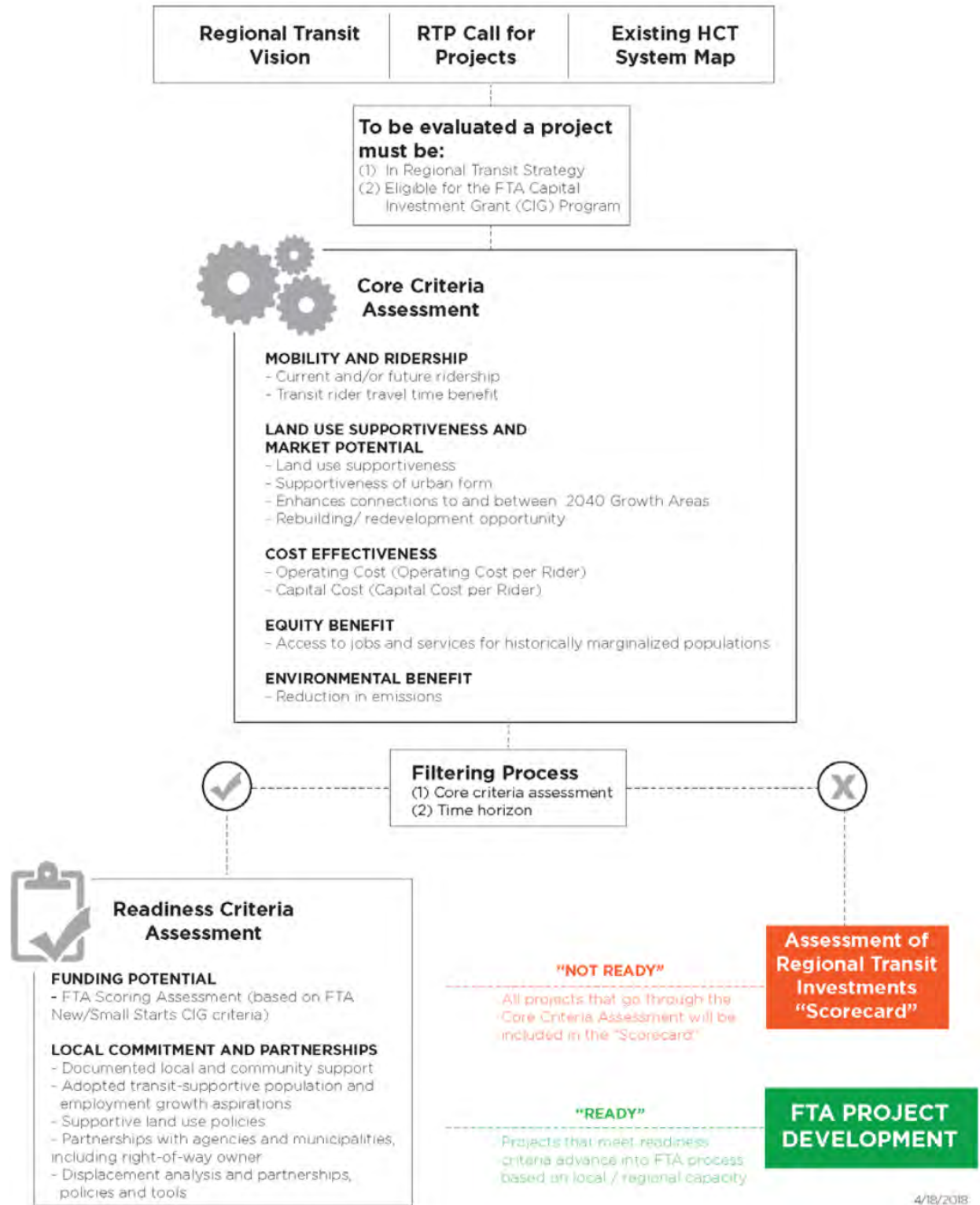


Figure 77. HCT Assessment and Readiness Criteria Process



Source: Nelson\Nygaard Consulting Associates, Inc.

DRAFT TECHNICAL MEMORANDUM

DATE: August 23, 2022; Revised August 31, 2022; Revised September 7, 2022

TO: Ally Holmqvist, Metro

FROM: Eddie Montejo, Parametrix
Ryan Farncomb, Parametrix
Kelly Betteridge, Parametrix
Sam Erickson, Parametrix
Oren Eshel, Nelson/Nygaard

SUBJECT: Revised Corridor Evaluation Criteria

CC: Project file

PROJECT NAME: Metro High Capacity Transit (HCT) Strategy Update

1 INTRODUCTION

The High Capacity Transit (HCT) System Strategy Update (HCT Update) project is reviewing and updating the region's HCT network vision. The original HCT Plan was developed in 2009 and has been updated several times since then, with the most recent review of HCT corridors occurring in 2018 as part of the Regional Transit Strategy. This memorandum documents the existing regional HCT corridor vision and proposes potential additional corridors for inclusion. The project team proposes evaluation criteria for screening candidate HCT corridors for inclusion in the regional HCT system vision.

1.1 Defining High Capacity Transit

For purposes of this project, "high capacity transit (HCT)" refers to the following modes and/or services:

- Bus Rapid Transit (BRT)
- Rapid Streetcar
- Light Rail Transit (LRT)
- Commuter Rail/Heavy Rail

Additionally, the HCT Update encompasses other high capacity or enhanced system elements including:

- Enhanced Transit Corridor (ETC) and "better bus" enhancements that enhance bus speed and reliability
- Frequent Service fixed route bus investments
- LRT operating improvements
- Other existing HCT corridor "state of good repair" investments

2 HCT CORRIDOR NETWORK UPDATE

Potential corridors are derived from the existing HCT vision, as created in 2009 and last updated in 2018, as well as additional corridors proposed as part of the 2020 regional transportation ballot measure process (T2020). Potential corridors also include those proposed for future frequent bus service in the 2018 Regional Transit Strategy Vision. Frequent Service corridors operate at service levels of “15 minutes of better” much of the day and experience high transit travel demand. Frequent Service corridors represent natural corridors for considering HCT investments. Figure 1 shows TriMet’s current Frequent Service network.

Figure 1. TriMet Frequent Service Network

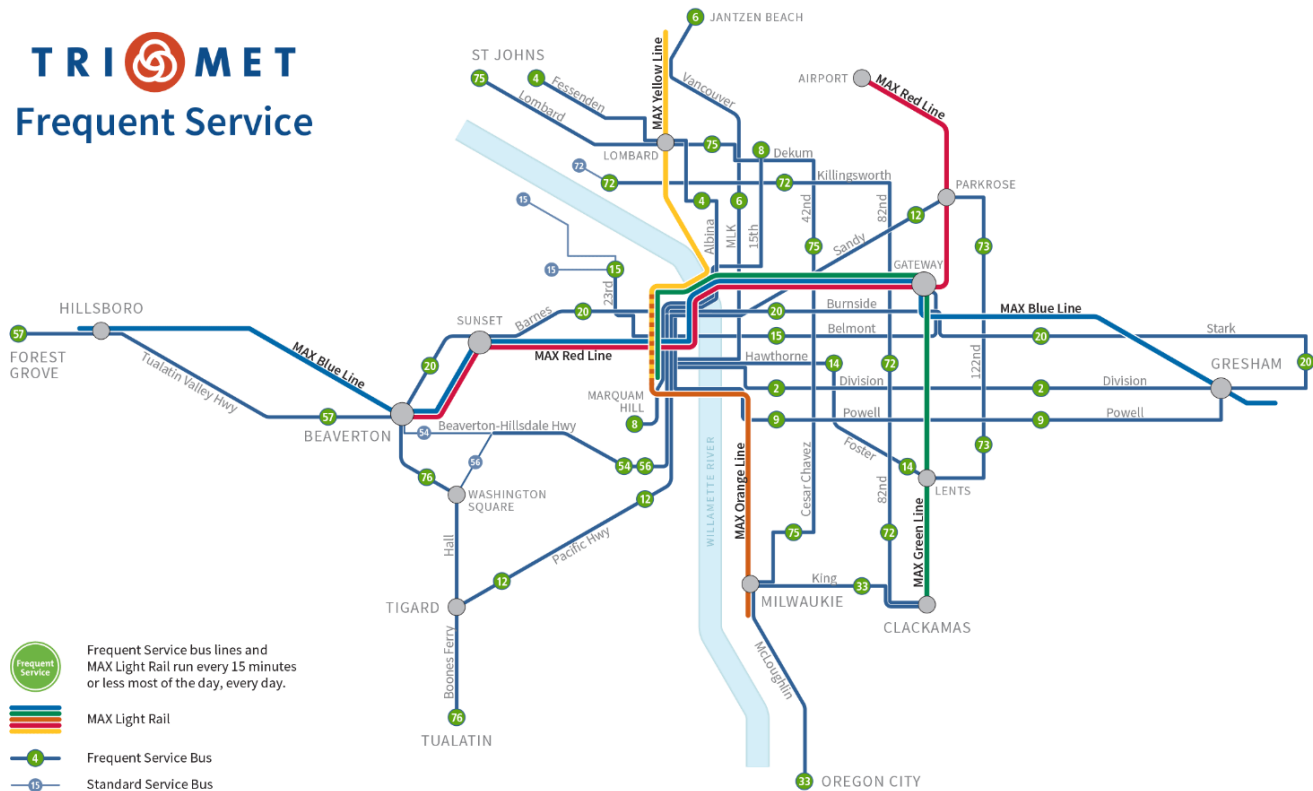
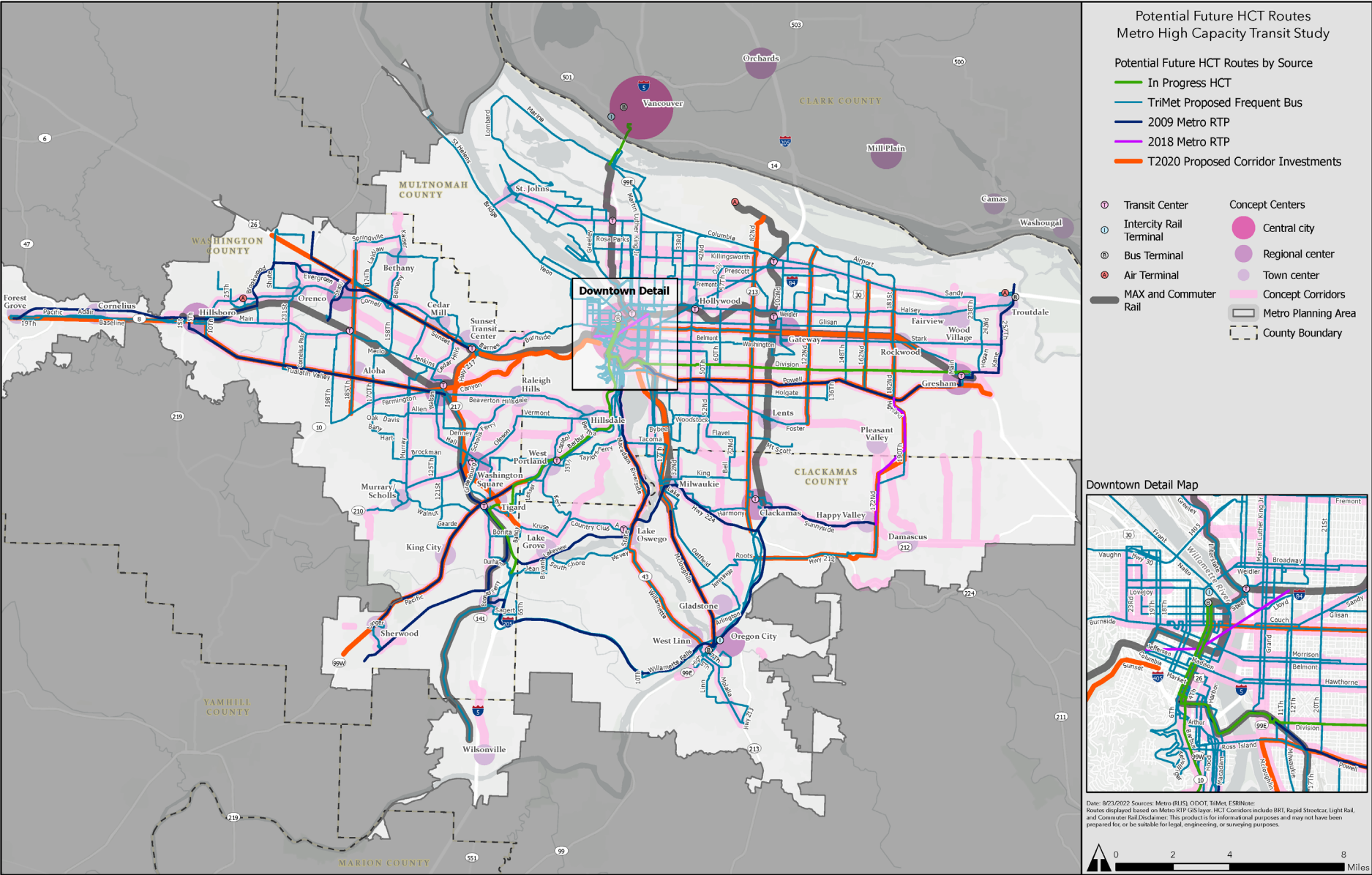


Figure 2. HCT Network - "Universe" of Corridors



3 APPROACH TO CORRIDOR EVALUATION

3.1 Draft Policy Framework

The corridor evaluation builds upon work completed to date for the Regional Transportation Plan (RTP) 2023 Update, which developed a draft updated policy framework based on a review of existing regional transit network policy as well as peer agency policies to identify gaps and priorities for HCT now and in the future. Building from this work, the corridor screening and evaluation criteria were developed to reflect the updated 2023 RTP policy framework to ensure that the analysis reflects current and future regional priorities and desired outcomes for HCT. Some of the key policy areas and drivers influencing the development of screening and evaluation criteria include focus on:

- **Developing specific policies to address equity and climate.** The screening and evaluation criteria evaluate corridor-level impacts to equity and climate based on the RTP draft policy framework. These equity and climate criteria will be used to prioritize investments in the HCT plan.
- **Connecting regional centers.** As part of the 2040 Metro Growth Concept, current RTP network policy focuses on HCT with a majority or all of the service in exclusive guideway connecting Regional Centers and City Centers. With the additional consideration of corridor-based HCT that includes many of the same elements, but without the majority exclusive guideway, an expansion of the network policy was proposed to connect Regional Town Centers to Regional Centers and the Central City. In that case, the evaluation criteria include a policy screen to ensure HCT investments connect Regional Town Centers to Regional Centers and the Central City.
- **Higher capacities.** The RTP currently defines HCT as carrying more transit riders than local, regional, and frequent transit lines. The screening and evaluation criteria consider a range of ridership and operational factors to identify corridors with the highest potential for needing greater transit capacity.
- **Frequency and reliability.** The draft policy framework is also focused on improving access to the regional network by making local transit more frequent, faster, and more reliable through the Enhanced Transit Concept (ETC). Although Enhanced Transit or “better bus” improvements may not always qualify as corridor-based HCT investments, ETC investments supports complimentary investments to HCT by improving access to regional transit, jobs, services, parks, and other essential destinations in the Metro area.

3.2 Two-Phase Corridor Evaluation Process

The HCT Plan update will replicate the two-phase analysis process done in the 2018 HCT Plan. Level 1 refers to a corridor screening process, which applies criteria to sort and organize the initial universe of potential HCT corridors. As a first step, the screening process is intended to refine the universe of potential HCT corridors by identifying the lowest-performing corridors. The remaining corridors will then be evaluated using the Level 2 Evaluation Criteria. The Level 2 criteria will prioritize corridors into “tiers” based on the technical analysis and corridor readiness criteria. The following subsections summarize the draft Level 1 and Level 2 screening and evaluation criteria.

3.2.1 Level 1 Corridor Screening Criteria

The Level 1 Corridor Screening Criteria is intended as a broad analysis step for sorting and screening out potential HCT corridors based on key evaluation criteria. The Level 1 analysis intentionally uses few criteria to hone in on the most important characteristics for successful HCT corridors according to the draft policy framework. The Level

1 Screening also includes a “Policy Screen” that refers to qualitative determinations about where to invest in future HCT based on feedback from the Project Management team and Working Group. For example, the Policy Screen pulls out corridors that are already substantially underway (i.e., advanced design or environmental work underway) such as the I-5 Interstate Bridge Replacement Program and Division Transit Project. Table 1 below summarizes the proposed Level 1 Screening Criteria.

Table 1. HCT Level 1 Corridor Screening Criteria

Criteria	Approach to measurement	Data Source/Notes	Methodology
Existing Ridership	<ul style="list-style-type: none"> Average Daily Boardings by Route (2019)¹ 	<ul style="list-style-type: none"> TriMet ridership data Meets HCT Plan (2018) Core Criteria Only applied to existing routes 	<ul style="list-style-type: none"> Assess TriMet Average Daily Boardings by TriMet Route IDs Aggregate route-level boardings and classify using 20th percentile breaks
Future Ridership	<ul style="list-style-type: none"> 2040 Person Productions + Attractions of TAZs within ½ mile of corridors Average 2040 Person Productions + Attractions of TAZs within ½ mile of corridors² 	<ul style="list-style-type: none"> Metro Travel Model Meets HCT Plan (2018) Core Criteria Applied to existing and proposed routes Person trips account for all modes Productions + Attractions is a proxy measure for total activity 	<ul style="list-style-type: none"> Select TAZ boundaries within ½ mile of corridors as baseline geography for calculation Sum existing 2040 Person Productions and 2040 Person Attractions for selected TAZs as a proxy for total future activity for corridors; Calculate the average of the sum of 2040 Person Productions and Attraction by TAZ to account for shorter corridors Aggregate route-level future productions and attractions using 20th percentile breaks
Equity	<ul style="list-style-type: none"> Metro Equity Focus Areas (EFAs) – EFAs within ½ mile of corridors 	<ul style="list-style-type: none"> Metro RTP Update (2022) Meets HCT Plan (2018) Core Criteria Metro Equity Focus Areas are measured at the Census Tract Level 	<ul style="list-style-type: none"> Select Census Tracts within ½ mile of potential HCT corridors Identify Metro Equity Focus Areas (EFAs) within ½ mile of potential HCT corridors Aggregate route-level EFAs based on 20th percentiles

¹ The Level 1 Corridor Screen will screen existing routes and planned/proposed routes separately to account for the fact that planned/proposed routes do not yet have ridership. Existing average weekday corridor ridership (2019) was only factored into the scoring for existing routes.

² Summing the *total* productions and attraction of all TAZs within a ½ mile of corridors accounts for longer corridors with higher potential demand for trips along the length of the route. Using the *average* of the sum of productions and attractions by TAZ within a ½ mile of corridors accounts for shorter corridors that may have concentrated activity but lower total person trips.

Criteria	Approach to measurement	Data Source/Notes	Methodology
Policy Screen (Qualitative)	<ul style="list-style-type: none"> • <i>Supports Metro Regional Concept:</i> Connects at least one (1) Town Center to a Regional Center/Central City. • <i>Remove Duplicity:</i> Remove corridors where HCT improvements are already planned such as Interstate Bridge Replacement Program and Southwest Corridor. • Remove C-TRAN routes, tram, and existing streetcar. Remove Division Transit since revenue service will start soon. 	<ul style="list-style-type: none"> • Policy screens are conditional checks to qualify potential HCT routes from the starting universe of corridors. 	<ul style="list-style-type: none"> • Qualitative assessment. Corridors are not scored based on the policy screen, but some candidate corridors will be eliminated based on the application of this criterion.

3.2.2 Level 2 Corridor Evaluation Criteria³

The Level 2 screening will focus on corridor “readiness,” meaning, whether the right conditions are in place to support advancing a given corridor for HCT investment. The Level 2 criteria are shown in Table 2. These criteria are derived from the 2018 evaluation and include several additional criteria related to climate, equity, and federal funding. The project team added these criteria to reflect regional policy priorities. The federal funding criteria are based on the Federal Transit Administration’s (FTA) Capital Investment Grants (CIG) program. This program is the most substantial non-local source for HCT funding and has funded many HCT investments, including much of the existing LRT system. Because of the outsize influence this program has on funding viability, the Level 2 screening criteria were revised to reflect the CIG program’s criteria, thereby helping to ensure readiness of project corridors.

Table 2. Level 2 Corridor Evaluation Criteria

Criteria	Measure	Data Source/Notes	Methodology
Transit Travel Time Benefit	<ul style="list-style-type: none"> • Transit travel time reliability, based on the travel time ratio of congested to free-flow conditions 	<ul style="list-style-type: none"> • HCT Plan (2018) Core Criteria • Meets Section 5309 Capital Investments Grants (CIG) Small Starts Program “Mobility Improvements” • TriMet General Transit Feed Specification (GTFS) data 	<ul style="list-style-type: none"> • Using TriMet’s automatic vehicle location (AVL) data (2019), the team will determine the average peak and off-peak speeds (in MPH) of transit for those corridors where transit service exists today. The greater the ratio of free-flow to congested travel

³ The Level 2 Corridor Evaluation assumes that all Level 1 Criteria will be reapplied to the remaining corridors.

Criteria	Measure	Data Source/Notes	Methodology
			speeds, the more transit travel time unreliability.
Productivity + Cost Effectiveness	<ul style="list-style-type: none"> Existing boardings per revenue hour in a given corridor Capital Cost per Rider (range to account for modal options) 	<ul style="list-style-type: none"> HCT Plan (2018) Core Criteria Input to 5309 Capital Investments Grants (CIG) Program "Cost Effectiveness" measure 	<ul style="list-style-type: none"> Boardings per revenue hour will be calculated based on 2019 and modeled 2040 boardings and transit revenue hours. Capital cost per rider will be presented as a range, based on average per-mile costs for LRT and BRT.
Environmental Benefit	<ul style="list-style-type: none"> Reduction in corridor-level Vehicle Miles Traveled (VMT) 	<ul style="list-style-type: none"> "Reduction in emissions" meets HCT Plan (2018) Core Criteria VMT used as key performance measure in Metro 2021 TSMO Strategy 	Using established transit elasticities, estimate the change in ridership that is likely occur in a given corridor by investing in HCT and the corresponding change in auto VMT that would be expected. Convert this change in VMT to GHG emissions using an average fleet emissions factor for year 2030.
Equity Benefit	<ul style="list-style-type: none"> Access to employment – Essential Jobs and Essential Services by Census Block within ½ mile of corridors Relative proportion of historically marginalized populations in each corridor, based on Metro's Focus Areas 	<ul style="list-style-type: none"> TriMet and Metro Essential Destinations data. Remix Online Tool for Existing Routes Consider specific impact to in-person jobs in the region (data from TriMet <i>Forward Together</i> project) 	<ul style="list-style-type: none"> The team will rely on data from TriMet's Forward Together program. Forward Together included location analysis of in-person jobs in the Metro region. The team will assess the relative number of in-person jobs within ½ mile of corridors using 20th percentiles. The relative proportion of historically marginalized populations within ½ mile of each corridor will be reported.
Land Use Supportiveness and Market Potential	<ul style="list-style-type: none"> 2040 Population Density by TAZ within ½ mile of corridors 2040 Employment Density by TAZ within ½ mile of corridors Presence of higher education institutions, multi-family and affordable housing 	<ul style="list-style-type: none"> Metro Travel Model HCT Plan (2018) Core Criteria "Land Use Supportiveness and Market Potential" Meets Section 5309 Capital Investments Grants (CIG) Small Starts Program "Land Use" and "Economic Development" criteria 	<ul style="list-style-type: none"> Using existing 2040 Metro travel model data, the team will develop population densities within ½ mile of each corridor and rank by 20th percentiles. The project team will also provide for purposes of comparison the average density within ½ mile of (1) the average existing frequent service bus line and (2) average light rail line. The same approach will be applied for total employment within ½ mile of the corridors.

Criteria	Measure	Data Source/Notes	Methodology
			<ul style="list-style-type: none"> The presence of multi-family and affordable housing, and higher education institutions will be applied as an additional land use check.

After the quantitative Level 2 results have been developed, the project team will conduct a final “policy check” to ensure the corridors that emerge from the analysis align with the HCT policy framework and the intended regional outcomes. This final review is qualitative; limited modifications, additions, or removals of certain corridors may result to ensure the corridors emerging from the Level 2 screen reflect the policy framework.

4 NEXT STEPS

The Level 1 screening results will provide information for decision-making, but do not dictate which corridors should be advanced to the Level 2 screening. The Level 1 screening results will be reviewed by Metro staff and the HCT Working Group to make the determination about which corridors should advance to the Level 2 screening. This memorandum will be revised and updated with Level 1 and Level 2 results at a later date.

DRAFT TECHNICAL MEMORANDUM

DATE: November 17, 2022

TO: Ally Holmqvist, Metro
Metro HCT Strategy Update PMT

FROM: Chad Tinsley, Parametrix
Ryan Farncomb, Parametrix
Kelly Betteridge, Parametrix
Oren Eshel, Nelson/Nygaard
Tomoko Delatorre, Nelson/Nygaard
Paul Lutey, Nelson/Nygaard

SUBJECT: HCT Corridor Analysis Approach to Identify “Big Moves”

CC: Project file

PROJECT NAME: Metro High Capacity Transit (HCT) Strategy Update

1 INTRODUCTION

This memo describes an approach to identify “Big Moves” as part of the corridor identification and screening process for the High Capacity Transit (HCT) System Strategy Update (HCT Update) project. This analysis would complement the Level 1 screening to identify candidate HCT corridors (HCT Screening) for inclusion in the regional HCT system vision, as described in previous memos. The HCT “Level 1” Screening process analyzed existing and planned frequent service corridors as well as corridors identified through the original HCT Plan in 2009 to help identify the universe of corridors to consider in the HCT Evaluation. However, since the screening is primarily based on corridors aligned with the existing TriMet service network, it may not identify travel “desire lines” where the existing transit network does not provide a convenient connection that people would choose for their trip. The project team is proposing an approach to help confirm needs identified through the screening process and assess additional connections that may not have been identified through the screening process:

1. Where current and future travel demand are strong
2. Where the current transit system does not provide a connection or a high quality connection

Connections with strong demand and lower-quality transit may be high priorities to evaluate for HCT, or other types of transit service (HCT may not be the most suitable mode for all areas). This analysis could confirm the need for corridors already identified through the screening process as well as suggest additional connections that should be evaluated as part of the HCT Strategy Update. Connections with strong demand and a low-quality transit connection could suggest additional corridors to evaluate for HCT. HCT projects could also be identified to strengthen existing parts of the HCT system that are only of moderate quality.

2 “BIG MOVES” CORRIDOR IDENTIFICATION APPROACH

2.1 Travel Demand Analysis Zones

Analysis zones were developed based on the following approach:

- Start with Metro Concept Analysis Center (2040) geographies
- Include City of Portland Town Center designations, based on the City of Portland [Centers GIS layer](#) and/or the map in Chapter 3 of the Comprehensive Plan (page 30): Belmont-Hawthorne-Division, Interstate/Killingsworth, Midway, and Northwest District
- Select Transportation Analysis Zones (TAZs) overlapping with the above geographies
- Identify additional TAZs as either additions to the above geographies or as additional geographies, including:
 - Major institutions (major hospitals, universities, etc.), such as OHSU.
 - Major employment areas, based on Longitudinal Household Employment Dynamics (LEHD) data and Metro model 2040 projections, using a threshold of 4,000 jobs in a TAZ and grouping adjacent TAZs with employment at or close to the threshold.
- Portland Central City Zones were disaggregated as follows for initial analysis, given the high concentration of trips, but could be reaggregated at a later stage of the process or for representation purposes.
 - Downtown – South, Central, and North
 - West of Downtown (west of I-405, north of Burnside)
 - Northwest Portland – Northwest District (corresponding to the City of Portland Town Center), Outer Northwest, and Northwest Industrial area
 - South Waterfront (with the OHSU Marquam Hill Campus as a separate geography)
 - Central Eastside – South and North
 - Rose Quarter/Albina West
 - Lloyd District
 - Albina East

Figure 1 shows the analysis zones.

2.2 Travel Demand

Travel demand data was aggregated to the above centers-based travel demand zone structure. The data was normalized using the area of the zones to account for the varying geographic size (and density of travel demand) of each area.

The primary travel demand measure used was future travel demand from the Metro model:

- Future (2040) Person Trips, both directions, Total and Normalized for area of the zone (per square mile)

Secondary travel demand measures were used to provide an understanding of more recent changes to travel demand, including effects of the pandemic:

- Fall 2021 person trips from Replica data,¹ both directions, Total and Normalized for area of the zone (per square mile), including trips by people earning less than 200% of the federal poverty level and estimate transit person trips
- Fall 2019 person trips for comparison with current (baseline) person trips from the Metro model

Travel demand measures were classified into five categories.

2.3 Service Quality

For purposes of this analysis, travel time was used as a proxy for service quality. Transit travel time was compared to auto travel times to understand the relative convenience of making a particular trip by transit versus driving.

- A representative point was selected for each analysis zone. If existing high capacity transit service was present, a HCT station was selected so that access time to/from destinations was not considered in evaluating how well a geography is generally served by the HCT system.
- Google Maps was used (via an automated query) to determine: 1. Auto travel time and 2. Transit travel time for each zone-to-zone connection. A trip time of 3 pm on a weekday (Wednesday) was specified. Analysis was run in both directions and the highest ratio used.
- A ratio of the transit travel time to the auto travel time was calculated. A ratio of 2.0 would mean that a transit trip takes twice as long as a trip made by driving.

The transit to auto travel time ratio was classified into five categories using the following breakpoints:

- Up to 1.1 (Transit competitive with auto)
- > 1.1 to 1.5
- > 1.5 to 2.4
- 2.5 to 3.9
- 4.0 or more (Transit takes significantly longer than driving)

¹ Replica is an activity-based transportation model in which travel demand is derived from people's daily activity patterns, including de-identified mobile location and demographic data sources.

Figure 1 Map of Analysis Zones

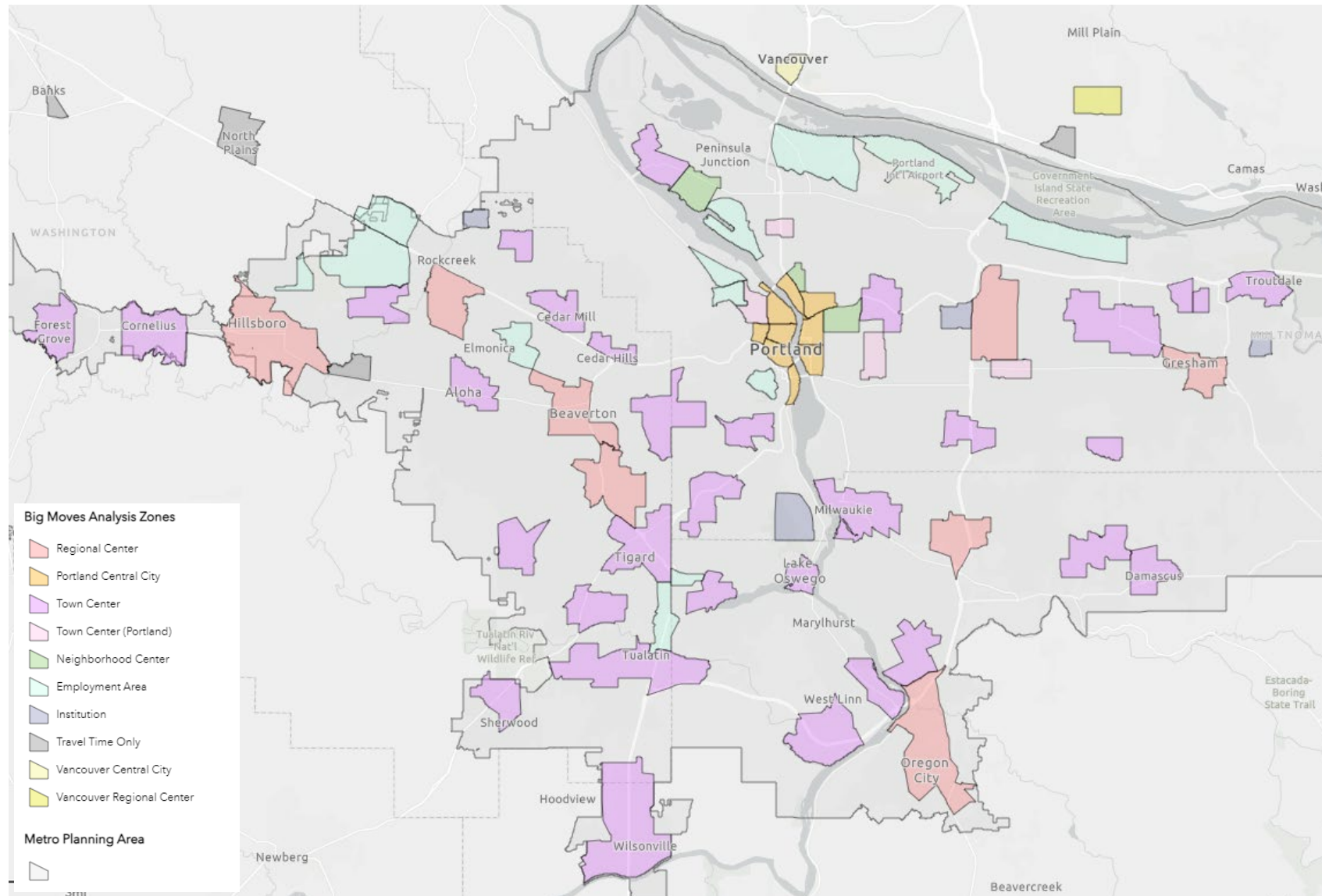
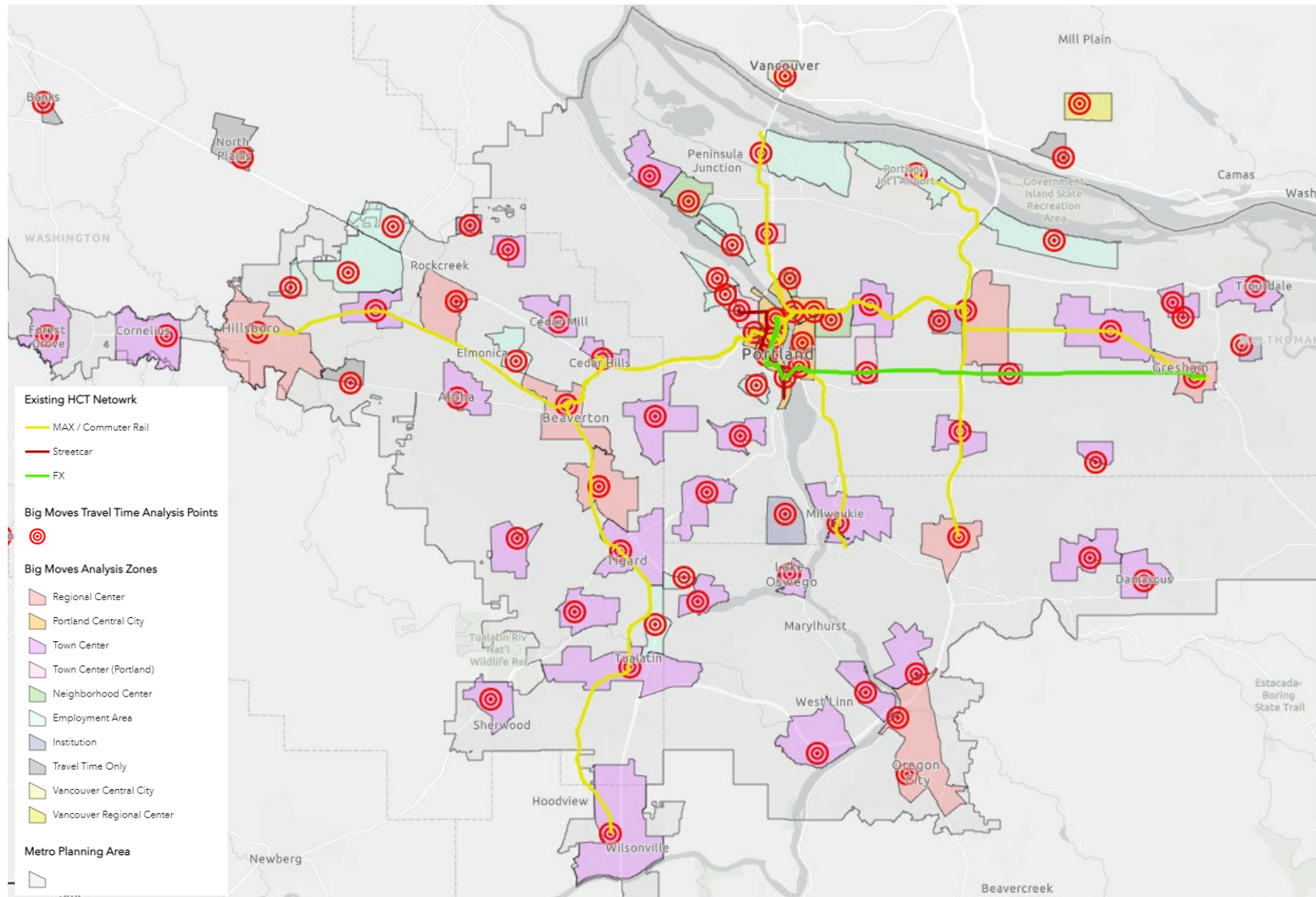


Figure 2 Map of Analysis Zones, Travel Time Analysis Points, and Existing HCT Network



3 ANALYSIS RESULTS

3.1 Analysis Results

The analysis was utilized as a tool to further explore and understand possible additional connections identified through the Level 1 Screening analysis and identify additional connections to consider in the next phases of the evaluation (e.g., Level 2 and Readiness Evaluation). **Figure 3** illustrates travel demand and the transit to auto travel time ratios for a representative set of connections between regional and town centers, including the additional employment and major activity centers included in the analysis. Line color illustrates the travel time ratio. Line weight illustrates travel demand. Travel demand in this schematic representation reflects only the demand between the specific centers connected, not the total travel demand between multiple centers that might utilize a particular connection (aggregating that demand was beyond the scope of this analysis). This analysis also did not consider demand outside of these centers.

- Connections shown in **dark or lighter blue** have a transit travel time that is competitive with driving. These include many parts of the existing light rail network, such as:
 - Between Gresham, Gateway, Hollywood, and Lloyd District
 - Between Clackamas and Gateway
 - Between Downtown Portland, Beaverton, and Hillsboro
 They also include some centers connected by bus links today.
- Connections shown in **yellow, orange, and red** range from moderately less competitive by transit to significantly longer.

The regional high capacity transit system is intended to be the backbone of the transit system. As such, this analysis focuses on longer-distance connections between regional centers, major town centers, and central cities with the highest travel demand and person capacity needs, that have gaps in service quality identified through this analysis. Focusing on these types of connections, this analysis identified the potential to improve transit travel times for corridors such as the following:

- Between multiple town and regional centers in a generally southeast to northwest arc through the Hwy 217 corridor between south and north/northwest Washington County, including connections from southwest Clackamas County. Since WES commuter rail operates between Wilsonville, Tualatin, Tigard, and Beaverton, but only during AM and PM peak hours, there is a gap in HCT service quality.
- The Tualatin Valley (TV) Highway corridor, between Beaverton, Hillsboro, Cornelius, and Forest Grove. There is an active planning project in this corridor (TV Hwy BRT).
- The Beaverton-Hillsdale (BH) Highway corridor, between Beaverton, Raleigh Hills and Hillsdale
- The Hwy 99W corridor, including Tigard, Tualatin, and Southwest Portland
- In South Clackamas County, between Oregon City and Clackamas Town Center (CTC) as well as along the Hwy 99E and Hwy 43 corridors, and between CTC and both Milwaukie and Happy Valley
- Town centers in East Multnomah County, including Troutdale, Fairview, and Wood Village, both east-west and north-south
- Across the Columbia River to/from Clark County

- Between St. Johns and various parts of Multnomah County

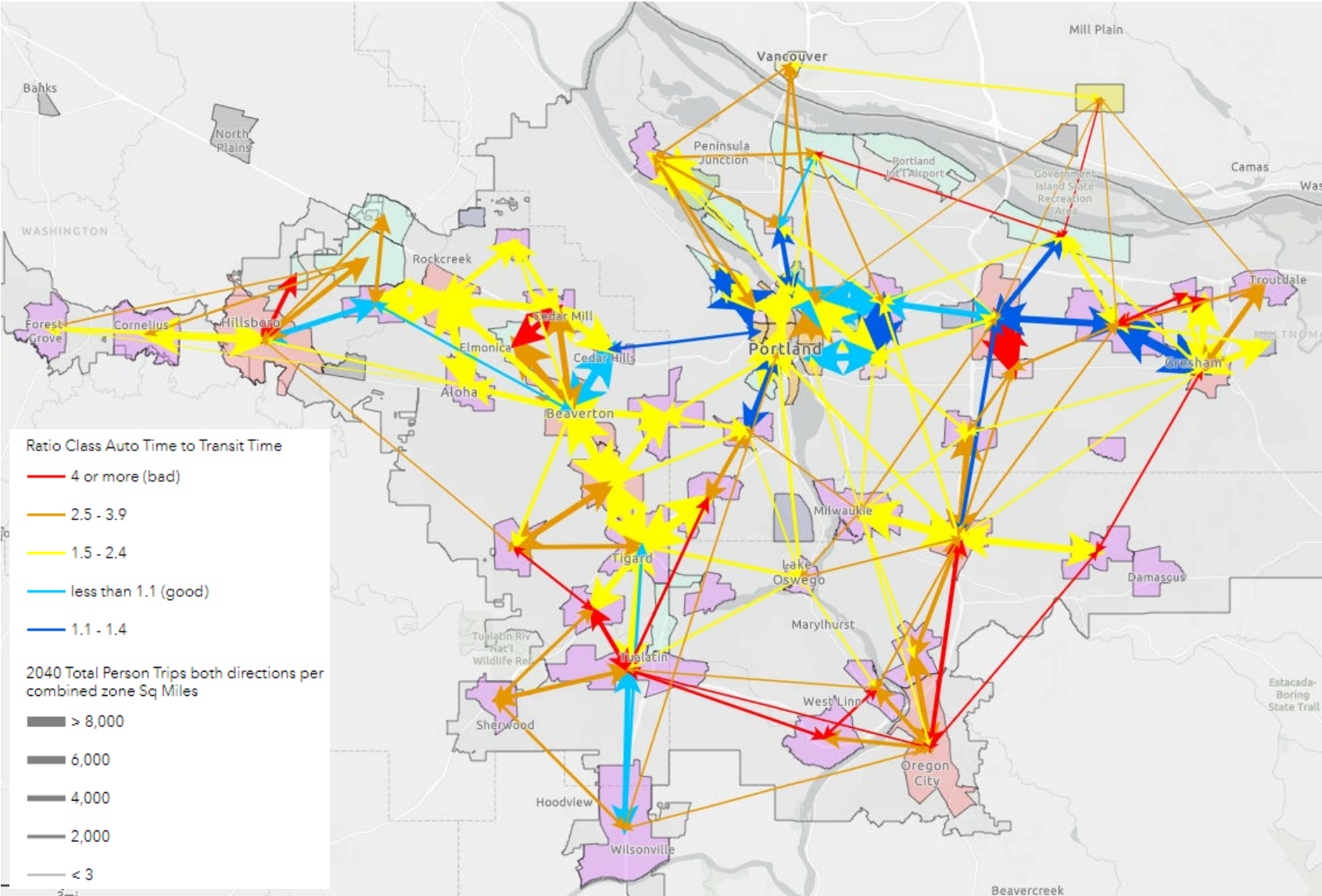
Figure 4 summarizes the connections identified above, along with existing HCT in these corridors, existing HCT priorities that were identified (in the 2009 HCT Plan/RTP or 2018 RTP), and active HCT planning efforts.

The analysis also highlights additional connections that are shorter in length or affect smaller or more isolated town centers. Examples of these types of gaps include:

- Employment areas north of Hillsboro, including along Evergreen Pkwy and Cornelius Pass Road.
- Town Centers in Washington County that are not along major travel corridors, such as Bethany, Murray/Scholls, and Sherwood.
- Columbia Corridor Employment Area in Multnomah County
- Between Midway and Gateway

However, these connections may be better addressed through other transit investments, such as frequent service fixed route, Better Bus enhancements, or enhanced connections to existing HCT service, and/or first and last mile improvements. These connections are likely outside the primary focus of the HCT system in connecting regional and major town centers and creating the backbone of the transit network.

Figure 3 Illustration of Travel Demand and Travel Time Ratio for Regional Zone-to-Zone Connections



3.2 Summary of Potential System Gaps and Previous/Active HCT Planning

Figure 4 Summary of Identified Major HCT Service Quality Gaps and Previous/Active HCT Planning

Major Travel Corridor / Connections	Counties	Existing HCT	Previously Identified HCT Priorities	Active HCT Planning
OR 217 Corridor (SW Clackamas Cty and SE Washington County – N/NW Washington County)	Washington, Clackamas	WES Commuter Rail (Peak Hours Only)	<ul style="list-style-type: none"> Upgrades to WES, Wilsonville-Beaverton Clackamas Town Center to Washington Square Oregon City to Washington Square 	-
TV Hwy Corridor	Washington	-	<ul style="list-style-type: none"> TV Hwy BRT 	TV Hwy BRT Study
US 26 Corridor (Sunset TC – Hillsboro)	Washington	-	<ul style="list-style-type: none"> US 26 Corridor, Sunset TC – Hillsboro 	-
BH Hwy Corridor	Washington, Multnomah	-	<ul style="list-style-type: none"> 2010 Mobility Corridors Atlas 	-
Hwy 99W / I-5 Corridor	Washington, Clackamas, Multnomah		<ul style="list-style-type: none"> Southwest Corridor LRT Sherwood – King City – Tigard 	Southwest Corridor LRT Project
Hwy 43 Corridor	Clackamas, Multnomah		<ul style="list-style-type: none"> Lake Oswego – Portland (Rapid Streetcar) 	-
Hwy 99E Corridor	Clackamas	MAX Orange Line (north of Park Ave)	<ul style="list-style-type: none"> Milwaukie – Oregon City (Extension) 	-
I-205 Corridor	Clackamas		<ul style="list-style-type: none"> CTC – Oregon City – Washington Square 	-
Hwy 224/Sunnyside Road Corridor	Clackamas	-	<ul style="list-style-type: none"> CTC- Milwaukie – Washington Square CTC – Happy Valley 	-
East Multnomah County (Troutdale / Fairview / Wood Village)	Multnomah	MAX Blue Line (south of identified communities)	<ul style="list-style-type: none"> LRT Extension, Gresham – Troutdale 	-
St. Johns	Multnomah	-	<ul style="list-style-type: none"> 2010 Mobility Corridors Atlas 	-
I-5 (Interstate Bridge)	Multnomah, Clark	-	<ul style="list-style-type: none"> Interstate Bridge 	Interstate Bridge Replacement Project
I-205 Corridor	Multnomah, Clark	-	<ul style="list-style-type: none"> 2010 Mobility Corridors Atlas 	-

3.3 Portland Central City Analysis Results

Although the focus of this analysis is trips around the region, regional transit trips are affected by service quality through downtown Portland. **Figure 5** illustrates travel demand and the transit to auto travel time ratios for a representative set of connections within the Portland Central City. Although the transit is relatively time competitive for some trips, HCT system speed into and through the Central City is slow, which affects travel time competitiveness both for transit trips into downtown and for transit trips that cross the region through downtown Portland. **Figure 6** summarizes these connections along with existing HCT lines, existing HCT priorities that have been identified (in the 2009 HCT Plan/RTP or 2018 RTP), and active HCT planning efforts.

Figure 5 Illustration of Travel Demand and Travel Time Ratio for Portland Central City

Figure 6 Summary of Identified Major HCT Service Quality Gaps and Previous/Active HCT Planning – Portland Central City

Major Travel Corridor / Connections	Counties	Existing HCT	Previously Identified HCT Priorities	Active HCT Planning
MAX into downtown and through Portland Central City	Multnomah	MAX	<ul style="list-style-type: none"> Central City Tunnel Study 	
Central Eastside (north-south and between Downtown)	Multnomah	Streetcar	<ul style="list-style-type: none"> 2010 Mobility Corridors Atlas 	-
Northwest Portland and parts of Downtown	Multnomah	Streetcar	<ul style="list-style-type: none"> 2010 Mobility Corridors Atlas 	-

3.4 Next Steps

This analysis provides additional information about the potential HCT connections identified in the Level 1 HCT Screening and helps identify additional gaps in regional transit connections and/or service quality (travel time). This analysis was used to shape the set of HCT corridors that will be considered in the Readiness step of the HCT Evaluation.