

Agenda



Metro

600 NE Grand Ave.
Portland, OR 97232-2736

Meeting: Southwest Corridor Plan Steering Committee
Date: Monday, September 11, 2017
Time: 9 to 11 a.m.
Place: Council Chambers, Metro Regional Center, 600 NE Grand Ave., Portland
Purpose: Receive updates on Southwest Corridor Plan progress and briefings on initial route proposal, New Starts rating, the Naito vs. Barbur alignment decision for LRT, and two related transportation improvements.

9 a.m. Welcome and introductions Co-Chair Dirksen

ACTION ITEM

9:10 a.m. Consideration of the Steering Committee meeting summary Co-Chair Dirksen
From July 10, 2017 ACTION REQUESTED

DISCUSSION ITEMS

9:15 a.m. Southwest Corridor Plan updates Chris Ford, Metro & Leah Robbins, TriMet
Overview of recent and upcoming Plan activities, including environmental review, equitable housing and development efforts, Sustainable City Year Program, and LRT design work. Summary of upcoming meeting dates and topics.
Discussion: Questions on recent staff efforts, upcoming decisions, or project schedule?

9:25 a.m. Public involvement updates Eryn Kehe, Metro
Preview of recent and upcoming engagement activities, including efforts related to potential property impacts. Review of July and August Community Advisory Committee (CAC) meetings.
Discussion: Questions on recent and upcoming public involvement efforts?

9:35 a.m. Initial Route Proposal (IRP) Chris Ford, Metro
Explanation of how staff propose to address federal request for identification of a draft preferred alternative in Draft Environmental Impact Statement
Discussion: Questions on process for identifying the IRP, implications of the IRP or process for identification of the final Preferred Alternative?

9:50 a.m. New Starts rating Dave Unsworth, TriMet
Overview of federal government's approach for evaluating transit projects requesting funding.
Discussion: Questions on implications for selecting the IRP or final Preferred Alternative?

10:05 a.m. Briefings on Naito vs. Barbur, Ross Island Bridgehead and Marquam Hill connection
Matt Bihn, Metro
Anthony Buczek, Metro
Community Advisory liaison
Staff presentation on information related to future decisions. CAC input on key considerations.
Discussion: Questions on the analysis and information presented? What issues does the Steering Committee think are key considerations in this decision?

PUBLIC COMMENT

- 10:45 a.m. Public Comment Co-Chair Dirksen
Opportunity for citizens to provide short testimony and/or submit written comments to inform the Steering Committee decisions.
- 11:00 a.m. Adjourn

Materials for 9/11/2017 meeting:

- 7/10/2017 meeting summary
- June 2016-July 2017 Public Engagement Summary
- New Starts rating memo
- Naito vs. Barbur briefing book
- Ross Island Bridgehead Reconfiguration Option Overview
- Marquam Hill connection briefing book

Meeting: Southwest Corridor Steering Committee

Date/time: Monday, July 10, 2017

Place: Metro Regional Center – Council Chamber, 600 NE Grand Ave., Portland

Committee Members Present

Craig Dirksen, Co-chair	Metro Council
Bob Stacey, Co-chair	Metro Council
John Cook	City of Tigard
Neil McFarlane	TriMet
Lou Ogden	City of Tualatin
Roy Rogers	Washington County
Dan Saltzman	City of Portland
Gery Schirado	City of Durham
Rian Windsheimer	ODOT

Metro Staff Present

Chris Ford, Matt Bihn, Michaela Skiles, Eryn Kehe, Anthony Buczek, Elissa Gertler, Malu Wilkinson, Yuliya Lee, Lucy Folau.

1.0 Welcome and introductions

Co-chair Bob Stacey called the meeting to order at 9:05 a.m. and welcomed the committee members and public to the meeting. The committee members proceeded to introduce themselves and noted their jurisdictional affiliation.

Co-chair Bob Stacey gave a brief summary of the meeting's agenda items and noted that today's meeting action item would be to approve appointment of a new member to the Southwest Corridor Community Advisory Committee.

2.0 Consideration of the Steering Committee meeting summary from May 8, 2017.

Co-chair Bob Stacey asked the committee for approval of the meeting summary from May 8, 2017. With all in favor, the meeting summary was accepted unanimously.

3.0 Public Comment

Mr. William Terrill, Beveland Street business owner and also representing other small business owners on Beveland Street, stated that he is proponent of the mass transit in general, but voiced opposition to having a light rail operating on Beveland Street due to its negative impact on local small businesses. He stated that many of the current small business owners were required by the City of Tigard in the past to put their own money into the development of the Beveland Street, and it would be devastating for them to walk away from such a personal and financial investment.

Mr. Terrill agreed that some sacrifices must be made in order to advance the project. He proposed an alternate route which would use 70th Street to Elmhurst Street, then turn West to cross highway 217, and having only one station on Elmhurst Street in Tigard Triangle. The detailed proposal was submitted at the Southwest Corridor Community Advisory Committee on June 5, 2017 and included as part of that meeting record.

Mr. James Shook, Beveland Road property owner, expressed opposition to having a light rail operating on Beveland Street. He pointed out that the uniqueness and serenity of the location on Beveland Street would be displaced by the light rail operations. Mr. Shook stated that not just small businesses, but also families would be negatively impacted by the light rail operations and urged the committee to consider proposal for only one station in Tigard Triangle on Elmhurst Street.

Ms. Liz Tester, Beveland Street business owner, expressed concern that Southwest Corridor light rail project is going to negatively impact her clients if the light rail is chosen to operate on Beveland Street. She stated that her other business locations are not able to service as many clients as location on Beveland Street and pointed out that reduced parking and noise from the light rail operations would be devastating to her business.

4.0 Southwest Corridor Plan updates

Mr. Chris Ford, Metro, gave a brief overview of the meeting agenda. He reminded the committee that in today's meeting they will hear several briefings from the project partners and staff on the Portland Community College (PCC) – Sylvania campus connection options, along the railroad vs. I-5 in Tigard route options, Downtown Tigard through and branched route options, and on Barbur vs. I-5 route options. Mr. Ford also noted that the City of Portland and the City of Tigard have received Equitable Housing grants from Metro and they will work towards looking for potential equitable housing opportunities related to the Southwest Corridor project. Mr. Ford added that Metro received an Equitable Transit Oriented Development grant last year from the Federal Transit Administration (FTA) and the committee will be updated on it in September. In conclusion, Mr. Ford stated that in today's meeting the committee members will hear updates on public involvement and on the upcoming Light Rail Transit design work and Sustainable City Year Program.

Ms. Leah Robbins, TriMet, gave a brief update on the LRT design work and Sustainable City Year Program. She stated that their project development teams are currently in the middle of the procurement process. Two contracts are being awarded (transit design and urban design), and hopefully those two entities will be formed into one consultant team. Ms. Robbins explained that the role of the consultant team would be to analyze preliminary proposed alignments and alternatives and use data from the Draft Environmental Impact Statement (DEIS) to come up with strategies to avoid, minimize or mitigate impacts of the project before moving on to the project development phase.

5.0 Public involvement updates

Ms. Eryn Kehe, Metro, reminded the committee that the Southwest Corridor Community Advisory Committee's liaison will give updates from the June meeting in today's meeting. She also gave a brief update of recent community involvement efforts which included:

- Southwest Corridor Plan newsletter mailing
- Barbur Boulevard businesses outreach
- Attending several meetings - Southwest Neighborhoods, Inc. (SWNI) Transportation Committee, Far Southwest Neighborhood Association, Portland Planning land use, Westside Economic Alliance, Downtown Tigard Business Alliance, Beveland Street businesses meeting
- Meeting one-on-one with several property owners
- Tabling at Tigard Balloon Festival and Muslim Cultural Festival
- Presenting at St. Anthony's Church – outreach to Vietnamese and Spanish speaking parishioners

6.0 Consideration of appointing a new member to the Southwest Corridor Community Advisory Committee

MOTION: Co-chair Craig Dirksen moved to approve Vasilios Garyfallou, Barbur Boulevard business representative, as a new member to the Southwest Corridor Community Advisory Committee.

ACTION: Without any comments, the motion passed unanimously.

7.0 PCC connection and Railroad vs. I-5 (Tigard) briefings

Mr. Matt Bihn, Metro, gave a presentation on Portland Community College (PCC)-Sylvania shuttle connection options. He elaborated on the two current options which included:

- 53rd Avenue automated shuttle
- Barbur TC – Baylor shuttle

Mr. Bihn explained considerations for both of the connection options which included neighborhood impacts, travel time, transfer convenience, capital and operating costs (pending information). In terms of neighborhood impacts, the two options included:

53rd Avenue automated shuttle

- On-demand electric vehicles, so frequency would vary throughout the day
- Would be located on 53rd Avenue (currently low-traffic street)

Barbur TC – Baylor shuttle

- Projected to add 18 buses per hour (peak) and 8 buses per hour (off-peak) to Capitol, Lesser, and Haines (which have existing bus routes)

Mr. Bihn summarized travel time and transfer convenience considerations which included:

53rd Avenue automated shuttle

- Barbur TC to PCC – 4 minutes
- Baylor to PCC – 5 minutes

Barbur TC – Baylor shuttle

- Barbur TC to PCC – 4-7 minutes
- Baylor to PCC – 5-7 minutes

Mr. Bihn stated that additional pending information would include capital costs, operating costs, and any other findings from the DEIS.

The committee members raised questions about the type of riders who would be using 53rd Avenue and Baylor shuttles, how many stops would be there on campus, and requested more details on the bus service that would support PCC connection options.

Mr. Bihn continued his presentation by giving an overview of the Railroad and I-5 route options. Two proposed route options included:

Railroad Option

- Crosses 72nd and Upper Boones
- Elevated at Bonita

I-5 Option

- Crosses 72nd at grade
- Under Bonita and Upper Boones at grade

Mr. Bihn gave an overview of considerations for both of the options which included station locations, park & rides, travel time, property impacts, ridership, traffic analysis and potential DEIS findings (pending information). He summarized how each of the route options compared to each other in each consideration:

Station locations**Railroad Option**

- Bonita – Elevated station with stairs/elevator
- Upper Boones Ferry – At-grade

I-5 Option

- Bonita – At-grade (slightly below Bonita)
- Upper Boones Ferry – At-grade (slightly below Upper Boones)

Travel time

The Railroad alignment would be 30 seconds faster than the I-5 alignment.

Projected Ridership (2035)

- **Railroad** is faster, but an I-5 station would attract more riders at Bonita due to proximity to Kruse Way
- **I-5** would have 1% more line riders and 2% more new transit trips

Park and Rides

- **Railroad Option** – 100 spaces at Bonita, 50 spaces at Upper Boones Ferry
- **I-5 Option** – 150 spaces at Bonita, 600 spaces at Upper Boones Ferry

Property impacts

- **I-5 alignment** - 13 more acres of full or partial property acquisitions (30% higher)
- **Railroad alignment** - assumes a 25-foot buffer between LRT and freight rail tracks; if a 50-foot buffer is required the impacts would increase significantly

Traffic impacts (at Upper Boones Ferry Road)

- **Railroad** – At-grade crossing
- **I-5** – runs below grade passing under road, park and ride access

Mr. Bihn concluded his presentation with a reminder that additional traffic information and findings from DEIS are still pending and will be presented to the committee later on.

The committee members deliberated and asked to clarify information on reaching low income populations around the station locations, commented on not adding more constraints on the current service while working on lane considerations for the I-5 alignment option thus allowing future plans for development, and noted how the ability to build higher structures due to transit options can bring potential development opportunities for the largest landholder in Tigard. In addition, comments were made to highlight the differences for operational facilities for two of the alignment options.

Mr. Michael Kisor, Southwest Corridor Community Advisory Committee (SW CAC) liaison, also resident of Southwest Portland and bicycle and pedestrian advocate, presented on the SW CAC discussion on the PCC shuttle connection options.

Mr. Kisor stated that overall, committee members had more to say about the 53rd Avenue shuttle option, both positive and negative. The Barbur TC/Baylor Shuttle was seen as being more flexible and providing more connection options by connecting at two light rail stations. On the other side, strengths of the 53rd Avenue Shuttle included better reliability, a smaller carbon footprint, lower operating costs and interest in exploring a new technology. The committee shared several concerns about the 53rd Avenue shuttle including safety, for riders, neighbors, cyclists, pedestrians, pets and children on the street. There was also concern about neighborhood impacts, vehicle storage, wait times/frequency and potential congestion at the SW 53rd station. Concerns about the Barbur TC/Baylor shuttle included increased congestion on local arterials, a higher carbon footprint and less reliability.

8.0 Downtown Tigard briefing

Mr. Matt Bihn, Metro, presented to the committee the route choices for the Through and Branched route options in Downtown Tigard. Mr. Bihn stated that the Through Route choices included operating on either Clinton Street or Ash Street. He proceeded by comparing those two choices in the following categories:

Travel time and ridership

- Clinton: 1 minute 20 seconds faster
- Ash: 2% more line riders and new system trips

Walkshed – Tigard Triangle

- Clinton: 1 stop – smaller walkshed area
- Ash: 2 stops – larger walkshed area

Property impacts, redevelopment potential, support of local plans

- Clinton: 11% more acres of acquisitions, support Tigard HCT Land Use Plan
- Ash: more relocations, more residential impacts, two stations in Triangle – better support for Triangle Strategic Plan, support Tigard HCT Land Use Plan

Traffic impacts

- Clinton: less interaction with traffic in Triangle, but proximity of Hall intersection to 99W is a concern

Pending information

- Capital costs, traffic analysis, impacts to wetlands, displacements of residents and businesses, effects on communities

Mr. Bihn continued with an overview of the Branched Route choices which included operating on either Ash Street or Wall Street. He summarized the two choices by comparing them in the following categories:

Travel time and ridership

- Ash: 1 minute 48 seconds faster, 1% more line riders and 2% new system trips

Property impacts, redevelopment potential, support of local plans

- Wall: 15% more acres of acquisitions, supports Triangle Strategic Plan and Tigard HCT Land Use Plan
- Ash: more relocations, more residential impacts, support Triangle Strategic Plan and Tigard HCT Land Use Plan

Traffic impacts

- Ash: more at-grade street crossings

Pending information:

- Capital costs, traffic analysis, impacts to wetlands, displacements of residents and businesses, effects on communities

The committee members deliberated and asked for additional details about why Wall Street is selected for the branched route option and why proposing two stations in the Tigard Triangle. Mr. Bihn responded that the Wall Street option will have a fewer impacts on the Downtown Tigard and potential for future light rail extension. He added that the City of Tigard expressed interest in having two stations in Tigard Triangle for development that would benefit the entire area. The committee members commented on the need for two stations in Tigard Triangle, urged staff to look for alternate routes in place of Beveland Street, and emphasized the importance of connecting to other modes of transportation while looking for alternate route options.

9.0 Barbur vs. I-5 briefing

Mr. Matt Bihn, Metro, presented to the committee the route choices for the Barbur or Adjacent to I-5 route options. Mr. Bihn explained there are two choices leaving south Portland: center-running on Barbur Boulevard or adjacent to I-5. Once the alignment switches off Barbur to run adjacent

along to I-5, then it will stay along I-5. There will be no moving back and forth between the two alignments.

Roadway Character – Today

- Gaps in sidewalks and bike lanes; spacing of protected pedestrian crossings insufficient for a pedestrian corridor; and in places, auto, bike, pedestrian lane widths not to ODOT or City of Portland guidelines

With adjacent to I-5 alignment:

- Auto lanes largely unchanged, bike and sidewalk gaps filled but maybe not to guidelines, some pedestrian crossings added for stations; no corridor-length storm water treatment, street trees, lighting, fewer traffic and property impacts; and FTA funding eligibility uncertain for improvements to Barbur

With center-running alignment:

- Complete rebuild of Barbur w/new auto, bike, pedestrian facilities designed to meet guidelines; new storm water, street trees, lighting, new pedestrian crossings, signalized intersections, wider profile requires more acquisitions

Auto operations

With adjacent to I-5 alignment:

- Auto lanes, intersections, signals largely unchanged; gated crossing for LRT transition from Barbur, and at SW Spring Garden; some local circulation impacts (Multnomah near I-5, Spring Garden)

With center-running alignment:

- Preserves 2 through-lanes in each direction; removes center-turn lane where it exists; U-turns required to access businesses on opposite side; longer walk phases due to wider street; potential new signals and new pedestrian crossing

LRT operations – reliability

With adjacent to I-5 alignment:

- LRT in exclusive ROW; not affected by signals, except at Spring Garden

With center-running alignment:

- Traffic signals to give LRT priority, but some delays for longer pedestrian crossings phases and longer left-turn/U-turn phases possible

LRT operations – travel time

- Custer to 26th: adjacent to I-5 faster than center-running
- 26th to 60th: center-running faster than adjacent to I-5
- Zero to 80 seconds delay between Terwilliger and 60th due to signals on center-running

Pedestrian and biking environment

With adjacent to I-5 alignment:

- Bike lane/sidewalk gaps filled, but still narrow in places; stations further away from most people; for most users, station access requires crossing all lanes

With center-running alignment:

- Corridor-length wide sidewalks and bike lanes; more protected pedestrian crossings; center platforms require crossing of 2 lanes for all users

Mr. Bihn explained that the wider width of crossing additional lanes for pedestrian environment (in addition to four lanes, plus platform, plus meridian), the signals will take longer with impacts traffic and signal operations.

Quality of stations**With adjacent to I-5 alignment:**

- Stations further from most users, less visible, more isolated; less accessible to emergency responders; and visual impacts – structures and lighting

With center-running alignment:

- Stations closer to most users; more visible, less isolated; more accessible to emergency responders; possibly perceived as safer

Redevelopment/Barbur Concept Plan**Barbur Concept Plan:**

- Calls for Barbur transition from highway to a “civic corridor”; key finding: HCT is critical to the vision; identifies focus areas that correspond to stations; proximity to envisioned redevelopment areas, better accessibility to more users, better visibility make center-running station platforms more likely to encourage redevelopment

The committee had questions and comments regarding the presentation, beginning with the impact on accessibility to the stations, for vehicle park-and-rides and buses. Mr. Bihn responded there would not be any real differences in design for either option; the model is not refined enough to show any differences. Another comment was about the center-running option, that businesses are concerned about safety aspect, taking away left turn into businesses. The vehicle impact of U-turns makes a longer path for people to cross, it also takes longer to make a U-turn, which means cars are waiting in line longer to make the U-turn. The tradeoff is safety vs accessibility of getting the cars through while waiting for pedestrians to cross to the platforms.

Committee members discussed the suggestion of having another physical tour, especially for Beveland Street, Ash and Wall, and the station at Bonita. A committee member expressed a concern regarding the viability of the dollars going forward to continue this project, and would like to have an update for potential revenue, providing information for how financially healthy the project is for at least another year. There will be challenges; the committee will need to come back for a much more thorough conversation. The project is currently funded to get to the DEIS. Staff will be evaluating the legislative transportation package; hopefully for the September meeting, more information will be provided. The idea of doing a route tour is very timely, especially now after receiving updates and analysis of the different alignments. It would be very helpful to have more in-depth diagrams/maps showing locations of stations, etc. for the tour. The chair observed perhaps a corridor tour could be provided before or in conjunction with the upcoming September committee meeting.

10.0 Adjourn

There being no further business, Co-chair Craig Dirksen adjourned the meeting at 11:09 a.m.

Attachments to the Record:

Item	Type	Document Date	Description	Document Number
1	Agenda	07/10/17	Meeting agenda	071017SWCSC-01
2	Summary	05/08/17	05/08/17 meeting summary	071017SWCSC-02
3	Document	06/01/17	Decision Briefing Book – PCC-Sylvania Shuttle	071017SWCSC-03
4	Document	05/18/17	Decision Briefing Book – Along the Railroad or I-5 in Tigard?	071017SWCSC-04

5	Document	06/05/17	CAC meeting June 5, 2017 – Key Considerations	071017SWCSC-05
6	Document	06/30/17	Decision Briefing Book – Downtown Tigard: Through Route	071017SWCSC-06
7	Document	06/30/17	Decision Briefing Book – Downtown Tigard: Branched Route	071017SWCSC-07
8	Document	06/30/17	Decision Briefing Book – On Barbur or Along I-5?	071017SWCSC-08
9	Email	07/10/17	Testimony from Michael Kisor (Loop hybrid proposal)	071017SWCSC-09

June 2016-July 2017 Public Engagement Summary

The purpose of this public engagement summary is to document the activities and outcomes of Southwest Corridor Plan outreach from June 2016 through July 2017. This work builds on public engagement activities conducted since the beginning of the Southwest Corridor Plan process, and begins to focus specifically on the light rail project as it enters the Draft Environmental Impact Statement (DEIS) period.

Overview

Seven years ago, regional leaders began envisioning a set of transportation and land use solutions to address key challenges and enhance livability in the Southwest Corridor. The Southwest Corridor Plan is a package of transit, roadway, bicycle and pedestrian solutions that can help reduce congestion, improve circulation and quality of life in the corridor. The Southwest Corridor Plan defines transportation investments to help realize the local land use visions adopted by each community in the area. In 2016, the decisions to study light rail transit and route options were narrowed into a package for study in the Draft Environmental Impact Study (DEIS). The DEIS study is underway now and it is expected to result in a report for public review and comment in early 2018.

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Metro News stories

Earned media coverage



Bridgeport Farmer's Market, July 2017

The Draft Environmental Impact Study

A key part of the Southwest Corridor Plan is a proposed 12-mile MAX light rail line from downtown Portland to Tigard and Bridgeport Village in Tualatin, along with numerous walking, biking and roadway projects to help people access stations.

Light rail is typically paid for by a mixture of federal and local dollars. To qualify for federal financial support, the project is required by the National Environmental Policy Act (NEPA) to complete an Environmental Impact Statement, or EIS.

The Federal Transit Administration (FTA), Metro and TriMet are the co-lead agencies for the environmental review process.

The nature of the federal environmental review process does not lend itself to ongoing

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public engagement. No decisions may be made while the environmental assessment is in process, and the findings of analysis must be vetted with participating agencies (including the City of Portland) and the Federal Transit Administration (FTA) prior to release.

Community Advisory Committee (CAC)

The CAC was created and populated by the Southwest Corridor Steering Committee in December 2016, based on guidance from project partner staff. The role of the CAC is to advise the Steering Committee on the selection of the Locally Preferred Alternative (LPA), which is the single light rail alignment that will be advanced to the Federal Transit Administration for their consideration.

Membership in the CAC was established through an open, public application process. Applications were accepted from October 31 to November 21, 2016. The process was advertised on the Metro website, on social media, via our interested parties email list, and by partner agencies including the City of

Portland. The project received 47 applications (21 from Portland and 26 from other areas). The Steering Committee appointed a 19-person committee. The committee is made up of twelve men and seven women, with nine members from Portland, seven from Tigard, two from Tualatin and one from Washington County.

The selection of the LPA is anticipated to occur in March 2018, preceded by the CAC's recommendation in February or March 2018. In preparation of this recommendation, the CAC is meeting the 1st Monday of every month – usually at the Multnomah Arts Center – to hear from project staff on the project background and upcoming decisions. Starting in May 2017, the CAC was presented with Briefing Books (see below) that summarizes alignment choices. These presentations will continue through October 2017. Through facilitated discussion, the CAC identifies key considerations that they think will be important during LPA decision-making. These considerations are presented to the Southwest Corridor Steering Committee by CAC liaisons. Early in 2018, the CAC will have the information they need to make an LPA recommendation to the Steering Committee.



Public Engagement Desired Outcomes

- Input on key issues and trade-offs specific to each key community in the corridor
- Input on desired benefits that Southwest Corridor Plan investments can bring to communities in the region
- Elevated voices of champions for the project
- Public stakeholders feel they have access to project details, technical staff and decision makers
- Decision-makers understand and consider public input in their decision making



Community Advisory Committee

- Carine Arendes - Tigard City Center Advisory Committee representative
- Roger Averbeck - Oregon Walks and Portland Pedestrian Advisory Committee representative
- Stephan Belding - Tigard Pedestrian and Bicycle Advisory committee representative
- Rachel Duke – Community Partners for Affordable Housing
- Tim Dickey - At large
- Jim Gardner - South Portland neighborhood representative
- Bill Garyfallou – Barbur business and property owner
- Chad Hastings - Center Cal Properties
- Michael Kisor - SW Portland resident and bicycle/ pedestrian advocate
- Lonnie Martinez- Tigard Transportation Advisory Committee representative
- Debi Mollahan - Tigard Chamber of Commerce
- Linda Moholt- Tualatin Chamber of Commerce
- Kathleen McMullen – PCC Sylvania Campus
- Evelyn Murphy - At large
- Brian Newman – OHSU, Major employer, medical facility and education institution
- Arnie Panitch - TriMet Committee on Accessible Transit representative
- Elise Shearer - Tigard Transportation Advisory Committee
- Ian Stude – Portland State University
- Ibrahim Turki – Muslim Educational Trust

Engagement methods and activities

To maintain dialogue and goodwill from the project's extensive public engagement, as detailed above, Metro and other project partners have worked to maintain an ongoing presence in the SW Corridor community to supplement the required scoping period and public review period for the Draft Environmental Impact Statement (DEIS). The components of our public involvement process have evolved to meet the specific goals of the environmental review phase, and include the following, which are described further below:

- Formation of a Community Advisory Committee, which meets monthly
- Briefing books
- Project notification mailing
- Public forums
- Regular scheduled public meetings with neighborhood associations and other corridor stakeholders
- Ongoing public awareness events, including community group presentations and tabling events
- Door to door visits
- Individual meetings with potentially impacted property owners
- Outreach to comply with federal environmental justice guidelines

What we've heard

- Support for the project
- Questions about schedule, funding and process
- Suggestions for other alignment alternatives to avoid impacts to certain properties
- Concern about more people coming into established neighborhoods
- Interest in good bus service in the corridor
- Interest in how bus routes would connect with this system
- Concern about property impacts
- Questions about what other destinations were considered (Wilsonville, Beaverton, Sherwood, etc.)



Tools/Methods

Briefing books

In order to maintain public interest and engagement in the upcoming LPA selection, and prepare decision makers for the complex decisions included in the LPA, project partners have been releasing Briefing Books, each focusing on an alignment section. Through fall 2017, individual decision briefing books will be released to inform conversations about the key considerations for each major decision. The first release of each booklet is a draft. Because the environmental impact analysis is ongoing, briefing books will be updated as new information becomes available. The schedule for Briefing Book release is:

- May 2017 - Branch vs. Through configuration
- June - PCC Sylvania connection options, RR vs. I-5 alignment options in southern Tigard
- July - Downtown Tigard alignment options, Barbur vs. adjacent to I-5 alignment options
- August - Barbur vs. Naito alignment options, Marquam Hill connection options
- September - Updates on earlier briefings
- October - Updates on earlier briefings, Ross Island Bridgehead

Project notification mailer

Metro mailed a summary of the proposed light rail project to all mailing addresses within approximately 1200 feet of a proposed alignment (including residential and business tenants). In addition, property owners on Barbur Blvd. with a registered address elsewhere received a mailing. Also, all properties fronting on a station access project (mainly sidewalks and bike facilities) received a mailing. In all, around 11,000 mailers were sent out in late March 2017. A copy of the notification mailer is attached.

Public forums

Several general public meetings have occurred during the environmental review phase, which have allowed for public input, sharing of information and general project awareness.

What we did/Who we met with

Community Advisory Committee (CAC)



Residents, businesses and property owners along the SW Corridor

- DEIS Scoping Open House at Wilson HS – 9/22/2016
- Tigard Business breakfast meeting – 5/25/2017
- Portland Land Use meetings – 6/22/2017 at NUNM & 6/29/2017 at Multnomah Arts Center

Tools/Methods

Neighborhood and stakeholder meetings

Metro and project partners have maintained a consistent schedule of visiting neighborhood associations and other groups to provide project updates and the opportunity for questions and input. These include quarterly meetings with the SWNI Transportation Committee and frequent attendance at other gatherings. Meetings held in Portland alone during the environmental review phase include:

What we did/Who we met with

- SWNI Transportation Committee – 6/20/2016, 9/19/2016, 11/21/2016, 5/15/2017
- Far SW NA – 5/28/2016, 1/24/2017, 6/27/2017
- CPO 4M - 9/28/2016
- Westside Economic Alliance – 5/29/2016
- Hillsdale NA – 12/20/16
- CPO 4K – 1/24/2017
- South Portland Neighborhood Association – 9/6/2016
- West Portland Park – 7/14/2016, 9/8/2016, 2/9/2017
- Friends of Terwilliger and the Homestead Neighborhood Association (joint mtgs) – 9/12/2016, 11/1/2016
- City of Portland Pedestrian & Bicycle Advisory Committees (joint meeting) – 03/14/2017
- Downtown Tigard Business Alliance – 6/28/2017
- Beveland Street Business meeting (Tigard) – 5/28/2017
- Jackson Middle School SUN school summer program – 7/20/2017

Public awareness events

As in earlier phases of the project, partner staff continue to attend public events in order to share general information on the project and answer questions. Past and future events include:

- September, 2016 – Downtown Tigard Street Fair, Tigard Farmer's Market, OHSU Farmer's Market
- October, 2016 – Hillsdale Farmer's Market
- June, 2017 – St Anthony's parish tabling (Tigard), Tigard Balloon Festival
- July, 2017 – Portland International Muslim Cultural Festival, Bridgeport Farmer's Market, Tigard Farmer's Market



Tools/Methods

Individual meetings with impacted property owners

Metro, TriMet and partner staff (including City of Portland staff) met with property owners, upon their request, to show them potential alignments and discuss possible impacts on their properties. The purpose is to provide owners current plans and share information about the process and the decision timeline. These meetings also initiate a discussion about possible ways to avoid, minimize or mitigate impacts to these properties. About a dozen of these meetings have occurred since May of 2017.

Project staff have also visited businesses districts where no business association exists, like on Barbur Blvd. Staff visited, emailed or called over 230 businesses and property owners on Barbur Blvd. to share information about the project.

What we did/Who we met with

Property owners along the SW Corridor



Environmental Justice Outreach

In the upcoming months, Metro and Trimet will identify and engage environmental justice populations in the SW Corridor which could be impacted by proposed alignments. So far, the project has aligned itself with St. Anthony's Church in Tigard where Vietnamese and Spanish-speaking services are popular to identify events to share project information. The mailer was translated into Spanish to share information with LEP populations in the area. Staff is partnering with the Muslim Educational Trust to co-host events with SW Portland Muslim community members. The first event together was the Muslim Cultural Festival held July 8, 2017. The event had a table with information about the project.

- St. Anthony's Church (outreach to Vietnamese and Spanish speaking parishioners)—6/11/17
- Muslim Cultural Festival—7/8/17



Collection of Southwest Corridor Stories and Metro Newsfeeds, June 2017-August 2017

More Than MAX: 4 Projects that Show the Vision for the Southwest Corridor

May 25, 2016 4:39pm

The Southwest Corridor Plan is more than light rail. It's an integrated plan for getting around in a growing, high-opportunity area of the Portland region. See a few other projects that are included.



Leaders Decide: Light Rail for Portland to Bridgeport Village, No PCC Tunnel

By Craig Beebe

May 10, 2016 8:36 a.m.

Leaders on the Southwest Corridor Plan steering committee voted to advance light rail instead of bus rapid transit between Portland, Tigard and Bridgeport Village in Tualatin. They also decided to stop studying a light rail tunnel to Portland Community College - Sylvania.



Southwest Corridor Leaders Meet Monday to Discuss Next Steps

June 9, 2016 12:44 p.m.

The Southwest Corridor Plan steering committee meets June 13 in Beaverton. Here's the agenda.



History Through a Lens: Glimpses of a Changing Southwest Corridor

By Justin Sherrill

June 7, 2016 10:30 a.m.

Take an interactive look at over a century of changes in communities along the Southwest Corridor.



Why Here? Why Now? 4 Facts About the Southwest Corridor

June 3, 2016 9 a.m.

Why are so many communities working together on the Southwest Corridor Plan? Here are four quick facts about the area, stretching from Portland to Tigard, Tualatin and Sherwood.

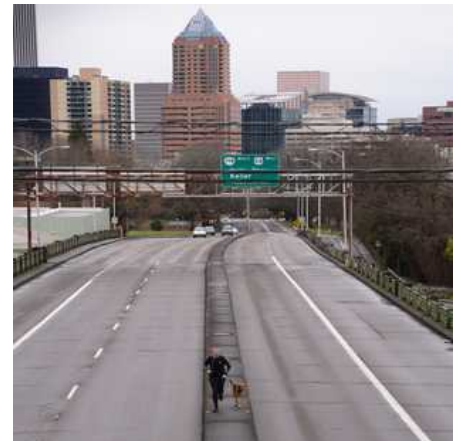


Looking Ahead: 10 Questions About the Southwest Corridor

By Craig Beebe

June 3, 2016 9 a.m.

The Portland region's next light rail line is in the works. And it's going southwest, from downtown Portland to Tigard and Tualatin. But there's a lot more than light rail ahead for this growing part of the region. Want to know what's up? Get answers to your questions here.



Apply Now: Southwest Corridor Community Advisory Committee Forming

Oct. 31, 2016 2:43 p.m.

As the proposed Southwest Corridor light rail project proceeds into a detailed environmental impact review, a committee of community members will play an important role in guiding its progress. Now is the time to apply to join.



Metro Receives \$895K Grant to Expand Jobs and Housing Opportunity in Southwest Corridor

Oct. 11, 2016 5:14 p.m.

The Federal Transit Administration has awarded Metro an \$895,000 grant to create an equitable economic development and housing strategy for the Southwest Corridor, where the region's next MAX line could connect Portland State University to Bridgeport Village as soon as 2025.



Comment Today to Shape Important Southwest Light Rail Study

Sept. 2, 2016 12:30 p.m.

A proposed light rail line in the Southwest Corridor is about to enter a new phase of study. You can help inform what's included, now through Oct. 3.



Southwest Corridor Update: Upcoming Comment Period Will Inform Environmental Review

Aug. 8, 2016 11:47 a.m.

The Southwest Corridor Plan is preparing to enter its next phase. Here's what you need to know to stay engaged.



Southwest Corridor Leaders Meet Monday to Discuss Next Steps

June 9, 2016 12:44 p.m.

The Southwest Corridor Plan steering committee meets June 13 in Beaverton. Here's the agenda.



Southwest Corridor Updates: Refined Recommendations, What We Heard and a Chance to Serve

Nov. 16, 2016 4:46 p.m.

Here's an update on what's new with the Southwest Corridor Plan: Staff recommendations, comment summaries and an opportunity to be a voice for your community.



Southwest Light Rail Environmental Impact Review Set to Proceed

By Craig Beebe

Dec. 14, 2016 8:30 a.m.

A few weeks after winning narrow support from Tigard voters, a proposed Portland-to-Tualatin light rail project proceeded to its next stop Monday as local leaders finalized the range of routes, stations and related walking, biking and roadway projects to be studied in a federally-required environmental review.



Why They Serve: 3 Questions for Southwest Corridor Community Representatives

By Craig Beebe

Feb. 8, 2017 10:30 a.m.

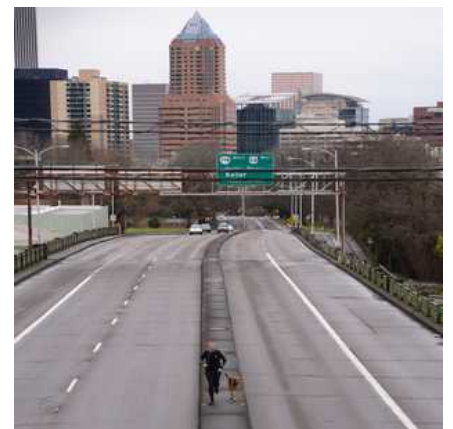
A new community advisory committee will play an important role in guiding the course of the Portland region's next MAX line. After the committee's first meeting this week, we checked in with a few members about why they serve and the perspective they'll bring.



Southwest Corridor Updates: Light Rail Study Continuing, Choices Ahead

March 28, 2017 7:43 a.m.

Get the latest on the Southwest Corridor Plan's ongoing light rail study.



In Their Words: 5 Young People Look to Southwest Corridor's Future

By Russ Doubleday

March 6, 2017 12:33 p.m.

We talked to middle and high school students from Portland and Tigard to hear their thoughts on their communities and the changes and opportunities Southwest Corridor light rail could bring.



In Their Words: Talking Transportation at Tigard's Supa Fresh Youth Farm

By Russ Doubleday

Feb. 15, 2017 11:30 a.m.

The young people who work at Supa Fresh Youth Farm live in communities around the region. For many, transportation is a challenge. In a recent interview, several Supa Fresh workers shared their perspectives on the community at the farm and in Tigard, hopes for future transportation in the area, and how future students may benefit from the Southwest Corridor light rail project, which is proposed to begin service in 2025.



1000 Friends of Oregon, Metro Collaborate to Prepare Community Leaders in Land Use Advocacy

By Guadalupe Triana

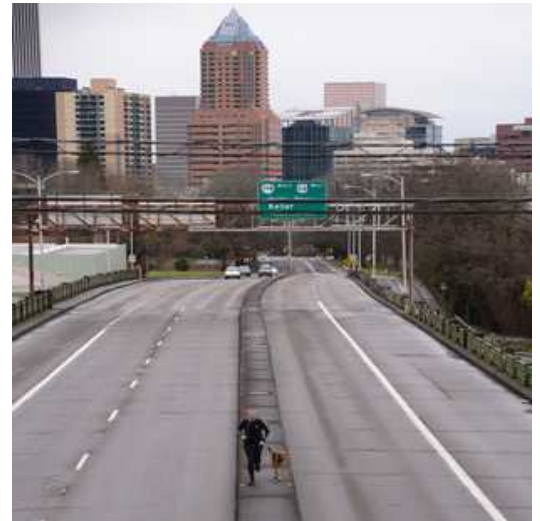
March 17, 2017 4:33 p.m. At 1000 Friends of Oregon, the Land Use Leadership Initiative has become a useful way for the land use-advocacy nonprofit and Metro to introduce more ways for leaders to gain a better understanding of what Metro is responsible for as a way to become effective advocates.



Southwest Corridor Updates: Light Rail Study Continuing, Choices Ahead

March 28, 2017 7:43 a.m.

Get the latest on the Southwest Corridor Plan's ongoing light rail study.



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Southwest Corridor - Earned media coverage

June 7, 2016 – July 31, 2017

Publication	Date	Headline	Author
Daily Journal of Commerce	6.6.2016	<u>Changes in store for Southwest Corridor</u>	Brian Campbell
BTA blog	5.27.16	<u>Southwest Corridor Open House weigh in</u>	Sarah Newsome
BTA blog	6.8.2016	<u>Weigh in: Walking and biking in the Southwest Corridor</u>	Lauren Hugel
Portland Tribune	6.8.16	<u>Tigard eyes November vote on Southwest Corridor line</u>	Mark Miller
BTA blog	6.10.16	<u>Looking ahead: 10 questions about the Southwest Corridor</u>	Metro
Willamette Week	6.15.16	<u>Portland Voters' Support Is Soft for Light Rail to Tualatin</u>	WW Staff
Portland Tribune	6.16.16	<u>TriMet: Tigard voters could kill southwest MAX line in November</u>	Jim Redden
Tigard Tualatin Times	6.29.16	<u>Tigard to vote on authorizing Southwest Corridor project</u>	Mark Miller
Oregonian	6.30.16	<u>Tigard vote could decide fate of Southwest Corridor light rail</u>	Elliot Njus
Tigard Tualatin Times	8.11.16	<u>Southwest Corridor plan enters environmental review phase</u>	Ravleen Kaur
Portland Tribune	8.11.16	<u>Talk of 'Portland creep' comes home</u>	Jim Redden
Tigard Tualatin Times	8.26.16	<u>Mayor Cook chairing 'yes' campaign for Tigard light rail</u>	Mark Miller
Portland Tribune	8.30.16	<u>My View: Tigard mayor endorses MAX expansion</u>	John Cook

Publication	Date	Headline	Author
Tigard Tualatin Times	9.06.16	<u>Public input sought on Southwest Corridor project</u>	Jim Redden
Portland Tribune	9.08.16	<u>SW Corridor Project seeks public input</u>	Jim Redden
Tigard Tualatin Times	10.06.16	<u>Give Tigard residents a chance to vote on MAX light rail option</u>	Craig Dirksen
Metro Newsfeed	10.11.16	<u>Metro receives \$895K grant to expand jobs and housing opportunity in Southwest Corridor</u>	Craig Beebe
Portland Tribune	10.12.16	<u>Feds approve \$895,000 for Southwest Corridor planning</u>	Jim Redden
Oregonian	10.19.16	<u>Much depends upon Tigard's light rail measure, which voters should pass: Editorial Endorsement 2016</u>	The Oregonian Editorial Board
Oregonian	10.26.16	<u>Tigard voters will decide on Southwest Corridor light-rail project</u>	Elliot Njus
KOIN 6 News	10.26.16	<u>Fate of SW Corridor MAX line in hands of Tigard voters</u>	Lisa Balick and KOIN 6 News Staff
Tigard Tualatin Times	10.27.16	<u>Tigard should support Measure 34-255</u>	Pamplin Editorial Board
Oregon Public Broadcasting	11.2.16	<u>Tigard Voters Hold Keys To Southwest Light Rail Line</u>	Rob Manning
KOIN	11.08.16	<u>Tigard light rail expansion too close to call</u>	KOIN 6 News Staff
Portland Monthly	11.09.16	<u>Could Tigard's light rail measure end up in recount?</u>	Mark Miller
OPB	11.09.16	<u>Tigard Voters Saying Yes To Light Rail Plan</u>	Ryan Haas
Oregon Business	11.10.16	<u>Editor's Note: Transit and Infrastructure in the Spotlight</u>	Linda Baker

Publication	Date	Headline	Author
KOIN 6 News	11.14.16	<u>Tigard light rail vote still too close to call</u>	Eileen Park
Portland Tribune	11.14.16	<u>Tigard light-rail measure passing by more comfortable margin after Monday update</u>	Mark Miller
Oregonian	11.16.16	<u>Tigard voters say 'yes' to light rail -- by just 130 votes</u>	Betsy Hammond
Willamette Week	11.16.16	<u>Light-Rail Plans for Bridgeport Village and Tualatin Stay Alive—by Just 139 Votes</u>	Nigel Jaquiss
DJC	11.15.16	<u>Suburban light-rail plans on track</u>	Chuck Slothower
KATU.com	11.17.16	<u>MAX line project from Portland to Tigard approved by narrow majority of voters</u>	KATU.com Staff
Hillsboro Tribune	11.17.16	<u>Will Washington County receive a new MAX light rail line?</u>	Mark Miller
Portland Tribune	10.28.16	<u>Washington County certifies passage of Tigard light rail measure</u>	Mark Miller
Willamette Week	10.28.16	<u>Washington County Elections Office Certifies Tigard's (Extremely Narrow) Vote to Proceed With Light Rail</u>	Nigel Jaquiss
Portland Tribune	12.13.16	<u>Hunziker station, Sylvania tram trimmed from Southwest Corridor project</u>	Mark Miller
Mass Transit	3.2.17	<u>University of Oregon to Partner with TriMet and Agency Partners on Southwest Corridor Light Rail Project</u>	TriMet
Oregonian	3.22.17	<u>Trump budget proposal would cut program that's fueled Portland's transit expansion</u>	Elliot Njus
KATU	3.29.17	<u>Metro plans public input into Southwest Corridor light rail expansion</u>	KATU news
Portland Tribune	4.2.17	<u>Council to consider SW Corridor affordable housing grant</u>	Jim Redden

Publication	Date	Headline	Author
Portland Tribune	5.4.17	<u>MAX-funding package deal with freeways sparks controversy</u>	Jim Redden
Southwest Examiner	5.1.17	<u>Advisory committee considers community development along future light rail line</u>	Erik Vidstrand
Portland Tribune	7.12.17	<u>Southwest Corridor: Spiff up or tear up Barbur?</u>	Dana Haynes
The Southwest Portland Post	7.1.16	<u>Ped, bike and road improvements will accompany the new light rail line</u>	Erik Vidstrand
The Southwest Portland Post	9.1.16	<u>Community invited to Sept. 22 open house on the future light rail project</u>	Erik Vidstrand
The Southwest Portland Post	9.1.16	<u>Metro prepares for environmental review on proposed light rail project</u>	Erik Vidstrand
The Southwest Portland Post	12.1.16	<u>Voters by slim margin agree to support extending light rail to Tigard</u>	Erik Vidstrand
The Southwest Portland Post	1.1.17	<u>Community advisory committee appointed for future light rail project</u>	Erik Vidstrand
The Southwest Portland Post	3.1.17	<u>Light rail advisory committee meets, environmental review phase begins</u>	Erik Vidstrand
The Southwest Portland Post	4.1.17	<u>Community Advisory Committee ponders light rail alignment, station issues</u>	Erik Vidstrand
The Southwest Portland Post	5.1.17	<u>Advisory committee considers community development along future light rail line</u>	Erik Vidstrand
The Southwest Portland Post	6.1.17	<u>Saltzman joins steering committee; light rail project still needs \$2 billion</u>	Erik Vidstrand



FTA New Starts Rating

August 29, 2017

The SW Corridor light rail project plans to ask for federal money to help with the cost of construction. These funds would come from the Federal Transit Administration (FTA), a division of the US Department of Transportation, which has a funding program called “New Starts.” This sheet summarizes the New Starts rating system. More details are available on FTA’s website.¹

FTA New Starts

The New Starts program will realistically pay up to 50% of the capital costs of a qualifying transit project.² FTA can choose to match at a lower level, or to exclude some project components from matching funds.

New Starts funding is a highly competitive process. There are currently 8 projects that are one step ahead of SW Corridor in the New Starts application process (“project development”) and 4 more projects that are two steps ahead (“project engineering”) in the process.³ Attached is a listing of projects in the current New Starts pipeline.

More projects apply for funding than receive it and some projects wait several years to receive funding. There is no set maximum for how much money an individual project can receive, but bigger amounts tend to relate to larger metro population, higher ridership and better overall value. Projects don’t receive all federal funds at once, instead being paid over a 5-10 year period depending on the number and amount of other projects getting funding.

To help determine the projects most deserving of funding, FTA has created a rating system to score projects. US Congress ultimately determines which projects receive funding, with input from FTA. The New Starts rating system uses a 5 point scale: Low, Medium-Low, Medium, Medium-High and High. A project must receive at least a Medium rating to receive New Starts funds. Given the competitive nature of the program, **TriMet believes the SW Corridor needs at least a Medium-High rating** to be considered for federal funds.

¹ https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/Final_Policy_Guidance_outreach_slides_-_August_2013_FINAL.pdf

² Technically New Starts will match up to 80%, but projects requesting more than a 50% match receive a significant ratings penalty.

³ <https://www.transit.dot.gov/funding/grant-programs/capital-investments/current-capital-investment-grant-cig-projects>

To provide some context, the Orange line had a medium-high rating and received \$745 million in federal matching funds.

SW Corridor Rating

50% of the New Starts rating is based on value and performance (Project Justification). Project Justification is based on 6 equally weighted components.

SW Corridor's rating is effectively already set in some areas, as they relate to existing aspects of the overall project location:

- Land use – existing population density, number of jobs, legally protected affordable housing and pedestrian accessibility. [*Likely SW Corridor LRT rating = Medium*]
- Economic development – plans and policies in place that support transit-oriented development and affordable housing production. [*Likely SW Corridor LRT rating = Medium or Medium-High*]

SW Corridor's rating in the following areas is largely based on **construction costs, operational costs, and ridership**. Those factors are driven by alignment, station location, and park and rides (sizes and locations). TriMet believes achieving a medium-high rating on Cost Effectiveness is critical to qualifying for federal matching funds:

- Congestion relief comparison between build and no-build of new weekday linked transit trips (change in system transit trips)
- Mobility benefits – ridership, with a bonus for transit-dependent riders (from zero car households or lowest income households)
- Cost effectiveness – a complex calculation that blends construction and operational costs divided by ridership
- Environmental benefits – monetized value of air quality, energy usage, greenhouse gas emissions, and safety benefits against blend of construction and operational costs and change in auto vehicle miles traveled

The other 50% of the New Starts rating is based on local financial commitment. This is based on current transit system finances, the amount of committed (fully approved and available) funds, soundness of the transit agencies operating budget, and “reasonableness” of the construction cost estimate.

Attachment: Recent and Current New Starts Projects

<i>Project</i>	<i>Location</i>	<i>Mode</i>	<i>Capital Cost (millions)</i>	<i>Funding Request (millions)</i>	<i>% Federal Match</i>	<i>New Starts Rating</i>
Full Funding Grant Agreement (funded)						
Regional Connector	Los Angeles, CA	LRT	\$1,403	\$670	48%	Medium-High
Westside Subway Section 1	Los Angeles, CA	Heavy rail	\$2,822	\$1,250	44%	High
Westside Subway Section 2	Los Angeles, CA	Heavy rail	\$2,499	\$1,187	48%	Medium-High
Mid-Coast Corridor	San Diego, CA	LRT	\$2,171	\$1,043	48%	Medium-High
Central Subway	San Francisco, CA	LRT	\$1,578	\$942	60%	Medium-High
Berryessa Extension	San Jose, CA	Heavy rail	\$2,330	\$900	39%	Medium
Eagle Commuter Rail	Denver, CO	Commuter rail	\$2,043	\$1,030	50%	Medium
Green Line extension	Boston, MA	LRT	\$2,298	\$996	43%	Medium-High
Bethesda to New Carrollton	Maryland	LRT	\$2,407	\$900	37%	Medium-High
LYNX Blue Line Extension	Charlotte, NC	LRT	\$1,160	\$580	50%	Medium-High
Orange Line	Portland, OR	LRT	\$1,490	\$745	50%	Medium-High
TEX Rail	Ft Worth, TX	Commuter rail	\$1,034	\$499	48%	Medium-High
Project Engineering (rated)						
Garden Grove Streetcar	Santa Ana, CA	Streetcar	\$298	\$149	50%	Medium-High
Blue Line Extension	Minneapolis, MN	LRT	\$1,536	\$753	49%	Medium-High
Southwest LRT	Minneapolis, MN	LRT	\$1,858	\$929	50%	Medium-High
Lynnwood LINK Extension	Seattle, WA	LRT	\$2,348	\$1,173	50%	Medium-High
Project Development (preparing for rating)						
South Central LRT Extension	Phoenix, AZ	LRT	\$705	\$349	50%	Medium
Westside Purple Line Extension, Section 3	Los Angeles, CA	Heavy rail	\$2,659	\$1,075	40%	Medium-High
BART to Santa Clara	San Jose, CA	Heavy rail	\$4,693			
West Lake Corridor	Lake County, IN	Commuter rail	\$563			
Durham-Orange	Durham, NC	LRT	\$2,476	\$1,238	50%	
Hudson Tunnel Rail	NJ-NY	Commuter rail				
2 nd Ave Subway Phase 2	New York, NY	Heavy rail	\$6,000	\$2,000	33%	
Federal Way LINK Extension	Seattle, WA	LRT	\$1,440			

What is the Southwest Corridor Light Rail Project?

The project is a proposed 12-mile MAX line connecting downtown Portland to Tigard and Tualatin.

After several years of early planning, the project is now undergoing environmental review.

What is the purpose of the decision briefing books?

Several project decisions remain, including options for alignments, stations, maintenance facilities and station access improvements.

Through fall 2017, individual decision briefing books will be released to inform conversations about the key considerations for each major decision. Because the environmental impact analysis is ongoing, briefing books will be updated as new information becomes available.

When will the decisions be made?

The steering committee is anticipated to narrow down the remaining options to a "Preferred Alternative" in early 2018.

Further outreach, design and environmental analysis will occur before a final decision on what to construct.

Decision Overview

The Southwest Corridor light rail line would extend the MAX Green Line south of the Downtown Portland Transit Mall. South of downtown, the line could run on either SW Barbur Boulevard or SW Naito Parkway.

The **Barbur alignment** would depart the existing MAX tracks at SW 4th Avenue and SW Lincoln Street and cross over I-405 on a new light rail bridge. The line would run along the east side of Barbur until SW Hooker Street, where it would enter the center of Barbur. The alignment would include a station at SW Gibbs Street, including a new connection to Marquam Hill. The line would continue center-running in Barbur until the Burlingame area.

The **Naito alignment** would continue on the Orange Line MAX tracks until Naito and Lincoln, and would serve the existing station on Lincoln. The alignment would run in the center of Naito until its intersection with Barbur. A station would be located at Gibbs (or an alternate location at Hooker), also including a new connection to Marquam Hill. South of Naito, the alignment would continue center-running in Barbur until the Burlingame area.

Both alignments would include paved trackways between the Transit Mall and where SW Capitol Highway intersects with Barbur in "The Woods" area to allow buses to bypass traffic congestion.

More detailed maps of the Naito and Barbur alignments are provided in the *Light Rail Alternatives for Environmental Review* document, available on the project website: www.swcorridorplan.org/light-rail-study.



CONNECT

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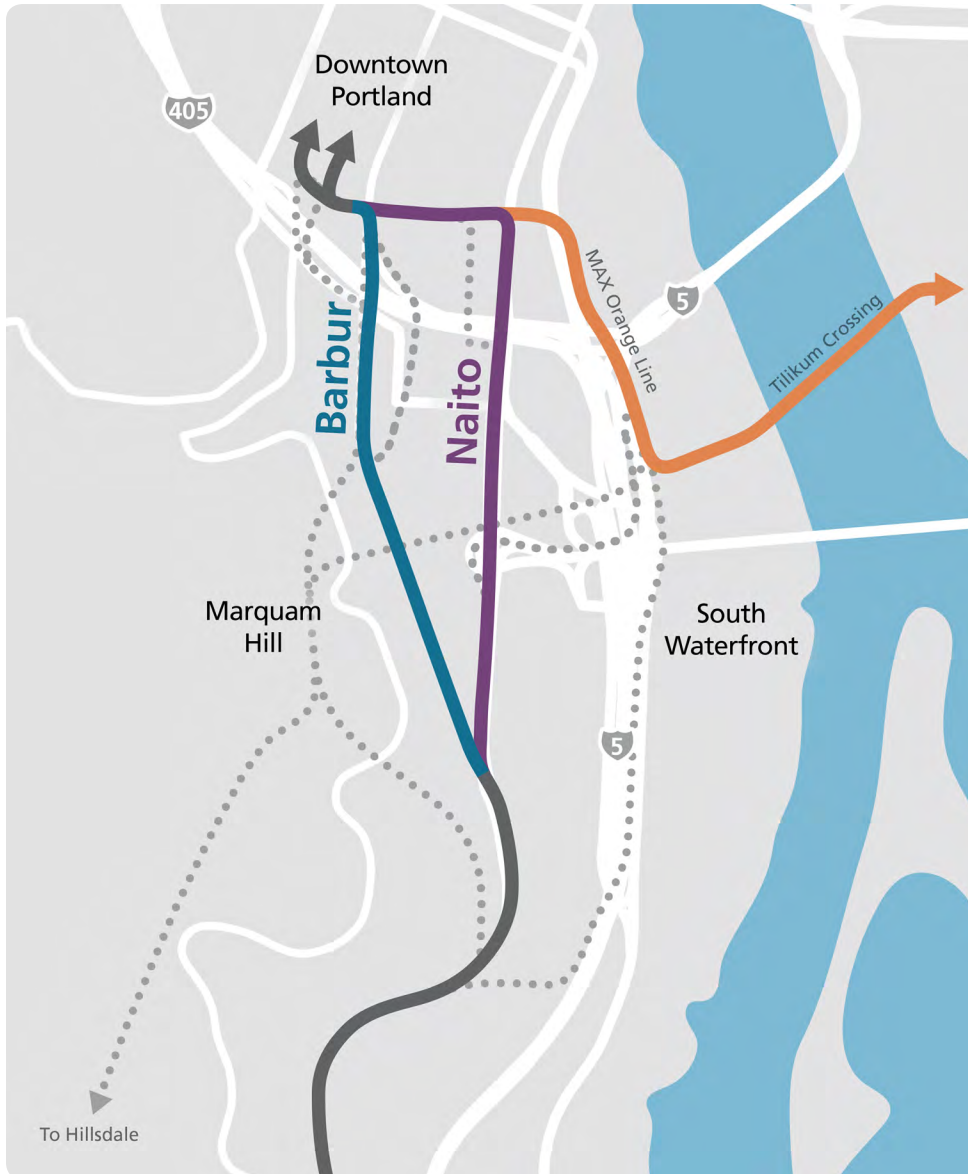
[@SWCorridor](https://twitter.com/SWCorridor)

503-813-7535

Alignments Considered and Removed

During the refinement phase of the project, many alignment options were considered. Options that were considered and removed in the South Portland area included alignments that departed from the Orange Line MAX tracks in the South Waterfront area and tunnels under Marquam Hill. The map below shows the multiple South Waterfront and Marquam Hill tunnel alignments that were removed during the refinement phase.

More information on options considered and removed is provided in the *Project Background and Alternatives Considered* document, available on the project website: www.swcorridorplan.org/light-rail-study.



..... Alignments considered and removed

Related Decisions

The Ross Island Bridgehead Reconfiguration would modify the road network at the west end of the Ross Island Bridge in the South Portland/Lair Hill neighborhood to accomplish multiple transportation and land use objectives. With light rail on Barbur, the Bridgehead Reconfiguration would be optional and would not impact the light rail design. With light rail on Naito, there are two designs: one that incorporates the Bridgehead Reconfiguration and changes the character of Naito to an at-grade boulevard and one that largely maintains the existing limited access roadway configuration and circulation patterns. More information on the Bridgehead Reconfiguration and the two versions of the Naito alignment is included in a separate report, available on the project website: www.swcorridorplan.org/light-rail-study. Updated versions of this briefing book will incorporate information about the Bridgehead Reconfiguration.

The Marquam Hill connection, which would provide access between the Gibbs station and Marquam Hill, would be constructed with either a Barbur or Naito light rail alignment, with access to both streets. More information on the Marquam Hill connection options will be provided in a separate briefing book.

For more information on the full range of alternatives under consideration, see the *Light Rail Alternatives for Environmental Review* document, available on the project website: www.swcorridorplan.org/light-rail-study.

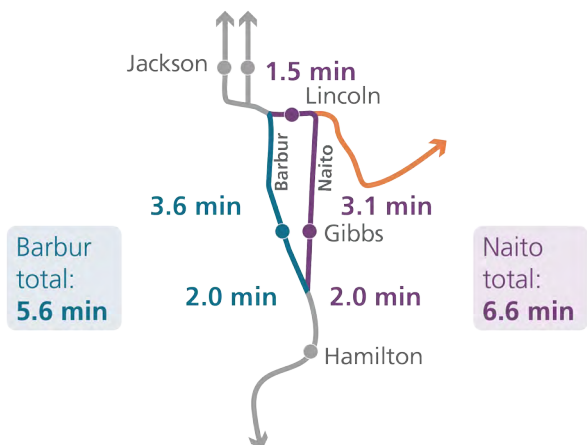
Considerations

This first version of this briefing book focuses on the differences between the Barbur and Naito light rail alignments, without addressing the trade-offs between the two potential Naito roadway designs (Bridgehead Reconfiguration and Limited Access). Light rail travel time, station locations and ridership are discussed on the following pages. A summary table is provided on the back page of this document.

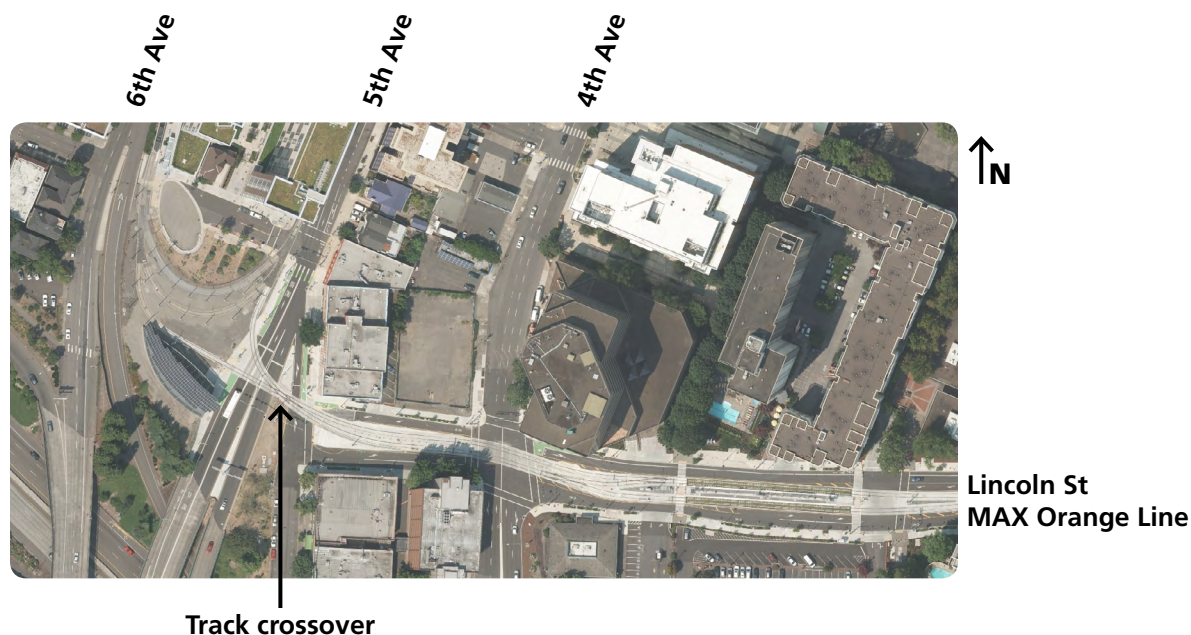
Several considerations depend on the differences between the Bridgehead Reconfiguration and Limited Access designs for a Naito alignment, such as property impacts, capital cost, traffic impacts and redevelopment potential. These considerations will be discussed in more detail in the next version of this briefing book.

Travel time

The **Barbur alignment would be one minute, 10 seconds faster** than the Naito alignment. The Naito alignment would provide access to the Lincoln Station built as part of the Orange Line, which accounts for most of the alignment's additional travel time compared to the Barbur alignment.



Both alignments' connection to the transit mall would test light rail on-time performance. Existing tracks used by the MAX Orange Line cross over each other at SW 5th Avenue near SW Lincoln Street Avenue in order for northbound trains to reach SW 6th Avenue on the transit mall and for southbound trains to connect from SW 5th Avenue on the transit mall. In this crossover section, only one train at a time can pass in either direction. With the Naito alignment, Southwest Corridor light rail vehicles would merge with Orange line vehicles on Naito west of SW 1st Avenue, introducing additional trains through the crossover location at SW 5th. With the Barbur alignment, Southwest Corridor light rail vehicles would merge with Orange line vehicles at SW 4th Avenue, less than 250 feet from the crossover. The merge location's proximity to the crossover location and to a complex auto circulation point **increases the potential of a Barbur alignment to affect light rail operations.** Operations analysis that will clarify the impacts is not complete, and results could impact travel time assumptions used in light rail modeling, including differences between the Barbur and Naito alignments.



Ridership

Projected ridership in 2035 is 2 percent higher for Barbur than Naito, with 41,600 daily line riders compared to 40,900 line riders. **The Barbur alignment also has a 9 percent higher projected change in daily system transit ridership** compared to the Naito alignment, with 17,800 new system trips compared to 16,300 new system trips. The Barbur alignment gains riders due to its faster travel time near the peak load point, but the advantage is partially offset by the riders gained by the Naito alignment’s access to the Lincoln Station.

With the Ross Island Bridgehead Reconfiguration, which will be more fully addressed in updated versions of this briefing book, new developable land parcels would be created along SW Naito Parkway. Additional households and employment would improve line, system and station ridership. Rules for modeling performed in the application for federal transit funding prohibit different land use assumptions for future alternatives; therefore, this modeling assumes the same levels of households and employment for all alternatives.

Lincoln Station

The Lincoln station serves portions of southern downtown Portland and the RiverPlace area that would not be served with a Barbur alignment. With Naito, the Lincoln station would attract nearly 700 daily walk ons and offs. It would also provide a convenient cross-platform transfer location to/from the Southwest Corridor light rail by the Orange line riders from/to areas east of the Willamette River. The Lincoln Station would have 1,800 daily ons and offs by Orange line transfers. With the Barbur alignment, those transfers could occur at different stations along the transit mall, likely at Portland State University, but riders would need to walk one block between the north- and southbound directions of the transit mall to make the transfer. For Yellow line riders from the north, however, a transfer to the Southwest Corridor line would be more attractive with a Barbur alignment due to the faster travel time to the south. Projected Yellow/Orange line ridership in 2035 grows by 1,150 riders, or nearly 2.5 percent, with a Naito alignment compared to a Barbur alignment.

Gibbs Station

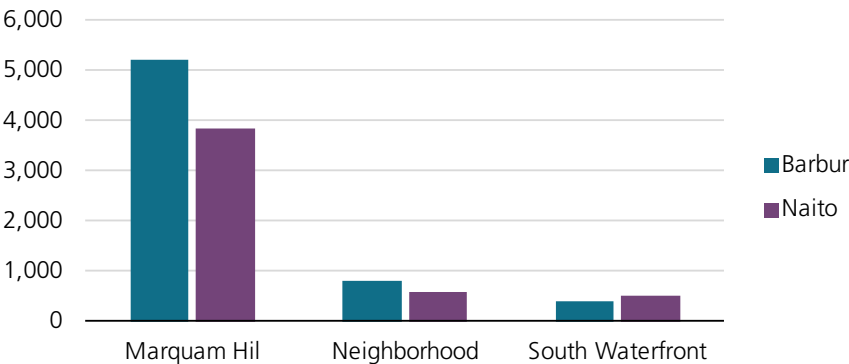
While the proposed Gibbs station site on Barbur is only slightly more than 1/10th of a mile away from the Naito site, grade changes and differences in proximity to major destinations would result in slightly different ridership markets for walk-on riders on each alignment. The Gibbs Barbur station would be closer to the Marquam Hill connection, and the Gibbs Naito station would be closer to the South Waterfront via the Hooley pedestrian bridge, and to the National University of Naturopathic Medicine. While

Marquam Hill riders would use a Gibbs Naito station and South Waterfront riders would use a Gibbs Barbur station, those riders would need to cross Barbur or Naito and use a stairway or a ramp. As a result, ridership differs. Overall, the Gibbs Barbur station is projected to have 7,800 daily walk ons and offs in 2035, while the Gibbs Naito station would have 6,600.

Walk Distance from Station

	Gibbs Barbur Station	Gibbs Naito Station
Marquam Hill Connection	Adjacent	0.16 mile
Hooley Pedestrian Bridge (west end)	0.29 mile	0.16 mile

Gibbs walk-on riders by location



Pending information

Updated versions of this briefing book will incorporate information about the Ross Island Bridgehead Reconfiguration and will include new information learned from ongoing environmental analysis. Inclusion of the Bridgehead Reconfiguration would result in considerable differences in capital costs, property impacts, traffic impacts and redevelopment potential.

Summary Table

The following summary table will be updated as new information becomes available. The ongoing environmental impact analysis could reveal significant impacts associated with Naito and Barbur alignments. In updated versions of this briefing book, the summary table will incorporate information about the Ross Island Bridgehead Reconfiguration.

	Barbur	Naito
Transit Performance <i>(Full Corridor)</i>		
New system transit trips <i>2035 average weekday</i>	17,800	16,300
Line ridership <i>2035 average weekday</i>	41,600	40,900
Travel time: PSU to Bridgeport Village <i>2035 average weekday, peak period</i>	32.9 minutes	34.0 minutes
Finance <i>(Full Corridor)</i>		
Capital cost	TBD	TBD
Access and Development <i>(Segment A only)</i>		
Specific measures TBD	TBD	TBD
Communities and Built Environment <i>(Segment A only)</i>		
Property acquisitions	TBD	TBD
Residential and business displacements	TBD	TBD
Other specific relevant impacts TBD	TBD	TBD
Natural Environment <i>(Segment A only)</i>		
Specific relevant impacts TBD	TBD	TBD

Assumptions

For full-corridor information, Alternative A1 (Barbur) is assumed for Segment A and Alternative B2 (I-5 Barbur Transit Center to 60th) is assumed for Segment B and Alternative C1 (Ash to I-5) is assumed for Segment C.

For more information on the range of alignment alternatives under consideration, see the *Light Rail Project Alternatives for Environmental Review* document, available on the project website: www.swcorridorplan.org/light-rail-study.



Ross Island Bridgehead Reconfiguration Option Overview

July 31, 2017

Introduction

The Southwest Corridor Plan has considered a broad range of transportation projects in the corridor, including road, walking, biking and transit improvements. These projects were drawn from local Transportation System Plans (TSPs) and Metro's Regional Transportation Plan (RTP). Certain projects that are closely tied to the proposed Southwest Corridor light rail alignments are being studied in the light rail project's Draft Environmental Impact Statement (EIS). One of these projects – by most measures the most complex – is known as the Ross Island Bridgehead Project. This project would reconfigure the road network at the west end of the Ross Island Bridge in the South Portland/Lair Hill neighborhood to accomplish multiple transportation and land use objectives.

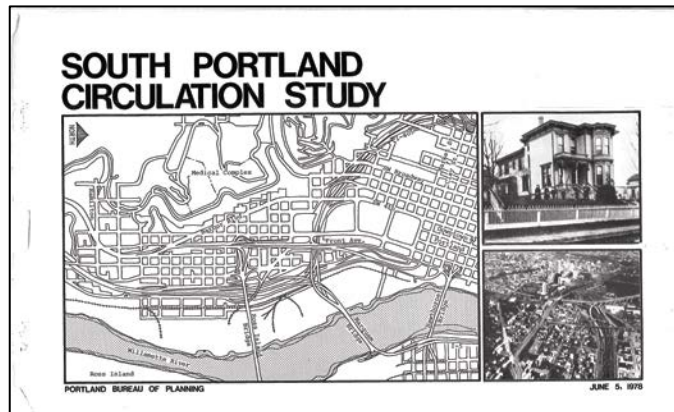
One potential alignment for the Southwest Corridor Light Rail Project would run on SW Naito Parkway through the Ross Island Bridgehead area. Building an at-grade light rail alignment on Naito would require reconstructing the roadway to accommodate the tracks, so project partners are considering different concepts for how the roadway could be configured with light rail. This document examines two design approaches for a light rail alignment on Naito Parkway: one that incorporates the Ross Island Bridgehead Project and one that accommodates light rail while largely maintaining the existing limited access roadway configuration and circulation patterns.

The light rail alignment could also run on SW Barbur Boulevard through the South Portland/Lair Hill area. A separate “decision briefing book” summarizes the trade-offs between the Barbur and Naito alignments, available on the project website at www.swcorridorplan.org/light-rail-study. A future version of the Barbur vs. Naito decision briefing book will also describe the trade-offs between the two design approaches for a Naito alignment.

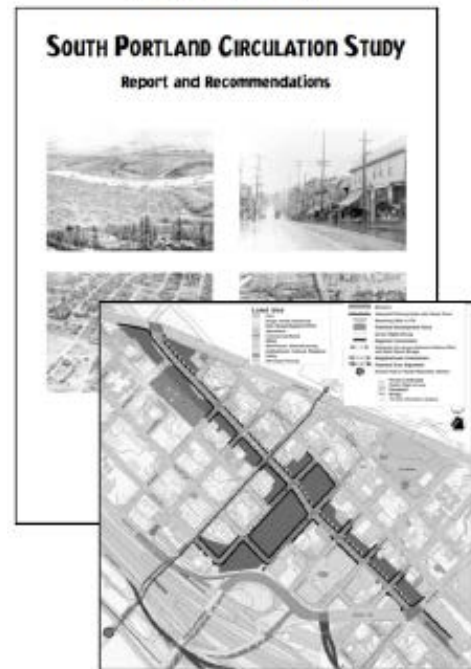
Planning Background

The current understanding of the Bridgehead Project is the genesis of a number of planning studies, including the South Portland Circulation Study (1978), the 2001 update to the South Portland Circulation Study, the I-405 Design Workshop (2010), the Barbur Concept Plan (2013), and the earlier phases of the Southwest Corridor Plan. These studies explored the transportation and land use challenges in this neighborhood, and recommended or suggested potential solutions.

June 1978



June 2001



March 2010



April 2013



South Portland History

Over the years, infrastructure projects have shaped and reshaped South Portland (see maps in Appendix A). In the late 1800s through the early 1900s, the neighborhood was “a settlement community for Italian Catholics and East European Jews emigrating to America” (South Portland Circulation Study, 1978). During this time, streetcar lines attracted commercial land uses along SW 1st Avenue, SW Front Avenue (now Naito Parkway) and SW Corbett Street. The surrounding residential areas had walking access to this commercial spine through the neighborhood, as well as to the industrial employment that developed along the Willamette River.

The rise in automobile popularity after WWI brought a series of changes to South Portland. The Ross Island Bridge opened in 1926, initially connecting to the existing street network, which was primarily a traditional grid layout. Around 1935, the rail line along the alignment of today’s Barbur Boulevard was abandoned and replaced by a highway, and the connections to the Ross Island Bridge were modified in order to serve increasing traffic volumes.

In 1943, Harbor Drive was constructed along the downtown waterfront as part of the federal highway system, serving as the primary north-south artery along the west coast. Front Avenue was widened to connect OR-99W to Harbor Drive, which “split the residential community in two, displaced homes and businesses, removed the street car line, and thus destroyed the neighborhood’s social and functional core” (South Portland Circulation Study, 1978). Later changes in the 1950s added interchanges and grade separations to improve traffic flow. According to the 1978 study, “the ‘band aid’ approach to roadway construction applied to this area for over 40 years had not only undermined the stability of a once strong community, but also produced a confusing tangle of arterial traffic routes.”

With the opening of I-5 on the Marquam Bridge in 1966 and I-405 on the Fremont Bridge in 1973, OR-99W was eclipsed in its function as the primary north-south artery. The Harbor Drive portion was removed in 1974 and replaced with Tom McCall Waterfront Park. The 1978 South Portland Circulation Study proposed removing the Front Avenue segment and associated ramps, reclaiming that land for redevelopment, and routing through traffic around the Corbett and Lair Hill neighborhoods via SW Kelly Avenue. The follow-up study in 2001 reached a similar conclusion.



Ross Island Bridgehead looking east, 1932



Ross Island Bridgehead looking southwest, 1952

Existing Conditions

Auto circulation in South Portland today remains similar to the conditions of the late 1970s. Because multiple freeways and highways converge in South Portland, travelers from throughout the region pass through the area.

With the current roadway configuration, much of this regional through traffic travels on surface streets in the neighborhood. For example, while the Ross Island Bridge and the Sunset Highway are both classified as US-26, the facilities connect via the surface street network. Neighborhood streets also serve as de facto highway ramps connecting I-5 traffic to the Ross Island Bridge, including Kelly Street, SW Whitaker Street and SW Curry Street.

Currently, much of the traffic on Naito Parkway south of downtown is accessing the Ross Island Bridge. Through traffic volumes are relatively low for an arterial street, at about 10,000 per day (2014 counts). In comparison, the overall average daily traffic volumes on Naito Parkway are about 14,000 per day north of the bridge and 22,000 south of the bridge (2015 counts). Much of the traffic using the Ross Island Bridge travels to other parts of the region. In 2035, about 45 percent of the bridge's traffic is projected to be traveling to or from Washington County, and 27 percent to or from Clackamas County.

Peak-hour traffic conditions are generally poor for vehicles accessing the Ross Island Bridge. Vehicle traffic queues extensively during the evening peak on Naito Parkway and neighborhood streets waiting to access the Ross Island Bridge. These queues typically extend to Barbur Boulevard for traffic from the south and to SW Sheridan Street and SW Fifth Avenue for traffic from the west (see the map on the following page). Traffic also queues on the bridge during the morning peak heading westbound to enter downtown.

As a result of its history connecting to the Harbor Drive freeway, the South Portland segment of Naito Parkway and its ramped connections to the Ross Island Bridge look and feel like a freeway interchange. Auto, walking and biking access across Naito Parkway is very constrained. Local auto traffic access on or off of Naito Parkway is allowed at only a few locations, and auto access across Naito Parkway is allowed only at an underpass at SW Grover Street. Walking access across Naito Parkway is provided by an undercrossing at Grover Street and an overcrossing at SW Hooker Street, though neither is accessible to people with disabilities, and both provide low-quality walking and biking improvements for all users. The effect these access limitations is to divide the area into three small neighborhoods.

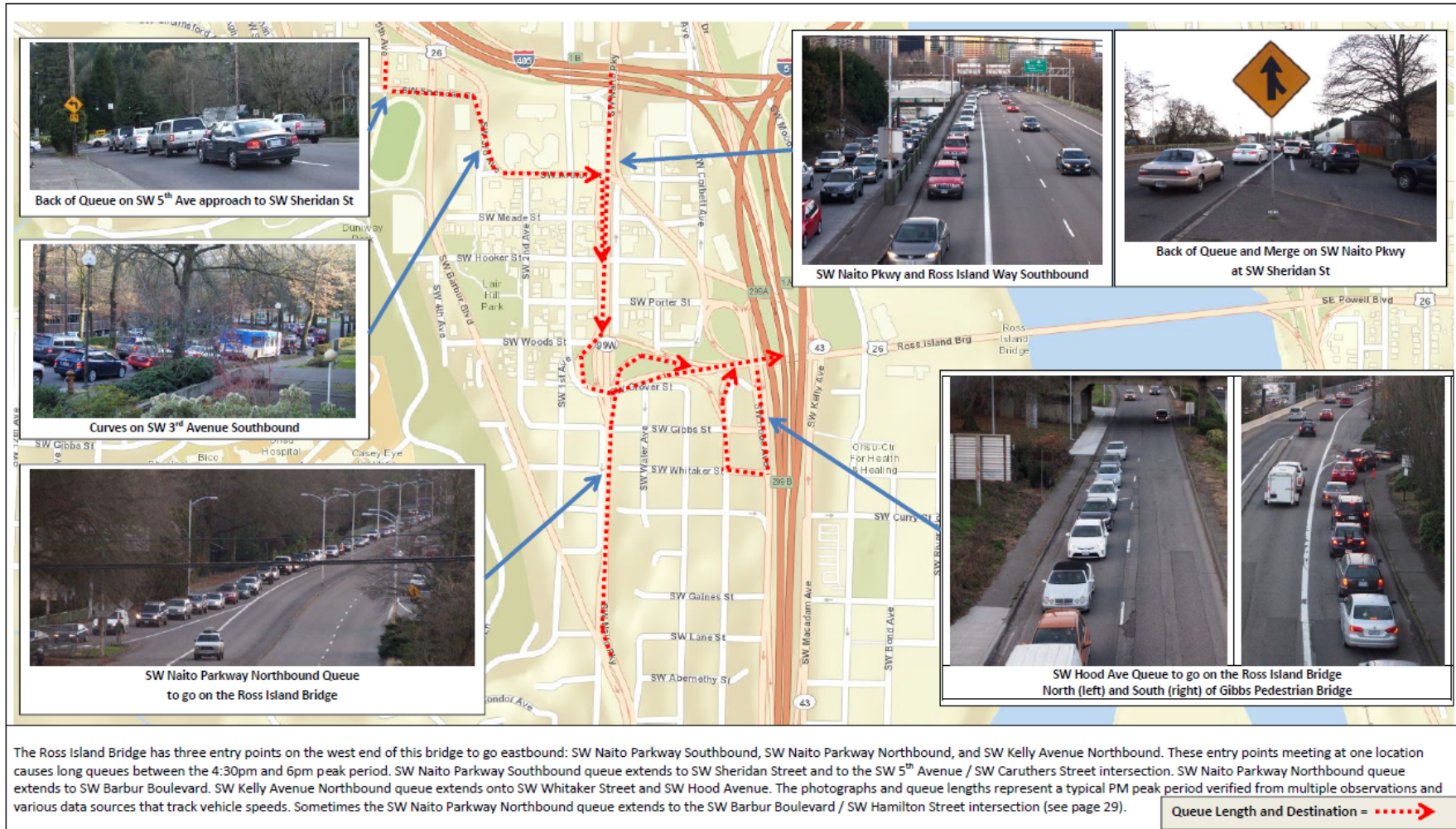


Existing pedestrian overcrossing at Hooker St.



Existing pedestrian undercrossing at Grover St.

SE Powell Boulevard (continue) – West End of Ross Island Bridge during the PM Peak Period



Daily peak-hour queues of vehicles wait on Naito and wind through neighborhood streets. (Courtesy of ODOT.)

Goals of the Bridgehead Project

The Bridgehead Project is intended to accomplish a range of land use and transportation goals from both the City of Portland and the Oregon Department of Transportation (ODOT). Project goals include:

City of Portland (from the 2001 South Portland Circulation Study):

- Reunite the Lair Hill community by reconnecting the east-west street grid across Naito Parkway.
- Provide a sense of community by turning former rights-of-way currently used as bridge ramps and travel lanes into developable land for private investment in housing and commercial uses.
- Take non-local, regional traffic out of the heart of the Lair Hill Neighborhood by providing improved connections between the Ross Island Bridge, I-405, I-5, and Downtown.
- Respect the historic character of the Lair Hill neighborhood by encouraging development that is in keeping with the urban design motif of the neighborhood.
- Increase opportunities for multi-modal travel, including access to the Willamette River.

ODOT:

- Preserve and enhance highway to highway connections (Powell, Sunset Highway, Naito, I-405, I-5, and OR-43) for regional traffic movement through South Portland.
- Maintain and/or improve safety and operations.
- Avoid precluding future potential improvements to this area, including along I-405 and US-26.

The current designs of the Bridgehead Project are based on the outcomes of ODOT and the City of Portland's I-405 Design Workshop in 2010. During that effort, three different design concepts were examined. The technical group involved reached agreement to proceed with Concept C, the Westbound Enhanced Grid, in future plans. Based on analysis to date on this concept, the Bridgehead project would:

- Implement the recommendations of Portland City Council, 2001.
- Potentially reduce vehicle delay (subject of ongoing traffic analysis).
- Restore street grid, including at-grade pedestrian/bike crossings.
- Remove through traffic from local streets.
- Restore land to tax rolls and provide opportunities for redevelopment.

Naito Light Rail Alignment with Bridgehead Reconfiguration

One option for a Naito light rail alignment includes the Bridgehead Project. This option, known as 'Alternative A2-BH' in the Draft EIS, aims to achieve the goals of the Bridgehead project while accommodating light rail. The map on the right depicts the new and removed roadway segments associated with this option, as well as roadways converted to local access. For the full map of Alternative A2-BH, see the *Light Rail Project Alternatives for Environmental Review* document, available at www.swcorridorplan.org/light-rail-study.

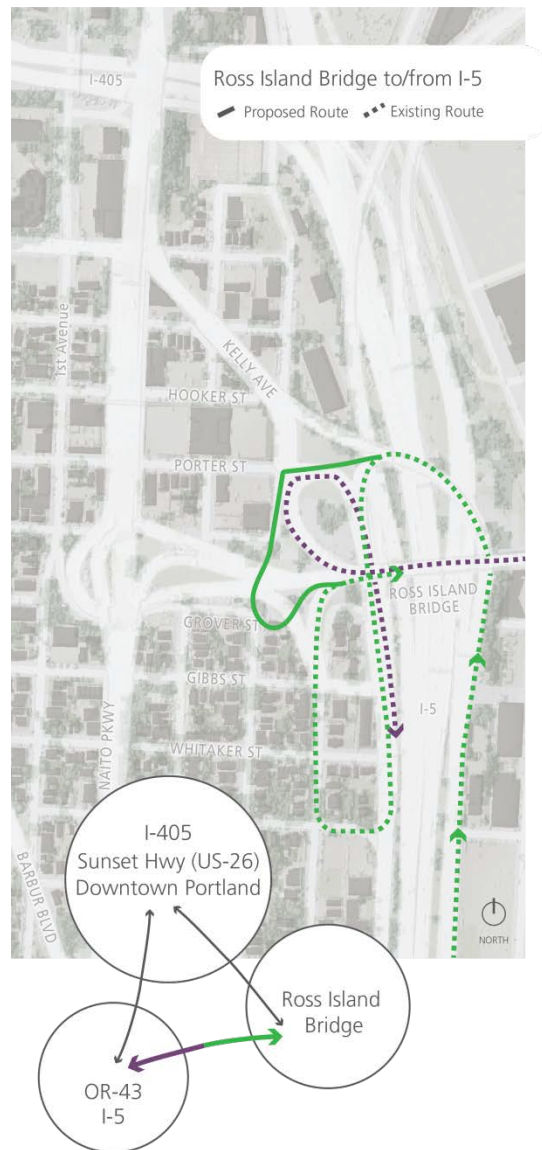
These designs are based on Concept C from ODOT and the City of Portland's I-405 Design Workshop in 2010, but have been refined somewhat as part of the Southwest Corridor Plan process to integrate the light rail line. The primary modifications proposed are:

- Redirect traffic from downtown Portland and I-405 (including eastbound US-26 traffic) along Kelly Avenue to a new ramp to the Ross Island Bridge, mirroring the route westbound US-26 traffic already uses, which would remove traffic from Naito Parkway. (See maps on the following page.)
- Convert Naito Parkway to a surface boulevard, including adding five new at-grade intersections with traffic signals or stop signs between Kelly Avenue and Barbur Boulevard, allowing crossings by vehicles and people walking or biking.
- Eliminate the use of neighborhood streets as ramps by creating more direct access from I-5 to a new ramp accessing the Ross Island Bridge. (See maps on the following page.)
- Convert the interchange at Barbur and Naito to a signalized surface intersection.
- Allow for the addition of light rail to Naito Parkway, including one station.
- Add bike facilities on Naito Parkway.
- Allow for redevelopment of about 2.8 acres of land by removing several highway ramps.

The maps on the following page highlight how through traffic circulation would differ from existing conditions with the Bridgehead Reconfiguration option. In addition, the maps in Appendix B isolate the individual paths of travel for through and local traffic under existing conditions and with the Bridgehead Reconfiguration.



Overview of Through Traffic Circulation: Existing Conditions and Changes with Bridgehead Reconfiguration



Naito Light Rail Alignment with Limited Access Roadway Configuration

The second option for the Naito light rail alignment would generally maintain the existing limited access roadway configuration of Naito while widening the roadway to accommodate light rail. This option, known as ‘Alternative A2-LA’ in the Draft EIS, was developed by ODOT in 2016. The map on the right depicts the new and removed roadway segments associated with this option, as well as ramps accessing the Ross Island Bridge that would be reconstructed to fit the increased roadway width. For the full map of Alternative A2-LA, see the *Light Rail Project Alternatives for Environmental Review* document, available at www.swcorridorplan.org/light-rail-study.

This configuration would retain the current limited-access facility and ramps along Naito Parkway, while adding one signalized intersection at Gibbs Street to facilitate access to a light rail station. The westbound-to-southbound ramp from the Ross Island Bridge to Naito Parkway would be widened to two lanes, and signalized at the intersection with Naito Parkway and Gibbs Street.

The goals for this concept include:

- Avoid significantly altering the roadway configuration.
- Retain highway configuration of Naito Parkway, Barbur Boulevard, and Ross Island Bridge.
- Allow crossing of Naito Parkway by vehicles and people walking and biking at Gibbs Street.
- Add bike facilities on Naito Parkway.
- Allow for the addition of light rail to Naito Parkway, including one station.

Auto access to and from the west end of the Ross Island Bridge would remain largely unchanged from existing conditions under this option.



Appendix A: South Portland History in Maps

The following maps from the 1978 South Portland Circulation Study illustrate how the neighborhood's transportation networks and land uses have changed over time.

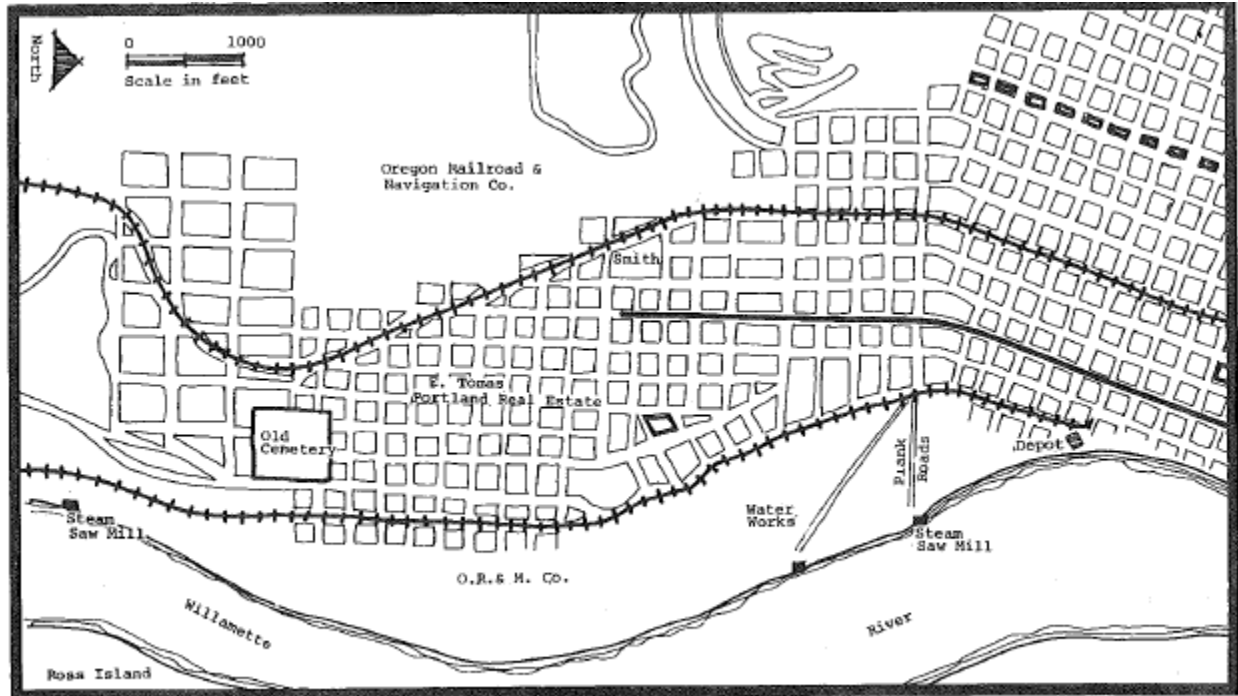


Figure 4; South Portland ca. 1886.

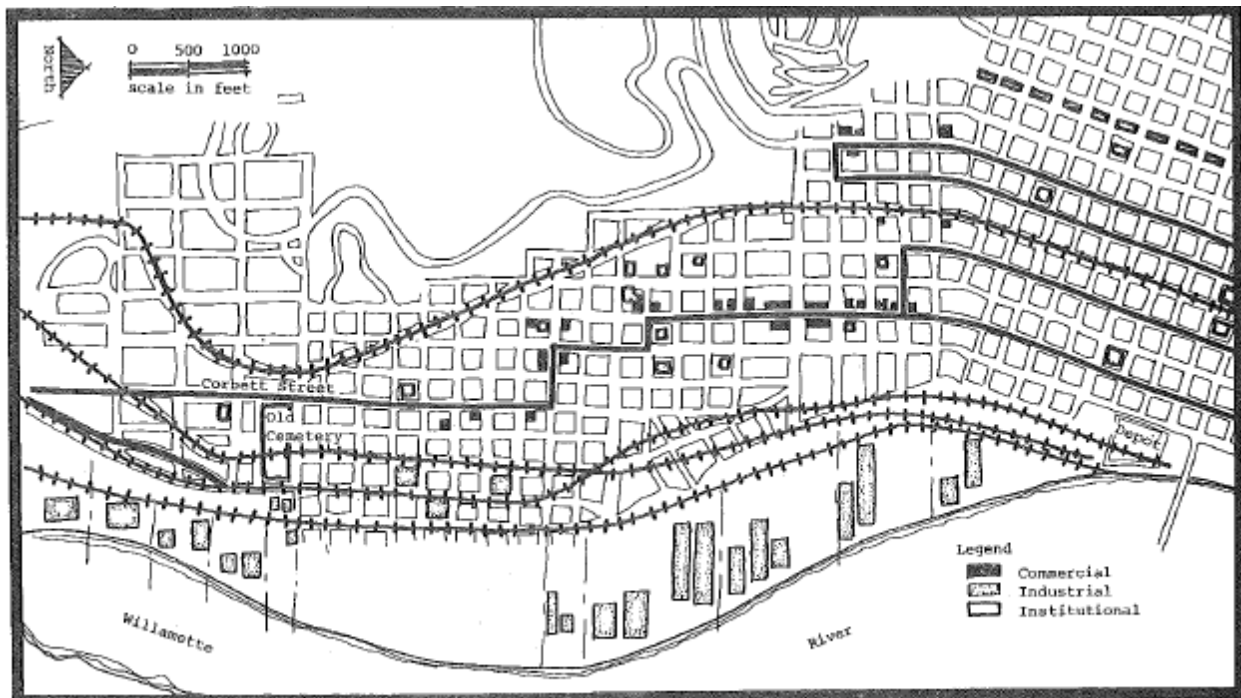


Figure 5; South Portland Land Use, ca. 1910-1923.

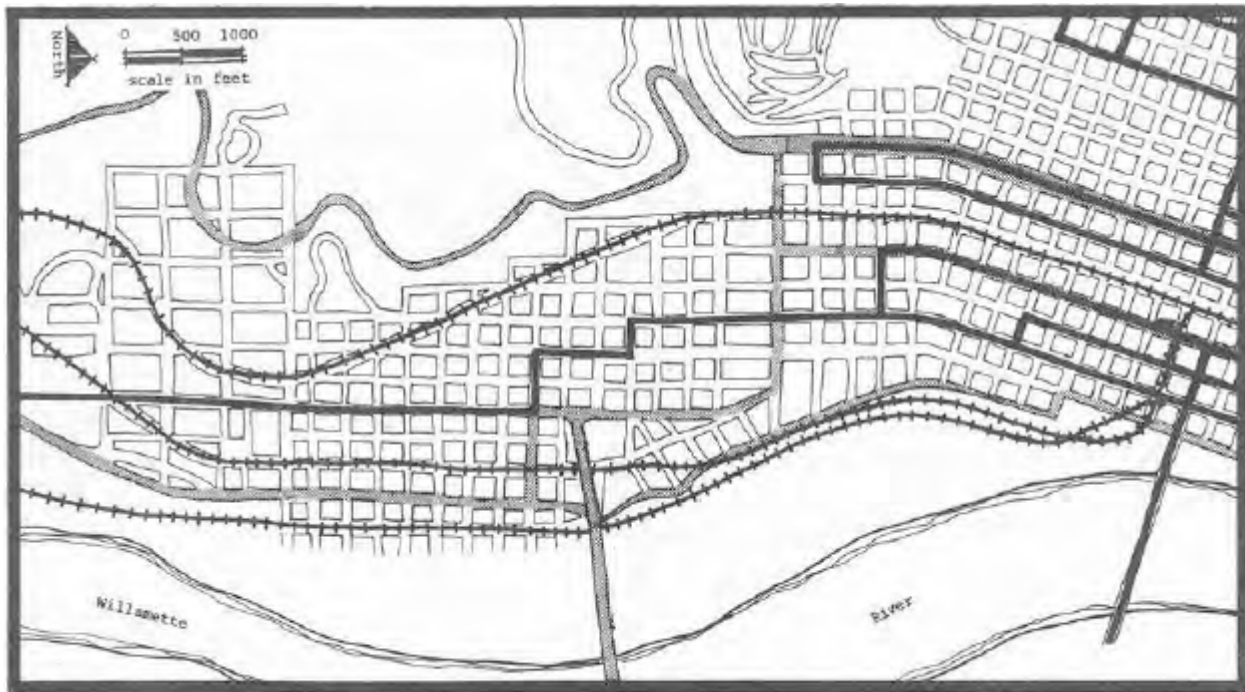


Figure 6; South Portland, ca. 1927.

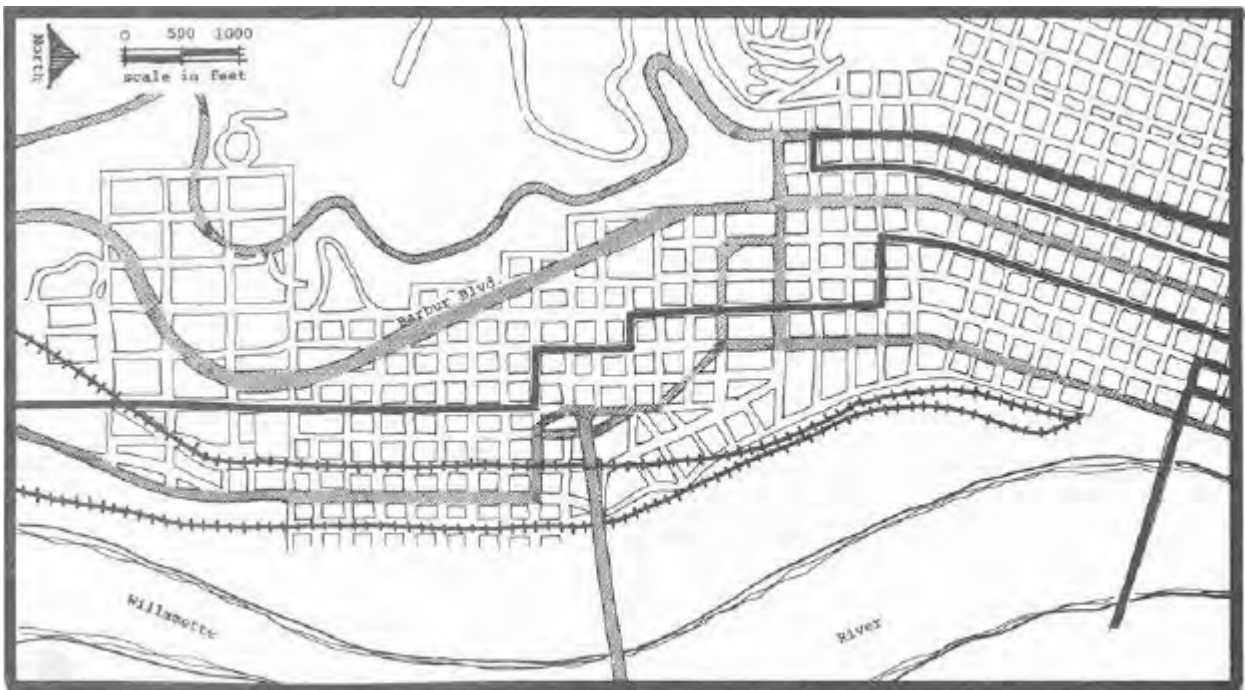


Figure 7; South Portland, ca. 1935

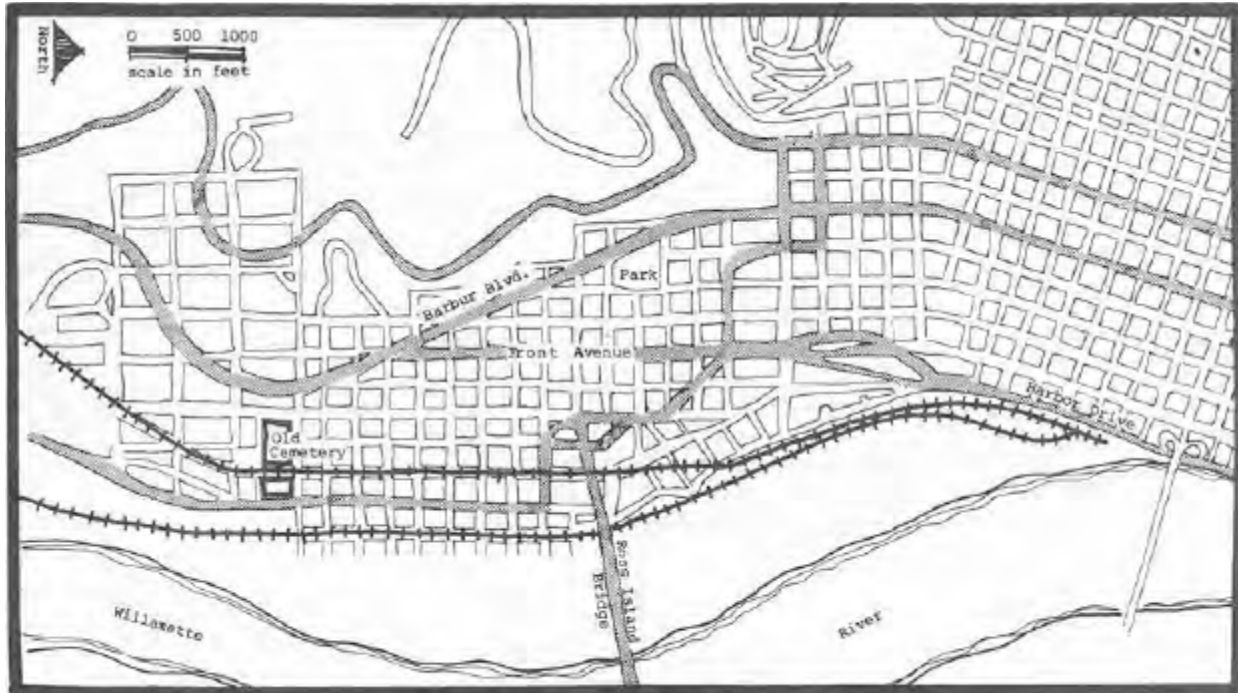


Figure 8; South Portland, ca. 1942.

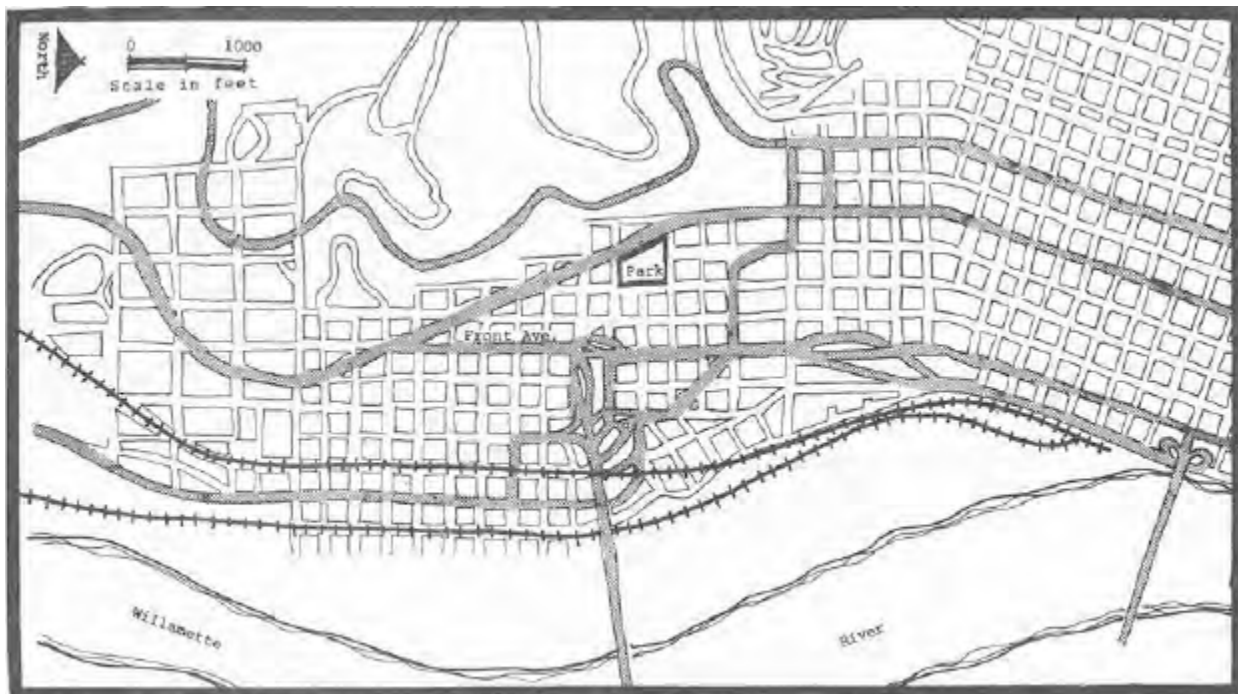


Figure 9; South Portland, ca. 1950.

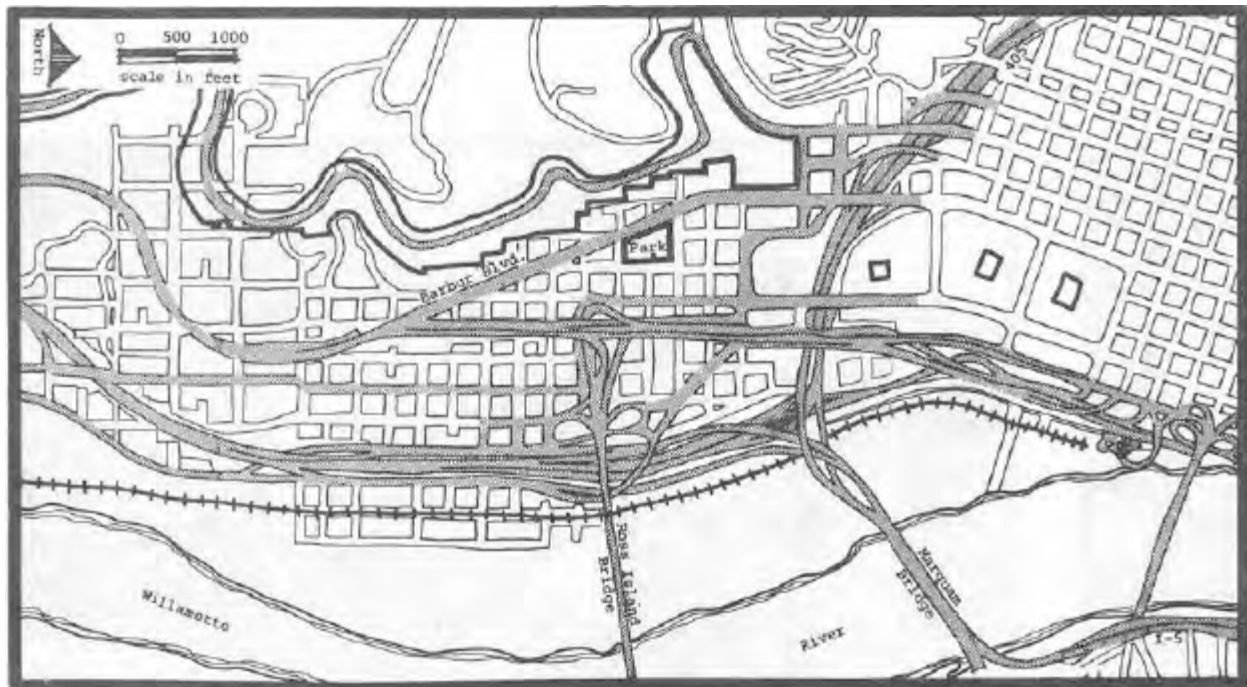
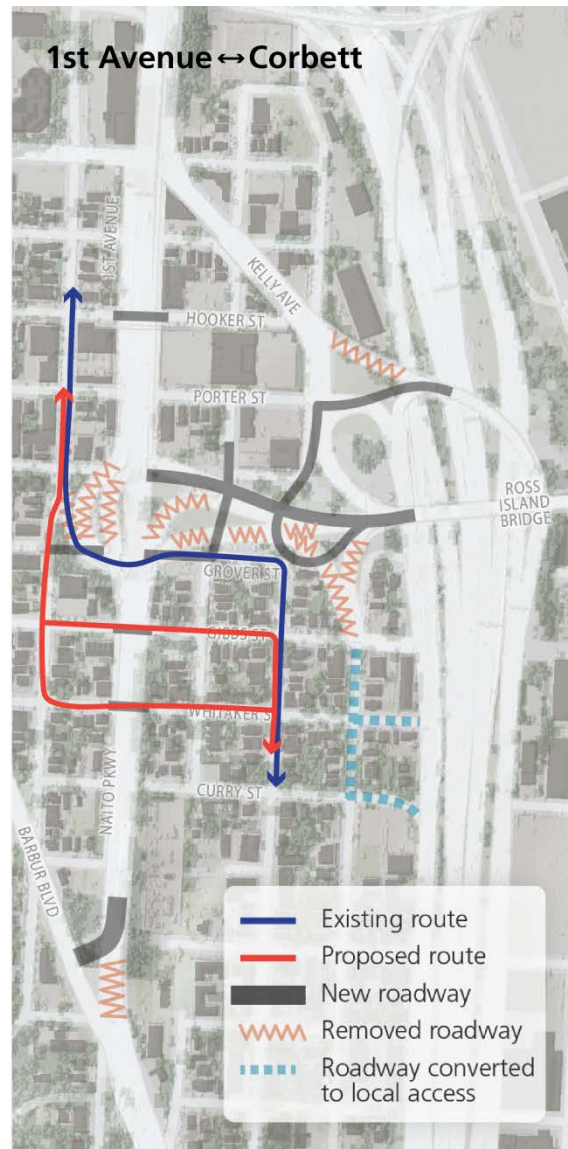
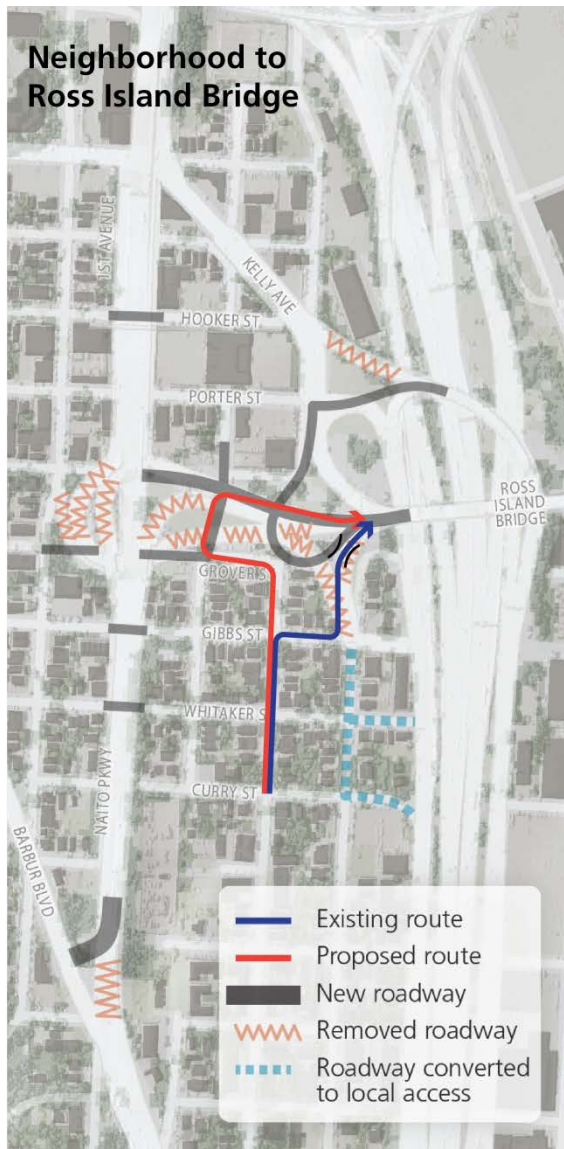


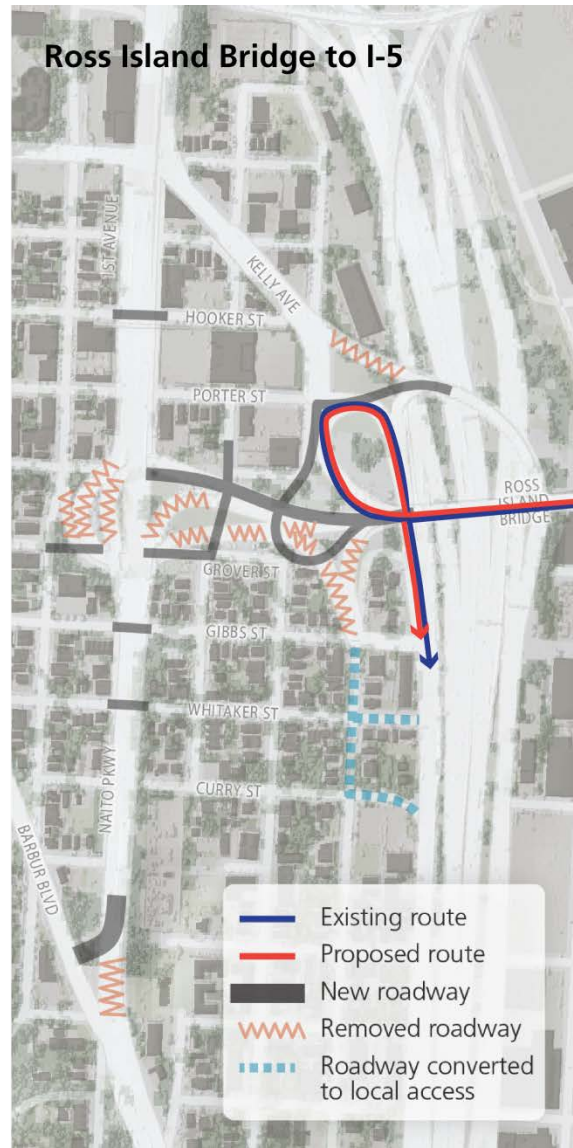
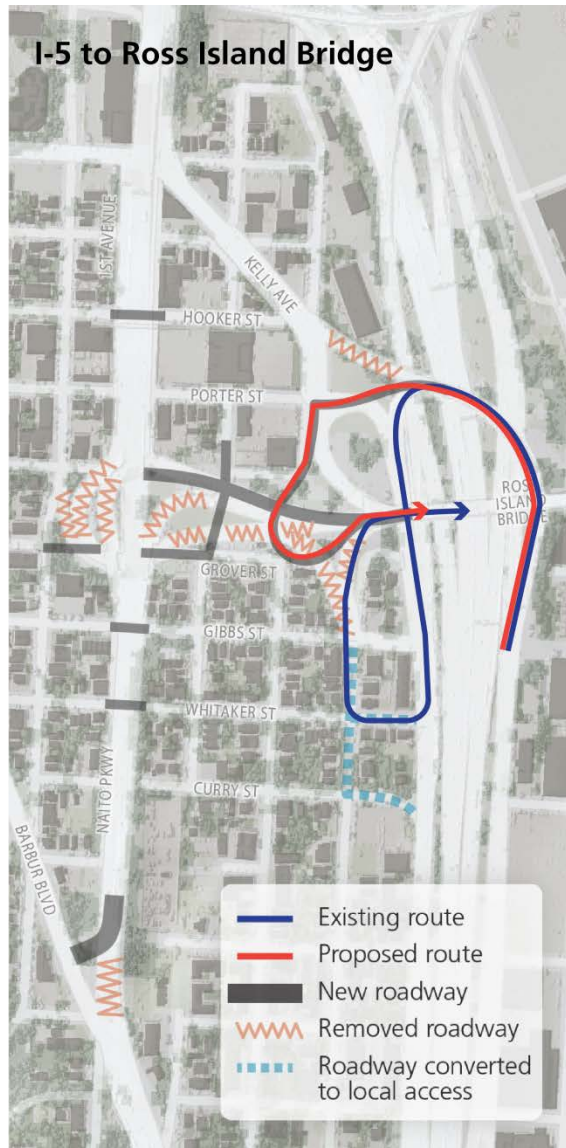
Figure 10; South Portland, ca. 1970.

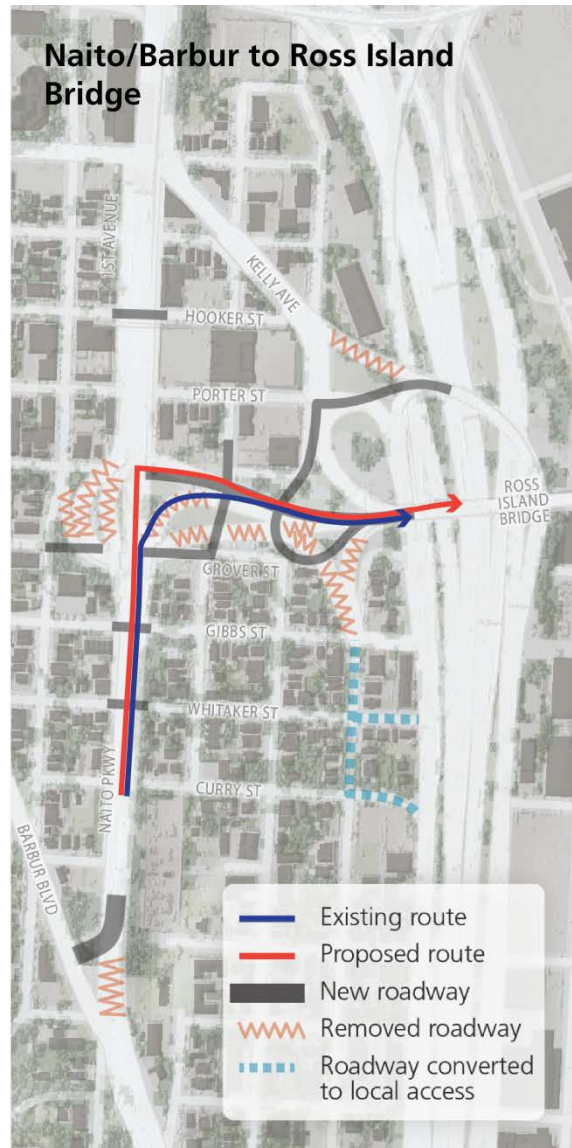
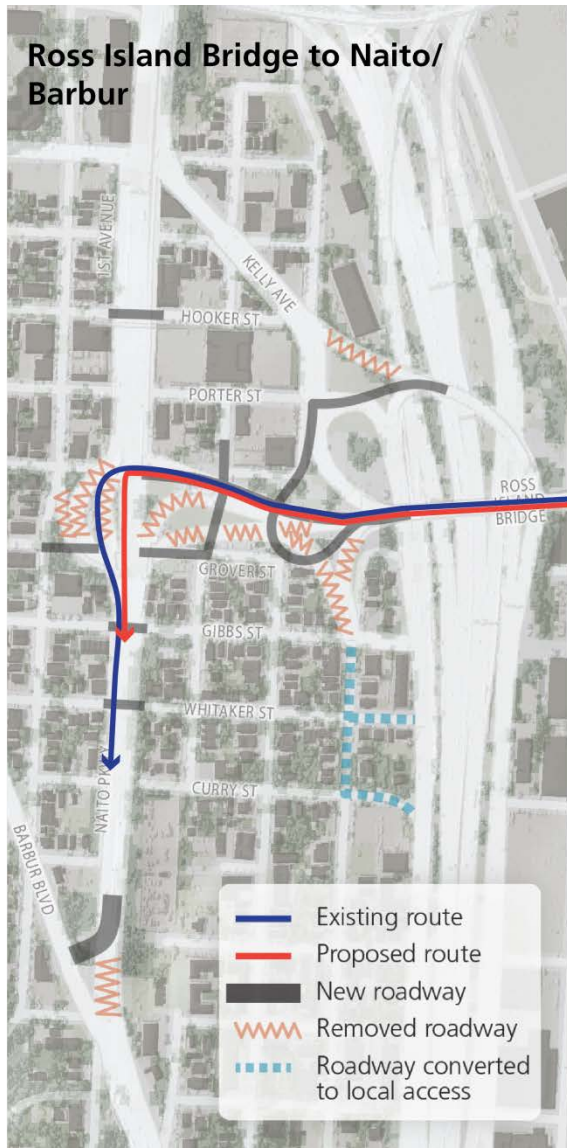
Appendix B:

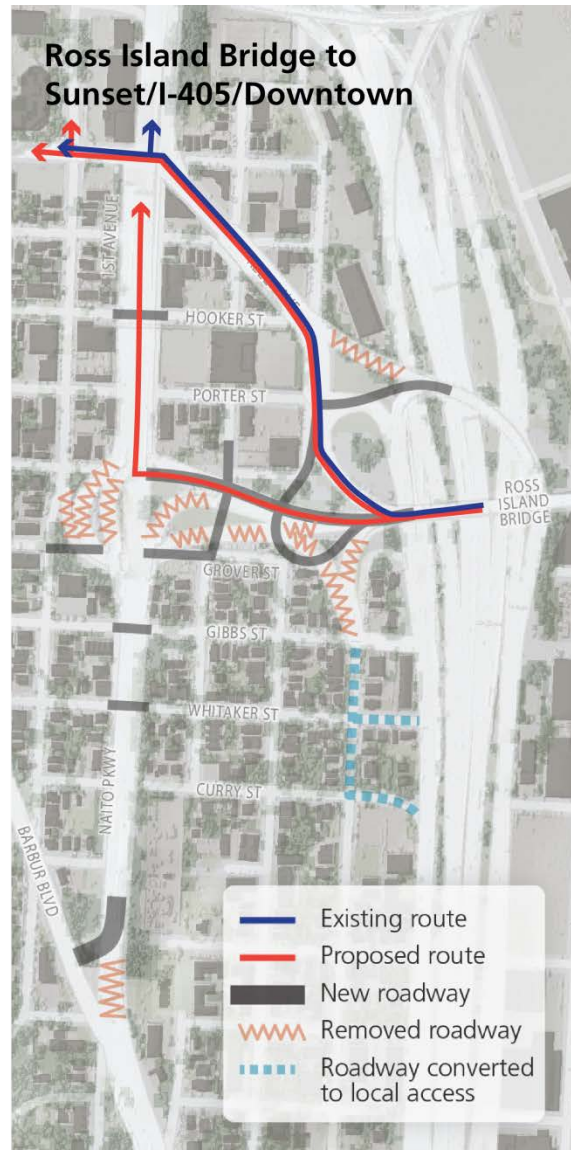
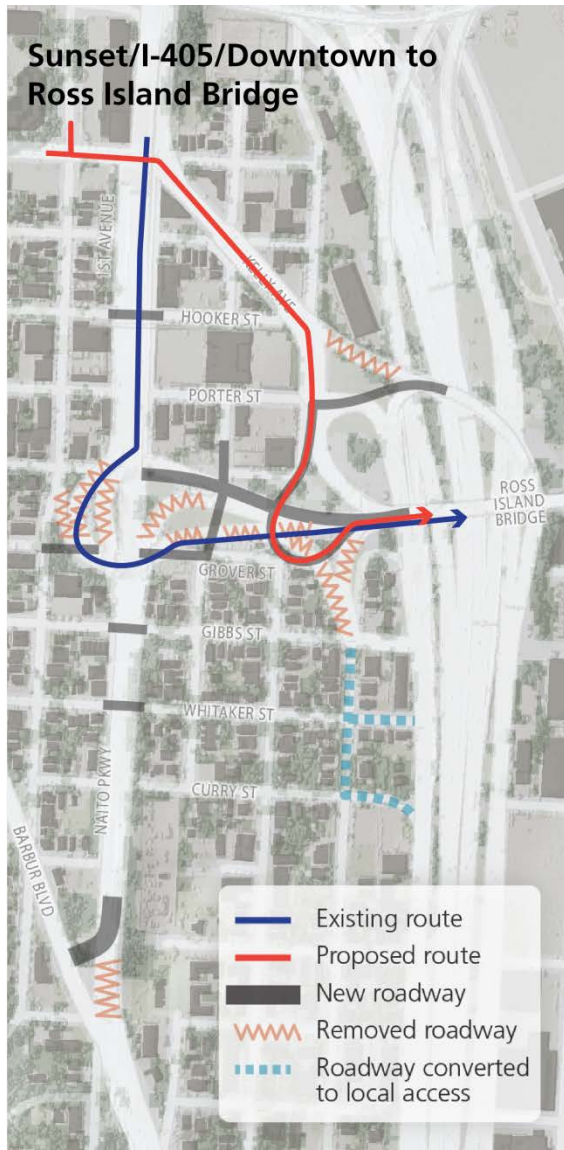
Auto Circulation for Naito Alignment with Bridgehead Reconfiguration

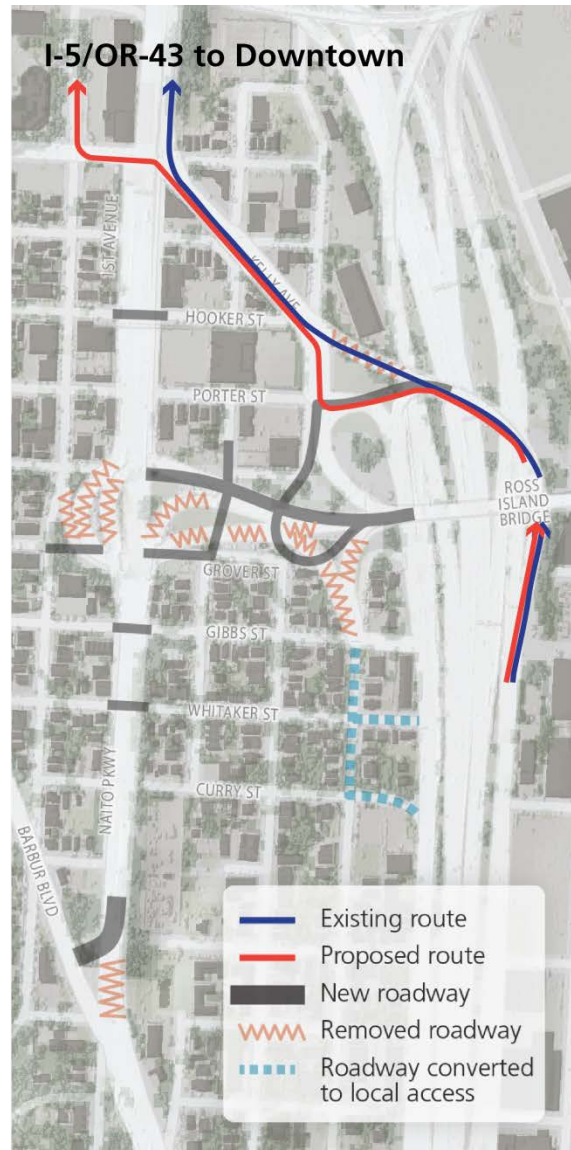
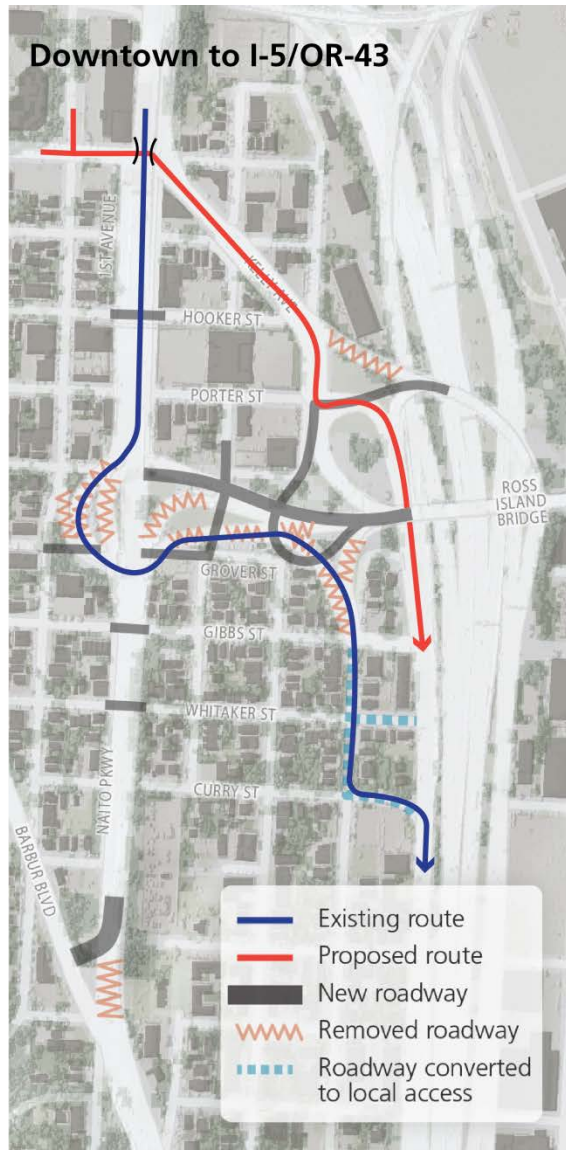
The following maps illustrate how auto traffic would circulate through the South Portland area with light rail on SW Naito Parkway including the Ross Island Bridgehead access reconfiguration.











What is the Southwest Corridor Light Rail Project?

The project is a proposed 12-mile MAX line connecting downtown Portland to Tigard and Tualatin.

After several years of early planning, the project is now undergoing environmental review.

What is the purpose of the decision briefing books?

Several project decisions remain, including options for alignments, stations, maintenance facilities and station access improvements.

Through fall 2017, individual decision briefing books will be released to inform conversations about the key considerations for each major decision. Because the environmental impact analysis is ongoing, briefing books will be updated as new information becomes available.

When will the decisions be made?

The steering committee is anticipated to narrow down the remaining options to a "Preferred Alternative" in early 2018.

Further outreach, design and environmental analysis will occur before a final decision on what to construct.

Decision Overview

The Southwest Corridor Light Rail Project includes a new connection to link the light rail line with the jobs and services at the medical facilities located on Marquam Hill, including Oregon Health & Science University (OHSU), the Veterans Affairs (VA) Portland Health Care System and the Portland Shriners Hospital for Children. Metro models project that over 10,000 daily trips (including both directions) would use this connection in 2035, including trips connecting to and from light rail, local buses and the Lair Hill neighborhood. Walking time along the proposed connection, which would link Barbur Boulevard with OHSU's Kohler Pavilion, is estimated to be about six minutes.



Four connection options are under consideration, which include combinations of tunnels, elevators and bridges. This initial version of the Marquam Hill Connection briefing book introduces these options, while subsequent versions will explore the trade-offs between them.

CONNECT

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503-813-7535

About Marquam Hill

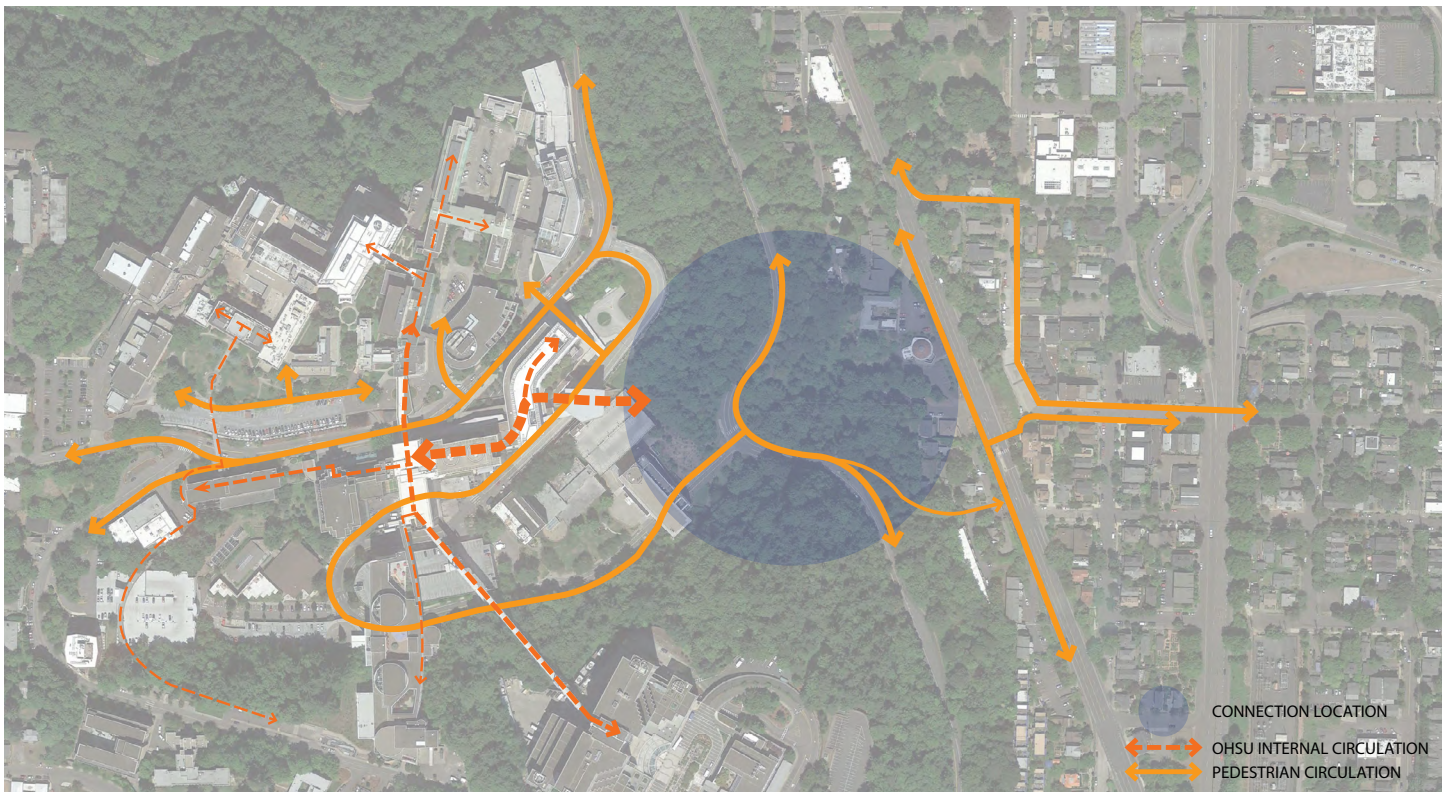
Marquam Hill is a major employment, health and educational center located in Southwest Portland. OHSU, the VA and Portland Shriners Hospital are all located here, along with residences and some supporting businesses in the Homestead neighborhood.

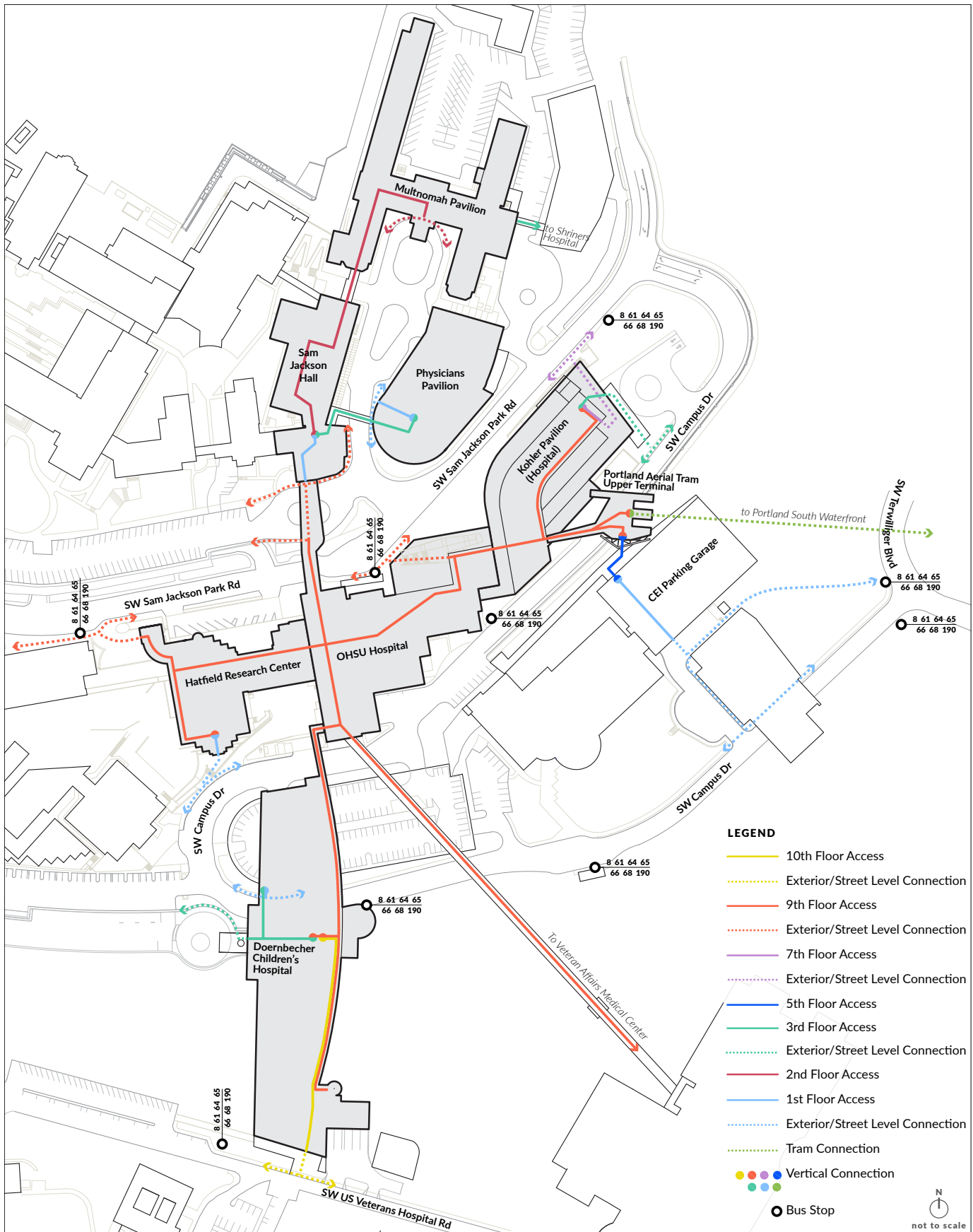
Vehicle access to Marquam Hill is primarily via SW Sam Jackson Park Road and SW Terwilliger Boulevard. Both streets become congested, affecting cars and buses. Transit routes include TriMet lines 8, 61, 64, 65, 66, 68, CTRAN route 190 and the Portland Aerial Tram.

OHSU's Kohler Pavilion provides a central circulation point for many of the medical facilities. The 9th floor provides access to the tram terminal, and connects to the OHSU Hospital and the Hatfield Research Center. It also leads to skybridges to both the VA and OHSU's Doernbecher Children's Hospital. From SW Sam Jackson Park Road, exterior ramps or stairs lead to Kohler Pavilion entrances at the 7th or 9th floors. From SW Campus Drive, an entrance to the building is at the 3rd floor.

Three of the four Marquam Hill connection options described in this briefing book would reach the 7th floor terrace of the Kohler Pavilion. This is considered the preferred connection location because it would provide a large, open location with multiple ADA-compliant exit points that could accommodate crowds without causing congestion, and because of the convenient access points to multiple destinations on the hill. These include elevator and stair access to the 9th floor and its connections, as well as stairs and ramps to either Sam Jackson Park Road or Campus Drive.

The map below illustrates general pedestrian circulation around Marquam Hill and Barbur Boulevard, with the approximate location of a Marquam Hill connection. The map on the following page shows circulation on the OHSU Marquam Hill campus in more detail.





OHSU MARQUAM HILL CAMPUS HOSPITAL PUBLIC ACCESS

AUGUST 30, 2017



Background on Marquam Hill Connection

Original concepts for a connection between Barbur Boulevard and Marquam Hill were developed in 2014 by two consultant design teams with input from project partners and interested stakeholders, including OHSU, the VA, City of Portland staff, the South Portland Neighborhood Association, the Homestead Neighborhood Association, Friends of Terwilliger and the Southwest Corridor Steering Committee.

In July 2015, a direct light rail tunnel connection to Marquam Hill was removed from further study by the Southwest Corridor Steering Committee because of the adverse construction impacts and high costs relative to the projected ridership gains. As a result, the project's proposed pedestrian and bicycle connection between the light rail alignment and the hilltop became critically important.

Overview of Connection Options

All connection options would connect OHSU's Kohler Pavilion (at the 3rd or 7th floor) to Barbur Boulevard, crossing Campus Drive and Terwilliger Boulevard. At Barbur, the connection would begin south of the location of the Congregation Ahavath Achim synagogue. The following table summarizes differences between the options.

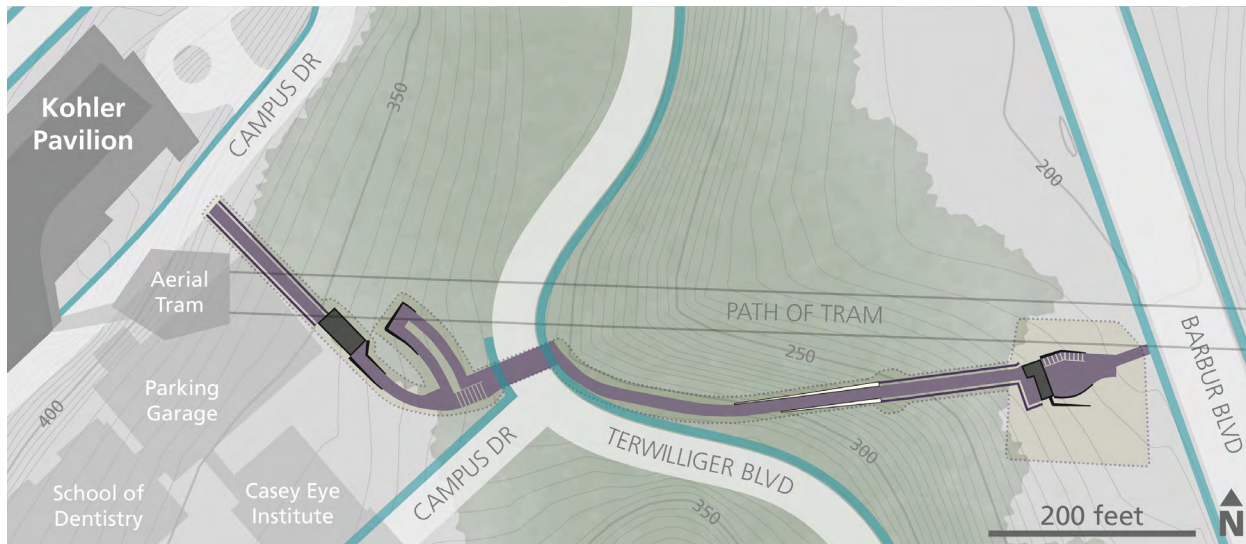
	Access to Kohler Pavilion	Crossing Campus Drive	Campus Drive to Terwilliger	Crossing Terwilliger	Terwilliger to Barbur
1A <i>Elevator/Bridge and Path</i>	3rd floor	at-grade crossing	stairs and ramps stairs and elevator bridge	at-grade crossing	at-grade path stairs and elevator bridge
1B <i>Elevator/Bridge and Recessed Path</i>	7th floor	bridge	stairs and ramps recessed path stairs and elevator	underpass	at-grade path stairs and elevator bridge
1C <i>Elevator/Bridge and Tunnel</i>	7th floor	bridge	stairs and ramps tunnel stairs and elevator	underpass	at-grade path stairs and elevator bridge
2 <i>Full Tunnel</i>	7th floor	bridge	tunnel stairs and elevator	tunnel	at-grade path tunnel

The nearest light rail station would be just north of Gibbs Street on either Barbur Boulevard or Naito Parkway, depending on the light rail alignment. More detailed maps of the Naito and Barbur alignments are provided in the *Light Rail Alternatives for Environmental Review* document, available on the project website: www.swcorridorplan.org/light-rail-study.

The station location would not affect the Marquam Hill connection designs. With either station location, the stairs from the east side of Barbur Boulevard to Gibbs Street would be improved and ADA-accessible ramps would be added, and a new pedestrian crossing would be added across Naito Parkway at Gibbs Street to connect to the existing pedestrian bridge over I-5.

Connection 1A: Elevator/Bridge and Path

This option would include two elevators, two bridges and an on-grade path. A path would connect Barbur to an elevator tower to the west. A bridge would connect the elevator tower to a path along the hillside east of Terwilliger. The option would include an at-grade crossing of Terwilliger with an improved pedestrian crossing. On the west side of Terwilliger, stairs and ramps would lead to the second elevator tower. A bridge would connect the upper elevator to Campus Drive at the third floor base of Kohler Pavilion. Because the upper elevator tower and bridge would be directly under the path of the Aerial Tram, Connection 1A could not tie in directly to the seventh floor of Kohler Pavilion as the other connection options do. Instead, pedestrians would cross Campus Drive to an entrance to Kohler Pavilion to reach a bank of elevators, or continue along Campus Drive to other facilities.



Connection Elements

- Path, ramp or plaza
 - Stairs
 - Bridge
 - Tower with elevator and stairs
 - Below-ground wall
 - Above-ground wall
 - Estimated construction footprint
- Over about 5 ft tall
Thicker line = taller

Existing Conditions

- Sidewalk or path
- Tree cover



Connection Elements

- Path, ramp, plaza or stairs
- Bridge
- Tower with elevator and stairs
- Wall (above or below ground)

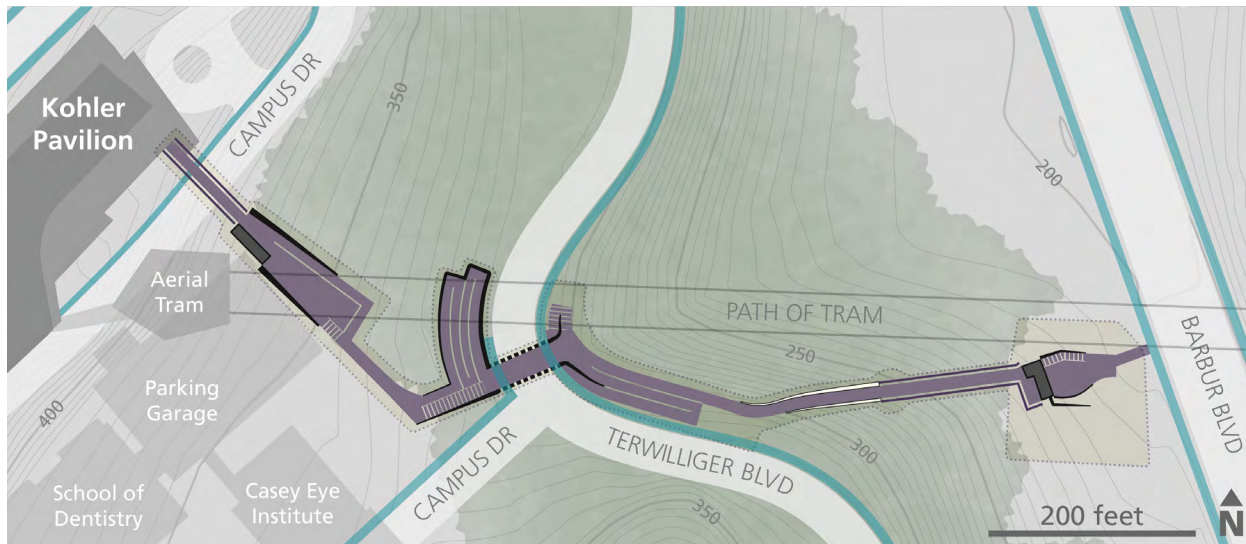
Existing Conditions

- Ground level
- Sidewalk or path
- Tree cover

Connection 1B: Elevator/Bridge and Recessed Path

This option would include two elevators, two bridges and an on-grade path. This option would be identical to Connection 1A for the lower elevator and bridge near Barbur, but would differ at Terwilliger and at the upper elevator and bridge west of Terwilliger.

Connection 1B would feature a below-grade crossing of Terwilliger, which would include ramps and stairs on the east side of the roadway to connect to the existing multi-use path. West of Terwilliger, a series of stairs and ramps would connect the pedestrian underpass to a wide recessed path at the base of the upper elevator. A bridge would connect the top of the elevator to the seventh floor of Kohler Pavilion.



Connection Elements

- Path, ramp or plaza
 - Stairs
 - Tunnel
 - Bridge
 - Tower with elevator and stairs
 - Below-ground wall
 - Above-ground wall
 - Estimated construction footprint
- Over about 5 ft tall
Thicker line = taller*

Existing Conditions

- Sidewalk or path
- Tree cover



Connection Elements

- Path, ramp, plaza or stairs
- Tunnel
- Bridge
- Tower with elevator and stairs
- Wall (above or below ground)

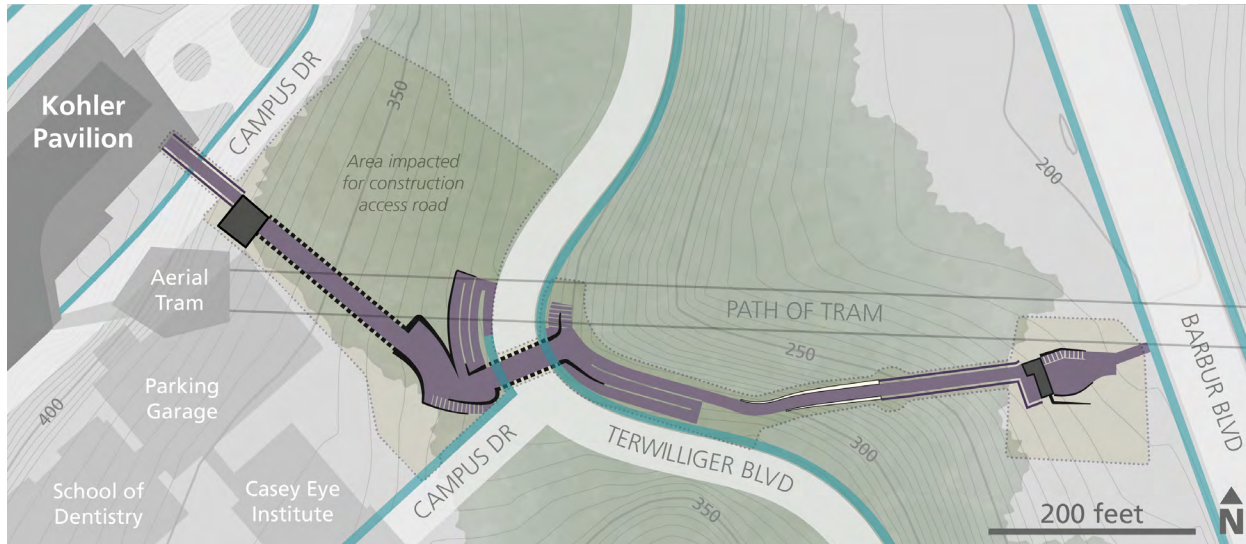
Existing Conditions

- Ground level
- Sidewalk or path
- Tree cover

Connection 1C: Elevator/Bridge and Tunnel

This option would include two elevators, two bridges and an on-grade path. This option would be identical to Connection 1B from Barbur to the below-grade crossing of Terwilliger, but would differ west of Terwilliger.

The pedestrian underpass below Terwilliger would emerge into an open recessed area west of the roadway, about 30 feet below the level of the surrounding ground. A series of ramps and stairs would connect this open area to the sidewalks on Campus Drive and the west side of Terwilliger. A 180-foot-long tunnel would lead from the open area to the upper elevator tower. A bridge would connect the top of the elevator to the seventh floor of Kohler Pavilion.

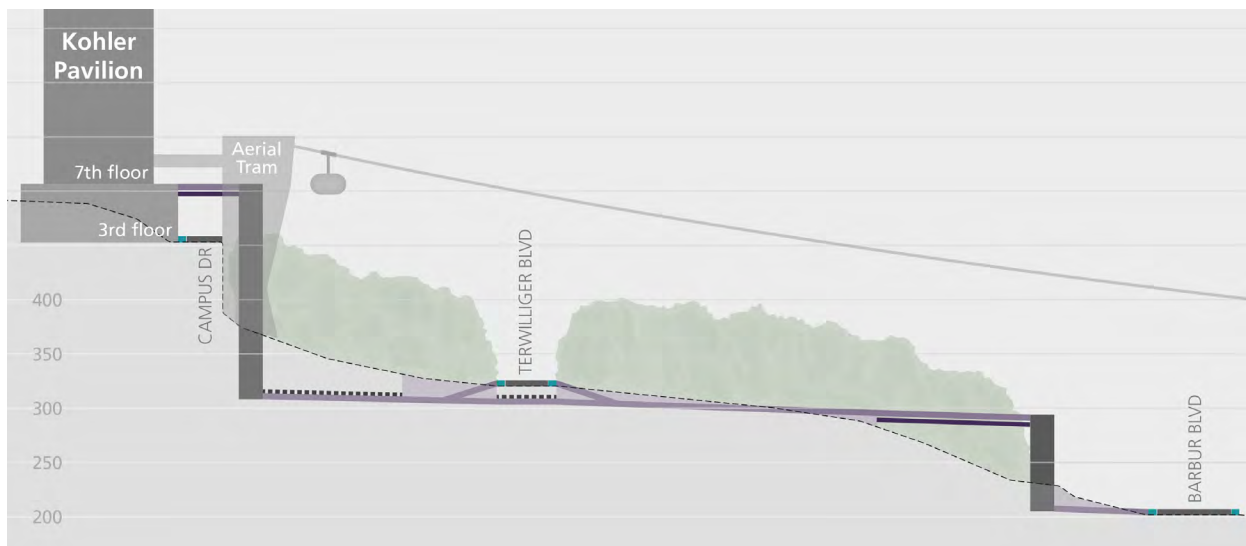


Connection Elements

- | | |
|---------------------|----------------------------------|
| Path, ramp or plaza | Tower with elevator and stairs |
| Stairs | Below-ground wall |
| Tunnel | Above-ground wall |
| Bridge | Estimated construction footprint |
- Over about 5 ft tall
Thicker line = taller*

Existing Conditions

- | |
|------------------|
| Sidewalk or path |
| Tree cover |



Connection Elements

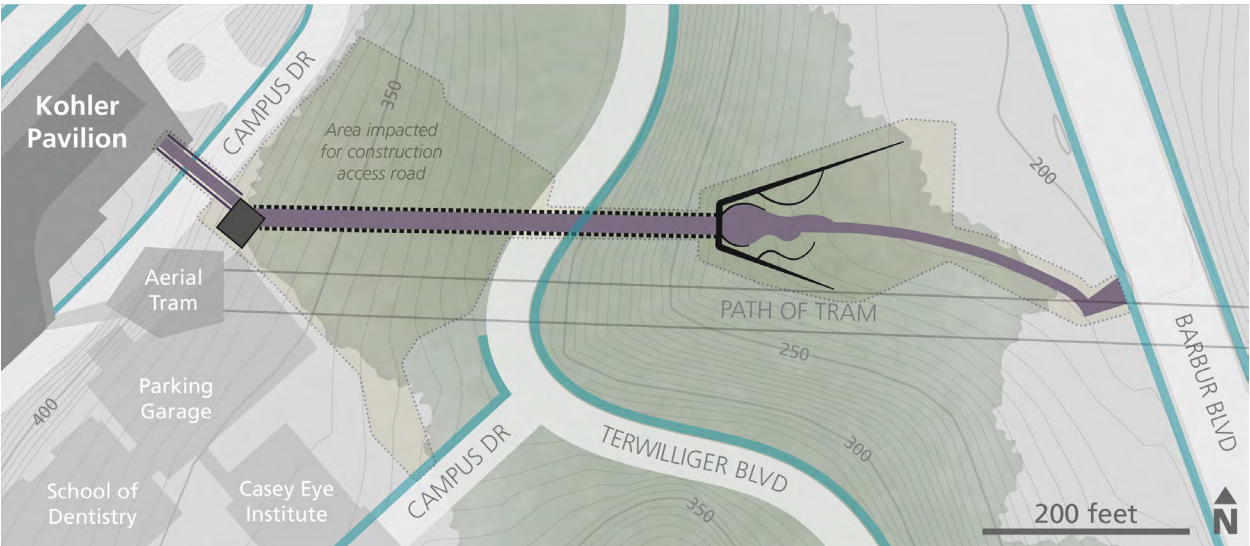
- | | |
|-----------------------------|--------------------------------|
| Path, ramp, plaza or stairs | Tower with elevator and stairs |
| Tunnel | Wall (above or below ground) |
| Bridge | |

Existing Conditions

- | |
|------------------|
| Ground level |
| Sidewalk or path |
| Tree cover |

Connection 2: Full Tunnel

Connection 2 is distinct from the other three Marquam Hill connection options and has a single tunnel, an elevator and a bridge. A path from Barbur would lead to an open plaza area partially embedded into the hillside. A 450-foot-long tunnel would extend into the hillside under Terwilliger and connect to an elevator. A bridge would connect the top of the elevator to the seventh floor of Kohler Pavilion.

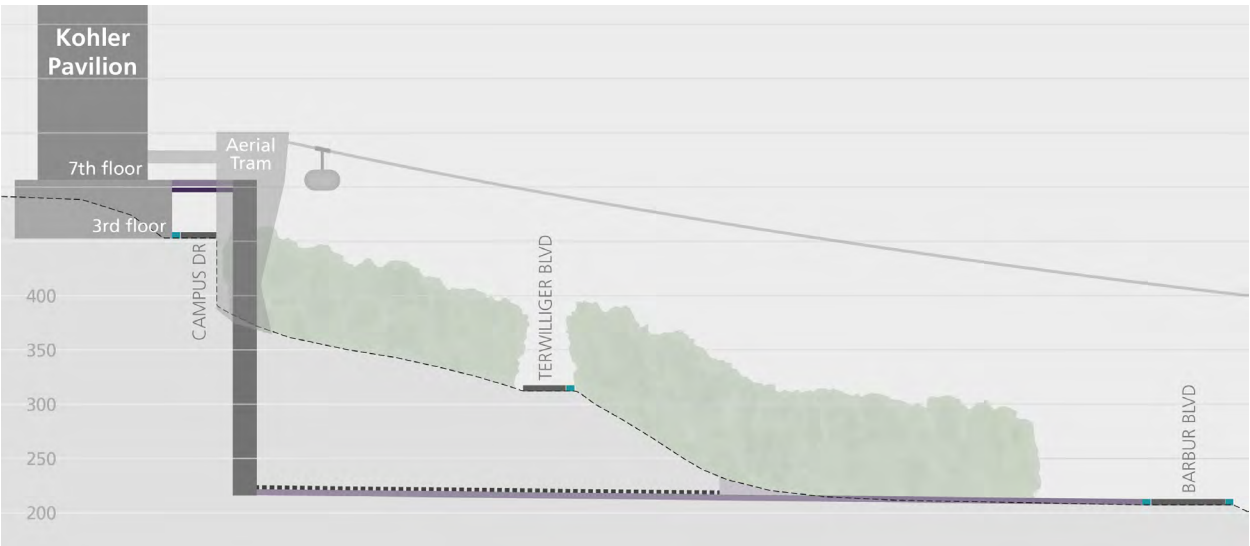


Connection Elements

- Path, ramp or plaza
- Stairs
- Tunnel
- Bridge
- Tower with elevator and stairs
- Below-ground wall } Over about 5 ft tall
Thicker line = taller
- Estimated construction footprint

Existing Conditions

- Sidewalk or path
- Tree cover



Connection Elements

- Path, ramp, plaza or stairs
- Tunnel
- Bridge
- Tower with elevator and stairs
- Wall (below ground level)

Existing Conditions

- Ground level
- Sidewalk or path
- Tree cover