project Update

Key Activities – Stakeholder Briefings

Project

Public

Stakeholders
Including the Stakeholder Representative Group (SRG)

Technical Community

[Logos of various organizations associated with the project]
2. Project Update

Key Activities – Public Outreach

- Red Cross / KGW Keeping you Safe – “Prepare Out Loud”
- Podcast – Project Spotlight
- New Factsheet
- Portland Saturday Market
- Online Briefing
2. Project Update

Key Activities – Public Outreach

Red Cross / KGW Keeping You Safe

“Prepare Out Loud”

September 2017
2. Project Update

Key Activities – Public Outreach

Multnomah County Podcasts – Project Spotlight

December 2017
2. Project Update

Key Activities – Public Outreach

New Factsheet

Multnomah County is working to create an earthquake-safe Willamette River crossing.

WHAT IS THE PLAN?
Since 1926, the Burnside Bridge has served us well. To take us across the river for another 100 years, it needs an upgrade. Over the next several years, Multnomah County will evaluate options for creating a resilient Burnside crossing that will withstand a major earthquake.

The first step is to narrow a long list of over 100 options through a screening process to arrive at a short list of recommended options to be evaluated in more detail in a later phase.

HOW ARE THE OPTIONS BEING NARROWED?
Multnomah County has considered more than 100 river crossing options on the Burnside Bridge route. These options are undergoing an intensive screening process to make sure they meet criteria for a reliable river crossing after a major earthquake.

1. Each option was screened against the requirements of community resiliency, emergency management, and transportation infrastructure.
2. Each remaining option was evaluated on how well it functioned under emergency and business-as-usual conditions.
3. Each remaining option was weights further evaluated for its performance on key criteria.

We are here.

EARTHQUAKE RESILIENCY
Support resilience and rapid emergency response after an earthquake.

NON-MOTORIZED TRANSPORTATION
Support areas and facilities that provide pedestrian and bicycle access.

TRANSPORTATION CONNECTIVITY
Support diverse transportation options for all users.

EQUITY
Indigenous achievements and other groups may be impacted by the bridge design.

BUILD ENVIRONMENT
Respect and protect the environment and minimize impacts.

FINANCIAL STEWARDSHIP
Gray, public funds are invested wisely.

STOPPING AT A RIVER CROSSING
An earthquake-safe crossing is in place, so we must work tools and options to consider.

We are here.

REPORT FALL 2016
A report of the final report will be presented to the community for final review.

The Multnomah County Burnside Bridge project is underway. The Burnside Bridge project team will continue to work with the community to develop a future cross.

We want to hear from you.

Multnomah County is working with regional partners and the community to narrow crossing options with this planning process. Tell us what we should consider as we plan for an earthquake-resilient crossing.

We want to hear from you.

Multnomah County is working with regional partners and the community to narrow crossing options with this planning process. Tell us what we should consider as we plan for an earthquake-resilient crossing.

Find out more about these opportunities at BurnsideBridge.org
2. Project Update

Key Activities – Public Outreach

Portland Saturday Market

December 2017
2. Project Update

Key Activities – Public Outreach

Online Briefing

We are making progress towards a resilient Burnside crossing.

Multnomah County is studying options to make the Burnside Bridge capable of withstanding a major earthquake. We have been evaluating a wide range of options and want to catch you up on what we are learning, what we have heard and what’s next for this study.

Then we want to hear what you think!

Watch the overview video to learn more about Earthquake Ready Burnside Bridge.

January 2018
2. Project Update

Discussion Break
3. Screening Results

SCREENING STEPS

1

- Seismic Resiliency
- Emergency Response
- Compatibility with major infrastructure

OPTION GROUPS

No Build
Maintain existing bridge as-is.

Seismic Retrofit
Upgrade the existing bridge.

Enhanced Seismic Retrofit
Retrofit most of the existing bridge, but replace the spans over I-5 and the railroad.

Replacement
Build a new crossing such as a high fixed bridge, low movable bridge, twin bridges or a tunnel.

Enhance Another Bridge
Retrofit or replace a different bridge across the Willamette River.
3. Screening Results

SCREENING STEPS

1. Each option was screened against the core requirements of seismic resiliency, emergency response, and compatibility with major infrastructure.

2. Each remaining option was evaluated on how well it functioned immediately after an earthquake in addition to everyday use.

OPTION GROUPS

No Build
Maintain existing bridge as-is. These options are not seismically resilient or cannot support emergency response.

Seismic Retrofit
Upgrade the existing bridge. A full seismic retrofit of the bridge is not feasible due to significant impacts to I-5 during construction.

Enhanced Seismic Retrofit
Retrofit most of the existing bridge, but replace the spans over I-5 and the railroad.

Replacement
Build a new crossing such as a high fixed bridge, low movable bridge, twin bridges or a tunnel.

Enhance Another Bridge
Retrofit or replace a different bridge across the Willamette River. Other bridges do not provide a rapid and reliable connection to the Burnside lifeline route after an earthquake.
3. Screening Results

Sampling of Options to be Evaluated

ENHANCED SEISMIC RETROFIT

Photos of sections of bridge next to I-5
3. Screening Results

Sampling of Options to be Evaluated

REPLACEMENT – Movable Bridge
3. Screening Results

Sampling of Options to be Evaluated

REPLACEMENT – Twin Movable Bridges

Mode Separated

Multi-Modal
3. Screening Results

Sampling of Options to be Evaluated

REPLACEMENT – 97’ High

Fixed Bridge: Couplet Alignment

Fixed Bridge: Burnside St Alignment
3. Screening Results

Sampling of Options to be Evaluated

TUNNEL – Multi-Modal

Stacked no Bike/Ped
No W/S Transit Only Lane
54' Int. Dia
60' Ext. Dia
6% slope on West Side Requires DE Approval

Seattle Alaska Way Tunnel
- 2 miles
- 57.5 Diameter (Largest in the world)
- Estimated $4.75 billion

Proposed Tunnel Section
- 2.2 miles
- 60' Diameter (15% larger area than Alaska Way)

MODE SEPARATED TUNNEL
# 4. Options Evaluation

## What’s next?

### SCREENING STEPS

**OPTION GROUPS**

<table>
<thead>
<tr>
<th>Option Group</th>
<th>Seismic Resiliency</th>
<th>Emergency Response</th>
<th>Compatibility with Major Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Build</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seismic Retrofit</td>
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<tr>
<td>Enhanced Seismic Retrofit</td>
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<tr>
<td>Replacement</td>
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</tr>
<tr>
<td>Enhance Another Bridge</td>
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</tbody>
</table>

### Option Groups

- **No Build**: Maintain existing bridge as-is.
- **Seismic Retrofit**: Upgrade the existing bridge.
- **Enhanced Seismic Retrofit**: Retrofit most of the existing bridge, but replace the spans over I-5 and the railroad.
- **Replacement**: Build a new crossing such as a high fixed bridge, low movable bridge, twin bridges or a tunnel.
- **Enhance Another Bridge**: Retrofit or replace a different bridge across the Willamette River.

### 1. Evaluation Criteria

- Seismic Resiliency
- Emergency Response
- Compatibility with major infrastructure

### 2. Functionality Criteria

- Function immediately after an earthquake
- Everyday use

### 3. Performance Evaluation

Further evaluated for its performance in six key categories:

- **Seismic Resiliency**
- **Non-Motorized Transportation**
- **Transportation Connectivity**
- **Equity**
- **Built Environment**
- **Financial Stewardship**

### FINAL REPORT

**FALL 2018**

**We are here.**

**REMAINING OPTIONS**
4. Options Evaluation

3

Further evaluated for its performance in six key categories:

- SEISMIC RESILIENCY
- NON-MOTORIZED TRANSPORTATION
- TRANSPORTATION CONNECTIVITY
- EQUITY
- BUILT ENVIRONMENT
- FINANCIAL STEWARDSHIP
4. Options Evaluation

Guiding Principles

- Measurable at the level of design and information that will be available in this step
- Help differentiate alternatives
- Reflect input received to date
- Narrow range of crossing options to be carried forward into an environmental impact statement
4. Options Evaluation

Proposed Evaluation Criteria

Criteria 1: Seismic Resiliency

*Support reliable and rapid emergency response after an earthquake*
4. Options Evaluation

Proposed Evaluation Criteria

Criteria 2: Non-motorized Transportation

Support access and safety for bikes, pedestrians and people with disabilities
4. Options Evaluation

Proposed Evaluation Criteria

Criteria 3: Transportation System

Support street system integration and function (cars, freight, transit, bikes, peds, ADA)
4. Options Evaluation

Proposed Evaluation Criteria

Criteria 4: Equity

*Minimize adverse impacts to communities of concern and promote transportation equity*
4. Options Evaluation

Proposed Evaluation Criteria

Criteria 5: Built Environment

*Promote land use compatibility and minimize impacts to parks and historic resources*
4. Options Evaluation

Proposed Evaluation Criteria

Criteria 6: Financial Stewardship

*Be responsible stewards of public funds*
4. Options Evaluation

Proposed Evaluation Criteria

Discussion Break
5. Schedule Review

We are here

*Potential funding for 'Environmental Review' phase
6. Closing Remarks

Thank You