

Westside Multimodal Improvements Study

# **DRAFT Issues, Needs, and Problem Statement**

May 2022



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# 1 Purpose of the Project

This project will identify multimodal transportation needs and opportunities for improvement in the Westside Corridor.

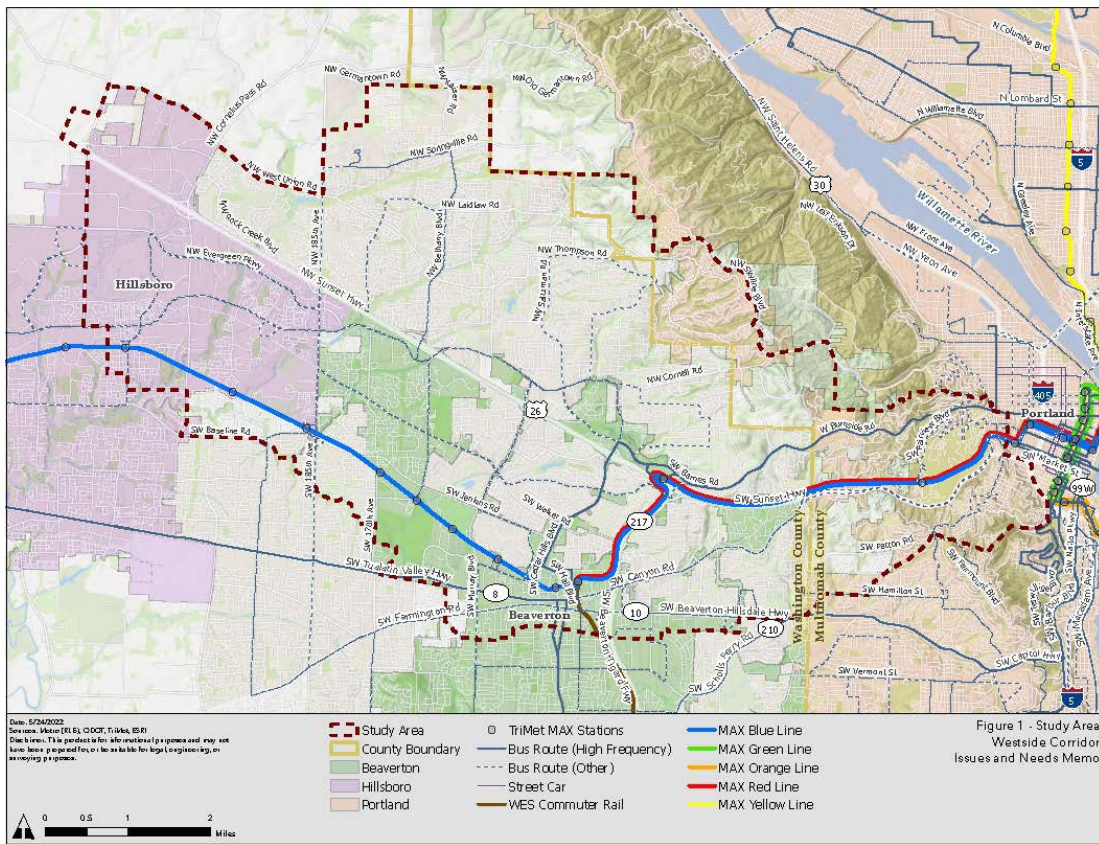
ODOT and Metro are co-managing the Westside Multimodal Improvements Study and working with local governments, local agency partners, and community members to identify transportation issues, needs, challenges, and opportunities in the Westside Corridor.

The Project will consider potential multimodal projects, strategies, and technologies to develop a preferred set of investments and programs to address them. Investment options will be evaluated for their potential to address existing and future transportation deficiencies that affect the movement of freight and commuters who use the US 26 corridor for access between Hillsboro's Silicon Forest, key Westside employers and employment districts such as the West Five in Beaverton, Northern Washington County's agricultural areas, the Portland Central City, I-5 and I-84, the Port of Portland marine terminals, rail facilities, and the Portland International Airport.

See the map below showing the initial study boundary. Investment locations may extend past this boundary.

This document establishes the issues, needs, problem statement, and goals that will guide alternatives analysis, evaluation, and development of solutions for the Westside Multimodal Improvements Study.

**Figure 1 Study Area**



This map shows the proposed study area for this project.

## 2 Existing Conditions

The Westside Corridor is expected to grow significantly, adding households and jobs to the region. Mobility in the Westside Corridor is important to the region's economy, but the corridor experiences significant traffic congestion for vehicles and lacks system completeness for bike facilities, sidewalks and trails. The corridor is served by high-capacity light rail transit and a bus network with frequent service routes.

### Study Area: Westside Corridor

The preliminary study corridor is centered on the US 26 Sunset Highway from Hillsboro through the Vista Ridge Tunnel, where it intersects with the I-405 loop to access I-5 and I-84. The study area extends from the I-405 loop in the east to NW Helvetia Rd/NE Brookwood Parkway in the west. Strategies and solutions developed for this study are likely to extend beyond the initial study area, as needed. US 26 is a key thoroughfare in the region's transportation system, along with I-5, OR-217, I-84, and I-405.

### Current Conditions and Trends

#### A Growing Corridor

The *Washington County Transportation Futures Study* (2017) was a planning effort to anticipate transportation needs and solutions in Washington County for the next 50 years. Although that project's study area does not line up with the Westside Corridor, its long-term expectations for growth in housing, employment and travel needs are relevant. Highlights from the Transportation Futures Study findings and trends include:

- A 40-55% increase in population over the next 40-50 years.
- Regional centers (Downtown Beaverton, Tanasbourne, and others) will continue to develop into a mix of residential, employment and commercial uses.
- Expected decline in vehicle miles traveled per person, based on recent declines and regional policies supportive of urban, mixed-use, higher density centers and regional investment in high-capacity transit and active transportation.
- A 100-145% increase in employment.

- Employment growth likely focused in Hillsboro, Hwy 217 corridor and southern Washington County, based on Metro forecasts.
- More daily trips will be coming into the County than out of the County. The share of daily trips within the County will also increase.
- More people and more jobs results in more trips. Traffic 40 years from now will be worse, even with changes in how we travel.
- Transit, walking, and bicycle trips will increase at a faster rate than auto trips. However, a 50% increase in people traveling by vehicle will result in about 3 million vehicle trips per day.
- Traffic delays will more than double compared to today, or people will choose to travel at different times of day, resulting in higher levels of congestion throughout the day.
- Congestion will increase throughout the day, especially on freeways and at regional access points. None of the transportation options from the Transportation Futures Study will eliminate or even reduce vehicle delays to today's levels.
- Congestion will increase on major roads, which will create more cut-through traffic on local roads.
- Delays of freight traffic will increase over four-fold due to more trucks on the road and their dependence on the most congested freeways and roads.
- Improvements in bicycle, pedestrian, transit, highway and roads, smart technology and demand management are needed to meet increased travel demand.

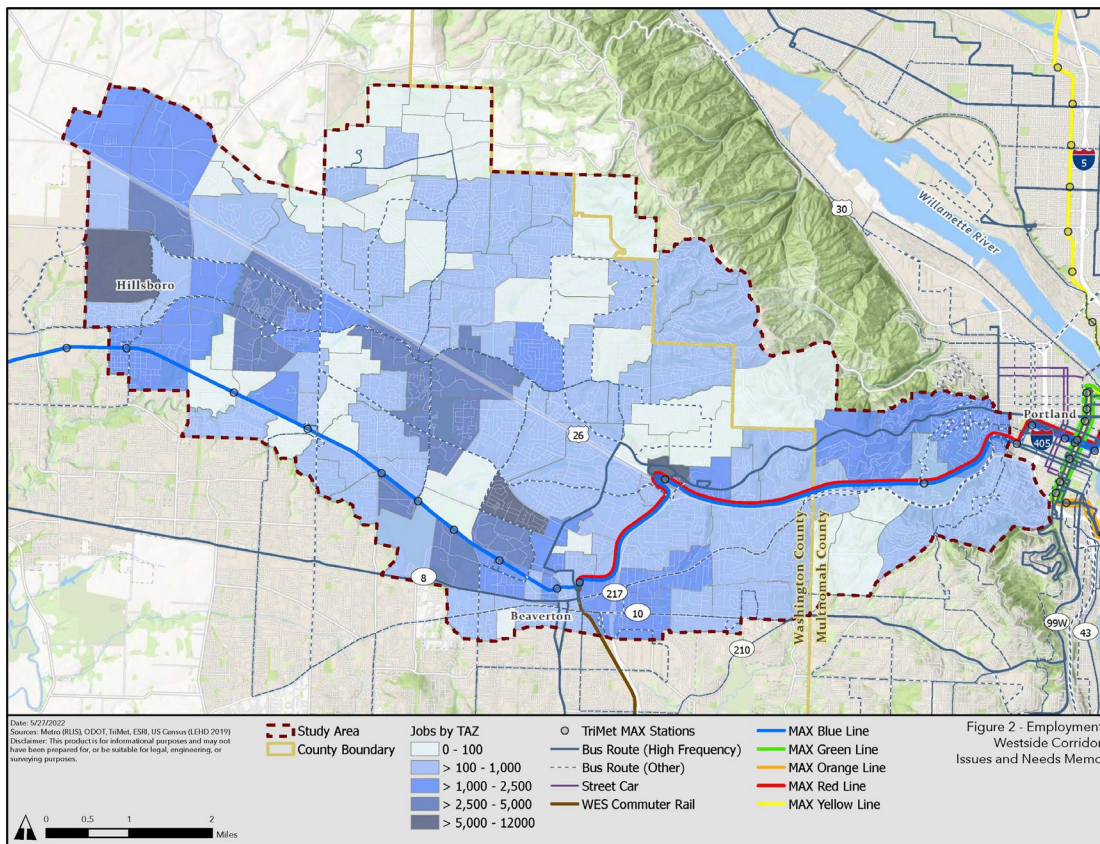
## Employment

The Portland metro area is often called the "Silicon Forest" because of numerous technology companies; many of these top tech employers are located in the Westside Corridor. The study area includes many of the region's top private employers across all industries, including Intel, Nike, Tektronix, Reser's Fine Foods, Qorvo, and Salesforce, among others. Top public sector employers include local school districts, city and county governments, hospitals and health care providers.

The Westside Corridor is a regional employment destination. There are approximately 85,000 residents and 117,000 workers employed in the study area. Of these people, 27,000 live and work in the area; 97,000 commute to the area for work but live elsewhere; and 64,000 live here and commute elsewhere for work.



**Figure 2 Employment**



This map shows the number of jobs per traffic analysis zone (TAZ) across the region. Highest concentrations of employment are shown in dark blue, and lowest concentrations are shown in light blue.

Source: U.S. Census Bureau: LEHD OnTheMap, 2019.

## Land Use

US 26 and Blue Line and Red Line MAX Light Rail are the transportation backbone of the Westside Corridor, which connects Portland’s Central City with the major regional centers in Beaverton and Hillsboro. City and county comprehensive plans and regional plans guide long-term changes to land use patterns, the mix of uses, and density.

Coordinated land use and transportation planning is a key strategy to improve livability in several ways – it can decrease time spent traveling when businesses and services are closer to residential areas, increase transportation options, and make it easier to drive less or not own a private vehicle. Planned and expected growth in the Westside Corridor will mean increased density in regional centers, town centers, and transit station areas; increasingly mixed-use places; and reduced travel distance between home, school, work and other destinations.

Land use and development patterns have a strong influence over how much transit ridership can be generated. And major transit investments are largely dependent on having enough ridership to support the investment. Within the Westside Corridor, areas of high employment and housing do not always have the urban environment to support high ridership. Conditions that support high transit ridership include medium to high density, a mix of uses, limited parking, and connections to low-stress bicycle and pedestrian infrastructure.

**Figure 3 Land Use**

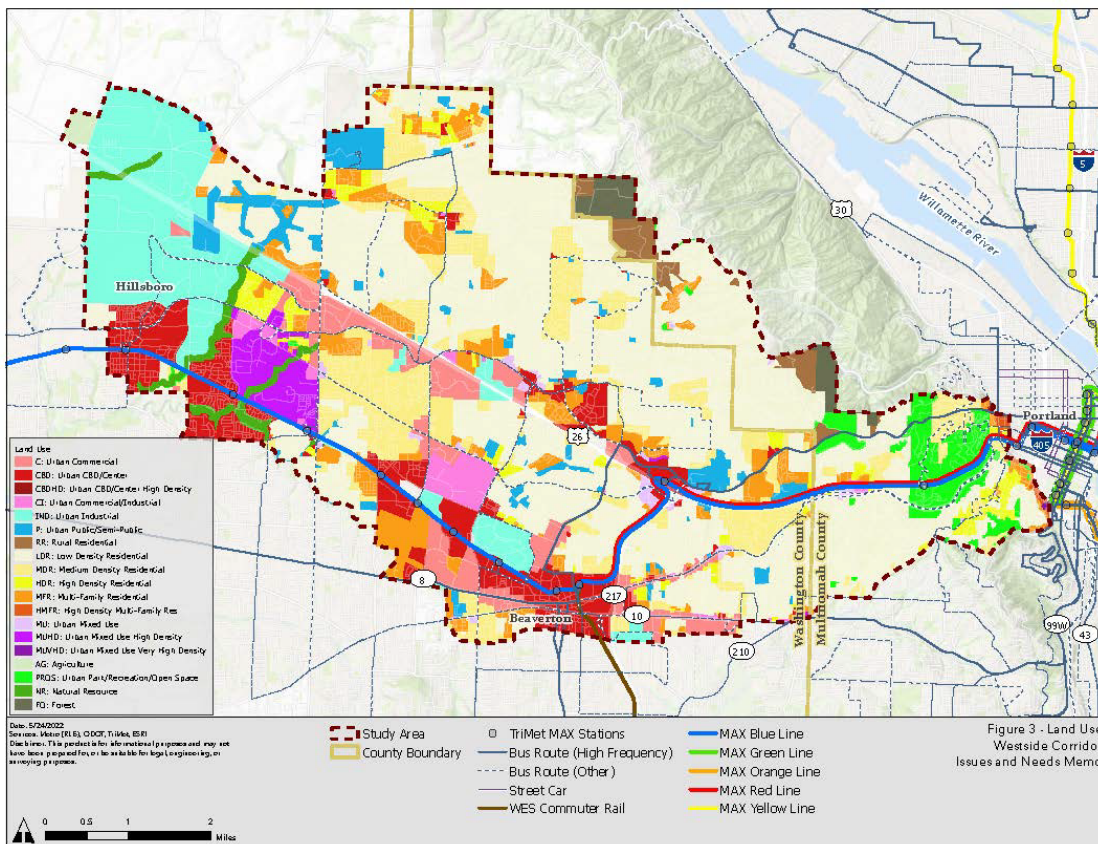


Figure 3 - Land Use Westside Corridor Issues and Needs Memo

This map shows the planned future land uses across the study area.

Source: Metro RLIS.

## Active Transportation

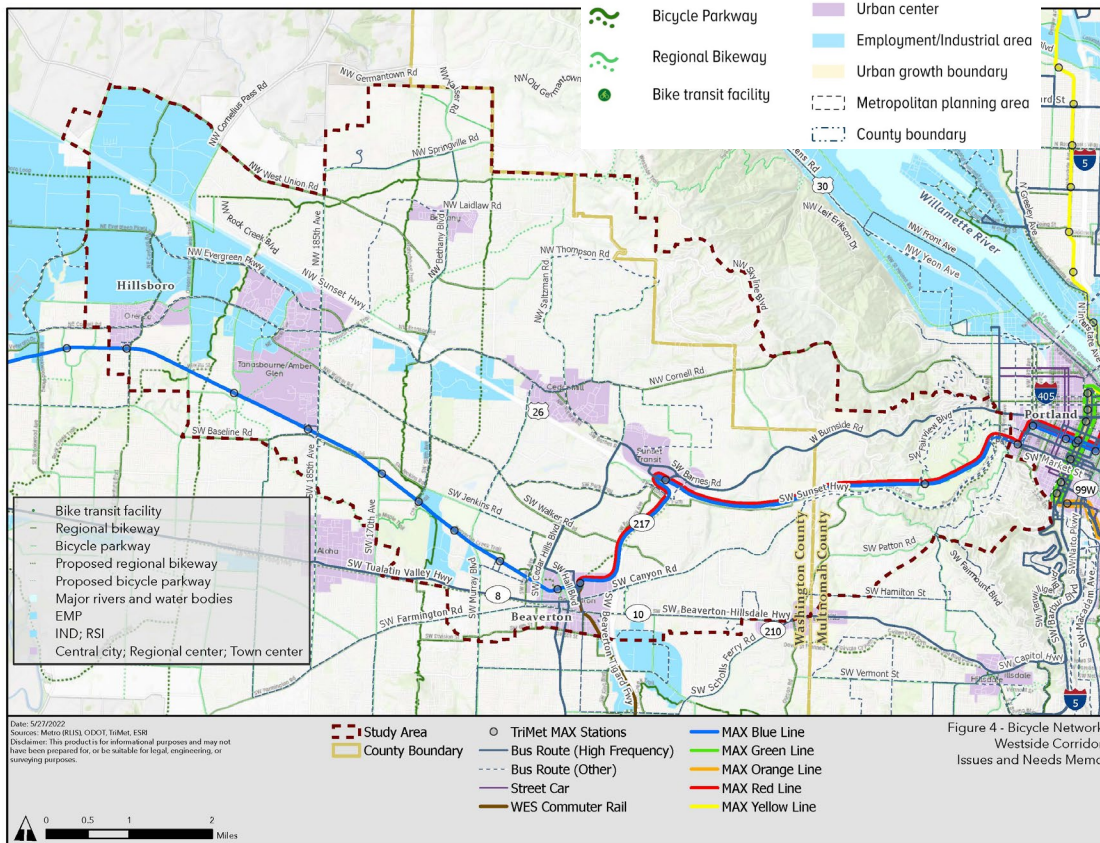
Like the street network, the bicycle and pedestrian networks in the study area are more disconnected and farther apart than in the central city and Portland's east side. This is due to the more suburban land use patterns, as well as topographic constraints.

There are gaps in the active transportation networks across much of the study area, even in areas well served by bus and high-capacity transit. Gaps in the active transportation



networks and high-stress conditions (such as sidewalks and bike routes along roads with high volume and high speed traffic) can make it more difficult for people to get where they are going. More active transportation investments, such as low-stress sidewalks, bike facilities, and protected crossings, are needed to improve connectivity that allows people to safely walk, roll, bike, and access transit.

**Figure 4 Bicycle Network**



This map shows bicycle parkways (dark green) and regional bikeways (light green) across the Westside Corridor, alongside urban centers (purple) and employment centers (blue). Dotted lines indicate planned bicycle facilities. The black line is an approximation of the proposed study area.

Source: Oregon Metro.

## Freight

US 26 is the most important east-west freight route on the west side, serving to connect the centers of employment, manufacturing, and agricultural production in Washington County with regional, national, and international freight distribution centers in Multnomah County. Moreover, US 26 is one of two primary routes that serve freight

travel between the Oregon coast and the Port of Portland, serving many cities along the way.

Traffic congestion on the US 26 corridor leads to wide variability in travel times, which negatively impacts businesses and regional competitiveness. Traffic congestion in the study area can add significant delay to trips between the metro area and the coast, making trips over 30% longer.

The Hillsboro Airport is located just west of the study area. The airport expects to maintain current function as a general aviation airport for the next 20 years. Commercial service is not expected within the next 20 years, and facilities (including terminals and runway capacity) are expected to be maintained at current extent.

The PNWR short line railroad runs parallel to the US 26 corridor, both to the north near Helvetia and to the south, along Tualatin Valley Highway.

## **Transit Service**

The Westside Corridor is served by MAX light rail (Blue and Red lines), WES commuter rail, bus and frequent service bus lines, and LIFT paratransit. The MAX lines connect the regional centers in the corridor. TriMet's bus service generally operates along the network of major arterial streets. In the study area, the frequent service bus routes include W Burnside Road/SW Barnes Road (Line 20) and Beaverton-Hillsdale Highway (Lines 54 and 56). In addition to TriMet service, Ride Connection provides door-to-door transportation for older adults and people with disabilities, dial-a-ride service for rural Multnomah County residents outside the TriMet service area, and operates additional, shuttles for Washington County that serve employment and rural areas. Other services along the corridor include Columbia Rider, POINT, Tillamook County Transportation, and Yamhill County Transit serves Hillsboro and Tigard transit centers.

**Figure 5 Transit Network**

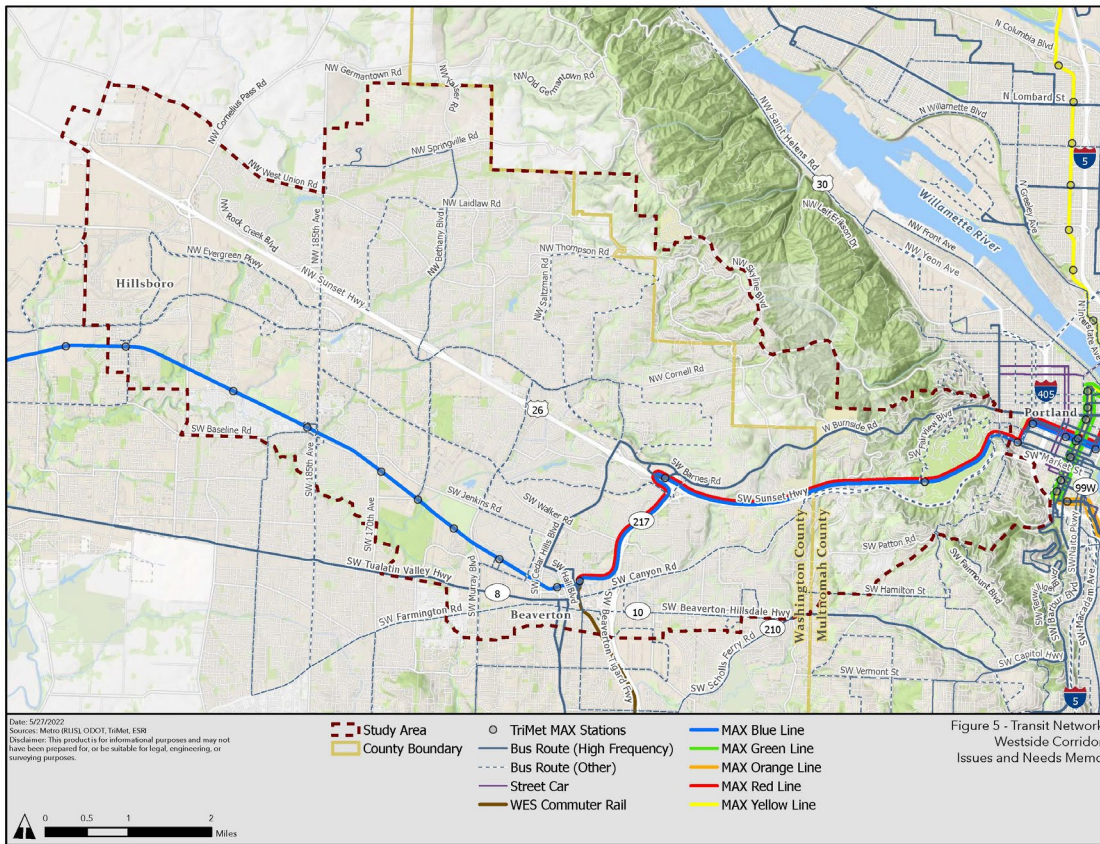


Figure 5 - Transit Network, Westside Corridor Issues and Needs Memo

This map shows the transit network in the Westside Corridor.

Source: TriMet.

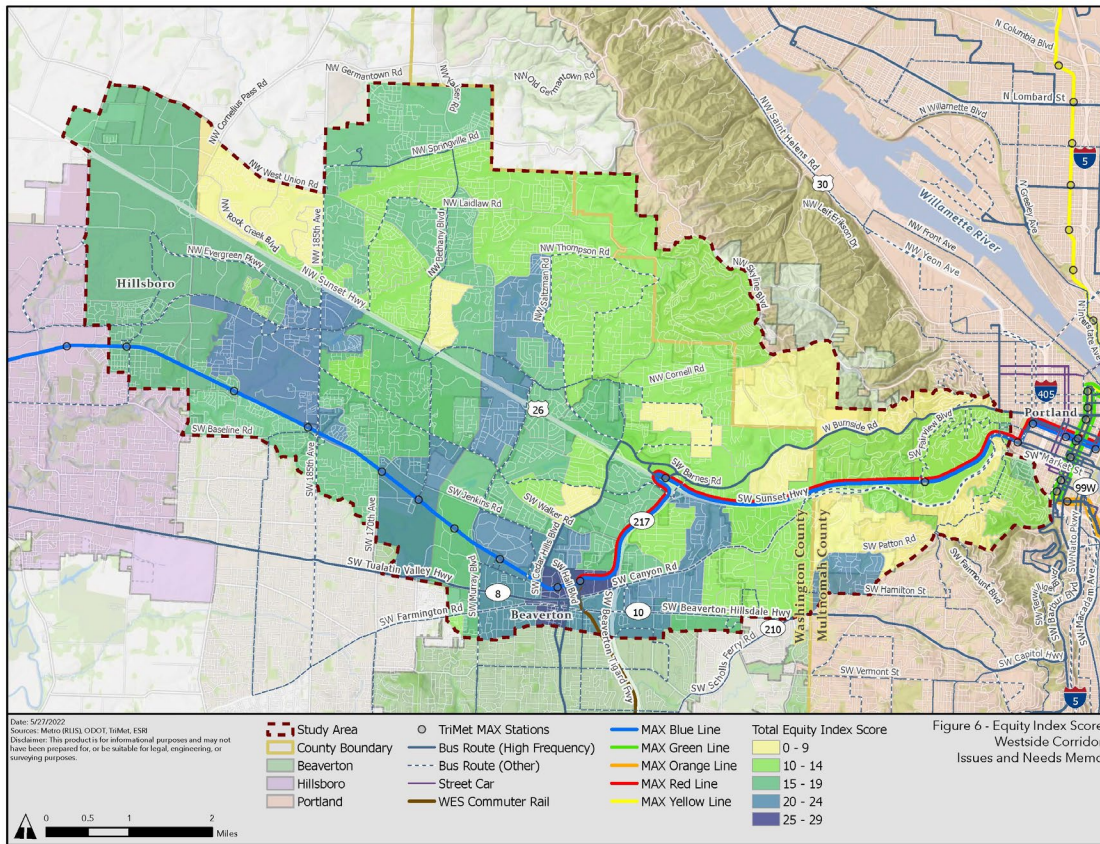
## Transit Equity

TriMet has created an index that will be helpful in identifying priority equity areas and communities as part of this study. TriMet’s transit equity index, shown in the figure below, is scored based on the following equity indicators: people of color, low-income households, low English proficiency persons, people with disabilities, older adults, youth, households with poor vehicle access, access to affordable housing, access to low/medium wage jobs, access to services. Higher scores indicate a higher opportunity area for transit equity.

Many areas along the Westside Corridor score high in opportunity for improved transit service, and opportunity is generally higher south of US 26.



**Figure 6 Transit Equity Index**



This map shows the Transit Equity Index scores for the study area. The Transit Equity Index scoring is based on the following equity indicators: people of color, low-income households, low English proficiency persons, people with disabilities, older adults, youth, households with poor vehicle access, access to affordable housing, access to low/medium wage jobs, access to services. Higher scores indicate a higher opportunity area for equity. The red line is an approximation of the proposed study area.

Source: TriMet, based on 2018 ACS. Credit: Stakeholders: Tom Mills and Carl Green Jr. Analysis by: Erin Hamilton

## Traffic Congestion

Due to traffic congestion and high motor vehicle travel demand along US 26, travel time through the corridor is inconsistent and often delayed. Motor vehicle crashes and vehicle breakdowns can cause safety hazards and further delay for people driving. Frequent congestion can lead to spillover traffic, when drivers choose to take an alternate route, although that often requires a longer trip or out of direction travel, which increases vehicle miles traveled (VMT). And congestion leads to higher greenhouse gas emissions, worsening global climate change.

Land use patterns and past infrastructure investments in the study area prioritized auto vehicle travel, which contribute to continued reliance on personal vehicles to meet

people's daily travel needs. This pattern results in high vehicle miles traveled (VMT) and greenhouse gas emissions.

Travel times along US 26 from Hillsboro to the Vista Ridge Tunnel (that is, the length of the study area) can vary between 14 and 24 minutes on a typical day, depending on the time of day. Highest delays are seen at the evening peak at 5:00 PM. This does not account for traffic congestion due to crashes, which can cause much longer delays.

## **Travel Patterns and the Pandemic**

The COVID-19 pandemic, which began in early 2020, altered travel patterns dramatically. Travel and traffic volumes dropped significantly in 2020 as compared to pre-pandemic 2019 levels, but as of early 2022, statewide traffic volumes were increasing and had mostly returned to levels seen in 2019; trips are expected to continue to grow as the economy recovers.

The rate of people working from home is higher in the Portland metro region than Oregon as a whole, and levels are higher for professionals and business workers. Nationally, the rate of people working from home was highest in the first few months of the pandemic, accounting for 35% of the workforce in May 2020, and has been declining since then, making up just 11% in November 2021.

Transit ridership declined more than other modes during the pandemic and has been slower to recover. Prior to the pandemic, transit ridership had been declining for years, despite a growing population. Factors include a strong economy, relatively low price of gasoline, gentrification of the urban core, and the rise of ride hailing, among others. TriMet's ridership analysis shows that throughout the pandemic, bus lines serving lower-income neighborhoods have lost the fewest number of trips overall, and it is likely true for all transit providers in the region. TriMet is evaluating post-pandemic service needs and will make changes to the regional transit service network in 2023.

## **Future Conditions and Trends**

The current conditions and trends outlined above are expected to continue or increase in the future.

- Continued growth as new jobs and housing are added in the Westside Corridor
- Increase in traffic congestion, diversion and delay
- Increase in freight traffic, including smaller format residential delivery vehicles
- Land use patterns that increase density and mix of uses, increased transit-oriented development
- Incremental improvements in active transportation networks



- Continued pandemic travel impacts (likely short-term or medium-term) – changes in where, when, and how people are traveling
- Accelerating impacts from climate change
- An inequitable transportation system that is overly reliant on car ownership to move around the region in an affordable, reliable, and dignified manner.

## 3 Problem Statement

Current multimodal transportation conditions in the Westside Corridor result in an inequitable and environmentally unsustainable system that is overly dependent on personal motor vehicle travel, which results in vehicle congestion and unreliable travel times for people driving and moving freight. This adversely affects the safety, affordability, and livability of the area and can impede economic competitiveness.

Travel conditions in the corridor are difficult due to traffic congestion and are expected to worsen as the corridor adds new housing and jobs. Despite a brief decrease due to the pandemic, trends are showing increased driving trips and freight travel. At the same time, there has been a decline in transit use. Active transportation networks are dispersed and incomplete.

Traffic safety is trending in the wrong direction, and impacts are higher for Black, Indigenous and people of color (BIPOC). The Metro region has seen increasing numbers of total traffic fatalities, serious injuries, and pedestrian and bicyclist fatalities in the past 5 years.

## 4 Key Issues

Key issues are broad concerns that impact the study area and the broader region.

The Westside Multimodal Improvements Study recognizes the following issues:

- Transit travel times are not competitive with driving in parts of the study area.
  - Infrequent service due to a lack of transit supportive land use and infrastructure characteristics.
  - Existing roadway spacing limits connectivity and transit access
  - Lack of regional express transit options
  - Multi-transfer rides, slower travel through Central City
- The urban environment and development patterns in the Westside Corridor are less conducive to high transit ridership, which limits additional transit investment.
- Inadequate “last mile” access to transit for pedestrians and bicyclists
  - Existing non-grid design and gaps in active transportation network reduce access to transit
  - Existing bicycle and pedestrian infrastructure is often located on high speed and high volume roadways that produce a high-stress environment for people walking and bicycling.
- Congestion due to limited capacity
  - Bottleneck at the tunnel, with limited road right of way width
  - Continued growth without system redundancy results in longer periods of delay and increased diversion through neighborhoods.
- Traffic safety for all users and modes
  - Metro regional safety report shows increasing serious, fatal and ped/bike crashes over the past five years
  - Seismic vulnerability of the transportation network
- Impaired motor vehicle mobility due to growing travel demand and congestion
  - Land use plans have not been fully realized, and land supply is limited on the in the study area.
  - Land use patterns and infrastructure have been built in a way that is auto-dependent and does not make walking, bicycling, or taking transit easy, safe, or reliable.

- Impaired freight movement
  - Lack of network redundancy and limited system connectivity
  - Economic impacts of congestion, delay, and travel time variability
- Vehicle emissions contribute to climate change and air pollution

## 5 Needs

Needs are the specific concerns or problems to be addressed within the corridor.

The Westside Multimodal Improvements Study will seek solutions that address the following specific needs within the corridor:

- Improve multimodal options
  - Increase person throughput in the corridor
  - Improve non-auto mode share
  - Address multimodal access issues to major employment areas
  - Address multimodal access issues to other key destinations – education, health care, recreation, and open space
  - Improve the quality and safety of the active transportation network
  - Complete gaps in the active transportation network
  - Reduce incidences of severe or fatal crashes in the study area, including crashes involving bicyclists or pedestrians
  - Improve access to transit, especially in areas of high transit equity opportunity/need
- Increase transportation equity
- Reduce congestion and improve safety
  - Resolve congestion or provide reliable alternative modes or routes
  - Support long-range land use plans that focus development near transit and foster complete communities that integrate housing and daily destinations
  - Identify traffic management strategies to extend the availability of existing highway capacity
- Improve freight mobility
  - Increase travel time reliability for goods movement through the corridor
- Improve economic outcomes while considering who bears the benefits and costs
- Support regional and state goals to reduce greenhouse emissions



## 6 Project Goals

The Westside Multimodal Improvements Study process is for local agencies and the public to collaborate to identify and prioritize multimodal investments to address the issues and needs.

By addressing the issues and needs with various policies and investments options, the implementation plan will:

- Improve multimodal access to regionally significant employment, educational, and commercial centers.
- Improve transportation equity.
- Improve mobility throughout the Westside Corridor for people traveling to work and daily activities, as well as commercial traffic.
- Improve safety, increase person throughput, and improve travel time reliability for all users of the corridor.
- Improve connections for freight, including generators and distribution.
- Support future household and economic growth projected in the corridor.
- Create a more affordable and equitable system of travel in the corridor.
- Support regional and statewide climate goals.

## Revision History

Initial Draft: February 2, 2022

Revised: March 9, 2022

Revised: March 30, 2022

Revised: April 29, 2022

Revised: May 27, 2022