

# SW Corridor Light Rail Project

## Adoption of Preferred Alternative

Nov 1, 2018

WE KEEP PORTLAND MOVING.

Teresa Boyle - PBOT

Eric Engstrom - BPS

Malu Wilkinson - Metro

Dave Unsworth - TriMet



**PBOT**  
PORTLAND BUREAU OF TRANSPORTATION

# Session Overview

## Staff Presentation:

- Project **Overview**
- Land Use Perspective; Housing Strategy & MOU
- **Work Plan**
- Next Steps

## Public Testimony

## Council Q&A, Discussion & Action

# Near Term Milestones

Council - accept Preferred Alignment	Today
Council - authorize Jurisdictional Transfer	Nov 7th
Metro Council adopts LPA, updates RTP and holds hearing on LUFO	Nov 15th
Steering Committee established	early 2019
Community Advisory Committee created	early 2019

# Project Development Phase

- Advance designs through **technical analyses**, urban design, **community engagement**
- Advice from **CAC**
- Decisions by **Steering Committee**
- **Conceptual Design Report** to illustrate design and how it addresses City priorities and community values
- Publish **FEIS**



# Big Picture

**2019/2020:** Project Development and FEIS

**Early 2020:** Portland commits local match

**2020:** Voters decide on regional funding

**2021:** Construction starts with local funds

**2023:** FTA commits rest of funds

**2027:** Light rail opens for Service

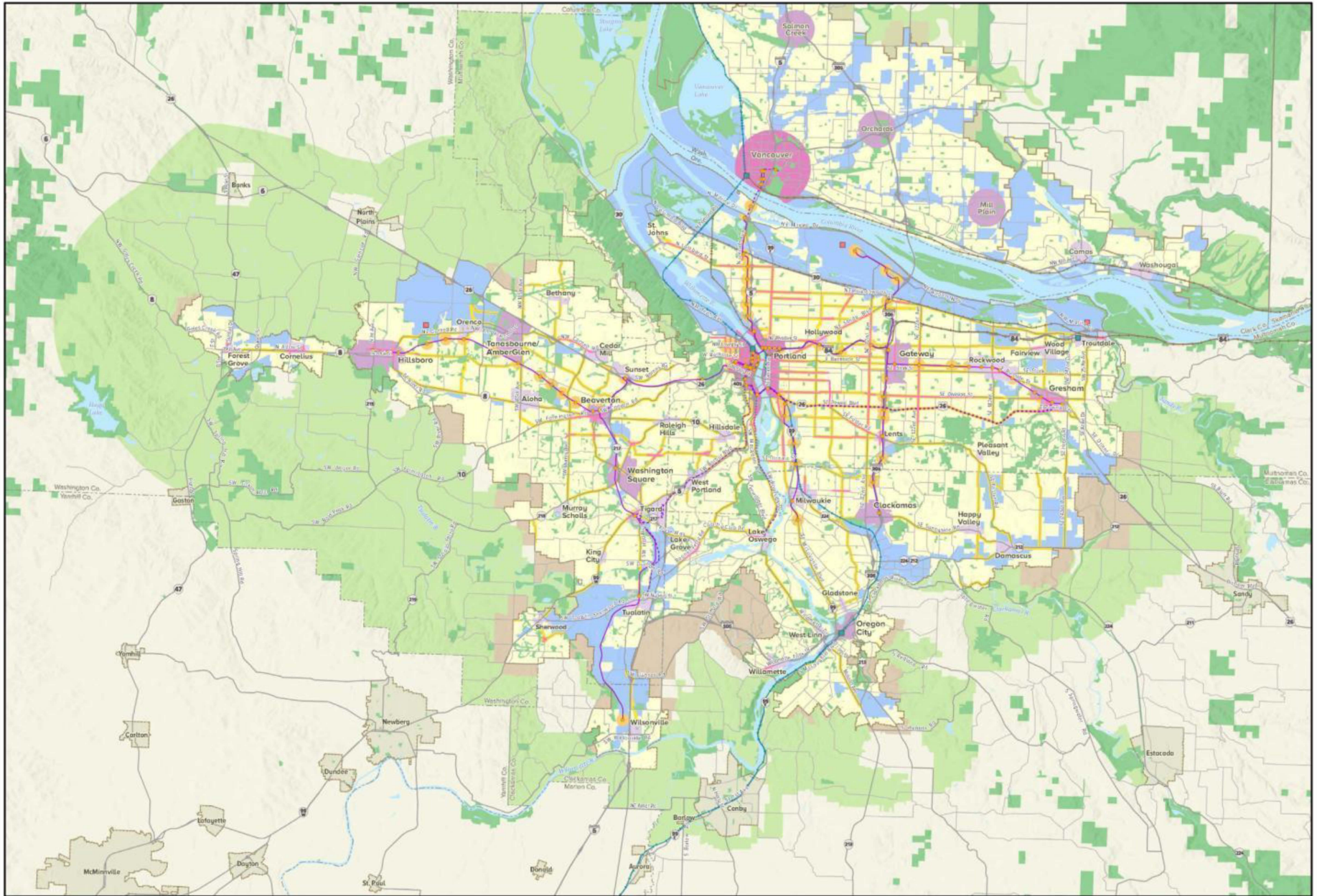
# Project Overview

- **Malu Wilkinson**

**Metro**

- **Dave Unsworth**

**TriMet**



# 2040 Growth Concept Map

September 2014



This information on this map was derived from digital databases of Metro GIS. Data was taken from the location of this map. Metro cannot accept any responsibility for errors, omissions, or outdated information. There are no warranties, expressed or implied, including the accuracy of the information or the use of the information for any purpose other than that for which it was provided.

The Metro 2040 Growth Concept defines the form of regional growth and development for the Portland metropolitan region. The Growth Concept was adopted in December 1995 through the Region 2040 planning and public involvement process. The concept is intended to provide a long-term vision of the region.

The map highlights elements of regional planning efforts including the 2035 Regional Transportation Plan that outlines investments in multiple modes of transportation, and a commitment to local policies and investments that will help the region better accommodate growth within its centers, corridors and employment areas.

For more information on these initiatives, visit <http://www.growthmetro.gov/2040>


- Central city
- Regional center
- Town center
- Station communities
- Main streets
- Corridors

- Employment land
- Parks and natural areas
- Neighborhood
- Rural reserve
- Urban reserve
- Urban growth boundaries

- Existing high capacity transit
- Planned high capacity transit
- Proposed high capacity transit tier 1
- Mainline freight
- High speed rail
- County boundaries

- Neighboring cities
- Airports
- Intercity rail terminal





There could be 340,000 residents in  
the Southwest Corridor by 2035-

**70,000**

**more than today.**

[swcorridorplan.org](http://swcorridorplan.org)

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# 55%

**of Barbur Boulevard**

doesn't have a sidewalk on both sides.

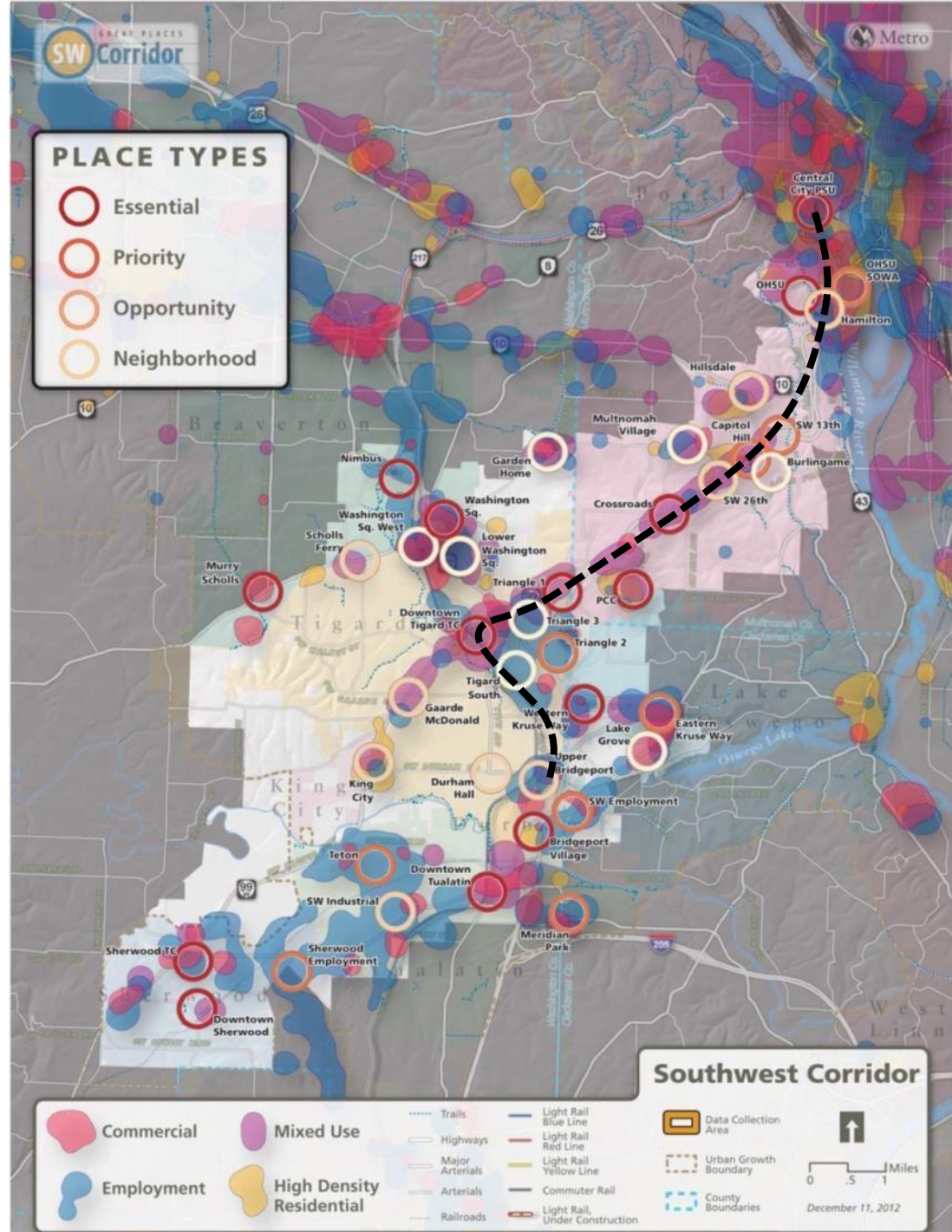
The Southwest Corridor Plan would fix that.

[swcorridorplan.org](http://swcorridorplan.org)

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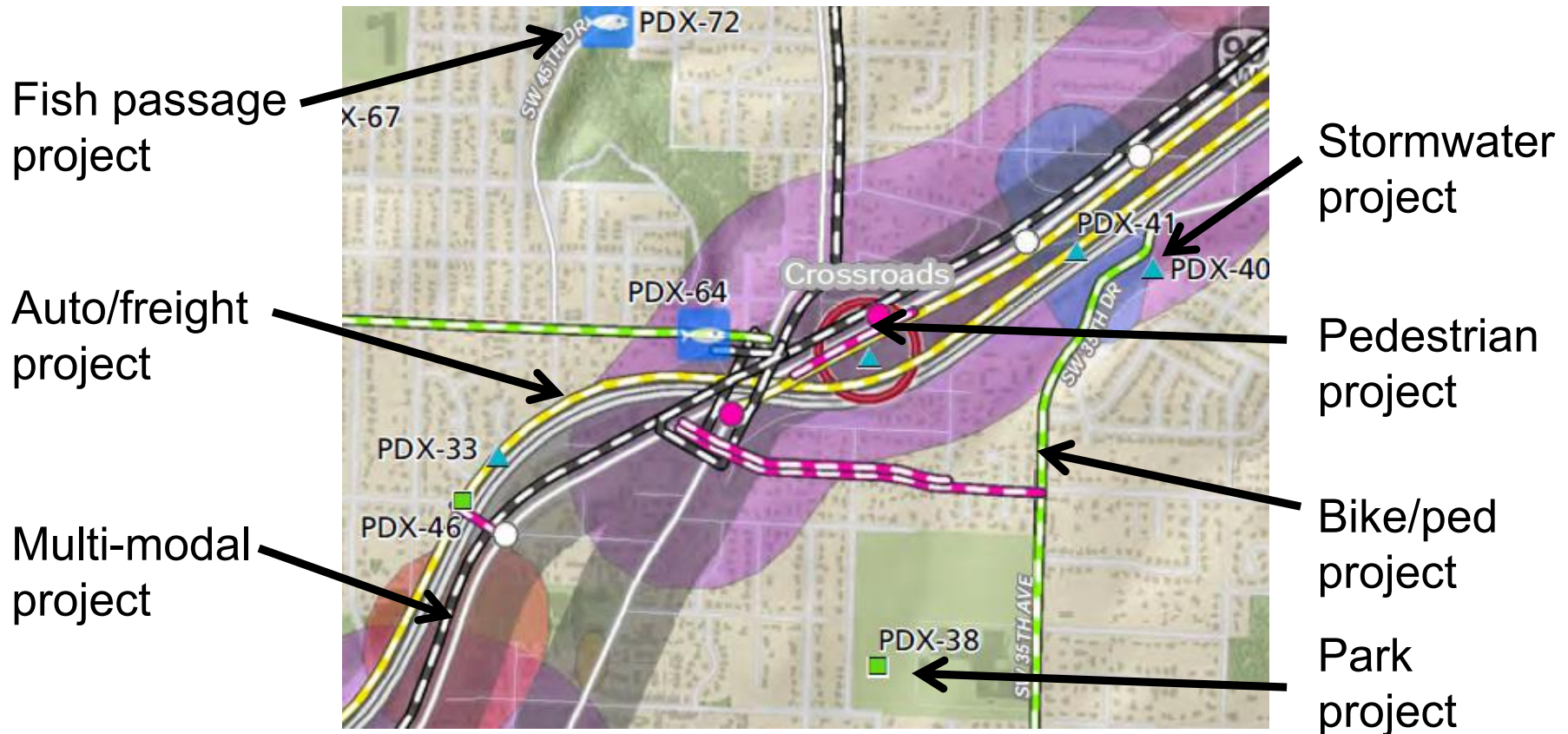


We started  
with land use  
to connect to  
places



# Shared Investment Strategy

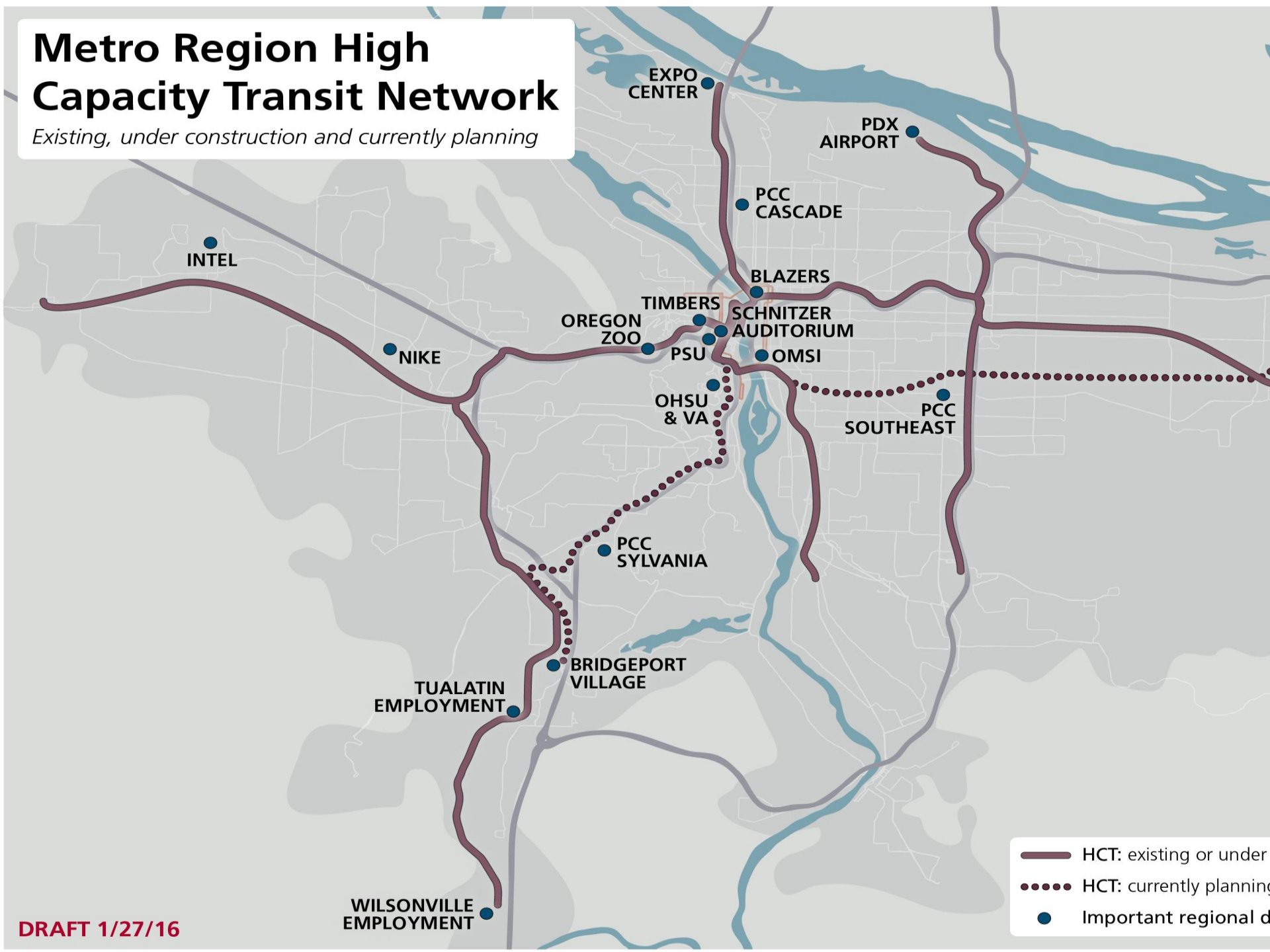
Road, active transportation and green projects combine together to make a great place.





# Metro Region High Capacity Transit Network

Existing, under construction and currently planning







# Community Advisory Committee

- 19 positions
- Representing Portland, Tigard, Tualatin and Washington County
- Business, community groups & institutions represented
- 14 monthly meetings
- Consensus on LPA





# Engagement







# Inclusive Growth

## Housing

- Portland / Tigard Equitable Housing (funded with Metro grant)
- TriMet's commitment on housing
- Metro bond: \$653M

## SW Equitable Development Strategy

- Housing
- Workforce development
- Business stabilization
- Pilot programs



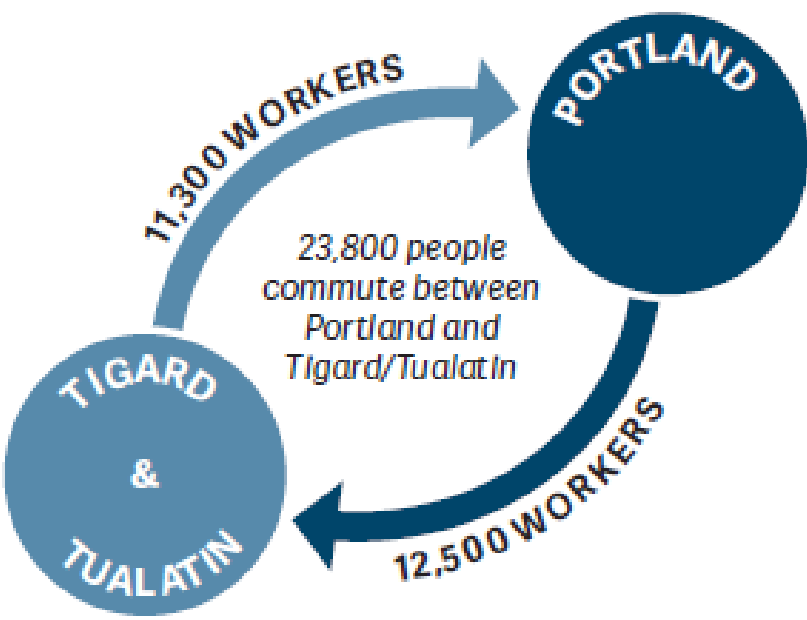
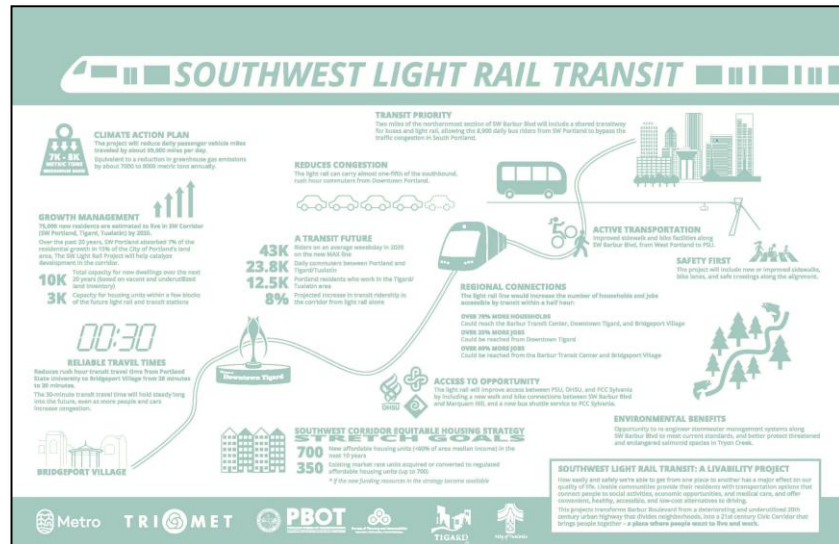
# Project Benefits



**43,000 riders on the line**  
on an average weekday in 2035



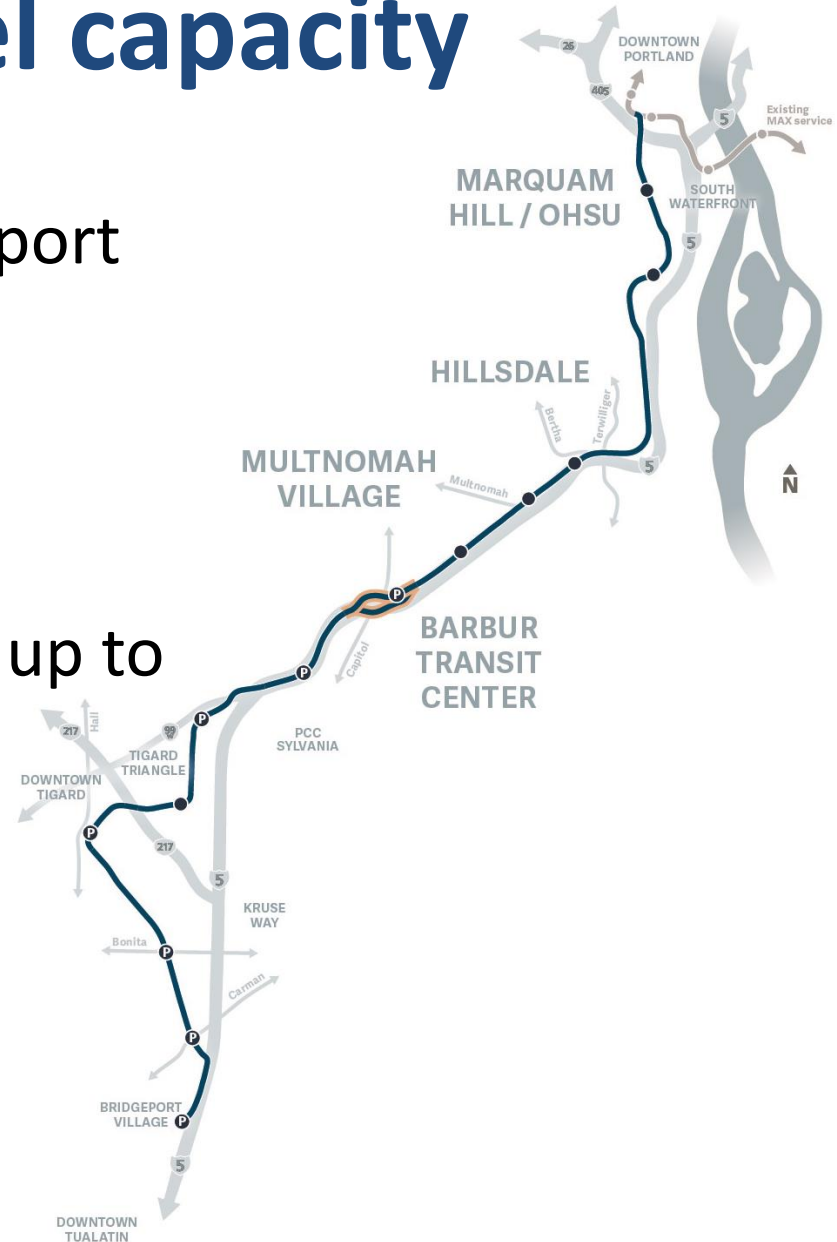
**1 in 5 commuters on MAX**  
going southbound from downtown  
during the 2035 PM rush hour





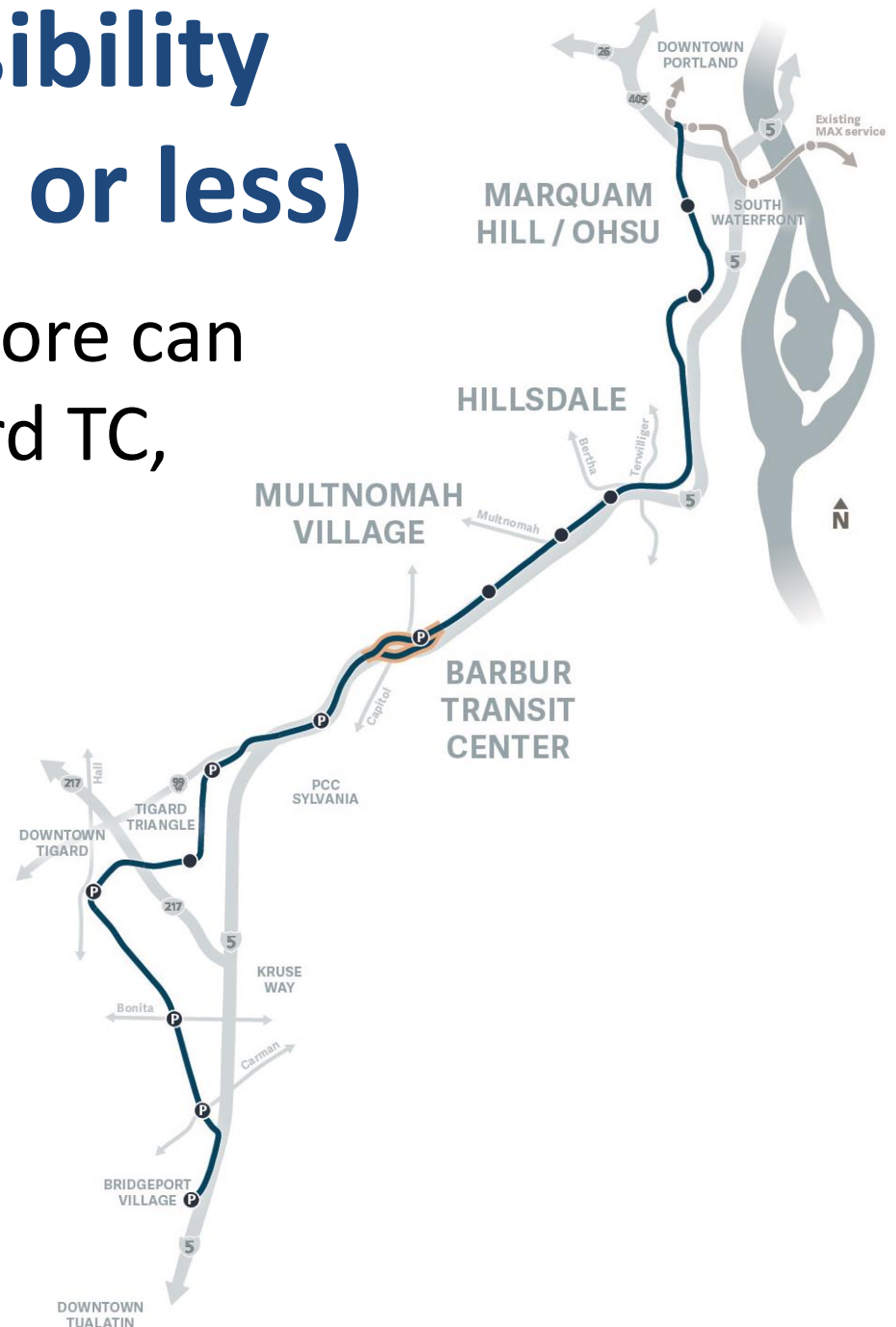
# Adds travel capacity

- Fast — 30 min PSU to Bridgeport
- Reliable — PM peak driving averages 29 mins **but** ranges up to 58 mins
- Popular — 43,000 daily rides in 2035



# Accessibility (30 mins or less)

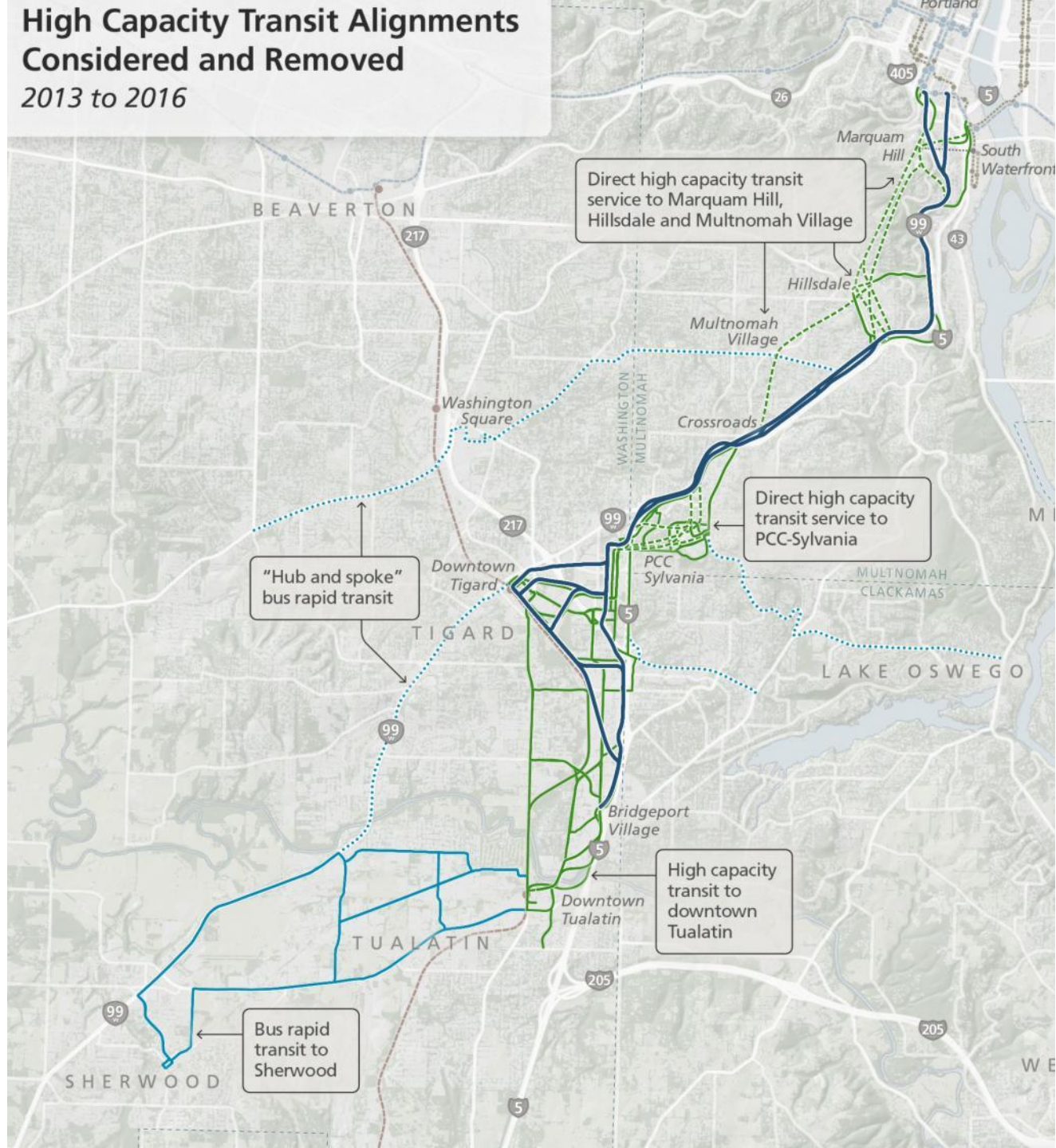
- Households — 70% more can reach Barbur TC, Tigard TC, and Bridgeport
- Jobs —
  - 35% more reached from Tigard TC
  - 60% more reached from Barbur TC and Bridgeport





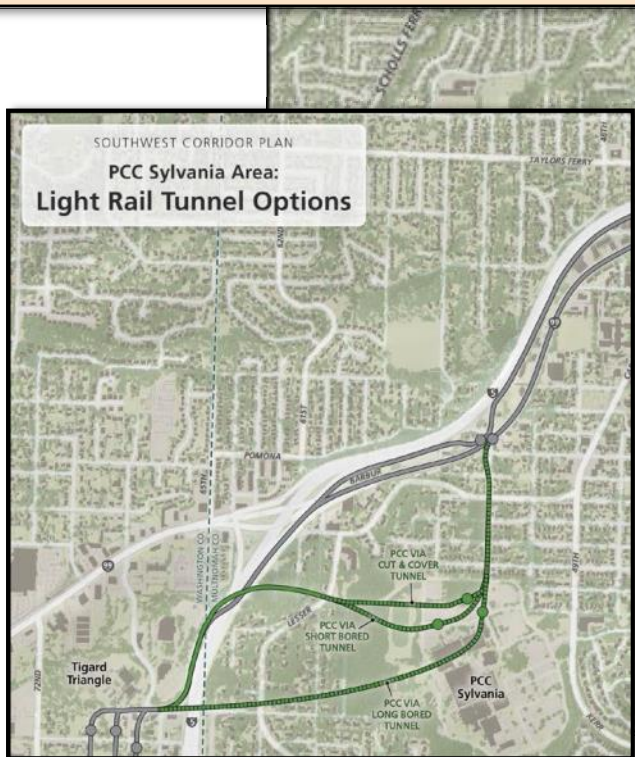
# High Capacity Transit Alignments Considered and Removed 2013 to 2016

Over 60  
alignment  
options were  
considered





# Major decisions included tunnels and BRT or light rail



# More than light rail...

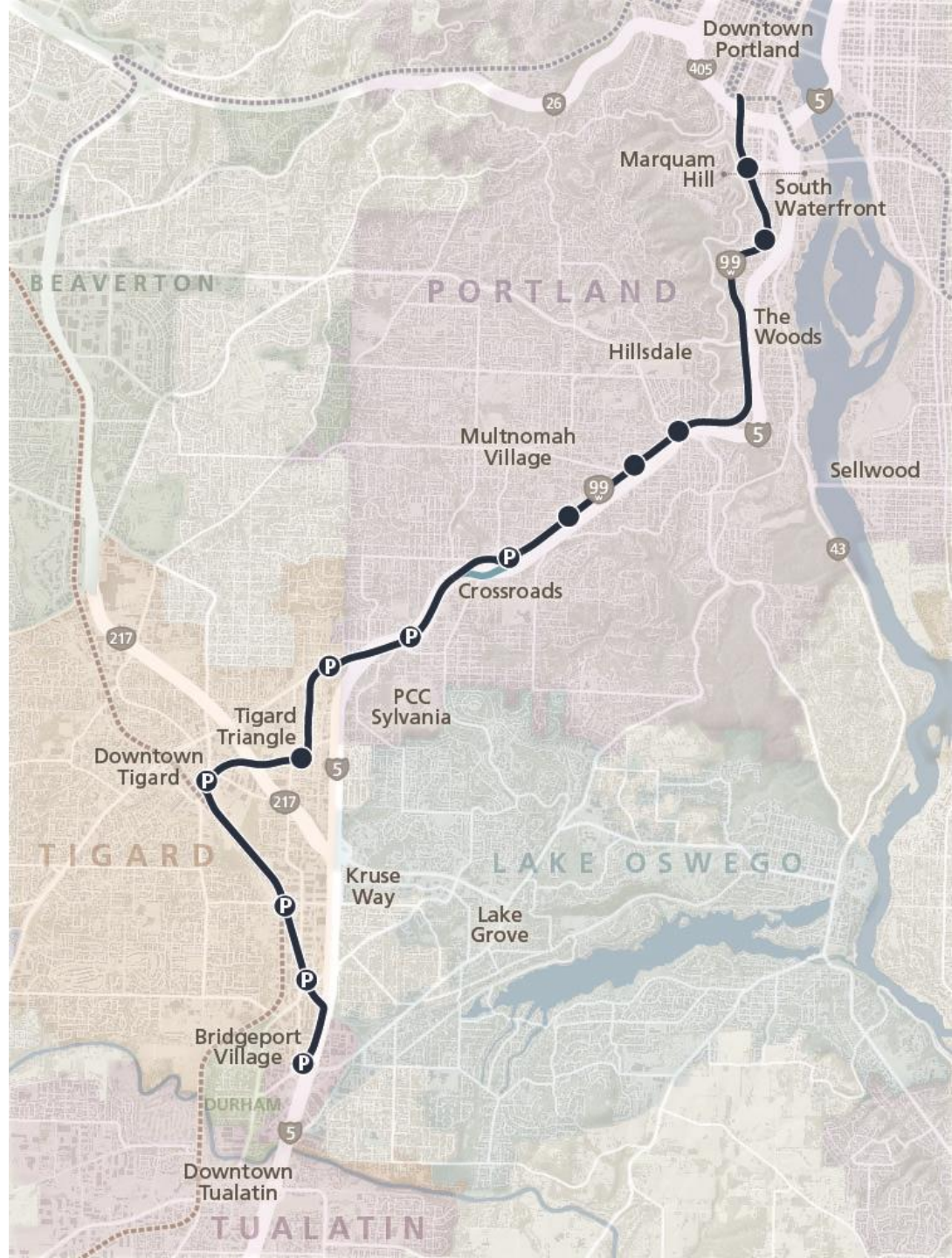
- new walk and bike connector between Barbur and **Marquam Hill**, increasing accessibility to Terwilliger Parkway
- 2-mile **shared transitway** to allow buses to bypass traffic congestion
- shuttle between **PCC-Sylvania** and nearby stations
- continuous **sidewalks** and **protected bike lanes** where LRT is in Barbur



# ***Preferred Alternative recommended by SW Corridor Steering Committee***

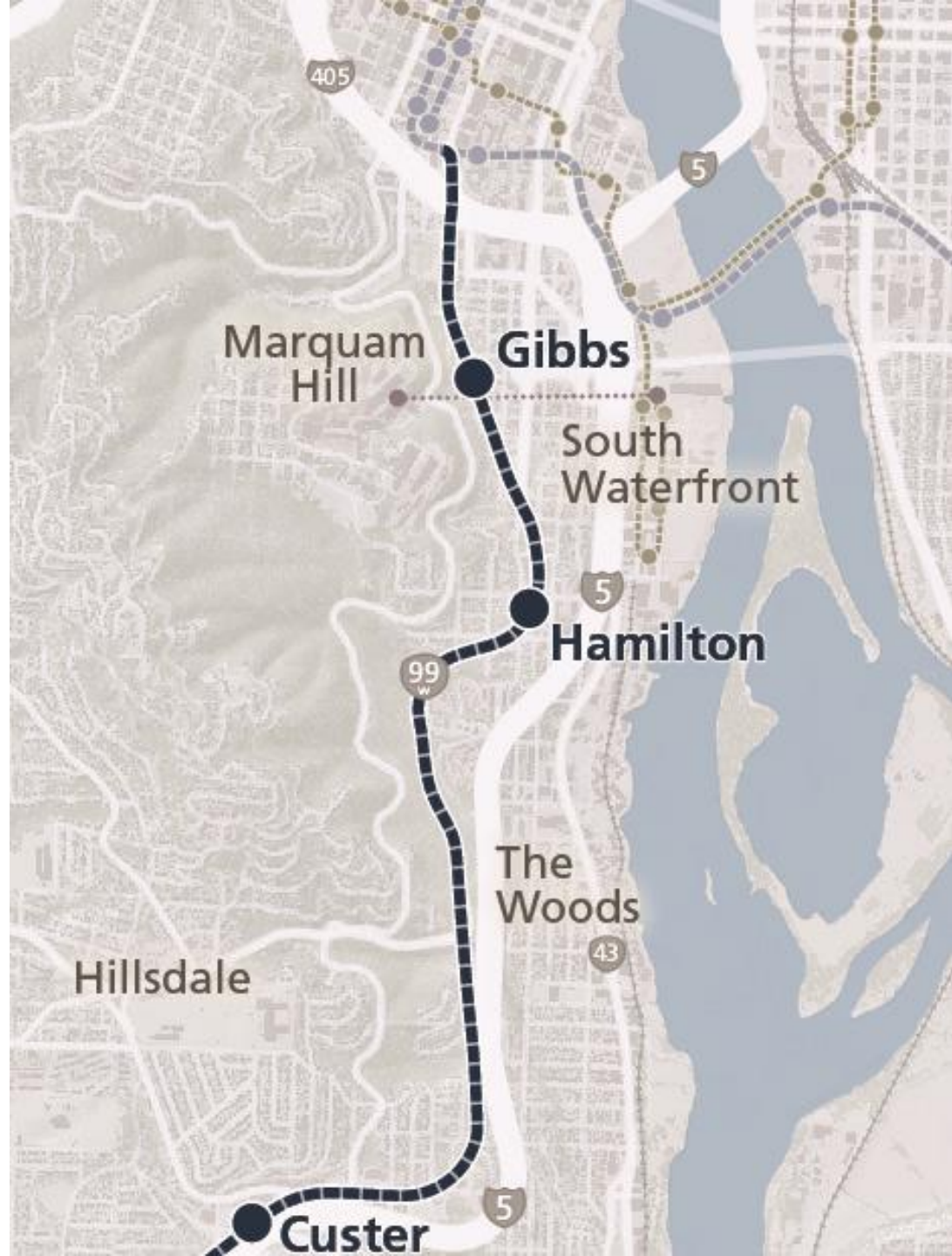
Based on...

- Purpose and Need
- Draft EIS
- Public + agency input
- FTA rating criteria



## Inner Portland

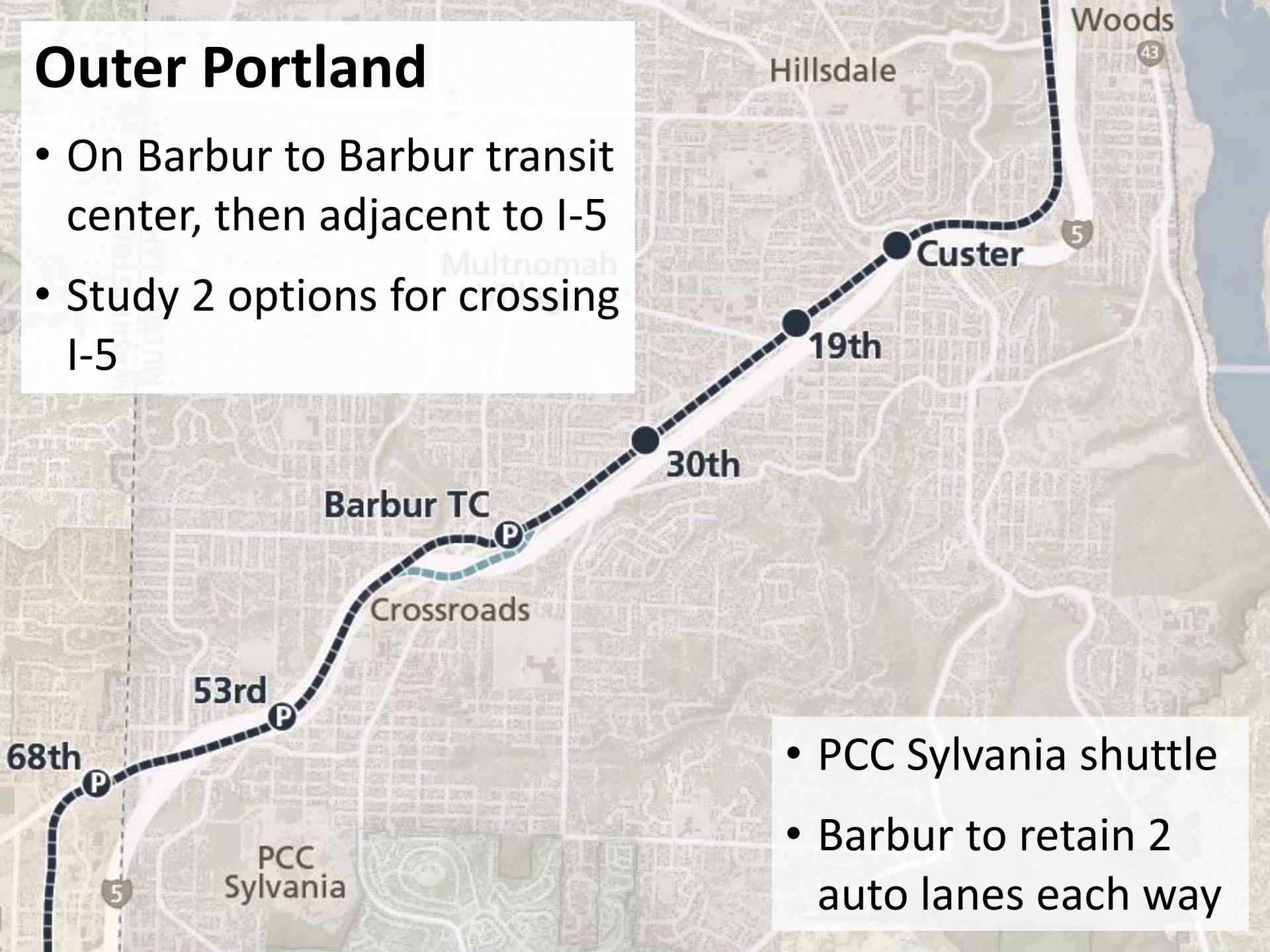
- On Barbur Blvd.
- Marquam Hill connection (tbd)
- Shared transitway
- Replace Newbury and Vermont viaducts
- Continuous bike lanes & sidewalks on Barbur





# Outer Portland

- On Barbur to Barbur transit center, then adjacent to I-5
- Study 2 options for crossing I-5



- PCC Sylvania shuttle
- Barbur to retain 2 auto lanes each way

# Next Steps

## **2019:** Project Development

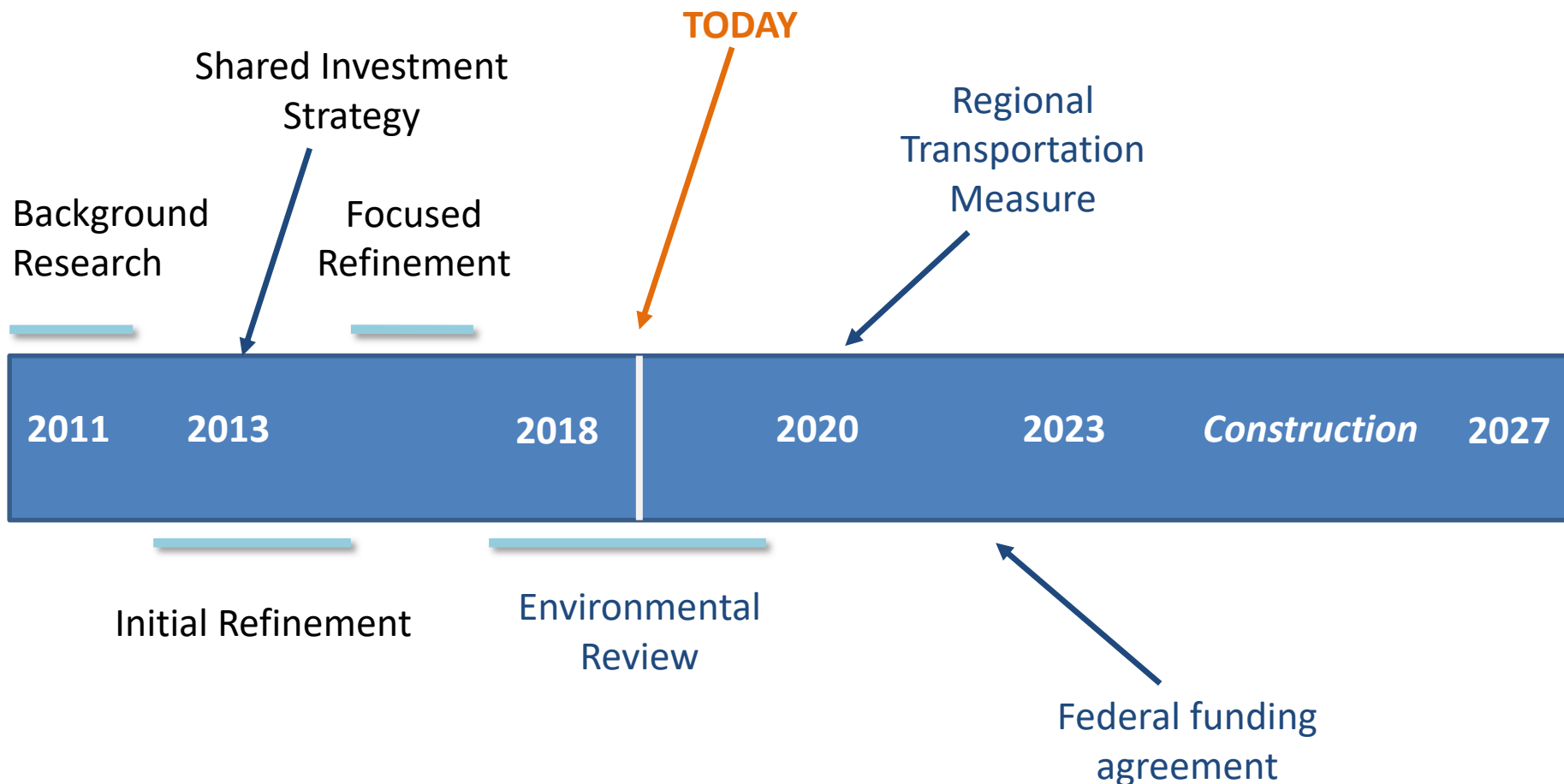
- New Steering Committee & CAC
- Public meetings & design workshops
- Update / advance designs
- Continue SWEDS
- Complete environmental review
- Create Conceptual Design Report

## **2020:** Regional funding measure

## **2022:** Secure federal funds

## **2027:** Light rail opening

# Overall LRT Schedule

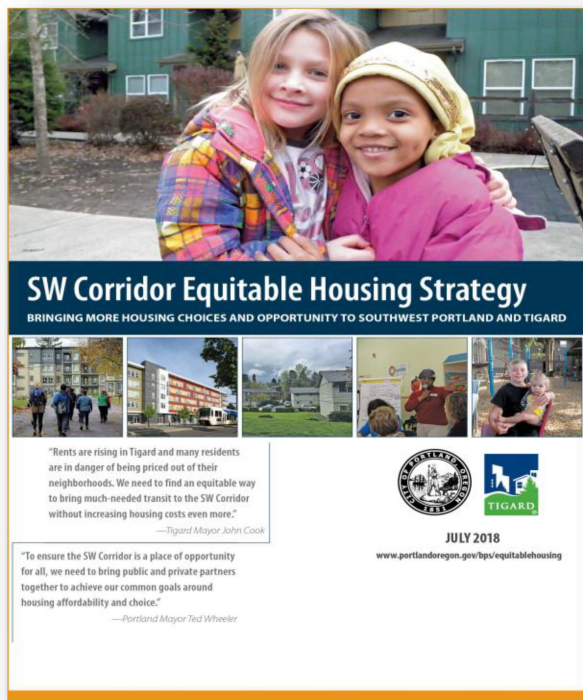




# Land Use & Housing Strategy

- Eric Engstrom

BPS



### Goal 1

**Commit early financial resources to address near-term housing crisis and long-term needs**



### Goal 2

**Prevent residential and cultural displacement**



### Goal 3

**Increase choices for new homes for all household types and incomes**

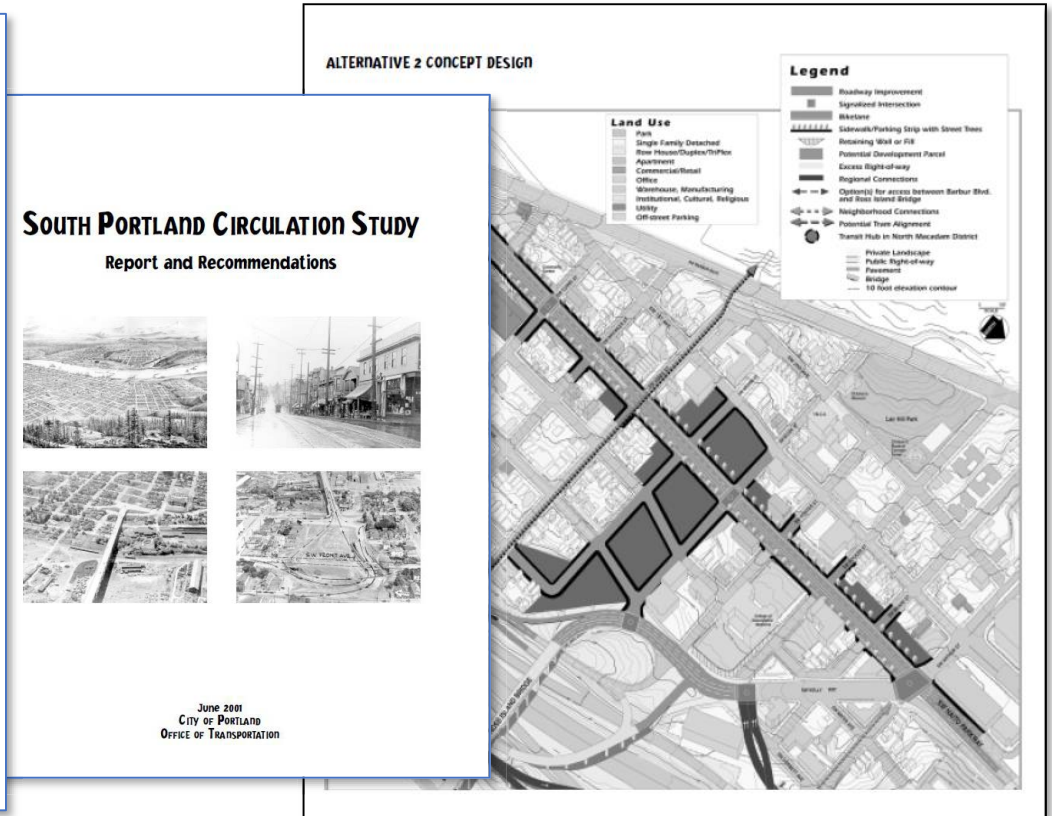
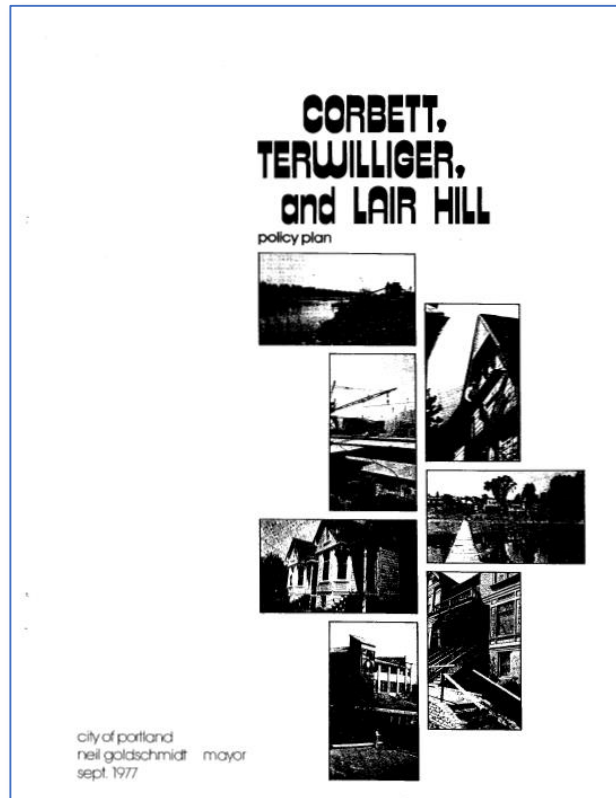




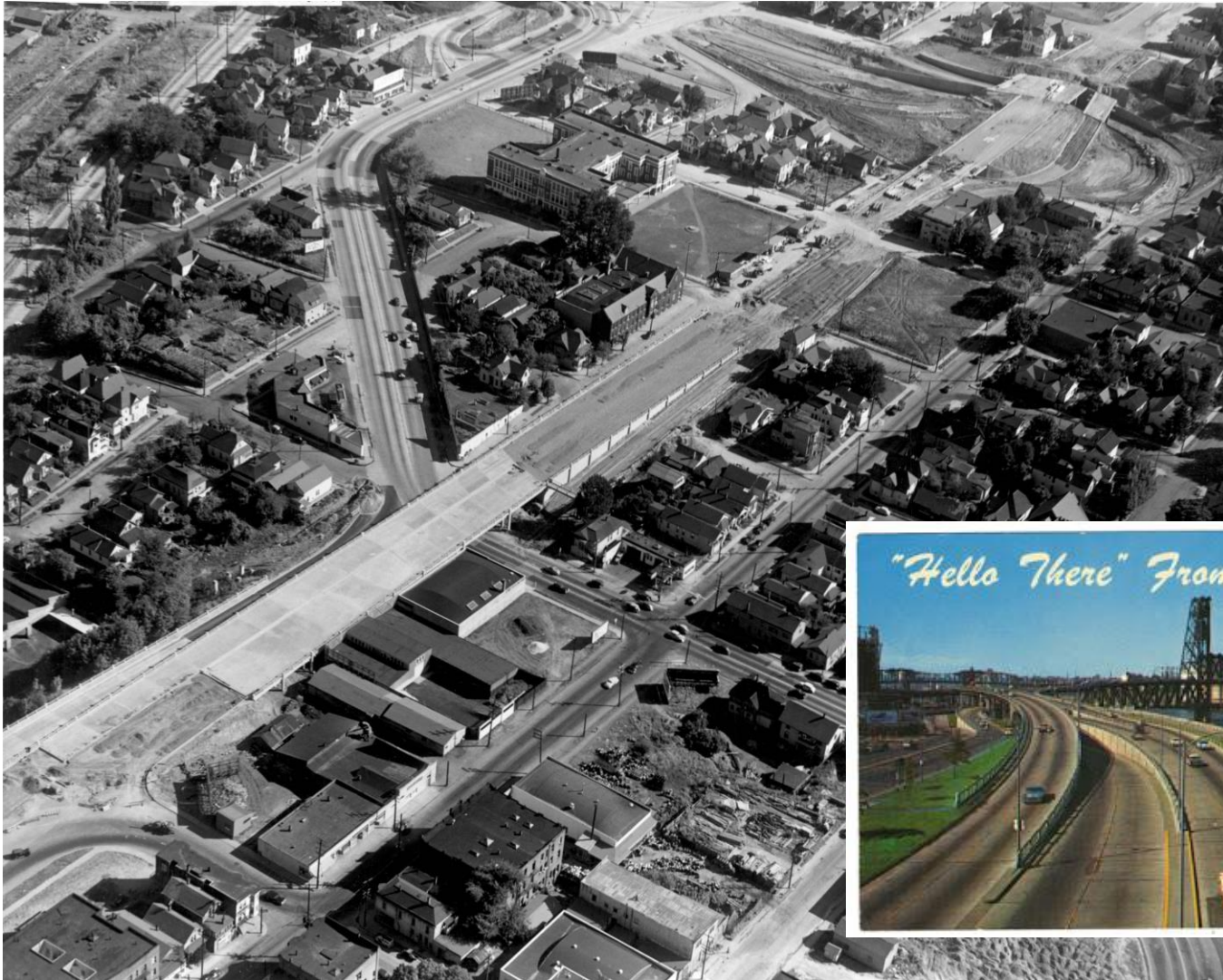
## West Portland Town Center



# Ross Island Bridgehead







## Ross Island Bridgehead





# What's Next?

- **Technical** work and community engagement:
  - Urban design, **Crossroads**, Park & Rides, bike & pedestrian connections, **Marquam Hill** Connector, PCC bus shuttle, **station** areas
- **CDR** - Conceptual Design Report
- **FEIS** - Final Environmental Impact Statement:
  - traffic, historic, environmental, property analyses
- Updated **cost** estimates





## Southwest Corridor Light Rail Project Steering Committee Preferred Alternative Report

### 1. RECOMMENDATION

This report presents the Southwest Corridor Steering Committee's recommended Preferred Alternative for the proposed Southwest Corridor light rail project. The Preferred Alternative must include the transit mode (light rail).

#### Summary of

This recommendation extends from the previous report. It is based on the Rail Project and takes into account the projects.

The recommendation and refinement

- Alternative
- Alternative

- Alternative

\*The committee Draft EIS, or

In addition, the plan for further committee review with a committee of

### Exhibit A

#### Appendix A – Preliminary Work Plan Development

The following text is an initial set of interests that does not yet represent a finalized, consensus agreement. Factors from public comments and federal environmental permitting needs must also be taken into account before the workplan is finalized.

#### Segment A – Issues to be addressed

The committee recommends the following design and planning efforts as the project proceeds:

- Work with FTA to determine which portions of the viaducts replacement are eligible for federal funding recognizing that some elements may become betterments to the transit project
- Develop construction sequencing that minimizes traffic impacts related to replacement of the viaducts and associated SW Capitol Highway (Highway 10) overpass
- Define bicycle and pedestrian improvements at the tie-in of light rail to existing infrastructure at SW 4th Avenue and SW Lincoln Street.
- Optimize designs for the light rail alignment tie-in to existing light rail tracks at SW 4th Avenue and SW Lincoln Street to ensure reliable light rail operations.
- Maximize speeds of buses and trains operating together on the shared transitway in South Portland.
- Initiate a planning process to select and refine a Marquam Hill connection design.
- Continue traffic analysis with focus on, but not limited to, the South Portland area.

# Work Plan

- Steering Committee directed
- Completes FEIS and project development phase
- See **Exhibit A** to resolution pg 18-20

# Community Engagement

- **Public meetings:**
  - Community Advisory Committee - monthly; review and comment; receive testimony
  - Steering Committee - every other month; decision-making; receive testimony
  - Community meetings for specific design questions
- Email; website; mailings
- Meetings with **affected businesses and homeowners**; transit rider outreach; engagement with community organizations, etc.

# Community Engagement

Topics for **near-term engagement** (to inform Steering Committee decisions) include:

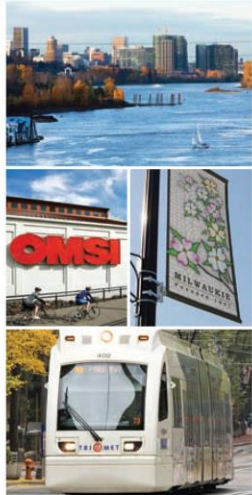
- |   |                          |
|---|--------------------------|
| • <b>Crossroads</b> alignment           | Fall 2018 - Early 2019   |
| • <b>Marquam Hill Connector</b>         | Early 2019 - Spring 2019 |
| • Station locations                     | Early 2019 - Spring 2019 |
| • <b>Park &amp; Ride</b> location/sizes | Early 2019 - Spring 2019 |
| • PCC <b>Shuttle</b>                    | Early 2019 - Spring 2019 |

**Other** concurrent engagement processes:

- Station area planning (**BPS land use study**)
- **Ross Island Bridgehead** concepts & design (BPS and PBOT)



# Conceptual Design Report



PORTLAND-MILWAUKIE  
LIGHT RAIL PROJECT

## CONCEPTUAL DESIGN REPORT Public Discussion Draft

February 18, 2010



PROJECT PARTNERS:



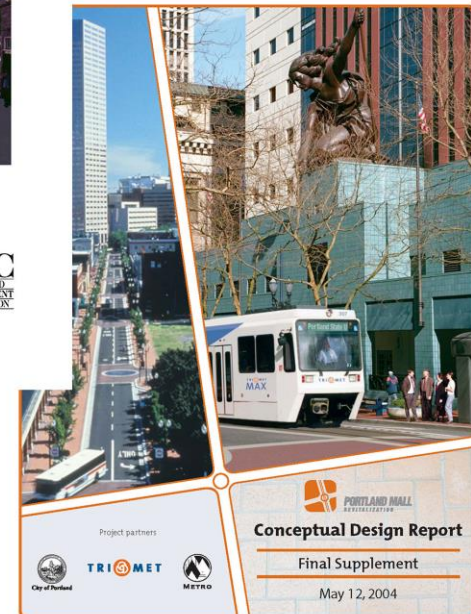
## INTERSTATE MAX CONCEPTUAL DESIGN REPORT AMENDMENT 2



December 6, 2001



See **Exhibit C** of Resolution



# Conceptual Design Report (CDR)

**What:**      **Work Plan** report - **Exhibits A & C**

**Why:**      Illustrates design and how it addresses City priorities and community values.

Summarizes **technical** evaluations

Addresses **issues**

Directs future **design** work

**Who:**      **Community**, City Commissions, **Council**

**When:**      Draft CDR - Fall 2019 (**public discussion draft**)  
Final CDR - early 2020

# Near-Term Topics

- **Crossroads** alignment
- **Marquam Hill** Connector
- PCC **bus shuttle**
- **Park & Ride** siting and sizes



# Alignment at Crossroads

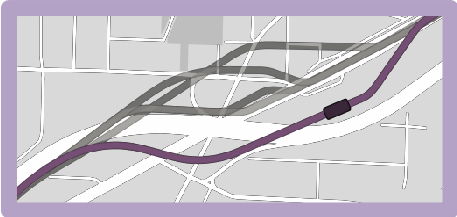
Steering Committee chose **B2 & Taylors Fy (Refinement 2)**  
Directed team to evaluate and  
Consider **Smith** alignment

Evaluation underway - Team has added:  
**Smith modified** alignment  
**Collins** alignment

Public Meetings to discuss:  
First was on **10/29**  
Next one **early Dec** and TBD **January**

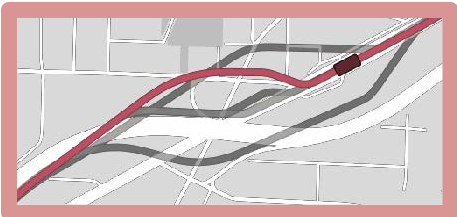
Steering Committee selects alignment - early 2019

# Crossroads Alignment Options:



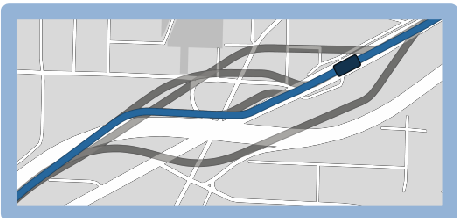
Alternative B2

from Steering Committee



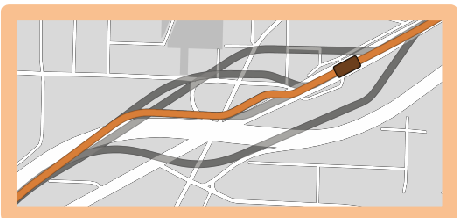
Refinement 2  
(Taylors Ferry)

from Steering Committee



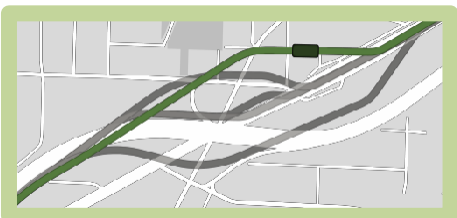
Smith

from neighbor suggestion



Smith Modified

developed by staff



Collins

developed by staff

# What we've heard

- Walking and biking
- Traffic congestion
- Park, trail, creek, vegetation impacts
- Property impacts
- Barbur World Foods
- Visual, noise, vibration impacts
- Vision for West Portland Town Center

## Other technical considerations:

Travel time

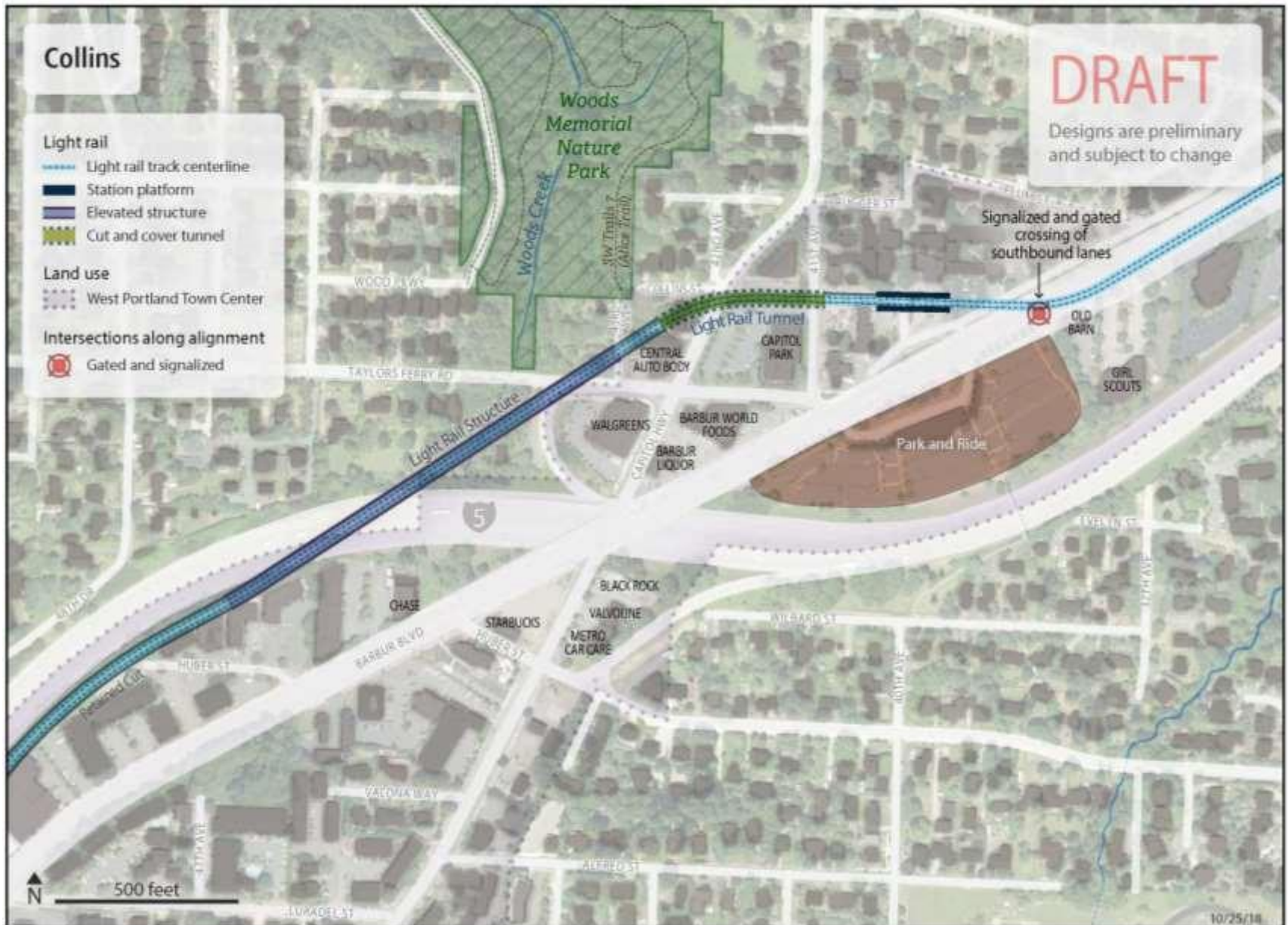
Cost

Safety

Track grades, curves, grades



# Collins Alignment



# Some Evaluation considerations

Draft Comparison of Crossroads Route Options -- October 29

10/29/18

		Alternative B2	Refinement 2	Smith	Smith Modified	Collins
Visual	Light rail structures approximate total length and height at top of rail (images not to scale)					
Displacements	Residential	None	3 single-family residential units	None	None	5 residential units, including 2 single-family and 1 triplex
	Businesses <sup>1</sup>	25 businesses	28 businesses, incl. Barbur World Foods	15 businesses	13 businesses, incl. Barbur World Foods	14 businesses
	Employees <sup>1</sup>	197 employees	323 employees	63 employees	110 employees	64 employees
Park and natural environment	Woods Memorial Nature Park and SW Trails 7	No impact	Could increase noise and visual impact to Woods Memorial Nature Park. Would change SW Trails 7 access	No impact	No impact	Could increase noise and visual impact to Woods Memorial Nature Park. Would change SW Trails 7 access
	E-Zone impact <sup>2</sup>	No	Yes	Yes (minor)	Yes (minor)	Yes
Station visibility and access	Station	Poor station visibility from Barbur	Station integrated with Barbur	Station integrated with Barbur	Station integrated with Barbur	Station integrated with streetscape, adjacent to Barbur
	Bus access to station	Direct at Barbur TC	Across 2 northbound Barbur lanes	Across 2 northbound Barbur lanes	Across 2 northbound Barbur lanes	Direct at station (north of Barbur)
	Park and ride access to station	Direct at Barbur TC	Across 2 northbound Barbur lanes	Across 2 northbound Barbur lanes	Across 2 northbound Barbur lanes	Across Barbur
Walking and biking <sup>3</sup>	Long crosswalks	No change to crosswalk length across Barbur at Capitol	No change to crosswalk length across Barbur at Capitol	Lengthens skewed crosswalks across Barbur at Capitol	Lengthens skewed crosswalks across Barbur at Capitol	No change to crosswalk length across Barbur at Capitol
Land use	Redevelopment	Least supportive of redevelopment	More opportunities for redevelopment	More opportunities for redevelopment	More opportunities for redevelopment	Most opportunities for redevelopment
Auto traffic	Safety and circulation	Least traffic impact. One gated track crossing of Barbur (northbound)	Significant traffic impact. Safety and circulation concerns with gated track crossings of Capitol (both directions, at Taylors Ferry) and Barbur (southbound)	Most traffic impact. Safety and circulation concerns with gated track crossings of Capitol (both directions, at Barbur) and Barbur (southbound)	Most traffic impact. Safety and circulation concerns with gated track crossings of Capitol and Barbur (both directions), 41st (southbound), Taylors Ferry (eastbound)	Least traffic impact. One gated track crossing of Barbur (southbound)

<sup>1</sup> Business and employee counts are estimated from Bureau of Labor Statistics data with field verification.

<sup>2</sup> E-Zones are the City of Portland's Environmental Overlay Zones, which are established to protect natural resources, minimize risk of damage to homes from natural hazards, and mitigate the effects of climate change. The acreage of impact includes a 30-foot construction buffer.

<sup>3</sup> All options would add or replace sidewalks and bike facilities along streets that are rebuilt as part of the route.

# Staff's Initial Impression

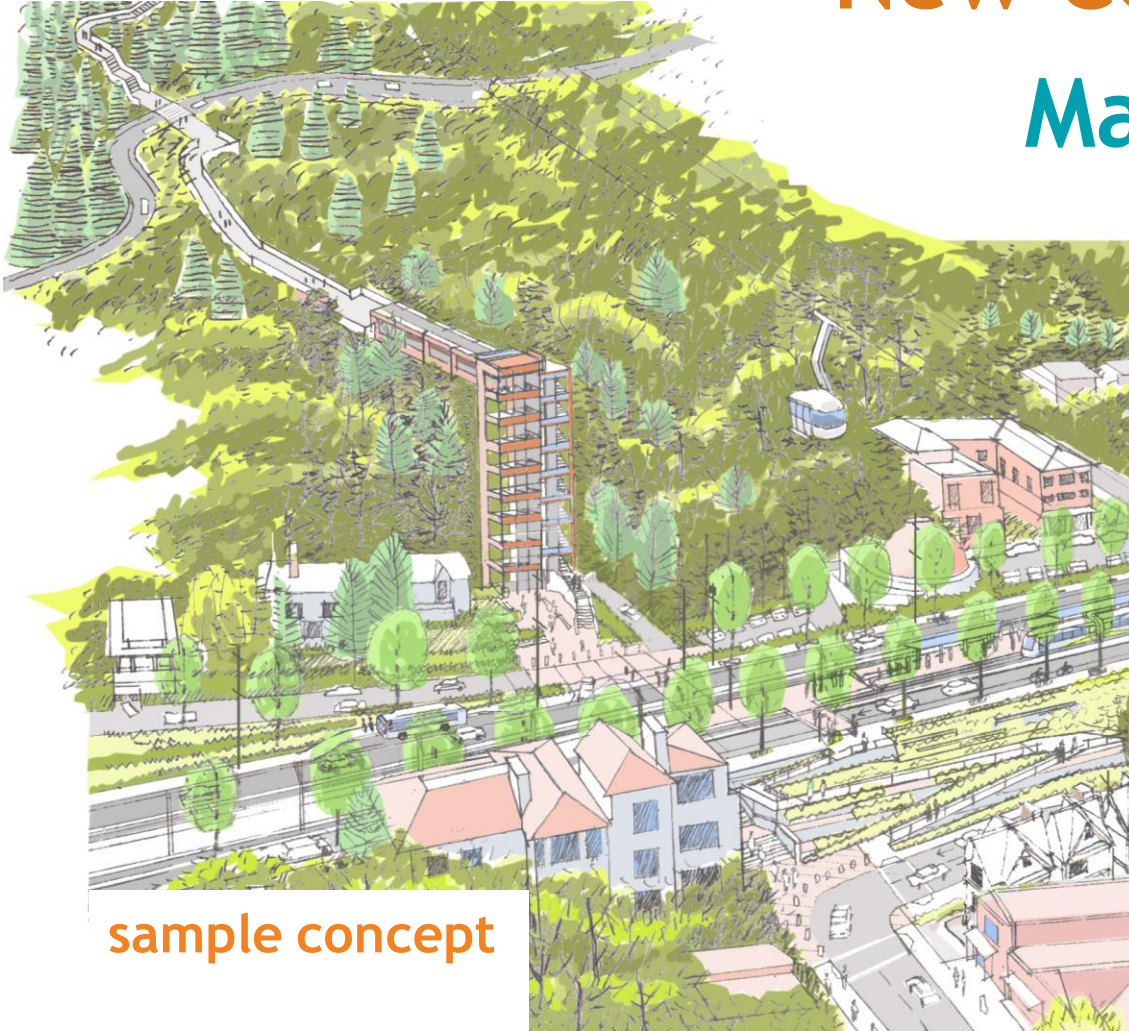
**Alternative B2** and **Collins** have greatest potential for further evaluation

## **Biggest factors in staff's evaluation:**

1. Crossroads bridge replacement
2. Barbur World Foods displacement
3. Traffic impacts



# New Connection to Marquam Hill



sample concept

## Gibbs station

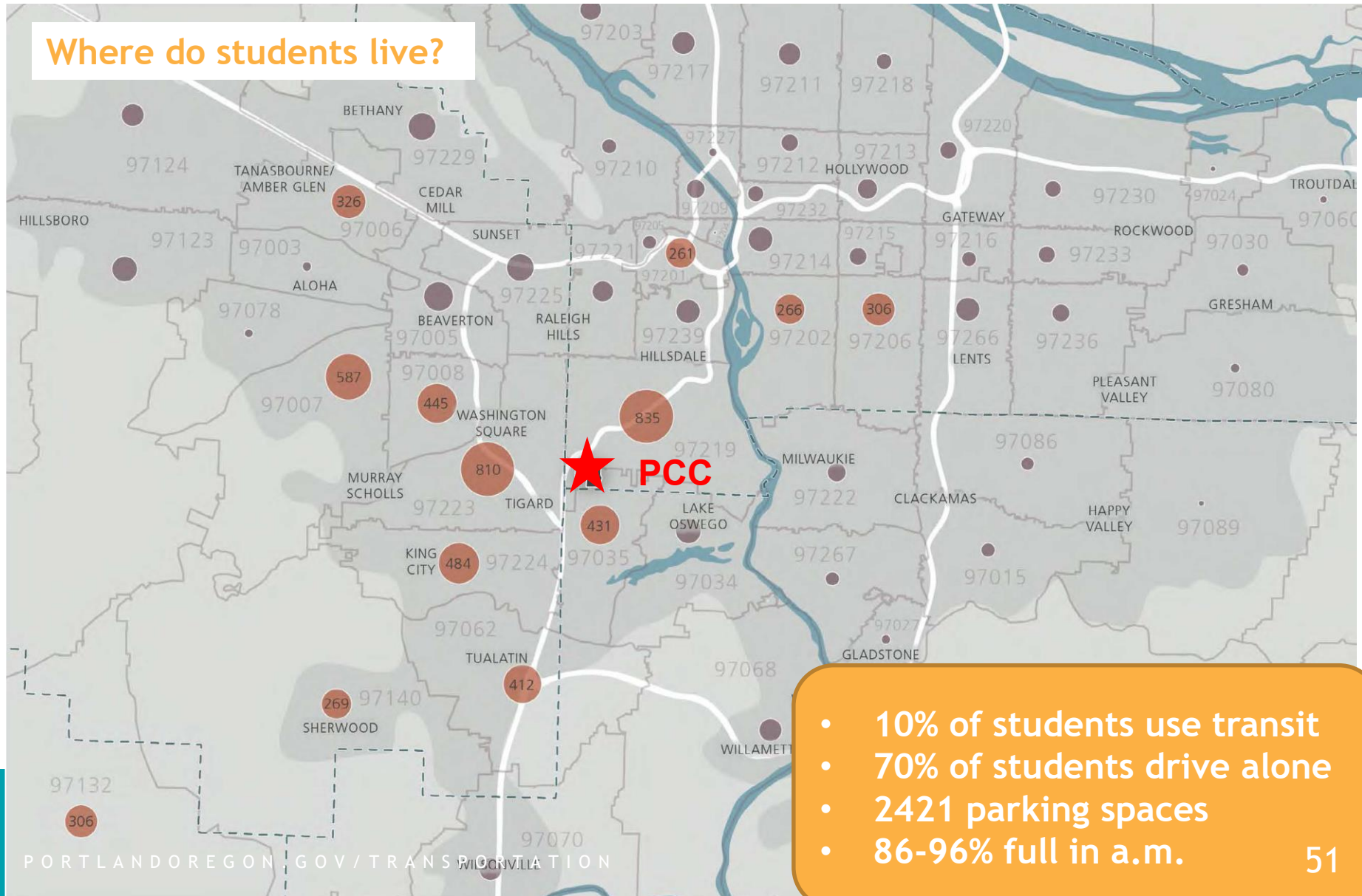


# Marquam Hill Connection - Process

- **Community** engagement & **Stakeholder Committee**
- Stakeholder Committee will be:
  - Friends of Terwilliger, neighborhood associations
  - OHSU
  - City bureaus (PPR, PBOT, BDS)
  - TriMet, Metro
- Committee will:
  - **Define values** (e.g., user experience, park impacts and accessibility, safety and security, etc)
  - **Evaluate options** considering **regulatory framework**
  - **Recommend type** to Steering Committee
- **Type III Land Use Reviews** (Design and Environmental)
- **FEIS: 4(f), park, historic**

# PCC - Connections Needed

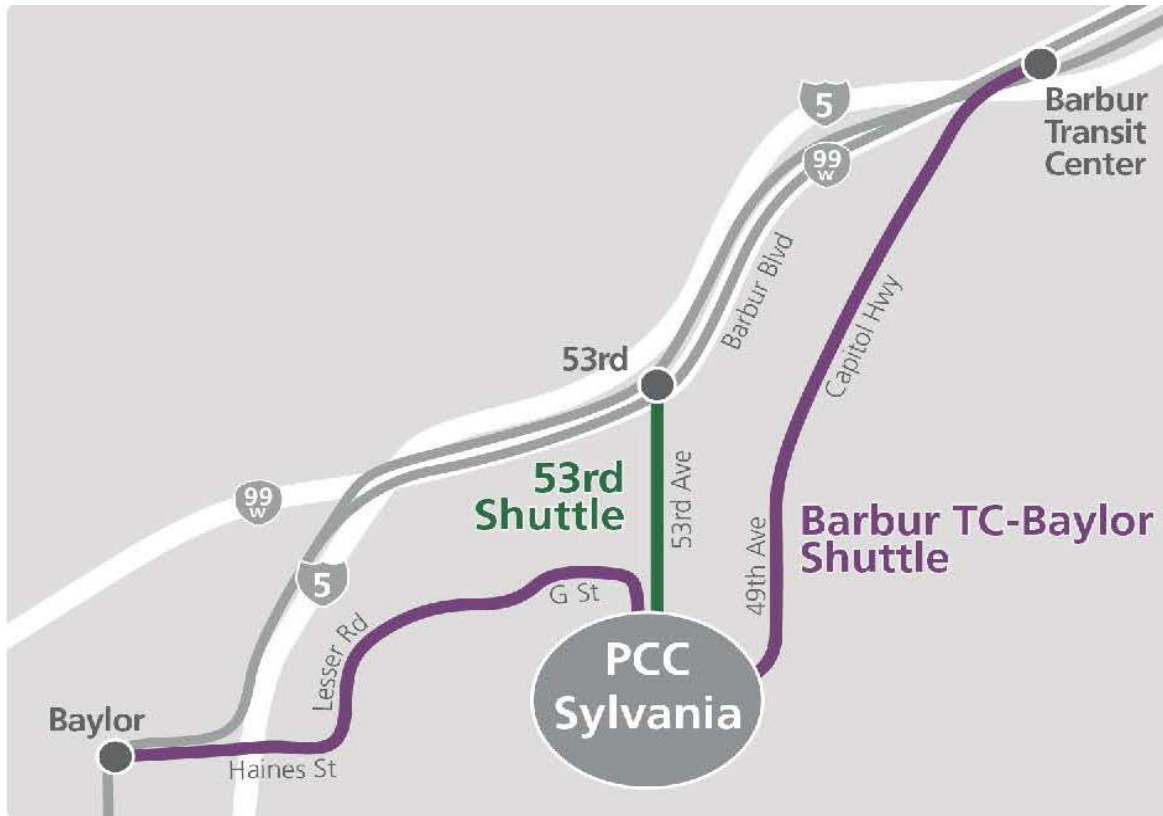
## Where do students live?



- 10% of students use transit
  - 70% of students drive alone
  - 2421 parking spaces
  - 86-96% full in a.m.
- 51



# Evaluate Bus Shuttle Options



- **Efficient** connection to light rail
- Evaluate **shuttle routes** - either:
  - **Tigard-PCC-BTC loop**  
or
  - **SW 53rd**
- **Improve SW 53rd**

# SW 53rd - street improvement



- ¼ mi to edge of campus
- Gravel road
- Park adjoins
- SW Trails access
- Retain gate at PCC



# Park and Ride Evaluation

## Park-and-Ride Facility:



“... A parking lot or structure in association with a light rail station, transit stop, or transit transfer point. Generally, park-and-rides should provide access to regional route service for areas not directly served by transit...”



# Park and Ride Siting

DEIS studied **numerous** locations

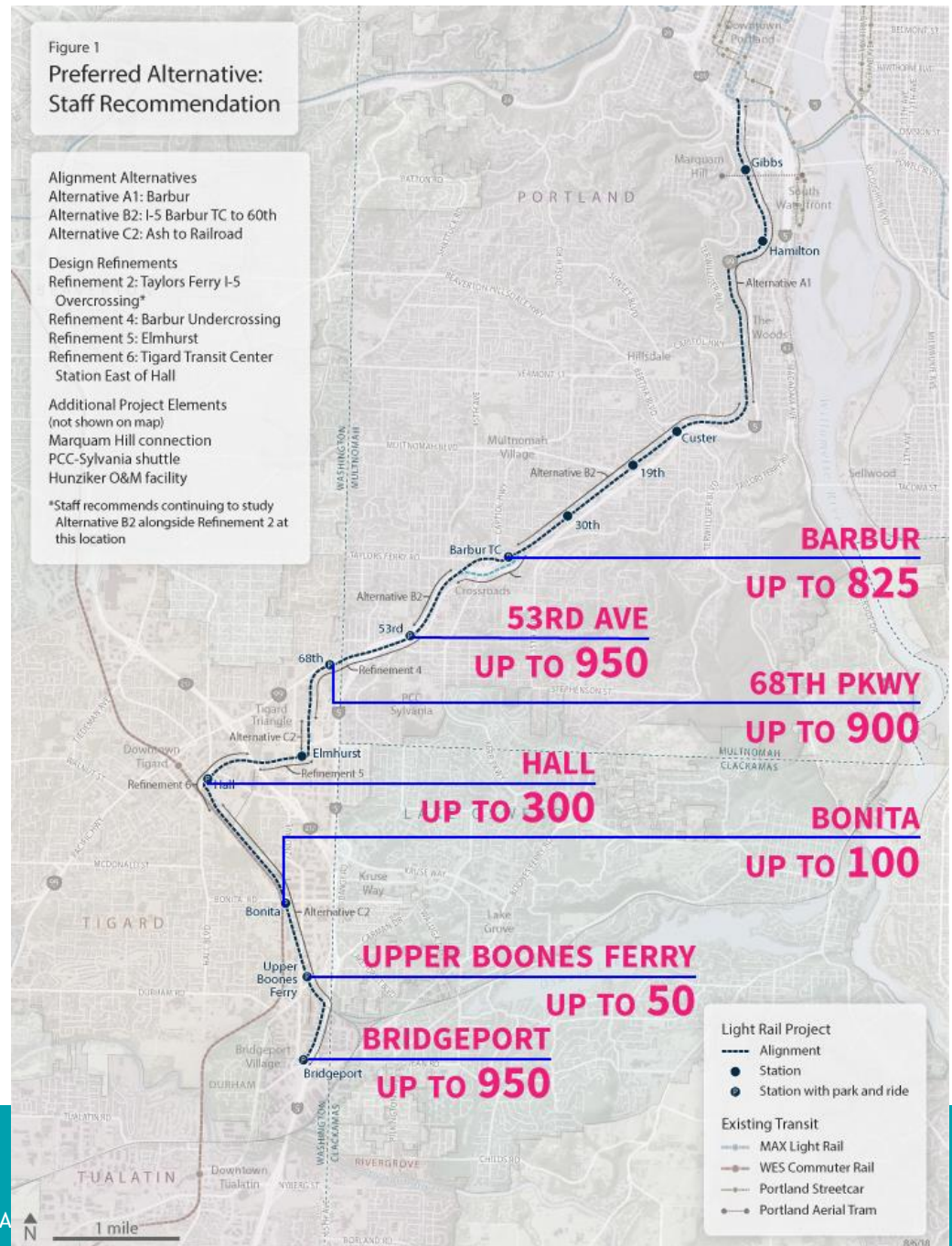
Wanted to **i.d. all possible candidates** at maximum size

Provided a **conservative** view of impacts

Now need to “**right size**” balancing ridership, cost, traffic impacts, land uses, bus transfer connections, and accessibility

# DEIS evaluated these locations

- Spread throughout alignment
- 7 possible sites
- Over 4000 spaces

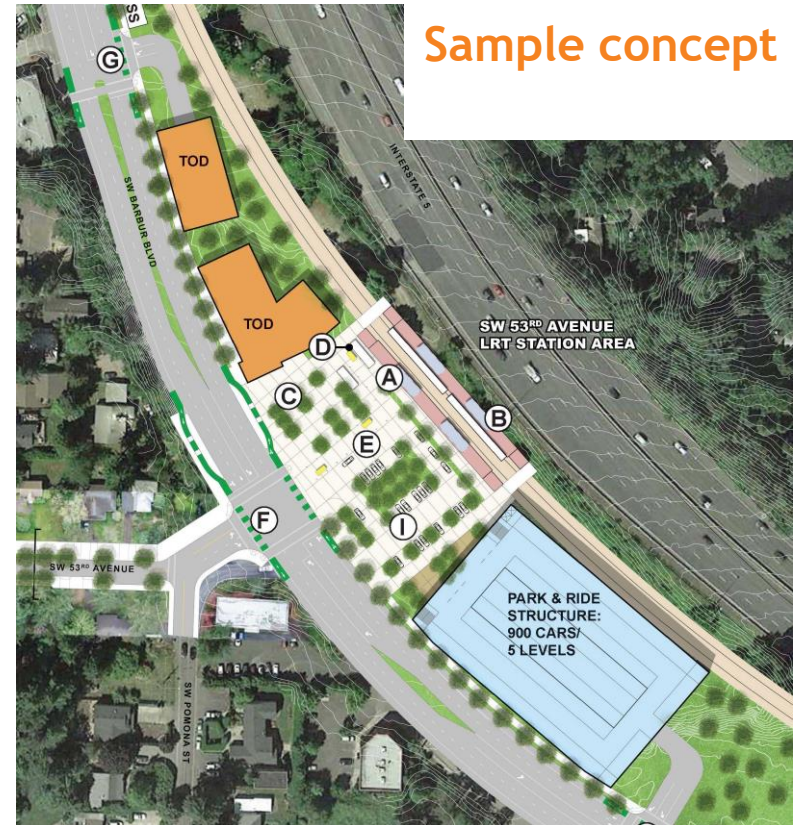


# P&Rs in Portland

## Some considerations:

- LRT station layout
- Bus connections
- number of spaces
- Bike/ped access
- TOD potential

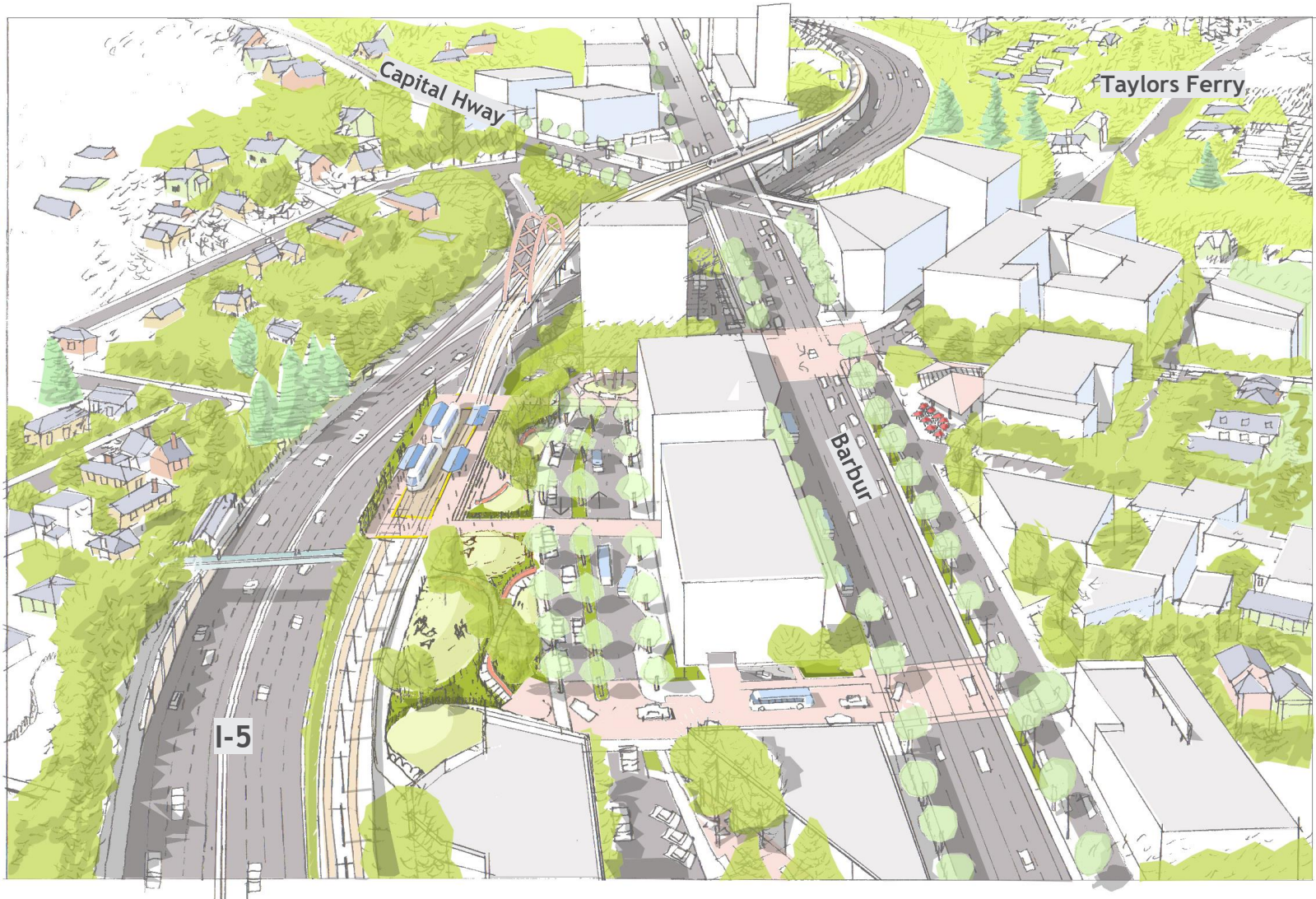
Sample concept



SW 53rd P&R



# Barbur Transit Center



# Other Activities in Support

- Jurisdictional Transfer City
- Historic/cultural resources Metro
  - Landmarks Commission
  - SHPO process
- LUFO is established Metro
  - Single land use action for LRT project; expedited appeal process created by state legislature (HB 3202)
  - All prior LRT projects had their own LUFO
  - Defines locations where project is located including stations, alignments, park and ride and connections
  - Still subject to local land use approvals and permits

# Historic Resources

Metro-Led Process lasting 9-12 months

Concurrent steps for 4(f) and Section 106:

- Public process to gather information, discuss impacts to historic resources
- *Determination of Eligibility* and *Finding of Effect* for each individual resource prepared and submitted to SHPO
- Documentation of impact avoidance and minimization alternatives

Develop MOA between SHPO and FTA on how to resolve any adverse effects to historic resources



# Today's Resolution

- **Accepts** Preferred Alignment and
- **Directs:**
  - Conceptual Design Report
  - Address Issues Raised
  - Implement Ross Island Bridgehead process
  - City Local Match financing strategy
  - Report on Affordable Housing

# Invited Testimony

- **Dr. David J. Schleich** **NUNM**
- **Rebecca Ocken** **PCC**
- **Jason Franklin** **PSU**
  
- **Margaux Macchiaverna** **VA**
- **Michael Harrison & Matt Hilton** **OHSU**

# Public Testimony

## SOUTHWEST LIGHT RAIL TRANSIT

### A TRANSIT FUTURE

**43K** Riders on an average weekday in 2035 on the new MAX line  
**23.8K** Daily commuters between Portland and Tigard/Tualatin  
**12.5K** Portland residents who work in the Tigard/Tualatin area  
**8%** Projected increase in transit ridership in the corridor from light rail alone

### GROWTH MANAGEMENT

70,000 new residents are estimated to live in SW Corridor (SW Portland, Tigard, Tualatin) by 2035.

Over the past 20 years, SW Portland absorbed 7% of the residential growth in 15% of the City of Portland's land area. The SW Light Rail Project will help catalyze development in the corridor.

**10K** Total capacity for new housing units over the next 20 years (based on vacant and underutilized land inventory in Portland)

**3K** Capacity for housing units within a few blocks of the future light rail transit stations

**00:30**

### RELIABLE TRAVEL TIMES

Reduces rush hour transit travel time from Portland State University to Bridgeport Village from 38 minutes by express bus to 30 minutes.

The 30-minute transit travel time will hold steady long into the future, even as congestion increases.



BRIDGEPORT VILLAGE



### CLIMATE ACTION PLAN

The project will reduce daily passenger vehicle miles traveled by about 59,000 miles per day.

Equivalent to a reduction in greenhouse gas emissions by about 7000 to 8000 metric tons annually.



### SOUTHWEST CORRIDOR EQUITABLE HOUSING STRATEGY STRETCH GOALS

**700** New affordable housing units (<60% of area median income) in the next 10 years

**350** Existing market rate units acquired or converted to regulated affordable housing units (up to 700)

\* if new funding resources in the strategy become available



### ACCESS TO OPPORTUNITY

Light rail will improve access between PSU, OHSU, and PCC Sylvania by including a new connections to Marquam Hill through faster transit, and a new bus shuttle service to PCC Sylvania.

### REGIONAL CONNECTIONS

Light rail would increase the number of households and jobs accessible by transit within a half hour:

**> 70% MORE HOUSEHOLDS**  
 Could reach the Barbur Transit Center, Downtown Tigard, and Bridgeport Village

**> 35% MORE JOBS**  
 Could be reached from Downtown Tigard

**> 60% MORE JOBS**  
 Could be reached from the Barbur Transit Center and Bridgeport Village

### TRANSIT PRIORITY

Two miles of the northernmost section of SW Barbur Blvd will include a shared transitway for buses and light rail, allowing 8,900 daily bus riders from SW Portland to bypass traffic congestion.

### REDUCES CONGESTION

Light rail can carry almost 1/5 of southbound, rush hour commuters from Downtown Portland.



### ACTIVE TRANSPORTATION

Project will include new and improved sidewalks, bike lanes, and safe crossings along the alignment.



### ENVIRONMENTAL BENEFITS

Opportunity to replace existing stormwater systems along SW Barbur Blvd to meet current standards and better protect threatened and endangered salmonid species in Tryon Creek.

### SOUTHWEST LIGHT RAIL TRANSIT: A LIVABILITY PROJECT

How easily and safely we're able to get from one place to another has a major effect on our quality of life. Livable communities provide their residents with transportation options that connect people to social activities, economic opportunities, and medical care, and offer convenient, healthy, accessible, and low-cost alternatives to driving.

This project transforms Barbur Boulevard from a deteriorating and underutilized 20th century urban highway that divides neighborhoods, into a 21st century Civic Corridor that brings people together - a place where people want to live and work.



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 PORTLAND BUREAU OF  
 PUBLIC TRANSPORTATION





# Council Discussion & Action

Questions?