Steering Committee
July 23, 2019
Station Access/ Park & Rides
Connected Transportation Choices

- Light Rail
- Bus
- Westside Express Service
- Park & Ride

Existing bus routes in & near Southwest Corridor
Connected Transportation Choices

- Multi-use Trails for Cycling & Walking
- Bike Facilities
Connected Transportation Choices

- Electric bikes, scooters & shuttles are being considered for connections to stations.

- Phone apps will make trip planning & fare payments simple & easy to use.
Park & Ride Scenarios

Dispersed

Scenario A
Park & Rides Spread Among Stations

Cost: $48.3 million
Spaces: 1,763

Concentrated

Scenario B
Large Regional Structures only at Major Arterials

Cost: $83.3 million
Spaces: 1,713

Existing

Scenario C
Maintain Existing Park & Rides (No New Facilities)

Cost: $0
Spaces: 793
Considerations
• June 10 to June 28, 2019

• Version in English and Spanish

• Promoted through email, social media, signage at P&R

• 569 total responses
Respondents

- Access transit by*:
  - 36% drive
  - 71% bike/walk

5% of TriMet rides originate from Park & Rides

*Is more than 100% because respondents could provide multiple answers.
Key Survey Takeaways

- Priorities for station areas is strongly correlated with how a person accesses transit
- Overall preference for Scenario A - Park & Rides spread among stations
- Those who bike and walk prefer less parking
- Most respondents want better bike, walk and bus access
Scenario Preferences

How well does each scenario address the considerations of access, budget, development, environment, and demand?

Rate the scenario from 1-5 stars with 5 being best.
Scenario Preferences

All Respondents

569 responses

4 stars 2 stars
5 stars 1 stars
3-star ratings excluded

Scenario
A Dispersed
B Concentrated
C Existing

48% 34%
24% 12%

31% 17%
16% 27%

31% 21%
1% 31%
Scenario Preferences

202 responses

4 stars 2 stars
5 stars 1 stars
3-star ratings excluded

Scenario
A Dispersed
B Concentrated
C Existing

64%
32%
16%

41%
19%
21%

67%
17%
45%

5 stars
64%
17%

4 stars
32%
33%

2 stars
16%
41%

1 stars
6%
8%

3-star ratings excluded
Scenario Preferences

311 responses

4 stars 2 stars
5 stars 1 stars
3-star ratings excluded

Scenario Preferences

Scenario | A Dispersed | B Concentrated | C Existing
---|---|---|---
5 stars | 39% | 45% | 38%
4 stars | 20% | 32% | 13%
3 stars | 19% | 15% | 13%
2 stars | 29% | 30% | 25%
1 star | 13% | 17% | 24%
Scenario Preferences

95 responses

4 stars 2 stars
5 stars 1 stars
3-star ratings excluded

Scenario A: Dispersed
- 64% of respondents prefer this scenario.
- 17% rated it 4 stars.
- 18% rated it 5 stars.

Scenario B: Concentrated
- 67% of respondents prefer this scenario.
- 23% rated it 4 stars.
- 52% rated it 5 stars.

Scenario C: Existing
- 54% of respondents prefer this scenario.
- 11% rated it 4 stars.
- 43% rated it 5 stars.
- 10% rated it 2 stars.
- 20% rated it 1 star.
Scenario Preferences

SW Corridor Residents

276 responses

4 stars 2 stars
5 stars 1 stars
3-star ratings excluded

Scenario

A
Dispersed

B
Concentrated

C
Existing

53%

27%

28%

33%

16%

44%

24%

57%

27%

25%

30%
Scenario Preferences
**Considerations (Overall Rankings)**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Access</td>
</tr>
<tr>
<td>2</td>
<td>Environment</td>
</tr>
<tr>
<td>3</td>
<td>Demand</td>
</tr>
<tr>
<td>4</td>
<td>Development</td>
</tr>
<tr>
<td>5</td>
<td>Budget</td>
</tr>
</tbody>
</table>
Considerations (Top Two)

- Access
- Demand
- Environment
- Development
- Access
- Environment
Considerations (Top Two)

Residents

SW Portland
- Access
- Environment

Tigard & Tualatin
- Access
- Demand
<table>
<thead>
<tr>
<th>Rank</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bus Connections</td>
</tr>
<tr>
<td>2</td>
<td>Bike/Walk Access</td>
</tr>
<tr>
<td>3</td>
<td>Automobile Parking</td>
</tr>
<tr>
<td>4</td>
<td>Mobility Hub</td>
</tr>
<tr>
<td>5</td>
<td>Affordable Housing</td>
</tr>
<tr>
<td>6</td>
<td>Housing and Shops</td>
</tr>
<tr>
<td>7</td>
<td>Green Space and Nature</td>
</tr>
<tr>
<td>8</td>
<td>Public Gathering Space</td>
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</tbody>
</table>
Values (Top Two)

Automobile Parking
Bus Connections

Bike/Walk Access
Bus Connections

Bike/Walk Access
Bus Connections
Values (Top Two)

SW Portland
- Bike/Walk Access
- Bus Connections

Tigard & Tualatin
- Bus Connections
- Automobile Parking
Fee for Parking?

- Yes: 61%
- No: 39%

- Yes: 82%
- No: 18%

- Yes: 66%
- No: 34%
Fee for Parking?

SW Portland

- Yes: 46%
- No: 53%

Tigard & Tualatin

- Yes: 62%
- No: 38%
Next Steps

• Define project scope          October 2019
• Conceptual Design Report (CDR)  Early 2020
• Final Environmental Impact Statement (FEIS)  Early 2020
Conceptual Design Report (CDR)
Introduction
Overview

Reference:
Portland-Milwaukie Light Rail Transit Project
Purpose

✓ Communication tool for team, project partners and the public;
✓ Defines the project vision, principles, goals and objectives;
✓ Clearly documents the project scope and it’s benefits, as well as issues to be resolved during design;
✓ Identifies partnership opportunities (shared investments);
✓ Captures public process to date;
✓ Builds public support for the project.
Timeline

• Draft – December
• Public Engagement – early 2020
• Final – mid 2020
DRAFT- Organization

1 EXECUTIVE SUMMARY
   1.1 Project Purpose and Need
   1.2 Project Principles and Goals
   1.3 Project Definition
   1.4 Project Summary: Issues and Opportunities
   1.5 Project Budget and Schedule
   1.6 Next Steps

2 INTRODUCTION
   2.1 Purpose of Conceptual Design Report
   2.2 Document Mapping
   2.3 Document Organization

3 PROJECT PROCESS
   3.1 Public Involvement Process
   3.2 Project Oversight

4 PROJECT DESIGN GOALS AND FEATURES
   4.1 Project Goals and Objectives
   4.2 Project Requirements
   4.3 Design Extents
   4.4 Station Characteristics
   4.5 Elements of Continuity
   4.6 Elements of Distinction

5 DESIGN CONCEPTS: SEGMENT A
   5.1 Segment A Overview
   5.2 South Downtown Land Use District
   5.3 Lair Hill Land Use District
   5.4 Woods Land Use District

6 DESIGN CONCEPTS: SEGMENT B
   6.1 Segment B Overview
   6.2 Historic Barbur Land Use District
   6.3 West Portland Town Center Land Use District
   6.4 Far Southwest Land Use District

7 DESIGN CONCEPTS: SEGMENT C
   7.1 Segment C Overview
   7.2 Tigard Triangle Land Use District
   7.3 Downtown Tigard Land Use District
   7.4 Tigard Employment Corridor Land Use District
   7.5 Bridgeport Village Land Use District
MOVE AND CONNECT PEOPLE: Move people between destinations quickly, conveniently and safely.

MOBILITY

GOALS

• **Goal 1:** Design and implement a safe, dependable transit project that is competitive for Federal funds.

• **Goal 2:** Provide riders with an attractive and desirable transit experience.

• **Goal 3:** Design for adaptability to future modes and technology.

• **Goal 4:** Support completion of a multi-modal transportation network.
EQUITABLE COMMUNITIES

MAINTAIN AND CREATE EQUITABLE PLACES: Build partnerships to support vibrant and unique places for diverse people living in, and moving to, the Corridor.

GOALS

• **Goal 1:** Maintain and strengthen existing community and cultural assets.

• **Goal 2:** Promote equitable access to community resources and transit benefits.

• **Goal 3:** Support creation of welcoming and intuitive spaces for users of all abilities to support the well-being of individuals and the larger social fabric.

• **Goal 4:** Inspire equitable economic development.
ENVIRONMENT
ENVIRONMENTAL PROTECTION, RESTORATION, AND CONNECTION: Preserve, restore and create natural resources to increase ecosystem benefits and habitat.

GOALS

• **Goal 1:** Preserve and support wildlife habitat and connectivity within the regional ecosystem.

• **Goal 2:** Design a Project that is ecologically responsive and optimized to support the natural environment.

• **Goal 3:** Provide and maintain access to nature, recreation and green spaces.
DRAFT - Project Principles

RESILIENCE

WALK, BIKE AND TRANSIT IS THE PREFERRED CHOICE: Maximize the community’s physical and social resilience while reducing carbon emissions.

GOALS

• **Goal 1:** Promote community sustainability by incorporating flexibility, adaptability, affordability and diversity into the Project to withstand the test of time.

• **Goal 2:** Assist communities with the transition to a low-carbon future.
DRAFT - Project Principles

MOBILITY  EQUITABLE COMMUNITIES  ENVIRONMENT  RESILIENCE
Project Cost Update
July 23, 2019
Context

June meeting
• Cost gap based on late 2018 estimate
• MOS required for FEIS

Today
• Updated cost estimate with larger gap
• Process to define competitive project to Bridgeport (and MOS) by October
Paradigm shift needed

2019 cost estimate
  • Larger gap between scope and target

Funding constraints
  • Local sources
  • Criteria for federal dollars
Cost estimates (billions)

Scope target $2.375 b

Finance costs

Scope $462 m

DEIS Scenarios (2017)

Initial Route Proposal (Spring 2018)

LPA with modifications (Late 2018)

Pre-FEIS (Mid-2019)
Cost elements

Scope
- Design, construction, acquisition, relocation, mitigation, vehicles

Escalation: 3.5%

Contingency: 25% overall at entry to engineering phase (required by FTA)

Financing
- Cost of borrowing before funds arrive
Estimate accuracy

TriMet estimators and consultant expertise

- Industry best practices
- Two independent estimates are within 2% of each other
- Risk assessment: FTA-required analysis of ability to deliver project; contingency
- Market analysis: independent review of materials, contractors, escalation
What Changed? (Late 2018)

• Estimating changes
  • Escalation: 2.75% → 3.5%
• Scope
  • Added viaducts
  • Grade separated Upper Boones Ferry Road
**SWC Cost Elements**

*North Avenue 3.8 Mile Extension*

- **Project Scope Target (YOE)**: $2.375B
- **2018 Estimate (YOE)**: $2.733B

**To Reach Bridgeport:**
- Solve Viaducts Funding
- Reduce High Value ROW Costs
- Reduce O&M Facility
- Reduce Bonita to Bridgeport Costs

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

**Expected Scorecard**

- **Downtown Tie-in**
  - $10-40M
  - [+$20M]

- **Marquam Hill Connector**
  - $72-80M

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

- **Viaducts**
  - $100-200M

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

- **B2 - Short Span**
  - $6-7.5M

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

- **74th Alignment Options**
  - N/A

- **Upper Boones At-Grade**
  - $55M

**Total:** $8.98M

*Updated: 05.28.2019*
What Changed? (Mid-2019)

• Increased costs
  • Stormwater, utilities
  • Property acquisition; relocations
  • Downtown tie-in
• Reduced Costs
  • Light Rail Vehicles
  • Shorter structure over I-5 at BTC
  • Upper Boones at-grade refined
Potential solutions for $462 m gap

• Increase funding

• Reduce scope
## Funding assumptions

<table>
<thead>
<tr>
<th>Partner</th>
<th>Request ($m)</th>
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<tbody>
<tr>
<td>FTA</td>
<td>1,250</td>
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<tr>
<td>Metro / voters</td>
<td>850</td>
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<tr>
<td>State of Oregon</td>
<td>150</td>
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<tr>
<td>TriMet</td>
<td>75</td>
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<tr>
<td>City of Portland</td>
<td>75</td>
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<tr>
<td>Washington County</td>
<td>75</td>
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<td>Regional Flexible funds</td>
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<td><strong>Total</strong></td>
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<tr>
<td><em>(Interim finance)</em></td>
<td><em>(150)</em></td>
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<td><strong>YOE Scope Target</strong></td>
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Competitiveness for federal funding

- Competing projects
- Criteria
- Ratings
## Current FTA projects

<table>
<thead>
<tr>
<th>Current LRT Project</th>
<th>Total cost (b)</th>
<th>FTA share (b)</th>
<th>FTA percent</th>
<th>Overall rating</th>
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<tbody>
<tr>
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<td>$1.4</td>
<td>$0.7</td>
<td>48%</td>
<td>M-H</td>
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<tr>
<td>San Diego Mid-Coast Corridor</td>
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<td>$1.0</td>
<td>48%</td>
<td>M-H</td>
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<tr>
<td>Boston Green Line Extension</td>
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<td>$1.0</td>
<td>43%</td>
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<td>Maryland Purple Line</td>
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<td>$0.9</td>
<td>37%</td>
<td>M-H</td>
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<td>$0.7</td>
<td>50%</td>
<td>M-H</td>
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<td>Minneapolis Blue Line (Eng)</td>
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<td>$0.8</td>
<td>49%</td>
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<td>Minneapolis Southwest (Eng)</td>
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<td>$0.9</td>
<td>50%</td>
<td>M-H</td>
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<td>Durham – Orange (Eng)</td>
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<td>$1.2</td>
<td>50%</td>
<td>M</td>
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<td>Lynwood Link (SEA) (Eng)</td>
<td>$3.1</td>
<td>$1.2</td>
<td>38%</td>
<td>M-H</td>
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FTA funding criteria

Rating target: Medium-High
Project justification

✓ Mobility improvements
✓ Environmental benefits
✓ Congestion relief

☑ Cost effectiveness

\[
\text{annualized capital cost + operating cost} / \text{ridership}
\]

✓ Economic development
✓ Land use
Local financial commitment

✓ Current financial condition of agency

☐ Commitment of capital and operating funds
   
   One level higher rating if local partners provide significant additional funds

✓ Reliability/capacity of capital and operating funds
Conclusions

- The **project scope must be reduced** to maintain competitiveness
- Additional local funds would help the project be competitive for federal funds
Revisit fundamental assumptions to address $462 m gap

Explore scope reductions over $100 m

• Narrow Barbur
• Adjacent to Barbur
• Avoid viaduct structures
Additional local funding?

- Add Jurisdictional Transfer $65 m
  - Increases revenue to $2.44 b
  - Reduces gap to $397 m

- Additional funds from local partners
Next steps

**Summer**  Staff develop feasible options

**September**  Review feasible options (full-length and MOS)

**October**  Select options (full-length and MOS) for FEIS, local funding commitments, continuing design