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**Thursday, June 02, 2022**  
**6:45 PM – 8:30 PM**

**Zoom Link:**

<https://clackamascountry.zoom.us/j/83995299536?pwd=M0JWRzlydjIHbk81S2NmY2FkaVYxZz09>

**Telephone:** 1 (253) 215-8782

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## AGENDA

**6:45 p.m. Pledge of Allegiance**

**Welcome & Introductions**

*Chair Paul Savas & Mayor Brian Hodson, Co-Chairs*

**Housekeeping**

- Approval of May 05, 2022 C4 Minutes

**Page 03**

**6:50 p.m. Forward Together Update, TriMet**

*Presenting: Grant O'Connell, Senior Planner  
Luke Norman, Services Planner*

- Forward Together Memo
- Existing Conditions Report - Introduction
- [Forward Together](#) , more information

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**8:00 p.m. Survey Results, Potential C4 Housing Shelter Field Trip**

*Introducing: Trent Wilson, C4, ClackCo Staff*

**8:15 p.m. Updates/Other Business**

- JPACT/MPAC Updates
- Climate Action Plan Task Force Update
- Supportive Housing Services Update
- Other Business

**8:30 p.m. Adjourn**

# General Information



## Current Voting Membership

		C4 Exec	C4 Metro	C4 Rural	JPACT	MPAC	R1ACT
<b>Clackamas County</b>	Commissioner Paul Savas	●	●	●	●		●
<b>Clackamas County</b>	Commissioner Mark Shull		●	●		●	
<b>Canby</b>	Mayor Brian Hodson	●		●			●
<b>CPOs</b>	Martin Meyers (Redland CPO)	●	●	●			
<b>Estacada</b>	Mayor Sean Drinkwine			●			
<b>Fire Districts</b>	Matthew Silva (Estacada Fire District)	●					
<b>Gladstone</b>	Mayor Tammy Stempel	●	●				
<b>Hamlets</b>	Kenny Sernach (Beavercreek Hamlet)			●			
<b>Happy Valley</b>	Council Brett Sherman		●			●	
<b>Johnson City</b>	Vacant						
<b>Lake Oswego</b>	Mayor Joe Buck		●			●	
<b>Milwaukie</b>	Councilor Kathy Hyzy		●		●	●	
<b>Molalla</b>	Mayor Scott Keyser			●			
<b>Oregon City</b>	Commissioner Adam Marl		●			●	
<b>Portland</b>	Vacant						
<b>Rivergrove</b>	Mayor Walt Williams		●				
<b>Sandy</b>	Mayor Stan Pulliam			●			
<b>Sanitary Districts</b>	Paul Gornick (Oak Lodge Water Services)	●					
<b>Tualatin</b>	Councilor Valerie Pratt		●				
<b>Water Districts</b>	Jim Johnson (Rivergrove Water District)						
<b>West Linn</b>	Mayor Jules Walters		●				
<b>Wilsonville</b>	Mayor Julie Fitzgerald		●				

## Current Ex-Officio Membership

<b>MPAC Citizen Rep</b>	Ed Gronke
<b>Metro Council</b>	Councilor Christine Lewis
<b>Port of Portland</b>	Emerald Bogue
<b>Rural Transit</b>	Todd Wood (Canby Area Transit)
<b>Urban Transit</b>	Tom Markgraf (TriMet)

## Frequently Referenced Committees:

- CTAC:** Clackamas Transportation Advisory Committee (C4 Transportation TAC)
- JPACT:** Joint Policy Advisory Committee on Transportation (Metro)
- MPAC:** Metro Policy Advisory Committee (Metro)
- MTAC:** Metro Technical Advisory Committee (MPAC TAC)
- R1ACT:** Region 1 Advisory Committee on Transportation (ODOT)
- TPAC:** Transportation Policy Advisory Committee (JPACT TAC)

**Thursday, May 05, 2022**  
**Development Services Building**  
 Main Floor Auditorium, Room 115  
 150 Beaver Creek Road, Oregon City, OR 97045

**Attendance:**

**Members:** **Canby:** Brian Hodson, **Clackamas County:** Paul Savas; Mark Shull; **CPOs:** Martin Meyers, Marjorie Stewart (alt); **Hamlets:** Kenny Sernach, **Happy Valley:** Brett Sherman; **Lake Oswego:** Joe Buck; Rachel Verdick; **Metro:** Christine Lewis, Shirley Craddick (Alt.); **Milwaukie:** Kathy Hyzy; **MPAC Citizen:** Ed Gronke; **Transit:** Tom Markgraf (TriMet), Todd Wood (Rural Transit); **Tualatin:** Valerie Pratt; **Water District:** Jim Johnson (Rivergrove), Sherry French (CRW); **West Linn,** Jules Walters;

**Staff:** Trent Wilson (PGA); Chris Lyons (PGA)

**Guests:** Martine Coblentz (ClackCo, CA); Andrews Lopez (CCC); Mira Mohsini (CCC); Khanya Msibi (CCC); Marcus Mundy (CCC); Maria Magallon (ClackCo, CA); Csea Leonard (ClackCo, CA); Jamie Stasny (DTD); Dayna Webb (OC); Laura Terway (HV); Jaimie Lorenzini (Happy Valley); Mark Ottenad (Wilsonville); Jeff Gudman (Community); Rick Cook (Stafford Hamlet); Scott Turnoy (ODOT);

The C4 Meeting was recorded and the audio is available on the County's website at <http://www.clackamas.us/c4/meetings> . Minutes document action items approved at the meeting.

<b>Agenda Item</b>	<b>Action</b>
<b>Approval of April 07, 2022 C4 Minutes</b>	Approved.
<b>Welcome New Members</b>	Welcomed new members: -Adam Marl, Commissioner, Oregon City -James Johnson, Rivergrove Water District -Sherry French, Clackamas River Water (Alternate)
<b>Update on the Research Justice Study of Clackamas County with Coalition of Communities of Color</b>	Leaders from the Coalition of Communities of Color shared the intent and status of their work related to the Research Justice Study in Clackamas County. Nearly every city and the county is participating in the study.
<b>Shelter Housing Discussion, follow up discussion</b>	C4 members revisited the topic of shelter housing, discussing their priorities for moving this discussion forward. Members want to get more information about zone changes, middle housing, pricing support, as well as a request to "map out the needs" for "ideal shelter

	<p>locations.”</p> <p>Member Gronke recommended members read the book, Tent City Urbanism.</p> <p>Staff broached the topic of a field trip to Eugene to explore and learn about shelter models. Some interest expressed, Executive Committee committed to discuss.</p>
<p><b>Updates/Other Business</b></p> <ul style="list-style-type: none"> <li>• <b>JPACT/MPAC Updates</b></li> <li>• <b>Climate Action Plan Task Force Update</b></li> <li>• <b>Supportive Housing Services Update</b></li> <li>• <b>Fireworks Ban Update</b></li> <li>• <b>Other Business</b></li> </ul>	<p>JPACT/MPAC: Climate Friendly and Equitable Communities rulemaking continues to be discussed in the region, as well as waste management topics. The 2023 RTP amendment was approved by Metro, and JPACT will be considering in May a budget adjustment to the I-205 capital project.</p> <p>Climate Action Plan Task Force: Outreach plan is underway; C4 members requested a visit to C4 from the project team.</p> <p>Supportive Housing Services: SHS revenue continues at a steady rate. Staff did not have exact numbers at the time of meeting.</p> <p>Fireworks Ban: The BCC made a decision to NOT ban fireworks for 4<sup>th</sup> of July, due to wildfire concerns. The BCC will revisit the topic if wildfire conditions worsen closer to the “season.”</p> <p>Other business: C4 staff noted that ODOT will be pursuing INFRA grant for I-205 Phase II. Staff noted this request would name tolling as the grant match and that each jurisdiction should consider whether to support. Support letters are due on May 20.</p>

Adjourned at 8:56 p.m.

**Date:** May 26, 2022

**To:** Clackamas County Coordinating Committee

**From:** Tom Markgraf, TriMet Director of Government Affairs

**Subject:** TriMet Updates for June 2<sup>nd</sup> Meeting

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TriMet will provide an update to the Clackamas County Coordinating Committee on planning efforts underway at TriMet to improve transit in Clackamas County.

1) A Comprehensive Service Analysis is currently underway to develop a transit service restoration plan across TriMet’s service area. This planning effort, called Forward Together, was designed to review not only how COVID has impacted transit ridership, but to assess how TriMet’s service should adapt to meet the changing demand for transit.

TriMet and our consultant team has recently completed an Existing Conditions Assessment and Transit Market Study. Both of these documents are available for review prior to this presentation at <https://trimet.org/forward/> . TriMet staff will provide an overview of takeaways from these studies, information about the service recovery scenarios currently under development, and the timeline for seeking feedback on these alternatives from this group and the public.

2) Concurrently with Forward Together, TriMet is participating in ODOT’s Transit and Multimodal Working Group to evaluate potential transit and multimodal investments to mitigate the impacts of tolling in the I-205 project area. We are in the process of evaluating potential service and capital improvements necessary to ensure that there are improved transit options in the project area to help people get where they need to go.

3) Oregon City Transit Center serves as a hub for many TriMet bus lines and shuttle services from across the region. Increasing capacity at the transit center is critical to improving transit service in Clackamas County. Staff will share some background on this capital project.

# Transit Existing Conditions Report

**MAY 23, 2022**

TriMet Forward Together

prepared by JARRETT WALKER + ASSOCIATES

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# 1 Introduction

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# Forward Together: Why This Project Now?

Forward Together is about the design of TriMet’s services and schedules: where should the buses go, and when? What should the structure of lines and schedules be? What goals should the agency be pursuing in its service design? Our focus is largely on the bus network since it is the easiest to revise as needs change.

TriMet’s most recent systemwide network planning project was the Service Enhancement Plan (SEP) process completed in 2018. Most of the work of developing the individual SEPs happened between 2011 and 2016. The SEPs generated ideas for future bus network structure based on extensive analysis and

conversations with the community. The SEP ideas have been the source of many of the service improvements that have been made since then.

Dramatic shifts in ridership and travel demand have occurred since the beginning of the COVID-19 pandemic. The simplest view of the change is illustrated by **Figure 1**, showing the enormous drop in ridership and significant reduction in service since the beginning of the pandemic. The number of riders, the places they are going, and the outcomes the public desire from transit are all changing. For these reasons, TriMet needs to take a fresh look at the network.

## Three Kinds of Change

The last two years have seen abrupt and possibly permanent changes in the life and economy of our region and have raised new questions about what TriMet’s priorities should be. Planning forward, we must think about three dramatic changes that have affected TriMet and the communities it serves:

- Changes in Need and Demand
- Changes in Financial Resources
- Changes in Goals and Priorities

With Forward Together, TriMet wants to start a public conversation about how the agency’s network should change in the face of all these questions.

### Changes in Need and Demand

COVID-19 caused a steep drop in transit ridership that has been returning gradually, but it also changed the shape of transit demand. Rush hour commuting is a much smaller share of our ridership than it was before. What is the future of rush hour demand, which was a significant part of our ridership before the pandemic? Should we prepare for a future in which some office workers no longer commute at rush hour every day?

### Changes in Financial Resources

Unlike the SEPs, the Forward Together recommendations will be financially constrained. They will be designed to be financially possible for TriMet to implement in the next three years. This funding level is 9% above the pre-COVID service level, as it accounts for recent Federal assistance and new state funding flowing through HB 2017. It is 32% above the level of service operated now in early 2022,

a level that is held down by a shortage of staff. The revenue level assumed in Forward Together is not a statement about how much transit service the region needs or should have; it’s merely a description of what, given the current funding sources, TriMet anticipates it can afford.

### Changes in Goals and Priorities

The foundation of this effort is the need to update our priorities. Transit plays a central role in many issues that people care about, including urban development, social equity, racial justice, traffic, safety, and climate change. Each of these issues suggests certain priorities for TriMet, but they sometimes push the agency in different directions.

For that reason, Forward Together will develop three alternative network concepts. Each one will consist of a network of proposed lines, specifying how frequently, and at what times, each line would operate. Each concept will be designed to serve one or more popular goals, but they will differ in what their priorities are among those goals. The point is to illustrate to the public several different possible ways that the network could develop – each with clear advantages and disadvantages – so that the community can help TriMet determine which concept should be the starting point for the next changes in its network.

TriMet Service and Ridership 2020-2022

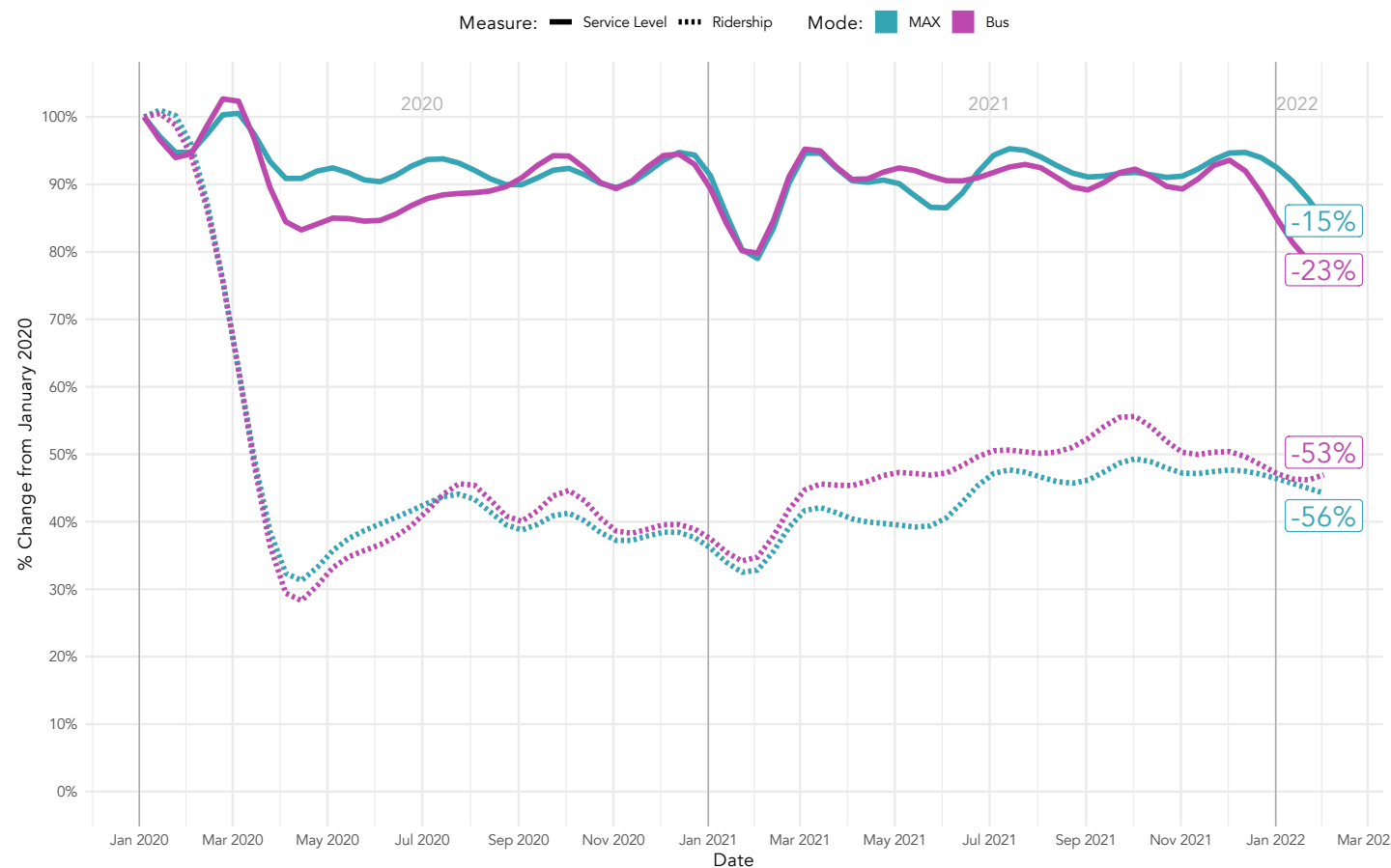


Figure 1: TriMet Service Level and Ridership, 2020-2022

# Network Design Goals

## About this Document

The Transit Existing Conditions report is about telling the story of today's network: the principles behind its design, its evolution over the past decades, what it does well and where it falls short, and the rapid changes it has endured through the COVID-19 pandemic. This document will serve as a foundation for the rest of the process, providing the baseline that can be used to compare the potential costs and benefits of the network alternatives.

The Transit Existing Conditions Report has 4 sections:

1. This introduction, which covers the project purpose, workplan, and lays out the project approach to goal-driven design and measurement.
2. TriMet's Market, a tour of the key land use, development, employment, and demographic factors that characterize the geography across which TriMet service operates.
3. TriMet's Existing Network. This chapter describes the existing network, its design principles, performance, and how it has changed since the late 2000s recession and during COVID.
4. COVID Travel Market & Trends. This section provides a summary of the key changes in need and demand that have emerged through the pandemic.

Customers						
Goals	1 Satisfied riders		2 Satisfied community stakeholders and employers		3 Supportive broader community	
Objectives	1A	Provide safe service	2A	Improve environmental sustainability and stewardship and reduce TriMet's carbon footprint	3A	Ensure strong support for transit and TriMet
	1B	Increase ridership	2B	Advance mobility for those with limited options	3B	Increase funding for regional mobility expansion
	1C	Improve customer experience, information, and services	2C	Support economic opportunity for all by expanding employee access to jobs and customer access to businesses and services		
	1D	Ensure equitable distribution of services and resources	2D	Help shape the future of cities and our region in line with Metro 2040 Growth Concept		
			2E	Ease congestion by providing attractive travel options during peak periods		

Figure 2: TriMet Customer-Oriented Goals from TriMet Business Plan FY2022-23

## TriMet's Business Plan

Transit can serve many different goals. Individual people and communities value these goals differently.

Figure 2 shows the customer-oriented goals in the FY2022 - FY2027 Business Plan<sup>1</sup>, which lays out a range of internal and external objectives for the agency. This version of the document is currently out for public comment, but the customer-focused goals are fundamentally similar to prior years.

These goals address a range of widely held values among the public, including environmental sustainability, economic opportunity, equitable distribution of public benefits, reducing congestion, and helping deliver the urban development outcomes of the Metro 2040 Growth Concept.

**Some of these goals are only served if many people use transit.** For example, transit can only mitigate congestion and reduce greenhouse gas emissions if many people ride the bus rather than drive. We call such goals **"ridership goals"** because they are achieved through high ridership.

Goals related to economic opportunity and equitable mobility are also related to the ridership goal, because for the positive outcomes that affordable, useful public transportation can provide to be widespread in the community, many members of the community must actively use the service.

**Other goals are served by the simple presence of transit.** A bus route through a neighborhood provides residents insurance against isolation, regardless of whether or not they are able to drive, walk or cycle a long

distance. A route may also fulfill political or social goals, for example by getting service close to every taxpayer or into every municipality. We call these types of goals **"coverage goals"** because they are achieved in large part by covering geographic areas with service and ensuring that transit is widely available, rather than by high ridership.

The objectives articulated in TriMet's Business Plan include goals that can only be met by achieving high ridership, and goals that can only be met by providing expansive coverage.



## Ridership and Coverage

Ridership and coverage goals are both associated with a range of desirable outcomes, but they lead to opposing approaches to network design with a constrained budget. **Figure 3** is a simple illustration of how ridership and coverage goals conflict with one another, due to geometry and geography.

When transit is designed to achieve ridership, it tends to focus on providing high-frequency service to busy places. Transit designed to be widely available and achieve high coverage must spread those resources out to serve a wider area, so less service is available for high frequency in busy places.

In the fictional area at the top of **Figure 3**, the little dots indicate the presence of people and jobs. The lines indicate roads. Most of the activity is concentrated around a few roads.

A transit provider pursuing only a ridership goal would focus service on the streets where there are large numbers of people. Because service is concentrated onto fewer routes, frequency is high, and a bus is always coming soon. This would result in a network like the one at bottom-left, with all buses running on only two red routes running on the busiest corridors.

If the city were pursuing only a coverage goal, on the other hand, it would spread out services so that every street had a bus route, as in the network at bottom-right. In this example, only one or two buses serve each of the green routes, so waiting times for each route would be longer.

## Transit Equity

TriMet is committed to equity across its operations. As the agency's 2019 Title VI Program Update<sup>2</sup> reads:

*Continuing to invest in transit equitably and embracing an inclusive model where equity is a core business objective is critical to TriMet.*

For TriMet, transit equity has three defining elements:

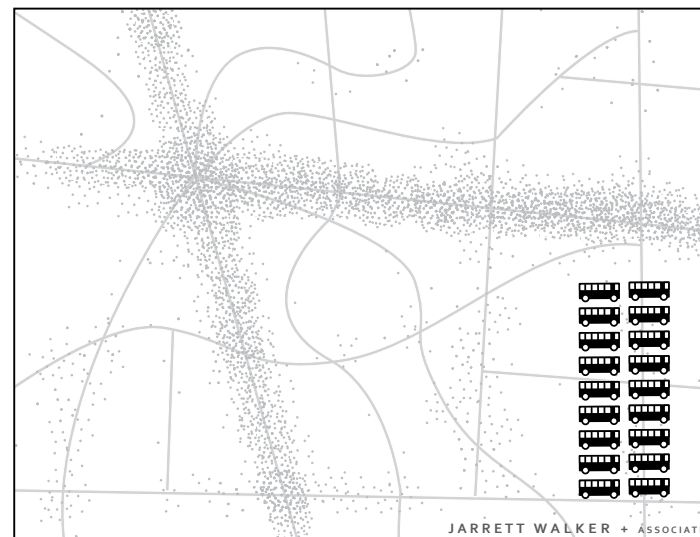
*Policies that promote the equitable distribution of burdens and benefits*

*Promoting equal access to resources and services*

*Engaging transit-dependent riders in meaningful planning and decision-making processes*

Transit equity goals are embedded within the ridership/coverage tradeoff. One of the challenges that all transit agencies face in planning more equitable service is in defining exactly what the service should be doing, and what more equitable outcomes it should be pursuing.

Should transit become **more useful** for disadvantaged populations, reducing the burden of travel time, and potentially cost of vehicle ownership for people of color and lower-income people, and expanding the range of opportunities it can connect them to? This is an equity goal that is embedded within the ridership goal, because it requires a useful service that can attract substantial ridership to ensure that the outcomes it can deliver are broadly felt throughout the community. TriMet's objective of "economic opportunity for all" is an example of an equity goal that requires a useful network capable of generating high ridership.



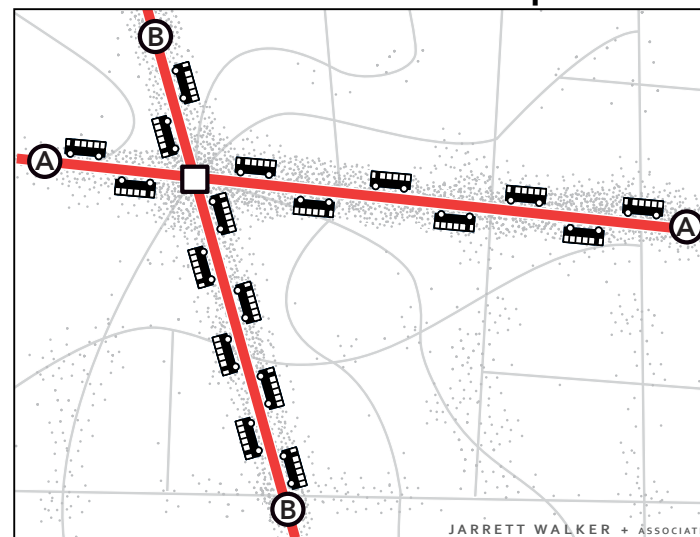
Imagine you are the transit planner for this fictional town.

The dots scattered around the map are people and jobs.

The 18 buses are the resources the town has to run transit.

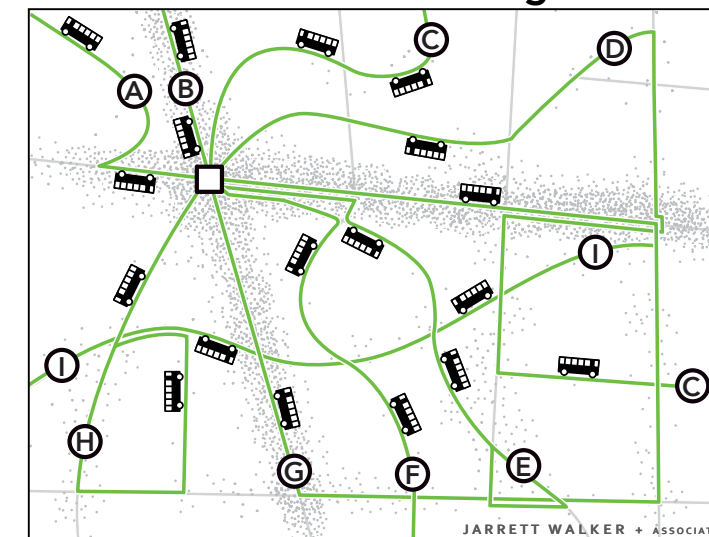
Before you can plan transit routes, you must first decide: What is the purpose of your transit system?

### Maximum Ridership



All 18 buses are focused on the busiest area. Waits for service are short but walks to service are longer for people in less populated areas. Frequency and ridership are high, but some places have no service.

### Maximum Coverage



The 18 buses are spread around so that there is a route on every street. Everyone lives near a stop, but every route is infrequent, so waits for service are long. Only a few people can bear to wait so long, so ridership is low.

Figure 3: Ridership and Coverage Goals

# Illustrating and Measuring Goals

Should transit be **widely available** for members of disadvantaged communities, so that everyone that needs transit has access to it? This is a coverage goal, and service designed to achieve it will need to run in places that are unlikely to generate high ridership, to ensure that few people are left behind.

These goals are not always in conflict. It is possible to imagine a network alternative designed to both improve the usefulness and availability of service for disadvantaged groups, and prioritizes these needs first, compared to ridership or coverage-focused services in places with fewer minority or lower-income people. One of the purposes of Forward Together is to better understand which equity goals TriMet should be focused on as it designs service.

## Illustrating Goals

While TriMet has only so many resources to run bus service, it has never before conducted network planning within those limits on the basis of a public process informed by a clear sense of goals or priorities. Last decade's major service planning effort, the Service Enhancement Plans, includes a wide range of improvements that address both ridership and coverage goals, at a total cost well above the level of service TriMet is currently able to provide.

The alternatives developed in the Forward Together process will illustrate what it would mean for TriMet's network, with its existing service level, to focus more on achieving a particular set of goals.

For example, what would it mean to focus on transportation equity, providing more useful service to lower-income people, people of color? How would the network look if TriMet

sought to serve everyone in the service area? What if the network were designed to focus on climate goals, reducing vehicle miles traveled and getting people out of cars?

Which services would be improved, and which would be reduced, in order to make progress towards those goals?

Forward Together is about illustrating the network changes that TriMet would need to make to focus on goals like these in a concrete way - with specific route maps, and a level of detail that can be rigorously evaluated, to provide the necessary information to support a community conversation about what we want our transit system to do.

## Measuring Goals

A clear conversation about transit goals demands a clear set of measurements that can help explain the potential impacts of changes to the transit network. Transit agencies like TriMet are awash in performance indicators and are compelled by federal regulation to document the performance of their service in incredible detail, focusing on measures of ridership, service cost, efficiency, reliability, and many others.

These measurements help TriMet manage service, but they are not the ones we need to have a clear conversation about the goals and priorities for transit service planning. For that, we need a suite of measurements that are focused on people and places, and how transit service can be relevant to them.

Planning in pursuit of a more equitable distribution of benefits and burdens also requires the capacity to measure those outcomes. In TransitCenter's 2021 *Equity in Practice*<sup>3</sup> guidebook, two sets of equity measures are

Different types of measurements help us understand whether we are meeting our transit goals. These measures fall into two groups:

- **Measures of Availability** - Where is transit service? Who is near service? Which areas lack service? Are transit operating resources distributed equitably?
- **Measures of Usefulness** - What can you reach using transit? Who is transit more or less useful for? Are the mobility benefits of transit distributed equitably?

identified:

- Place/neighborhood-focused measures showing outcomes for defined areas of need.
- Person-focused measures showing outcomes for people of certain identities.

We break measurement of transit goals into two groups: measures of transit's potential usefulness, and measures of its availability. These measures are applied at the person-level, describing outcomes for people throughout the service area, and at the place-level, describing outcomes within particular areas, and using detailed maps to visualize how outcomes vary across the service area.

### Measures of Availability

Some of the goals described on the last page require transit be widespread throughout the community, including goals related to providing service to every part of TriMet's district; to ensuring that a basic affordable mobility option is present in all parts of the community; or to ensuring that TriMet's resources are

distributed equitably.

These goals are primarily measured by determining which people, jobs, or significant destinations are near service; when that service is available; and the quantity of service provided.

### Coverage-focused availability measures

In a network design process, it is very common to evaluate the impacts of a given change on the "coverage" of the transit system. By coverage, we mean the number of people within a given distance of service - typically either 1/4-mile, or 1/2-mile. When service expands to new areas, the number of people covered increases. An important measure of the impact of a coverage-focused network alternative is how many more people it puts near service than other options.

### Ridership-focused availability measures

Availability measures are also important to evaluate network plans oriented towards generating high ridership. Because Frequent Service bus lines tend to be the most useful



routes, generating the most ridership (and carrying the majority of TriMet's bus passengers), measuring the number of people and jobs who have access to high-frequency service is one way to gauge the ridership potential of a particular set of network changes.

### Equity-focused availability measures

Measures of availability can be applied to both place and person-focused equity analysis, focused on questions about the distribution of service resources across the service area, or within the equity area identified through TriMet's 10-factor index.

Finally, availability measures are fundamental for the service equity analyses transit agencies conduct as part of their compliance process with the Civil Rights Act of 1964. TriMet's Title VI policy for evaluating Disparate Impacts of major service changes on minority populations is an example of a common way availability measures are used in transit planning. When a major service change happens that produces a decrease in the amount of transit service, TriMet analyzes whether the percentage of minority population living within 1/4-mile of the affected line exceeds that of the service area as a whole.

### Measures of Usefulness

Many of the goals described on the last page require transit be useful; that it presents a convenient, reliable travel option that lots of people will choose. Unlike measures of availability, which show how service is distributed, measures of usefulness look at whether that service is actually likely to take people where they need to go.

As the TransitCenter *Equity in Practice* guidebook notes, a "proximity analysis looks at who

lives near transit, but this can be quite different from who benefits from transit".

To measure the performance of the existing network or proposed changes towards these goals, we need to use methods that focus on factors like waiting, speed, and travel time. Three of the most common ways to do this are *travel time analysis*, *access analysis*, and *rider-ship modeling*.

These are related methods that can be used to understand how a set of changes to a transit network could change its potential usefulness for riders. Each of them depends on a model of the network that can be used to develop trip plans, based on a different set of routes, running at different speeds and frequencies, over different spans of service.

For example, imagine a network change that upgraded TriMet's Line 87-Airport Way / 181st to high-frequency service (an idea present in TriMet's Eastside Service Enhancement Plan). Today, Line 87 runs about every 35 minutes. With a Frequent Service upgrade, it would run every 15 minutes. Any trips along Line 87 would become faster because of the reduced waiting time required.

### Travel Time Analysis

Travel time analysis is the most straightforward of the three measures of utility. Simply put, travel time analysis compares how long trips take with the existing transit network and proposed changes.

In a travel time analysis, we can show the impact of changes like a frequency improvement on specific trips. Sometimes, this involves developing a matrix showing the travel time between a set of significant destinations with different transit alternatives. Another common application is to compare travel times using

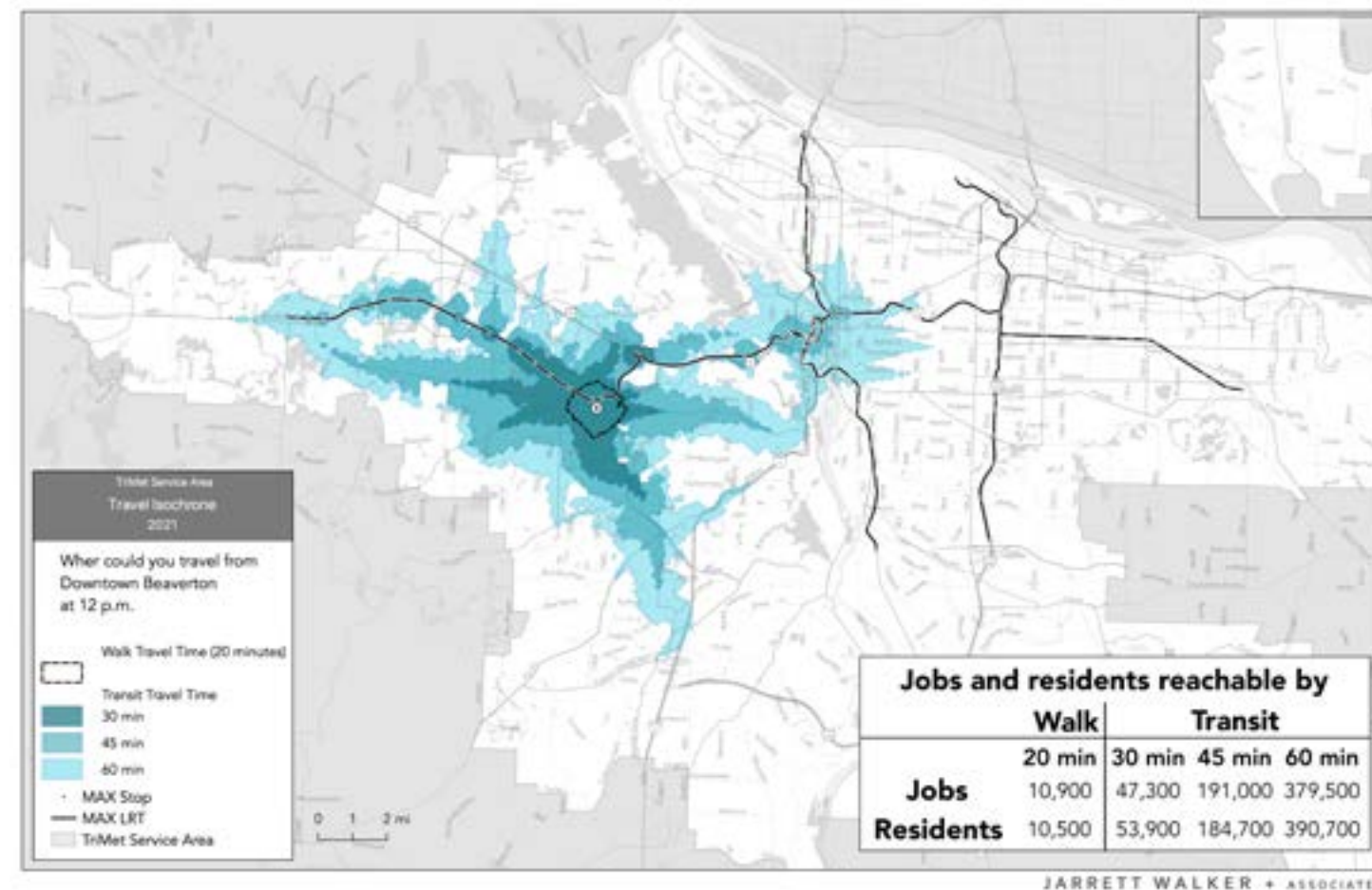


Figure 4: Transit isochrone from Downtown Beaverton

Travel time "isochrones" show an area on a map that is reachable from a starting point in a certain amount of time. Many measures of usefulness depend on isochrones to analyze the number of jobs or other destinations that are reachable on transit.

trips between zones, like the US Census Longitudinal Employer-Household Dynamics (LEHD), which measures the flows of workers between their homes and workplaces.

Whatever trips are analyzed, travel time analysis is always about comparing alternatives' impact on specific trips between specific places. This can help us understand the potential impact of a proposed network change on existing travel patterns, existing riders, and connections between important places that lots of people need to move between.

### Access Analysis

If travel time analysis is about questions like "will my trip be faster or slower?", access analysis is focused on questions like "where can I go on transit in a reasonable amount of time?". Where travel time analysis shows the impact on specific trips that the existing network makes possible, access analysis helps to understand the range of trips that would be possible with transit.

For customers, the decision to take transit revolves around one key question: where can it take me? If transit can't get you where you

need to go in a reasonable amount of time, by the time you need to arrive, it is unlikely to be an option that you consider if you have other more convenient alternatives.

Access analysis is often used to address questions like these:

- How many jobs could the typical resident reach in 30, 45 or 60 minutes?
- What are the places in the region where transit is most useful to reach jobs? Where is it less useful?
- How many fewer jobs are reachable on Sundays than on weekdays?
- What percent of the region’s residents are within a 30-minute transit trip of a grocery store?
- How many people have access to at least some baseline number of jobs or key destinations?
- How does transit usefulness for reaching jobs or destinations vary by race, ethnicity, income, or other demographic characteristics?

In access analysis, we aren’t looking at specific trips, or existing travel patterns. We are analyzing how much stuff the transit network can take you to.

### Ridership Modeling

Ridership modeling can be thought of as an elaboration of the previous two methods. Rather than simply comparing travel times, or calculating the range of places reachable, ridership modeling adds a behavioral element to evaluate whether a particular set of network changes will result in more or fewer people riding transit.

Ridership modeling is critical in major infrastructure projects, where the ridership return on capital investment is often an important precondition for federal funding.

### Equity Applications of Usefulness Measures

Because transit’s core benefit is the mobility it can make possible, usefulness measures are important to understanding how those benefits are distributed throughout the community. All three of the types of measures of usefulness described here can be applied to equity analysis. For example, travel time analysis can be used to compare the travel times experienced by members of disadvantaged groups with those of people outside of those groups. Access analysis can be used to compare job access for people living in equity areas and non-equity areas. Ridership modeling can provide insights into who is likely to be using a particular service improvement or infrastructure project.

### Sorting Goals and Measures

Figure 5 summarizes how availability and usefulness measures can be applied to ridership, coverage, and equity transit planning goals. This is not an exhaustive list of measures that could be used in this process; it is likely that additional metrics will be identified through the public engagement process to help evaluate the network alternatives. But regardless of the precise measures employed, it is important to evaluate each goal with measures that speak to the outcomes those goals are intended to deliver.

	Example Availability Measures <i>Where is transit service?</i>	Example Usefulness Measures <i>Where can you go on transit?</i>
Ridership Goals	<ul style="list-style-type: none"> <li>• % of population and jobs near Frequent Service</li> <li>• % of key destinations or job centers near Frequent Service</li> </ul>	<ul style="list-style-type: none"> <li>• Median number of jobs reachable by residents</li> <li>• % of residents within 30/45/60 minute trip of key destinations</li> <li>• Travel times between key destinations</li> <li>• Estimated number of daily/weekly/annual riders</li> </ul>
Coverage Goals	<ul style="list-style-type: none"> <li>• % of population and jobs near transit service</li> </ul>	<ul style="list-style-type: none"> <li>• % of population with access by transit to at least x number of jobs</li> </ul>
Equity Goals	<ul style="list-style-type: none"> <li>• % of disadvantaged people near Frequent Service and any service</li> <li>• Title VI Disparate Impact measures</li> <li>• Coverage and presence of transit service and Frequent Service in identified equity areas</li> </ul>	<ul style="list-style-type: none"> <li>• Median number of jobs reachable by disadvantaged populations</li> <li>• Demographic distribution of access</li> <li>• Job and destination access in identified equity areas, compared to other parts of the region</li> </ul>

Figure 5: Goal-driven measurement

# Forward Together Schedule

**Figure 6** shows the timeline for the Forward Together project. This existing conditions phase was conducted concurrently with the first phase of engagement, focused on transit goals.

This first phase of engagement has three main elements:

- The inclusion of questions related to the ridership/coverage tradeoff in TriMet’s attitudes and awareness survey, a general survey about the agency and its service that is administered to a statistically valid sample of the region’s residents.

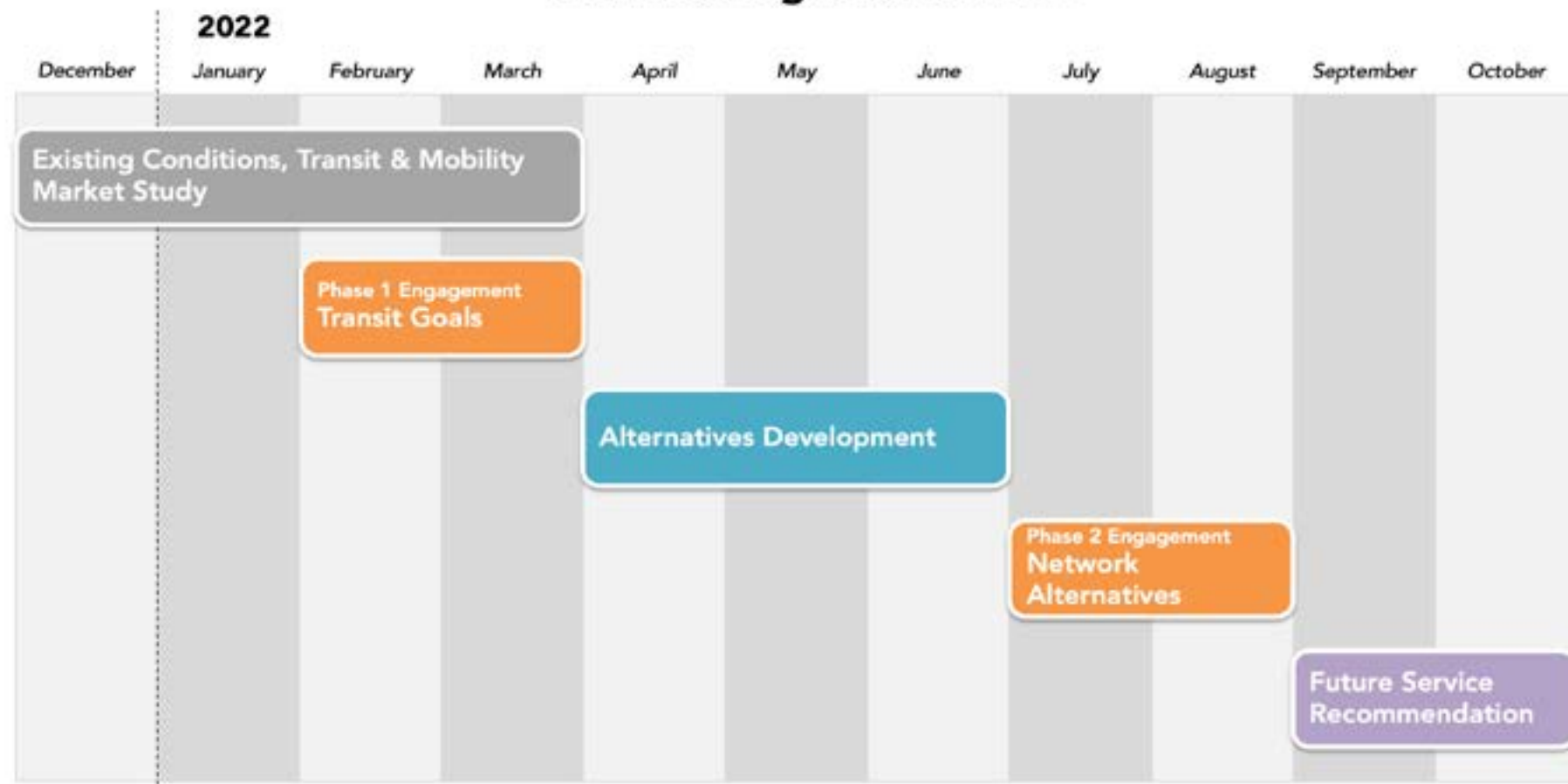
- A web survey on the Forward Together website that goes into greater detail on the goals and tradeoffs described in this document.
- Additional engagement with key community partners working with hard-to-reach communities designed to understand the needs and desires of their constituents.

In late Spring 2022, TriMet will design three alternatives focused on illustrating design goals that emerged from the first phase of outreach. These will be presented to the public in Summer 2022 in an effort focused on the goals and values they believe should go into

service planning. The network alternatives will help to clearly explain the costs and benefits of each option.

The Final Report detailing the future service recommendation will be developed in Fall 2022 based on the input received in the Summer Phase 2 engagement process. This is not about picking a single alternative as “the” future service recommendation; instead, it will synthesize the feedback received in the engagement processes into a set of lessons for TriMet to carry forward into its future service planning efforts.

## Forward Together Timeline



TriMet’s Forward Together process will run through most of 2022, concluding with a final report and future service recommendation in the fall.

Figure 6: Forward Together Timeline