SOUTHWEST CORRIDOR
LIGHT RAIL PROJECT

Steering Committee
April 8, 2019
TIMELINE

---|---|---|---|---|---|---|---|---|---|---|---
Planning | Design | Construction | Environmental Review | Testing and training

- Draft conceptual design report: August 2019
- Final conceptual design: March 2020
- Potential regional funding vote: November 2020
- Federal funding: September 2022
- Service begins: September 2027
TIMELINE


Planning | Design | Environmental Review | Construction

2019:
Draft conceptual design report: August 2019
Final conceptual design: March 2020

2020:
Potential regional funding vote: November 2020

2021:
Federal funding: September 2022

2027:
Service begins: September 2027

Testing and training
# Project Funding Sources

<table>
<thead>
<tr>
<th>Revenue Sources</th>
<th>(in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal New Starts Funds</td>
<td>$1,250</td>
</tr>
<tr>
<td>Regional Funding Measure</td>
<td>$ 850</td>
</tr>
<tr>
<td>Local, State, Regional Partner Funds (public and private)</td>
<td>$ 425</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$2,525</strong></td>
</tr>
</tbody>
</table>
### Project Scope (Cost) Target

<table>
<thead>
<tr>
<th>Revenue Sources</th>
<th>(in millions)</th>
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<td>$ 425</td>
</tr>
<tr>
<td>(less interim finance)</td>
<td>$ 150</td>
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<tr>
<td><strong>Project Scope Target (YOE)</strong></td>
<td><strong>$2,375</strong></td>
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</tbody>
</table>
Locally Preferred Alternative

Project Scope
Estimated $2.733

• 12 mile corridor to Bridgeport
• Rebuilds existing infrastructure (roadway, structures)
• Connections to Marquam Hill and PCC campuses
• Stations and Park-and-Rides to access regional system
• Includes design mitigations (grade separations)
## Target Cost Reduction

<table>
<thead>
<tr>
<th></th>
<th>(in millions)</th>
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<tbody>
<tr>
<td>Project Scope Target</td>
<td>$2,375</td>
</tr>
<tr>
<td>LPA Cost Estimate</td>
<td>$2,733</td>
</tr>
<tr>
<td>Target Cost Reduction</td>
<td>$(358)</td>
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</tbody>
</table>
## SWC Cost Elements

_Note: Assume 3.5% escalation_

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Project Scope Target (YOE)</td>
<td>2.375B</td>
</tr>
<tr>
<td>2016 Estimate (YOE)</td>
<td>2.733B</td>
</tr>
<tr>
<td><strong>Total Cost/Scope Gap:</strong></td>
<td>2.733B/(-0.358M)</td>
</tr>
</tbody>
</table>

### To Reach Bridgeport:
- Solve Viaducts Funding: **D**
- Reduce High Value ROW Costs: **E**
- Reduce O&M Facility: **F**
- Reduce Bonita to Bridgeport Costs: **H** or **I**
- Continue to Balance Cost Pressures: **A thru C**

### Cost Elements:

- **A** Downtown Tie-in:
  - + $10-40M

- **B** Marquam Hill Connector:
  - + $0-20M

- **C** Consolidate Station(s):
  - - $3.4-7.5M

- **D** Viaducts:
  - - $200M

- **E** High Value ROW:
  - - $15-50M

- **F** B2 - Short Span:
  - - $0-7.5M

- **G** O&M Facility:
  - - $15-50M

- **H** 74th Alignment:
  - - $0-51M

- **I** Upper Boones At-Grade:
  - - $25M

*Updated: 04.02.2019*
SWC Cost Elements
Note: Assume 3.5% escalation

Project Scope Target (YOE): 2.375B
2016 Estimate (YOE): 2.733B

To Reach Bridgeport:
- Solve Viaducts Funding:
- Reduce High Value ROW Costs:
- Reduce O&M Facility:
- Reduce Bonita to Bridgeport Costs:
- Continue to Balance Cost Pressures:

Total Cost/Scope Gap: 2.733B (-358M)

A. Downtown Tie-in + $10-40M
B. Marquam Hill Connector + $0-20M
C. Consolidate Station(s) - $3.4-7.5M
D. Viaducts - $200M
E. High Value ROW - $15.50M
F. B2 - Short Span - $0-7.5M
G. O&M Facility - $15-50M
H. 74th Alignment - $0-51M
I. Upper Boones At-Grade - $55M

Updated: 04.02.2019
**SWC Cost Elements**

*Note: Assume 3.5% escalation*

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<tr>
<td><strong>2016 Estimate (YOE)</strong></td>
<td>2.373B</td>
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<tr>
<td><strong>Total Cost (Scope Gap):</strong></td>
<td>2.373B (1.358M)</td>
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<td><strong>To Reach Bridgeport:</strong></td>
<td>2.373B (1.358M)</td>
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<tr>
<td><strong>Reduce High Value ROW Costs:</strong></td>
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<tr>
<td><strong>Reduce O&amp;M Facility:</strong></td>
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<td><strong>Reduce Bonita to Bridgeport Costs:</strong></td>
<td>G</td>
<td></td>
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<td><strong>Continue to Balance Cost Pressures:</strong></td>
<td>H or I</td>
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</tr>
<tr>
<td><strong>Downtown Tie-in</strong></td>
<td>+ $70-40M</td>
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<tr>
<td><strong>Marquam Hill Connector</strong></td>
<td>+ $0-20M</td>
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<tr>
<td><strong>Consolidate Station(s)</strong></td>
<td>- $3.4-7.5M</td>
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<tr>
<td><strong>Viaducts</strong></td>
<td>- $200M</td>
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<tr>
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<td>- $15-50M</td>
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<tr>
<td><strong>O&amp;M Facility</strong></td>
<td>- $15-50M</td>
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<tr>
<td><strong>74th Alignment</strong></td>
<td>- $0-51M</td>
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<tr>
<td><strong>Upper Boones At-Grade</strong></td>
<td>- $55M</td>
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Updated: 04.02.2019
Next Steps

• Update Alignment Cost Estimate (Summer 2019)
  • Incorporate Steering Committee Decisions (through May)
  • Working Assumptions for FEIS
  • Basis for Partner Funding
Bonita to Bridgeport
Data
Traffic
Travel time
Walksheds
Displacements
Natural resources
Constructability
Cost
LPA 2018 (IRP in DEIS)
LPA Elevated

2. LPA ELEVATED

Plan View

LPA Elevated Route Cross Section

Private Property

Railroad ROW 60'

Private Property

Existing Building

Property Line

Existing Building

Property Line

LRT ROW 34'

12'
74th Ave

Plan View

74th Ave, Route Cross Section

Private Property (E) 45' 74th Avenue ROW

Private Property (E) 56' WES Train ROW

ODOT ROW 30'

New 74th Avenue ROW 56'

LRT ROW 28'

SW Corridor
74th Ave, refined
East of WES
LPA at-grade, refined
Bridgeport Station

DEIS

B

C

D

E

F
### Comparison of options

**Bonita to Bridgeport Options Comparison**

**DRAFT 4/19**

<table>
<thead>
<tr>
<th></th>
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<tr>
<td><strong>Traffic</strong></td>
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<tr>
<td>At-grade crossings</td>
<td>72nd Ave Upper Boones, with queuing concern</td>
<td></td>
<td>72nd Ave Upper Boones, with queuing concern</td>
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<tr>
<td>Bridgeport Park &amp; Ride</td>
<td>South of Lower Boones</td>
<td>South of Lower Boones</td>
<td>South of Lower Boones</td>
<td>North of Lower Boones</td>
<td>North of Lower Boones</td>
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<tr>
<td><strong>Light Rail Performance</strong></td>
<td></td>
<td></td>
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<tr>
<td>Travel time difference from LPA</td>
<td>N/A</td>
<td>30 seconds faster</td>
<td>30 seconds slower</td>
<td>60 seconds faster</td>
<td>60 seconds faster</td>
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<tr>
<td>On-time performance</td>
<td>Risk of delay</td>
<td>Risk of delay</td>
<td>Risk of delay</td>
<td>Risk of delay</td>
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<td><strong>Property Acquisitions</strong></td>
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<td>Full tax lot parcels</td>
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<td>Partial acquisitions</td>
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<td><strong>Relocations</strong></td>
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<td>Businesses</td>
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<td>Employees</td>
<td>320</td>
<td>270</td>
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<td>520</td>
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<td><strong>Environmental impacts</strong></td>
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<td>Acres of floodplain</td>
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<td>0.00</td>
<td>0.80</td>
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<td>Acres of wetland</td>
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<td><strong>Land Use, Trails</strong></td>
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<td>Regional trail opportunity</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>On-street</td>
<td>On-street</td>
<td>–</td>
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<tr>
<td><strong>Risks</strong></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Railroad interface</td>
<td>Union Pacific, no existing agreement</td>
<td>Union Pacific, no existing agreement</td>
<td>Union Pacific, no existing agreement</td>
<td>Outside railroad right-of-way</td>
<td>Portland &amp; Western (WES), shared use agreement</td>
<td>Portland &amp; Western (WES), shared use agreement</td>
</tr>
<tr>
<td>Utilities</td>
<td>–</td>
<td>–</td>
<td>High risk</td>
<td>Higher risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>(-$55m)</td>
<td>–</td>
<td>(-$55m)</td>
<td>(-$31m)*</td>
<td>(+$77m)*</td>
<td>(+$12.5m)*</td>
</tr>
</tbody>
</table>

*Risk of additional environmental study
Community Engagement

• Letters (January); meetings, calls, correspondence (ongoing)
• Public meetings (January, February)
• **Open houses** (March, April)
• April 25, 6-7:30 p.m. PacTrust Business Center, Building F
  16505 SW 72nd Ave
Community Engagement

- Over 350 emails and letters
- Over 325 attendees at meetings and open houses
March & April Comment Cards

Preferred options:

- LPA Elevated (2)
- 74th Ave Refined (5)
- LPA Refined (3)
- LPA 2018 (1)
- East of WES (6)
- 74th Ave (4)

(Respondents could choose multiple)

Top open-ended comments:

Concern about business impacts (109)
- Circuit Bouldering Gym (54)
Concern about traffic impacts (45)
Cost Considerations (25)
- Prefer lower cost option (16)
- Prefer higher cost for lower impacts (9)

Updated 4/5/19 4 p.m.
Marquam Hill Connections
Purpose

• To connect the Gibbs St. Station to the many destinations on Marquam Hill & bus routes as well as the neighborhoods & Terwilliger Parkway
Goals & Criteria

- Access: Develop equitable, efficient, convenient connections for all users to a number of destinations.

- Safety: Create a safe & secure, 24/7 connection for all users.

- Context: Enhance & improve the historic, scenic & recreational resources; consider the unique character of the area in the design.

- Environmental: Project & enhance natural resources & habitat.
Goals & Criteria

• Operational: Provide a long-term, sustainable connection for current & future users.

• Budget/Schedule: Be cost effective & timely within the SW Corridor Light Rail project.

• Experience: Create a connection that provides a high-quality user experience & inspires civic pride.
Special Considerations

Distance of about 1,000 horizontal ft. & 300 vertical ft. Historic Olmsted Brothers parkway & environmental resources

Site Section: Marquam Hill to Gibbs St. Station on Barbur Blvd.
Process

- **Working Group**: Participates in mode studies with design team
- **Green Ribbon Committee**: Provides perspective & overview; makes recommendations to Steering Committee

Working Group site visit on Terwilliger Blvd.
Many Options Considered
Bridge + Elevator

Precedents

Edmonton, Canada

Neckartenzlingen, Germany

Ennetbaden, Switzerland
Tunnel + Elevator

Precedents

Miho Museum, Japan

Miho Museum, Japan

Kings Cross, London
Inclined Elevator

Precedents

Ljubljana, Slovenia

Edmonton, Canada

Deer Crest, Utah

Montmartre, Paris
Next Steps

Open house		April 10
Online open house	April 15
Green Ribbon Committee meetings	April 10 +

April 8

Committee on Accessible Transportation (CAT)
Portland Design Commission briefing
Community Advisory Committee (CAC)
Portland City Council work session
Steering Committee