



PUBLIC REVIEW DRAFT

2018 Regional Transportation Plan

Regional Transit Strategy

A strategy for providing better transit service in the greater Portland region

June 29, 2018

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4.2.1.4 Intercity Rail

Intercity passenger rail provides high quality rail service to communities outside of the region provides an important connection to our region. Intercity rail can connect regions and even states. This type of service goes beyond our regional boundaries and serves people traveling to destination in and out of our region.

4.3 Regional Transit Policies

Regional transit priorities are informed by the following policies which aim to provide transit as an attractive and accessible travel option for all people in the Metro region, optimize existing transit system operations and ensure transit-supportive land uses are implemented to leverage the region's current and future transit investments.

Eight policies form the foundation of this vision:

Policy 1: Provide a seamless, integrated, affordable, safe and accessible transit network that serves people equitably, particularly communities of color and other historically marginalized communities, and people who depend on transit or lack travel options.

Policy 2: Preserve and maintain the region's transit infrastructure in a manner that improves safety, security and resiliency while minimizing life-cycle cost and impact on the environment.

Policy 3: Make transit more reliable and frequent by expanding regional and local frequent service transit and improving local service transit options.

Policy 4: Make transit more convenient by expanding high capacity transit and improving transit speed and reliability through the regional enhanced transit concept.

Policy 5: Evaluate and support expanded commuter rail and intercity transit service to neighboring communities and other destinations outside the region.

Policy 6: Make transit more accessible by improving pedestrian and bicycle access to and bicycle parking at transit stops and stations and using new mobility services to improve connections to high-frequency transit when walking, bicycling or local bus service is not an option.

Policy 7: Use emerging technology to provide better, more efficient transit service – focusing on meeting the needs of people for whom conventional transit is not an option.

Policy 8: Ensure that transit is affordable, especially for people who depend on transit.

4.3.1 Policy 1: Provide a seamless, integrated, affordable, safe and accessible transit network that serves people equitably, particularly communities of color and other historically marginalized communities, and people who depend on transit or lack travel options (NEW)

The Portland metropolitan region's economic prosperity and quality of life depend on a transportation system that provides every person and business in the region with equitable access to safe, efficient, reliable, affordable and healthy travel options and have the same opportunity to thrive, regardless of their race or ethnicity. With a transportation system focused on mobility and access that addresses the transportation disparities faced by communities of color, the region's transportation system has the ability to open opportunities which can dramatically improve outcomes for people of color. While on the surface, a focus on racial equity may seem exclusionary, but by addressing the barriers faced by those communities, outcomes for other disadvantaged communities will improve as well.

A complete and seamless transit system is based on providing frequent and reliable bus and rail transit service during all times of the day, every day of the week. This goes far beyond the responsibility of the transit agencies; it requires actions on behalf of the region and all the jurisdictions. In order to provide frequent and reliable service, the region needs to partner together to invest in transit priority treatments and high capacity transit to ensure that transit can take people where they need to go on time.

All transit trips begin and end with different modes of access even if stations are mere steps from origins and destinations. Riders access transit via walking, bicycling, bus, rail, carpools, shared mobility (like Uber and Lyft or Biketown) and private automobiles. Safe and comfortable access to the stations is critical to the riders experience and convenience, but also makes transit fully accessible to people of all ages and abilities. Every transit rider is a pedestrian first, whether it is walking to the station, parking their bike and walking to vehicle or walking from the park and ride to the bus or rail.

High frequency or typical fixed route transit service may not make sense for everyone throughout the region. People often rely on demand-response transit or infrequent buses that provide slow service and are costly to operate. New shared mobility models like microtransit could provide better service at lower cost in these situations. As these options continue to mature, agencies should look for opportunities to supplement demand response and underperforming service with shared mobility. This could provide better service for underserved and transit-dependent residents, and also increase resources available to serve high-demand corridors.

Technology also provides tools to actively manage the Portland metropolitan region's transit system. This can involve using intelligent transportation systems and services to help improve the speed and reliability of transit, or taking advantage of smart phones and other personal technology to efficiently communicate information about transit options.

Microtransit can differ from conventional transit service in several different ways:

- Some operate on flexible routes to pick up and drop off riders nearer to their origins and destinations.
- Instead of operating on a fixed schedule, microtransit services may allow riders to request a ride when they need it.
- Services often use vans or small buses instead of 40-passenger buses.
- Many services are privately operated or operated through partnerships between public agencies and private companies.

4.3.2 Policy 2. Preserve and maintain the region's transit infrastructure in a manner that improves safety, security and resiliency while minimizing life-cycle cost and impact on the environment. (NEW)

While our transit system is still relatively new, it will become increasingly important to invest in upkeep as the system ages. It is critical to ensure that it is well-maintained and to replace or improve outdated parts of our transit system to preserve its efficiency. In addition, the Federal Transit Administration's State of Good Repair program is dedicated maintenance of our transit system includes incorporating industry best practices and recommendations related to reliability and safety and supporting TriMet's implementation of its Service Enhancement Plans to help transit agencies maintain bus and rail systems as part of the Moving Ahead for Progress in the 21st Century (MAP-21) Act. These grants are distributed to state and local governments to repair and upgrade rail and bus rapid transit systems that are at least seven years old.

Following the Great Recession of 2008, TriMet delayed new bus purchases for four years because of the resulting decrease in income from taxes. Starting in 2012, TriMet began to replace buses on an accelerated schedule and has since moved away from having one of the oldest fleets in the country to an industry-standard average age of eight years. According to the FTA, the average useful life of a bus is 12 years, or 500,000 miles. Another area of

investment for TriMet is the MAX system, parts of which are more than 30 years old. While the FTA's assigned life expectancy for rail cars is 25 years, industry experience reports a 30-35 year lifespan in reality. Nevertheless, the TriMet light rail system will soon be in need of repairs and upgrades.

It's also important that to plan for the future capacity needs of our transit system. As our region grows and ridership on our public transportation system is ever increasing, the region is starting to push the limits of what our existing infrastructure can handle. This creates more transit bottlenecks throughout the region, increasing congestion and decreasing the reliability of our transit system. Some lines already have many buses running behind schedule due to heavy traffic, which leads to unpredictable service. Other lines suffer from overcrowding. Popular lines will always have standees, but some trips have such high ridership that at times, riders are unable to board and must wait for another vehicle. In order to make transit more reliable and convenient, these factors must also be addressed.

Some recent maintenance projects and improvements that TriMet has undertaken include:

- Replacing switches and realigning the trackway at the Rose Quarter
- Replacing switches and reconstructing rail at SW 11th Avenue in Downtown Portland
- Completing design for reconstructing MAX trackway over the Steel Bridge
- Beginning a four-year replacement of overhead power contact wire on the original MAX Blue Line between Cleveland Ave in Gresham to Lloyd Center
- Upgrading and repairing platform areas at Gresham City Hall and Washington Park stations

Other improvement projects include planned upgrades to fourteen (14) MAX Blue Line stations between NE 42nd/Hollywood and Cleveland that include safety improvements and electronic display installations. Pedestrian crossings and shelters are being improved; trees on or near the platform are being removed to make space for lighting and improve the line-of-sight for security cameras.

4.3.3 Policy 3: Make transit more reliable and frequent by expanding regional and local frequent service transit and improving local service transit options.

4.3.3.1 Expand regional and local frequent service transit

In 2040 corridors, main streets and centers, the RTP recommends supporting transit by providing transit-supportive development and well-connected street systems to allow convenient bicycle and pedestrian access.

As mentioned earlier, Frequent service transit is defined as wait times of 15 minutes or less from the early morning to late in the evening, seven days a week. Frequency is especially important for making transit more competitive with driving for riders who take short, local trips, because the time riders spend waiting for a bus to take a short trip is a proportionately larger component of the total travel time than it is for longer trips.

Frequent bus service is appropriate when high ridership demand is demonstrated or projected, the streets are pedestrian-friendly, there are high proportions of transit-dependent residents, the lines connect to existing or proposed HCT corridors, and/or it serves multiple centers and major employers. Exhibiting many of the same service characteristics as frequent bus service, streetcar service functions primarily as a connection within and between 2040 centers and corridors.

Preferential treatments, such as transit signal priority, covered bus shelters, curb extensions, special lighting, enhanced sidewalks, protected crosswalks and bikeways, are all fundamental to making the frequent service bus and streetcars elements of the transit network function at its highest level. In select locations, park-and-ride facilities may provide vehicular access to the frequent service network, especially for areas that cannot be well-served by local transit due to topography, street configuration, or lack of density.

Types of frequent transit services and facilities include:

- Frequent bus
- On-Street Bus Rapid Transit
- Streetcar (Local)
- Express Bus
- Enhanced Transit elements
- Regional transit centers and stops
- Bicycle stations/parking
- Park-and-ride facilities

Transit service improvements and expansion should be prioritized, with an emphasis on congested transit lines that serve historically marginalized communities. Decisions about transit investments should be assessed with an equity lens to ensure transit access for our most vulnerable communities.

4.3.3.2 Improve local service transit

The local transit network provides basic service and access to local destinations and the frequent and high capacity transit network. Service span and frequencies vary based on the level demand for the service. The local transit network ensures that the majority of the region's population has transit service available to them.

Local transit service is appropriate where there is some transit demand, but not enough to support regional or frequent service. Local transit is designed to provide full transit service coverage to the region. Transit preferential treatments and passenger facilities are appropriate at high ridership locations. Sidewalk connectivity, protected crosswalks and bikeways are all fundamental to making the local transit service elements of the transit network function at its highest level.

Providing local bus service increases the convenience of transit, particularly for areas without frequent service transit or where traditional transit service is not viable. Local transit service also expands community and regional transit service across the region that improves access to jobs and community places and can help facilitate that first/last mile

connections where business and or homes are spread out and regional fixed-route bus service is not cost effective.

Types of local transit services include:

- Local Bus
- Para-Transit
- Deviated “On-Demand” routes
- Community and job connector shuttles
- Employer Shuttle Service
- Community Event Shuttles
- Tram

In order to reach our regional transit objectives local transit service improvements and expansion should be coordinated with TriMet’s Coordinated Transportation Plan for Seniors and Persons with Disabilities and the Special Transportation Funds Advisory Committee (STFAC).

4.3.3.4 Demand response services

One foundational support of the regional transportation system in both urban and rural areas is the availability of demand-response services. These services provide access to transportation that “fills in the gaps” where fixed-route transit, complementary paratransit, or deviated fixed-route “last mile” shuttle services are not the appropriate or most cost-effective tool to meet the need of low income individuals, seniors or people with disabilities. Because these services operate in the background, as a coordinated addition to the total transportation system, they often go unnoticed. However, they provide a lifeline of service to low-income people who experience barriers to accessing the transportation system. Each year over 500,000 trips are provided on demand-response services throughout the region, and current service is still not enough to meet the existing demand or projected growth in demand concurrent with the region’s growing population.

Additionally, Metro’s considers transit service as part of the analysis of urban reserve areas for possible inclusion in the UGB, as directed by Statewide Planning Goal 14 Urbanization which includes a requirement to analyze the orderly and economic provision of public facilities and services. Public facilities and services is defined as sanitary sewer, water, storm water management and transportation, including the provision of public transit services. TriMet and SMART complete the public transit service analysis on behalf of Metro for the urban reserve areas in their respective service districts. This analysis is used to compare the relative costs, advantages and disadvantages of providing public transit service to the different urban reserve areas.

4.3.4 Policy 4: Make transit more convenient by expanding high capacity transit and improving transit speed and reliability through the regional enhanced transit concept.

4.3.4.1 Expand high capacity transit, to serve transit dependent populations and improve system performance between key destinations

High Capacity Transit (HCT) investments help the region concentrate development and growth in its centers and corridors. The regional transit network concept calls for fast and reliable HCT service between the central city and regional centers. HCT service carries high volumes of passengers quickly and efficiently, and serves a regional travel market with relatively long trip lengths to provide a viable alternative to the automobile in terms of convenience and travel time.

High capacity transit provides greater connections between the Portland Central City, regional centers, and passenger intermodal facilities. It operates on a fixed guideway or within an exclusive right-of-way, to the extent possible. High capacity transit strives for frequencies of 10 minutes or better during the peak hours and 15 minutes during off peak hours. Passenger infrastructure at HCT stations and within station communities often include enhanced amenities, such as real-time schedule information, ticket machines, special lighting, benches, shelters, bicycle parking, civic art and commercial services.

To optimize and leverage transit supportive land uses, alignments and station locations should be oriented towards existing and future high density, mixed-use development. To this end, urban form and connectivity, redevelopment potential, market readiness, public incentives and infrastructure financing should all be considered during the corridor refinement and alternatives analysis phases of project development. High capacity transit investments are informed by the HCT assessment and readiness criteria (see performance measures chapter of this strategy).

Types of high capacity transit types, facilities and services include:

- Light Rail Transit (MAX)
- Rapid Streetcar (Streetcars running in mostly exclusive right-of-way so that they are able to travel faster safely)
- Bus Rapid Transit (majority of service operates in separate and dedicated right of way, defined stations, transit signal priority, short headways).
- On-Street Bus Rapid Transit (substantial transit investment, some separate or dedicated right of way, defined stations, transit signal priority, short headways).
- Commuter Rail (WES)
- Interurban Passenger Rail (e.g., Amtrak or regional rail systems in other regions)
- Intermodal Passenger Facilities (e.g., Union Station and Greyhound)
- Secure bicycle parking (Bicycle stations or Bike & Rides)
- Park & Ride lots

- Transit Centers
- Transit Stations

Major infrastructure investments have implications within the communities they are located. Historic data shows that a major HCT investment contributes to both positive and negative outcomes for the communities they serve. It is critical that during the planning for a new HCT investment, a strategy should be developed that considers both the positive and negative impacts of the investment, particularly as it applies to the most at-risk populations. These tend to be people of color, low income, low English proficiency, seniors and youth. Additionally, these populations tend to be our most transit dependent. What this means is that their potential displacement from the economic pressures that the investment brings, ultimately leads to undermining the long-term effectiveness of the investment. By planning all new HCT lines through an Equitable Development Framework, we can attempt to lessen the negative impacts of the investment, while enhancing the opportunity that these transit-dependent populations benefit from it, by limiting residential and business displacements and gentrification.

Any HCT planning effort should directly incorporate community in the decision-making process. The process should also be informed and include an assessment of data with an equity lens. Where possible HCT, projects should also enhance the contracting and job training benefits and opportunities for displaced and historically marginalized populations.

4.3.4.2 Improve transit speed and reliability through the regional enhanced transit concept

In order to meet the Portland Metro region's environmental, economic, livability and equity goals as we grow over the next several decades, we need to invest more in our transit system, particularly the frequent service bus network. There are many ways to increase transit speed and reliability throughout our system. The region should pursue opportunities as they arise to improve the efficiency of our system to support our transit riders.

The Enhanced Transit Concept (ETC) program, is one way to do this, which employs new public partnerships to service treatments that increase capacity and reliability, yet are relatively low-cost to construct, context-sensitive, and able to be deployed quickly throughout the region where needed.

ETC can be implemented through the coordinated investment of multiple partners and has the potential to provide major improvement over existing service or even our region's best frequent service, but less capital-intensive and more quickly implemented than large scale high capacity transit. Investments would serve our many growing mixed-use centers, corridors, and employment areas that demand a higher level of transit service but are not seen as short-term candidates for light-rail, or bus rapid transit.

ETC partnerships could also create more reliable, higher quality transit connections to connect low-income and transit-dependent riders to jobs, school and services. It would allow for a more fine-grained network of higher-quality transit service to complement our

high capacity transit investments, relieve transit congestion and grow ridership throughout the region.

Preferential treatments, such as transit signal priority, covered bus shelters, special lighting, enhanced sidewalks, and protected crosswalks are also all fundamental to making the ETC network function at its highest level.

Improving the speed and reliability of our frequent service network could be implemented at the regional scale, along corridors or at “hot spot” locations. Table 4.2 describes the different types of treatments that have the potential to improve reliability.

Table 4.2: Enhanced Transit treatments

Regional	Hotspot
Bus on shoulder	Dedicated bus lane
Transit signal priority and signal improvements	Business access and transit (BAT) lane
Headway management	Intersection queue jump/right turn except bus lane
Corridor	Transit-only aperture
Level boarding	Pro-time (peak period only) transit lane
All door boarding	Multi-modal interactions
Bus stop consolidation	Curb extension at stops/stations
Rolling stock modification	Far-side bus stop placement
Transit signal priority and signal improvements	Street design traffic flow modifications

4.3.5 Policy 5: Evaluate and support expanded commuter rail and intercity transit service to neighboring communities and other destinations outside the region.

Intercity passenger rail and bus service to communities outside of the region provides an important connection to the regional transit network. A high level assessment of potential demand for commuter rail outside of the Portland urban growth boundary was conducted as part of the 2009 High Capacity Transit System Plan.

The demand estimates of ridership potential are highly conceptual and were developed only to determine the order of the magnitude of differences between corridors, not as actual predictions of ridership. The estimates are not based on detailed alignment, station location or service concepts. Rather, they estimate the potential to attract riders based on comparable commuter rail services in operation in the United States and the overall demand for work travel between the major corridor markets.

Key findings from this analysis are summarized below:

- **Potential Intercity Corridor.** A potential future **commuter rail line to Newberg** may be feasible in the long term. Even though the riders per mile analysis looks favorable due to the relatively short distance of the line, the overall population in the rail shed is very low compared to other corridors, and overall ridership is relatively low. Metro, regional partners and corridor communities should consider right of way preservation planning for this corridor and consider land use planning activities that focus on transit supportive development around potential future commuter rail station areas.
- **Promising Intercity Corridor. Salem/Keizer** is the most promising of the corridors evaluated. In addition to the highest market potential, this corridor has a number of favorable aspects: there is existing Amtrak passenger rail service in the corridor, this is a lightly used freight corridor that was evaluated in the 2001 Oregon Rail study as a potential commuter rail corridor, and an alignment could easily tie into the WES commuter rail service now operating to Wilsonville. If the region or state chose to focus on the development of inter-regional rail service, this alignment should take priority. After coming to a similar conclusion about this corridor, the Oregon State Legislature passed House Bill 2408, which directs ODOT to study the possible extension of commuter rail service from Wilsonville to Salem, which is currently serviced by SMART today.

In addition, the Pacific Northwest Corridor is one of ten corridors identified for potential high-speed rail investments to better connect communities across America. Shown in Figure 4.5, this corridor provides an important intercity rail connection between Eugene, Oregon and Vancouver, British Columbia. More work is needed to determine what partnerships, infrastructure investments and finance strategies are needed to support this level of service.

Figure 4.5: U.S. High Speed Intercity Passenger Rail Network



Source: U.S. Department of Transportation (April 2016)

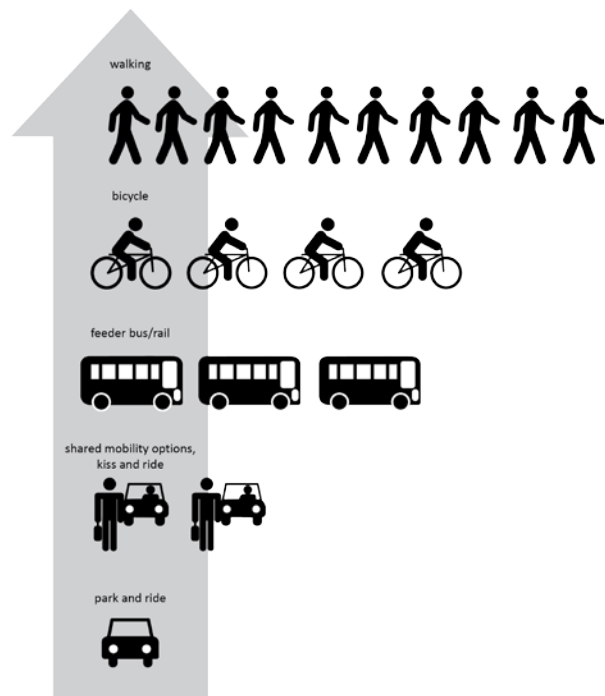
4.3.6 Policy 6: Make transit more accessible by improving pedestrian and bicycle access to and bicycle parking at transit stops and stations and using new mobility services to improve connections to high-frequency transit when walking, bicycling or local bus service is not an option. (REVISED)

4.3.6.1 Improve pedestrian and bicycle access to and bicycle parking at transit stops and stations

Providing safe and direct walking and biking routes and crossings that connect to transit stops ensures that transit services are fully accessible to people of all ages and abilities. At some point in their trip, all transit riders are pedestrians. The environment where people walk to and from transit facilities is a significant part of the overall transit experience. An unattractive or unsafe walking environment discourages people from using transit, while a safer and more appealing pedestrian environment may increase ridership. Likewise, high quality local and regional bicycle infrastructure extends the reach of the transit network, allowing more people to access transit from longer distances. Figure 10 depicts the Metro region’s priorities for providing multi-modal access to the region’s transit service. It prioritizes walking and biking to transit and deemphasizes driving to transit.

Figure 4.6. Regional Transit Access Priorities

Metro Regional Transit Access Priorities



Establishing pedestrian and bicycle connections to bus and train stations and stops helps extend the reach of the transit network, making trips made by transit feasible and accessible for more people of all ages and abilities, including seniors and people with disabilities. Transit, pedestrian and bicycle travel benefit as improvements are made to each of the modes.

Improving pedestrian and bicycle access to transit is accomplished through:

- filling sidewalk gaps within a mile of stops and stations;
- filling bicycle and trail network gaps within three miles of stops and stations;
- integrating trail connections with transit;
- providing shelters, transit tracker information and seating at stops and stations;

- providing bicycle amenities at transit centers such as repair stations and lockers;
- providing pedestrian and bicycle protected crossings at stations and stops where appropriate, including secured, covered bicycle parking or Bike and Rides at stations and stops;
- allowing bicycles on board transit and exploring the use of apps to let bicycle riders know if a bus or train has bicycle space available;
- locating transit stops and stations on bicycle and pedestrian maps, integrating biking, walking and transit on tools such as TriMet’s Trip Planner and Transit Tracker;
- co-locate bike and car sharing facilities at transit stations to improve active transportation connections and manage parking demand, which helps to create a safer walking and bicycling environment; and
- Linking modal systems in regional and local transportation plans.

4.3.6.2 Explore new ways to improve connections to high frequency transit

Advances in technology have given rise to new transportation options that make it easier for people to share vehicles and rides and provide a potential first/last miles connection. Many of these options are already widely used in our region:

- In the city of Portland, transportation network companies (TNCs) Uber and Lyft provided an estimated 7 million rides in 2017. We do not know how many of these were first/last mile connections to transit.
- Car sharing services operate over 1,000 vehicles in the region, and though some of these services have been around for a decade, new models have sprung up, including free-floating car sharing companies like ReachNow and Car2Go that allow people to pick up and drop off a car anywhere within a defined service area.
- The City of Portland’s bike share system, BIKETOWN, launched in July 2016, and carried over 300,000 trips in its first year. Many of the bikeshare stations are purposefully co-located at transit stations.

Other innovations are not yet available in our region, but may be soon:

- Shared electric bikes or scooters allow riders to take easier or longer-distance trips than they could on a conventional bicycle.
- Microtransit, which refers to services that use smart phones to allow riders to book trips, collect data to tailor routes that meet riders’ needs and serve these routes with vehicles that are smaller than conventional buses, can be a viable model for communities that don’t have high enough ridership for conventional transit to pencil to be cost effective.

These new options, along with conventional shared modes like transit, carpools, and vanpools, are often referred to collectively as “shared mobility.” Combining transit and other shared modes can provide better service for travelers while creating better environments around stations. People who might otherwise need to drive to can instead

use a combination of shared mobility and transit. In these situations, shared mobility provides more convenient connections to stations, but taking transit for the bulk of the trip keeps the journey more affordable. If more people use shared modes to get to transit rather than driving, it can free up space that might otherwise be used for parking for public spaces, bicycle and pedestrian facilities or development. In order to deliver on this potential, Metro and our partners need to improve connections between shared mobility and transit. There are several actions we can take.

- Dedicate space for shared mobility at transit stations. Accommodating bike share stations or pods of car share vehicles at transit stops makes it easy for transit riders to use these options. Setting aside space for pickups and dropoffs near stations can make it more convenient for people to access options to transit, as well as improve safety by reducing conflicts between modes. At stations with parking, reserving premium spaces for carpools or shared vehicles can provide an incentive for travelers to share trips instead of driving alone.
- Coordinate with shared mobility companies to provide shared connections to transit stations. Several communities already support vanpools or operate shuttles to and from transit stations. Similarly, public agencies can work partner with microtransit or carsharing companies to provide new connections to transit and promote the use of these services.
- Make it easy to plan and book transit and shared mobility trips. Smartphone apps are now the most common way for people in the Portland region to access information about their transportation options. At a minimum, transit agencies should make schedule and route information available through their own online tools as well as in general transit feed specification format so that it can be incorporated into apps like Google Maps, TransitApp, and moovel. TriMet's Open Trip Planner Shared-use Mobility project will create a platform to integrate data on transit and shared mobility options so that riders can easily plan multimodal trips. The ability to book and pay for multimodal trips on a single platform could make transit-shared mobility connections even more convenient.

There are two important issues to consider when integrating transit and shared mobility data. The first is ensuring that third-party apps use that data in a way that supports transit. No matter how easy-to-use or informative the apps and websites that public agencies develop are, a significant number of people will get data from third-party apps. The companies that develop these apps often monetize transit data by showing advertisements for TNCs that show how much quicker a rider could reach a destination by paying extra for an Uber or Lyft. These advertisements can draw people away from taking transit, and agencies should consider whether they want to place conditions on the use of transit data by third parties.

The second is maintaining access for the many people who can't access apps or make online payments, which can include low-income people, undocumented people, people with disabilities, or people with limited English proficiency—in other words, many of the same travelers who rely on transit. Phone-based concierge services or cash-based

payment services at convenient locations, as well as traditional fare media and schedules, can help these people continue to access transit.

Design and manage designated transit streets to prioritize transit and shared travel. Dedicating transit lanes and rights of way and prioritizing buses at signalized intersection are widely used strategies to help transit vehicles move more quickly. As the region explores congestion pricing, we should consider methods of pricing that reduce tolls for higher occupancy vehicles. More TNCs picking people up and dropping them off means that curb space is increasingly valuable, and the use of global positioning systems on TNC vehicles makes it possible to manage where these vehicles drop people off and pick them up. Agencies can manage the curbside to prioritize TNCs carrying more than one passenger and avoid conflicts with transit vehicles.

4.3.7 Policy 7: Use emerging technologies to provide better, more efficient transit service, including focusing on meeting the needs of people for whom conventional transit is not an option.

Emerging technology is a highly advancing field that can provide opportunities to improve transit service and efficiency. The region should incorporate emerging technologies to achieve our regional goals. One key way to do this is through the application of technology to serve areas that are more difficult to serve by traditional transit service.

Our region is home to many people with disabilities who require specialized vehicles and point-to-point service, as well as people who depend on transit but live in communities where fixed-route service doesn't make sense. These people often rely on demand-response transit or infrequent buses that provide slow service and are costly to operate. New shared mobility models like microtransit could provide better service at lower cost in these situations. As these options continue to mature, agencies should look for opportunities to supplement demand response and underperforming service with shared mobility. This could not only provides better service for underserved and transit-dependent residents, but also increase resources available to serve high-demand corridors.

Over the longer term, autonomous vehicle (AV) technologies have the potential to make transit work more efficiently everywhere, and transit agencies should look for opportunities to test these technologies and understand their potential benefits as they become available.

Transit is a critical option for those in need, the most efficient way to move people along crowded streets, and the backbone of many communities. It is difficult to imagine positive future for the region without it. In order to make sure that transit thrives, we need to enhance service on high-ridership lines while experimenting with new ways to provide transit (like microtransit or using new mobility services to connect to stations) in communities that are challenging to serve with large buses traveling fixed routes.

4.3.8 Policy 8: Ensure that transit is affordable, especially for people who depend on transit.

The cost of transportation burdens many households in the metropolitan region. Transportation is usually the second largest share of household costs (after housing) and are particularly burdensome for low-income households who often have the longest distances to travel. It is therefore important to ensure that transit is affordable, particularly for the riders that need it the most (i.e. the riders who do not have access to cars). Ensuring that transit is affordable alleviates the cost of owning automobiles; in the Portland Metro Region, an individual saves an average of \$10,477 annually by switching from cars to public transit (APTA, June Transit Savings Report, 2017).

Low-income households, people of color, people with disabilities, children, senior citizens, and people with limited English proficiency are those most affected by transportation costs because they're historically more transit-dependent than others. As our region continues to grow in both population and diversity, embracing this growing diversity means providing service that is equitable. Using equity as a lens to guide decisions ensures that the transit system benefits those who rely on it the most.

SMART routes within the City of Wilsonville are free, while other routes running to Canby, Tualatin, Barbur Transit Center, and Salem charge a fee. SMART also offers a reduced half price pass for seniors (60 years and older), persons with disabilities, Medicare card holders and youth riders (5-17 years old or students to 23 years old with valid student ID).

Expanded payment options

TriMet also rolled out the Hop Fastpass, a state-of-the-art electronic fare system for TriMet, C-TRAN, and Portland Streetcar. Riders will be able to choose from a variety of payment options, including a transit-only smart card, contactless bank card, and smartphones with contactless technology built in. One benefit of the Hop Fastpass for low-income riders is a daily and monthly cap on fares paid. Riders who use the system for two full-fare trips will be able to ride the rest of the day for free. Similarly, after using the Hop Fastpass for the equivalent cost of a monthly pass, riders will be able to use the transit system for free for the rest of the month. The Hop Fastpass therefore allows riders to buy daily and monthly passes one installment at a time, making discounts available to those who can't afford the cost of a daily or monthly pass up front.

Reduced Fare Program

TriMet has already implemented several programs in order to make transit affordable. Reduced fares are available to youths ages 7-17 and students in high school or pursuing a GED, and children 6 and under ride for free with a paying passenger. High school students in the Portland Public School District can ride for free during the school year as well by showing their student ID. Honored citizens, which include those over 65, those on Medicare, or those with disabilities are also eligible for reduced fares. Access Transit fare

programs help low-income riders, including low-income seniors and riders with disabilities. These programs provide fares to non-profit and community-based organizations at lower to no cost, which are then distributed to clients.

Over the last few years, TriMet has been working toward a reduced fare program for people with limited incomes. A task force of advocates, community members and elected officials recommended a low income fare program where adults at or below 200 percent of the federal poverty level would be eligible for half-priced fare. Implementation of this program means that adults making up to \$24,120 a year could take a ride for \$1.75, and buy a day pass for \$2.50 (the same price as Honored Citizen and Youth fares). Participants would use a reduced fare Hop card similar to an Honored Citizen or Youth card. House Bill 2017 provided the funding to implement the TriMet Low-Income Fare Program.

Partnerships and advocacy

To ensure that transit remains affordable, the region should build partnerships with non-profit and human service providers to support the dissemination of information about these fare programs and to work through ways in which these programs can be more effective. This should also include advocating in the state legislature and to the voters to increase, deepen, and sustain long-term funding for programs which support keeping transit affordable for riders.