

ELEVATING PEOPLE

Planning for Equitable Travel to Marquam Hill



JUNE 2018



Figure 1. Storytelling Preview for Patients, Employees, and Students

As a volunteer driver, Antonio James understands the transportation needs of OHSU patients. *Travel Frequency: Routine. To read more, go to page:*

35

Ammar understands how important transportation availability is for OHSU's patients. *Travel Frequency: Daily. To read more, go to page:*

75

Marcos' commute is complicated by the displacement of the black community in Portland. *Travel Frequency: Daily. To read more, go to page:*

70

AMMAR
VIVIAN
JONATHAN
MARCOS
THANH
KAYLA

Without someone to help her, it's getting harder for Vivian to navigate Marquam Hill. *Travel Frequency: Infrequent. To read more, go to page:*

40

Traveling to an OHSU research study from Corvallis is no small feat for Connie. *Travel Frequency: Routine. To read more, go to page:*

53

Working at OHSU is a great fit for Magdalena who loves getting to work without a car. *Travel Frequency: Daily. To read more, go to page:*

22

Taking the first bus of the day means Manny is just barely on time for work. *Travel Frequency: Daily. To read more, go to page:*

25

Jonathan prefers to take the bus to work, but there isn't always room for him. *Travel Frequency: Daily. To read more, go to page:*

50

Knowing that she will soon be blind, Kayla is worried about how she'll get around OHSU. *Travel Frequency: Infrequent. To read more, go to page:*

47

Thanh loves his job at OHSU but isn't sure if he can continue to afford the commute. *Travel Frequency: Daily. To read more, go to page:*

20

As an OHSU/PSU student, Sky takes multiple transit trips every day. *Travel Frequency: Daily. To read more, go to page:*

79

MANNY

SKY

FAWZIA

MAGDALENA

CONNIE

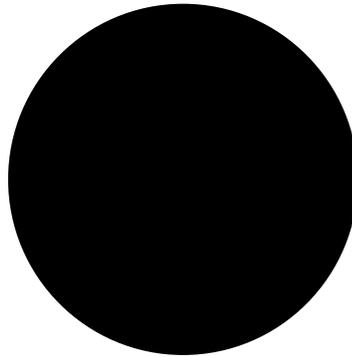
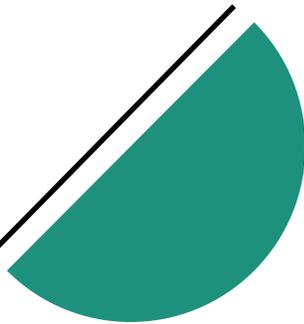
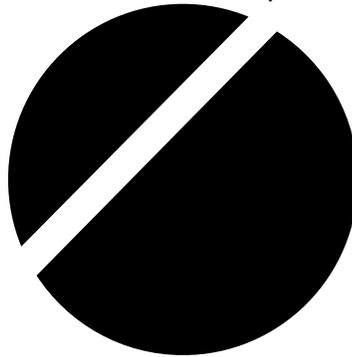
ANTONIO

Fawzia translates for her parents but she can't always get a ride to OHSU. *Travel Frequency: Routine. To read more, go to page:*

30

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Consulting Team

Plan581 is a team of graduate students of Urban and Regional Planning and Public Health that passionately engages community, seeks partnership to create broad change, and strives to be accomplices in addressing social and racial equity in the Portland region and beyond.

Territory Acknowledgement

We begin by respectfully acknowledging, with humility, that the land where OHSU sits is the ancestral lands of the Multnomah, Chinook, Tualatin Kalapuya, Kathlamet, Molalla, Clackamas, and other Tribes who made their homes along the Columbia River. We also acknowledge that the colonization of this land is an ongoing process, as we occupy this land through deceptive and broken treaties. Let us remember these histories, work to heal, and strengthen relationships with the Indigenous communities who continue to live in region.



Portland State
UNIVERSITY



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A view of the Portland Aerial Tram, one of only two commuter aerial tramways in the United States, entering the terminal at Marquam Hill

INTRODUCTION

CHAPTER OVERVIEW

Elevating People intersects with OHSU’s vision for diversity and inclusion and their goals to reduce single-occupancy vehicle trips and promote the increased use of sustainable multimodal transportation. In this opening chapter, Plan581 details the context within which to situate this plan, sets intentions and guiding principles, and outlines the plan’s components. It also introduces the plan’s unique storytelling approach that centers the diverse experiences of some of Marquam Hill’s travelers.

Oregon Health & Science University (OHSU) is Oregon’s only academic health center and the largest employer in Portland. OHSU’s nationally recognized programs and numerous specialties draw many people to the institution. Its Marquam Hill campus generates thousands of trips to and from their facilities every day, but constrained road access leading to the hill worsens traffic issues for the surrounding neighborhoods—on top of the high numbers of people traveling by car through the area (Figure 2). Though OHSU has implemented a wide range of programs aimed at reducing employee single-occupancy vehicle (SOV) trips to Marquam Hill, projected future growth of the institution will require additional measures to further reduce SOV trips and to meet the needs of a diverse campus and region.

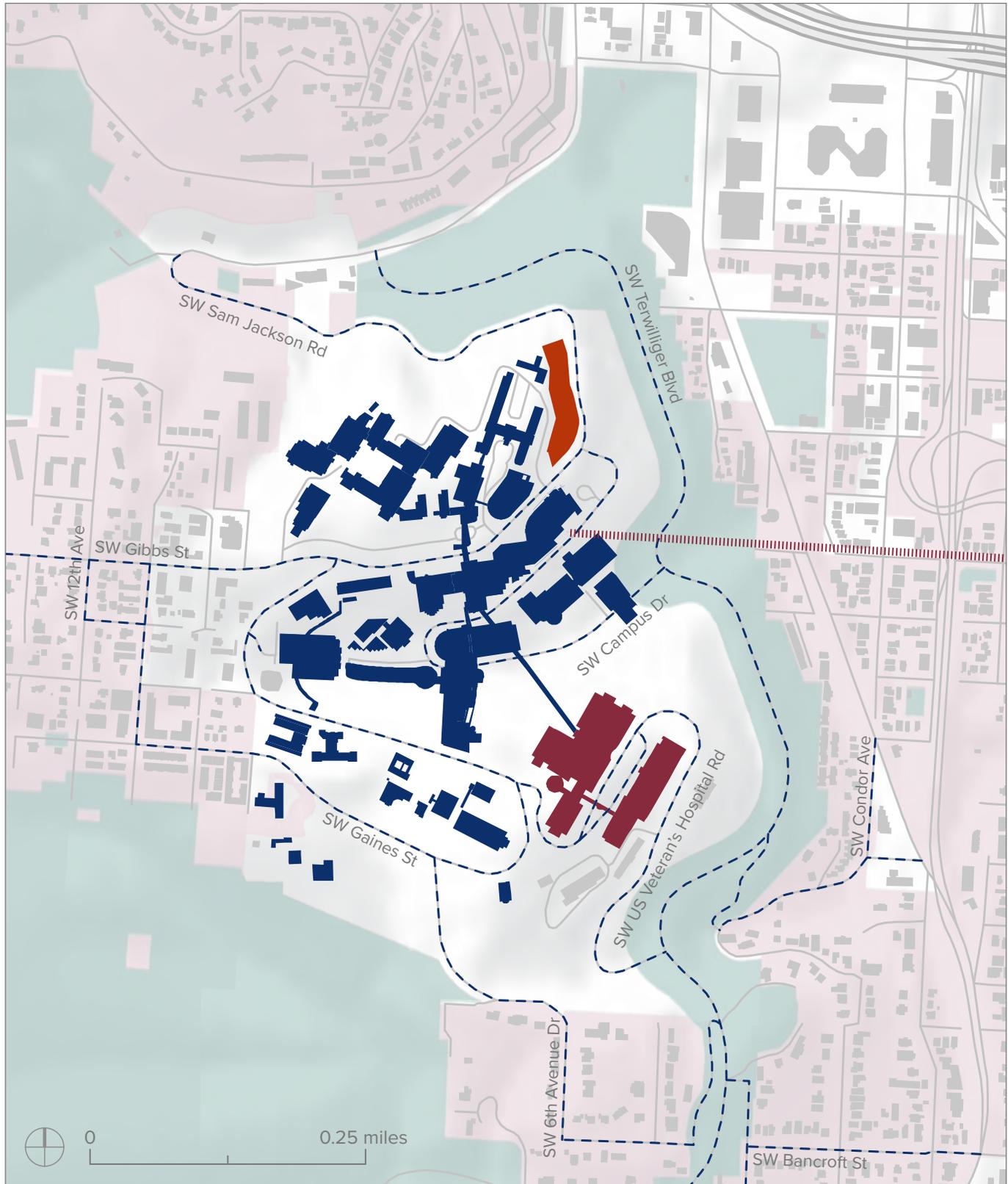
Plan581, a team of urban planning graduate students at Portland State University, presents the *Elevating People* plan and its Transportation Equity Lens to help guide OHSU’s future transportation investments. Together, the plan and lens are aimed at improving travel to Marquam Hill by identifying Priority Communities and advancing transportation equity through internal and regional efforts. Plan581 provides a comprehensive analysis of the transportation network, communities

of concern, and underserved groups, and describes the institution’s capacity and existing policies which fortify the implementation of the Transportation Equity Lens. Plan581 identifies Priority Communities—the groups of people who experience the greatest barriers for travel—by analyzing underrepresented employee and visitor experiences. A targeted effort that begins with Priority Communities is at the core of an equity-focused transportation planning strategy which OHSU can use to guide future transportation investments. This approach can satisfy OHSU’s need to reduce SOV trips while also increasing employee retention and reducing patients’ missed appointments—a critical component for increasing OHSU’s competitive advantage and growing their reputation as a top hospital in the region.

Identifying Priority Communities, linking them to individual and systemic issues at OHSU, and establishing criteria for evaluating future projects with regard to how they respond to the needs of Priority Communities are what differentiates this work from previous planning efforts.

This plan describes opportunities for OHSU to better serve Priority Communities through transportation investments, practices, policies, and advocacy efforts. It

Figure 2. Access Roads that Lead to Marquam Hill



- | | | | | | | |
|---|----------------|---|-----------------|---|--------------|---------------------------|
|  | OHSU buildings |  | Green space |  | Access roads | <i>Source: Metro RLIS</i> |
|  | OHSU campus |  | Residential |  | Tram | |
|  | Shriner's |  | Other buildings |  | Streets | |
|  | VA buildings | | |  | Freeway | |

Accounting for the different experiences and identities of the full range of people who travel to Marquam Hill will help guide transportation plans that better serve OHSU's entire community.

also contains travel profiles and narratives to illustrate the diversity of travel experiences and people who belong to these Priority Communities, as well as why an intersectional lens is needed to advance equity in transportation planning. Like past plans, this document serves as an advocacy tool to advance progressive ideas with institutional leadership, and to illustrate the urgency of improving travel options to Marquam Hill to stakeholders and regional partners.

This assessment by Plan581 was initiated by the client, OHSU Transportation & Parking, and their concerns regarding peak-hour travel to Marquam Hill. OHSU, visitors, and people in the surrounding area are experiencing congestion, lengthier travel times, limited access to transit, and barriers to biking and walking because of high numbers of those driving, geographic constraints, and issues associated with Marquam Hill itself. These conditions have previously prompted OHSU to develop solutions with other consultants to address peak-hour and nighttime travel, particularly to improve employee transportation options as the institution continues to grow and travel issues become more complex. Limited parking availability at OHSU does not meet the current demand, and OHSU has prioritized a strategy for reducing employee SOV trips and making transit and active modes the best way to travel to Marquam Hill. Recent efforts have resulted in sophisticated studies, a wealth of data, pilot programs, and transportation plans with several recommendations for OHSU to implement in the near future. A majority of research and programs by OHSU have been focused on employee travel, however, there is an opportunity now to prioritize sustainable travel that better serves OHSU's entire community—including patients, students, visitors, and employees—with more attention to the various identities and experiences that transcend the travel modes by which they are often categorized.

Methodology

Plan581 synthesized information gathered from several sources between January and May 2018 to create the foundation for this plan and the Transportation Equity Lens presented herein. The team utilized expert consultations, stakeholder interviews, peer-reviewed literature and other salient sources, GIS analysis of census data, survey responses, and feedback from public engagement events to inform the contents of this plan. A full accounting of the methodology appears in the appendix at the end of this plan.

This plan is divided into five major sections:

- Trends
- Challenges
- Impacts
- Equity Lens
- Recommendations

Across these sections we center our questions on three main topics:

- Priority communities and their experiences traveling to Marquam Hill
- The transportation systems that get them there
- The institutional policies and processes that created that system

Moving through the report, Plan581 will share what is known and commonly understood about trends in transportation to Marquam Hill, and explore critical gaps and burdens in these services in the Challenges section. The Equity Lens section introduces a lens that could constructively guide work to fill these gaps. The Recommendations chapter includes recommendations necessary to promote an equitable system of transportation for all travelers to OHSU.

The intended audience of this report is the Transportation & Parking department and senior leadership at OHSU, although others may find its content valuable for their own purposes.



Top: Riders boarding the TriMet Line 8-Jackson Park/NE 15th bus

Bottom: An employee valets her bike before boarding the Tram to Marquam Hill





View from the bike valet on the South Waterfront, looking towards Marquam Hill

TRENDS

CHAPTER OVERVIEW

This chapter describes Marquam Hill’s travel conditions, available transportation options, and how OHSU and regional agencies work together to be responsive to the needs of people traveling to Marquam Hill. Plan581 discusses how issues of congestion, long commutes, and limited transit accessibility impact those who need access to OHSU. This chapter also alludes to a strategy involving Plan581’s Transportation Equity Lens to elevate OHSU’s impact for serving its community.

In the last 20 years, the Portland Metro area has grown in population by 34%.^{1,2} During this same time, OHSU employee and patient totals grew by 160%.³ Historically, OHSU’s growth concentrated at its Marquam Hill campus. Yet the majority of more recent growth has occurred at the eight-acre South Waterfront campus which opened in 2014. Today these two campuses host 86% of OHSU employees and 70% of their patient visits. By the year 2028, the Marquam Hill and South Waterfront campuses are projected to further expand, adding a combined total of 24% more jobs and 56% more patients.⁴ The increase in individuals needing access to Marquam Hill has challenged the capacity of the existing transportation infrastructure leading to and from OHSU’s hilltop campus (Figure 3). With further growth on the horizon, OHSU is exploring innovative ways to enhance capacity and efficient use of Marquam Hill’s transportation resources.

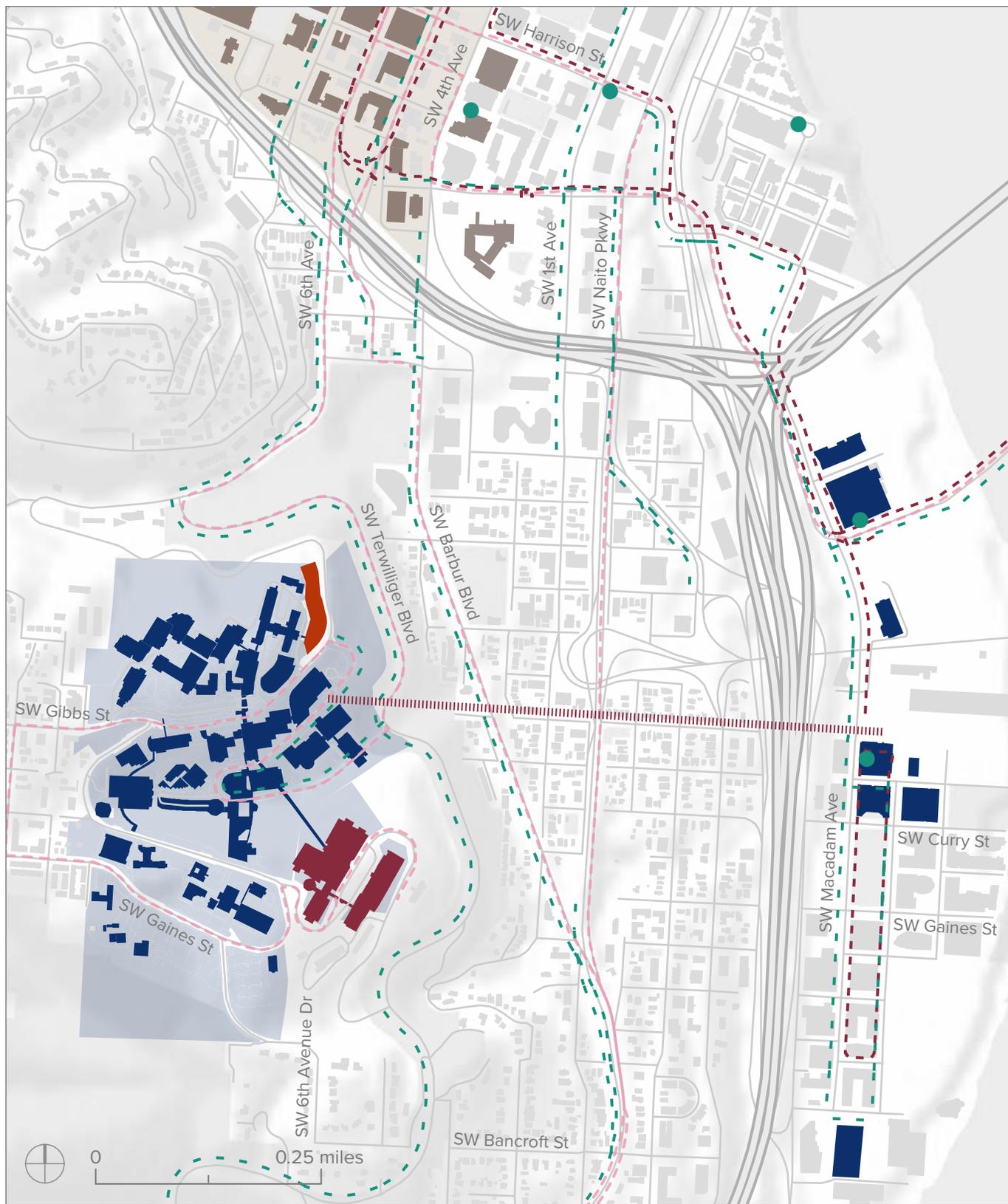
What are Transportation Options Available?

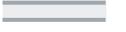
Marquam Hill has been the primary campus for OHSU since it was first established in 1919. The original 108-acre campus was donated to the hospital in 1917.⁵ The campus is 581 feet above sea level, whereas the City of Portland is an average of 50 feet above sea

level. The campus has an average grade of 25% or more, and 40% of the now 116 acres is unbuildable due to its slope.⁶

The street network for accessing the hospital’s services on Marquam Hill consists of neighborhood collectors and local streets and has not changed much since the hospital opened. In 1985, when the workforce on Marquam Hill was still small, 77% of OHSU-Marquam Hill employees drove to work. By 1999, as the workforce grew, the percentage of employees who drove alone to work dropped to 50%, in part because parking services on the hill could not be expanded at the same rate as this workforce growth. In 2006, the City of Portland designated Marquam Hill a Plan District. As part of that process, the Homestead neighborhood, which shares Marquam Hill with OHSU, successfully lobbied to place restrictions on OHSU’s future growth. OHSU was asked to manage commuting impacts on nearby residential streets by designating Sam Jackson Park Road as its main entrance, reducing cut through behavior on local streets, and had to comply with a cap on parking availability that is regulated by the City.⁷ Since the Marquam Hill Plan District designation, OHSU Marquam Hill employees share of traveling via SOV trips dropped to 39% in 2013 but then rose to 45% in 2016.⁸

Figure 3. OHSU Marquam Hill, OHSU South Waterfront, and PSU Campuses



- | | | | | | | | |
|---|----------------|---|-----------------|--|--------------------|---|--------------------|
|  | OHSU buildings |  | PSU buildings |  | Light rail transit |  | Tram |
|  | OHSU campus |  | PSU campus |  | Frequent bus |  | Streets |
|  | Shriners's |  | Other buildings |  | Bike lanes |  | Freeway |
|  | VA buildings | | |  | Biketown | | Source: Metro RLIS |

20-YEAR HISTORIC GROWTH 1995-2016

+34%	Metro
+161%	Employees
+159%	Patients

10-YEAR PROJECTED GROWTH 2017-2028

+20%	Metro
+27%	Employees
+67%	Patients

Aerial Tram. The Portland Aerial Tram connecting Marquam Hill to the South Waterfront opened in 2006. The Tram serves 6,400 daily riders and operates at near capacity during the afternoon and evening peak period. Trips cost \$4.70 when traveling up to Marquam Hill and are free when going down to South Waterfront. All OHSU employees and students ride free with their ID badges. The Tram operates weekdays 5:30 a.m. to 9:30 p.m. and on Saturdays from 9:00 a.m. to 5:00 p.m. Tram closure for maintenance or inclement weather causes significant impacts for OHSU operations.

Pedestrian and Wheeled Movement. Due to its steep incline, travel to Marquam Hill and movement across the campus can be strenuous and unsafe for people using crutches, assistive walkers, manual wheelchairs, or skateboards. Some trails exist for hike-based commuting as part of the Southwest trails network. Alternatively, people can access Marquam Hill by walking on sidewalks where they exist. However the sidewalk network is incomplete, and results in circuitous trips.⁹ Accessing Marquam Hill via sidewalk is most common only for those who utilize the Gibbs Street pedestrian bridge. A walking commute from downtown to Marquam Hill generally takes 20-30 minutes.

In the last decade, OHSU has tripled the percentage of its workforce that bikes to work (Figure 4).¹⁰ This shift has partly been a result of the opening of the Tilikum Crossing bridge, the largest car-free bridge in the United States, which provides a safe and easy connection for cyclists traveling between southeast Portland and OHSU's campuses. The South Waterfront campus hosts a Biketown bike share docking station in front of the Tram stop. OHSU also runs its own bikeshare system that includes electric bikes to help facilitate active transportation when employees need to travel between the Marquam Hill and South Waterfront campuses.

It is a common practice for people biking to Marquam Hill to arrive at South Waterfront and load their bikes onto the Tram in order to avoid biking up the steep route to the hilltop campus. These bikers then ride their bikes down the hill on their way home. Each Tram vehicle is able to accommodate three bikers per trip. Bikers may also park their bikes at Go By Bike, a free valet bike service in front of the Tram's loading terminal that runs weekdays 6:00 a.m. to 7:30 p.m. Go By Bike has recently expanded and can accommodate 450 bikes. During Portland's fair weather months of June to September, Go By Bike often reaches capacity and must turn excess bikes away.

In addition to the Tram, OHSU also provides an elevator at the South Waterfront campus. It lifts cyclist and pedestrians 70 feet to the Gibbs Street pedestrian bridge, a 700 feet long pedestrian and bike bridge. The bridge opened in 2012 and provided a new option to travelers whose alternative was a one-mile circuitous route. This elevator's operations are tied to the Tram in such a way that when the Tram is closed for maintenance, this elevator is also inaccessible. A stairwell located next to the elevator offers a 132-step alternative to those able and willing to utilize that option.

MAGDALENA

Meet Magdalena

Magdalena is committed to supporting OHSU's goals of cutting back on car travel, even if it means getting creative with her commute.



Choosing Your Own Car-Free Adventure

When people ask Magdalena about her job, she tells people that she feels like she won the employment lottery. Not only is she doing the work she loves as a medical interpreter, but she also gets to work for an employer who goes to great lengths to encourage its employees to walk, bike, and take transit to work.

Although she does sometimes bike to work when the weather is nice, Magdalena usually takes transit to work. Her trip begins at the Johnson Creek MAX station, where she rides the train downtown to transfer to the Line 8 bus to take her the rest of the way to Marquam Hill. Taking Line 8 from downtown can sometimes cause her to be late to work due to the multiple stops the bus makes along the transit mall downtown. Even though taking transit is longer than driving, Magdalena doesn't mind the commute itself. However, she does worry about what would happen to non-English-speaking patients if she doesn't arrive to work on time to translate for them. A more streamlined route between downtown and Marquam Hill would help alleviate some of her transportation-related stress by providing a faster connection from her MAX stop to the hill.

How OHSU Can Help: Operating a transit mall shuttle would help ensure that Magdalena and other OHSU employees making transit transfers downtown would have a more efficient transit option to Marquam Hill. See page 74 for more details.

EMPLOYEE

Bus. TriMet runs one bus, Line 8, to Marquam Hill. Service begins at 5:00 a.m. and ends at 12:13 a.m during the work week. TriMet also runs express lines 61, 64, 65, 66, and 68 with limited service around weekday peak travel hours. Extensions to TriMet’s express bus service to Marquam Hill are expected in September 2018. C-Tran runs Line 190 from Vancouver, WA, to Marquam Hill as a peak hour express route.

Light Rail. The Portland regional light rail system, TriMet MAX (Metropolitan Area Express), stops at Tilikum Crossing on the South Waterfront. This stop is 0.6 miles from the Tram terminal, with an estimated walking time of 12 minutes between the stop and the terminal. Portland Streetcar, Portland Central City’s pedestrian accelerator, operates 16 miles of track including an extension that connects to the Tram terminal and circles the South Waterfront campus. The City of Portland, TriMet, Metro, and other stakeholders are currently working on a extension to MAX Light Rail to add a 12-mile line that would provide service to southwest Portland and continue on to Tigard and Tualatin. The SW Corridor line is slated to open in 2027. The route will include an OHSU stop along Barbur Boulevard. Elevators and catwalks would connect riders from the light rail stop to the campus on Marquam Hill.

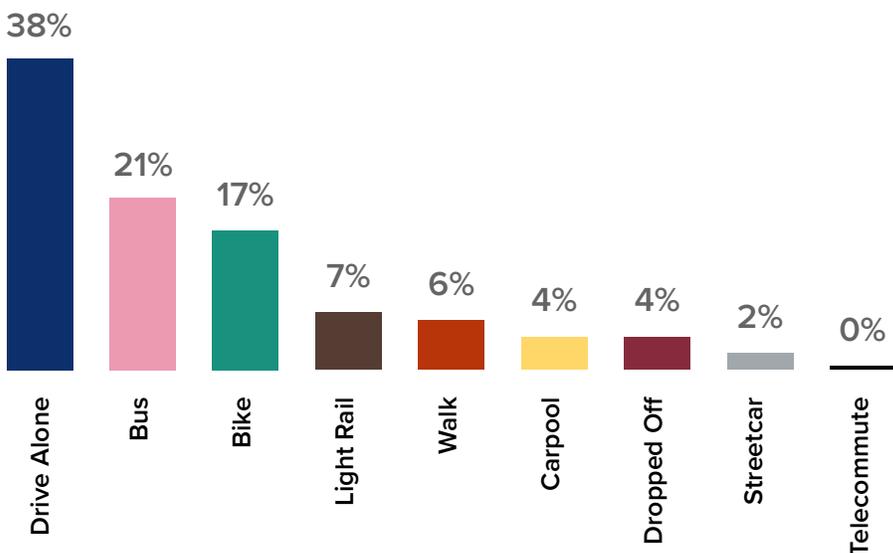
Assistive Transportation. In addition to their delineated route service, TriMet also provides a paratransit service called TriMet Lift within their bus and rail service area boundaries. TriMet Lift is available to riders who can’t take the delineated routes due to a disability or disabling health condition. All TriMet Lift rides must be scheduled at least one day in advance. TriMet Lift service operates from 4:30 a.m. to 2:30 a.m. Additionally, Ride Connection is a private non-profit organization that provides a similar free door-to-door service for adults 60 or older and people with disabilities. Service hours vary, but are much more



In the last decade, OHSU has tripled the percentage of its workforce that bikes to work.

However, driving alone remains the primary commute mode for most employees.

Figure 4. Primary Commute Mode for Marquam Hill & S. Waterfront Employees



limited than TriMet's Lift. Request for trips with Ride Connection must be submitted four business days in advance.

Medicaid—Non Emergency Medical Transportation. For patients on Medicaid, transportation to and from appointments is included as part of their health care coverage. These patients coordinate rides through state-contracted brokerages, who work with patients to provide medically appropriate transportation. Most patients on private insurance do not have any transportation benefits.

Additional Options. Uber, Lyft, and traditional taxi companies all serve Marquam Hill. Zip Car has one parking space at OHSU. Car2Go and ReachNow car sharing are not available on Marquam Hill.

What is OHSU's Foundation for Transportation Equity?

A Defined Vision for Sustainable Transportation Options. In 2017, OHSU engaged with consultants to develop a comprehensive Transportation Demand Management (TDM) plan to guide its transportation planning efforts over the next 10 years. The TDM defines OHSU's vision and goals for transportation as the institution continues to grow. Staff and stakeholders generated this statement regarding transportation as part of the TDM:

As a leader in health and innovation, OHSU will provide a flexible transportation program that allows patients, visitors, students, and employees to choose safe and convenient travel options to, from, and within campus. To facilitate campus growth, the transportation system will reduce reliance on single-occupancy vehicle trips through the promotion of cost-effective, sustainable, and multimodal mobility solutions.¹¹

This vision includes developing an inclusive, multimodal system for patients, visitors, students, and employees, which OHSU has been working toward for years, as evidenced by their renowned transportation program. This program has resulted in reduced single-occupancy vehicle (SOV) commutes, with only 37% of employees driving alone to Marquam Hill and South Waterfront.¹² OHSU's projected growth calls for continued and more aggressive efforts to reduce driving and increase the use of biking, walking, and transit. These modes are emphasized for Marquam Hill due to its restrictive parking conditions, land and topographic constraints, and congestion.

Leadership at OHSU—from the President's office to personnel across campuses—has placed an emphasis on climate action, equity, and health for all.¹³ This has contributed to an ongoing transformation, spurring additional major transportation wins for the institution such as construction of the Portland Aerial Tram, car-free Tilikum Crossing bridge, and bike valet facilities at South Waterfront. Migrating the biennial Employee Commute Options survey in-house to OHSU from TriMet has also generated richer data to inform Transportation & Parking's actions (Figure 5).¹⁴

Since the 2008 recession, innovation and cost containment have been key themes that influence transportation decision-making at OHSU.¹⁵ In 2009, OHSU's Bike Program was launched. Incentives

Leadership at OHSU—from the President's office to personnel across campuses—has placed an emphasis on climate action, equity, and health for all.

and facilities already existed for bike travel, however, promoting bike travel as part of a greater transportation strategy was a new effort. A cohesive program began to take shape, and the following year the transportation website—a transformative tool for employees—went live. Transportation & Parking used this website as a central hub for communicating travel options to OHSU.¹⁶ This electronic platform to promote incentives and to track trips replaced a punch card system. Today, the platform continues to grow with expanded incentives, integration of popular activity trackers and smartphone applications, and simpler login functionality to reduce barriers for participation.

Existing Plans: Transportation and Diversity, Respectively. As an institution, OHSU’s core values are *Transparency, Diversity, Quality,* and *Service Excellence*. OHSU developed *Vision 2020*, a strategic plan, in 2007, and revised it in 2013. *Vision 2020* established a framework to support continuous quality improvement across OHSU’s health care, research, education, and service mission areas.¹⁷

OHSU has an overall readiness to meet aspirational and pragmatic goals for transportation equity. This readiness is demonstrated by OHSU’s Transportation & Parking staffing structure and its past successes, the formation of a Stakeholder Advisory Committee, and commitment to operationalizing this work, which includes a variety of thought leaders and influencers across the campus to steer its efforts. OHSU has also developed diversity policies that emphasize their business case for equity and its relevance to transportation, with diversity as the key to OHSU’s ability to attract and retain top talent, achieve innovation and creativity, and flourish in a competitive market.¹⁸ However, there have also been ongoing limitations and constrained progress in some areas of transportation planning. This applies to their historical emphasis on employee travel options and parking.

OHSU shuttle drop-off on Marquam Hill from downtown locations



THANH

Meet Thanh

Thanh is a committed OHSU employee who loves his job but is finding it harder and harder to get to work.



Obstacles on the Road to Continued Success

Thanh always knew he wanted to help people as they recovered from illnesses or surgeries. As a Certified Nursing Assistant, he is achieving that dream even though the hours can be difficult and the pay is low. Having worked at OHSU for the last four years, Thanh has seen a lot of other CNAs come and go. Thanh enjoys working at OHSU and has always intended to stay with the hospital long-term, but the rising cost of transportation to and from work may get in the way of that goal.

Thanh used to live closer to OHSU, but he moved to a more affordable place in Gresham a few years ago. Since then, the additional distance from Marquam Hill combined with his varying work schedule don't always make it possible to take the bus or train. Thanh also lives too far away to easily take advantage of the walking and biking incentives that OHSU offers. He has been driving his own car to work since he moved, but his car is old and not in the best shape, and the added cost of gas and needing to pay for daily parking at work adds to his financial burdens. As much as Thanh would like to stay at OHSU for many more years, the cost and hassle of getting to and from work has led him to think about looking for work elsewhere.

How OHSU Can Help: Expanding direct service transit routes would help Thanh and other OHSU employees who live further out have a more efficient and reliable transit option to Marquam Hill. See page 74 for more details.

EMPLOYEE

Marquam Hill transportation issues are part of a larger regional transportation context, creating the need for collaborative solutions and partnerships.

Using the framework developed by the 2017 TDM, OHSU builds on their foundation to implement progressive recommendations to reduce SOV trips and improve sustainable, multimodal transportation options for everyone. In this document, Plan581 introduces a Transportation Equity Lens that supplements the TDM and previous transportation planning work. The Lens highlights opportunities to reduce SOV trips while also reducing transportation barriers for its stakeholders and community members who are currently underserved. These groups include those who are low-income, racial/ethnic minorities, or those with limited English proficiency—such as those covered in Title VI for public agencies including TriMet.¹⁹ Plan581 also includes people with disabilities and people who are geographically isolated.

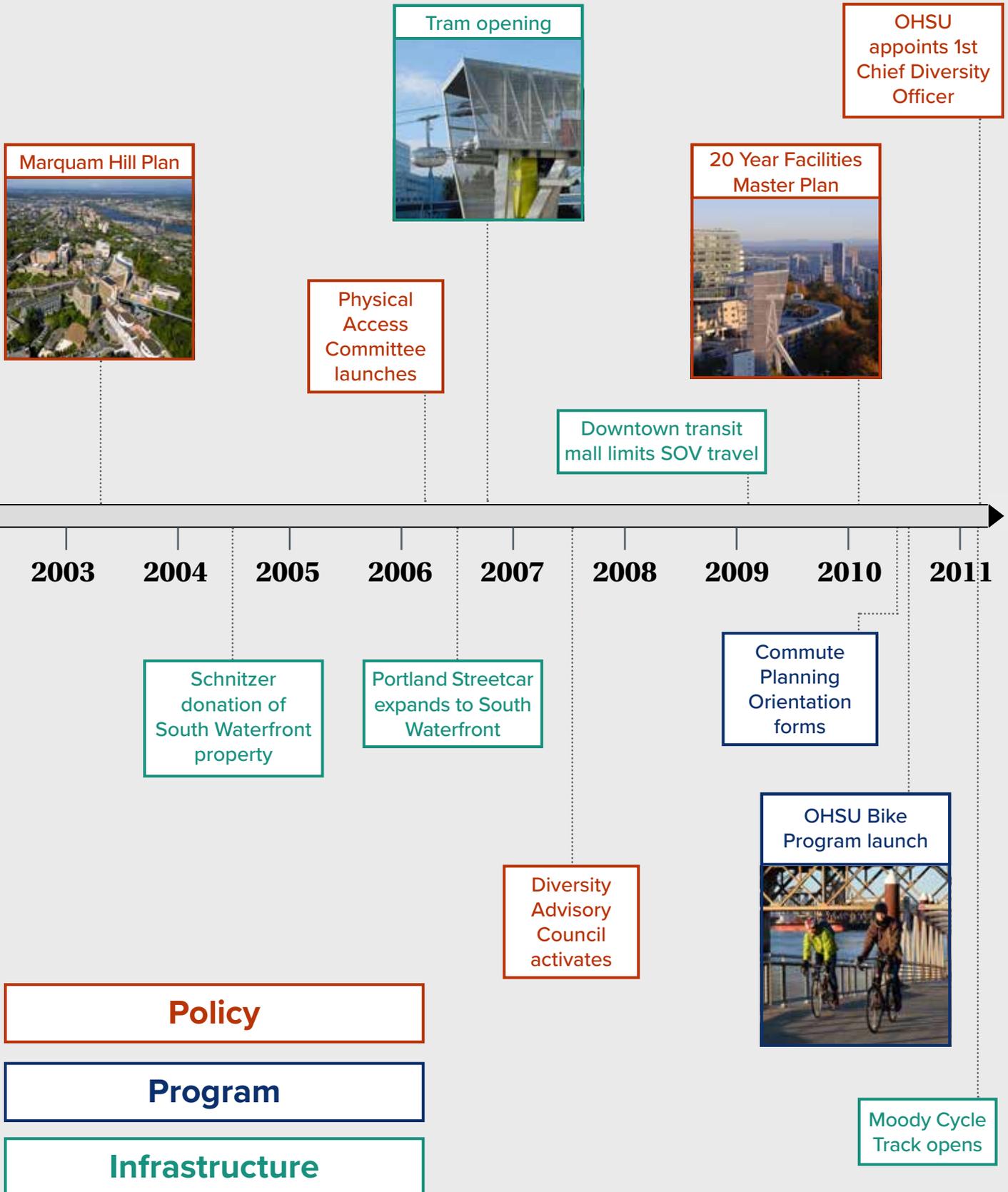
OHSU recognizes the urgency of transportation planning that goes beyond employee-centered efforts and expands on existing patient amenities to achieve positive outcomes for all campus visitors. A sustainable transportation vision *should* also be one that emphasizes equity. Several strategies in the Diversity Action Plan and the OHSU Diversity Business Case support this.

External Partnerships and Resources. While OHSU is primed for implementing several recommendations in the TDM, key elements of the plan depend on outside leadership, investments, and collaboration with regional partners. Partners include: Go by Bike, Portland State University, City of Portland, Metro, State of Oregon, TriMet, C-Tran, Ride Connection, and non-governmental organizations integral to providing transportation, health, and social services locally and statewide. Regional partnerships are required for advancing OHSU’s initiatives and for making strides at the intersections of climate action planning, land use and housing, public health, and labor. The Oregon Legislature recently passed *Keep Oregon Moving* (HB 2017) which is generating more dollars for transportation improvements throughout the state, including massive projects in the Portland area which can create opportunities for improving travel to key destinations such as OHSU.²⁰

Plan581’s *Elevating People* and Transportation Equity Lens. This next installment of transportation planning for OHSU builds on *Vision 2020*, the *Diversity Action Plan*, the TDM plan, and several local plans that reiterate the need for sustainable and equitable policies, investments, and programs. Plan581’s *Elevating People* provides a customized Transportation Equity Lens—an emerging tool in the transportation planning field—with explicit tenets to incorporate into decision-making to advance equity, the institutional mission, and external advocacy efforts that drive outcomes for OHSU and support regional climate action goals. Consequently, *Elevating People* is designed to enhance the TDM and other OHSU planning efforts by prioritizing stakeholders whose needs have historically been overlooked in transportation planning and to apply elements of existing OHSU plans which support transportation equity for patients, employees, students, and visitors.

OHSU TIMELINE:

Successes, Investments, and Travel Options



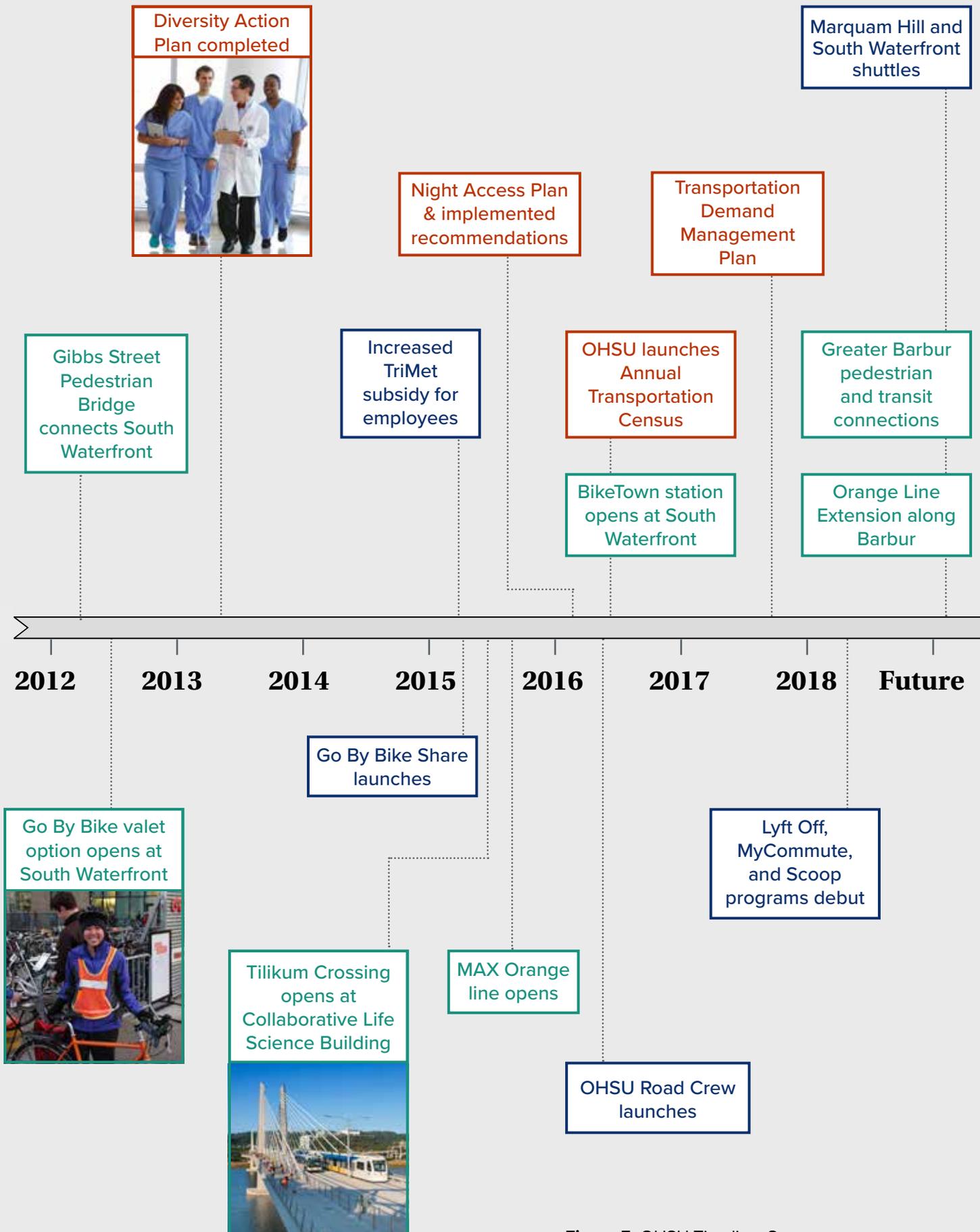


Figure 5. OHSU Timeline: Successes, Investments and Travel Options

What are the Impacts of our Transportation System?

Together, the effects of congestion, long travel times, and limited access cause a range of systemic and community-level impacts. This section briefly discusses these impacts. It is meant to both provide an impetus for their correction and offer depth and nuance to traditional understandings of transportation challenges.

Systemic Impacts. As an institution, the three main impacts OHSU experiences due to transportation challenges are related to:

- Competitiveness
- Employee retention
- Lost revenue
- Carbon emissions

As a regional leader in health care services, research, and teaching, OHSU risks losing a competitive edge as transportation challenges dissuade potential employees and impact retention rates of existing employees. Continuing to address transportation challenges means a continued ability to hire essential employees, from nationally renowned surgeons to cutting edge researchers, and critical nursing and support staff. Second, as transportation challenges impact OHSU patients, especially those with low-incomes or who live in rural settings, OHSU loses revenue from missed appointments. An example of the link between transportation access and appointment completion were the snowstorms in early 2017 which crippled Portland's transportation system and led to millions of dollars in lost revenue for OHSU in only a few days. Furthermore, existing rates of SOV trips to and from Marquam Hill work against OHSU's carbon neutrality goals.²¹

Community and Individual Impacts

Time and Cost Burden. Limited transportation options leave many communities with long and costly commutes to Marquam Hill, though this burden is not equally distributed. Those who live farthest away are more likely to have lower incomes but face the highest time burden while also paying a higher proportion of their income on transportation. Time burden also depends on travel mode choice. Employees who take the bus have an average daily commute of 86 minutes, almost twice that of employees who drive alone.²² Time and cost have real impacts on individuals and families. Time dedicated to commuting is time that could be spent with family or friends or working additional jobs. Money spent on high transportation costs could be dedicated to housing, food, childcare, or educational opportunities.

Employee Access and Retention. Limited, lengthy, or onerous transportation options negatively impact both current and potential employees. Difficult commutes contribute to current employee stress levels, job dissatisfaction, and lower retention, thus impacting employee physical, mental, and financial health. Additionally, limited ease of access to the campus means the

Transportation heavily impacts our ability to retain and even recruit staff. We're a sought after employer, but many times during the interview process people realize how difficult it is to get here and withdraw their application.

—OHSU Manager

exclusion of certain communities from the relatively well-paying job opportunities OHSU has to offer, a dynamic that further exacerbates regional economic inequalities.

Access to Healthcare. Communities with limited transportation options often experience tenuous access to health care which contributes to poor health outcomes.²³ Lack of reliable transportation has been shown to be a strong predictor of delaying medical care for a new medical problem,²⁴ and is a significant reason for missed or cancelled appointments.²⁵

Positive Utility of Travel. While some people prefer little to no commute time, other people find that commuting has some positive benefits.²⁶ These include leisure time and downtime, although research suggests commute enjoyment is tied to levels of ease and comfort, as well as access to media such as cell phones, car radios, etc. Commuting experiences involving active transportation, such as public transportation, walking and cycling, can also provide important health benefits like meeting daily activity recommendations,²⁷ weight loss, and blood pressure reduction.²⁸

MANNY



Providing leniency for transportation-related tardiness would help ease Manny's worries about being late and losing his job. See page 71 for more details.

Limited Choices, Big Ramifications

The workday starts early for Manny and his coworkers in Nutritional Services. The early shift is not his first choice, but considering how hard it has been for him to secure stable employment without having completed his high school education, he is determined to succeed. To arrive at work on time, Manny needs to catch the first C-Tran bus from his home in Vancouver, and then transfer to TriMet downtown to get to Marquam Hill. Because there isn't an earlier bus available, Manny only has a few minutes between his scheduled arrival time and the beginning of his shift. He has already received a warning for being late when his scheduled bus never showed up. Manny knows that another warning could cost him his job, but he doesn't have another option for getting to work.



MAX Orange Line crossing SW Naito Parkway on OHSU's South Waterfront campus

CHALLENGES

CHAPTER OVERVIEW

This chapter discusses how transportation systems reinforce inequities, how some OHSU policies and programs work against the goal of reducing single occupancy vehicle trips, and how existing incentive structures may benefit some more than others. Plan581 also emphasizes the importance of a systems approach, shared leadership, and collaboration to improve travel to Marquam Hill for all users.

OHSU's Marquam Hill campus experiences what is referred to as a "last mile" transportation problem. Travelers to the hill can spend up to 30 minutes completing the last mile to the hill due to congestion and delays. The current road infrastructure leading to Marquam Hill has steep grades and high-speed traffic which make the environment unsafe and challenging for walking and biking.

The Transportation & Parking department at OHSU has instituted numerous programs to help address Marquam Hill's transportation challenges. Although these programs have demonstrated some effectiveness, the need to further reduce SOV trips to the hill remains. This chapter elaborates on transportation inequities and the rationale for addressing them first within a transportation demand management strategy as a means for improving the entire system for all travelers.

Plan581 synthesized information gathered from several sources between January and May 2018 regarding different facets of the transportation issues related to Marquam Hill (Figure 6). The team utilized expert consultations, stakeholder interviews, peer-reviewed literature, and other relevant sources, GIS analysis of census data, survey responses, and feedback from public engagement events to inform the contents of this report. A more detailed accounting of

the methodology appears in the appendix at the end of this report. This data all served to enhance and deepen an understanding of the challenges faced by different people as they travel to Marquam Hill.

Concluding this section, Plan581 highlights the merits of infusing OHSU's broader diversity and inclusion strategies to concurrently advance transportation planning and satisfy the institution's patient-centered vision and equity goals, further exploring how current systems of decision-making, collaboration, engagement, and data collection are all instrumental for transportation equity.

Why the Current Transportation System Is Inequitable

Each traveler experiences factors that influence their transportation choices, including time, travel cost, trip origin, and destination, as well as financial circumstances, personal responsibilities, and individual identity. These factors influence travel choices but are not reflected in typical user classifications like "employee" or "patient." Plan581 seeks to explore factors that influence travel choices for populations who experience high burdens and barriers related to travel time, cost, and accessibility.

A comprehensive analysis of the transportation system that goes beyond

INTERVIEW INVENTORY

Interviewed
 Not Interviewed

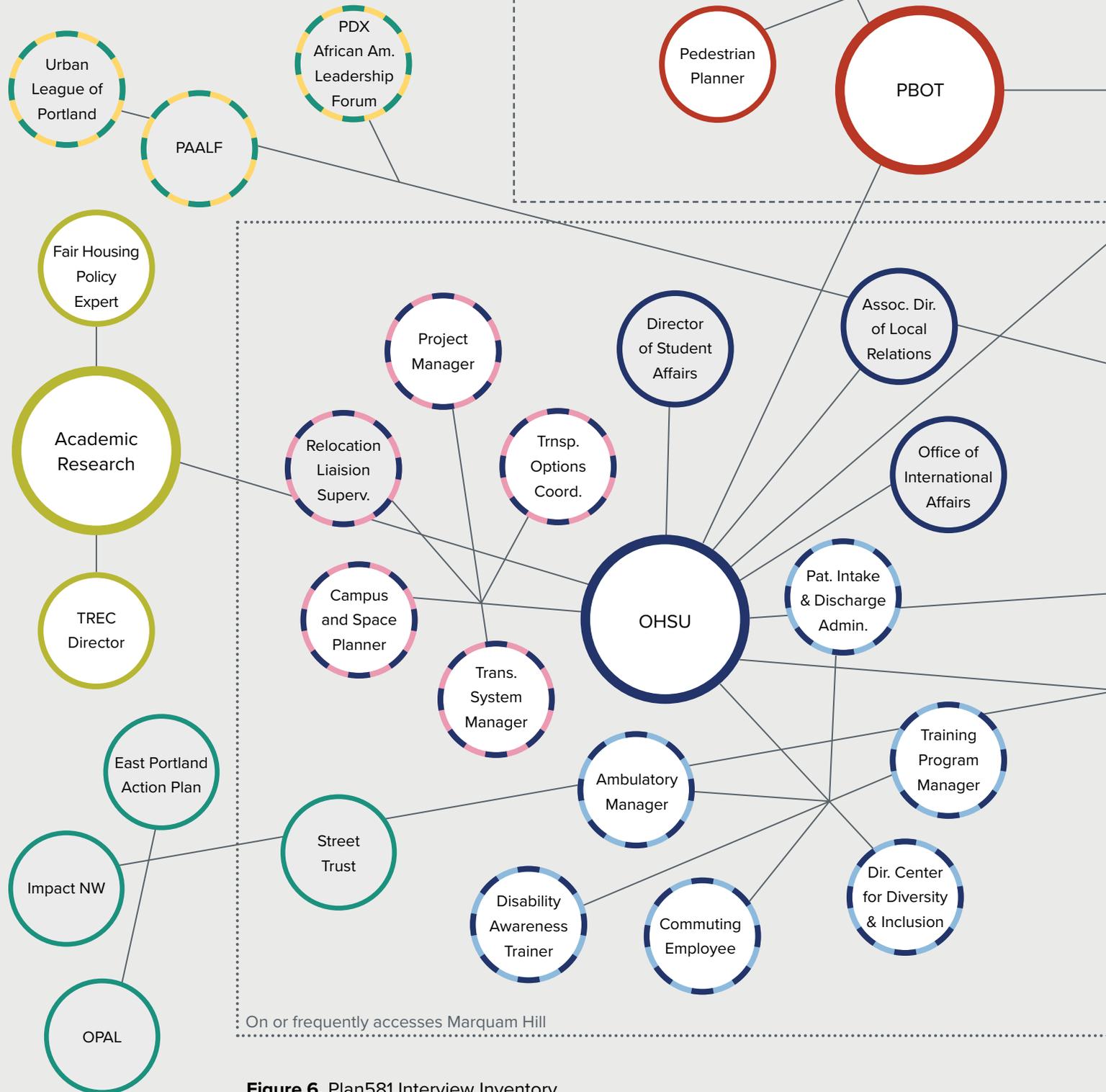
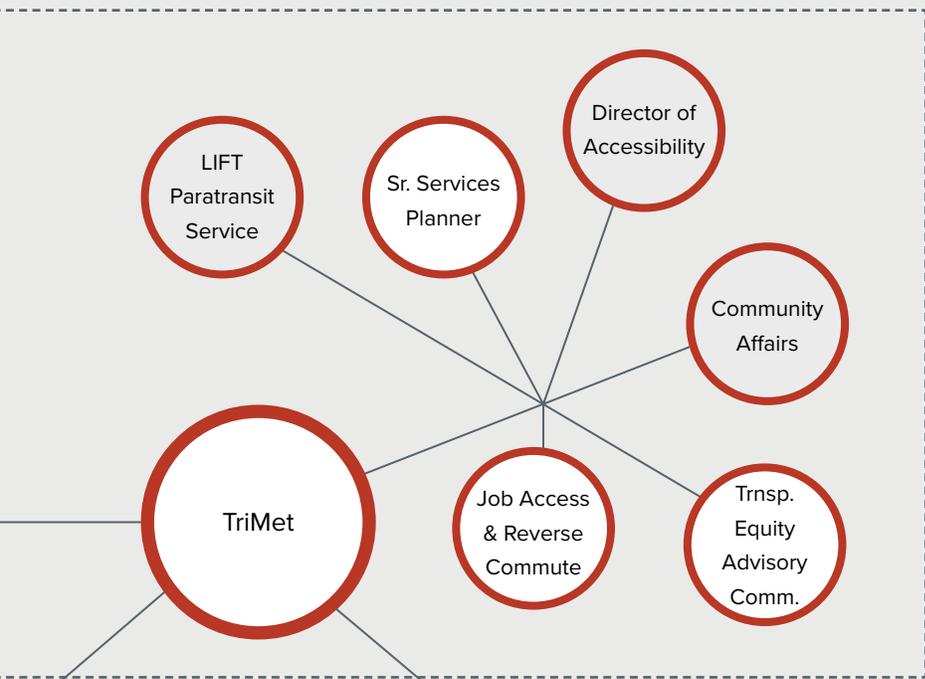
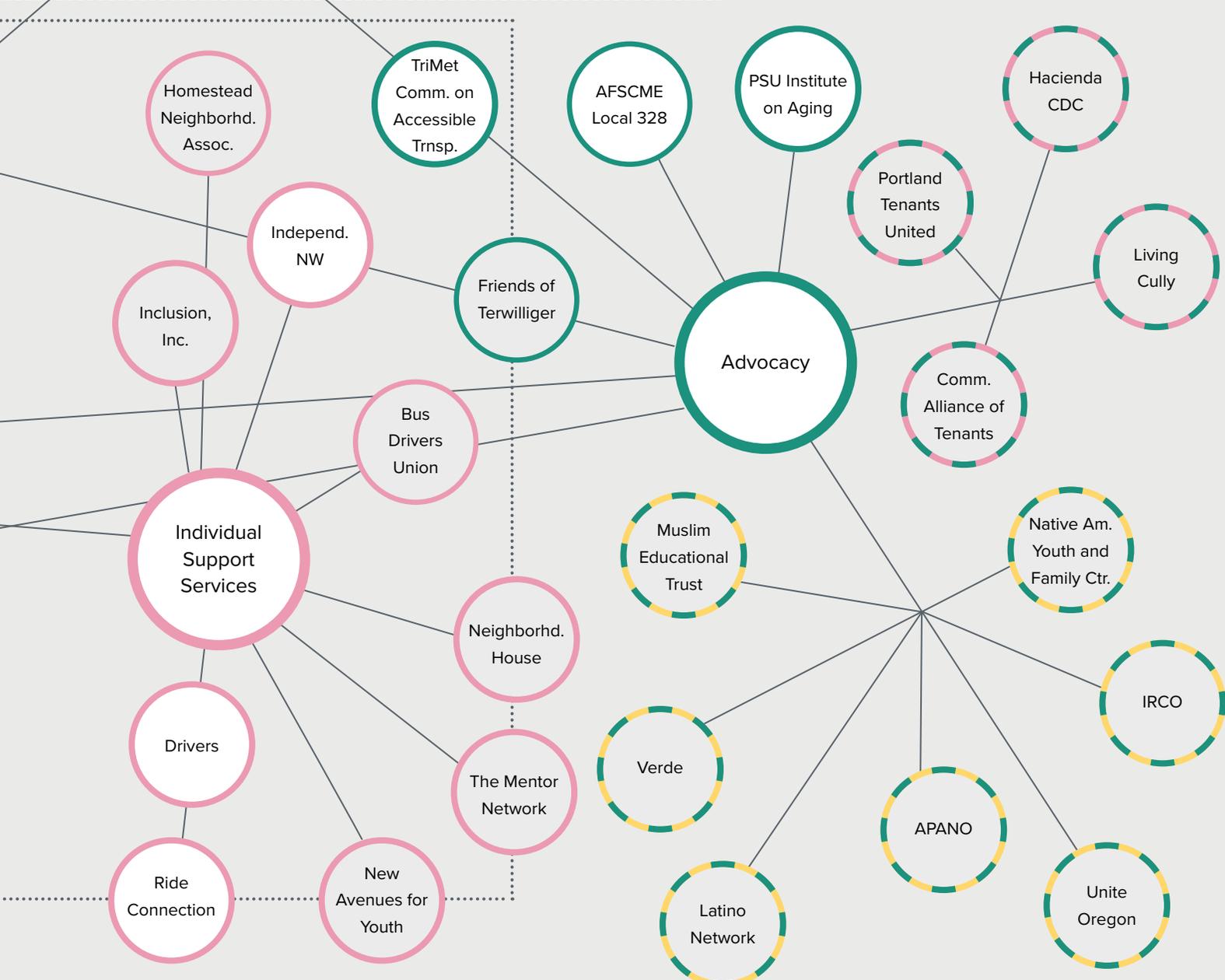


Figure 6. Plan581 Interview Inventory



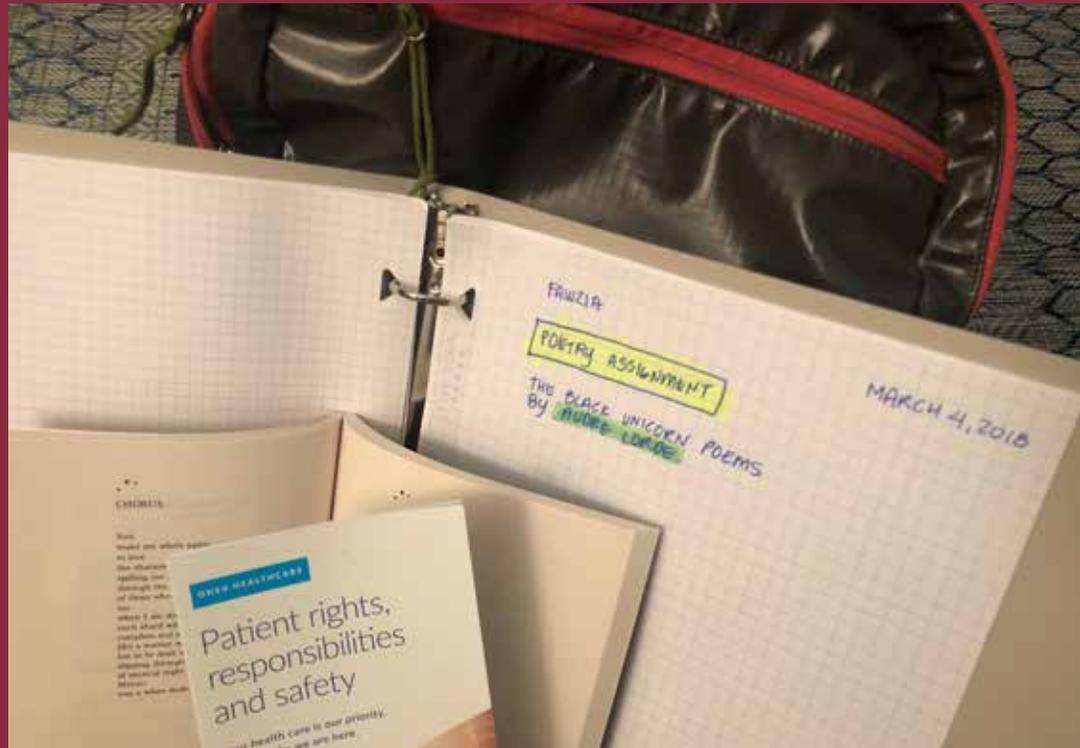
- Advocacy: General
- Advocacy: Housing
- Advocacy: Communities of Color
- Government
- Individual Support Services
- OHSU: General
- OHSU: Transportation & Planning
- OHSU: Priority Community Advocate
- Research



FAWZIA

Meet Fawzia

Though not a patient herself, this teenager provides essential support for her family as they care for her younger brother.



When a “Visitor” is More Than Just a Visitor

At age 16, Fawzia is no stranger to OHSU and Marquam Hill. Her brother, Liban, has a condition that requires ongoing care at OHSU’s Doernbecher Children’s Hospital. Fawzia always attends his appointments with her family.

One of Fawzia’s family duties is to help translate information into Somali for her parents. Fawzia’s extensive knowledge of her brother’s condition and fluency in English have been helpful for OHSU’s staff as well as for her brother and parents. Even though OHSU can arrange for interpretation at Liban’s appointments, the family strongly prefers that Fawzia accompanies them to provide additional translation support. Before they arrive at OHSU, Fawzia can also help communicate with the TriMet Lift driver that is dispatched to pick up Liban at their home in Happy Valley and help her parents navigate Marquam Hill. But when rides are arranged with TriMet Lift for Liban to attend his appointments at Doernbecher, there isn’t always room for Fawzia to ride with her mother and brother. Fawzia knows that Americans may not understand how important it is for a Somali family to stay together as they make medical decisions. However, she does wish that she didn’t have to try so hard to get transportation so she can help translate for her parents at Liban’s appointments.

How OHSU Can Help: Supporting community transportation services would help regional partners increase their capacity so Fawzia could ride to Marquam Hill along with her family. See page 69 for more details.

EMPLOYEE

Commuting is the number one reason people quit.

—OHSU Manager

examining mobility and congestion reveals how planning can respond to the needs of traditionally underserved communities. This section examines the transportation system, incentives, and costs that influence how people travel to Marquam Hill.

Additional physical improvements for easing travel to Marquam Hill will likely necessitate both high capital costs and political exchanges. While many transportation infrastructure projects are expected to be costly, targeted investments that seek to create a more equitable transportation system can be cost-efficient and more effective for serving the groups who would benefit most from these improvements. By using the Transportation Equity Lens presented in this report to evaluate potential projects and investments, OHSU can identify those projects which have the most beneficial impacts for Priority Communities. OHSU also has the ability to affect change on a larger scale by working with other partners who are responsible for addressing regional transportation barriers and limitations.

Transportation Investments for Marquam Hill and Beyond. A suite of investments has been made on Marquam Hill to improve travel for all users, yet some additional investments are necessary to continue this progress. However, a Marquam Hill-focused approach may fail to address the largest transportation burdens for many communities. This section discusses many of the successful past and future transportation investments on the hill and encourages OHSU to take a broader approach and advocate for regional transportation improvements.

OHSU has several projects lined up to address concerns on Marquam Hill. An intersection redesign is slated for SW Campus Drive and SW Terwilliger Boulevard. An existing parking garage is being rebuilt, and a new one is being added. Two blocks of missing sidewalk are being designed in addition to a shoulder widening and a pedestrian trail is being enhanced. OHSU is also formalizing a request to have an ADA analysis conducted at its Marquam Hill Campus.

There are currently 4,314 parking spaces at the OHSU Marquam Hill Campus. In 10 years that number will be 4,603. Patients and their visitors park free in patient parking, and complimentary valet service is available in select areas. Employee parking is regulated Monday through Friday 8:00 a.m. to 5:00 p.m. and is a combination of permitted spots and hourly spots. There are 4,781 people currently on the annual pass waitlist. For reference, 851 employees currently have an annual parking permit. The average cost of an annual pass costs \$1,082.40 and is paid in installments of \$45.10 each pay period. The inequities in the permitting system are introduced in the TDM plan. For a comprehensive understanding of the parking opportunities and constraints of Marquam Hill, refer to the complete analysis in the TDM.

While there have been numerous high-impact transportation projects at OHSU, continuing to rely on high-cost infrastructure projects may lead to diminishing returns. Accordingly, the Transportation & Parking department is deploying programmatic strategies to influence travel behavior in order to meet transportation planning goals. For example, incentive programs to increase the use of active modes like biking

and walking have been recently introduced for OHSU employees and students. Under the new program, participants can earn \$1.50 once per day Monday through Friday if they walk, run, or bike to campus. A recent rideshare incentive program called Scoop was released in April where drivers can earn \$2-\$9 per person per trip to or from campus. Riders pay between \$2-\$10.

Plan581 advocates for a transportation planning strategy that is not limited to Marquam Hill in order to better address the needs of Marquam Hill travelers. Focusing on Marquam Hill is necessary, but it does not address the full range of needs of the system's users and tends to preference to privileged groups who have the most transportation opportunities.

Time, a factor that has been strongly cited by many travelers, has not been tackled adequately to achieve behavioral change. While cost is an important consideration for many travelers and a limiting factor for many, OHSU has deployed many cost-based approaches. With the exception of the introduction of the Tram, OHSU has limited direct control over the factors that contribute to travel time. With this understanding, Plan581 analyzed OHSU's transportation issues within the regional transportation network to evaluate how its strategy is addressing the needs of its employees, patients, and students.

Incentives and Influences on Travel Choices. An array of factors impact transportation decisions. In this section, Plan581 discusses two: OHSU's incentives for driving and biking, and public transit time. Using a systems approach is helpful to understand the interplay between incentive programs and travel behavior as well as the current disincentives for non-SOV transportation modes. In

We cater to the elite here. If you're important enough, you will have parking. If you're not important, you have to pay daily parking.
—OHSU Manager



Signs on Marquam Hill indicate parking locations and availability

addition to refining in-house incentive programs, OHSU also has the opportunity to use its regional influence to advocate for the mitigation of disincentives in the broader regional context.

Biking. OHSU has a successful bike incentive program that has offered commuters a cash incentive since 2005. Bike commuting by employees has tripled since the program's inception. Both regional and localized infrastructure enhancements from PBOT and OHSU have further improved the conditions for people who bike, including Tilikum Crossing, the Tram, the Gibbs Street pedestrian bridge, and Go by Bike. Each of these enhancements encourages cycling, though the primary beneficiaries are the connections between OHSU's South Waterfront campus and downtown Portland. The connection between downtown and Marquam Hill remains challenging despite transportation investment in the areas adjacent to the hilltop campus.

Though it is designed to increase biking as a transit mode, the impact of the current incentive program is limited by the region's uneven distribution of bicycle infrastructure. Those who can afford to live closer to OHSU and people living in areas with existing active transportation infrastructure benefit most from current biking, running, or walking incentives.

A low-barrier bike commute is a maximum of six miles, or 40 minutes. When evaluating OHSU's bike, run, and walking incentive program within a regional context, this six-mile low-barrier range benefits those who live closest to areas saturated with transit and active transportation infrastructure. Gentrification

Bike valet services are available for free at the South Waterfront campus for secure parking



continues to impact low-income residents and communities of color as population growth and rapid neighborhood change displaces them. Low-income communities and communities of color have been pushed to areas more than eight miles away from downtown Portland.

An evaluation of OHSU's biking incentive program can provide insight on how to more effectively shape this and future programs. Addressing equity impacts, such as disproportionate financial incentives, allows the institution to redirect resources to those who have fewer resources and options.

Driving. OHSU leadership recognizes that they must reduce employee SOV commuting in order to accommodate for projected growth. To meet these goals, OHSU should evaluate the current system of employee annual parking permits. Currently, this program includes five elements that work against OHSU's goal:

- On a prorated daily basis, annual parking permits are cheaper than daily parking
- Permits are granted to those who wait years to receive them
- Permits are used as recruitment incentives, resulting in some employees receiving their permits before others on the list
- A parking space is nearly guaranteed for permit owners
- Permits are considered a sunk cost, meaning that once they are being paid for, permit owners are more likely to drive so they can utilize their parking spot

Some OHSU employees have waited years for a parking permit. In that time, many relied on TriMet bus service or biked to work. Once they received a parking permit, some reverted to driving to work due to having a permit, not because of an issue they had with their interim commute mode.

Variations in employee shift times make carpooling extremely difficult and has kept the popularity and utility of carpooling relatively stagnant. OHSU has thus recently launched a rideshare system that has a balance risk and rewards. The carpooling feature, Scoop, was released shortly before this analysis was completed. There is a risk in people choosing to carpool who would otherwise not use a passenger vehicle at all, as this may create additional vehicle trips. Conversely, a potential benefit is people who would otherwise drive alone choosing to carpool. Consequentially, Scoop runs the risk of adding a sixth incentive to permit holders to keep their permits and potentially make money off the ability to be guaranteed a parking spot. Analyzing the demographics of program participants as part of a routine program evaluation would provide valuable information on

To reach Marquam Hill by bike, you'd have to be a confident rider who is able bodied and healthy and would probably be between 20 and 40 years old.

—PBOT Employee

who is benefitting from these programs. It may be that Scoop is pulling riders away from transit or biking rather than actually combining what would have been multiple drivers into one car.

I used to take the bus while I was on the parking permit waitlist. Now that I have my permit of course I'm going to drive.

—OHSU Employee

Improving Access using Non-SOV Travel Modes. OHSU's transportation programs seek to support alternative transportation choices for many types of travelers to Marquam Hill. There are several critical programs that help communities with diverse travel needs access the hill and minimize transportation burdens.

Subsidized Fare. OHSU provides all students and employees with a 95% subsidized TriMet pass or a 75% subsidized C-Tran pass. Some unions have also negotiated for additional subsidy increases for their members, resulting in these transit passes being paid for in full by OHSU. The transit fare subsidy program is essential for reducing transportation cost burdens for many public transit users and makes public transit a more attractive option for all.

Patient Valet Parking. OHSU's patient valet parking program helps the campus feel accessible for new patients by reducing stress around finding parking and by providing assistance with directions immediately upon arriving to campus. This

ANTONIO



Expanding patient navigation assistance services would help drivers like Antonio James get patients to where they need to be. See page 67 for more details.

Giving Back by Giving Rides

After hearing stories told by his disabled friend who needed to get to around town but didn't own a car, Antonio James was drawn to volunteering with Ride Connection. Many of Antonio James' passengers are going back and forth to Marquam Hill, and while he can drive them to the hill, he isn't always sure if some of them will be able to find their way once inside OHSU. Antonio James wishes he could help guide his passengers to their doctor's door, but he can't leave his vehicle. He tries to give directions, but this isn't always enough—especially since he can only communicate in English and his passengers' primary languages are not always the same. Even though his role can be stressful, Antonio James knows that if he and the other volunteer drivers weren't there, many people wouldn't have other options.

service reflects the institution’s commitment to patient care and satisfaction.

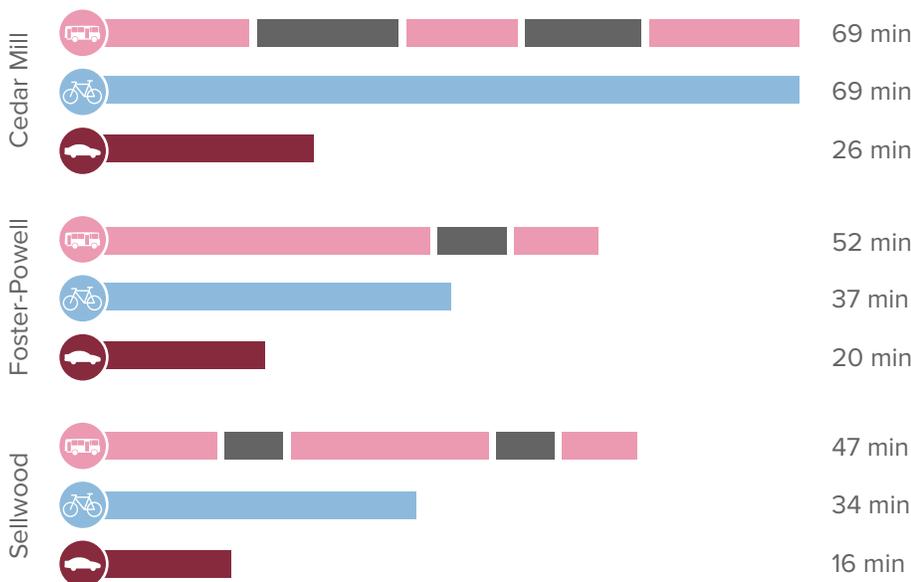
Guaranteed Ride Home. Having a car at work provides the assurance to drivers that they will be able to respond quickly to a personal emergency when they have a personal vehicle at work. To ensure employees would feel they had a similar option if taking transit or active modes, OHSU implemented the Guaranteed Ride Home program, which was recently expanded to support employees working on the hill during all times of the day and night. The program is currently under-utilized but has potential to greatly expand its impact as it is better promoted.

Lyft Off. Some swing shift employees have little choice but to drive because public transportation does not run during the start or end of their shift. To address this problem, OHSU runs the Lyft Off program, which gives these employees a \$15 Lyft credit for each shift. While this can remedy transit limitations for some, others who live far away or have limited transit access are not fully supported, or have to drive to park-and-rides closer to the central city in order to use the program.

Express Bus Service. In September, TriMet will expand its hours of service on Lines 61, 64, 65, 66, and 68, the express bus routes that serve OHSU. This expansion was a direct result of OHSU’s previous planning work and is an example of how OHSU can approach its regional partners and advocate on the behalf of its campus users. While the extended service hours are helpful, the new schedule still fails to accommodate a 7:00 p.m. shift end



Figure 7. Neighborhood Sample: AM Travel Time to Marquam Hill



These three neighborhoods are all within 10 miles of Marquam Hill.

For some, trips to Marquam Hill require multiple transfers to reach the same destination, leading to stressful time delays.

 = Transfer

Travel time calculated using Google Maps to show weekday arrival by 8:45 AM

OHSU must continue to innovate and push the status quo if it is to grow, diversify, and provide high-quality care services and employment opportunities.

—TDM 2017

time, which is common for many staff working twelve hour shifts, such as nurses.

Telecommuting. OHSU has worked to expand opportunities for some employees to telecommute, reducing the number of people commuting to and from Marquam Hill every day. While telecommuting is less common, continued focused engagement with applicable departments and managers could encourage telecommuting policies and make progress toward more widespread adoption.

Reducing Improper Parking. OHSU has also improved enforcement of parking rules to discourage employees from parking in patient lots. They have also expanded off-site park-and-ride options, which dovetail with the region's dozens of park-and-ride facilities operated by TriMet.

Public Transportation: Benefits and Burdens. While transit is critical for many Marquam Hill travelers, its benefits and burdens are not evenly distributed. Existing transit to the hill benefits only some communities. Investments could be made to improve transit service and efficiency for all users, especially those better connecting underserved communities (Figure 7).

Currently, many service routes bring people from all across the Metro region to downtown, but only a few provide direct service to the hill. Some communities, like those that live along direct service transit routes, have more convenient access to Marquam Hill. These trips are considerably simpler and more time-efficient compared with those that must live farther out and require multiple transfers to reach the same destination. A more in-depth analysis of who currently benefits from direct-route access would help guide future investments to better prioritize the low-income communities and communities of color who are more likely to have less direct bus service.

The current public transportation system is effective at connecting people from across the region to downtown. However, there is only one direct connection bus line from downtown to Marquam Hill, Line 8. Because Line 8 serves both as a regional service route and route between downtown and OHSU, the final stretch to the hill causes a significant delay as it makes numerous stops en route to OHSU. These challenges are compounded by OHSU being the last stop on the line and result in additional crowding on Line 8 buses.

Why Equity Planning is Requisite for Transportation Planning

Elevating People emphasizes the value of integrating broader institutional policies for diversity and inclusion along with transportation plans to develop an effective strategy for addressing the most pressing Marquam Hill travel issues and boosting OHSU's competitive advantage in health care and education. Aligning with local and regional climate action plans, building on institutional practices and policies, and applying the Plan581 Transportation

and Equity Lens presented in this plan are necessary steps to achieving OHSU's mission, reducing SOV trips, improving sustainable multimodal travel, and providing better service to region overall. Planning with a Transportation Equity Lens makes this possible.

Transparent Process. Transportation decision-making at OHSU ranges from group-informed to individually-driven project selection processes. Small- to medium-scale projects are driven by team interests, enthusiasm, and persistence to confirm funds, personnel hours, and institutional support.¹ The ability to pitch and initiate these projects is a positive attribute of Transportation & Parking. However, the most complex yet impactful projects—especially those that have the most potential to advance equity at OHSU—demand more than internal buy-in and commitment from this group. Transportation & Parking staff have also enlisted outside consultants, including Plan581, to analyze transportation alternatives and justify new recommendations, as a way to increase validation and reconsideration from the institution for these progressive and emerging transportation solutions.² The *Night Access Plan* and the TDM are examples of this and have proved to be influential for accelerating new projects at OHSU and for gaining recent TriMet service improvements for off-peak travel to Marquam Hill.³

Transportation & Parking's Stakeholder Advisory Committee (SAC) was formed during the TDM development process. This committee consists of staff throughout OHSU and has informed some of the TDM components such as goal-setting and program recommendations.⁴ The SAC is a model for future decision-making to increase accountability for applying Plan581's Transportation Equity Lens to serve Priority Communities. The ongoing addition of stakeholders who represent several income levels, job classifications, areas of residence, racial groups, and abilities and capacity-building for them are fundamental. Transportation & Parking can routinely provide educational and professional development opportunities to incentivize SAC participation and to keep its members regularly connected regional and national transportation best practices for transportation equity.⁵ Transportation & Parking as well as SAC can use the Plan581 Transportation Equity Lens to influence advocacy platforms, representation without tokenization,⁶ talking points at public meetings, and hiring and recruiting, which are all essential for addressing the needs of Priority Communities.

Focused Strategy. Transportation & Parking staff have varying viewpoints and experiences in regards to engaging stakeholders, developing high-impact transportation interventions, and defining groups to reach. They have had some successes with developing and implementing transportation programs which serve mostly employees and also some patient transportation needs, however, a more focused approach would be more responsive to groups with acute challenges. A strategy which involves decision-making to serve Priority Communities, as suggested by Plan581 and the Transportation Equity Lens, supports this focused approach. Transportation & Parking has expressed interest in pursuing this strategy, but its staff have yet to

If we tell incomplete stories about what's at stake and what the problem is, we will have incomplete solutions.

—Charlene Carruthers, Director of Black Youth Project 100

incorporate a prioritization framework. They need explicit information about travelers to guide their work. During the TDM development process, OHSU engaged some stakeholders through surveys, workshops, and focus groups, but had reservations about involving larger numbers of stakeholders outside of surveys because of the complexity and time associated with them.⁷ Transportation & Parking, in collaboration with other departments, can fulfill these activities which are essential to equity planning.⁸ Working with other departments and outside consultants can help fill the staffing gap and increase OHSU's capacity for cultural responsiveness, multilingual skills, and more diverse staff representation to meet the needs of Priority Communities.⁹ These are activities described in the *Diversity Action Plan*.

Collaboration. OHSU planning efforts intersect and overlap with goals and activities in several plans found in the city and region, however, more alignment and shared efforts among agencies are needed to resolve regional transportation issues. With Plan581's Transportation Equity Lens, the TDM, and aspirations to update their 2010 Strategic Master Plan, OHSU can influence transformative collaborations with Metro, the City of Portland, TriMet, and C-TRAN. The goals set in the 2015 Climate Action Plan developed by Multnomah County and the City of Portland, like OHSU's TDM Plan, advocate for an aggressive reduction in SOV trips. The City has established policy framework at the local and regional level, setting goals of reduced reliance on SOV trips and increasing trips made by transit and active modes. Portland's Climate Action Plan places a strong emphasis on advancing social and racial justice as decision-makers in each industry consider impacts and strategies to minimize carbon emissions by 2050.¹⁰

Multiple funding sources, regional partners, and political will made Tilikum Bridge possible.



VIVIAN

Meet Vivian

The changing needs and abilities of this long-time patient has made navigating the OHSU Campus increasingly challenging over time.



Great Doctors Shouldn't Be Hard To Find

It didn't used to be so difficult for Vivian to attend her appointments at OHSU. But now that her husband has passed away and her children are raising their families elsewhere, Vivian finds herself needing to coordinate her own transportation to and from Marquam Hill. After she stopped driving, Vivian tried taking the bus to her appointments, but it was hard to remember where to get on and off the bus for the different doctors she sees. Getting lost in the labyrinth-like halls of the hospital after getting off at the wrong bus stop not only made her miss an appointment, but it was so frightening that Vivian is afraid to take the bus up the hill anymore.

TriMet's Lift service has been an improvement because she can get dropped off right at the entrance to the correct building. However, finding her way from the building's entrance to the doctor's office is not always easy—especially for someone who is experiencing more and more confusion these days. The nurses at her doctor's office are concerned about Vivian and her ability to get to her appointments and back home again safely. Vivian finds the rides with TriMet Lift very helpful, but she still wishes someone could meet her at the building entrance and walk with her to her doctor's office so she doesn't get lost again.

How OHSU Can Help: Expanding patient navigation services would help Vivian safely access her medical care. See page 67 for more details.

PATIENT

Operating with this Transportation Equity Lens brings OHSU closer in alignment with other agencies doing this work with a shared approach and language for equity.

Addressing congestion, transit access, and barriers to multimodal travel cannot be resolved by OHSU alone. OHSU working with PBOT, TriMet, Metro, and others on project committees to advocate for the interests of patients, students, and employees is an essential activity for bringing attention to Marquam Hill travel issues. Transportation & Parking has not been able to extensively describe which groups have been experiencing transportation issues and what the targeted remedies are because they have not conducted a robust equity analysis nor have they established a framework that mirrors those of other agencies. OHSU representatives, leadership, and committees can reference Priority Communities as they assess transportation investments. They can ground their decisions with the Transportation Equity Lens. Operating with this Lens brings OHSU closer in alignment with other agencies doing this work with a shared approach and language for equity.

Transportation & Parking can leverage the expertise and exposure that personnel across the campus have with serving Priority Communities. Staff within the various departments of OHSU possess a wealth of knowledge and should be recognized as transportation planning influencers. OHSU needs formalized and consistent mechanisms for collaboration and decision-making.¹¹ Committees and departments should collaborate rather than work independently to advise leaders on issues such as parking, ADA accessibility, and other transportation matters. Efforts to address Priority Communities can be strengthened with a shared vision and understanding across departments.

Impactful Data. Although the annual transportation census is managed by Transportation & Parking, the data collected is relevant to many working groups and decision-makers outside of transportation. Optimizing how key demographic information is collected such as *gender, race, income, and role or department* and other non-commute-specific activities such as family responsibilities and other personal needs can significantly enhance the quality of information available to inform future transportation enhancements. Deepening the understanding around identity and travel choice, perception of options, and modal challenges will provide insights to innovative and equitable investment of resources.

Moving Forward

When we analyze our transportation system utilizing an equity lens, and as seen through the experiences of our Priority Communities, we find that critical gaps and inequities related to transportation still persist. These findings echo the voices of many of the region's vulnerable communities in a call for increased investments to improve transportation choices and reduce burdens on these communities. By continuing the analysis of regional transportation assets in addition to their own transportation programs, OHSU can position themselves to fill in gaps of service that currently dictate how users get to the Marquam Hill. To do this work effectively, OHSU must first address existing inequitable systems of decision-making, community engagement, and data analysis as outlined here and embrace their role as a regional player in transportation equity.



Arriving to Marquam Hill and navigating the campus can still be a challenge for frequent visitors

IMPACTS

CHAPTER OVERVIEW

Elevating People's Priority Communities are resilient—they do whatever they can to access employment, education, and health care on the hill. Some, however, still face more pronounced challenges than others when accessing the hill related to time, cost, or mobility. In this chapter, Plan581 explains how Priority Communities are still struggling and identifies key opportunities to improve their access and expand their travel options.

OHSU has a record of implementing effective solutions to address transportation issues for its campus, and can leverage its experience to lead in regional transportation equity work. Elevating the needs of Priority Communities continues to resonate internally with OHSU's values for diversity and inclusion, and previous actions have improved the travel for many. Despite these strengths, gaps in these approaches remain because a strategy to address the needs of Priority Communities remains undefined. This section advocates for a strategy that is responsive to the complexities in travel experiences for diverse groups of people who travel to Marquam Hill.

Who Should OHSU Prioritize?

While OHSU, the City of Portland, and regional partners have supported the growth of a robust transportation system in and around OHSU, there are still gaps in access. Many users experience significant time, economic, health, and social burdens related to commutes. Furthermore, as OHSU works to reduce SOV trips, it must consider the complex realities that commuters and visitors face, and continue to push for solutions that account for these complexities. Plan581 highlights key Priority Communities and describes them as people more likely to have limited transportation choices or be most impacted by costly or inefficient travel options.

Priority Communities. Identifying communities of concern and fully considering their travel experiences are needed in order to find solutions to the most pressing transportation and mobility issues. OHSU not only has a legal requirement under Title VI to plan for and accommodate all legally protected classes, but they also have established a firm commitment to promoting diversity and inclusion. Plan581, building on previous work at OHSU to support diverse communities, identifies four groups that OHSU should prioritize in all transportation improvement efforts:

- **Low-income communities**
- **Communities of color**
- **Individuals with disabilities**
- **Geographically isolated communities**

This list is intersectional, but non-exhaustive. Individuals may identify with or experience more than one of these classifications, as well as others that impact their transportation options and transportation-related burdens. This plan focuses on these Priority Communities because they experience unique, significant, and inequitable transportation burdens that complicate their ability to work, learn, and access care at OHSU.

Why Priority Communities still Struggle

While Portland boasts a robust transportation system, Priority Communities still experience inequitable hardship and a lack of transportation choices that complicate their access to employment, learning, and care.

Plan581 analyzes both existing transportation services as well as gaps and burdens that Priority Communities experience as they travel to the hill. This section is organized by Priority Community, with each section discussing these communities' unique and shared travel experiences. Each Priority Community section is organized into three groups of travelers: *infrequent*, *routine*, and *daily*. These groupings eschew traditional categorizations by user type (e.g. employee, patient, and visitor) and encourage us to think about the challenges faced by certain types of transportation needs. This framing supports the development of both cross-cutting solutions and targeted interventions that address either shared or specific needs. These three travel frequencies are defined as follows:

- **Infrequent:** People who come to Marquam Hill for one-time or infrequent purposes, like patients traveling for medical procedures, or prospective employees. These travel experiences may be defined by unfamiliarity with transportation options and difficulty navigating around the hill.
- **Routine:** People who travel to Marquam Hill often, but not every day. Their transportation routes are more set, but their unpredictable or variable travel needs may provide particular challenges. This may describe patients with consistent medical needs, routine volunteers, or part-time and contract employees.
- **Daily:** People who commute to Marquam Hill most every day, mainly regular employees. They may have their commute set, but may face the most time and cost burden in their travel to the hill.



Personal and physical safety are major concerns for transit riders.

A Food and Nutrition Services employee reported that they frequently sleep in chairs in OHSU waiting rooms on the weekends because their transit options cannot get them home and back to the hill again on time for their next shift.

Low-income Communities. Low-income individuals and families experience a range of transportation challenges and burdens. They are more likely to live farther away from OHSU (Figure 8), especially as the region continues to grow and housing prices soar. They are also more likely to take the bus, and less likely to own a reliable car.¹ Whichever travel mode they use, they experience a higher relative transportation cost burden, which displaces limited financial resources that are otherwise needed for housing, food, healthcare and education. Plan581 discusses key opportunities, challenges, and burdens experienced by different types of low-income travelers.

Infrequent Travelers

- Many patients with access to a car drive to the hill and park in free patient parking lots.
- For patients without a car but with access to public transportation near their home, TriMet's fixed route services provides access. For some people, facing numerous transfers and potential delays can make it challenging to get to an appointment on time, or even at all.
- Gaps in low-income patient access are felt by OHSU as well, both in terms of financial cost from missed appointments and staff time and stress resulting from patients left in waiting rooms after hours.²

Routine Travelers

- Ride Connection assists low-income travelers through direct transportation services or TriMet fare discounts. Low-income travelers will also benefit from TriMet's forthcoming low-income fare program, to be rolled out in July 2018.
- Some OHSU social workers are acting beyond their official duties by assisting patients with trip planning either to, from, or around the hill, but this taxes their clinical capacity.³



Line 8 is the only direct connection bus from downtown to Marquam Hill.



Daily Travelers

- OHSU heavily subsidizes public transportation for all employees through its provision of highly discounted TriMet passes and moderately discounted C-Tran passes. The Portland Aerial Tram, streetcar, and OHSU shuttles are also free to OHSU employees.
- Other key programs, including Lyft Off, the new Lyft subsidy program for off-peak commuters, and Scoop, for incentivizing carpooling, also assist OHSU's low-income employees.
- Driving is the most viable option for some employees because of dependents, convenience, inadequate transit access or the extended travel time associated with alternatives.
- Many swing shift staff park in city metered spots in the neighborhoods to save money, but have to return to their vehicles during their breaks to re-feed the parking meters.⁴
- Employees who take public transit may risk tardiness if buses are delayed or transfers are missed. Accordingly, many have to plan to get to work much earlier than the start of their shift.
- Retention rates for low-income employees are especially low,⁵ placing a burden on some departments as they continuously lose, hire, and train new employees.⁶

KAYLA

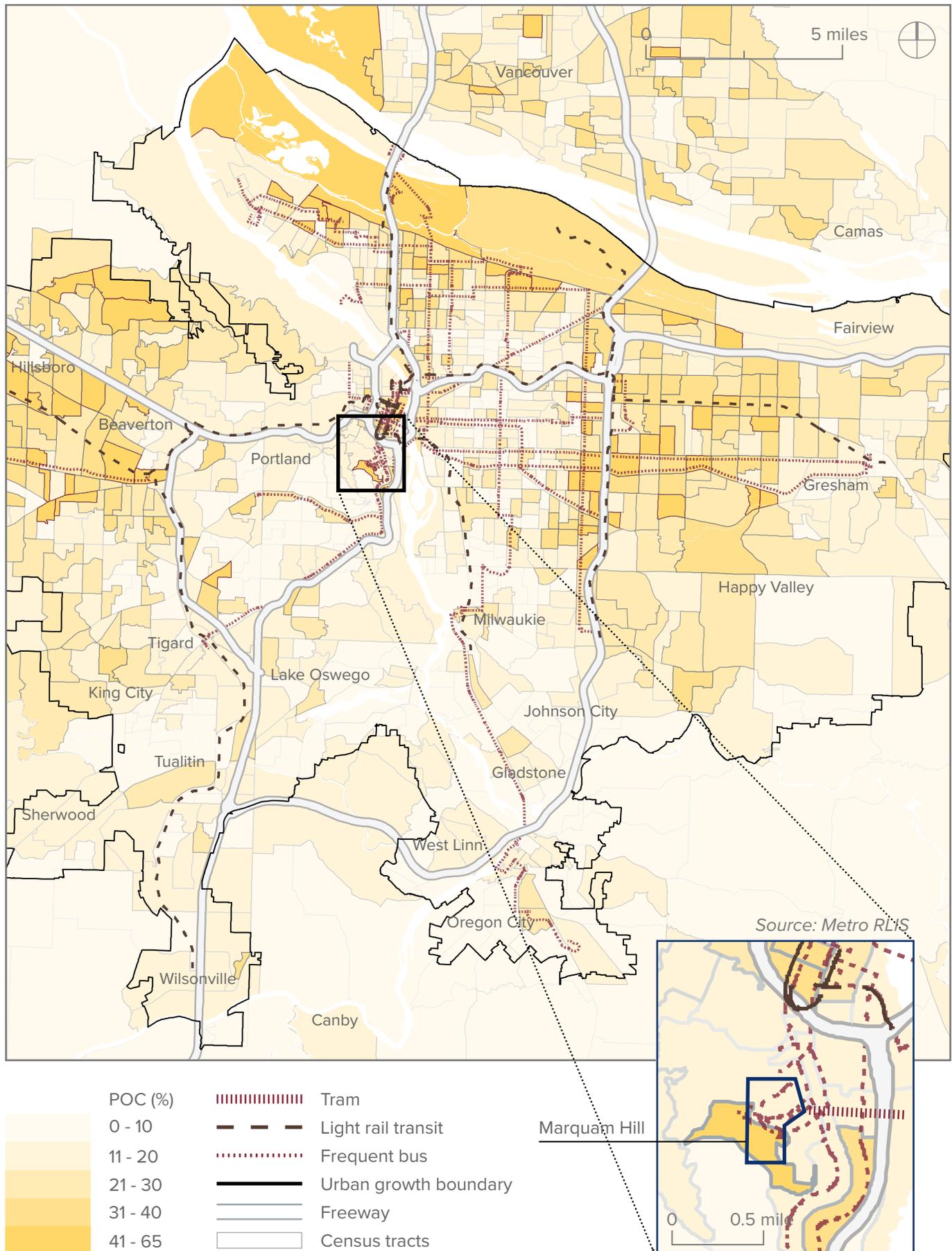


Participating in regional and statewide policymaking and planning can allow OHSU to advocate for the transit services Kayla needs. See page 77 for more details.

Seeing a Complicated Path Ahead

With a hereditary condition that causes early blindness, Kayla has been going to OHSU's Casey Eye Institute on Marquam Hill since she was a child. While she hoped the onset of her vision loss would be delayed, Kayla is starting to feel the effects of diminishing vision. Getting to and around Marquam Hill is tricky enough already, leading Kayla to wonder how she will get around campus once she cannot see anymore. Kayla takes the bus and uses the in-bus stop announcements as her primary non-vision orientation cues, but she can get lost when the buses don't announce every stop. Kayla wants to maintain her independence, but she already recognizes that navigating Marquam Hill with limited vision will be a challenge.

Figure 9. Percent People of Color and Public Transit Options in the Portland Region and Marquam Hill



I don't really feel safe on the MAX. The driver isn't there to help if something happens.

—OHSU Employee

Communities of Color. Communities of color experience particular transportation challenges and burdens as a result of a long history of racism, housing segregation, disinvestment, and economic inequity. In Portland, like in cities across the US, federal highway projects led to the demolition of African-American communities and the displacement of thousands of people from the Albina neighborhood.⁷ Furthermore, transportation planning processes have historically marginalized communities of color and other communities from participation.⁸ In order to meaningfully promote diversity and inclusion, OHSU must recognize and seek to rectify the effects of historical patterns of racial injustice and exclusion.

Infrequent Travelers

- Communities of color are more likely than white communities to rely on family, friends, or their broader social network for access to a car.⁹ This may make their access to medical services less reliable.
- In addition, communities of color, as a result of histories of disinvestment, exclusion, and discrimination, have fewer social and community resources, such as vehicles, to support all of its members. For example, nationwide, African-American families are four times less likely than white families to own a car.¹⁰
- Research suggests that communities of color are more likely to not receive medical care due to transportation barriers than white communities.¹¹

Routine Travelers

- Communities of color have significantly longer travel times to health care compared to white communities.¹²
- Furthermore, communities of color are more likely to have routine health care needs because health outcomes for most communities of color are significantly poorer than white communities (with Asian populations being the exception).¹³

Daily Travelers

- Improving access to OHSU for low-income communities of color should be a regional priority if we are to address issues of racial economic disparities.
- For many current and prospective OHSU employees of color, including those who are potentially impacted by displacement, transit access may be poor or lengthy.
- Figure 9 highlights how many of the gaps in TriMet's frequent service routes overlay with areas with higher proportions of communities of color.
- For some, riding transit is defined by fear and concerns about safety—fears which heightened after the racially motivated MAX attack in May 2017.¹⁴

JONATHAN

Meet Jonathan

Jonathan prefers to take the bus to work, but his use of a wheelchair can complicate the journey.



Riding the Bus with Your Own Set of Wheels

Most days are good days for Jonathan, when his symptoms are manageable and he can get around with ease. These are the days when he feels confident about taking the bus to work. The bus drivers on his route are generally very helpful, but in his 10 years of taking the bus to Marquam Hill he has had some problematic encounters.

It doesn't happen too frequently on his way to work, but on his way home some buses are already at their capacity for wheelchairs by the time they get to Jonathan's stop. Jonathan knows that bus drivers are supposed to call a taxi for him when they are the second bus that is too full to pick him up, but this rarely happens and he is usually left waiting for third, fourth, or even fifth bus to accommodate him. The bus drivers up on Marquam Hill seems to be under a significant amount of time pressure, leaving Jonathan to feel like an inconvenience because of his wheelchair. He has also had bus drivers intentionally ignore him as he is waiting for his bus and drive on without him. Jonathan would like to take transit all the time, but sometimes it is just too much of a hassle to deal with—especially on his higher symptomatic days where he cannot tolerate the longer bus ride and boarding delays.

How OHSU Can Help: Advocating for ADA high capacity buses would help ensure that Jonathan and other wheelchair users traveling to Marquam Hill don't face extended boarding delays. See page 76 for more details.

EMPLOYEE

Sometimes [TriMet's] Lift drops me off hours early for my appointment, but other times I get there late and have to reschedule, only to repeat the whole process again.

—OHSU Patient

Individuals With Disabilities. Individuals with physical and cognitive disabilities experience unique transportation challenges. Some individuals have fixed mobility limitations, while others experience dynamic mobility limitations, changing month-to-month or even day-to-day. In addition to the role a disability can play in mobility, people with disabilities are more likely to be lower-income, with nationwide median earnings at only two-thirds of people without disabilities.¹⁵ Together, this means individuals with disabilities experience high rates of transportation insecurity.¹⁶

Infrequent Travelers

- For infrequent patients or prospective employees with cognitive disabilities, travel and navigation can be especially difficult, as consistency and planning are important for manageable or low-stress travel.
- Ride Connection's RideWise program works to help individuals get comfortable with their daily travel needs but these services are geared toward routine trips.
- RideConnection also works diligently to assist those with disabilities in getting to their medical appointments at OHSU, but they are over-capacity and regularly turn down ride requests.¹⁷
- Ride Connection and other non-emergency medical transportation services have difficulties with patient pick up and drop off on the hill, especially for patients who need door-to-door assistance.¹⁸ Similar difficulties arise for services such as Uber, Lyft, and other ridesharing services.

Communities of color experience particular transportation challenges and burdens, often facing longer ride times.



Routine Travelers

- For many, public transportation is the only regular option for transportation. While many people with disabilities use TriMet’s fixed route services, others, and particularly those with heightened ambulatory or cognitive challenges, use TriMet’s LIFT paratransit service.
- TriMet LIFT users express dissatisfaction with long waits and inflexible pick up times. TriMet Lift provides a two hour window during which users need to be ready to be on the shuttle in five minutes. This also means that patients with set medical appointments must schedule for a ride to potentially arrive many hours in advance.
- For individuals with disabilities, especially those with chronic or acute pain, sitting on a shuttle for four or more hours can be excruciating.

Daily Travelers

- Most of TriMet’s fixed service buses have three spots for people with various mobility devices, but these spots can fill up completely during peak hours. Some people have to wait for another bus, or even two or three more buses, before they can be accommodated.¹⁹
- People with visual impairments find that the tools meant to help them, including the announcement of stops, either under-deployed or inadequate.
- Generally, TriMet drivers are accommodating, polite, and eager to assist people with disabilities board and get secured if needed. However, some users have reported drivers pulling away after seeing someone with a disability approach or pretending not to see them at all.²⁰

Sometimes when bus drivers see me coming, they turn away and pretend not to see me. They just keep on driving.

—Community Advocate and Wheelchair User



Facilities and vehicles do not always accommodate people traveling with mobility devices.

Geographically Isolated Communities. Communities both within and outside of the Portland metro area experience difficulty getting to Marquam Hill due to where they live. Communities on the fringes of the Portland metro area are more likely to be lower-income, face housing insecurity, and have less reliable public transit access. They may be more reliant on personal vehicles to get around, but regardless of the travel mode utilized, they experience long commutes. For rural communities, getting to OHSU is particularly difficult, especially for those without access to a personal vehicle or social supports.

Infrequent and Routine Travelers

- Rural patients in some Oregon counties face particular challenges getting to Marquam Hill because their communities lack the resources to finance even bare-bones public transportation services.
- it is not uncommon for rural patients to have to stay extra nights in hospital beds because their transportation either fell through or could not arrive on time. In some cases, OHSU departments will cover hotel costs for patients so they can free up critical space for new patients.²¹

CONNIE



Supporting community transportation services would help patients like Connie access medical services at OHSU. See page 69 for more details.

Going the Extra Mile for an Extra Chance

Connie feels fortunate to be able to participate in a research study at OHSU, even if commuting there is expensive. She knows that since other treatments for her condition have failed, this study may be her last hope. Connie relies on an OHSU volunteer to coordinate transportation between her home in Corvallis and Marquam Hill, but the service is not always available. She could drive her own car, but her condition makes this painful and unsafe. Though she does receive a research participation incentive, this does not cover all of her transportation costs to travel to and from OHSU. Connie wishes she had a more convenient and affordable option for getting to and from her appointments at OHSU.

- Geographically isolated communities benefit from various non-profit and volunteer-provided services including RideConnection and Angel Flight. While these systems are effective in getting some patients to care, their reliance on private donations and volunteers make them inherently unsustainable.

Daily Travelers

- Park-and-rides have been a key tool to encourage those with personal vehicles to choose multi-modal transportation options and reduce congestion in the central city, however, few exist along direct transit routes serving the hill and Park and Rides are not accessible for some in outer East Portland.
- Employees without a vehicle must rely on other means to get to frequent service transit lines. For employees who take only transit, long commute times with numerous transfers places strain on their daily life and reduce their capacity to work, recreate, or parent.

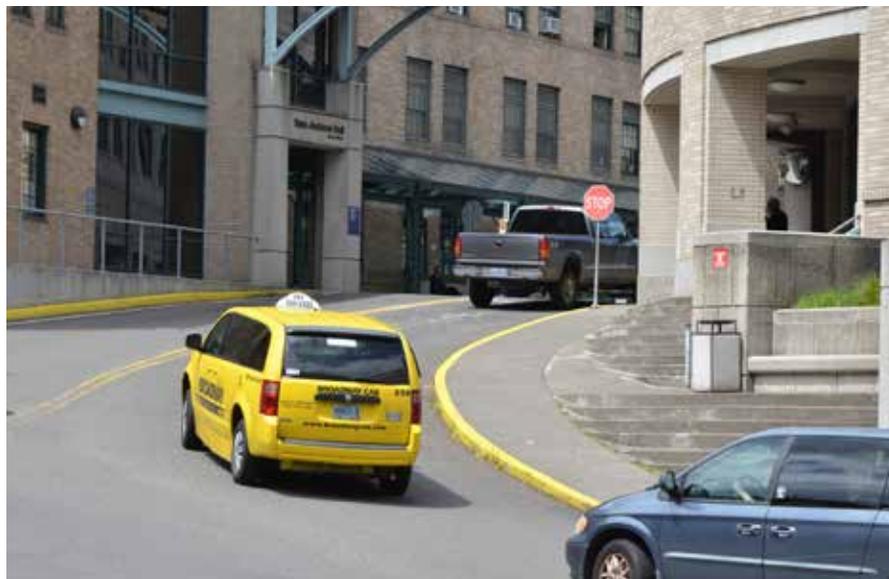
Additional Considerations. The experiences of our four Priority Communities are wide ranging, however, they do not account for all of the unique challenges people face in getting to Marquam Hill. In this brief section, additional experiences are highlighted.

Communities with Limited English Proficiency

- OHSU does not offer non-medical interpretation services to support patients and employees who travel to or need to navigate the hill.
- It is common for individuals or families to rely on other family members or youth to translate for them, adding a logistical challenge and additional cost burden to trips to and from OHSU.

If these volunteer services didn't exist, patients would not get care.

—OHSU Employee



Taxis provide patients and visitors door-to-door service.

When people are uncomfortable, don't trust the process, or don't believe that their concerns are going to be met they are least likely to seek health care.

—OHSU Employee

Immigrants

- Recent immigrants, regardless of immigration status, may face particular challenges navigating new transportation systems.
- Some undocumented immigrants, regardless of how long they have been a part of our communities, experience fear and concerns for safety when in public spaces including on transit.

Gendered Norms and Transportation

- Women, trans, and non-binary people who commute via bicycle face a suite of gendered social norms that act as barriers.²² Gendered norms around child care and domestic responsibilities mean women are more likely to run errands before or after work.

Trans/Non-binary Communities

- Trans-sexual and gender non-binary communities experience violence and harassment at significantly higher rates than the broader population,²³ which impacts these communities' relationship with public space and their comfort and ability to fully utilize public services such as public transportation.²⁴
- Furthermore, these communities experience high rates of homelessness and housing insecurity, which may complicate their transportation choices.²⁵

Looking Forward. OHSU and its regional partners have done much to support the nuanced needs of all of Portland's communities. However, significant gaps and burdens still exist. The Priority Communities and their experiences outlined here should guide future transportation planning and investments so that our most pressing transportation inequities are addressed. Not all of these needs can be met right away, but there are both significant problems and overlapping needs that should receive priority.

In the next section of the plan, we provide a critical tool—a Transportation Equity Lens—that OHSU should adopt and employ to guide future transportation decisions. This lens requires the consideration of Priority Communities and their complex, nuanced needs. Furthermore, it promotes alignment with regional transportation partners which will help OHSU build consensus around meeting these needs, and improve travel to Marquam Hill for all users.



An equity framework would help prioritize transportation investments for Priority Communities.

EQUITY LENS

CHAPTER OVERVIEW

To address their most pressing transportation challenges, OHSU must be intentional and systematic in centering the needs of Priority Communities. In this chapter, Plan581 provides a Transportation Equity Lens to guide equitable investment and programming. The Lens also aligns OHSU more closely with regional partners, and could act as a tool to help leverage partnerships to promote regional transportation equity.

Plan581 developed this Transportation Equity Lens to complement and expand the TDM's evaluative framework which is intended inform transportation budgeting, planning, implementation, and evaluation activities. The lens consists of the following key dimensions necessary for an equitable transportation system and a people-centered planning approach.

The dimensions of the Transportation Equity Lens and their definitions are:

- **Justice.** An action that intentionally redistributes power and resources, dismantles systemic racism, and results in a more equal distribution of opportunity and privilege across our communities.
- **Inclusivity.** A policy of including marginalized and Priority Communities in planning, decision-making, and implementation processes.
- **Access.** The ability of an individual to reach employment, goods, or services, taking into consideration the time burden, cost burden, and physical abilities of that individual to do so.
- **Mobility.** The ease with which an individual can move between destinations and navigate transportation disruptions.

- **Community Impact.** Impacts on the economic stability, educational opportunities, housing security, community health outcomes, and environmental health of the region and all of its communities.
- **Capacity.** The ability to implement strategies based on their feasibility and the availability of resources in the form of funding, institutional champions, personnel, partnerships, and time.

These dimensions were designed by evaluating local, regional, national, and OHSU internal examples of transportation decision-making frameworks (Table 1). Plan581's lens intentionally integrates equity across all dimensions, rather than containing it in a single dimension. However, the lens still mirrors many regional priorities, including equitable transportation, positive health outcomes and opportunities for prosperity as articulated in Portland's *2035 Comprehensive Plan*, and the elements of productivity, equity, and connections in TriMet's *Service Guidelines Framework*.

Process

The Transportation Equity Lens, is intended to compliment the TDM's evaluative framework. The lens adds value to existing decision-making processes by:

- Evaluating a project’s strengths and weaknesses in promoting transportation equity.
- Promoting transparency to internal and regional partners and building momentum for expanded partnerships.

Plan581 models the use of the Transportation Equity Lens throughout our recommendations in the following chapter. For each strategy discussed we highlight corresponding dimensions that are effectively addressed.

Additional Resources

1. [All Aboard! Making Equity and Inclusion Central to Federal Transportation Policy](#)
2. [Untokening 1.0 — Principles of Mobility Justice](#)
3. [PAALF People’s Plan](#)
4. [Mobility Equity Framework: How to make transportation work for people](#)

Table 1. Transportation Decision Making Frameworks

OHSU Transportation Demand Management Plan (TDM)	OHSU Night Access Plan (NAP)	TriMet’s Service Guideline Framework
<ul style="list-style-type: none"> • Patient first • Employer of Choice • Multimodal • Safe & Healthy • Innovative / Admin • Cost Effectiveness • Impact 	<ul style="list-style-type: none"> • Time • Cost • Impact • Equity 	<ul style="list-style-type: none"> • Demand • Productivity • Connections • Equity • Growth
Portland 2035 Comprehensive Plan Transportation Goals	The People’s Plan by Portland African American Leadership Forum (PAALF)	An Agenda for Equity: A Framework for Building a Just Transportation System in Los Angeles County
<ul style="list-style-type: none"> • Safety • Multiple Goals • Great Places • Environmentally Sustainable • Equitable Transportation • Positive Health Outcomes • Opportunities for Prosperity • Cost Effectiveness • Airport Futures 	<ul style="list-style-type: none"> • Administration of Justice • Arts and Culture • Community Resilience and Community Building • Economic Development • Education • Environmental Justice • Health • Housing 	<ul style="list-style-type: none"> • Money • Mobility • Housing and Development • Health and Environment • Jobs • Goods Movement

Transportation Equity Framework Components

JUSTICE

Definition. An action that intentionally redistributes power and resources, dismantles systemic racism, and results in a more equal distribution of opportunity and privilege across our communities.

Value. Justice means sharing the benefits of OHSU as a place of learning, employment, and care with every community so every individual can reach their greatest potential.¹ This is done not by treating each community the same, but by addressing the specific challenges, barriers, and needs that community has in accessing those benefits. OHSU's commitments to diversity, inclusion, and community service are met if the institution and its departments explicitly work to promote racial justice, social equity, and anti-oppressive practice.

As the largest employer in Portland and a world-renowned research institution, OHSU has the power and privilege to incorporate Justice as a foundational practice.² As a foundational leader, OHSU can model untested and innovative justice initiatives and lead regional agendas to mobilize resources towards transportation equity beyond its campus.

Evaluation. The following considerations can guide OHSU in operationalizing this important lens dimension:

- What are the socio-economic conditions that justify this project? How are they being addressed?
- How will the socio-economic condition change during the project, and at the end of the project? Who does this change benefiting at each stage? Who does it burden at each stage?
- How does this project support Priority Community communities such as those who are low-income, communities of color, disabled, or geographically isolated?
- How does the project address and impede the repetition of patterns of historic injustice, oppression, and institutional racism?
- How does the project work to reflect the diversity of the communities the project serves?
- How does the project use programming that is culturally-responsive to its targeted users?

Additional Resources

1. [Race, Power and Policy: Dismantling Structural Racism](#)
2. [Evaluating Transportation Equity](#)
3. [Social Impact Assessment](#)
4. [Equity and Social Justice Ordinance 16984 \(2010\) - King County, Washington](#)

JUSTICE

INCLUSIVITY

ACCESS

MOBILITY

COMMUNITY IMPACT

CAPACITY

INCLUSIVITY

Definition. A policy of including marginalized and Priority Communities in planning, decision-making, and implementation processes.

Value. Plan581 uses Inclusivity here to mean the integration of Priority Communities into processes of strategy development, decision-making, and implementation. Inclusive processes benefit OHSU because they:

- Lead to better outcomes by tailoring projects to better meet the needs of intended users, building support for project implementation, and strengthening relationships between OHSU and its communities.
- Reflect Portland’s commitment to equity and inclusion, and parallel a growing movement in urban planning towards meaningful community engagement and empowerment.

Evaluation. Inclusive processes, as defined here, do not necessarily have to engage with every community and user type, but do need to focus on those that are or could be impacted by a project. Inclusive projects should also avoid exploiting community organizations and representatives. Rather, their time and contributions should be valued adequately in the same way that professional consultants would be valued and compensated for their time. Finally, inclusive planning does not just mean simple consultation. Priority Communities should have a role in setting transportation planning priorities, developing strategies, and deciding on the particulars of implementation.³ With these process considerations in mind, projects should be considered inclusive when they meet the the following (or similar) criteria:

- Will the target population(s) be consulted during the project’s design and implementation?
- Does the decision-making body for the project’s approval reflect the diversity of OHSU’s communities?
- Does the project collect participant feedback as part of its operation?
- Is there a mechanism in place that considers and integrates participant feedback into project implementation?

Additional Resources

1. [City of Portland Public Involvement Principles](#)
2. [Re-Inventing Democracy Through Participatory Budgeting](#)

JUSTICE
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ACCESS

Definition. The ability of an individual to reach employment, goods, or services, taking into consideration the time burden, cost burden, and physical abilities of that individual to do so.

Value. An evaluation of Access strives to understand the fastest, most efficient, and most convenient transportation option that is available to a specific population or individual. An accessibility metric will aid in promoting transportation initiatives that support OHSU's mission of putting their patients first. Evaluations can be designed to promote improvements of services for prioritized communities, such as disabled low-income patients, or low-income employees who live in the outer areas of Portland.

At their foundation, accessibility evaluations prioritize those who are unable to drive and examine the time and cost burdens of alternative options.⁴ This approach further supports OHSU's ongoing work in managing the parking and congestions issues on Marquam Hill.

Evaluation. Access should first evaluate whether an individual can reach critical services at all. The evaluation should then compare the quickest feasible transportation mode available to that person with those available to other communities in order to identify service opportunities and inequities. Questions to ask as part of an accessibility evaluation include:

- Does this project provide more efficient service to a community identified as having limited access?
- How much does this project reduce travel time and costs for each prioritized community?
- How does this project improve travel options for prioritized communities?
- How will this project reduce time gaps between arrival and departure times and appointment or shift times?⁵

To start preparing for more equitable accessibility, OHSU can begin analyzing commuting burdens as the sum of commuting time plus cost burden. This approach can build understanding of where spatial mismatches exist in the service region.

Additional Resources

1. [Evaluating Accessibility for Transport Planning](#)
2. [Tools for Measuring Accessibility in an Equity Framework](#)

JUSTICE
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CAPACITY

MOBILITY

Definition. The ease with which an individual can move between destinations and navigate transportation disruptions.

Value. OHSU continues to grapple with parking and road capacity constraints on Marquam Hill. A mobility metric will assist OHSU in implementing projects that alleviate the needs which lead individuals to drive to campus. By addressing these external factors, alternative transportation options should therefore become more efficient. For example, if additional daycare or preschool capacity is established near campus, more employees could bike to work with their children as they would no longer need to drive first to a daycare and then to OHSU.

Additionally, unlike Access which considers the single fastest travel option, Mobility examines the availability of all travel options. Having a variety of options helps the transportation network be more resilient in the face of disruptions such as a tram closure or extreme weather event. Equitable mobility can be measured for any socio-demographic characteristics.

Evaluation. Mobility is best evaluated with criteria designed around a scenario or needs and can be considered in the context of regional transportation options, OHSU operations, and individual efficiency. Examples of questions to help evaluate Mobility in these categories include:

- Mobility in terms of regional transportation options can be assessed by asking first what transportation is easiest for a individual, and then how that changes if they have a broken leg, or if they begin fostering a child.
- Mobility in terms of OHSU operations may look at questions examining how staff will get to work if roads are unsafe, or the Tram is closed.
- Mobility in terms of individual efficiency looks at what needs or concerns lead individuals to drive to work. Questions may explore how the inclusion of secondary destinations or errands, like dry cleaners, grocery stores, or daycares, closer to campus can impact the number of SOV trips to OHSU.

Additional Resources

1. [Evaluating Transportation Equity](#)
2. [Guide to Calculating Mobility Management Benefits](#)

JUSTICE
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COMMUNITY IMPACT

Definition. Impacts on the economic stability, educational opportunities, housing security, community health outcomes, and environmental health of the region and all of its communities.

Value. OHSU is a leader in health care and the largest employer in Portland. As such, its decisions and investments have regional consequences. OHSU's hiring and retention practices, advocacy efforts or lack thereof on labor, education, housing, and transportation issues, and proactive stance in climate action planning are all influential on economic and health outcomes in the region. When considering transportation projects, OHSU should consider how they impact communities beyond targeted users. This dimension is important because of the following relationships:

- Transportation investments directly impact housing affordability.⁶
- Access to employment at OHSU is important for regional economic prosperity.
- Transportation is a large source of greenhouse gas emissions.⁷
- Access to health care⁸ and active transportation options⁹ both impact health outcomes.

Evaluation. While measuring Community Impact is challenging, the follow questions can guide the preliminary evaluation of community impacts, and support the alteration of transportation projects or encourage deployment of additional strategies to mitigate negative community impacts:

- How does the project impact communities beyond improving transportation options?
- Does this project positively or negatively impact housing affordability, environmental health, and economic opportunity?

Additional Resources

1. [An Agenda for Equity: A Framework for Building a Just Transportation System in Los Angeles County](#)
2. [Transportation Benefit-Cost Analysis: Community Impact](#)
3. [Transportation for All: Good for Families, Communities, and the Economy](#)

JUSTICE
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ACCESS
MOBILITY
COMMUNITY IMPACT
CAPACITY

CAPACITY

Definition. The ability to implement strategies based on their feasibility and the availability of resources in the form of funding, institutional champions, personnel, partnerships, and time.

Value. OHSU's assessment of its Capacity is a powerful exercise when approaching decision-making. Having a high capacity to plan or implement a strategy to advance transportation equity is a strong indicator to move forward in a decision-making process. Having low capacity, however, should not be a deterrent and should serve as a signal to the institution to make immediate investments, collaborate with partners, or consult with others to fill gaps or address deficiencies.

Evaluation. Evaluating Capacity involves looking at several sources of power for the institution and how they can help or hinder progress. Questions to consider include:

- What is the operating budget for the fiscal year for any given department, project, or cause?
- Who are partners and collaborators in a given matter, what can they offer, and how should OHSU work with them to accomplish shared goals?
- Who does the project or decision depend on?
- Which personnel are available and what are their strengths?

JUSTICE
INCLUSIVITY
ACCESS
MOBILITY
COMMUNITY IMPACT
CAPACITY



The Portland Aerial Tram is a prime example of how OHSU has the capacity to influence regional transportation investments that impact thousands of people in the community.

- Who are internal and external champions for a cause or project?
- What can be accomplished in the near-term versus long-term?

Additional Resources

1. [Transportation Equity Caucus](#)
2. [Power Analysis](#)
3. [Alliance for Community Transit](#)
4. [Participatory Budgeting](#)

Trail improvements act as quick wins that satisfy short-term transportation priorities.





View of the aerial tram ascending the hill, crossing the highway, with downtown Portland in the distance

RECOMMENDATIONS

CHAPTER OVERVIEW

While Plan581's Transportation Equity Lens is meant to anchor OHSU's transportation equity work, furthering transportation equity also means implementing innovative programs, reforming existing systems, advancing a regional approach and addressing institutional policies and processes. In this chapter, Plan581 uses these dimensions to provide recommendations, many drawn directly from conversations with Priority Communities, that address many of the most pressing challenges discussed in *Elevating People*.

The primary recommendation of *Elevating People* is to utilize the Transportation Equity Lens as presented in the previous chapter. This equity-centered lens emphasizes projects which fall within the capacity of OHSU and its regional partners that can further justice, practice inclusivity, increase mobility and access, address community impacts. Complementing this tool, Plan581 provides a series of additional recommendations, some are new and others echo existing plans. These recommendations work alongside the Transportation Equity Lens to promote transportation equity by centering the needs of Priority Communities, engaging in social and racial justice, and leveraging OHSU's influence and position as a regional player to advocate for change.

This section is organized into four parts (Table 2). The first section, *How to Innovate to Support Priority Communities*, focuses on new and explicit strategies to promote transportation equity. The second section, *How to Reform Existing Systems for Efficiency*, includes strategies to alter existing infrastructure, programs, and policies to make travel to Marquam Hill better for Priority Communities. The third section, *How to Champion Regional Equity*, advocates for OHSU to play a larger role in directing regional policies and investments to address pressing transportation and housing concerns. Finally, the fourth

section, *How to Adopt More Equitable Policies and Processes*, encourages actions that give Priority Communities a stronger voice in transportation decision-making processes and promote a more flexible and understanding workplace for Priority Communities.

How to Innovate to Support Priority Communities

Bold yet pragmatic solutions are needed to address systemic issues fueling transportation inequities. As a national leader in health care, research, and education, OHSU is no stranger to innovation. Therefore, OHSU is primed to lead transformative actions that center transportation and access as basic rights. This section highlights five key opportunities to implement new and essential programs to put patients first, support OHSU's most vulnerable employees, and build community capacity.

1.1 Expand Patient Navigation Assistance Services

Scenario: Some patients with cognitive or physical disabilities, as well as those unfamiliar with the campus, find navigation around Marquam Hill overwhelming. Furthermore, non-emergency medical transportation services have difficulty accommodating

patients who need door-to-door support in getting to appointments, both due to a lack of drop-off sites near popular medical destinations and limited staff capacity. Together, these challenges result in stressful patient experiences, congestion on the hill, and undermine the ability of transportation service providers to meet the needs of their clients.

Response: OHSU currently operates a valet system for patients who drive to the hill. Operating on similar principles, Plan581 recommends that OHSU introduce patient navigation assistance services to assist patients getting from their point of arrival to their appointment. These services would be helpful for non-emergency medical transportation services like Ride Connection or TriMet's LIFT, whose drivers could phone ahead and ask for a navigator to assist their client to their appointment destination.

Strengths: Access

Table 2. Recommendations to Advance Transportation Equity at OHSU

RECOMMENDATION	STRENGTHS
How to Innovate to Support Priority Communities	
1.1 Expand Patient Navigation Assistance Services	Access
1.2 Institutionalize Patient Transportation Coordination	Access
1.3 Support Community Transportation Services	Access, Capacity
1.4 Provide Employees More Leniency for Transportation-related Tardiness	Justice, Community Impact
1.5 Distribute Income-based Travel Subsidies	Justice, Mobility
1.6 Provide Child care for Lower-income Employees	Justice, Mobility
How to Reform Existing Systems for Efficiency	
2.1 Reconfigure Parking Permit Program	Justice
2.2 Expand Direct Service Transit Routes	Access, Mobility
2.3 Operate a Transit Mall Shuttle	Access, Mobility
2.4 Advocate for ADA High Capacity Buses	Access
How to Grow OHSU's Positive Impact	
3.1 Participate in Regional and Statewide Policymaking and Planning	Capacity, Community Impact
3.2 Connect Housing to Transportation Issues	Justice, Community Impact
3.3 Multiply Outside Funding Sources	Capacity, Community Impact
How to Strengthen Efforts throughout OHSU	
4.1 Collect Better Data Together	Capacity, Inclusivity
4.2 Apply OHSU Diversity Action Plan and Evaluate	Justice, Capacity, Inclusivity
4.3 Facilitate Inclusive Decision-making	Capacity, Inclusivity
4.4 Budget for Equity and Take Action	Justice, Capacity

Many of Plan581's interviewees shared the difficulties that patients experience getting to campus, especially those with special needs.

1.2 Institutionalize Patient Transportation Coordination

Scenario: Patients are generally on their own to figure out travel to Marquam Hill. While OHSU has an array of online resources that identify several transportation options for getting to and around Marquam Hill, these instructions are most helpful for patients who drive. Some patients, especially non-English speakers, may not easily discover community resources for arranging rides, such as Ride Connection. Furthermore, it is not uncommon for patients to find a ride to Marquam Hill but then be unable to get a ride back home. A more proactive approach on behalf of OHSU to support patient transportation would assist patients in accessing health care and avoid the cost of missed appointments to OHSU and its patients alike.

Response: Some social workers with high familiarity levels and departmental support readily provide personalized travel consultation to patients with difficulties getting to and from Marquam Hill. However, the availability of this service varies, and conducting these consultations strains the capacity of these workers to attend to other tasks in clinical settings. Plan581 recommends that OHSU adopt a standardized system of patient appointment scheduling that includes a consultation on traveling to the hill. This could mean including routine questions during scheduling, like: “Do you know how you will be getting to your appointment?” Or, “Do you need assistance getting to your appointment?” If a patient expresses concern about their ability to get to Marquam Hill, the scheduler could offer navigation information, transportation alternatives, and community resources to assist them.

Strengths: Access

1.3 Support Community Transportation Services

Scenario: While most patients drive to the hill, many rely on various non-profit and volunteer transportation services like Ride Connection, Angel Flight West, and the American Cancer Society to access care. These service providers have limited capacity and cannot accommodate the needs of all patients who request assistance, meaning some people either delay their care or are unable to receive it at all.

Response: Plan581 encourages OHSU, in accordance with its goals to improve health for all Oregonians, to help expand and advocate for community transportation service organizations. As a direct beneficiary of these services in the form of improved patient access, OHSU should work to build the capacity of these organizations and support their long-term sustainability. For example, OHSU could develop a formal partnership with Ride Connection and sponsor a medical shuttle that serves patients with mobility and access challenges. Ride Connection is currently piloting a shuttle program with the support of other

MARCOS

Meet Marcos

Marcos would love to take transit to work, but rising housing costs and displacement have led him to drive.



Maintaining Community Ties in a Changing City

Marcos' parents always stressed the value of community to him as he was growing up, but it feels even harder nowadays to stay connected with the black community he was surrounded by during his childhood. That's why Marcos goes out of his way to ensure that his children are able to go to school with other black children. Marcos is committed to providing this type of environment for his children, but it does complicate his daily commute to OHSU.

Weekday mornings start early for Marcos and his sons. There is a lot to coordinate as a single parent to get everyone out the door on time. Since moving to outer East Portland, Marcos has been driving his kids to the elementary school in St. John's that they have attended since kindergarten before continuing on to begin his day at OHSU. Marcos appreciates the flexibility and work-life balance that his role as a research associate provides for him and his boys. However, he recognizes that all this driving is taking its toll. Marcos would love to be able to take transit to work, but he needs the flexibility and efficiency of a car in order to pick up and drop off his kids at school and still get to work on time. If he could find affordable housing closer to his work and his children's school, then transit would be a viable option for his daily commute to and from Marquam Hill.

EMPLOYEE

How OHSU Can Help: Connecting housing to transportation issues would help expand transportation options for OHSU employees like Marcos who cannot afford to live closer to Marquam Hill. See page 77 for more details.

regional hospitals. OHSU should consider allocating resources to expand a similar shuttle service to their campus and to make it permanent.

Strengths: Access, Capacity

The bus lines that are closest to my home only run during certain hours. It can sometimes take over two hours to get to work.

—OHSU Employee

1.4 Provide Employees More Leniency for Transportation-related Tardiness

Scenario: Employees from all socioeconomic backgrounds experience unforeseen transportation related delays, but for those with less flexible work schedules, those who have particularly long commutes, or those who take public transit, these delays can be especially impactful. Employees who experience delays, like a traffic incident on a highway, a delayed bus, or a flat bicycle tire, and lack a flexible schedule, risk getting reprimanded or even losing their job for tardiness. For those taking transit, especially those with already long commutes, the fear of consequences along with their earnest desire to arrive to work on time mean they often leave for work much earlier than necessary to allow a time buffer. For some taking the bus, this means planning to arrive to work 30 minutes in advance, which exacerbates the burdens of already long commutes.

Response: While OHSU needs its staff to arrive to work on time in order to fulfil their obligations, employees do face complex individual and systemic challenges getting to work, many that are unexpected and out of their control. Plan581 recommends working with employee unions to explore more forgiving policies that support the needs of both the hospital and its employees.

Strengths: Justice, Community Impact

1.5 Distribute Income-based Travel Subsidies

Scenario: While they do receive generous support from OHSU in the form of public transportation subsidies, lower-income employees continue to be disproportionately burdened by transportation costs and long commutes. Some employees have limited choices regarding their housing location or dependent care needs, and these constraints result in them to driving to work despite the current transit incentives. OHSU has made impactful investments in employee commuting benefits, but these incentives and travel subsidies are not tailored for those who experience increased commute burdens relative to their incomes. A recalibrated incentive system which takes a more holistic approach to alleviating commute burdens would serve to increase equity within the transportation incentive program.

Response: Plan581 recommends that OHSU expands its transportation incentive programs to better acknowledge the nuanced travel needs of low-income employees and better alleviate their transportation burdens. This incentive structure would utilize tiered, income-based direct payments to employees

to use as needed for transportation-related expenses. This innovative solution could incorporate housing or childcare vouchers, free or heavily subsidized transit passes for family members or dependents of lower-income employees, or a strong incentive system that pays people for taking transit to help offset the costs of longer transit commutes. This policy aligns with other government and nonprofit programs, such as the Oregon Health Plan and TriMet's low-income fare program, which prioritize public resources for low-income communities.

Strengths: Justice, Mobility

1.6 Provide Child Care for Lower-income Employees

Scenario: Low-income employees may find their transportation choices constrained by their dependent care needs. Financial limitations may restrict a family's choice in child care services, meaning services may be far from home or be inflexible on drop-off and pick-up times.

Response: In accordance with OHSU's commitments to employee wellbeing and supporting its employees' ability to perform their jobs to the fullest, Plan581 recommends that OHSU consider providing employees with child care. The provision of free or subsidized low-cost child care for low-income employees would support employee diversity and inclusion and make employment at OHSU more accessible to all. While employees of all income levels would benefit from child care near or on Marquam Hill, prioritizing these services for low-income employees would help mitigate the acute costs and time burdens associated with securing child care.

Strengths: Justice, Mobility



The regional transportation system and OHSU's transportation incentive programs could be reevaluated to identify redundancies in incentives.

How to Reform Existing Systems for Efficiency

OHSU's responsiveness to patient and employee travel needs depends on the services of outside agencies as well as on their own initiative programs. Coordinated planning is central to strengthening this symbiotic relationship to reduce redundancies and to direct resources to fill gaps in the existing transportation system.

Plan581's analysis in the Challenges section concluded that there is a high likelihood of overlap and duplication of transportation-related incentives for many users. The relationship between the regional transportation system and OHSU's transportation incentive programs can be reevaluated to better complement one another rather than multiplying incentives for some while others have none. Reconciling these inconsistencies will help OHSU better support its employees and meet its transportation goals.

2.1 Reconfigure Parking Permit Program

Scenario: OHSU is projected to experience additional significant patient and employee growth on Marquam Hill. To accommodate this growth within the current geographic and physical constraints of the hill, OHSU has determined that it will need to reduce the percentage of employees who drive to work. The current allocation of employee parking permits only satisfies a small proportion of the demand that exists. Ownership of one of these coveted permits guarantees the holder a parking spot and costs less than the equivalent of buying hourly parking passes over the same time frame. Both of these factors encourage parking permit holders to drive to Marquam Hill. The lengthy waiting list of the current parking permit allocation system does encourage some to take alternate means of transportation while waiting for a parking permit. However, these employees often revert back to driving once they obtain a permit in order to make use of it.

Response: In concert with recommendation P.1. of the TDM, Plan581 advises a parking permit approach that utilizes cost mechanisms to disincentivize parking permit ownership by either getting rid of the annual pass all together or by making parking permits more expensive than hourly parking. A higher parking permit price would encourage drivers to reevaluate the expense of holding a permit. In combination with OHSU's transit pass incentives, more appropriately-priced parking permits would likely encourage employees to take transit, walk, or bike to work more often and use hourly parking for days where a personal vehicle is needed. Modifications to the parking permit waitlist structure and pricing should continue to be made for disabled and low-income individuals who have a demonstrated need to use their vehicle for their regular work commutes.

Strengths: Justice

Those making the least money have the highest costs for parking.

—OHSU Manager

2.2 Expand Direct Service Transit Routes

Scenario: Being able to utilize direct transit service to Marquam Hill is a transportation asset for OHSU’s travelers as well as for OHSU itself. Direct service transit lines encourage transit ridership by offering a more efficient and convenient transit trip. In turn, increased transit ridership helps OHSU meet its SOV trips and carbon reduction goals. TriMet’s Line 8 is the primary direct service transit line serving Marquam Hill. OHSU’s Aerial Tram is the other direct service option for those accessing the hill from South Waterfront. Transit riders who do not live along Line 8 experience increased commute times due to longer, indirect routes and the need to transfer to and from other bus or train lines. Tram riders must transfer from other transportation modes at or near South Waterfront in order to be able to use this method of getting up to Marquam Hill.

Response: Since transit routes that provide direct service offer better experiences for riders, the catchment areas for these direct lines should be evaluated to ensure these routes are serving those with the most need. Plan581 recommends that OHSU analyzes which areas and people currently benefit from existing direct service lines to Marquam Hill as compared to those who don’t have access to these direct service routes. In the catchment areas for Line 8, displacement due to rising housing costs and gentrification have shifted the demographics of those who benefit from Line 8’s current route alignment to benefit a historically privileged segment of the population. In contrast, bus Line 9 also terminates in Downtown Portland and runs 12 miles east all the way to Gresham, serving many of the region’s census blocks having the lowest median family incomes. By partnering with TriMet, OHSU could work to understand how the realignment of direct service transit routes can better benefit Priority Communities. Giving Line 9 direct access to OHSU would create a linkage from Gresham to Marquam Hill and would thus benefit those who experience longer and more challenging transit commutes.

Strengths: Access, Mobility

2.3 Operate a Transit Mall Shuttle

Scenario: TriMet’s Line 8 connects Northeast Portland to OHSU by running through Portland’s transit corridor and provides a connection the MAX Light Rail at Pioneer Square. It services OHSU’s main campus and Oregon’s largest Veterans Hospital, both on Marquam Hill. As the only transit line with direct service to Marquam Hill and running along this transit hub, Line 8 serves both as a commuter connector for people making transfers along the transit mall, and as a regional service bus taking riders to their homes in Northeast Portland.

The bus lines that get me closest to home only run during certain hours. It can sometimes take over two hours to get home.

—OHSU Employee

Line 8's multipurpose alignment is most problematic for riders with mobility devices who have to compete for the two ADA compliant spaces at the front of the bus. Line 8 frequently reaches its capacity both in terms of standing room availability and in ADA availability. This is especially a challenge for peak hour service. Line 8 serves five miles of regional service before entering the transit mall. By the time it reaches the transit mall to pick up riders making transfers, the ADA spaces are commonly already occupied, causing delays for riders needing ADA access who are trying to reach medical services or employment.

Response: Separating Line 8's shuttle and regional service functionalities can alleviate pressure on this system. Plan581 recommends that OHSU pursue either operating its own shuttle service between Marquam Hill and Pioneer Square or partnering with TriMet to design a shuttle that connects riders from downtown directly to the Veteran's Hospital and OHSU. This recommendation can be paired with a realignment of Line 8, the direct transit service route to Marquam Hill, to ensure the transit mall continues to have access to Marquam Hill without needing an entire fixed route to run that route.

Strengths: Access, Mobility

AMMAR



Institutionalizing patient transportation coordination would allow social workers like Ammar to better focus on their patients' clinical needs. See page 69 for more details.

Sometimes Getting There is Half the Battle

Ammar sees first-hand how important it is for patients to have reliable transportation to and from Marquam Hill. As a social worker, Ammar works to get patients where they need to go. The complexity of the different needs, transportation options, locations, constraints, and individual issues that each patient faces can make it hard for Ammar to match people with the right services. The time he spends coordinating transportation is time taken away from his other clinical duties. Ammar loves being able to help patients, but he knows there are more he cannot help and wishes there were additional resources to better support the transportation needs of all patients.

2.4 Advocate for ADA High Capacity Buses

Scenario: TriMet's fixed route services are all ADA accessible. However, at peak travel times and along routes that serve OHSU, these limited spaces for securing mobility devices are frequently fully occupied. This means some riders with mobility devices must wait for seats on subsequent busses, which exacerbates issues like physical discomfort, exposure to weather, and missed appointments.

Response: Plan581 recommends that OHSU advocate for transit improvements that benefit their patients, employees, and students utilizing mobility devices. Better real-time tracking systems and analysis of ADA accessible space on TriMet's fixed route services that access Marquam Hill or South Waterfront would help riders plan their trips to OHSU more effectively. OHSU can also lobby for additional ADA accessible spaces on routes as needed. Capacity for mobility devices on buses could be improved by redesigning the lower bus seating arrangement to have all seats face the center of the bus, creating an additional space for a mobility device, or by adding articulated buses to the transit service. As improvements such as these would increase access by patients, visitors, students, and employees to OHSU's largest campus, OHSU may want to consider financially supporting TriMet in these efforts.

Strengths: Access



Maximizing ADA accessibility on vehicles and multi-use facilities should be a priority.

Broader local and regional issues that are not typically addressed in transportation planning affect traveler choices and behaviors. Advocating for better health care and housing policies can expand transportation options for patients and employees.

How to Grow OHSU's Positive Impact

OHSU's transportation efforts and the institution as a whole are influential beyond its campus. Leveraging their influence to address regional inequities is urgent and needed. This leadership and the capacity to do this regional work effectively starts from within, where the institution has several avenues to improve diversity and inclusion as a way to advance transportation solutions. Plan581 recognizes the assets and strengths of this organization and the existing foundation it has to achieve large goals. This also means the expectations are even greater for them.

3.1 Participate in Regional and Statewide Policymaking and Planning

Scenario: Marquam Hill travel demands regional collaboration and solutions for health, jobs, transportation, and housing. OHSU and its employees have actively served on advisory groups, formed partnerships, contributed resources, and informed several recent plans and projects concerning South Waterfront, Marquam Hill, and other areas of downtown, including Tilikum Crossing, Portland Aerial Tram, Portland Innovation Quadrant, and Southwest Corridor plan. OHSU is a key player in several development projects for these areas but can extend its influence throughout the region for housing, education, health care, and transportation.

Response: OHSU should continue engaging in these efforts and lend its support to advancing policies for more affordable housing, ongoing statewide health reform for Medicaid, transportation expansion without displacement, and creating opportunities to eliminate the wage gap for groups such as people of color, immigrants, women, and people with disabilities. Land acquisition and land banking can yield to more housing opportunities in the area for low-income people and employees who have not been able to live closer to the campus or surrounding area. Until the projected construction for TriMet MAX Light Rail for the Southwest Corridor, OHSU can advocate concurrently for affordable housing initiatives, transit access, and employment programs to better serve Priority Communities.

Strengths: Capacity, Community Impact

3.2 Connect Housing to Transportation Issues

Scenario: Many transportation issues have a direct link to housing location and costs. OHSU employees, students, and patients share similarities with housing insecurity or unaffordability. Many are experiencing extended travel times as a result of limited affordable housing options closer to campus. Housing and transportation are both social determinants of health that should be integrated into OHSU's efforts to advance health equity for all.

Response: Through advocacy work and strategic investments and development, OHSU can extend its transportation equity work by supporting housing affordability and access for Priority Communities. This could also involve legal support and other resources employees and patients may need when faced with tenant-landlord issues. Partnerships with community organizations such as Community Alliance of Tenants could yield to valuable workshops to inform the OHSU community of their rights as tenants and connect them to advocates who could represent them in the event of a housing-related conflict.

Strengths: Justice, Community Impact

3.3 Multiply Outside Funding Sources

Scenario: OHSU has successfully secured funding that has made many of its major projects possible, such as a \$500 million fundraising pledge from Phil and Penny Knight for the OHSU Knight Cancer Institute. South Waterfront has recently been at the center of major investments for OHSU, surpassing Marquam Hill which is a major part of the campus and is home to other essential medical services and the largest concentration of employees and patients.



The MAX Orange Line and Tilikum Crossing was made possible by an infrastructure funding plan that combined local and federal sources.

Response: Engaging donors, funders, and other partners to advance health innovation and improve health outcomes through planned giving and grants focused on transportation as a social determinant of health can be another avenue for increasing resources to meet Priority Communities' needs. Immediate investments on Marquam Hill to improve ADA accessibility, direct connections from downtown through shuttles, and patient navigation and concierge services can serve everyone from employees to patients. Federal funding to Oregon for transportation is not expected to grow, however, *Keep Oregon Moving* (HB 2017) is an opportunity to expand local and regional transportation improvements to benefit OHSU and its stakeholders. Meanwhile, OHSU can take action into its own hands now by investing in hospital-sponsored patient transportation, as federal health programs have very limited resources to allocate to individuals seeking medical services. Federal policies place restrictions that are outright barriers to care. Participating in advocacy efforts to direct resources to Oregon and change policies at the federal level in addition to statewide and regional policymaking and planning, as mentioned earlier, are critical for advancing OHSU's needs with other collaborators on board.

Strengths: Capacity, Community Impact

SKY



Increasing opportunities to partner and develop strategies with other departments and groups would help people like Sky better advocate for their transportation needs. See page 80 for more details.

Multiple Responsibilities Mean Multiple Trips

As a public health and urban planning student, Sky regularly travels between the OHSU and PSU campuses, has late night classes, and relies on several apps for real-time transit arrivals to ensure the most efficient way to get to their destinations. As a frequent transit user, they are a vocal advocate for trainings for transit service providers, OHSU personnel, and community members to intervene and support transit passengers and pedestrians who are victims of hate speech, harassment, and violence because of their gender, race, disability, and perceived immigration status. Sky feels that transit systems have not been designed with their needs in mind. and wants to develop policies and practices to create the affirming environments for transgender and non-binary people like them and others who experience harassment and exclusion.

How to Strengthen Efforts throughout OHSU

4.1 Collect Better Data Together

Scenario: Transportation & Parking's annual transportation census survey has gone through several facelifts to improve data collection. Plan581 modeled a survey format which includes new demographic questions along with others that cover essential transportation questions and areas describe other life experiences that impact travel. The TDM stated the need for gathering more information about student and patient travel since most of the existing data is for employees. OHSU is committed to generating useful data but also concerned about the issue of survey fatigue and low completion rates.

Response: The next round of transportation census survey revisions and implementation can focus on adding useful demographic data with support from other departments, such as the Center for Diversity & Inclusion, to optimize survey quality and to gain insights into employee and student travel. This data can then generate information which can support equity initiatives and program development. Collaborating with others to develop better surveys and to include questions in others' surveys could reduce duplication and improve coordination of survey deployment. Sharing data within what is ethical and necessary would be beneficial to many campus departments. Other departments can inform Transportation & Parking about patient needs and help recruit and facilitate participants for focus groups, events, and activities outside of surveys. OHSU as a whole should standardize the inclusion of demographic and identity-based questions in all surveys and efforts to gather feedback to deepen understanding of disparities that exist for Priority Communities. By articulating organization-wide equity goals, OHSU will be prepared to address disparities, perform intentional outreach, and foster inclusive collaboration. Having well-defined strategies to reach these goals will allow OHSU to integrate racial and social equity into decisions, policies, budgets, programs, and practices.

Strengths: Capacity, Inclusivity

Balancing privacy and completion rate concerns with survey questions requesting demographic data can be a delicate balance but results in more valuable information for addressing equity concerns.

4.2 Apply OHSU Diversity Action Plan and Evaluate

Scenario: The OHSU *Diversity and Strategic Plan* (DSP) was completed in 2008 by the Diversity Advisory Council which formed the previous year. This plan created a structure for OHSU to achieve its diversity objectives over five years. There are six objectives that define what success looks like at OHSU. The *Diversity Action Plan* (DAP) developed in 2013 elaborates on several strategies to achieve five goals: Increase Recruitment; Strengthen Retention; Improve the Climate of Inclusion; Build Community Partnerships; and Benchmark for Excellence. Currently, there is no set strategy for diversity for Transportation & Parking and the department has several opportunities to focus

OHSU's Diversity and Strategic Plan and Diversity Action Plan are excellent resources for OHSU departments seeking to meet the institution's diversity and equity goals.

on the six objectives in the DSP and the five goals in the DAP to improve their surveys, marketing materials, staff capacity, and programs.

Response: Transportation & Parking can use the DSP and DAP to make strides in addressing transportation inequities and to better align themselves with the institution's overall vision for diversity and equity. The DAP suggests each mission/unit or department will use the plan as a guide to develop its own diversity action plan, adapting the strategies to meet its specific needs with the help of the chief diversity officer and their team.

Select Goals and Strategies in DAP:

- **Goal 1: Increase Recruitment**
 - *Strategy 4:* Increase diversity in the workforce across OHSU missions. Actions: Analyze workforce trends and projections, and define workforce priority population(s) and align with mission, vision, and goals for diversity and inclusion.
- **Goal 2: Strengthen Retention**
 - *Strategy 3:* Establish and implement best practices for retention. Actions: Incorporate and communicate diversity resources during on-boarding and orientations. Support and encourage employee resource groups (ERGs) and student interest groups. Support life balance initiatives (i.e., health and wellness, internal and external services, child/elder care, etc.).
- **Goal 3: Improve the Climate of Inclusion**
 - *Strategy 1:* Model and demonstrate inclusion. Actions: Engage and participate in community diversity events, outreach, and partnerships.
 - *Strategy 3:* Adopt best practices and standards that meet the needs of diverse individuals, particularly historically underrepresented groups. Actions: Adopt best practices and standards that meet the needs of individuals with disabilities.
- **Goal 4: Build Community Partnerships**
 - *Strategy 1:* Develop OHSU-wide diversity and engagement plan and annual diversity community report. Actions: Increase OHSU partnerships and collaborations with diverse communities and organizations across the state of Oregon.
 - *Strategy 2:* Engage and partner with community-based organizations to end healthcare disparities. Actions: Enhance health equity among OHSU's diverse patient populations.

- **Goal 5: Benchmark for Excellence**

- Develop and implement diversity and inclusion benchmarks to ensure responsibility and accountability. Benchmarking to utilize: Benchmarking against ourselves; Benchmarking against peer and notable institutions; Benchmarking against accepted standards.

Strengths: Justice, Capacity, Inclusivity

4.3 Facilitate Inclusive Decision-making

Scenario: Transportation & Parking has several key partnerships at all levels throughout OHSU and has recently formed the Stakeholder Advisory Committee (SAC) during the TDM plan development process. They recruited employees throughout OHSU to inform goal-setting and transportation recommendations. There is potential for this group to be more influential in decision-making and to get non-traditional or atypical partners involved in transportation. One concern for this department is the slow process to get buy-in for projects and to get them completed. The Physical Access Committee (PAC) has listed several projects in their annual report regarding ADA accessibility, wayfinding, and transportation drop-off zones. These overlap with some of the department’s TDM recommendations and goals. They can all work together to develop a transportation strategy which currently does not exist for TDM implementation with an opportunity to enhance it with the Plan581 Transportation Equity Lens.

Response: Involving partners outside of Transportation & Parking could define a stronger strategy for TDM and transportation equity



Collecting demographic data in the annual transportation census could provide insight into the needs of many riders, especially communities of color that travel far to get to Marquam Hill.

Applying the Transportation Equity Lens to decision-making and investment is integral to creating meaningful impacts for those communities which are often left out.

initiatives. They can get things done more effectively together. PAC is one platform for advancing projects with employee resource groups that are interested in equity and inclusion for Priority Communities. Creating intentional and long-term partnerships with stakeholders throughout OHSU can reduce duplication of activities and increase the people-power to meet their collective goals and projects listed in the TDM and this plan. PAC should evolve into a Transportation Equity Committee as a way to clearly define the objective and identify of the group. This process should include the following basic steps:

- Describe what is planned in a way that is accessible to all communities and stakeholders.
- Analyze the benefits and burdens on all people; define standard measures.
- Analyze the plausible alternatives that are meant to address the identified challenge.
- Center outreach and engagement on Priority Communities: people of color, low-income people, and other stakeholders in each step of the decision-making process.
- Develop an implementation plan to distribute the benefits and burdens in an equitable way.

Strengths: Capacity, Inclusivity

4.4 Budget for Equity and Take Action

Scenario: Collecting better data, increasing department capacity, and developing a transportation strategy to advance equity require resources. Budgeting for this work is important to getting it done. Transportation & Parking has invested in programs over the years and consultants for the TDM that have resulted in their position today as a leader in employee transportation services. The work does not stop here, and ongoing capacity-building and personnel are needed to ensure that this work integrates the leadership and influence of Priority Communities and other stakeholders who have not been involved but are instrumental to developing action steps.

Response: Transportation & Parking with SAC should re-evaluate its budget, develop a strategy, and set aside funds for key activities and TDM projects that align with the Plan581 lens as a reference point. They should also invest in employee, patient and community engagement. Other stakeholder groups and activities working on transportation equity should also receive financial incentives and recognition for their participation. Budget for future student-led projects in collaboration with universities for planning efforts such as NAP and *Elevating People* and provide stipends to fund professional-level work.

Strengths: Justice, Capacity

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Photography

OHSU: Pages 6, 10 (bottom), 12, 21, 22, 32, 33, 64, 65, and 66

Kyle Pinniger and Jackie Pinniger: 85

Maria Sipin: Pages 16, 19, 20, 25, 30, 35, 42, 45, 47, 52, 53, 54, 70, 75, and 79

Shutterstock: 40 and 50

TriMet: Pages 10 (top), 26, 39, 44, 51, 56, 72, 76, 78, and 82



ENDNOTES

Trends

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⁴ OHSU Transportation Demand Management Plan (2018)

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⁹ Night Access Plan

¹⁰ OHSU Transportation Demand Management Plan (2017)

¹¹ OHSU Transportation Demand Management Plan (2017)

¹² OHSU Transportation Demand Management Plan (2017)

¹³ OHSU Diversity Action Plan (2013)

¹⁴ Interview with OHSU personnel, April 2018

¹⁵ Interview with OHSU personnel, April 2018

¹⁶ Interview with OHSU personnel, April 2018

¹⁷ OHSU Vision 2020: <http://www.ohsu.edu/xd/about/vision/vision2020.cfm>

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APPENDIX A

Methodology

Plan581 synthesized information from several sources between January and May 2018 to create the foundation for this report and framework. As discussed below, expert consultations, stakeholder interviews, peer-reviewed literature and other relevant sources, plans and policies at OHSU and around the region, news media, GIS analysis of census data, survey responses, and feedback from public engagement events informed the contents of this report.

Expert Consultations. Plan581 consulted with Portland State University faculty in the fields of public health, urban studies, and planning having expertise in transportation, social justice planning, community-based participatory research, and age-friendly cities. These consultations informed the scope of work for this project, literature review, methodology, framework criteria, narratives, and planning roles.

Opportunities to improve information gathering via expert consultations include earlier and more frequent meetings, more defined conversations, and outreach to other faculty members.

Stakeholder Interviews. Plan581 compiled a list of stakeholders to serve as key informants who could provide context for developing a prioritization framework. These stakeholders include:

- OHSU personnel to describe employee, student, and visitor transportation needs, and to provide context about diversity and inclusion efforts taking place with regard to vision and policies.
- Regional transportation practitioners, researchers, and service providers to describe transportation issues, trends, and opportunities.
- Social services providers and community leaders to provide insights about travel experiences for aging adults, people with disabilities and special mobility needs, limited English proficiency users, youth, women, and children.

Opportunities to improve stakeholder interviews include identifying individuals from diverse backgrounds, agencies, and identities, and creating a more formalized structure for interview documentation and transcription. Additional interviews with OHSU employees, students, and patients experiencing transportation issues would also strengthen the findings. The compressed project timeline limited our ability to contact interviewees, schedule, conduct interviews, and reach more stakeholders.

Engagement Events. Plan581 attended two events in an attempt to speak with two communities in particular: students and patients. The first event was the OHSU-PSU Public Health Conference held on April 4th at Portland State University. Three Plan581 members presented a poster on the project's methods and engagement strategies to faculty and students. They also distributed surveys and initiated travel-related conversations to gather personal travel stories from students traveling between PSU and Marquam Hill.

The second event was the VA Sustainability Fair, held on Thursday, April 19th. Two Plan581 members tabled at the event, passed engagement cards with contact information and talked with patients and employees about their travel to the hill. An interactive display, encouraging people to mark their commute from great to not-so great, acted as a catalyst for robust conversation. In total, Plan581 took notes from 80 individual conversations relating to travel to the hill.

Storytelling. Storytelling offers a way to contextualize and humanize quantitative data, and it is recognized as an effective way to communicate the relationships between collection of data points. For the narratives featured in this report, Plan581 organized data received from expert consultations, community engagement events, and stakeholder interviews into categories based on traveler demographics, user experiences, origin locations, and type of visit to OHSU. This collection of sorted data was then synthesized into composite narratives, each of which share a cohesive travel experience. Plan581 included individuals who represent several identities that mirror patient demographics and those also described in the expert consultations and stakeholder interviews. Though the narratives themselves are fictional and the individuals in the photographs are models, the information points within each story are derived from actual travel experiences to and from OHSU and in the larger Portland Metro area.

Peer-reviewed Literature and Other Relevant Sources. Plan581 compiled a list of topics to explore and analyze from peer-reviewed literature and other relevant sources and searched for them using keywords such as:

- Active transportation
- ADA access
- ADA compliance
- Aging
- Bicycling
- City of Portland
- Climate action
- Communities of color
- Commute times
- Commuter programs
- Displacement
- Employee commute
- Employee turnover
- Health outcomes
- Hospital transportation
- Just growth
- Los Angeles
- Low-income
- Medical transportation
- Mobility justice
- OHSU
- Older adults
- PAALF People's Plan
- Pedestrians
- People with disabilities
- PERE
- Protected classes
- Racial equity
- Scenario planning
- Social determinants of health
- Spatial analysis
- Storytelling
- Title VI
- Transit access
- Transit burden
- Transit-dependent communities
- Transportation equity
- Transportation demand management
- Transportation incentives
- Transportation inequities
- Transportation modes
- Transportation policies
- Transportation reimbursement
- Travel behavior
- Untokening
- Walking

Opportunities to improve literature review includes searching for the most current materials, refining and specifying keywords, expanding search materials to include resources outside of peer-reviewed publications, and summarizing literature in a standard format.

Institutional Policy Analysis. Plan581 analyzed OHSU policy documents ranging from diversity and inclusion plans, strategic plans, campus plans, health equity policies, and physical access plans. OHSU media news, press releases, blogs, and historical accounts from personnel provided the basis for institutional milestones and successes, workforce demographics and goals, ongoing projects, and gaps related to transportation, campus development, funding sources, equity initiatives, employment conditions, patient service delivery.

GIS Analysis of Census Data. To identify where vulnerable populations live within the Portland Metropolitan region, Plan581 conducted a spatial analysis using GIS and block group data from the U.S. Census Bureau's 2012-2016 ACS 5-year Median Family Income (MFI) (B19013) and Race (B02001) data sets. Using the region's 2016 MFI of \$63,079 five break points were used to show the average of each block group: 0-20%, 20-40%, 40-60%, 60-80%, and 80-100% MFI. In this report, block groups over 100% MFI were grouped together and are not considered vulnerable concerning income.

To identify census blocks with higher concentrations of minority populations, the percentage of white and non-white population was found for each by subtracting the white alone population from the total population and then dividing by the total block population. These variables were then spatially represented on a map that included existing bicycle routes and infrastructure and transit routes by frequent and less frequent service.

This analysis was conducted to provide a visual representation of social and economic disparity. The presence and density of both active transportation networks and transit networks in areas with higher concentrations of vulnerable communities has been the subject of much analysis by agencies in the region. Our mapping efforts work to reinforce the regional implications that impact travel to Marquam Hill.

OHSU could better understand travel behavior and available options of different employee and student populations by collecting demographic information on their Annual Transportation Census that mirrors that collected by the U.S. Census Bureau. Spatial analysis with these data would allow the institution to better understand the travel burden experienced by those traveling and to cater programming to those with the fewest options.

Surveys. Plan581 analyzed information from the OHSU 2016 Census. This survey contains insights to employees' primary travel modes, reasons for driving alone, frequency and reasons for choosing walking, biking, or transit, and the issues and incentives that impact their travel choices. Plan581 also developed an employee and student survey to complement and guide OHSU's Annual Transportation Census with an addition of demographic questions and detailed trip-chaining questions to reveal multimodal trips. Trip-chaining is the use of multiple modes of travel, such as biking to MAX, or driving to a Park and Ride.

The Travel to Marquam Hill survey collected 135 responses between 3/30/2018 and 4/20/2018. This study had several limitations (e.g. respondents were mostly white, earning 80-100% MFI). Most respondents were employees. The short window of collecting responses did not allow for more targeted outreach to engage contractors, janitorial staff, food service employees, and other employees that do not use OHSU email at a high frequency. Opportunities to improve survey data include the addition of demographic identifiers, and targeted surveying of food-service and janitorial employees whose experiences may not be captured in the Annual Census. This may best be accomplished by making concurrent efforts, however intentionally separate from the Census to include students, contracted employees, and perhaps patients and visitors.



APPENDIX B

Process Exercise

This section demonstrates how the equity framework can be used to evaluate and prioritize transportation investments and programs. The frameworks used here are incomplete—they use only a few evaluative criteria and do not weight or quantify framework components. Accordingly, as it currently stands, the tool cannot be used to provide relative comparisons between projects. Before the full adoption of this framework as a tool to guide comparative decision-making, these details must be addressed.

The process of quantifying and weighing framework components should be conducted with the engagement of a broader set of decision-makers, transportation planning staff, and transportation advisory groups at OHSU. Plan581 believes a co-creative process conducted with internal OHSU stakeholders would build institutional buy-in and create a final framework tightly aligned with institutional priorities.

In this exercise, we provide a high-level evaluation of five example investments and programs either recommended in the 2017 TDM or by Plan581. These evaluations are conducted as if staff were using the framework to evaluate program proposals in preparation for scoring and presentation to decision-makers. The inclusion of examples here are not meant to act as an endorsement, and additional work needs to be done to determine their impact and viability. The five example projects considered are:

1. Patient concierge services
1. Income-based travel subsidy
2. Electric bicycle program
3. Park + ride with shuttle
4. Downtown tram

PATIENT CONCIERGE SERVICE

While OHSU provides mobile valet services at some locations on Marquam Hill, assistance is not provided to help get patients from their car or bus to their appointment. In order to fill this need, OHSU is developing a program to staff an on-call concierge service that patients and transportation service providers can use to assist patients in navigating the hill. This program especially hopes to help patients with cognitive and physical disabilities, as well as the transportation providers that work with these communities, to improve their experience on the hill.

Table 3. Criteria and Outcomes for Patient Concierge Service

	Evaluative Criteria	Outcomes
Justice	How does this project address systemic barriers for Priority Communities?	Assists patients with disabilities navigate the hill and increases capacity of transportation services organizations.
Inclusivity	How are Priority Communities involved in development, decision making, and implementation?	Three people who happen to have disabilities was included on transportation advisory committee who made formal recommendation to OHSU board of directors.
Access	How does this reduce travel time or costs of use for specific users?	Improves ability of patients with disabilities to get to their appointments on time and with less stress and disruption.
Mobility	How will this investment provide travelers with more options?	May make public transportation a more realistic option for some patients with disabilities, knowing they can be assisted once they reach the hill. May reduce congestion on the hill by limiting the need for vehicle idling to provide rider escort.
Community Impact	What are the impacts on jobs, education, housing security, health, and environment?	Minimal community impact beyond potentially improved health outcomes for patients with disabilities.
Capacity	What are the greatest barriers to overcome in order to accomplish project goals?	Financial costs of new staff and training; potential resistance to new hiring.

INCOME-BASED TRAVEL SUBSIDY

OHSU currently heavily subsidizes public transportation for all employees. Because this program neither prioritizes low-income earners nor accounts for accessory travel needs, such as dependant care or housing costs, OHSU wants to alter the program to center equity. The new program, developed in conjunction with lower-income earners at OHSU, provides employees under a certain income level a direct payment for travel in addition to discounted TriMet and C-Tran passes. This monthly stipend for employees may be used directly for transportation (e.g. to cover a TriMet pass, or bicycle maintenance). Employees may also use it for transportation-related reasons (e.g. to put their child in a daycare closer to home so they can take the bus to work or pay a higher rent for a home closer to transit services).

Table 4. Criteria and Outcomes for Income-Based Travel Subsidies

	Evaluative Criteria	Outcomes
Justice	How does this project address systemic barriers for Priority Communities?	Actively addresses regional economic inequality and transportation burdens for Priority Communities.
Inclusivity	How are Priority Communities involved in development, decision making, and implementation?	Low-income employees were involved in the development of the strategy, and will continue to advise implementation.
Access	How does this reduce travel time or costs of use for specific users?	Reduces cost burden to low-income and geographically isolated communities.
Mobility	How will this investment provide travelers with more options?	By reducing cost barriers or improving access to housing and childcare, employees have more choice in travel mode.
Community Impact	What are the impacts on jobs, education, housing security, health, and environment?	Improved access to employment at OHSU. Incentivization of transit supports climate action goals. Reduced cost burden improves housing security.
Capacity	What are the greatest barriers to overcome in order to accomplish project goals?	Monetary costs of program, either from new sources or reduced transit subsidy for moderate to high-income employees.

ELECTRIC BICYCLES (E-BIKE) PROGRAM

E-bikes are a popular first/last-mile solution that bridges the gaps between transit hubs and destinations. E-bikes can make biking on difficult terrain or with heavy loads easier. For OHSU, a sponsored e-bike program can provide employees, students, patients, and visitors the option to cycle from various hubs or from their homes with ease. The elevation of Marquam Hill, vehicle speeds, and weather make biking to OHSU challenging, and an e-bike can reduce these barriers. E-bikes can be loaned for long periods to individuals or operate similar to the Biketown bike share system, depending on OHSU's needs or vendor preference. An e-bike program may only serve a limited amount of people, but it has the potential to introduce biking to people who would not have otherwise chosen the bike as a commute option.

Table 5. Criteria and Outcomes for E-Bike Program

	Evaluative Criteria	Outcomes
Justice	How does this project address systemic barriers for Priority Communities?	Reduces barriers to obtain a high-quality bicycle but does not address other physical, social, and environmental issues Priority Communities face.
Inclusivity	How are Priority Communities involved in development, decision making, and implementation?	Priority Communities can inform program conditions and the types of e-bikes to purchase in order to accommodate people with disabilities.
Access	How does this reduce travel time or costs of use for specific users?	E-bikes can reduce bike travel times and transit transfers.
Mobility	How will this investment provide travelers with more options?	E-bikes can be an alternative to transit or driving and help mitigate for circumstances that make traditional bicycle use challenging.
Community Impact	What are the impacts on jobs, education, housing security, health, and environment?	Some environmental and individual health benefits with increased cycling, but otherwise low community impact.
Capacity	What are the greatest barriers to overcome in order to accomplish project goals?	Justify costs of launching e-bike program compared to investing in other programs. Ensure benefits to Priority Communities. Select vendor that meets OHSU's and communities' needs.

PARK-AND-RIDE WITH SHUTTLE

Direct shuttle lines to OHSU paired with park-and-ride facilities can reduce SOV travel to OHSU's campuses and provide a faster travel option compared with transit. Shuttle service provided from transit locations with park-and-ride facilities increases in higher occupancy travel and transit competitiveness with SOV commuting. By providing additional park-and-ride facilities at transit stations having OHSU shuttles as well as frequent service lines, travelers that do not have frequent service or transit service near their residence experience a reduction in travel time via the connection to shuttle service or transit.

Table 6. Criteria and Outcomes for Park-and-Ride with Shuttle

	Evaluative Criteria	Outcomes
Justice	How does this project address systemic barriers for Priority Communities?	Park-and-ride facilities near Tualatin Valley Highway west of the Marquam Hill campus serve communities that are racially diverse and most often drive alone.
Inclusivity	How are Priority Communities involved in development, decision making, and implementation?	Transportation equity committee identified geographic regions where a park-and-ride served by OHSU shuttles would reduce commute times for Priority Communities.
Access	How does this reduce travel time or costs of use for specific users?	Transit travel time is reduced in Portland's outlying and racially diverse neighborhoods.
Mobility	How will this investment provide travelers with more options?	Employees that drive alone can now use higher-occupancy shuttle service.
Community Impact	What are the impacts on jobs, education, housing security, health, and environment?	Increased feasibility for employment of low- and mid-income workers living on urban fringe. Potential increase in peak hour travel in area near park-and-ride.
Capacity	What are the greatest barriers to overcome in order to accomplish project goals?	Prioritization of new park-and-ride location due to desirability of this unique shuttle service in more suburban communities.

DOWNTOWN TRAM

An aerial tram serving a second landing point will improve travel time to Marquam Hill for pedestrians, cyclists, transit users, differently-abled populations, and local residents coming to OHSU from downtown Portland. Congestion on Marquam Hill during peak hour as well as the challenging incline make multimodal travel challenging for many. A direct connection to the downtown transit mall would allow faster and more direct service for those traveling from many quadrants of the Portland metro. Bypassing the bottlenecks that TriMet buses are subject to en route to Marquam Hill creates a more robust transit connection.

Table 7. Criteria and Outcomes for Downtown Tram

	Evaluative Criteria	Outcomes
Justice	How does this project address systemic barriers for Priority Communities?	Differently-abled persons, financially and geographically transit dependent communities are prioritized to have a more direct route to campus, reducing peak hour traffic delays.
Inclusivity	How are Priority Communities involved in development, decision making, and implementation?	Outreach to employees, patients, and advocates synthesizes community needs and is considered along with transportation census trends in efforts to better serve Priority Communities.
Access	How does this reduce travel time or costs of use for specific users?	Non-SOV patients, employees, visitors, and contractors experience faster transit travel to and from Marquam Hill, especially wheelchair-users who have limited space allocated with current bus service and those living in proximity to new tram landing.
Mobility	How will this investment provide travelers with more options?	Travelers can shift away from SOVs and bike, walk, or take transit to the tram.
Community Impact	What are the impacts on jobs, education, housing security, health, and environment?	Property values near new landing site will increase and impact affordability. Residents will have increased accessibility to jobs, along with shortened commutes for students. The added transit option will reduce SOV travel and associated environmental impacts.
Capacity	What are the greatest barriers to overcome in order to accomplish project goals?	Political buy-in along with negotiated alignment. Designating an appropriate landing point. Acknowledging and preventing potential negative impacts to the local residents affected by landing. Capital costs.

