Agenda

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Meeting:	**RTP Transit work group meeting**
Date:	Thursday, February 15, 2018
Time:	2:00 – 4:00 p.m.
Place:	Metro Regional Center, Room 401
Purpose:	Transit and transit related policy discussion
Outcome(s):	Review and feedback on proposed new and revised transit policies.

2:00 p.m.	**Welcome & project updates** *Who have you talked to about this work? What have you heard?*	Everyone
2:15 p.m.	**Draft Transit Policies** *Share initial drafts of new and revised transit policies*	Jamie Snook, Metro All - Discussion
3:15 p.m.	**Transit System Expansion Policy update** *Provide an update on the Transit System Expansion Policy, including the projects identified for analysis.*	Jamie Snook, Metro
3:30 a.m.	**Enhanced Transit Concept (ETC) Update** *Provide an update on the ETC Pilot Program.*	Jamie Snook, Metro
3:45 a.m.	**Next steps** *Discuss next steps/January meeting* • *Transit System Expansion Policy evaluation* • *Draft Regional Transit Strategy*	Jamie Snook, Metro
3:50 p.m.	**Eric Hesse's last Transit Work Group Meeting**	
4:00 p.m.	**Adjourn**	

Meeting Packet	Next Meeting
• Transit Work Group Agenda	March TBD, Metro
• December 2017 Transit Work Group Summary	
• Memorandum – Transit System Expansion Policy Update	
• Regional Enhanced Transit Concept Schedule	

Directions, travel options and parking information
Covered bike racks are located on the north plaza and inside the Irving Street visitor garage. Metro Regional Center is on TriMet bus line 6 and the streetcar, and just a few blocks from the Rose Quarter Transit Center, two MAX stations and several other bus lines. Visit our website for more information: http://www.oregonmetro.gov/metro-regional-center

CHAPTER 2: REGIONAL TRANSIT VISION AND POLICIES

This is an important time to update the Regional Transit Vision. With continued regional growth come challenges such as more congestion, higher housing prices, and constrained access to employment and daily needs. Residents, elected officials, and community organizations view increased transit service as a critical part of the overall solution to these challenges. If we want to become the region we laid out in our 2040 Growth Concept, we must continue improving transit's accessibility, service, reliability, and reach.

Building off of the region's Climate Smart Strategy, the Regional Transit Vision is ***to make transit more frequent, convenient, accessible, and affordable for everyone.*** What does frequent, convenient, accessible, and affordable mean?

Frequent transit service is defined as service that operates 15 minutes or better every day of the week, but this isn't the only type of service. Regional and local transit service provides basic service and ensures that most the region's population has transit service available to them; service span and frequencies vary based on the level of demand for the service. Because of limited resources, it is more important to ensure that service meets demand, rather than making blanket improvements to existing service. Frequency therefore means aligning the frequency and type of service to meet existing and/or projected demand for an area.

In order for people to choose transit over driving, transit must be **convenient** and reliable. A trip needs to get people to their destination at the projected time, and it must be relatively easy to use. Perhaps most importantly, it needs to get people to their destination quickly, or relatively so, as compared to driving. These issues can be addressed by implementing strategies that prioritize transit (e.g. signal priority and bus lanes) as well as adopting technology that make transit more predictable and user-friendly (e.g. electronic fare and real-time monitoring systems).

Accessibility refers to two separate but related aspects of transit. One is to ensure that transit is physically accessible to everyone, regardless of age or ability. All transit users must access transit via biking or walking, even if stops are mere feet away. Complete sidewalks and bike paths enhances the experience of using transit; handicap-accessible stations are essential to making transit work for everyone. The second component of accessibility is that essential destinations and jobs must be accessible via transit. As the region grows, it's crucial to continue to expand community and regional transit service in order to improve access to these daily stops.

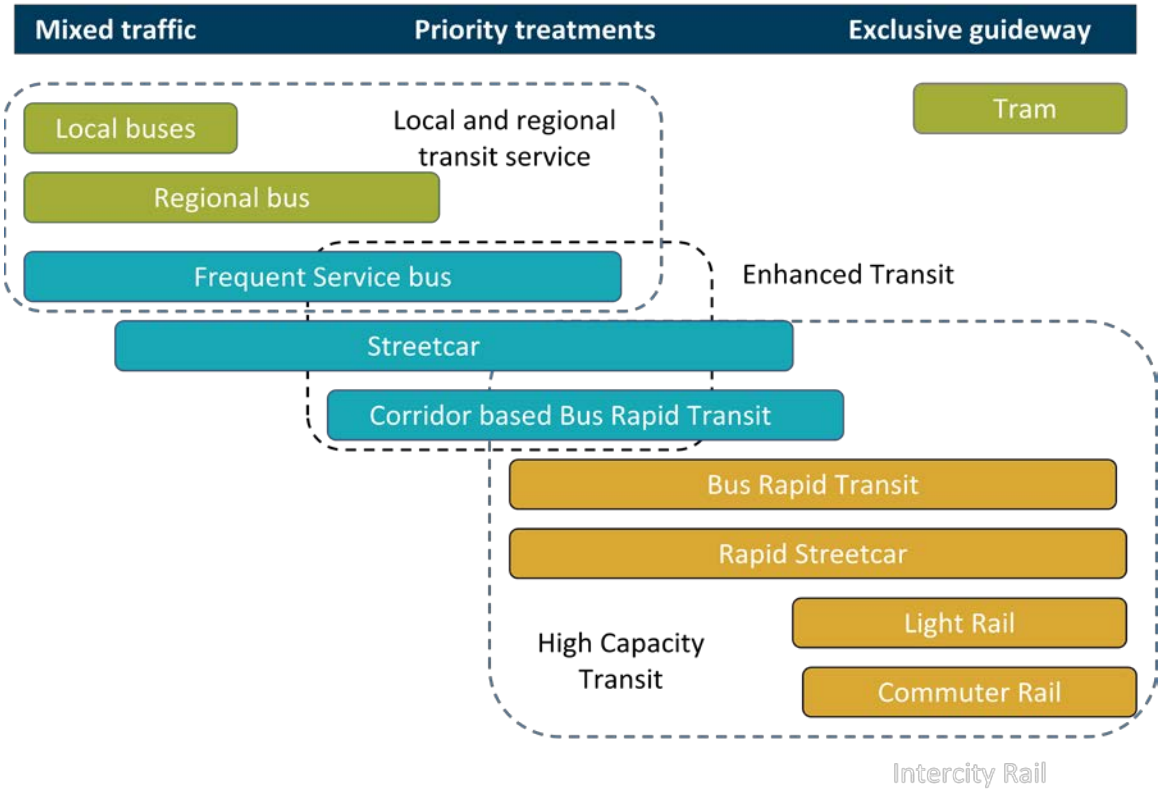
In some ways, **affordability** is the cornerstone of the other components of our vision. Frequency, convenience, and accessibility are essentially meaningless if transit is not available to people because it's not affordable. Additionally, affordability ensures that the transit system is equitable for those who rely on it the most.

Based on our regional transit vision, investments in our transit system should help achieve the following goals:

- **Frequent:** Align frequency and type of transit service to meet existing and projected demand and in support of local and regional land use and transportation visions.
- **Convenient:** Make transit more convenient and competitive with driving by improving transit speed and reliability through priority treatments (e.g. signal priority, bus lanes, queue jumps, etc.) and other strategies. Improve customer experience by ensuring seamless connections between various transit providers, including transfers, information, and payment.
- **Accessible:** Provide safe and direct biking and walking routes and crossings that connect to stops to make transit more accessible. Improve accessibility for seniors and persons with disabilities. Expand the system to improve access to jobs and essential destinations/daily needs.
- **Affordable:** Ensure transit remains affordable, especially for those dependent on it.

The Region's Transit Network - NEW

Our existing and planned system includes a variety of transit modes



There are a lot of variables that impact decisions about what type of transit mode and frequencies are most appropriate, including existing and future land uses, transit demand and opportunities and constraints. Decisions about which modes are accommodated and which mode gets priority treatment within a particular roadway or rail ROW segment are

made during the Corridor Refinement Plan or regional or local planning phase, and must consider the motor vehicle, freight, bicycle, and pedestrian functions/designations of the underlying roadway or rail line, and are subject to approval by the owner/operator of the underlying roadway or rail line.

Commuter rail and light rail modes tend to be in separate right of ways. Commuter rail operates in right-of-way separated from street traffic, but in some cases may share ROW with main and branch railroad lines. Light rail transit, bus rapid transit and rapid street car modes generally operate in right of way separated from street traffic, but in some cases may share right of way with arterial, collector and local streets and other transit only facilities, like the Bus Mall in downtown Portland and the Tilikum Crossing. Bus rapid transit can include exclusive Bus Rapid Transit in fully or mostly dedicated right-of-way, as well as Corridor Based Bus Rapid Transit, which is mostly in mixed traffic.

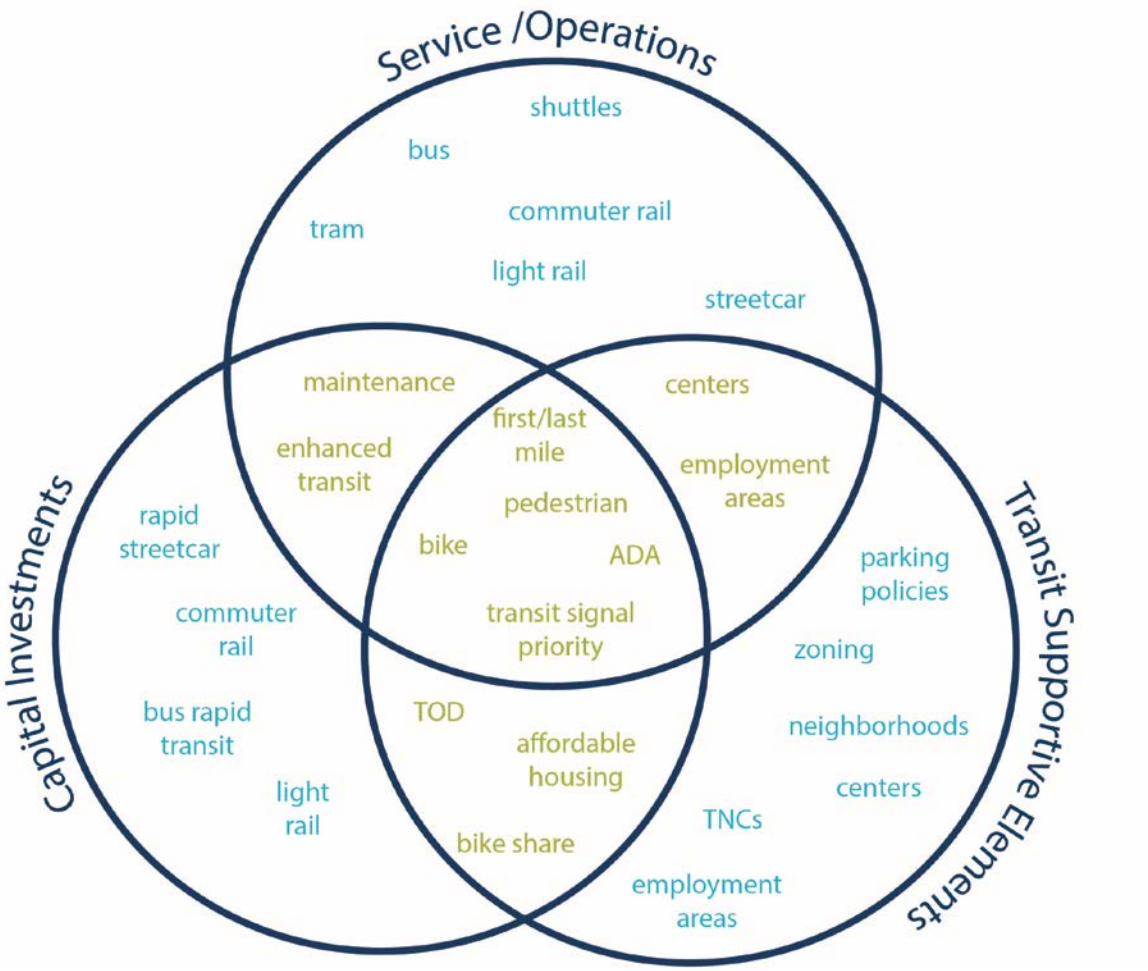
Implementation of the Regional Transit Vision

The Regional Transit Vision will be implemented through improving service, investing in infrastructure and expanding transit supportive elements:

1. **Transit service improvements:** local and regional transit service improvements designed to meet current and projected demand in line with local and regional visions and plans.
2. **Capital investments:** new enhanced transit strategies such as signal priority, dedicated lanes or high capacity transit options such as bus rapid transit or light rail.
3. **Transit supportive elements:** including policies such as Travel Demand Management and physical improvements such as sidewalks, crossings, and complementary land uses.

Figure x shows the relationships between these different types of investments.

Figure x Service improvements, capital investments and transit supportive elements



As we explore our region's transit needs, it is important to remember that limited funding is a challenge faced by regions and transit providers throughout the country. Many jurisdictions have taken to raising funds at the local level as a means to leverage the limited federal funds available. While our region is potentially preparing for a funding measure to support specific transit capital improvements, this will not address additional needs identified by stakeholders in the Regional Transit Vision, nor will it support increased operations or service investments.

Recommended RTP Transit Policy language

The regional street system has carried public transit for more than a century, beginning with the streetcars of the late 1800s and evolving into a combination of vans, buses, streetcars and light rail trains today. The Tri-County Metropolitan Transportation District of Oregon (TriMet) is the primary public transportation provider for the metropolitan region. The South Metro Area Rapid Transit (SMART) district in Wilsonville also provides regional transit service, connecting Wilsonville to downtown Portland. Just outside of the Metro region, Sandy Area Metro and Canby Area Transit provide transit service for Sandy and

Canby. Bus service in other surrounding areas, all with connections to TriMet, is also provided by C-TRAN (Clark County, WA), Cherriots (Salem, OR), Tillamook County Transportation District (Tillamook, OR), and Yamhill County Transit Area (Yamhill County, OR).

Transit is required to implement the 2040 Growth Concept, which calls for focusing future growth in regional and town centers, station communities, and 2040 corridors. A regional transit network, coupled with transit-supportive development patterns and policies that support taking transit, biking, and walking, will help the region:

- be less dependent on automobiles
- reduce overall transportation and housing costs
- lead healthier lives
- reduce greenhouse gas emissions

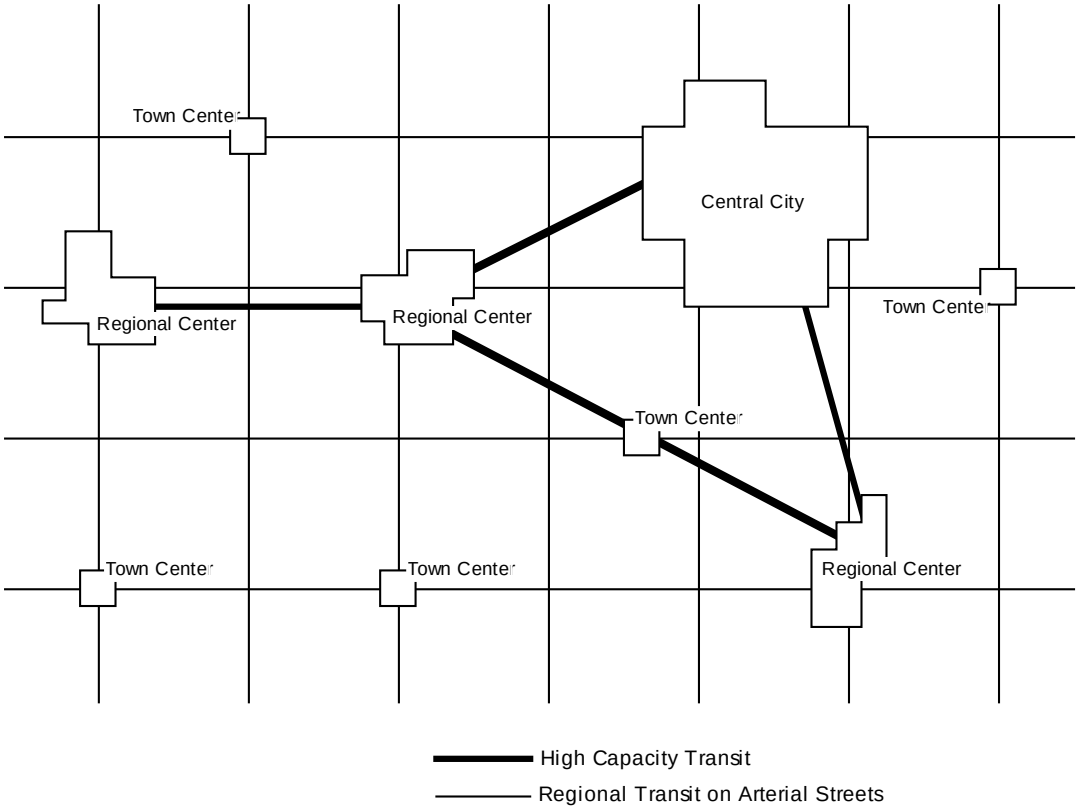
Eleven policies form the foundation of this vision:

1. **Build the total network and transit-supportive land uses to leverage investments**
2. **Expand high capacity transit**
3. **Expand the region's enhanced transit network - NEW**
4. **Expand regional and local frequent service transit**
5. **Improve local service transit**
6. **Support expanded commuter rail and intercity transit service to neighboring communities**
7. **Improve pedestrian and bicycle access to transit**
8. **Maintain and update old and aging infrastructure - NEW**
9. **Ensure that transit remains affordable – NEW**
10. **Use shared mobility to increase and improve first/last mile connections to transit - NEW**
11. **Use emerging technologies to provide better, more efficient service – beginning with the people for whom conventional transit doesn't work - NEW**

TriMet's Transit Investment Priorities (TIP) and SMART's Master Plan are informed by these 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. As part of the 2040 Growth Concept, transit is critical to connecting centers. **Figure x** shows how the regional transit system concept would connect the 2040 centers.

TriMet implements the majority of the transit service component of the RTP in what is called the Transit Investment Plan (TIP). The SMART district and other transit providers complement TriMet's service.

Figure x
Regional Transit Network Concept



The 2040 Growth Concept sets forth a vision for connecting the central city to regional centers like Gresham, Clackamas and Hillsboro with high capacity transit. The RTP expands this vision to include a complete network of regional transit along most arterial streets to better serve suburban communities. Existing land use mixes and future transit-oriented development potential should be considered and incorporated into service and station location decisions.

Figure x. Regional Transit Network Map

This section will include a brief descriptions of how the map was developed ans sumarize the changes from the existing RTP Regional Transit Network Map.

Policy 1. Build the total network and transit-supportive land uses to leverage investments

Building the total transit network is based on providing frequent, reliable bus and rail service during all times of the day, every day of the week. However, it goes far beyond this, requiring actions on behalf of the region and all jurisdictions, not just the transit agency. 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 and private automobiles.

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. 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. **Figure x** 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 x
Regional Transit Access Priorities

It is important to invest in making the whole trip more convenient, attractive, and accessible; features that do so include: clear customer information; easy access to stops

(including safe access to stations and secure bicycle parking), comfortable places to wait for transit; and modern, well-maintained vehicles. These are some of the aspects that make transit more competitive with driving and improve rider experience.

It is also important to ensure land uses are transit-supportive and to support local and regional land use and transportation plans and visions to leverage and protect transit investments. Adjacent land uses, block size, street connectivity, and parking management affect the success of transit service. Policies and investments that make transit work and not work can be found in **Table x**.

Table x
What Works and Doesn't Work to Support Direct Transit Service

Characteristic	Works	Doesn't Work
Density	High	Low
Street layout	Small blocks Grid system	Long, winding streets Cul-de-sacs, dead-end streets
Mix of uses	Mixed use (e.g., commercial, residential, and office uses)	Single use (e.g., all residential, all industrial)
Pedestrian and bicycle environment	Wide sidewalks Slow moving traffic Street elements (e.g., benches, street trees, pedestrian-scale lighting) Well-marked intersections with signalized crossings Bicycle parking	Narrow or no sidewalks Fast moving traffic Poor lighting No intersection markings and long pedestrian wait times
Site design	Buildings front the street and entrances	Buildings set back from the street and surrounded by surface parking
Parking	Limited Fee-based parking	Abundant Free

Source: TriMet

Transit-supportive development patterns include:

- An urban form and densities that generate a high number of transit riders.
- A mix of uses, and a balance of jobs and housing, that creates a place where activity occurs at least 18 hours a day.
- Well-designed streets and buildings that encourage pedestrian movement.
- Streets that can accommodate 40-foot buses.
- Safe, direct and convenient pedestrian and bicycle access, within communities and to transit stops.
- Street connectivity with good pedestrian and bike paths to extend the effective coverage of bus and rail service.
- Limited and managed auto parking.

Areas with low population and/or employment densities, abundant free parking, and with difficult access to transit stops generate fewer riders than areas with transit-supportive

development. When fewer riders are generated, it costs more per ride to provide transit service than it does in transit-supportive areas. Ridership productivity is a key criterion in assessing the benefits of service improvements and new transit investments.

Policy 2: Expand high capacity transit

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 connection of 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 day and 15 minutes on weekends.

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[1], civic art and commercial services. Using transit signal priority at at-grade crossings and/or intersections preserves speed and schedule reliability.

In select suburban locations, park-and-ride facilities provide vehicular access to the high capacity transit network. These services require pedestrian and bicycle networks that provides access from adjacent streets and land uses to the regional transit network, especially for areas that cannot be well-served by local transit due to topography, street configuration, or lack of density.

To optimize and leverage transit supportive land uses, the RTP calls for alignments and station locations 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 and prioritized by the System Expansion Policy (see implementation chapter of this report).

[1] See section 2.4.2.4 for description of TriMet Bicycle Parking Design Guidelines.

Types of high capacity transit 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 (limited stop, all day bus service with significant portions of the line running in transit-only right-of-way).
- On-Street Bus Rapid Transit (limited stop, all day bus service, mostly operating in mixed traffic with focused transit priority treatments, such as queue jump lanes). Due to its flexibility, On-Street Bus Rapid Transit can have attributes that are more like High Capacity Transit or like Frequent Service Bus and may be considered as a mode in either, depending on circumstances.
- 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)
- Bicycle stations/parking
- Park-and-ride lots
- Transit Centers
- Transit Stations

Policy 3. Expand region's enhanced transit network - NEW

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 investm more in our transit sytem, particularly the frequent service bus network. The Enhanced Transit Concept (ETC) is new partnerships to produce transit service and investements that provides increased capacity and reliability, yet is relatively low-cost to construct, context-sensitive, and able to be deployed more quickly throughout the region where needed.

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

The RTP calls for HCT alignments and station locations to be oriented towards existing and future high density, mixed-use development.

rapid transit with fully dedicated lanes.

ETC partnerships could also create quicker, 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 congestion and grow ridership throughout the region.

ETC increase capacity, reliability, and transit travel speed. These types of investments are necessary because buses are work horses in the Portland metropolitan region; they carry significant ridership – some lines, such as the #4 and #72 carry as much as MAX lines. Although our population is constantly growing and transit ridership is growing in absolute numbers as a result, the percentage of people that use transit to get to work has stayed constant at 12%. Enhanced transit is therefore a way to improve transit service and access without the capital investments that light rails require. They have additional benefits; they are more flexible and context sensitive, they can be deployed relatively quickly, and they can include buses or streetcars.

Preferential treatments, such as transit signal priority, covered bus shelters, curb extensions, special lighting, enhanced sidewalks, protected crosswalks and bikeways, 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 x describes the different types of treatments that have the potential to improve reliability.

Table x. 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	Bikes behind station
Bus stop consolidation	Left-side bike lanes
Rolling stock modification	Dedicated bike signal
Transit signal priority and signal improvements	Shared bus/bike zone
	Curb extension at stops/stations
	Far-side bus stop placement
	Street design traffic flow modifications

Policy 4. Expand regional and local frequent service transit

Frequent service transit has service running every 15 minutes or better from the early morning to late in the evening, seven days a week. Its elements include additional service, reliability improvements, distinctive branding, improved passenger facilities at bus stops,

enhanced pedestrian access and modern low-floor buses. 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 (that is, a ten minute wait for a five-minute ride is less attractive than a ten-minute wait for a sixty-minute ride).

In parts of the region where development focuses on regional and town centers and station communities, the RTP recommends providing radial frequent transit service to serve these centers. 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.

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 suburban 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)
- Enhanced Transit elements
- Regional transit centers and stops
- Bicycle stations/parking
- Park-and-ride facilities

Policy 5. 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 demand for transit service, but not enough to support frequent service. Local transit is deisngd to provide full transit service converage 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.

Improving local transit service is essential to our goal of aligning the frequency and type of transit service to meet existing and projected demand in support of adopted local and regional land use and transportation plans. It increases the convenience of transit, particularly for areas without frequent service transit, and it also expands community and regional transit service across the region that improves access to jobs and community places.

Types of local transit services include:

- Local Bus
- Para-Transit
- Tram
- Employer Shuttle Service

Policy 6. Support expanded commuter rail and intercity transit service to neighboring communities

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 HCT 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:

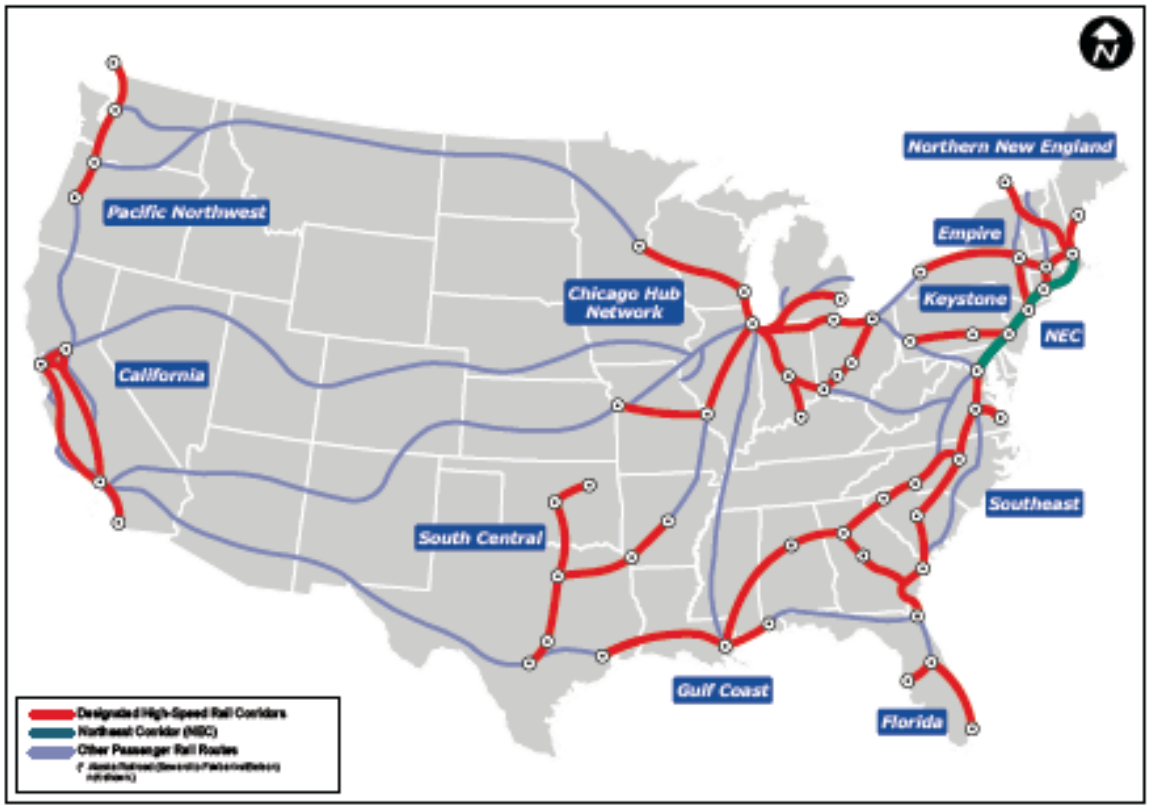
- **Nonviable corridors.** Hood River, Scappoose and Sandy are not viable commuter rail markets given current and projected conditions. Even considering a very low capital cost to construct these corridors, any metric of cost per passenger served would be very high.

- **Potential 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 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 recently passed House Bill 2408, which directs ODOT to study the possible extension of commuter rail service from Wilsonville to Salem.

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 x**, 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. More information about current efforts to support high speed rail are described in chapter 6.

Figure x
U.S. Intercity Passenger Rail Network



Source: U.S. Department of Transportation, Vision for High-Speed Rail in America (April 2009)

Policy 7. Improve pedestrian, bicycle access to transit

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. 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 and seating at stops and stations;
- 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;

- 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 systems in plans.

Polciy 8. Maintain and update old and aging infrastructure - NEW

While our transit system is still relatively new for a big city, it is becoming increasingly important to invest in its upkeep. As our infrastructure 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. 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. In addition, the Federal Transit Administration's State of Good Repair program is dedicated to helping 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.

Because of the recession in 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 we have since moved away from having one of the oldest bus fleets in the country to an industry standard average fleet 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, our light rail system will soon be in need of repairs and upgrades.

It's also important that we begin to think about the capacity of our transit system. As our region grows and ridership on our public transportation system is ever increasing, we are starting to push up against the limits of what our existing infrastructure can handle. This creates more bottlenecks throughout the region, increasing congestion and decreasing the reliability of our transit system. Some lines have too 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 later ones. In order to make transit more reliable and convenient, these factors must also be addressed. The FTA's Core Capacity grants help fund projects that increase the capacity of corridors that are at or over capacity or will be in five years by 10%.

Some recent maintenance projects and improvements that Trimet has undertaken in FY17 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 upgrades to 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.

Policy 9. Ensure that transit remains affordable - NEW

The cost of transportation burdens households in the metropolitan region. In 2010, the average household in the Portland region spent approximately 13.7 percent of its income on transportation, a number that is projected to hold steady from 2010 to 2040. 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 remains 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 makes it more convenient, attractive, accessible, and competitive with driving, particularly for short trips. It also 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 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.

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. Other cities are also doing their part to ensure that transit is affordable; SMART (South Metro Area Regional Transit) is free when traveling within the city of Wilsonville.

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.

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 recommeded a low income fare program where adults at or below 200 percent of the federal proverty 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.

Policy 10. Use shared mobility to increase and improve first/last mile connections to transit

Advances in technology have given rise to new transportation options that make it easier for people to share vehicles and rides. 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.
- 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.

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 out.

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 mgiht 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 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 take TNCs 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. Agencies can also subsidize TNC trips to and from transit stations.

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 OpenTripPlanner 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. Making it possible to book and pay for multimodal trips on a single platform could make transit-shared mobility connections even more convenient.

There are two imporant 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, as well as traditional fare media and schedules, can help these people continue to access transit.

Design and manage 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.

Policy 11. Use emerging technologies to provide better, more efficient service—beginning with the people for whom conventional transit doesn't work.

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 on 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 and TNCs 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 resdinets, but also increase resources available to serve high-demand corridors. Over the longer term, 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.

Memo

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Date: Wednesday, February 07, 2018
To: 2018 Regional Transportation Plan (RTP) Update: Regional Transit Work Group
From: Jamie Snook, Principal Planner
Subject: Transit System Expansion Policy Update: Evaluating our Investment Strategy

The purpose of this memorandum is to provide an update on the Transit System Expansion Policy (TSEP), including the proposed evaluation process, projects considered and next steps. The proposed evaluation process aligns with recent regional priorities including the six desired outcomes for the Portland metropolitan region, the Climate Smart Strategy outcomes related to transit and the RTP System Performance Measures. It also aligns with the Federal Transit Administration's (FTA) Capital Investment Grant (CIG) program, which provides capital funding for high-capacity transit projects. Finally, the proposed process was informed by a review of peer practices for prioritizing high capacity transit investments. The TSEP evaluation framework aims to identify transit corridor capital projects that best meet regional outcomes and position projects for potential federal and other funding opportunities.

Background

In 2010, Metro adopted the High Capacity Transit (HCT) Plan, a comprehensive assessment of existing and future high capacity transit investments. A total of 18 potential high capacity transit corridors were prioritized and placed into tiers of near term regional priority corridors (tier 1), next phase regional priority corridors (tier 2), developing regional priority corridors (tier 3) and regional vision corridors (tier 4). Today, two of the three "tier 1" projects are moving towards implementation:

- The Division Transit Project is in Project Development, under the FTA Small Starts program; and
- The Southwest Corridor Transit Project and Shared Investment Strategy is completing the necessary environmental analysis, under FTA and the National Environmental Policy Act (NEPA).

With the Division and Southwest Corridor Transit Projects moving forward, there is a need to identify the next HCT corridor to moving towards implementation. The TSEP element of the Regional Transit Strategy will identify how to prioritize transit that would eligible for the FTA New and Small Starts CIG Program.

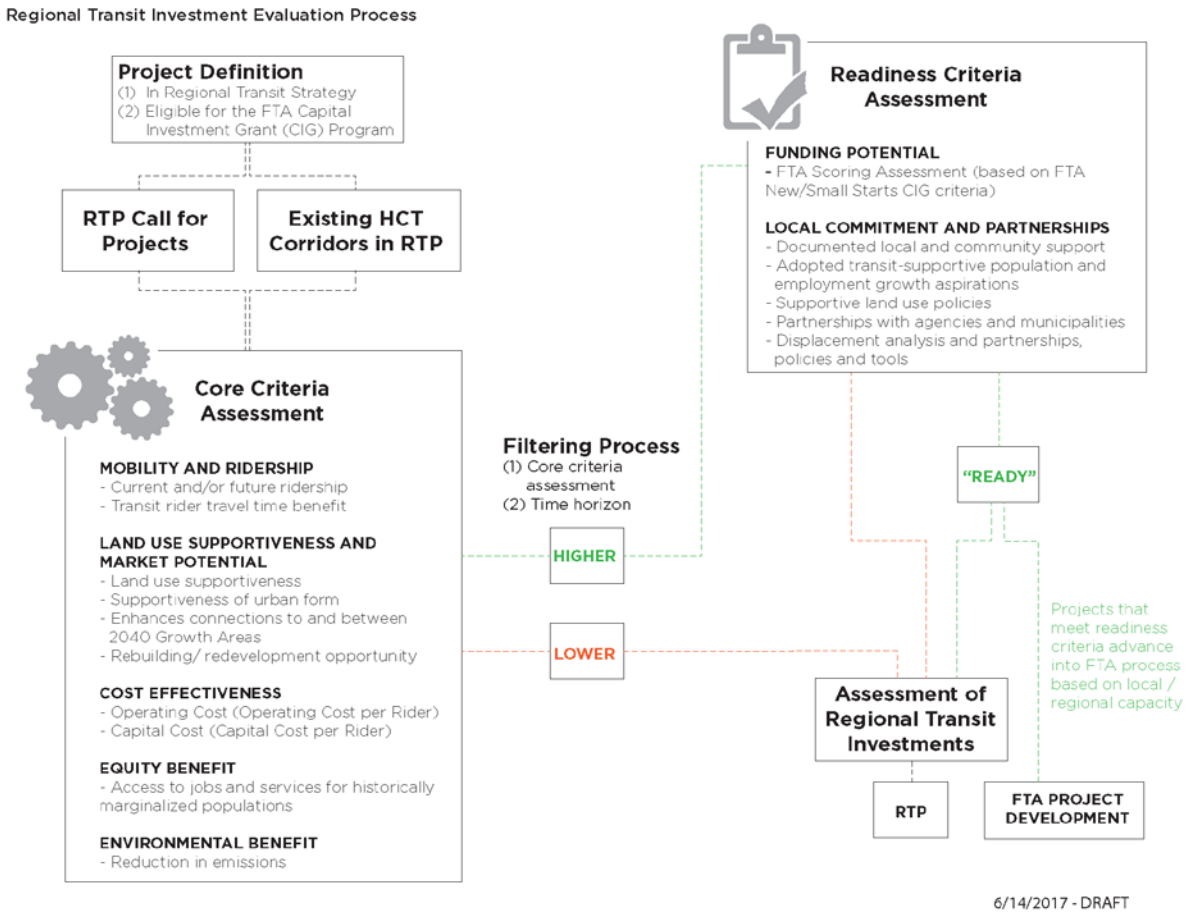
As we are updating the TSEP, the key elements to the update include:

- **Reduce the number of criteria** by eliminating duplicative measures, those not commonly used in peer processes, and certain qualitative measures that can instead become an element of a project justification narrative section of Metro's process of submitting projects for the Regional Transportation Plan (RTP).
- **Focus the core evaluation** measures on those elements that describe the benefit of the project, consistent with regional values, as well as measures that enhance the competitiveness of projects in the FTA CIG program.
- **Evaluate project readiness** separately for the highest priority projects. Project readiness factors include funding potential (aligned with FTA criteria) and local aspirations (measure local commitment and established agency partnerships to ensure successful project delivery)

Proposed Evaluation Process

Figure 1 below identifies the proposed process, including how projects are defined (e.g., which projects are run through this process), the proposed criteria, and the outcomes of the process.

Figure 1 TSEP Corridor Evaluation Process



Source: Nelson\Nygaard Consulting Associates, Inc.

The TSEP would be applied projects that are corridor-based transit projects and meet the federal CIG program eligibility requirements for Fixed Guideway (including light rail and commuter rail), Fixed Guideway BRT, Corridor-Based BRT, and Core Capacity projects.

The TSEP includes a multi-phased evaluation that includes core criteria as well as readiness criteria. The Core Criteria is comprised of measures that describe the benefit of the projects, consistent with regional values, as well as assess the competitiveness of projects for funding through the FTA CIG program. The Readiness Criteria is the second filter and is evaluated separately from the core criteria assessment for the highest priority projects. Project readiness factors include funding potential (a simulated scoring based on the FTA CIG program criteria) and local aspirations (measure of local commitment and established agency partnerships to ensure successful project delivery).

Key Evaluation Assumptions

- **Assumed Mode**. Not all projects submitted for evaluation will have had sufficient planning completed to define the exact mode of the transit corridor project. An assumed mode is, however, required for including the project in the regional travel model and for several of the proposed criteria that are based on model outputs. Therefore, project sponsors will be asked to compare their project to the minimum criteria for each of the general FTA project types and to select the most likely type.
- **Travel Time.** A travel time assumption will be based on the project type, level of corridor delay, and amount of the project operating in exclusive right of way. For the regional travel model to evaluate ridership and the travel time benefit of the project, the sponsor will need to define the approximate portion of the project that will operate in an exclusive right of way.
- **Feasibility.** For those projects that advance to the Readiness Criteria evaluation, a feasibility element will include a high-level assessment to identify areas where achieving the proposed amount of dedicated right of way may be challenging and to evaluate if there has been some level of agreement with the owner of the roadway about the stated right of way assumptions.

The Regional Transit Investments evaluation is a quantitative method for identifying which projects are most ready for the region to advance for potential funding by the FTA CIG Program. The outputs of this evaluation will be a visual snapshot illustrating the strengths and weaknesses of each project and will allow project sponsors to understand opportunities to enhance how a given project will score in future evaluations.

Recommended Regional Transit Investments Evaluation Criteria

Table 1 describes the proposed evaluation criteria and identifies the rationale and other notes related to the proposed analytical methods.

Criteria	Rationale/Notes
Mobility and Ridership	
Current and/or future ridership	▪ Ridership is a core measure of transit project benefit. ▪ Consistent with FTA, average existing and future ridership
Transit rider travel time benefit	▪ Travel time benefit to the user demonstrates the effectiveness of the project and is an important part of attracting ridership. ▪ Average travel time benefit per rider
Land Use Supportiveness and Market Potential	
Land use supportiveness	▪ Align with FTA Land Use evaluation measure. ▪ Existing corridor and station area development and character [pop. and employ. as well as urban design characteristics that exist today] ▪ Proportion of existing "legally binding affordability restricted" housing within ½ mile of station areas to the proportion of "legally binding affordability restricted" housing in counties through which the project travels [local or national data]
Supportiveness of urban form	▪ Street and block density impacts transit access. ▪ Measure the comprehensiveness of pedestrian and bicycle networks. Comprehensiveness of existing and planned pedestrian and cycling networks (source: RLIS data and submitted RTP projects). FTA evaluates existing station area pedestrian facilities, including access for person with disabilities [direct routes, continuous sidewalks, crossings]
Enhances connections to and between 2040 Growth Areas	▪ Transit is a key component of supporting the 2040 Growth Concept. (Central City, Regional Centers, Town Centers, Freight and Passenger Intermodal facilities, Employment areas, Industrial areas) ▪ Consider adapting measure to evaluate network connections using HCT + frequent network. This approach could illustrate how the corridor investment benefits the major O-D pairs between the growth centers connected.
Rebuilding/ redevelopment opportunity	▪ Catalyzing redevelopment is a benefit of investment in high quality transit. ▪ Consider aligning with existing Metro GIS data sources (e.g., TOD Strategic Plan).

Criteria	Rationale/Notes
Cost Effectiveness	
Operating Cost (Operating Cost per Rider)	▪ Aligns with FTA Cost-Effectiveness criterion. ▪ If mode and/or operating plan has not been determined, use typical operating cost per hour for a range of potential modes (LRT, BRT, Arterial BRT, Commuter Rail, and Streetcar) and an assumed service plan
Capital Cost (Capital Cost per Rider)	▪ Aligns with FTA Cost-Effectiveness criterion. ▪ If mode has not been determined, use typical capital cost per mile for a range of potential modes (LRT, BRT, Arterial BRT, Commuter Rail, and Streetcar) ▪ Federal measure is only based on federal share; so could have an assumed federal share for the purposes of evaluation.
Equity Benefit	
Access to jobs and services for historically marginalized populations	▪ The equity benefit of transit investments is an important value in the Portland and peer regions and CIG evaluation. ▪ Alignment with RTP system performance measure: The access to jobs and community places system performance measures
Reduction in emissions	▪ Aligning transit service with demand and land use is cost-effective way to reduce emissions. ▪ Model is not sensitive enough to produce this output on a corridor basis.
Funding Commitment/Partnerships/Local Support (Readiness Phase)	
Local Commitment and Partnerships	▪ Local commitment and partnerships between jurisdictions and agencies are essential for the implementation of large regional transit projects. ▪ Qualitative scoring of local interest and ability to deliver project. ▪ Feasibility assessment to evaluate if there has been some level of agreement with the owner(s) of the roadway about the stated right of way assumptions
Funding Potential	▪ For projects that would seek federal funding, assess project strength based on the CIG program criteria. ▪ As identified in the Federal CIG program, includes criteria similar to many of the proposed criteria.

Source: Nelson\Nygaard Consulting Associates, Inc

Projects to be Evaluated

Projects to be evaluated through this process include the HCT projects plus streetcar projects that were submitted to Metro as part of the 2018 RTP call for projects in August of 2017. These projects became the project list for initial evaluation using the proposed criteria and evaluation framework.

Since we don't have the time and resources to model each project separately, these projects were divided into three bundles. Projects were grouped together based on geographies and minimizing overlapping projects or in close proximity, in order to try and capture as much of the project specific benefit as possible. The bundles below show the three bundles of HCT and Streetcar projects from the 2018 RTP project list.

Bundle 1:

- BRT to Oregon City
- Red Line extension
- Streetcar extension to Montgomery Park
- LRT Portland to Vancouver

Bundle 2:

- Streetcar from Montgomery Park to Hollywood Transit Center
- Steel Bridge Improvements
- Blue Line extension to Forest Grove

Bundle 3:

- Commuter Rail all day service
- Streetcar extension to John's Landing
- Streetcar extension on MLK
- Amberglen Streetcar

Individual corridor modeling and analysis typically happens when a corridor is defined and there is a planning process for that specific corridor. During the project planning phase, the regional travel demand model, as well as other planning tools, can be utilized at a corridor level to identify specific benefits and tradeoffs.

Next Steps

We are running the model and three bundles and will report back to the Transit Work Group on the results. We will provide the Transit Work Group with the results of each criterion for each corridor listed above. This information will be presented in a visual snapshot illustrating the strengths and weaknesses of each project and will allow project sponsors to understand opportunities to enhance how a given project will score in future evaluations.

Regional Enhanced Transit Concept Workshop Schedule

Workshop 1: Clackamas County | 1/25/2018 | 9:00 – 1:00pm

33 5th & Washington (Oregon City) to Oregon City Transit Center
33 SE McLoughlin & Jennings to Oregon City Transit Center
35 Pacific Hwy & Furman to Lake Oswego Transit Center
72 Clackamas Town Center Mall to SE 82nd & Flavel

Workshop 2+3: Portland: Central City (overlap with CCIM) | 2/1/2018 | 9:00 am – noon/1:00 – 4:00pm

- Precise list to be determined via mapping

Workshop 4+5: Portland: Central City | 2/8/2018 | 9:00 am – noon/1:00 – 4:00pm

- Precise list to be determined via mapping

Workshop 6: Washington County | 2/14/2018 | 9:00am – 1:00pm

52 TV Highway to 26 in full – skip the segment north of 26
48 185th and Saltzman

Workshop 7: Portland: NON Central City | 2/22/2018 | 1:00 – 5:00pm

73 122nd & Burnside to 122nd & Shaver
73 122nd & Burnside to 122nd & Powell/Rhone
75 N Lombard & Portsmouth to Lombard TC

Workshop 8: Multnomah County | 3/1/2018 | 9:00am – 1:00pm

77 Broadway/Halsey NE 201st to NE Marine Drive
87 181st Avenue
Clackamas to Columbia
Hogan Division to Halsey

Workshop 9: Portland: NON Central City | 3/8/2018 | 9:00am – 1:00pm

20 E Burnside & NE 82nd to E Burnside & Chavez
20 E Burnside & SE 82nd to SE Stark & 122nd
20 E Burnside & SE Sandy/NE Couch to E Burnside & SE Chavez

Workshop 10: Washington County | 3/14/2018 | 9:00am – 1:00pm

12 Barbur TC to Tigard TC; both directions
76 SW Boones Ferry Rd & Seneca to Tualatin Park & Ride
76 Beaverton Transit Center to SW Hall & Hart; both directions

Workshop 11: Portland: NON Central City | 3/22/2018 | 1:00 – 5:00pm

14 SE Hawthorne & 12th to SE Hawthorne & Chavez
14 SE Hawthorne & Chavez to SE Foster & Powell
15 Gateway TC to SE 102nd & Washington

Workshop 12: Portland: NON Central City | 4/5/2018 | 9:00am – 1:00pm

44	SE Capitol & 25th to SW Capitol & Sunset
12	E Burnside & SE Sandy to NE Sandy & 42nd
12	Parkrose/Sumner TC to NE Sandy & 82nd

Workshop 13: Washington County | 4/12/2018| 9:00am – Noon

57	TV Highway revisited

Workshop 14: Oregon Department of Transportation | 4/19/2018 | 9:00am – 1:00pm

Any/all segments expected/desired to proceed in/on ODOT Facilities

Regional Transit Strategy

a component of the 2018 RTP

Regional Transit Strategy Work Group

Meeting #18

February 15, 2018

Today's agenda…

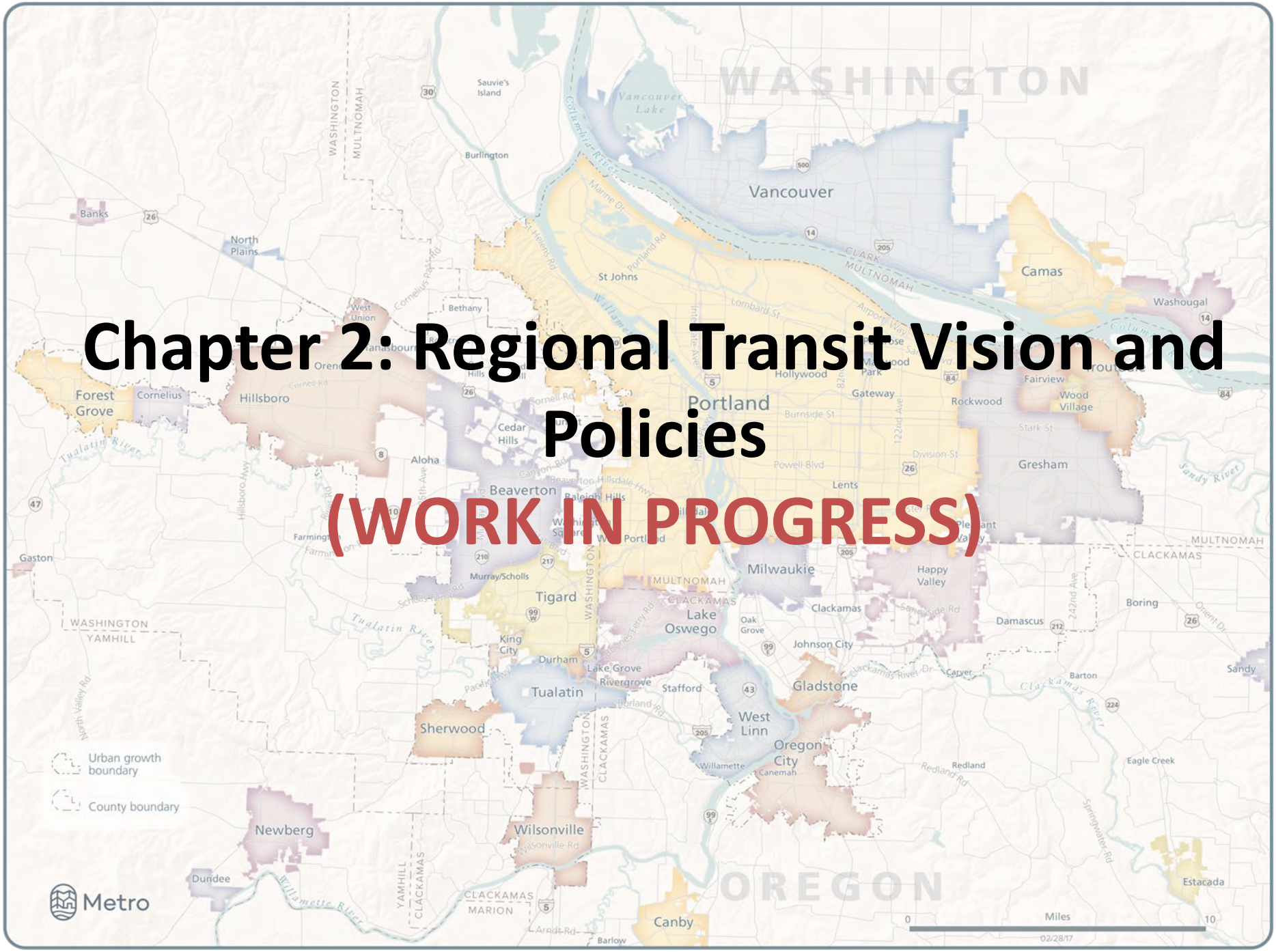
Welcome and introductions

Draft Transit Policies

Transit System Expansion Policy update

Enhanced Transit Concept (ETC) Update

Next steps



Chapter 2: Regional Transit Vision and Policies

(WORK IN PROGRESS)

Transit Policy Chapter

Re-organized

Added language about the transit vision (to make transit more frequent, convenient, accessible and affordable for everyone)

Existing policies remain

Minor edits to existing policies

New policies being added

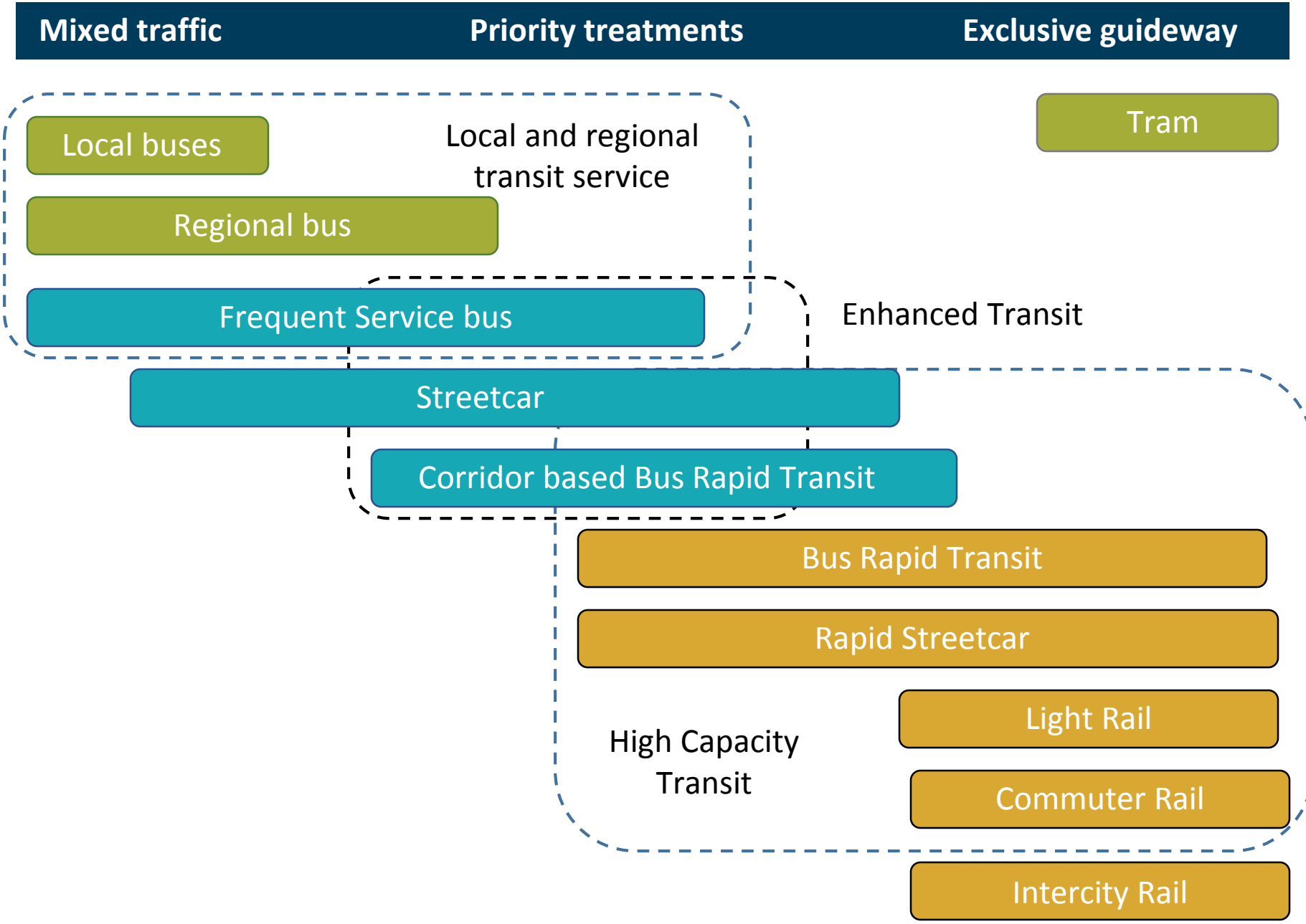
Policy Chapter layout

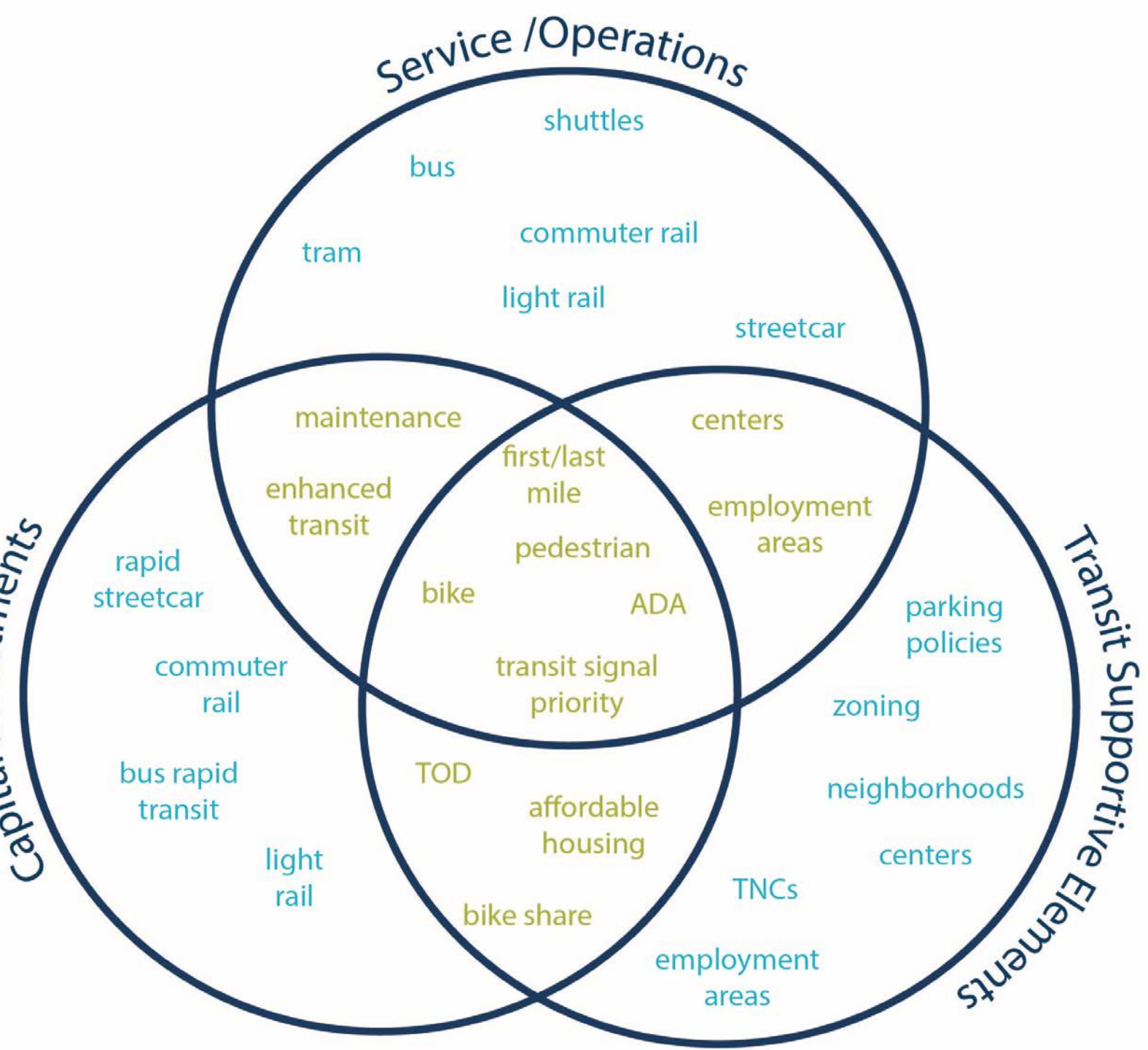
Transit vision: make transit more frequent, convenient, accessible and affordable

Regional Transit Spectrum

Regional Transit Network Map

Regional Transit Policies


Mixed traffic
Priority treatments
Exclusive guideway
Local buses
Local and regional transit service
Regional bus
Tram
Frequent Service bus
Enhanced Transit
Streetcar
Corridor based Bus Rapid Transit
Bus Rapid Transit
Rapid Streetcar
Light Rail
High Capacity Transit
Commuter Rail
Intercity Rail


Service /Operations
shuttles
bus
commuter rail
tram
light rail
streetcar
Capital Investments
maintenance
enhanced transit
rapid streetcar
commuter rail
bus rapid transit
light rail
Transit Supportive Elements
centers
employment areas
parking policies
zoning
neighborhoods
centers
TNCs
employment areas
first/last mile
pedestrian
bike
ADA
transit signal priority
TOD
affordable housing
bike share

Five new transit policies

Eleven policies form the foundation of this vision:

1. Build the total network and transit-supportive land uses to leverage investments
2. Expand high capacity transit
3. **Expand the region's enhanced transit network - NEW**
4. Expand regional and local frequent service transit
5. Improve local service transit
6. Support expanded commuter rail and intercity transit service to neighboring communities
7. Improve pedestrian and bicycle access to transit
8. **Maintain and update old and aging infrastructure - NEW**
9. **Ensure that transit remains affordable – NEW**
10. **Use shared mobility to increase and improve first/last mile connections to transit - NEW**
11. **Use emerging technologies to provide better, more efficient service – beginning with the people for whom conventional transit doesn't work - NEW**

Policy 3. Expand region's enhanced transit network - NEW

- Build capacity and reliability in our frequent service transit network
- Make investments in our system that are relatively low cost to construct and context sensitive
- Investments should be deployed quickly
- Build partnerships
- Regional, corridor or hotspot improvements

Policy 8. Maintain and update old and aging infrastructure - NEW

- Maintaining new infrastructure to limit wear and tear
- Improve aging components as new technology emerges
- Phasing out and replacing old elements as they the end of their normal life span

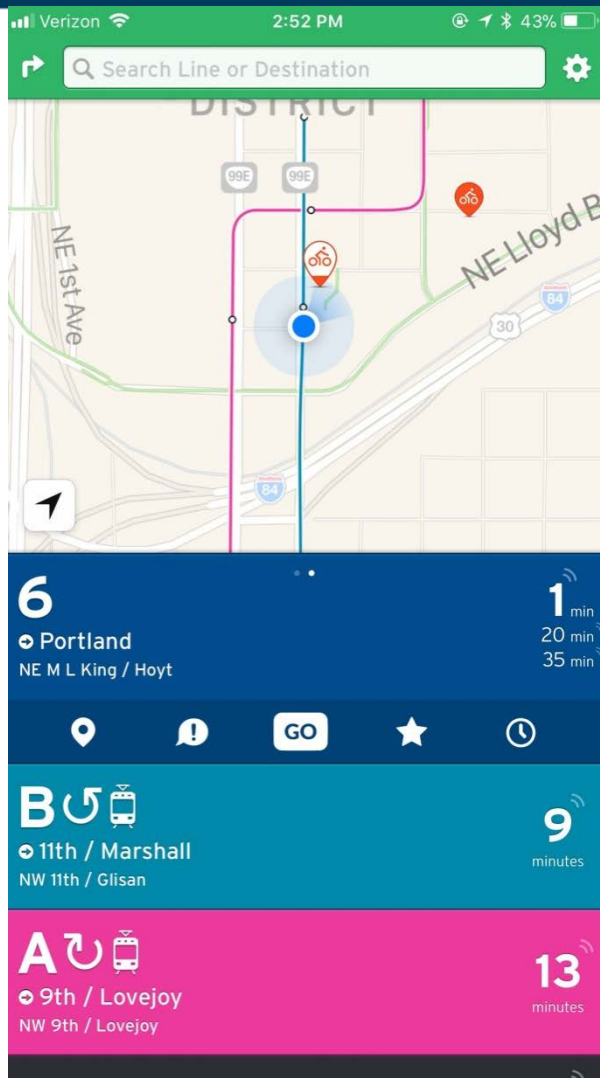
Policy 9. Ensure that transit remains affordable - NEW

- Provide reduced fare for seniors and youth
- Provide student passes for those in high school or pursuing a GED
- Provide a low income fare program
- Provide payment options, like the Hop Fastpass

Policy 10. Use shared mobility to increase and improve first/last mile connections to transit - NEW

Improve connections between shared mobility and transit

- Dedicate space for shared mobility at transit stations.
- Coordinate with shared mobility companies to provide shared connections to transit stations.
- Make it easy to plan and book transit and shared mobility trips. Design and manage streets to prioritize transit and shared travel.



Policy 11. Use emerging technologies to provide better, more efficient service—beginning with the people for whom conventional transit doesn't work - NEW

New shared mobility like microtransit and TNCs could provide better service at a lower cost for people with disabilities, areas where fixed route service doesn't make sense.

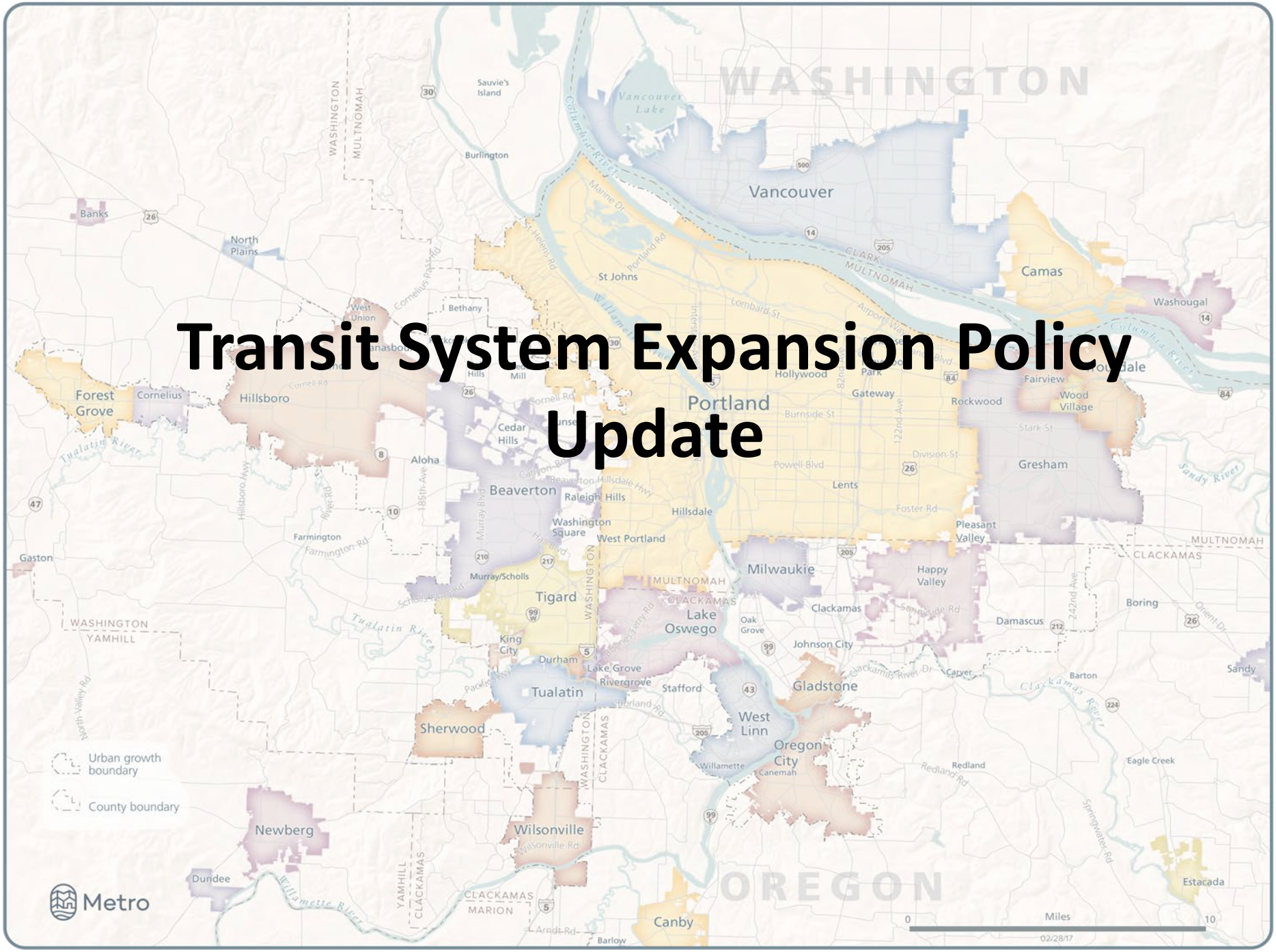
Agencies should look for opportunities to supplement demand response and underperforming service with shared mobility.

- Could provide better service for underserved and transit-dependent residents
- Could increase resources available towards high demand corridors.

Over the longer term, 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 Work Group Homework

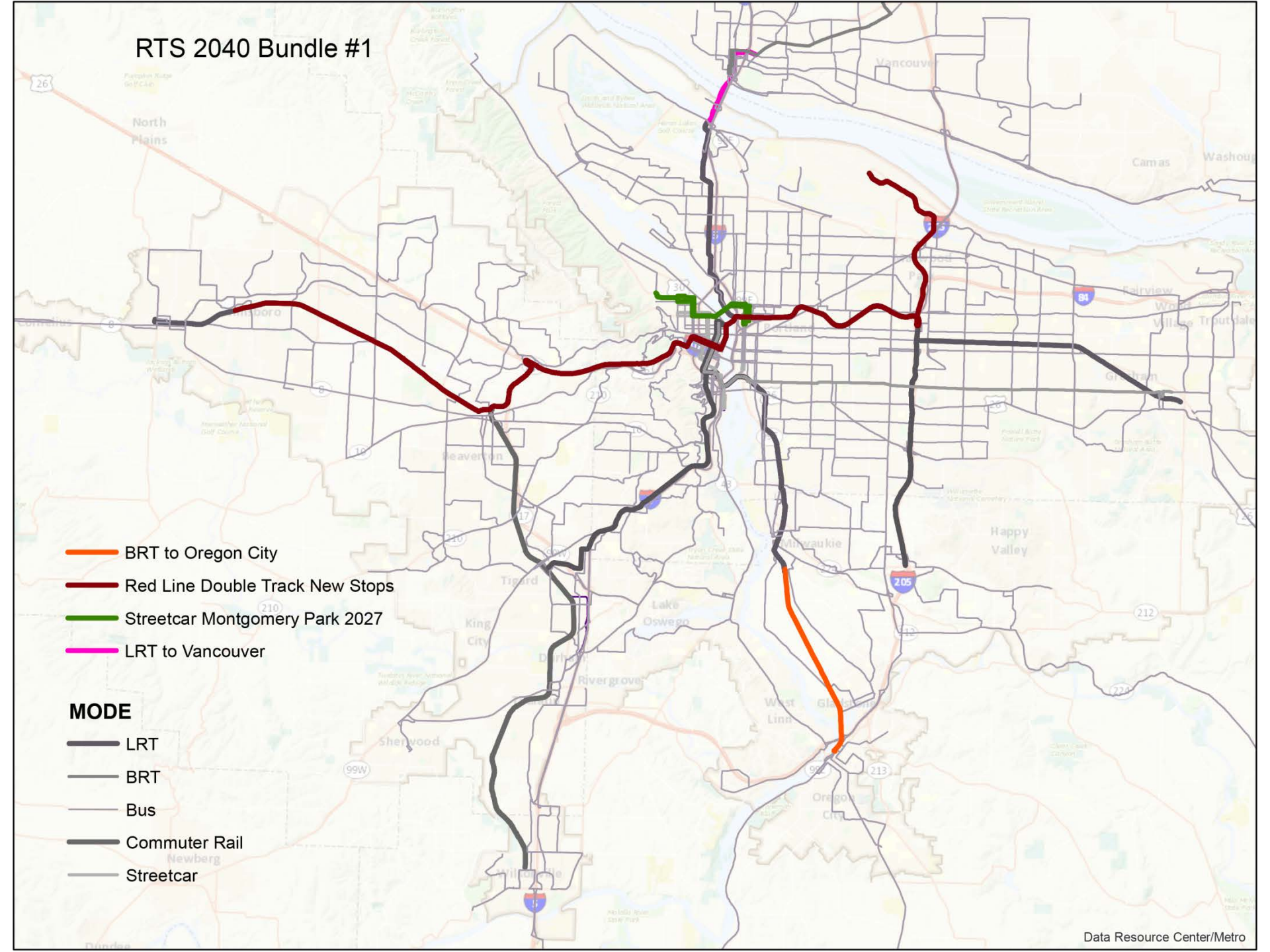
- Questions? Thoughts?
- Review policy chapter
- Provide feedback by March 2, 2018

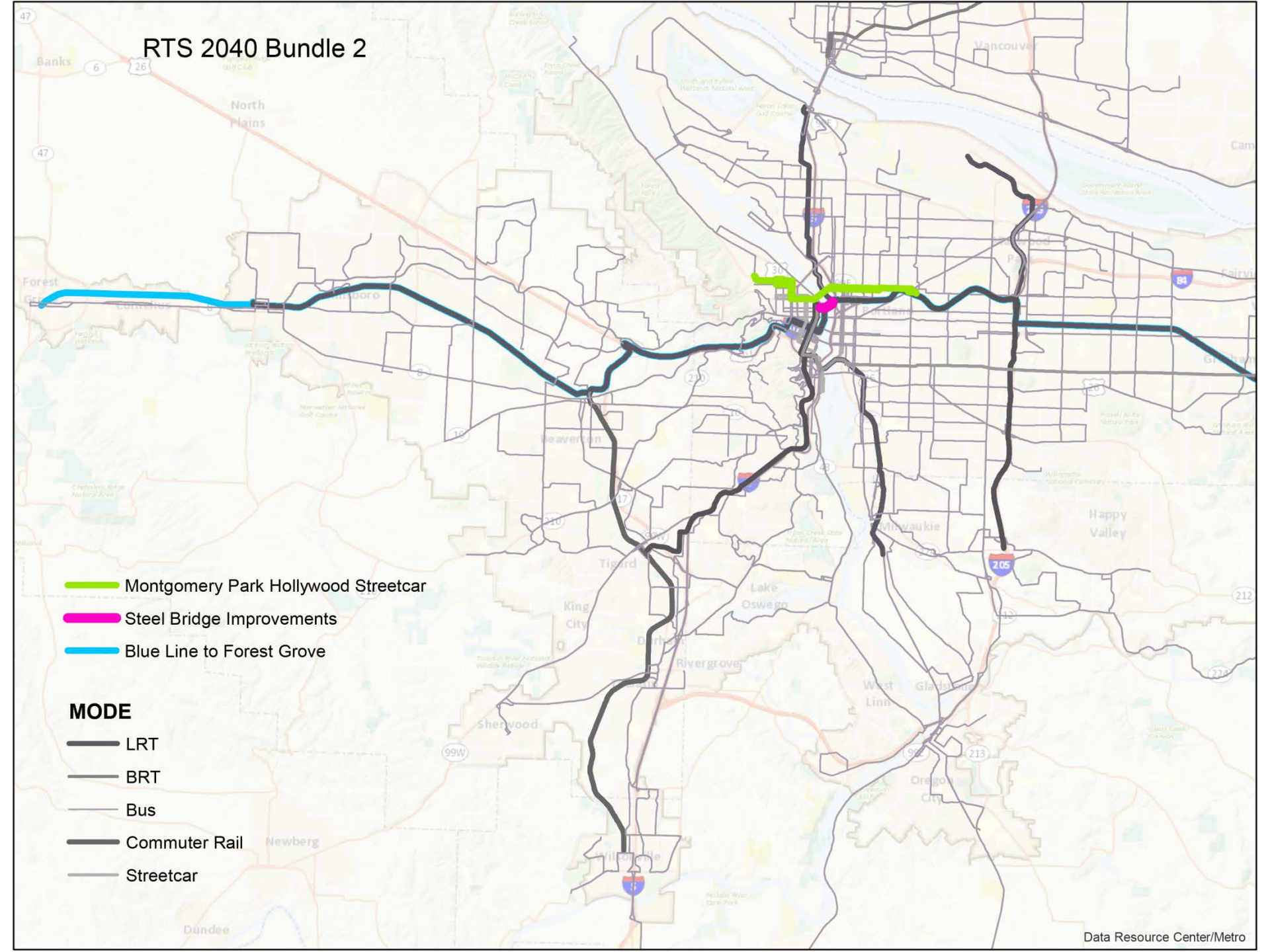

Transit System Expansion Policy Update
WASHINGTON
OREGON
Vancouver
Portland
Gresham
Hillsboro
Beaverton
Tigard
Lake Oswego
Tualatin
Sherwood
Newberg
Wilsonville
Oregon City
West Linn
Gladstone
Milwaukie
Camas
Washougal
Forest Grove
Cornelius
North Plains
Banks
Aloha
Cedar Hills
Raleigh Hills
Washington Square
West Portland
Hillsdale
Multnomah Village
Happy Valley
Clackamas
Damascus
Boring
Sandy
Estacada
Canby
Barlow
Sauvie's Island
Burlington
St Johns
Hollywood
Gateway
Rockwood
Fairview
Wood Village
Pleasant Valley
Lents
Foster Rd
Powell Blvd
Division St
Stark St
Burnside St
Lombard St
Columbia River
Willamette River
Tualatin River
Sandy River
Clackamas River
Urban growth boundary
County boundary
Metro
0
10
Miles
02/28/17

Transit System Expansion Policy

Projects eligible for New/Small Starts funding under the FTA Capital Investment Grant program

HCT (light rail, bus rapid transit and commuter rail) and streetcar projects


RTS 2040 Bundle #1
BRT to Oregon City
Red Line Double Track New Stops
Streetcar Montgomery Park 2027
LRT to Vancouver
MODE
LRT
BRT
Bus
Commuter Rail
Streetcar
Data Resource Center/Metro


RTS 2040 Bundle 2
Montgomery Park Hollywood Streetcar
Steel Bridge Improvements
Blue Line to Forest Grove
MODE
LRT
BRT
Bus
Commuter Rail
Streetcar
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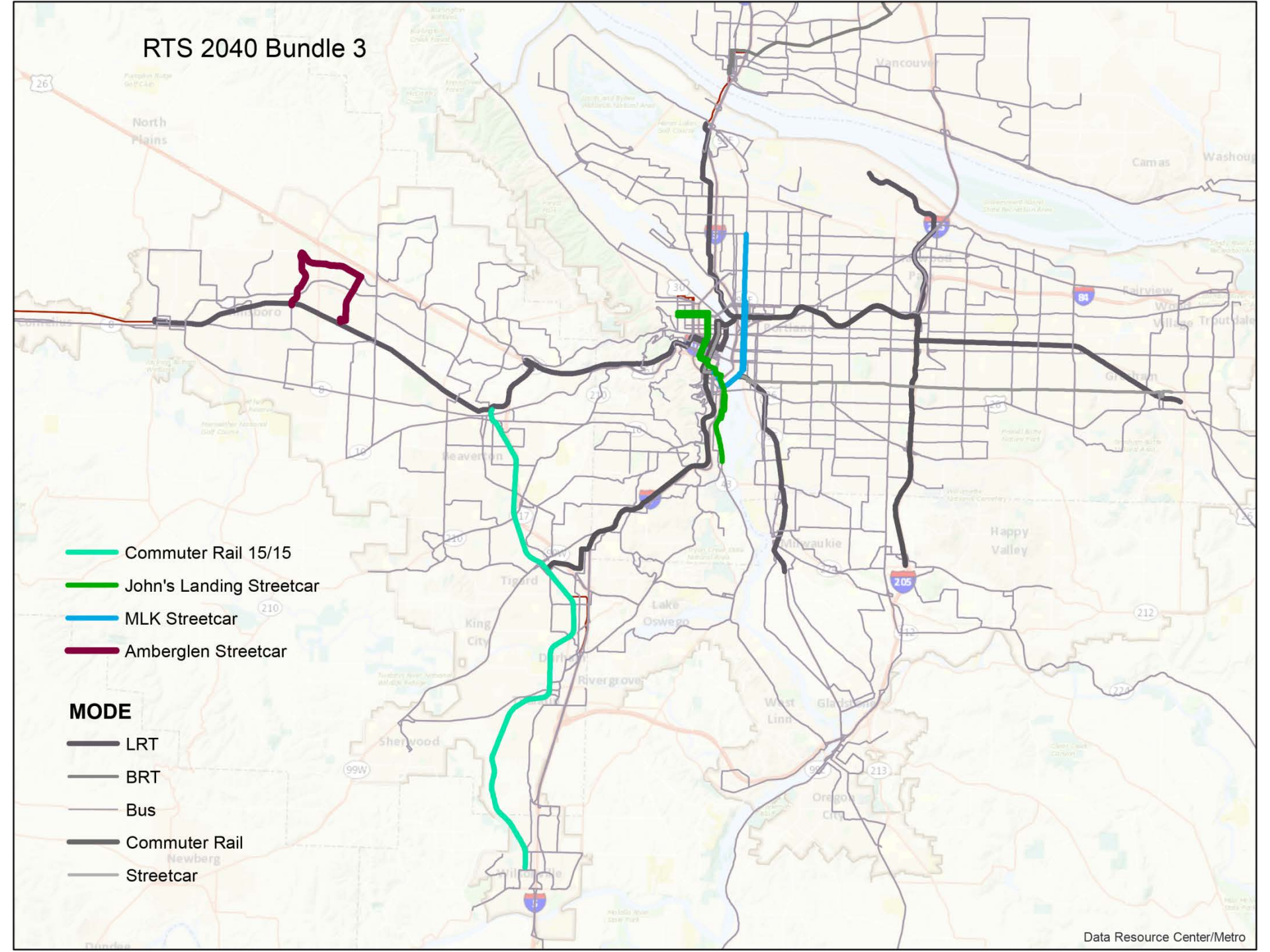
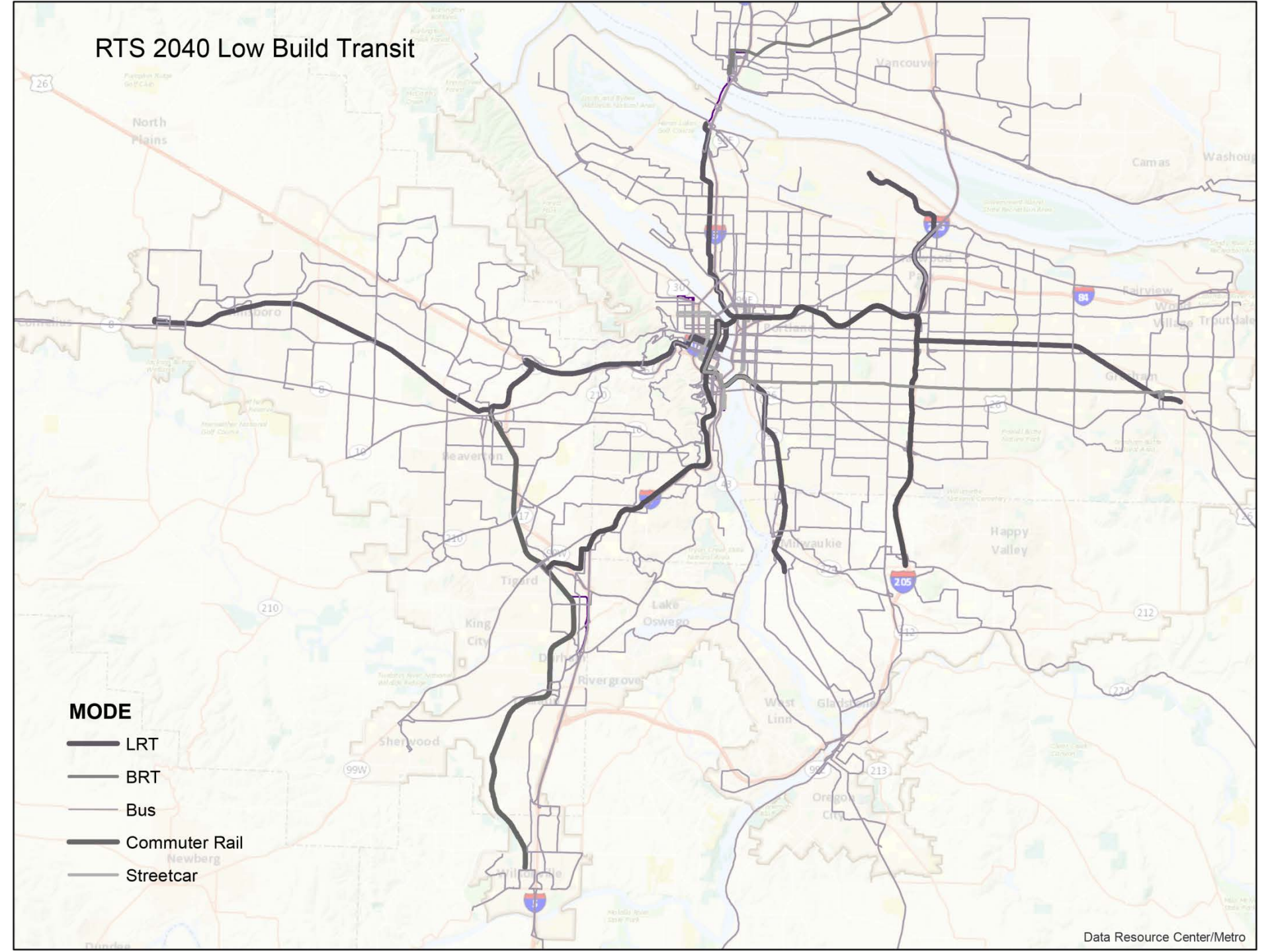
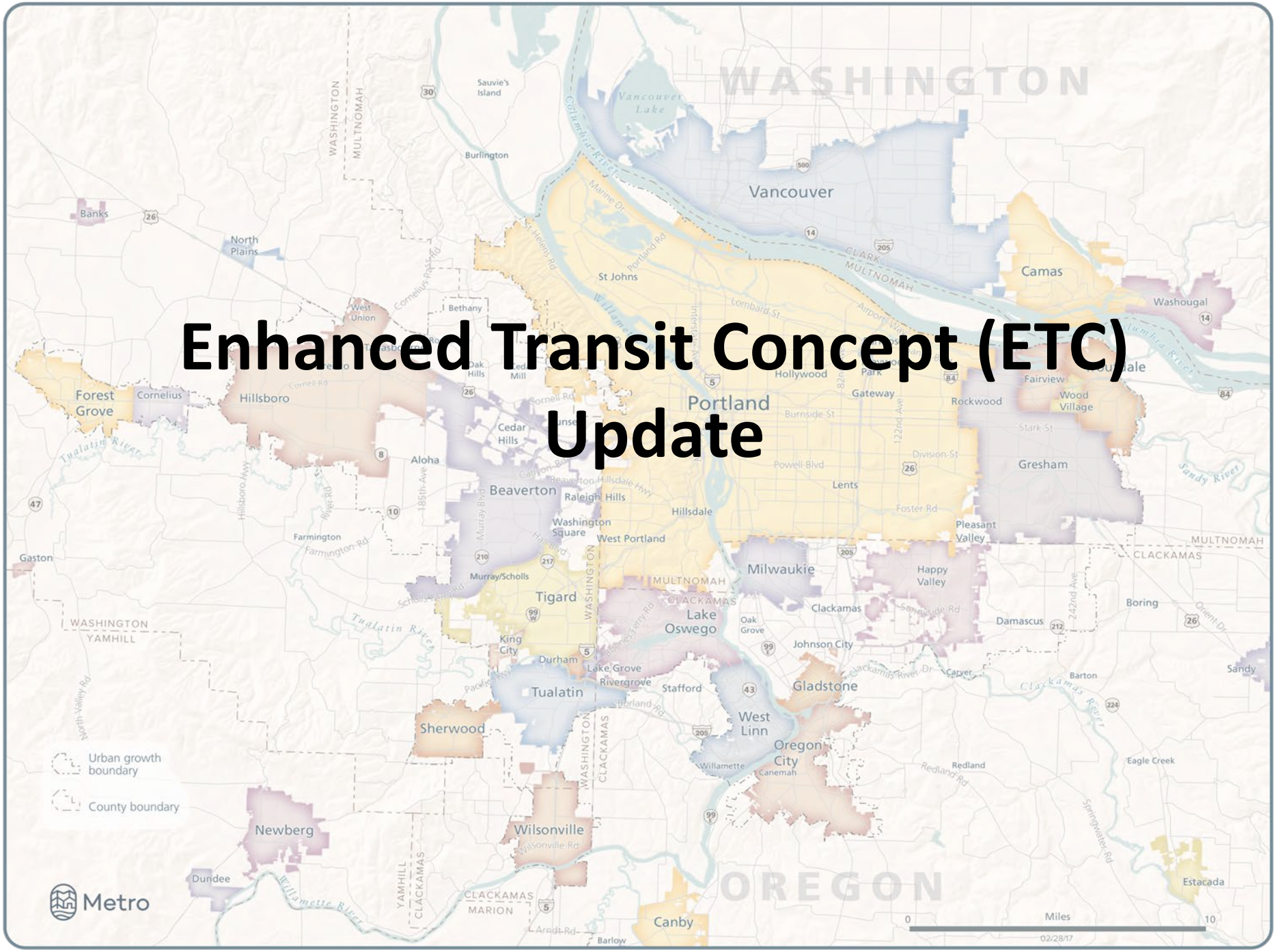
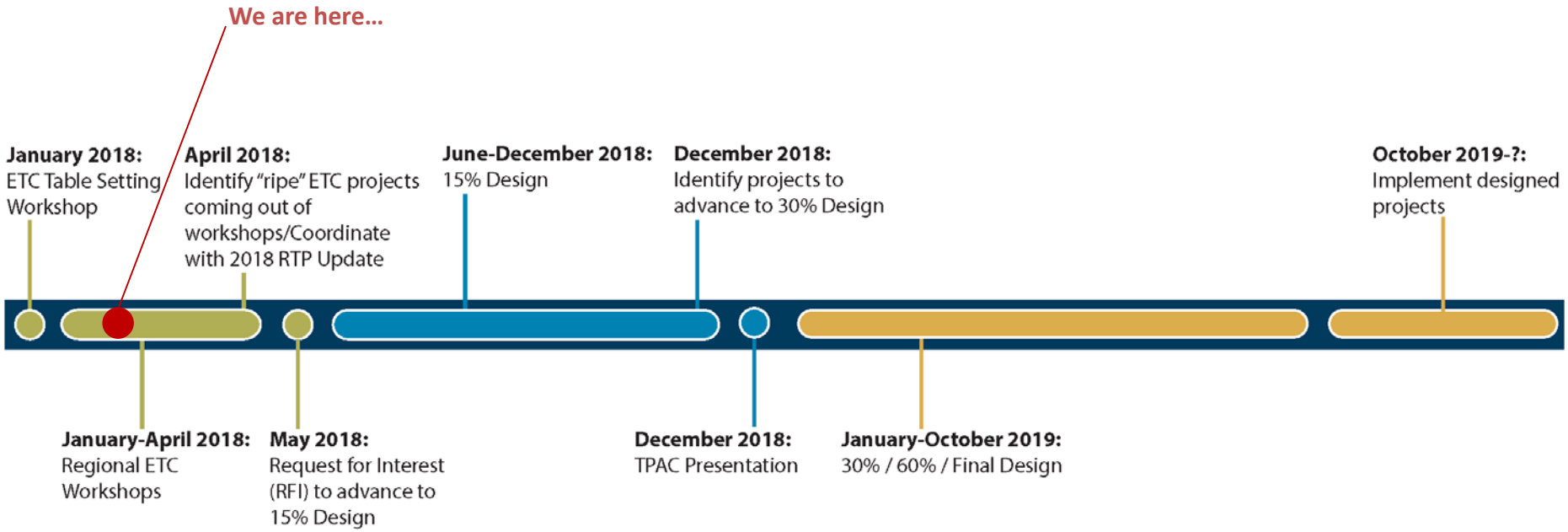

RTS 2040 Bundle 3
Commuter Rail 15/15
John's Landing Streetcar
MLK Streetcar
Amberglen Streetcar
MODE
LRT
BRT
Bus
Commuter Rail
Streetcar
Data Resource Center/Metro


RTS 2040 Low Build Transit
MODE
LRT
BRT
Bus
Commuter Rail
Streetcar
Data Resource Center/Metro

Enhanced Transit Concept (ETC) Update



ETC Schedule



Segments to be studied

Washington County –

12	Barbur TC to Tigard TC; both directions
✓ 52	Willow Creek Transit Center to NW 185th & West Union; both directions
✓ 52	NW 185th & West Union to PCC Rock Creek Layover;
✓ 52	SW Farmington & Murray to SW 185th & Tualatin Valley Hwy
57	TV Highway – Beaverton Transit Center to Hillsboro
76	SW Boones Ferry Rd & Seneca to Tualatin Park & RideTualatin Park & Ride
76	Beaverton Transit Center to SW Hall & Hart; both directions

Clackamas County –

✓ 33	5th & Washington (Oregon City) to Oregon City Transit Center; vice versa
✓ 33	SE McLoughlin & Jennings to Oregon City Transit Center; vice versa
✓ 35	Pacific Hwy & Furman to Lake Oswego Transit Center
✓ 72	Clackamas Town Center Mall to SE 82nd & Flavel; vice versa

Multnomah County –

77	Broadway/Halsey, NE 201st to NE Marine Drive
87	181st Avenue, Clackamas to Columbia
NA	Bridgeheads: Morrison, Hawthorne, Burnside
NA	Hogan - Division to Halsey

City of Portland Non Central City -

12	E Burnside & SE Sandy to NE Sandy & 42nd
12	Parkrose/Sumner TC to NE Sandy & 82nd
14	SE Hawthorne & 12th to SE Hawthorne & Chavez
14	SE Hawthorne & Chavez to SE Foster & Powell
15	Gateway TC to SE 102nd & Washington
20	E Burnside & NE 82nd to E Burnside & Chavez
20	E Burnside & SE 82nd to SE Stark & 122nd
20	E Burnside & SE Sandy to E Burnside & SE Chavez
44	SE Capitol & 25th to SW Capitol & Sunset
72	N Anchor & Channel to NE Alberta & MLK
73	122nd & Burnside to 122nd & Shaver
73	122nd & Burnside to 122nd & Powell/Rhone
75	N Lombard & Portsmouth to Lombard TC
77	Hollywood TC to NE Halsey & 60th

✓ City of Portland Central City

Next steps

March meeting:

- Transit system expansion policy
- More draft language for report

Thank you