



APPENDIX A



Transit Together Study

State of Regional Transit Part 1: Market Analysis

October 2022

GPCOG
GREATER PORTLAND
COUNCIL OF GOVERNMENTS

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NYGAARD

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1 INTRODUCTION AND KEY FINDINGS

TRANSIT TOGETHER

In early 2021, the Greater Portland Council of Governments (GPCOG) completed Transit Tomorrow, a 30-year strategic transit plan for the region. Transit Tomorrow outlines a four-part strategy to achieve its vision:

- Making transit **easier** for riders
- Creating **frequent** connections
- Investing in **rapid** transit
- Creating **transit-friendly places**

Transit Together is a follow-up GPCOG study to identify opportunities for increased coordination and integration in the region's transit network to improve efficiency and cultivate a cohesive and integrated system. It will apply the vision and goals of Transit Tomorrow by designing a transit network that is more easily shared, understood, and used by riders, and that improves region-wide mobility.

This transit Market Analysis is one of three parts of the Transit Together *State of Regional Transit* report.

- **Part 1 – Market Analysis:** This document assesses transit demand in the Greater Portland region.
- **Part 2 – Existing Service:** This document describes the current condition of the regional transit system.
- **Part 3 – Regional Service Delivery and Coordination:** This document describes the individual transit agencies in the Greater Portland region, their past and ongoing coordination efforts, and common challenges and opportunities.

Note: Throughout this document, the term 'transit' is used to refer to public transit in general. In some instances, however, the term 'transit' may more accurately apply to bus transit, as considerations related to Casco Bay Lines and Downeaster transit service can be much different than those related to bus service.



ASSESSING THE TRANSIT MARKET

An early task in the Transit Together process, and a fundamental part of designing improved regional transit service, is conducting a market analysis to understand the existing and future markets for transit in the Greater Portland region. The purpose of this market analysis is to understand where transit demand is located, what drives that demand, and begin assessing how transit service can be improved to better meet demand. The market analysis includes five sections:

- **Transit Demand:** Assessing which places have the greatest demand for transit.
- **Commute Flows:** Analyzing major regional commute patterns.
- **Key Locations:** Documenting key transit trip generators.
- **Planned and Proposed Development:** Mapping planned and proposed developments.
- **Access:** Assessing what places have transit access to jobs, healthcare, food, and other important destinations.

This document will be used to project the appropriateness of future transit services in the region and identify opportunities for transit investment.

COVID-19 AND TRANSIT TOGETHER

The COVID-19 pandemic has changed public transit throughout the world. In the United States and in the Greater Portland region, the pandemic has reduced transit ridership, and generally changed when, where, and how people travel.

In the Greater Portland region and throughout the U.S., the pandemic has also shone a light on the travel needs of 'essential workers'—those that cannot work from home and must travel every day to perform their jobs. In many industries, these workers are disproportionately low-income people and people of color, highlighting issues of equity and travel.

As transit ridership slowly recovers in the Greater Portland region, many see the Transit Together study's timing—just after the most dramatic pandemic-induced travel impacts—as a prime opportunity to redesign where, when, and how transit operates, with an eye towards serving those that continue to use public transit at high rates: essential workers and people who depend on transit as their primary mode of transportation.



KEY FINDINGS

This market analysis produces several key findings that inform service planning performed as part of the Transit Together study.

Transit Demand

Several corridors in the Greater Portland region show strong demand for transit and may hold opportunities for corridor-wide improvements.

- Brighton Avenue and Main Street in Portland and Westbrook
- Forest Avenue and Washington Avenue in Portland
- Congress Street in Portland, including connections to the Maine Mall
- Broadway in South Portland
- Alfred Street (Route 111) in Biddeford
- Main Street/Ocean Park Road/Saco Avenue in Saco and Old Orchard Beach

Commute Flows

Some of the region's largest commute flows highlight opportunities to grow transit market share.

- Into and out of downtown Portland
- To and from the Maine Mall area
- Cross-town along the Broadway corridor, in South Portland
- Between Westbrook and Portland's North Deering neighborhood
- Within Biddeford and Saco
- Between Biddeford-Saco-Old Orchard Beach and the Greater Portland area
- Between Biddeford-Saco-Old Orchard Beach and Scarborough
- To downtown Portland from the Brunswick, Biddeford-Saco, and Gorham-Windham areas
- Reverse commuting from Portland to the Biddeford-Saco, Scarborough, Yarmouth, and Freeport areas



Key Locations

Key transit destinations in the region are important to serve with high-quality transit. Notable concentrations or instances of these destinations, where transit service could be improved to serve existing and future markets, are:

- On and nearby the Portland Peninsula
- Southern Maine Community College in South Portland
- At rail and ferry hubs in Portland
- Along the Alfred Street (Route 111) corridor
- Along the Main Street (U.S. Route 1) corridor

Planned and Proposed Development

Several development projects represent opportunities to grow transit trip-making in the region:

- Throughout downtown Portland
- Along the Portland waterfront, including Commercial Street
- On the Broadway corridor in South Portland
- At the planned Riverton homeless services shelter in Portland
- Throughout downtown Biddeford
- At the new York County Judicial Center on Elm Street (U.S. Route 1)
- At select new transit-adjacent developments along existing transit lines

Access

Access is a measure of how easy it is to get to a place. When places are not easily accessible by transit but have a considerable demand for transit, that place can be considered 'underserved' by transit. Analysis in this study shows some places in the Greater Portland region that are underserved are:

- The Frenchtown, Cumberland Mills, and Blue Spruce neighborhoods in Westbrook
- Much of South Portland, including neighborhoods off Broadway and Redbank Village
- Parts of the East Deering neighborhood in Portland
- Much of Biddeford, Saco, and Old Orchard Beach, particularly in denser downtowns
- Select higher-density neighborhoods in Brunswick, Gorham, and Sanford



2 HOW DOES DEMAND FOR TRANSIT DIFFER ACROSS THE REGION?

Demand for transit is closely related to several factors. Each factor offers a different insight into transit demand and reveals how demand is geographically spread across southern Maine and the Greater Portland area.

- **Population Density:** Transit relies on having more people near service, so higher population density makes it more feasible to provide higher levels of service.
- **Employment Density:** The location and density of jobs is a strong indicator of transit demand, as work travel is often the most common type of transit trip.
- **Socioeconomic Characteristics:** Different people have different likelihoods of using public transit, often based on socioeconomic characteristics. For example, people living in households with many cars are much less likely to use transit than people without access to a vehicle.

Some areas may not be transit-supportive based on population, employment, or demographics independently. For this reason, this analysis considers these factors together.

METHODS

This transit demand analysis uses U.S. Census Bureau 2019 five-year estimates from the American Community Survey (ACS) to illustrate densities of population groups as people per acre. The following ACS tables were used at the census block-group level:

- **Age:** B01001
- **Country of Origin:** B99051
- **Income:** C17002
- **Race:** B03002
- **Vehicle Ownership:** B25044



For employment density, U.S. Census Bureau 2018 Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LODES) were used to illustrate densities of jobs per acre.

The communities assessed in this chapter sometimes include places outside the Portland Area Comprehensive Transportation System (PACTS) community boundaries, such as Brunswick and Sanford. These places are discussed because of their one-seat ride transit connections to PACTS communities.


























MATCHING LAND USE AND TRANSIT DEMAND

Figure 2-1 shows the relationship between the intensity of land use and transit demand. Typically, transit market size increases as land use intensifies and density rises. As the market grows, so does the frequency of transit that can be successfully operated. Places with very low-density land uses, such as rural and agricultural areas, do not generally support efficient fixed-route transit operation. Some low-density areas may support on-demand services, such as microtransit. Further analysis on the potential for low-density Greater Portland communities to support microtransit will be conducted as a part of the Transit Together study.

Fixed-route transit can generally be supported in suburban communities and some town centers, while denser environments support higher-capacity transit. Higher-frequency bus service is most likely to be successful along certain corridors in Portland, which has the highest densities in southern Maine.

Figure 2-1 Potential Level of Transit Service Supported by Different Land Use Intensities

Land Use			Transit			
Land Use Types	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service	Other Modes	
 Urban Core	>30	>15	    	15 mins. or less	 Other Passenger Rail	
 Urban and Neighborhood Mixed-Use	15-30	10-15	    	15-30 mins.		
 Mixed-Density Neighborhoods	10-15	5-10	   	30-60 mins.		Land Use and Frequency Varies
 Low Density	2-10	2-5		60 mins. or less, or on demand		 Passenger Ferry
 Rural	<2	<2		On demand		



POPULATION DENSITY

Population density is one of the most important factors in assessing transit demand. While population density technically indicates the proximity of people living together, it also correlates with land use types, such as single-family homes or apartment buildings. Denser places tend to be more walkable and less auto-oriented, with more limited access to parking and less reason and incentive to own a private automobile. These denser places are where high-frequency fixed-route transit is typically more successful and efficient. In very low-density places, fixed-route transit is generally not successful but on-demand service may be an appropriate transit mode.

According to the latest ACS, Portland urbanized area is home to 210,470 residents¹, with much of the population located in Portland. Figure 2-2 through Figure 2-5 show how these concentrations of residents relate to transit demand. Places shaded red likely have population densities that support some level of fixed-route transit, while places with pink shading have population densities that may be better candidates for non-fixed route transit. These low-density places may still warrant fixed-route service if employment or key destination density is high.

Places in the Greater Portland area with the highest population densities are:

- The **Portland Peninsula**, specifically the **East End** and **West End** neighborhoods
- The **Woodford's Corner** and **Oakdale** neighborhoods in **Portland**
- The **Pleasantdale** and **Willard Square** neighborhoods in **South Portland**
- The **Frenchtown** neighborhood and **residential community south of downtown** in **Westbrook**

Places in the Biddeford-Saco-Old Orchard Beach area with the highest population densities are:

- Downtown **Biddeford**
- Communities **south and west of downtown Biddeford**

Other places in the Greater Portland region with high population densities are:

- Parts of **Sanford**

¹ 2019 ACS five-year estimates; Hispanic or Latino Origin by Race (B03002); Portland, ME Urbanized Area.



Figure 2-2 Population Density in Greater Portland Region

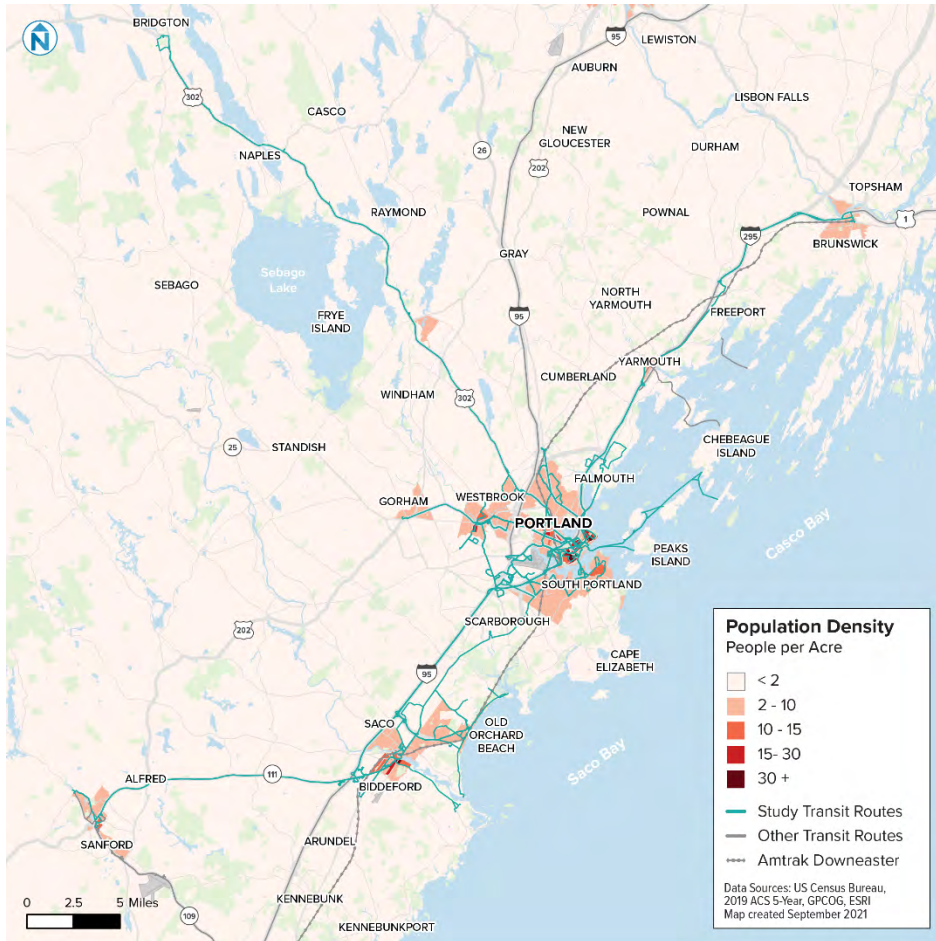


Figure 2-3 Population Density in Greater Portland Area

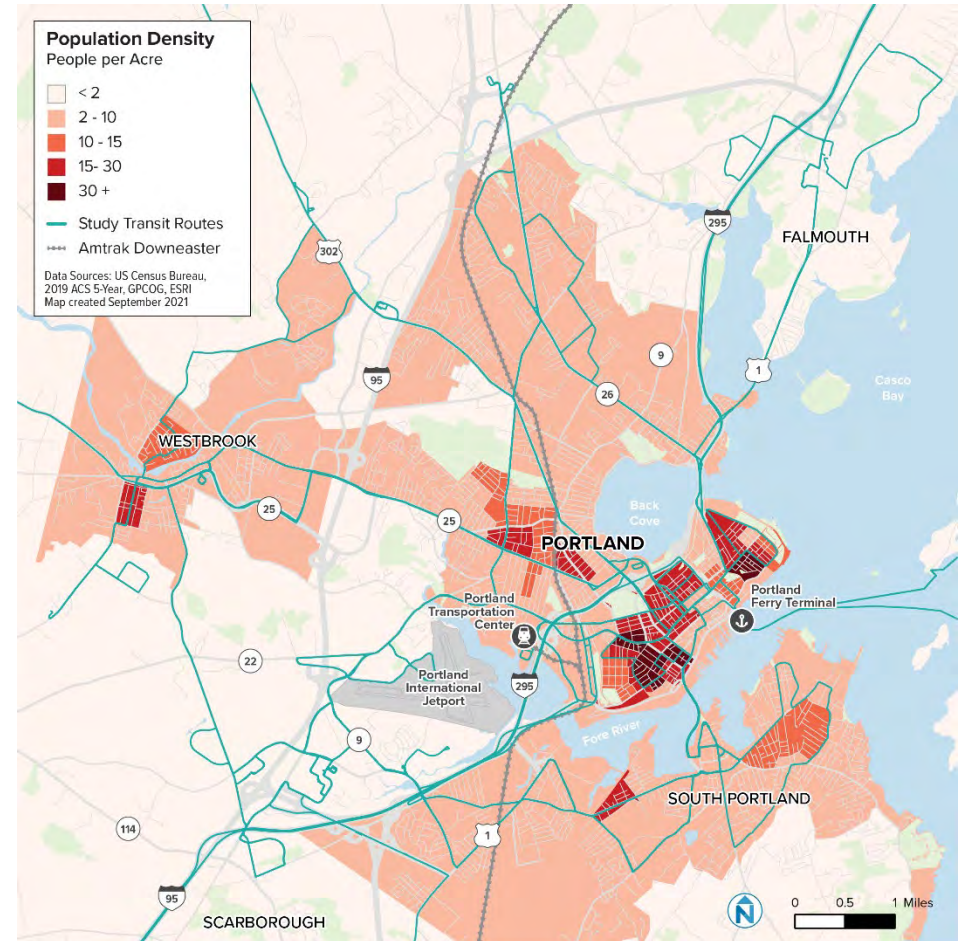




Figure 2-4 Population Density on the Portland Peninsula

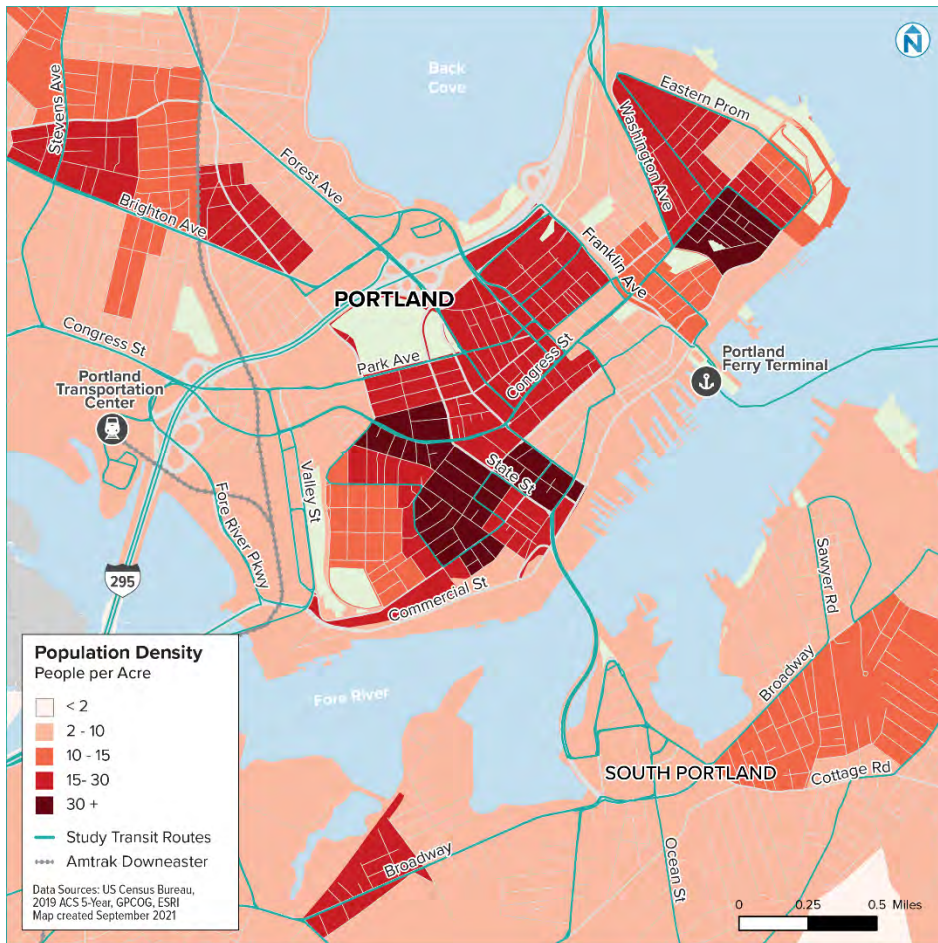
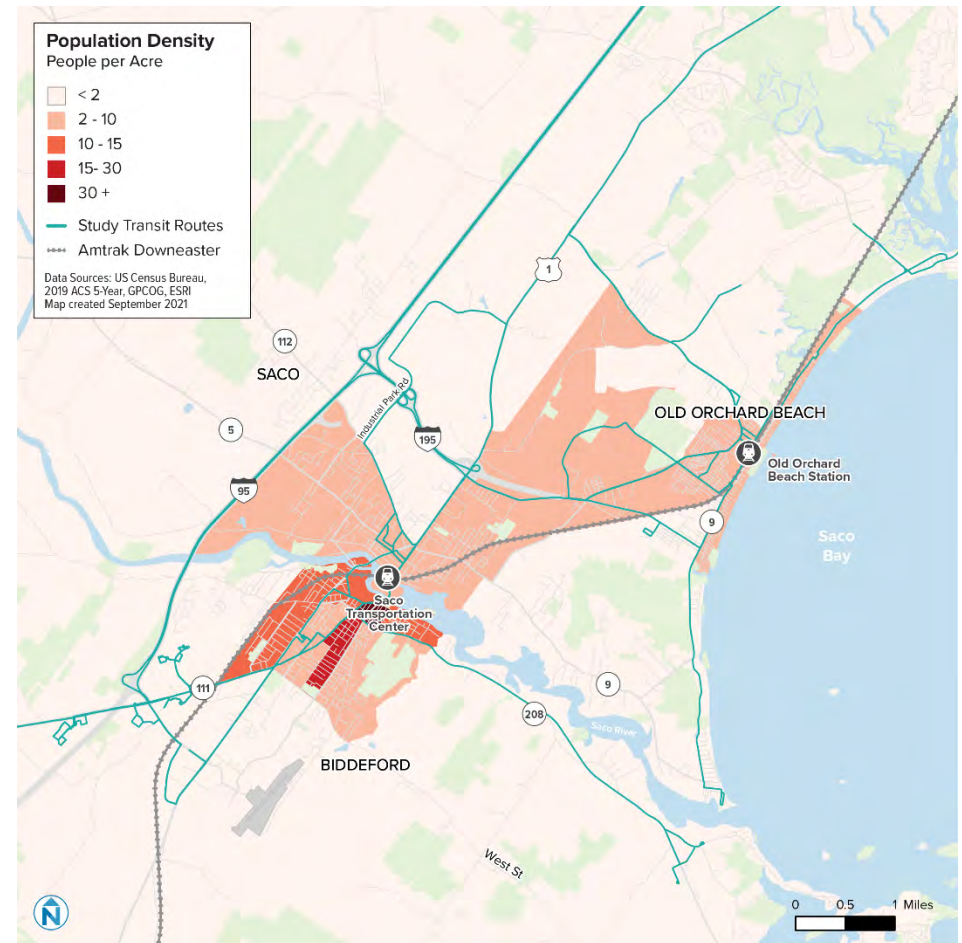


Figure 2-5 Population Density in Biddeford-Saco-Old Orchard Beach









Visualizing Population Density

Visualizing density helps illustrate what different land uses look like in the Greater Portland region. More people in a place generally means taller buildings located more closely together, like downtown Portland. Lower-density places in the region are rural, with agricultural land uses and fewer residents, such as North Yarmouth.

Figure 2-6 uses Nearmap aerial photographs taken on April 20, 2021 to tie quantitative descriptions of population density to real-life images from the Greater Portland region.



Figure 2-6 Visualizing Population Density in Greater Portland Region

<p>Portland Old Port/Downtown</p>		<p>Urban Core <i>30+ people per acre</i></p>	<p>High-frequency fixed-route transit is appropriate in places like downtown Portland because of the high densities of people without auto access, close proximity of key destinations, and limited parking availability.</p>
<p>Biddeford Downtown</p>		<p>Urban and Neighborhood Mixed-Use <i>15-30 people per acre</i></p>	<p>Fixed-route transit is appropriate in downtown Biddeford because of the population densities and demographic characteristics of residents. The gridded street network allows for many walking paths to transit stops.</p>
<p>Saco King Street</p>		<p>Low Density <i>2-10 people per acre</i></p>	<p>Low-frequency fixed-route transit may be appropriate in parts of suburban Saco. The relatively dispersed population and disconnected streets, however, make fixed-route service less efficient. Demand-response services may be more appropriate here.</p>
<p>Cumberland Blanchard Road</p>		<p>Rural <i><2 people per acre</i></p>	<p>Most people living outside the Cumberland town center have cars and many have long driveways that connect to streets without pedestrian infrastructure. Fixed-route transit is not appropriate here but demand-response service may work.</p>



Socioeconomic Indicators

In addition to population density, socioeconomic characteristics influence people's propensity to use transit. National research shows that some demographic groups are more likely to use transit than the overall population.

It is important to note that there is overlap among demographic groups. For example, many low-income people are also people without access to a vehicle. Of the socioeconomic characteristics analyzed in this document, auto ownership and income levels are generally the greatest influencers of transit use.

People of Color

Racial and ethnic minority residents typically have higher rates of transit use than white residents, and the provision of equally effective transit service to minority populations is important to the Federal Transit Administration as a requirement under Title VI of the Civil Rights Act of 1964. The Greater Portland region's population is composed of 12% residents of color and 88% white residents.²

Densities of people of color in southern Maine are distributed much like the general population. These densities are highest in the following neighborhoods. Figure 2-7 through Figure 2-10 show these distributions.

Places in the Greater Portland area with the highest densities of people of color are:

- The **Portland Peninsula**, specifically in **Bayside** and **East End** neighborhoods
- The **Pleasantdale** neighborhood in **South Portland**
- The **Frenchtown** neighborhood in **Westbrook**

Places in the Biddeford-Saco-Old Orchard Beach area with the highest densities of people of color are:

- **Biddeford**, south of **Alfred Street**

Other places in the Greater Portland region with high densities of people of color are:

- Part of **Sanford**

² 2019 ACS five-year estimates; Hispanic or Latino Origin by Race (B03002); Portland, ME Urbanized Area.



Figure 2-7 Density of People of Color in Greater Portland Region

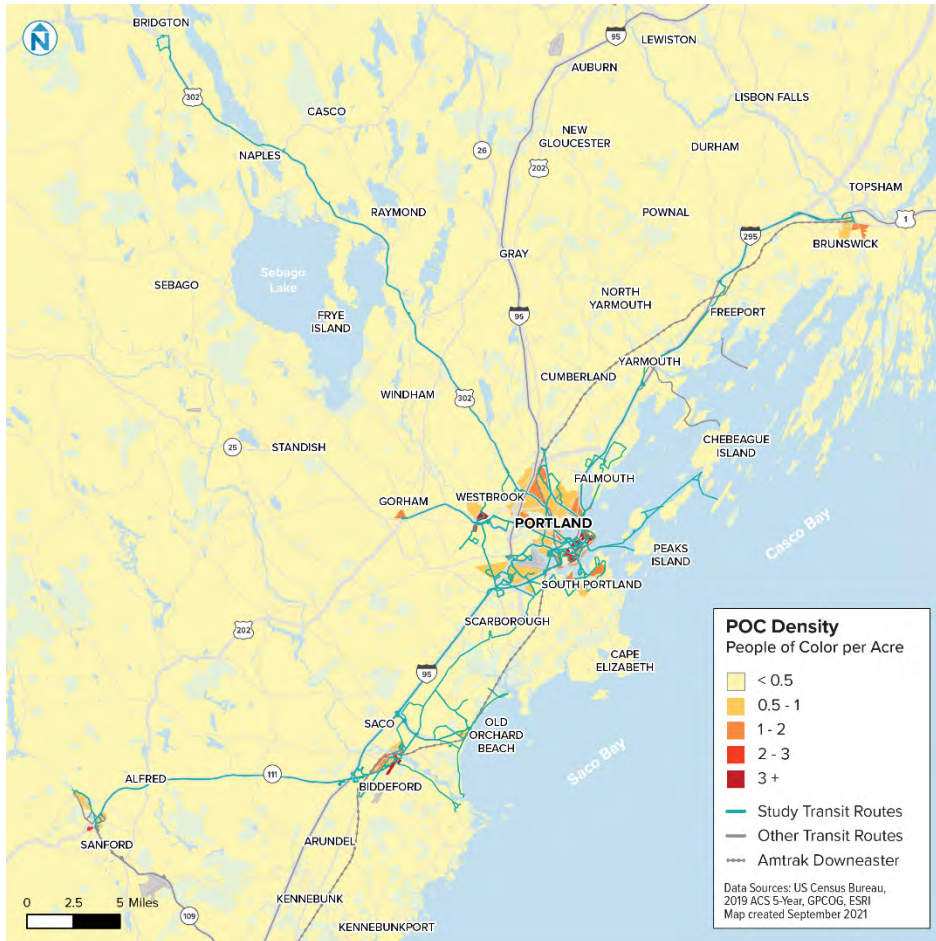


Figure 2-8 Density of People of Color in Greater Portland Area

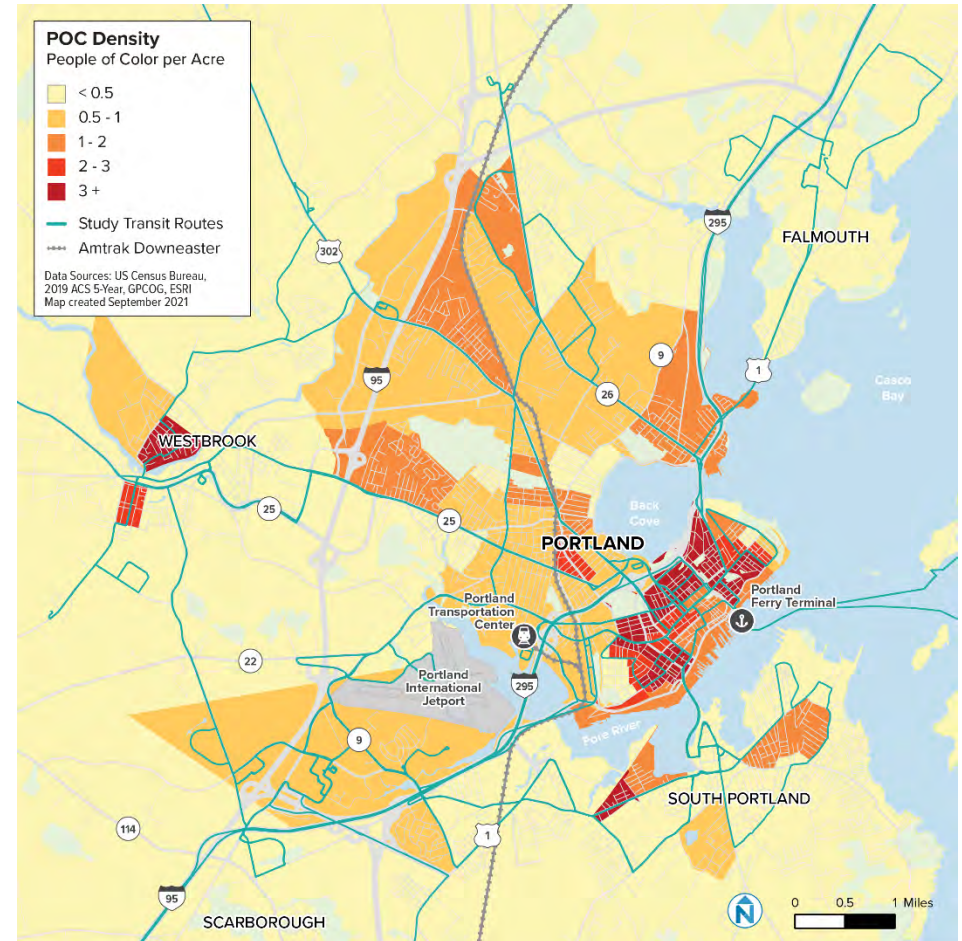
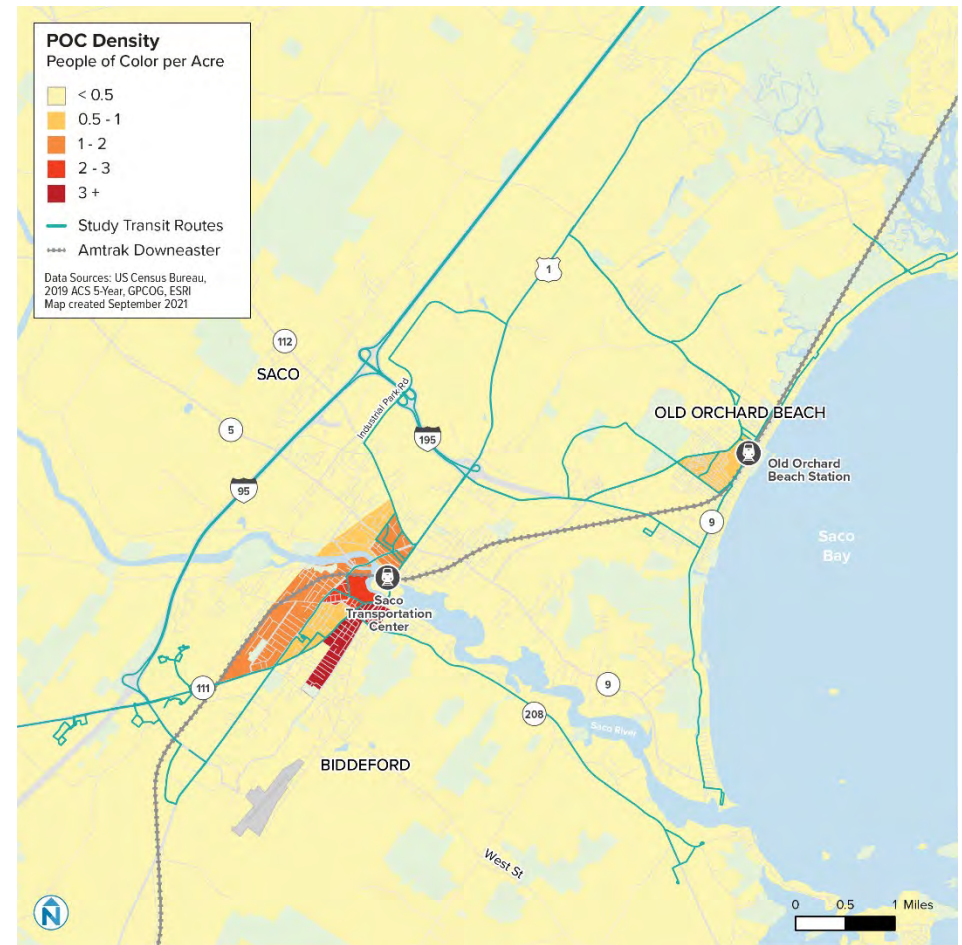




Figure 2-9 Density of People of Color on the Portland Peninsula



Figure 2-10 Density of People of Color in Biddeford-Saco-Old Orchard Beach





Zero-Vehicle Households

Households with limited or no access to a personal vehicle, either by choice or necessity, are more likely to rely on transit. Some people living in urban areas choose to live car-free because they can access jobs and other amenities via transit or by walking and biking. Other people use transit because of the high cost of driving or an inability to drive. Some households have fewer cars than workers, and one-vehicle households also typically have higher rates of transit use than households with two or more vehicles.

In the Portland urbanized area, around 9% of households completely lack vehicle access.³ Throughout the region, densities can be relatively low, sidewalks may or may not be present, and key destinations are often located outside of walkable town centers.

The highest density of zero-vehicle households is on the Portland Peninsula, where the street network is highly walkable, there is a high concentration of key destinations and jobs, and relatively frequent transit service operates.

Places in the Greater Portland region with the highest densities of zero-vehicle households are listed below. Figure 2-11 through Figure 2-14 show these distributions.

Places in the Greater Portland area with the highest densities of zero-vehicle households are:

- The **Portland Peninsula**, specifically the **West Bayside** and **West End** neighborhoods
- The **Oakdale** neighborhood in **Portland**
- The **Frenchtown** neighborhood in **Westbrook**

Places in the Biddeford-Saco-Old Orchard Beach area with the highest densities of zero-vehicle households are:

- Downtown **Biddeford**

³ 2019 ACS five-year estimates; Tenure by Vehicles Available (B25044); Portland, ME Urbanized Area.



Figure 2-11 Density of Zero-Vehicle Households in Greater Portland Region

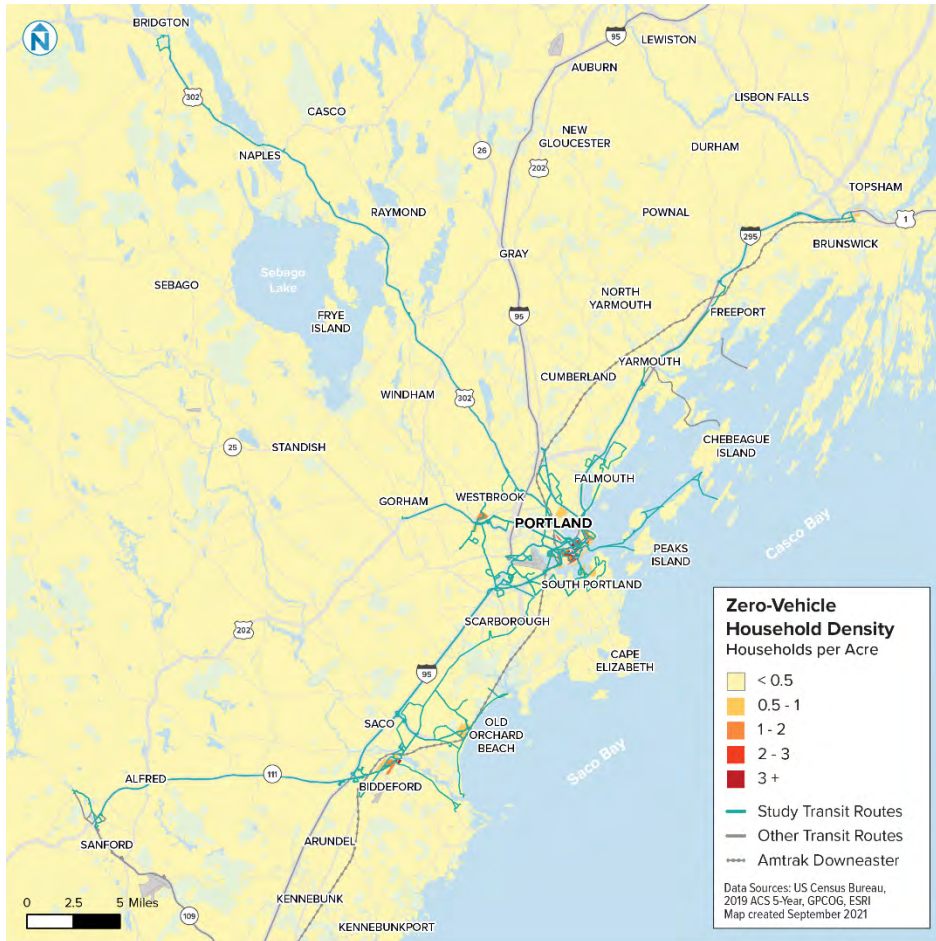


Figure 2-12 Density of Zero-Vehicle Households in Greater Portland Area

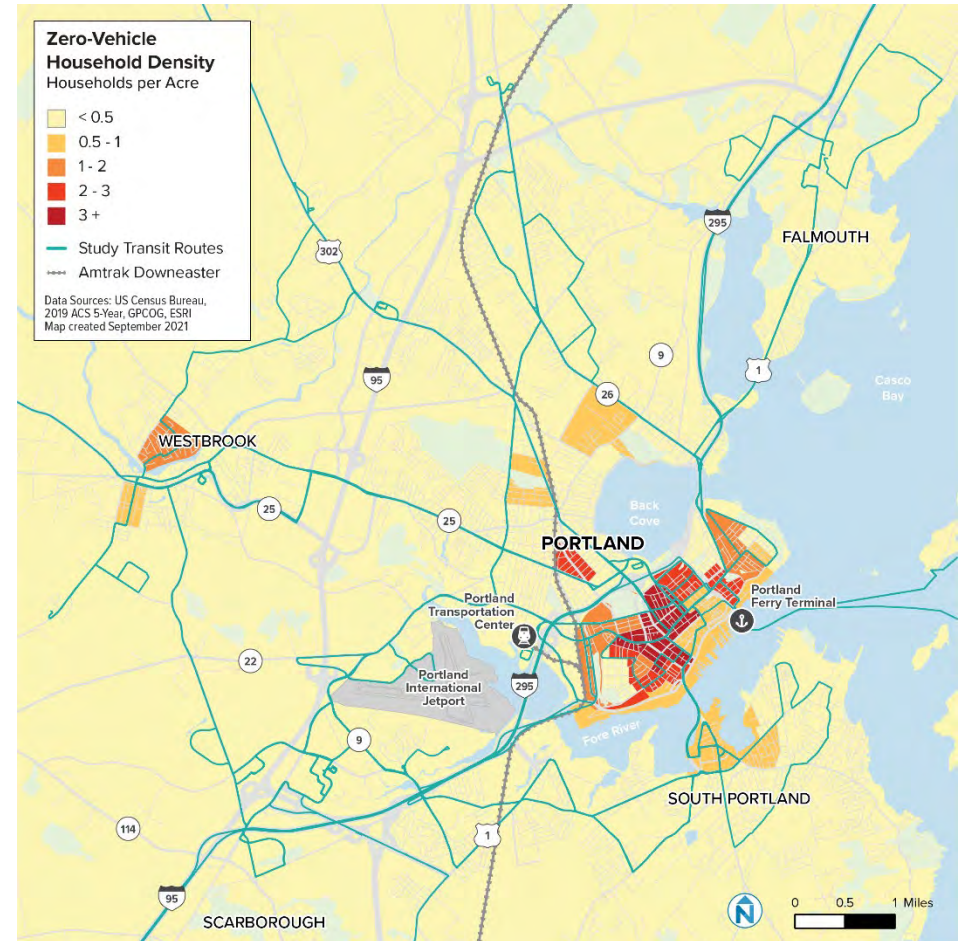




Figure 2-13 Density of Zero-Vehicle Households on the Portland Peninsula

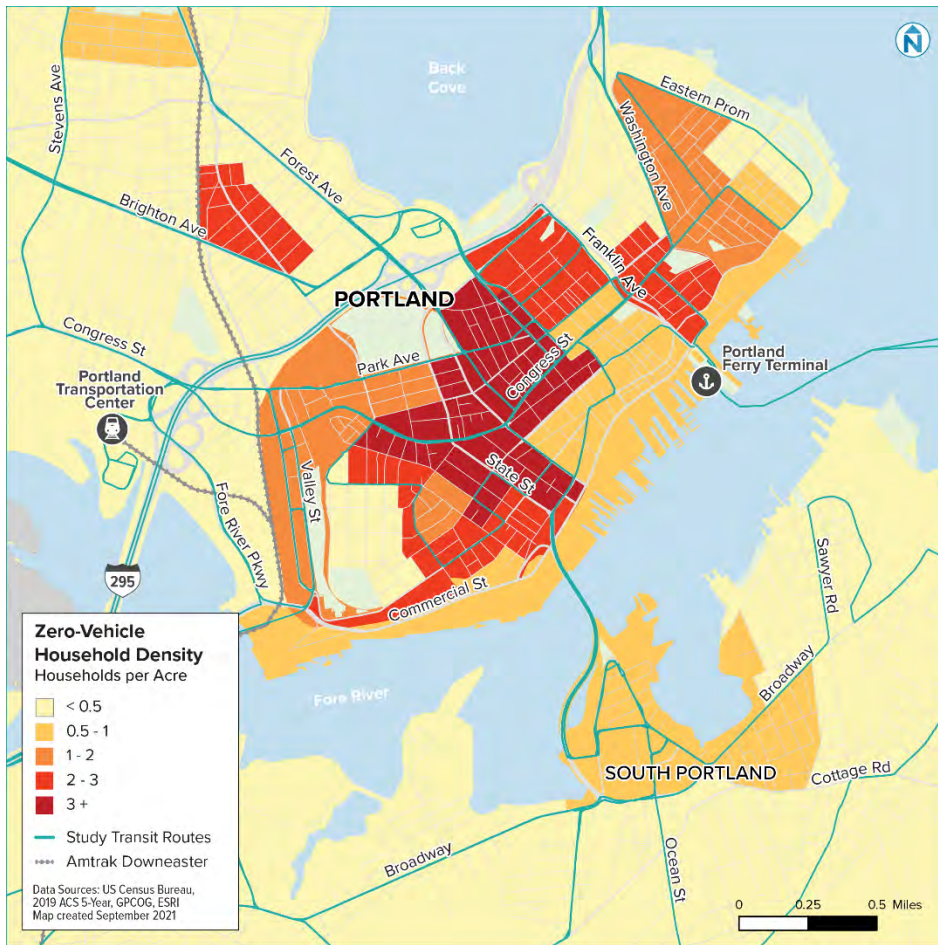
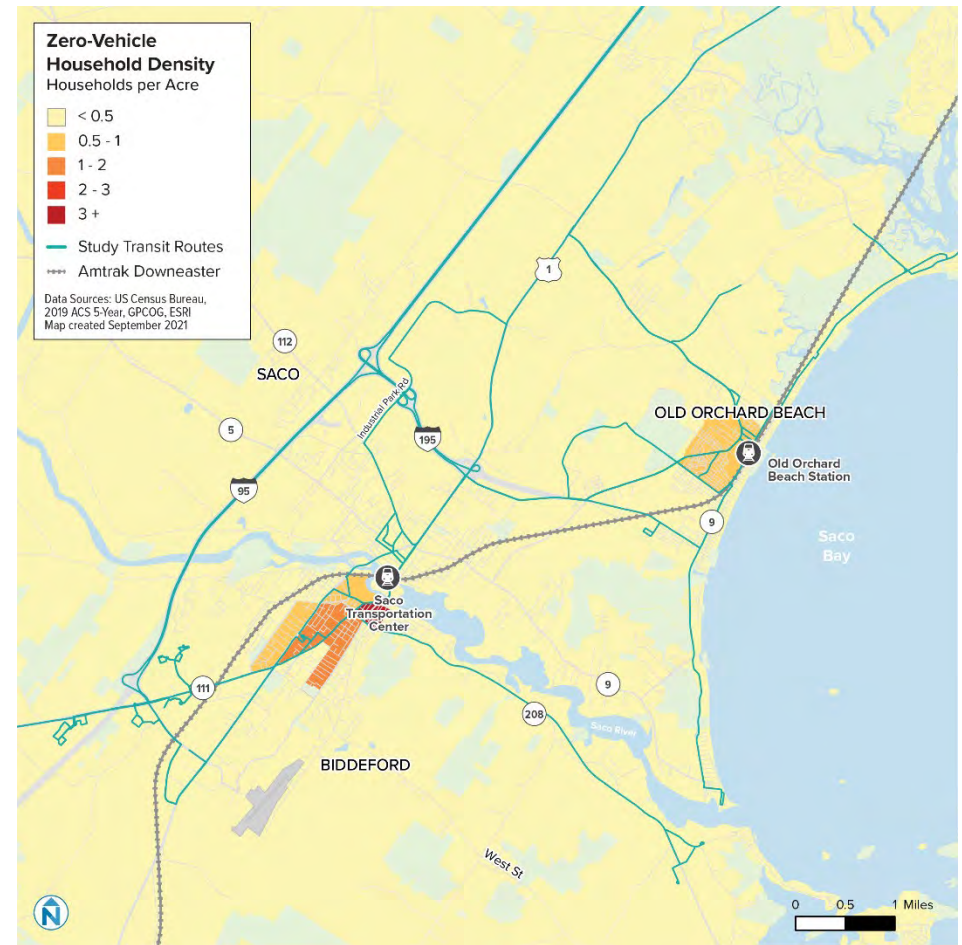


Figure 2-14 Density of Zero-Vehicle Households in Biddeford-Saco-Old Orchard Beach





Foreign-Born Population

Foreign-born people are generally more likely to use public transit than people born in the United States. Some of the reasons immigrant communities are more likely to use transit are the cost burden associated with arriving in a new country and challenges to obtaining a vehicle and/or a driver's license. Many immigrants also come from places where transit use is more common than it is in the United States.

In recent years, hundreds of refugees and asylum seekers have moved to the Greater Portland region. These people typically have limited means with which to access a private vehicle and so are more likely to be transit riders than the general population. Because of this, transit planning in the region should specially consider these populations' access to transit.

About 8% of people living in the Greater Portland region were born outside the United States.⁴ The densest communities of foreign-born people are listed below. Figure 2-15 through Figure 2-18 show this distribution.

Places in the Greater Portland area with the highest densities of foreign-born people are:

- The **Portland Peninsula**, specifically in the **East Bayside** and **West End** neighborhoods
- The **Frenchtown** neighborhood in **Westbrook**

Places in the Biddeford-Saco-Old Orchard Beach area with the highest densities of foreign-born people are:

- **Biddeford**, south of Alfred Street

⁴ 2019 ACS five-year estimates; Native and Foreign Born (B99051); Portland, ME Urbanized Area.



Figure 2-15 Immigrant Population Density in Greater Portland Region

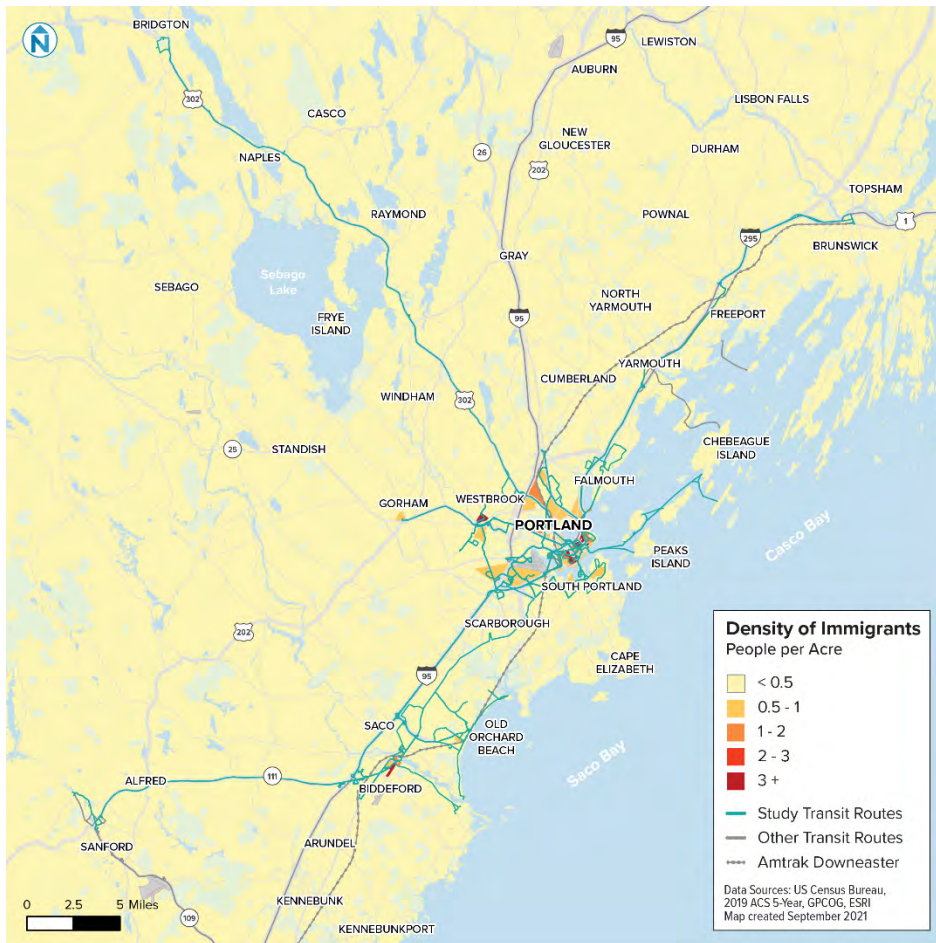


Figure 2-16 Immigrant Population Density in Greater Portland Area

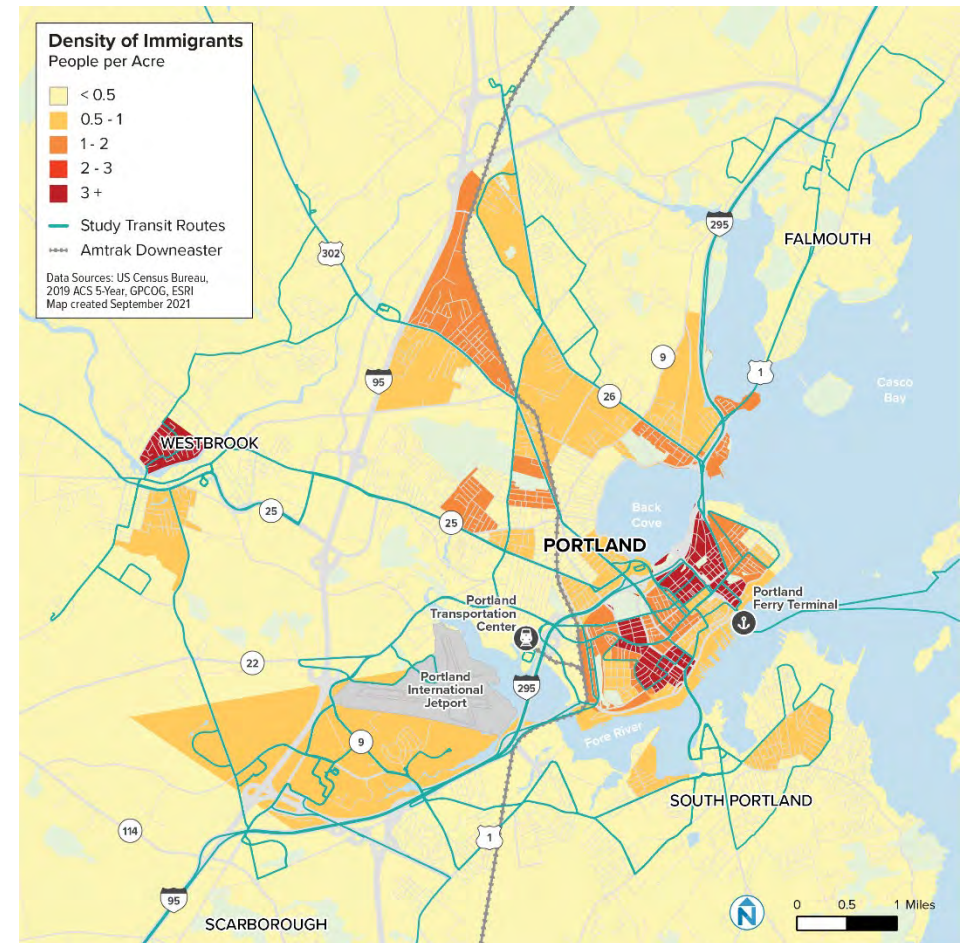
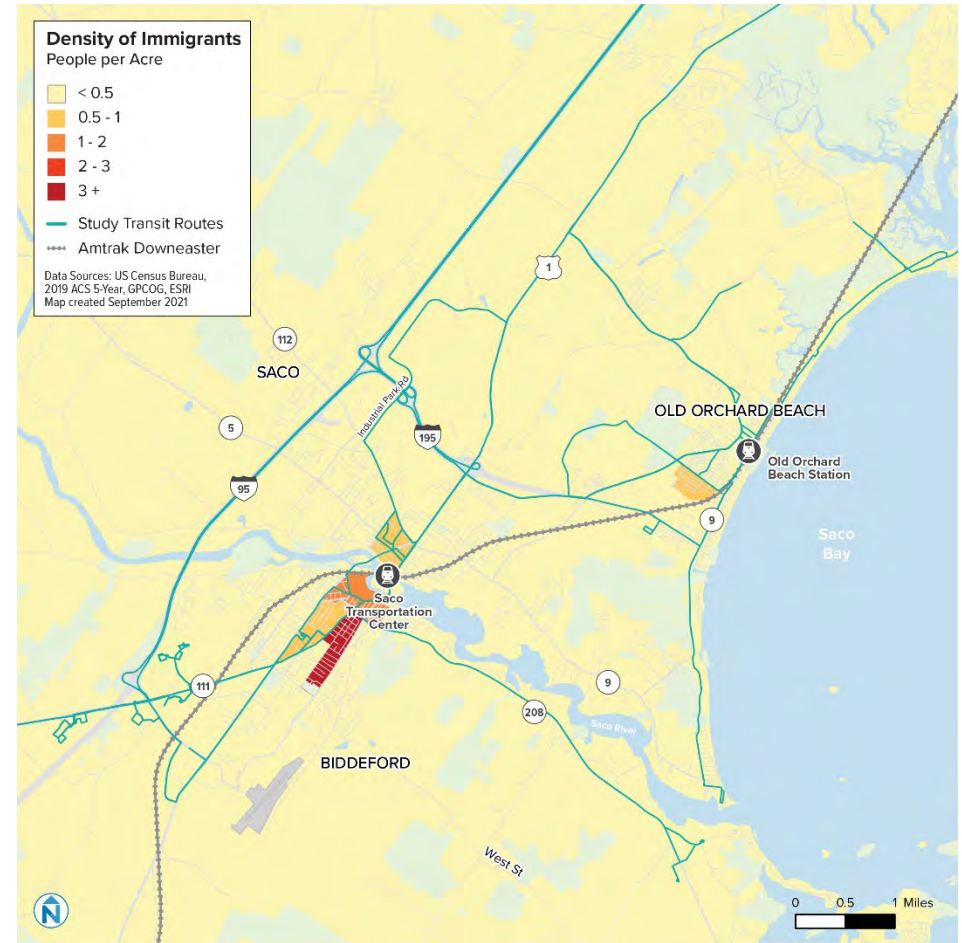




Figure 2-17 Immigrant Population Density on the Portland Peninsula



Figure 2-18 Immigrant Population Density in Biddeford-Saco-Old Orchard Beach





Low-Income Population

Residents with lower incomes tend to use local transit to a greater extent because it is less expensive than owning and operating a personal vehicle. Many low-income people rely on transit as their primary mode of transportation. Members of households earning fewer than approximately \$35,000 per year (200% of the federal poverty level for a two-person household)⁵ use transit to a greater extent than the general population. The 200% threshold is used because of the high cost of living in Portland, relative to other parts of the country.

About 25% of Greater Portland residents earn below 200% of the federal poverty level.⁶ Low-income populations are densest in the areas listed below. Figure 2-19 through Figure 2-22 show this distribution.

Places in the Greater Portland area with the highest densities of low-income people are:

- The majority of the **Portland Peninsula**
- The **Deering Center** and **Oakdale** neighborhoods in **Portland**
- The **Pleasantdale** neighborhood in **South Portland**
- **Westbrook**, both **downtown** and in the **Frenchtown** neighborhood

Places in the Biddeford-Saco-Old Orchard Beach area with the highest densities of low-income people are:

- Downtown **Biddeford**
- Downtown **Saco**

Other places in the Greater Portland region with high densities of low-income people are:

- **Sanford**

⁵ United States Department of Health and Human Services. January 13, 2021. HHS Poverty Guidelines for 2021. <<https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>>

⁶ 2019 ACS five-year estimates; Ratio of Income to Poverty Level in the Past 12 Months (C17002); Portland, ME Urbanized Area.



Figure 2-19 Low-Income Population Density in Greater Portland Region

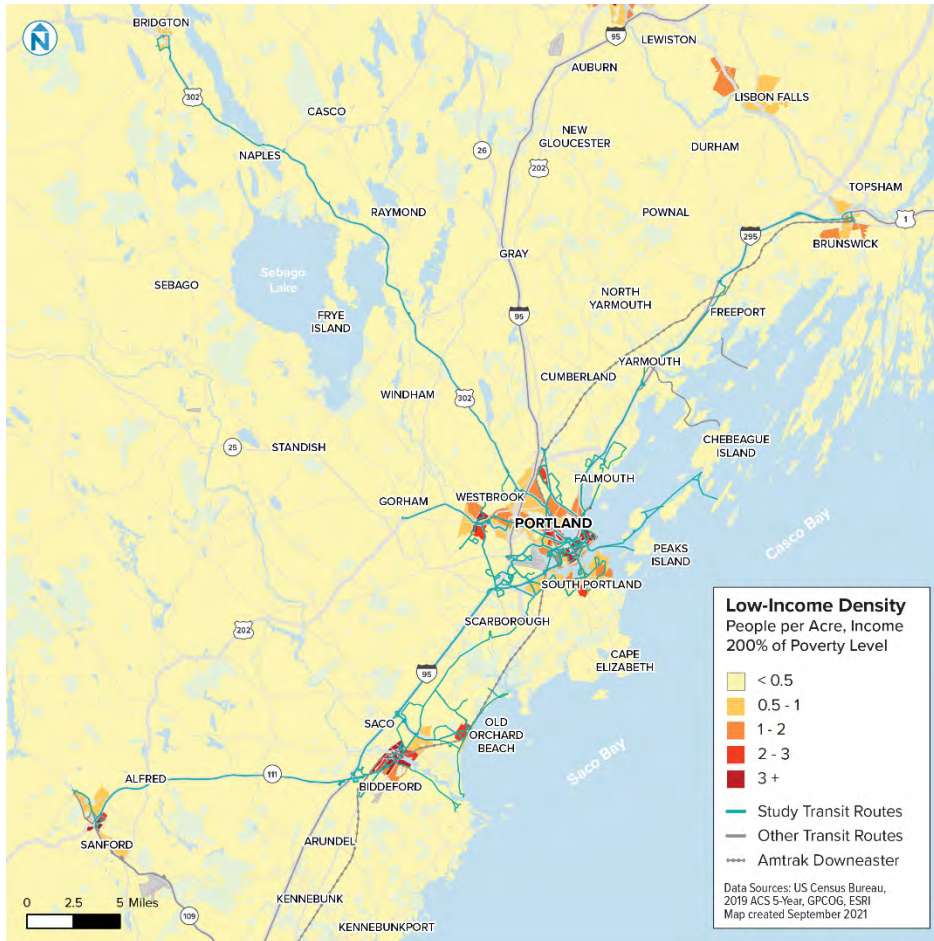


Figure 2-20 Low-Income Population Density in Greater Portland Area

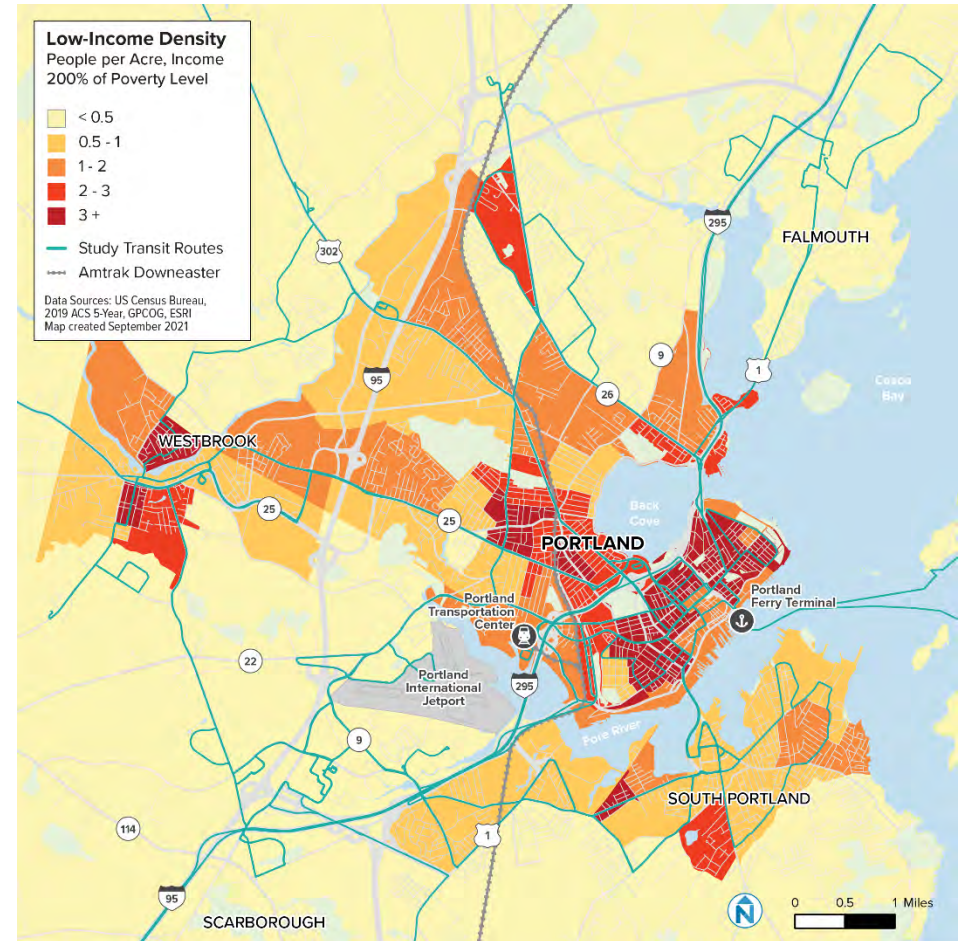




Figure 2-21 Low-Income Population Density on the Portland Peninsula

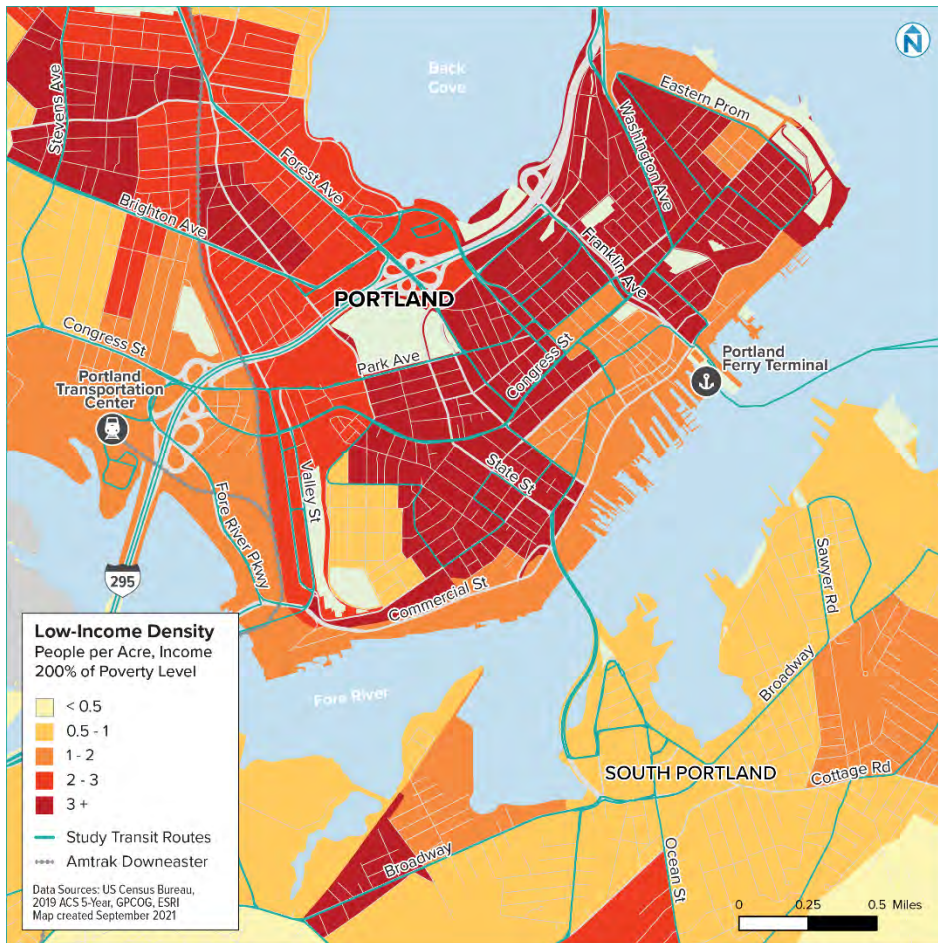
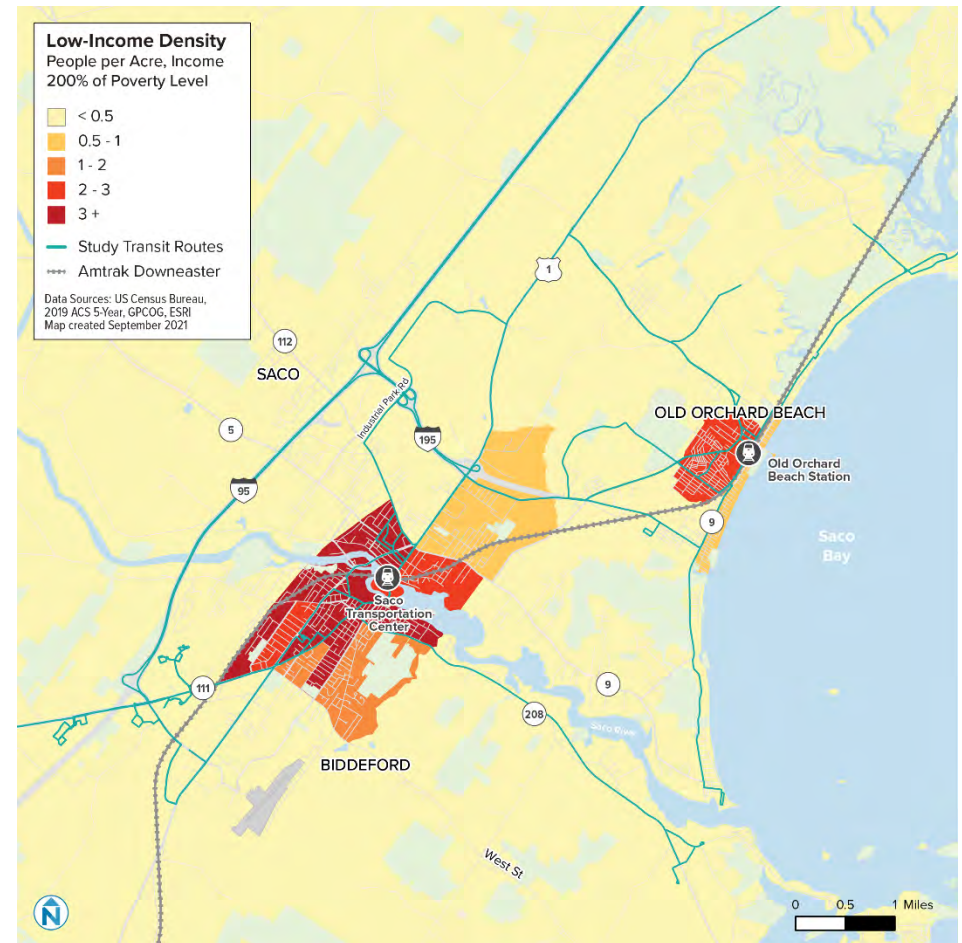


Figure 2-22 Low-Income Population Density in Biddeford-Saco-Old Orchard Beach





Senior Population

Older adults are often more likely than other age groups to use transit. Many senior residents live on limited fixed incomes, which makes low-cost public transit an attractive travel choice. Other older residents are not comfortable driving and use transit to maintain independence as they age.

Maine has the oldest population in the United States, with a median age of 45 years, compared to the U.S. median age of 38.⁷ Residents aged 65 and older are most densely concentrated in the places listed below. Figure 2-23 through Figure 2-26 show this distribution.

Places in the Greater Portland area with the highest densities of older residents are:

- The **Portland Peninsula**, specifically **East End** and **West End** neighborhoods
- The **Oakdale** neighborhood in **Portland**

Places in the Biddeford-Saco-Old Orchard Beach area with the highest densities of older residents are:

- Downtown **Biddeford**

Other places in the Greater Portland region with high densities of older residents are:

- Parts of **Sanford**

⁷ 2019 ACS five-year estimates; Age and Sex (S0101); State of Maine.



Figure 2-23 Age 65+ Population Density in Greater Portland Region

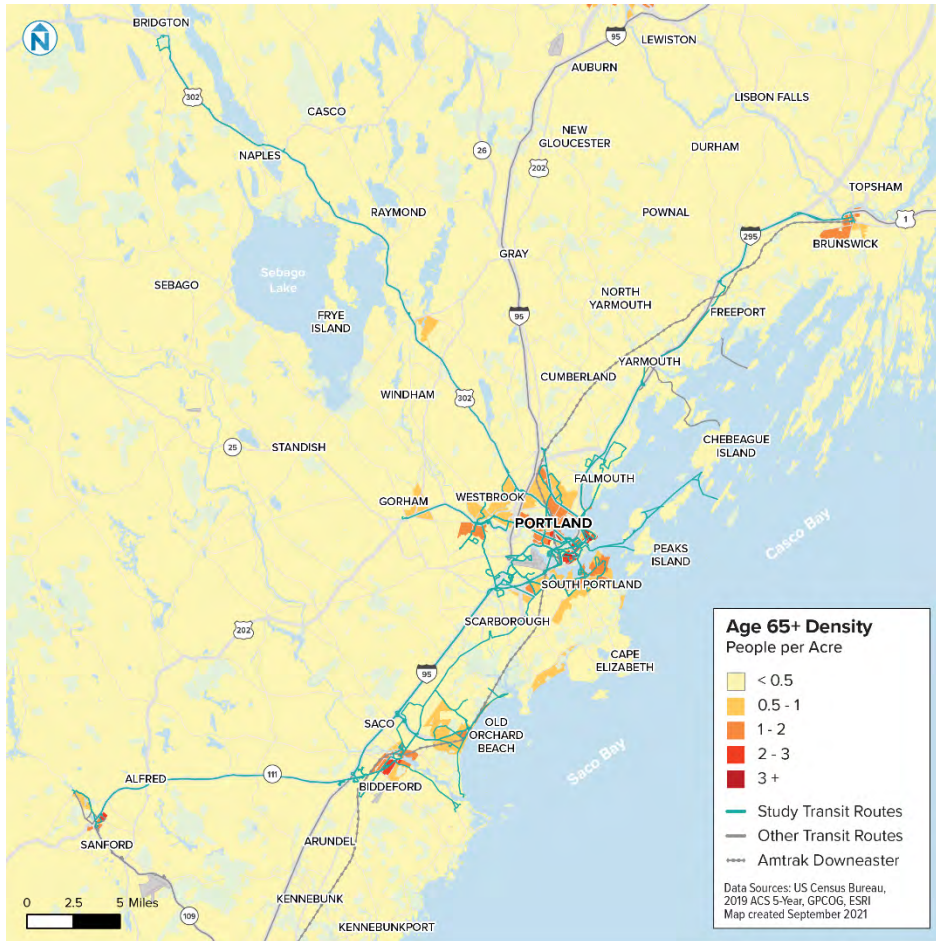


Figure 2-24 Age 65+ Population Density in Greater Portland Area

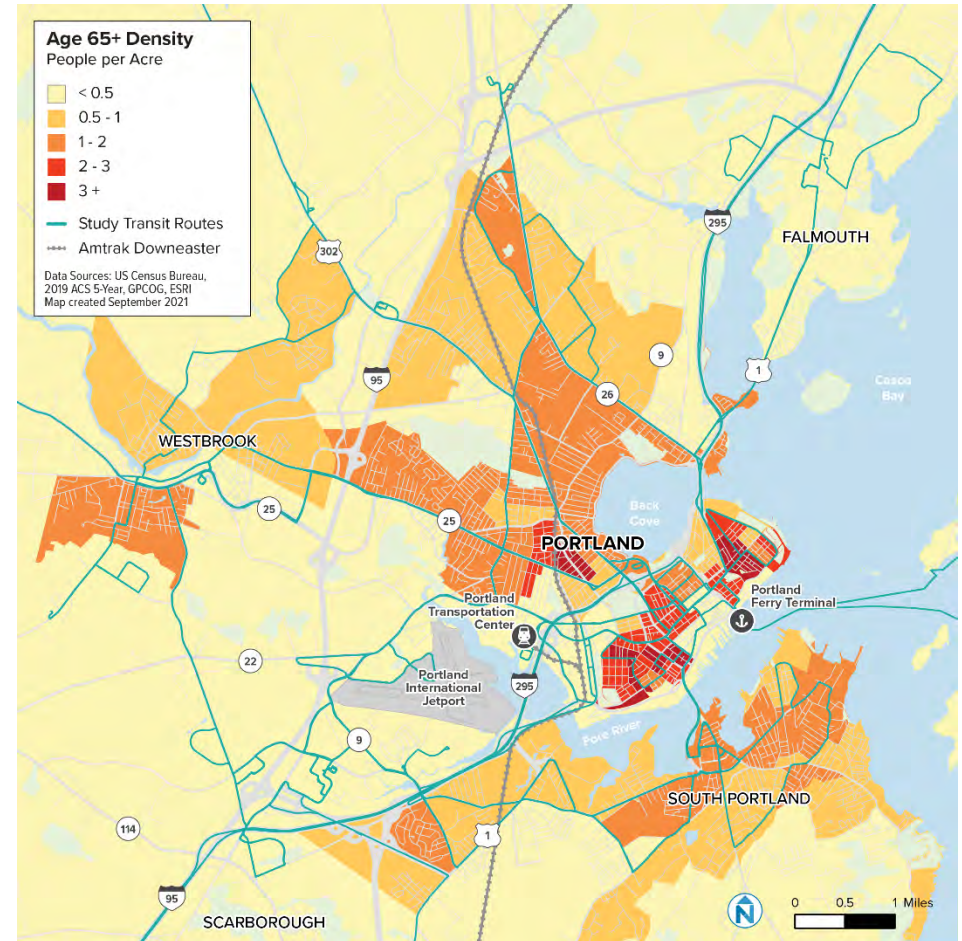




Figure 2-25 Age 65+ Population Density on the Portland Peninsula

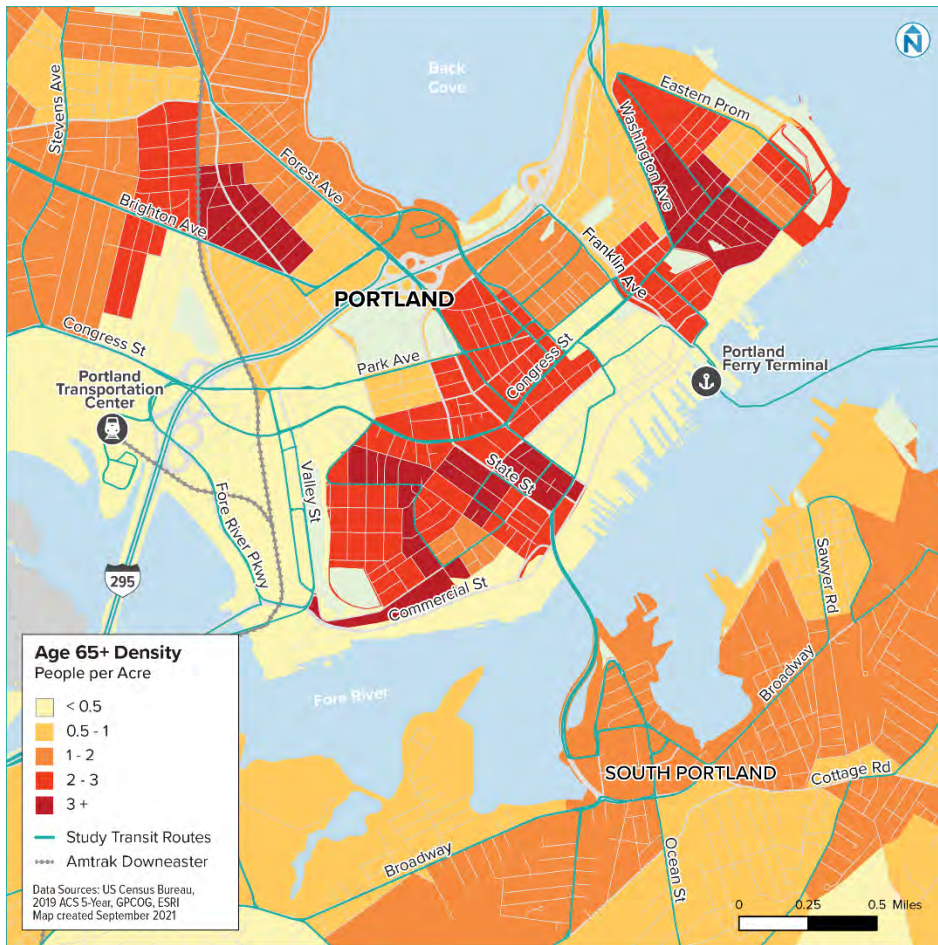
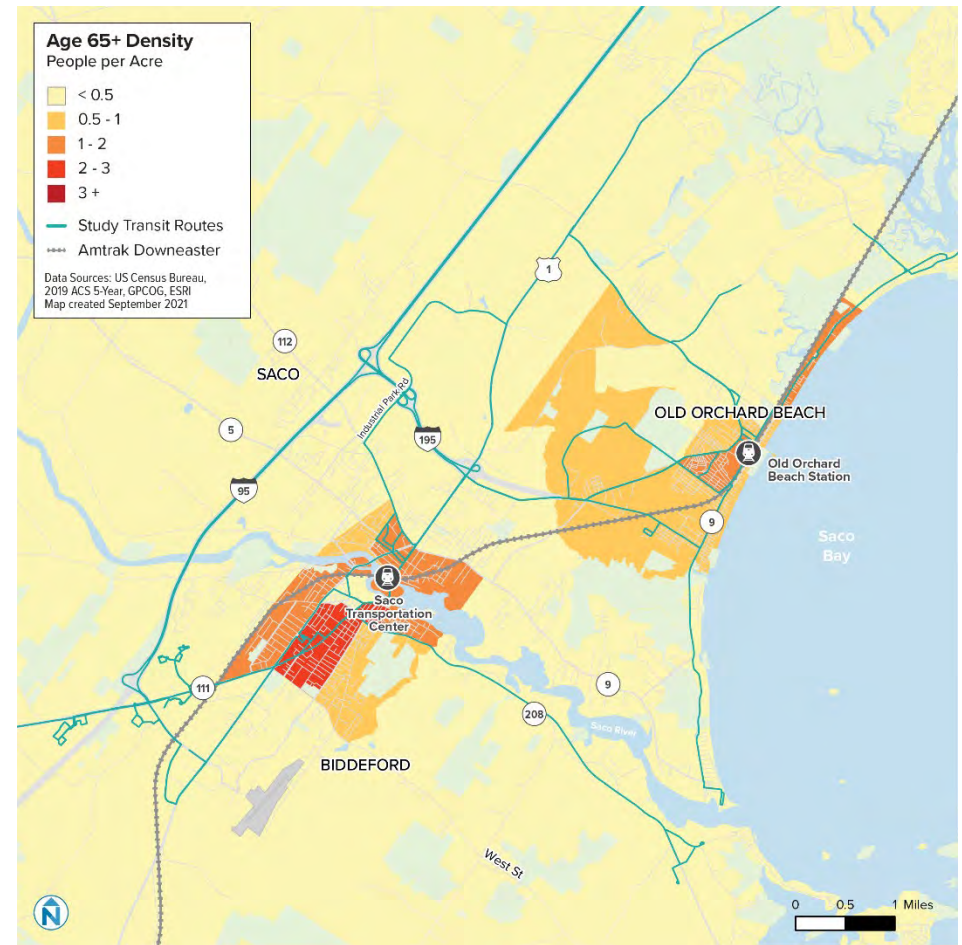


Figure 2-26 Age 65+ Population Density in Biddeford-Saco-Old Orchard Beach





EMPLOYMENT DENSITY

Commuting is the most common reason people ride transit. As a result, employment density is another major driver of transit demand. Job density is also a good indicator of demand because it can serve as a proxy for other types of travel activity, as well; where restaurant and retail employees work is also where diners and shoppers visit. Likewise, hospitals are major destinations for both workers and patients. Typically, as job densities increase, transit demand grows, particularly for more frequent service. In places with the densest concentrations of jobs, higher-frequency transit such as rapid bus and light rail may be appropriate. In places with lower densities of jobs, low-frequency fixed-route or demand-response transit may be more appropriate.

The places in Greater Portland where job densities are highest are listed below. Figure 2-27 through Figure 2-30 show this distribution.

Places in the Greater Portland area with the highest densities of jobs are:

- **Portland Peninsula**, specifically the **Old Port/Downtown** and the **Valley Street/Maine Medical Center** (MMC) area
- The **East Deering** and **Oakdale** neighborhoods in **Portland**

Places in the Biddeford-Saco-Old Orchard Beach area with the highest job densities are:

- Downtown **Biddeford**

Other places in the Greater Portland region with high employment densities are:

- **Brunswick**
- Parts of **Sanford**



Jobs, Commuting, and COVID-19

The COVID-19 pandemic dramatically impacted travel behavior for many people in the Greater Portland region and nationally. For many white-collar workers, the normalization of working from home has reduced their demand for peak-hour commute travel. In some cases, people who are able to work from home have increased the amount of trips they make during mid-day.

The COVID-19 pandemic has also highlighted the extent to which 'essential workers' have constrained travel needs. Many people cannot work from home and must travel at a certain time of day to start and end shift work. These workers are often disproportionately lower-income people and/or people of color, which highlights travel-related equity issues.

Nationally and in the Greater Portland region, COVID-19 has significantly reduced transit ridership. Although many agencies—including those in the Greater Portland region—have seen ridership slowly recover, ridership has returned at varying rates on different services and in different places. Many transit agencies believe that designing service that works for travelers with fewer options and less access to personal vehicles is the best strategy for regaining ridership. In many cases, this involves strengthening off-peak service and ensuring service in low-income communities is as useful as possible.



Figure 2-27 Employment Density in Greater Portland Region

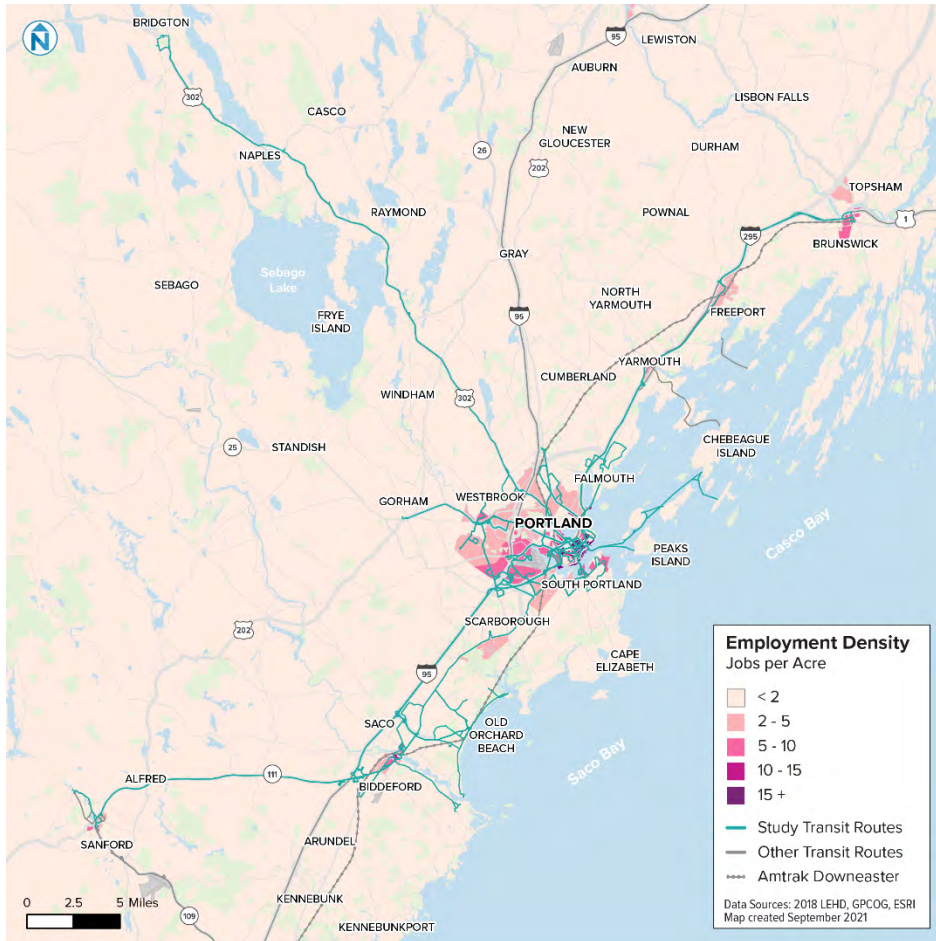


Figure 2-28 Employment Density in Greater Portland Area

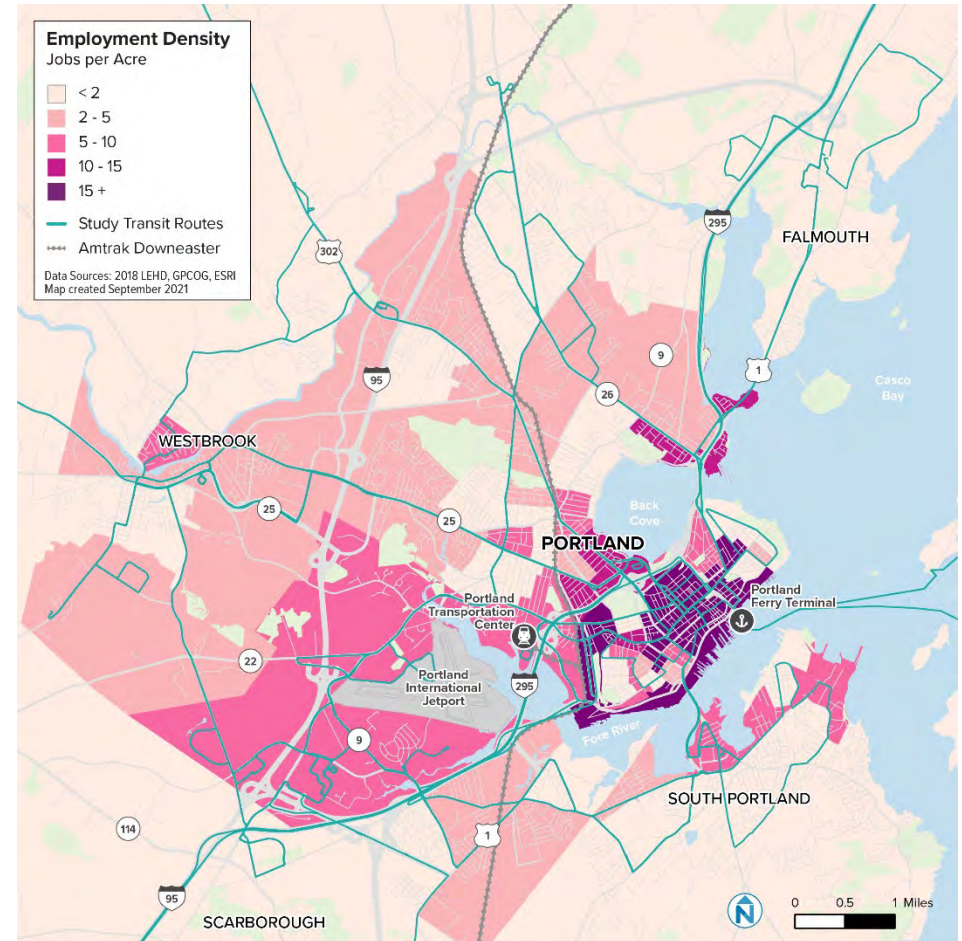
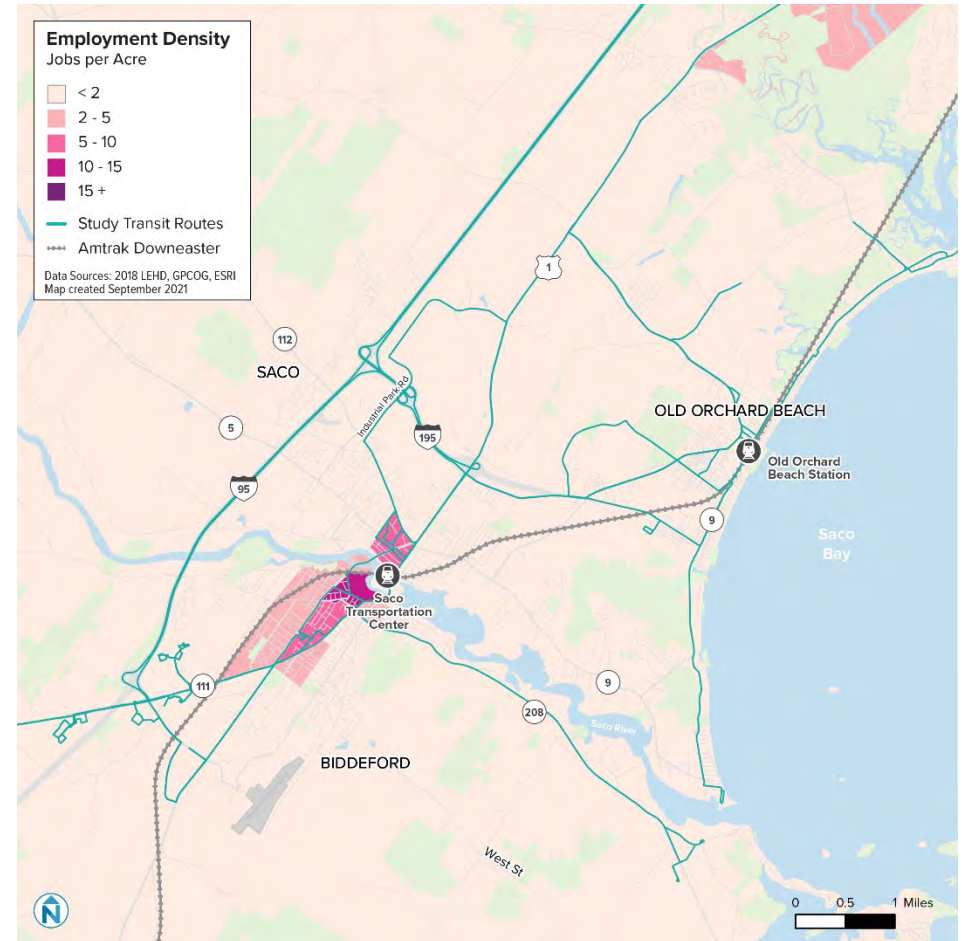




Figure 2-29 Employment Density on the Portland Peninsula



Figure 2-30 Employment Density in Biddeford-Saco-Old Orchard Beach





Visualizing Employment Density





Job density is the most important factor in assessing the appropriate level of transit service for employment centers. In general, jobs are more concentrated than residents. Generally, places with a mix of larger, closely spaced offices, stores, restaurants, and other employers are the best drivers of transit demand.

Some places, despite hosting a significant number of jobs, do not create as much transit demand as dense, mixed-use commercial cores. Places like Garmin's Yarmouth offices, for example, are home to many jobs but not nearly as many as parts of Forest Avenue in Portland, where places of employment cover a similar amount of land. Forest Avenue is much more conducive to transit use.

Figure 2-31 uses Nearmap aerial photographs taken on April 20, 2021 to tie quantitative descriptions of employment density to real-life images from the Greater Portland region.



Figure 2-31 Visualizing Employment Density in Greater Portland Region

<p>Portland Congress Street</p>		<p>Urban core <i>25+ jobs per acre</i></p>	<p>High-frequency fixed-route transit is appropriate in places like downtown Portland because of the density and variety of employment. Office buildings, retail establishments, and other job centers create significant demand for transit.</p>
<p>Portland Forest Avenue</p>		<p>Urban and neighborhood mixed-use <i>10-15 jobs per acre</i></p>	<p>Fixed-route transit is appropriate on much of the Forest Avenue corridor in Portland because of the mix of businesses, institutions, and residences. The resulting demand is stronger than the same density of each land use alone.</p>
<p>Scarborough Industrial Park</p>		<p>Low density <i>2-5 jobs per acre</i></p>	<p>Demand-response service is appropriate in the Scarborough Industrial Park because of the area's isolated location, relatively low employment density, and large supply of free parking.</p>
<p>Yarmouth Garmin Offices</p>		<p>Rural <i>>2 jobs per acre</i></p>	<p>Demand-response service is appropriate at the Yarmouth Garmin branch because the office park is isolated from residential areas, open only during limited weekday hours, and offers abundant free parking, which incentivizes driving over other travel modes.</p>



COMPOSITE TRANSIT DEMAND

Previous sections of this document describe how population density, socioeconomic characteristics, and employment density separately indicate demand for transit. Looking at them combined, however, is an important way to understand underlying demand for transit. This section discusses the composite (i.e., combined) transit demand for different parts of the Greater Portland region.

In this analysis, composite transit demand is developed from combined population and employment densities, and estimates the frequency of transit service an area can support. To estimate appropriate frequencies, population density is summed with two times the employment density (to account for non-employee trip generation at workplaces, such as shopping or appointments) and then categorized according to the residential density breaks shown in Figure 2-1.

Greater Portland Area

The composite transit demand in the Greater Portland area is the strongest in southern Maine, with demand concentrated on the **Portland Peninsula**, in **Oakdale near USM**, and in the southern portion of **East Deering**. Transit demand is also strong in parts of the North Deering, Rosemont, and Libbytown neighborhoods in Portland, as well as in Westbrook, the Maine Mall area, and the Knightville and Willard Square areas of South Portland. This demand is shown in Figure 2-32 and Figure 2-33.

Corridors with strong composite transit demand in the Portland area are good candidates for higher-frequency transit service. In the Portland area, the strongest of these corridors appear to be:

- **Forest Avenue** in Portland
- **Brighton Avenue** in Portland and **Main Street** in Westbrook
- **Congress Street** in Portland to the **Maine Mall Area** in South Portland
- **Broadway** in South Portland

Relative to the strong demand in the places discussed above, there is little transit demand elsewhere in the immediate Portland area, including Cape Elizabeth, most of Gorham, Falmouth, parts of southern South Portland, most of Westbrook north of the Presumpscot River (except Frenchtown), and most of Scarborough.⁸ It may be more

⁸ Redevelopment at Scarborough Downs may increase transit demand in the area.



effective to redeploy existing fixed-route services in these areas to places with greater demand, and to serve these areas with less resource-intensive service, such as demand-response transit.

Biddeford, Saco, and Old Orchard Beach

The Biddeford-Saco-Old Orchard Beach urban area is smaller and less dense than much of Portland, but there is a pocket of strong composite transit demand in **downtown Biddeford**, with relatively strong supporting transit demand in downtown Saco and much of Biddeford south and west of downtown (Figure 2-35). This demand forms a corridor of consistently strong transit demand from **downtown Saco, through downtown Biddeford, and along Alfred Street**. Although the corridor connecting Biddeford and the University of New England (UNE) is largely suburban and rural in nature, the UNE campus is large enough to produce considerable transit demand on its own.

In Saco and Old Orchard Beach, a corridor of transit demand exists from downtown Saco to downtown Old Orchard Beach, which are connected by Main Street (U.S. Route 1) and Ocean Park Road/Saco Avenue (Route 5).

Transit demand in the Biddeford-Saco-Old Orchard Beach area increases dramatically in summer, when Old Orchard Beach's population grows by over 700%.⁹ There is also considerable demand for commute travel between the Biddeford-Saco and Portland areas (this is discussed in the next chapter).

Other Communities

Although much of the remaining Greater Portland region is rural and very low-density, there are pockets of relatively high composite transit demand outside the Portland and Biddeford-Saco-Old Orchard Beach urban areas. Some of these areas, which are shown in Figure 2-32, are parts of **Sanford** and the University of Southern Maine campus in **Gorham**.

⁹ Town of Old Orchard Beach. About Old Orchard Beach. <<https://www.oobmaine.com/home/pages/about-old-orchard-beach>>



Figure 2-32 Composite Transit Demand in Greater Portland Region

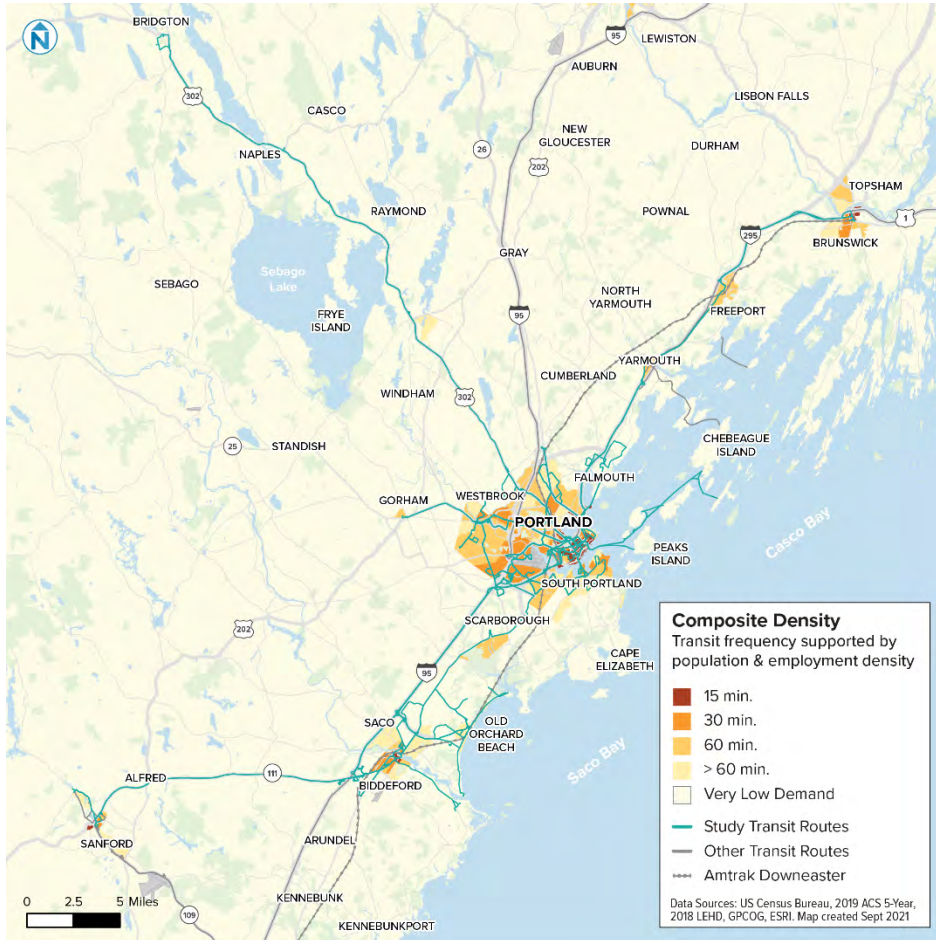


Figure 2-33 Composite Transit Demand in Greater Portland Area

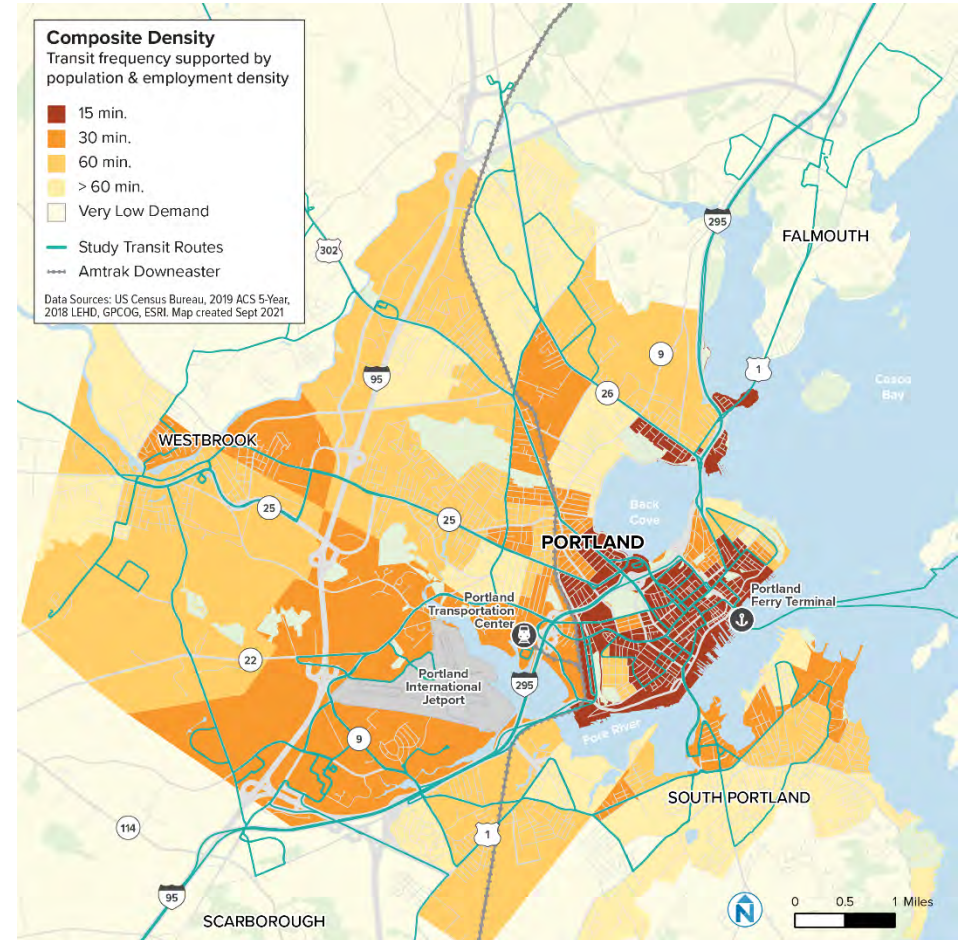
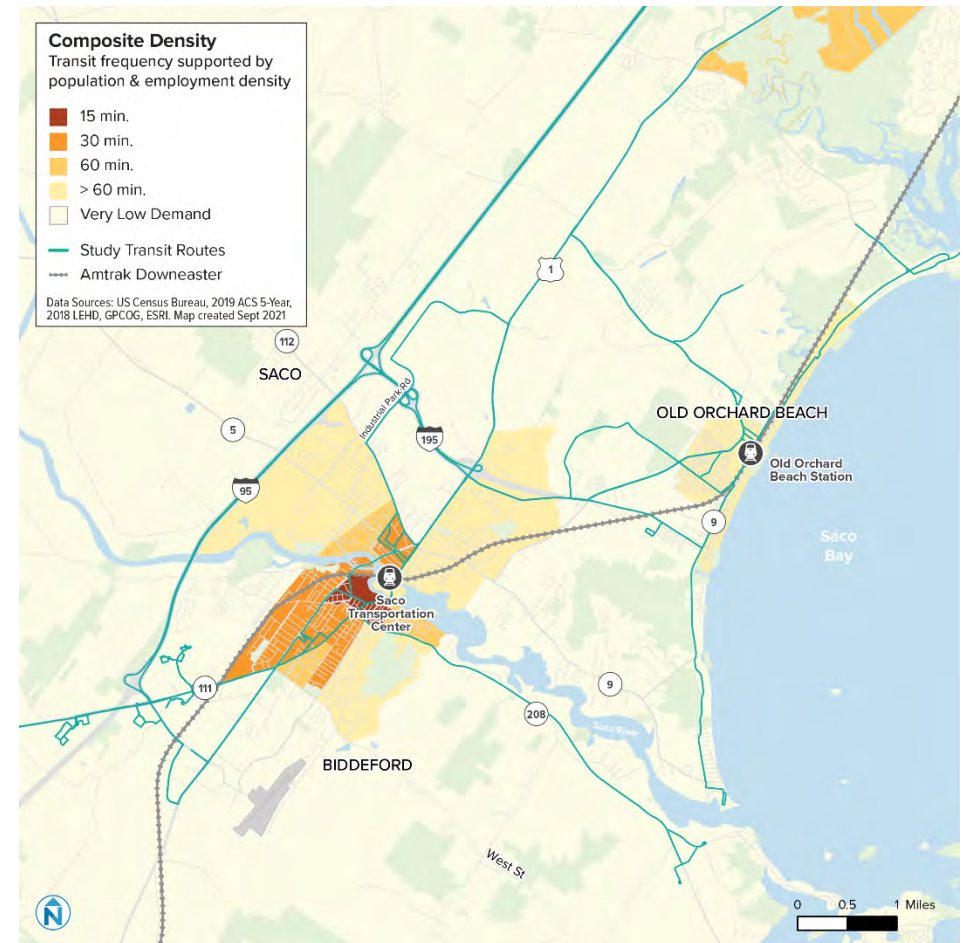




Figure 2-34 Composite Transit Demand on the Portland Peninsula



Figure 2-35 Composite Transit Demand in Biddeford-Saco-Old Orchard Beach





OTHER ELEMENTS OF TRANSIT DEMAND

Densities of places that people travel to and from are the most important but not the *only* important elements of transit demand. Other key considerations when assessing transit demand are:

- **Seasonal visitors:** Tourism plays a major role in travel demand in Maine and especially in the Greater Portland region. In 2018, over 37 million people visited Maine.¹⁰ In the Greater Portland region, many of those visitors travel to area cities, beaches, and the Lakes Region. Old Orchard Beach, in particular, has a population growth of over 700% in the summer.¹¹ All of these visitors travel, and many choose to use—or want to use—public transit. The summer tourist season is a major driver of transit demand in Greater Portland, especially for many Casco Bay islands served by Casco Bay Lines (CBL) ferries.
- **Traffic congestion:** Traffic congestion is a problem in urban areas throughout the world. When congestion is at its worst, it discourages people from using autos for transportation. For trips where congestion increases auto travel times in the Greater Portland region, demand for transit can be increased.
- **Parking:** The cost and availability of parking is a major element of transit demand. If parking is plentiful and low-cost (or free), auto travel is incentivized, as there is limited cost or time barrier to parking. If parking is less plentiful and/or more expensive, auto travel is less attractive; this can increase demand for transit, which may be a lower-cost and faster option than driving.
- **Transportation alternatives:** For many people, there are several alternatives available for trip-making: one could drive in a car, take transit, walk, or use other means of transportation. On islands in Casco Bay, most residents have only one option: public ferries. Although some residents may have access to private watercraft, most residents rely on CBL ferries for any trips that require leaving the island. This is a very specific and unique type of transit demand.

¹⁰ Maine Office of Tourism. 2019. Five-Year Strategic Plan. p. 4. <https://motpartners.com/wp-content/uploads/2019/04/2019-2023_Maine_5Year-Strategy-Plan.pdf>

¹¹ Town of Old Orchard Beach. About Old Orchard Beach. <<https://www.oobmaine.com/home/pages/about-old-orchard-beach>>



TRANSIT PLANNING IMPLICATIONS

The high-demand corridors identified in this transit market analysis are good candidates for service evaluations and recommendations that will be conducted in this Transit Together study.

Greater Portland Area

- METRO's Route 2 currently operates on the **Forest Avenue** corridor with half-hour peak-period headways. The composite transit demand analysis suggests portions of this corridor may warrant 15-minute peak-period headways. The Regional Transportation Program's (RTP) Lakes Region Explorer also operates four trips per day on the corridor but does not serve every stop served by METRO Route 2.
- The **Brighton Avenue and Main Street** corridor between Portland and Westbrook is currently served by METRO's Route 4 and Husky Line, with Route 4 making local stops and the Husky Line operating as an express route. Both routes operate with half-hour peak period headways that are offset, providing approximately 15-minute frequency service between major destinations on the corridor. As Rock Row and other developments are completed along the corridor, additional local service may be warranted. GPCOG is planning to study this corridor for high-capacity transit soon.
- The **Congress Street** corridor on the Portland Peninsula is currently served by METRO, SPBS, and Biddeford-Saco-Old Orchard Beach Transit (BSOOB Transit) routes. There is less service on Congress Street west of I-295, to the Portland Transportation Center, where riders can transfer to Concord Coach Lines buses and Downeaster trains, although there are plans to relocate the Downeaster station to the Portland Peninsula.¹²
- The **Maine Mall area**, however, is served only by METRO's Route 5 and SPBS' routes 24A and 24B. Although Route 5 offers half-hour peak-period service, improvements could be made to the speed and reliability of trips, as well as to transfers between SPBS and METRO service. There are also opportunities for improved transfers in the Maine Mall area, as BSOOB Transit, METRO, and SPBS all serve the Maine Mall but without a dedicated transit facility.
- Transit on the eastern part of the **Broadway corridor in South Portland** connects Southern Maine Community College to shopping destinations in Knightville and then to downtown Portland. Service on this corridor currently operates at hourly headways but can likely support increased frequencies.

¹² MaineDOT. December 2020. Portland Transportation Center (PTC) Customer and Transportation System Study. <https://www.maine.gov/mdot/planning/docs/2021/PTC%20Study%20-%20Draft%20Report%2012_28_2020_COMPILED_REDUCED.pdf>



Biddeford-Saco-Old Orchard Beach

- The **Alfred Street** (Route 111) corridor in **Biddeford** has considerable demand for transit but is currently served by an infrequent route with an indirect alignment. There are considerable opportunities to provide more useful transit service on this corridor.
- The **Main Street/Ocean Park Road/Saco Avenue corridor** (U.S. Route 1/Route 5) in **Saco** and **Old Orchard Beach** has demand for transit that increases dramatically in summer months. This corridor is currently served by year-round Route 52/53 and Route 60, which provide overall indirect and infrequent service among key destinations on the corridor. Given the demand for transit on the corridor—especially in the summer—there are opportunities to improve service.



3 WHERE DO PEOPLE CURRENTLY COMMUTE TO AND FROM?

METHODS

This travel flow analysis uses 2018 LODES data¹³ to estimate the volume of travel within, between, and to or from parts of the Greater Portland region. LODES data are publicly available and estimate work travel only. Flows are derived from zones which were custom-developed for this study. Although these zones typically include one or more city or town, they also include low-density suburban and rural areas outside of these urban centers, and so represent an aggregation of travel from a general area, not a specific origin-destination flow from one urban center to another. These data show all trips; trips made by auto, transit, and any other modes are included.

CURRENT TRAVEL PATTERNS

Figure 3-1 shows commute flows between some of the larger communities in the Greater Portland region. Key findings from this analysis show the largest commute flows are:

- There are **major commute flows to Portland**.
- There are a relatively large number of **reverse commuters** from Portland to Biddeford-Saco, Scarborough, Freeport, Yarmouth, and Gorham-Windham.
- Considerable commute flows from **Gorham-Windham to Scarborough**.
- The longest major commute is from the **Lakes Region to Portland**.
- Over 1,000 people living in the **Sanford area are employed in Portland**.

¹³ Tables JT00 and S000.



Figure 3-1 Intercity Travel Flows in the Greater Portland Region

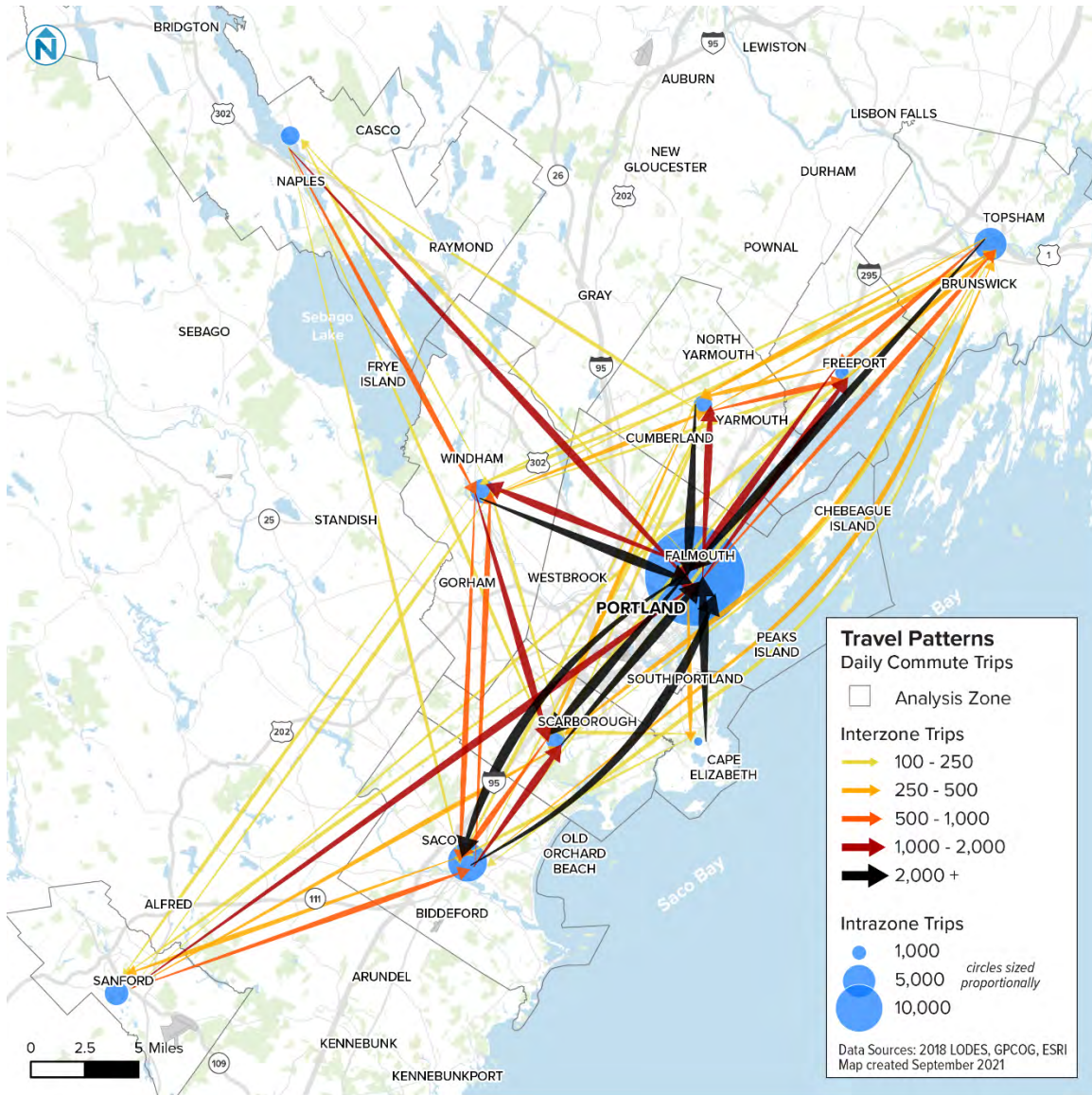


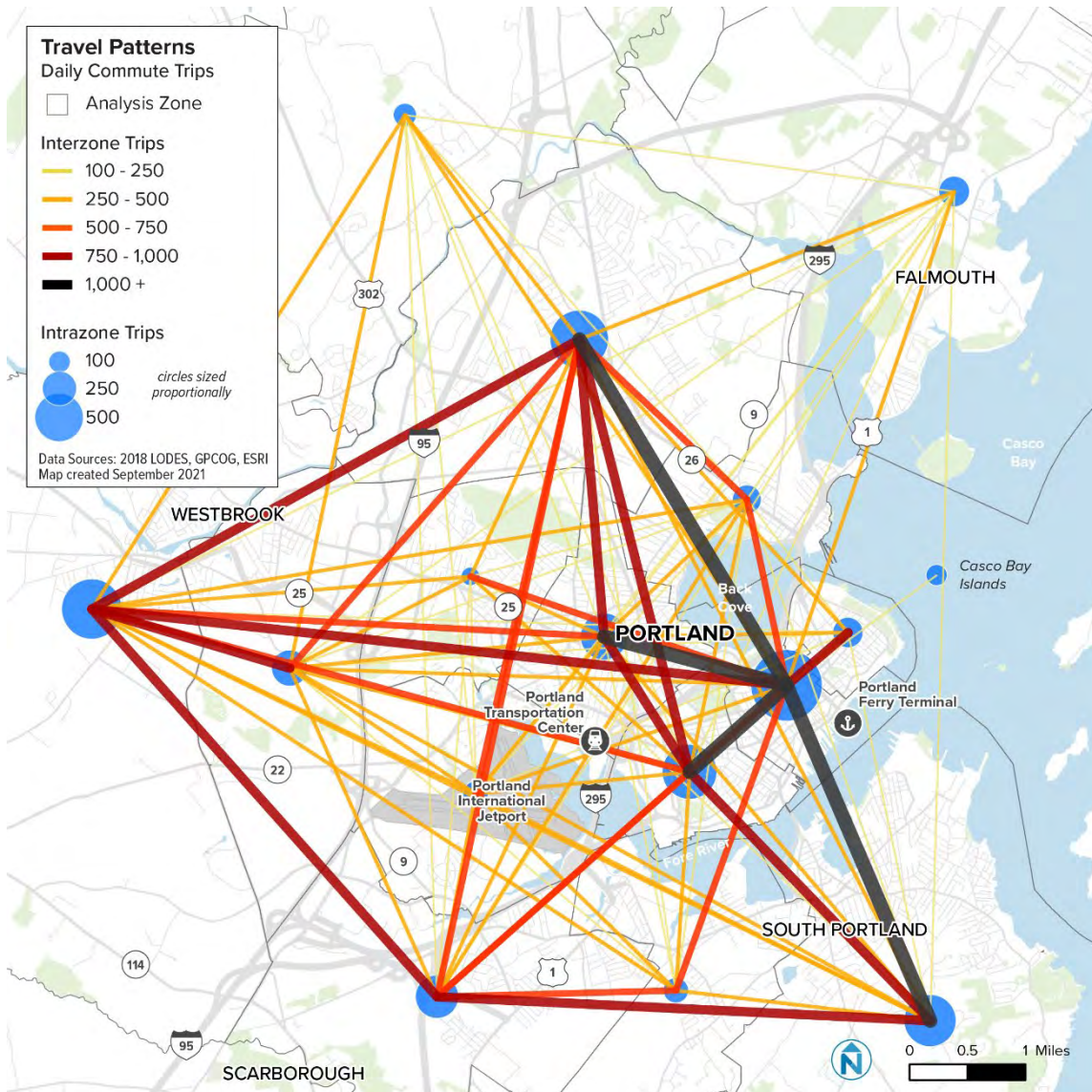


Figure 3-2 shows commute flows in the Greater Portland area. Key findings from this analysis show the largest commute flows are:

- **Between residential neighborhoods** (e.g., South Portland, North Deering) and **downtown Portland.**
- Considerable commute flows between **Westbrook and North Deering**, **Westbrook and the northern Scarborough/Maine Mall area**, **eastern Westbrook and western Westbrook**, and **eastern South Portland and northern Scarborough/Maine Mall area.**

In addition, there are relatively few trips to and from Falmouth, which is notable due to the existing fixed-route service provided in the area.

Figure 3-2 Greater Portland Area Travel Flows





TRANSIT PLANNING IMPLICATIONS

The commute flow analysis conducted in this section has several implications for transit service planning that will occur as part of the Transit Together study.

Greater Portland Area

- There are considerable travel flows **into and out of downtown Portland**, suggesting demand for higher-frequency service on corridors connecting Greater Portland area neighborhoods with the Portland peninsula. These corridors include **Broadway** in South Portland, **Brighton Avenue/Main Street** in Portland/Westbrook, **Congress Street**, **Forest Avenue**, and **Washington Avenue**.
- Data show considerable commute flows to and from the **Maine Mall area**, but current transit service to and from the area (including SPBS routes 24A and 24B, METRO Route 5, and BSOOB Transit Route 60) is generally circuitous, with major deviations that delay riders traveling to and from the Maine Mall area. Although many of these deviations are due to the area's land-use pattern, there may be opportunities for service to and from this area to be more direct. Routes 5, 24A, and 24B also duplicate the same travel flow of trips between the Maine Mall area and downtown Portland, and so there may be opportunities to better allocate regional resources serving this connection.
- There are considerable **cross-town flows** in South Portland, suggesting transit demand for a higher-frequency, more direct transit service on **Broadway**.
- Commute flow data reveal considerable **travel between Westbrook and Portland's North Deering neighborhood**. This trip is not currently possible with a one-seat ride. METRO may be able to better serve this connection with a cross-town route like the Route 3.
- **Falmouth** is currently served by METRO Route 7, which operates a bi-directional trunk alignment on Route 1 and two alternating terminal loops to low-density residential and commercial areas. The Town Landing Market terminal loop is operated during typical commute hours but does not serve an area with high transit propensity or considerable commute flows to and from the Portland Peninsula. Route 7 resources may be better allocated elsewhere in Falmouth or the region.



Biddeford-Saco-Old Orchard Beach

- There are considerable **intra-zonal commute trips** in the Biddeford-Saco-Old Orchard Beach area, suggesting opportunities to **strengthen transit corridors** connecting and within those communities.
- Many people commute between **Portland** and Biddeford-Saco-Old Orchard Beach in both directions. There may be opportunities to strengthen transit options to serve typical- and reverse-commute markets.
- There are considerable commute flows from Biddeford-Saco-Old Orchard Beach to **Scarborough**, suggesting opportunities to improve fixed-route transit service on BSOOB Transit Route 60.

Greater Portland Region

- There is considerable commuting to downtown Portland from the **Brunswick**, **Biddeford-Saco**, and **Gorham-Windham** areas, all of which are outside the immediate Greater Portland area. Enhancing commuter/express transit service to and from these destinations, either through service improvements or marketing/branding, may capture a greater share of this transit market.
- The relatively large number of **reverse commuters from Portland** to the Biddeford-Saco, Scarborough, Yarmouth, and Freeport areas may be an opportunity for improved regional transit service—such as that already offered on certain corridors by METRO's BREEZ, RTP's Lakes Region Explorer, the Downeaster train, and BSOOB Transit's Route 70. Examining existing service on these routes to identify opportunities to better serve or coordinate with major employment destinations could increase ridership. Improved marketing may also help.



4 WHAT LOCATIONS GENERATE THE MOST TRANSIT DEMAND?

Key locations for transit demand are those that typically generate high numbers of transit trips, or trips made by riders with few other travel options. These key destinations are often places that auto and active transportation users travel to, such as grocery stores. In other instances, these key destinations are disproportionately frequented by transit riders; for example, food banks and other social services.

METHODS

Destinations in this chapter are not selected quantitatively but based on qualitative assessments of their importance to transit riders. Typically, key destinations include major medical facilities, social services, grocery stores with produce, educational facilities serving high school students and older, major employers, shopping centers, select government buildings, and events/community spaces such as community centers.

KEY LOCATIONS

Key locations in the Greater Portland region are heavily concentrated on the Portland Peninsula, where shopping, major employment, medical, government, and social service organizations are clustered. Social services, in particular, are concentrated in downtown Portland's Bayside neighborhood. Outside downtown, there are clusters of key locations in the following places, which are mapped in Figure 4-1 through Figure 4-3.

- Along **U.S. Route 1** in **Saco** and **Biddeford**
- Near MaineHealth facilities on **U.S. Route 1** in **Scarborough**
- In the **Maine Mall area and South Portland's West End** neighborhood
- The **Knightville** neighborhood of **South Portland**
- Downtown **Sanford** and along Main Street/SR 109
- In downtown **Brunswick**
- In summer, **Peaks Island** is a major tourist destination



Figure 4-1 Map of Key Trip Generators, Portland Peninsula



Figure 4-2 Map of Key Trip Generators, Greater Portland Area

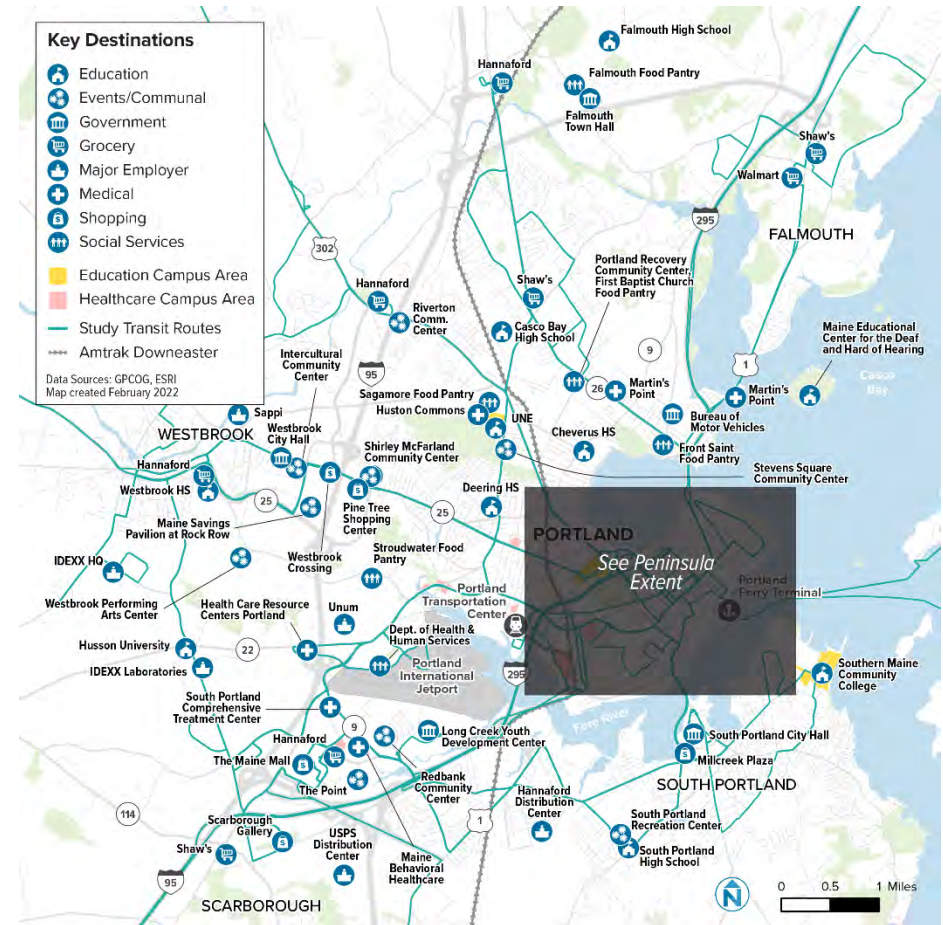




Figure 4-3 Map of Key Trip Generators, Biddeford-Saco-Old Orchard Beach



Key transit locations that are clustered together can often be efficiently served with fixed-route transit. Key locations that are isolated from other places and surrounded by unsafe or inefficient pedestrian networks can be challenging to efficiently serve with fixed-route transit. Examples of some of these destinations include:

- The **Westbrook Community Center**
- **Healthcare** facilities on Barra Road in **Biddeford**
- The Westbrook **Hannaford**
- **Isolated employment campuses** like the Unum building in Portland



TRANSIT PLANNING IMPLICATIONS

Understanding the location of key transit trip generators is essential to making sound service planning recommendations. Some of the implications of these locations are:

Greater Portland Area

- Most of the major trip generators in the Greater Portland region are served by transit. The presence of transit service, however, does not necessarily make these destinations accessible, as the frequency, directness, speed, and reliability of service, as well as the condition of pedestrian infrastructure to access transit stops, all influence a place's accessibility.
- In South Portland, Southern Maine Community College (SMCC) is a major destination. Peak-period service to and from SMCC, however, is only available on SPBS Route 21, and at 45- to 60-minute frequencies. Route 21 operates as a large loop with a considerable deviation into the Ferry Village neighborhood, making the trip extremely indirect for people traveling to and from SMCC. Improving the directness and frequency of service to and from SMCC is an opportunity.
- Intermodal transfers in the Greater Portland region are difficult, due to the challenges of siting transit infrastructure such as ferry terminals (which much be located in appropriate harbor space) and railroads (which are typically limited to existing right-of-way). Connecting these modal terminals with bus service poses its own challenges, and adds another seat to transit passengers' rides.

Biddeford-Saco-Old Orchard Beach

- In the Biddeford-Saco-Old Orchard Beach area, BSOOB Transit serves most major destinations but with routes that loop, deviate, and are generally indirect. In addition to being indirect, routes like the Route 52 White/53 Blue operate infrequently. The current service provided by BSOOB Transit requires redesign that better incorporates transit design principles, especially when evaluating corridor deviations and frequency.

Greater Portland Region

- The considerable distance between some key destinations (e.g., places in Sanford and places in Portland) means transit-dependent people may not be able to access some destinations in a timely manner (e.g., a transit trip from Sanford to Portland and back may take nearly an entire day), if at all. There may be opportunities to improve connections between key destinations that are far apart.



5 WHERE ARE MAJOR DEVELOPMENTS OCCURRING?

Understanding where major development will occur is important for transit agencies, as large commercial or residential projects are likely to grow travel demand, thereby triggering needs for additional transit service. Planning transit for major new developments, rather than reacting after development has been completed, can improve outcomes by strengthening the connection between land use and transportation.

METHODS

Although many specific details of planned developments in the Greater Portland region are unknown, some major developments are far enough along in the planning, proposal, or construction phase that their likely characteristics are known. Several of these developments are mapped in Figure 5-1 through Figure 5-4, and are shown to illustrate the relationships between near-term development and transit service. Identifying these relationships helps improve service planning recommendations developed in this study.

These developments were selected based primarily on submitted planning documents to local land use authorities. The municipalities of Biddeford and Portland also provided staff-level input regarding planned development.

The developments shown are not a comprehensive collection of planned and/or proposed developments and are shown to represent general trends in development as well as select key developments that may influence near-term transit provision. The maps shown below are scaled roughly to represent the projected number of units in residential developments, the projected square footage of commercial and institutional developments, and a scaled-down projected square footage of industrial developments.¹⁴

¹⁴ Industrial development square footage is scaled down because industrial sites, such as industrial parks or large warehouses, are not typically strong transit trip generators.



MAJOR DEVELOPMENT

Major developments near transit often have one of two key relationships with transit service:

1. They are **transit dependent** and require good transit service to be successful. Examples of these types of development are the planned Riverton homeless shelter, where many clients will likely not have access to a vehicle, and the Maine Medical Center expansion, where limited parking means many workers depend on transit to commute.
2. They are **transit adjacent** and may generate new transit riders due to their location in the transportation network. Examples of these types of projects include the Saco Island Townhomes, which have good access to BSOOB Transit, Downeaster, and Southern Maine Connector service, and the Lambert Woods development, which will have access to METRO Route 9A/9B service. Developments of this type will have parking and so providing good transit service will be key to ensuring transit travel is competitive with auto travel for new residents.

Much of the new development in the Greater Portland region is concentrated on the Portland Peninsula, including along the waterfront. There are also several major residential and mixed-use projects underway off the Peninsula, including at Rock Row in Westbrook, throughout downtown Biddeford, and at Scarborough Downs in Scarborough. Key developments are further discussed in the transit planning implications section, below.

If completed, the largest of these projects will transform transit travel patterns in the Greater Portland region and dramatically increase transit demand where they are located. Some portions of Rock Row and Scarborough Downs are currently being developed but both may be long-term efforts, with full build-out of Scarborough Downs expected in 20-30 years.



Figure 5-1 Map of Select Developments in Greater Portland Region

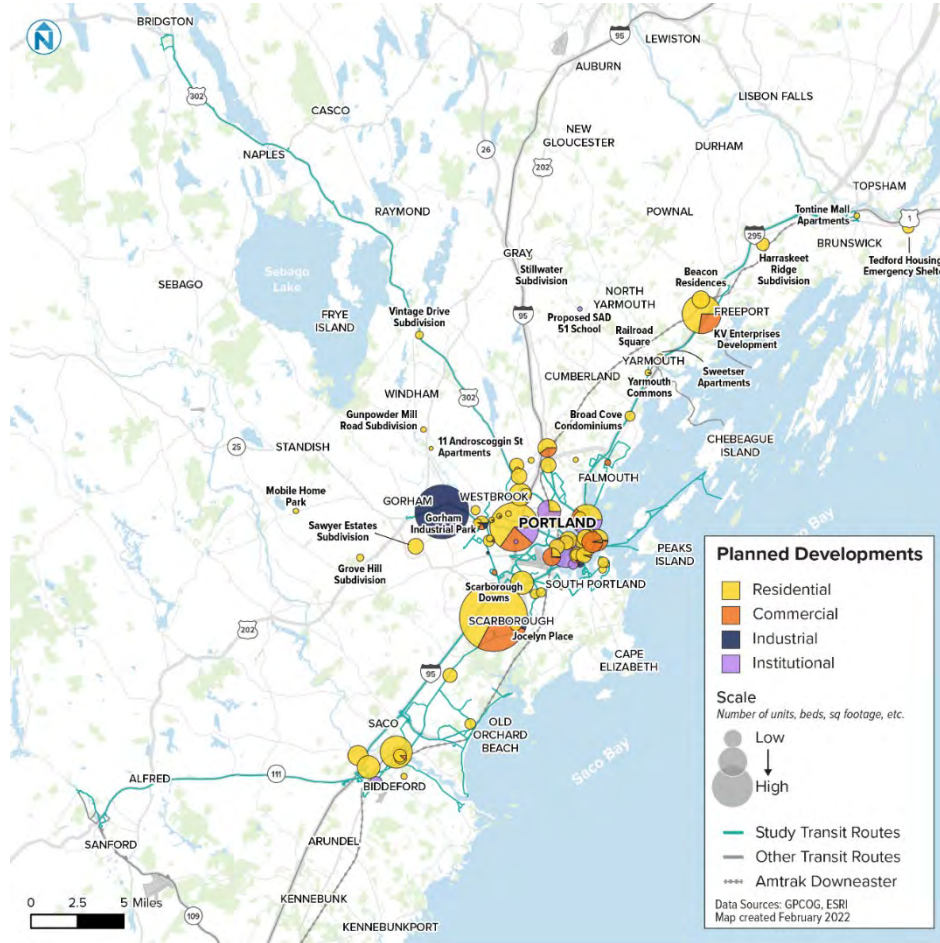


Figure 5-2 Map of Select Developments on the Portland Peninsula

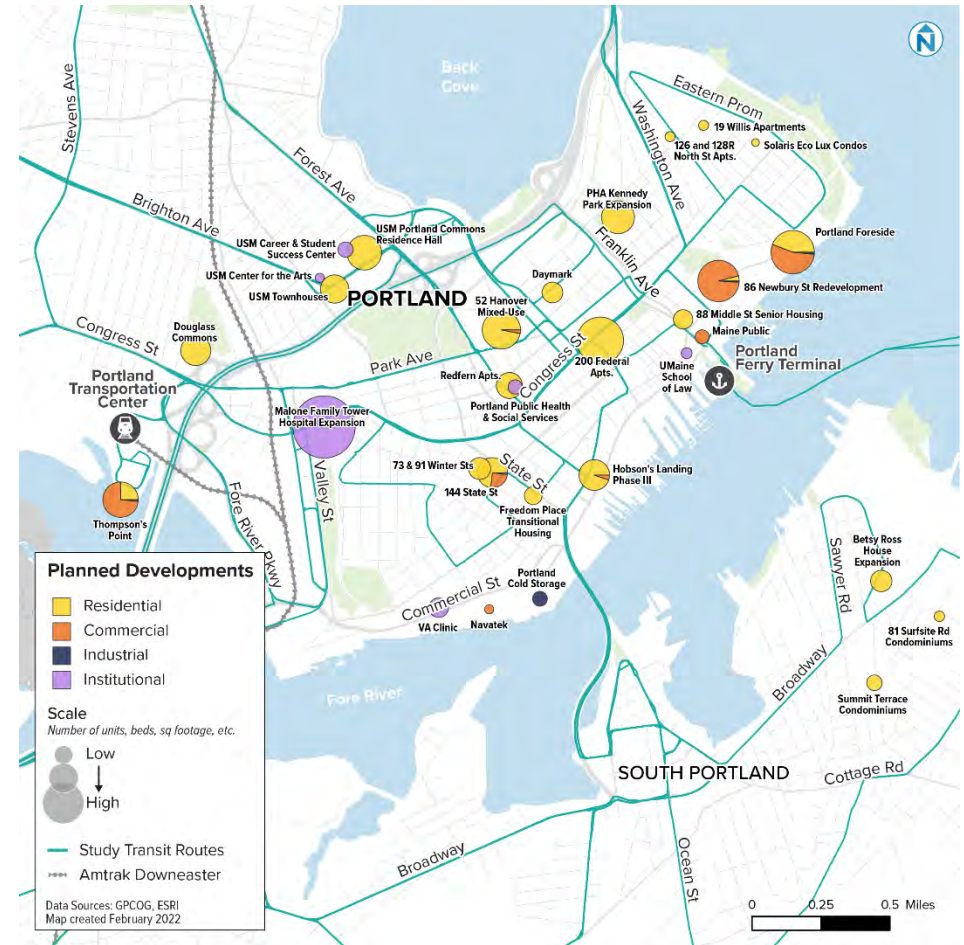




Figure 5-3 Map of Select Developments in Greater Portland Area

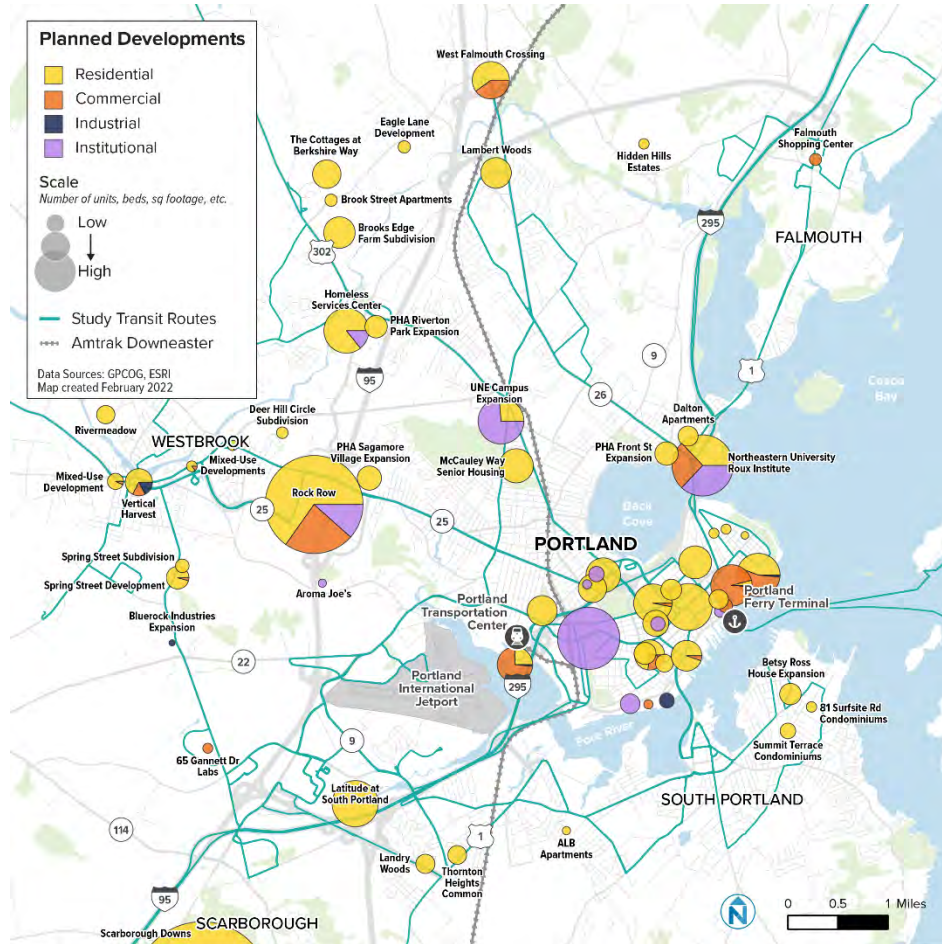
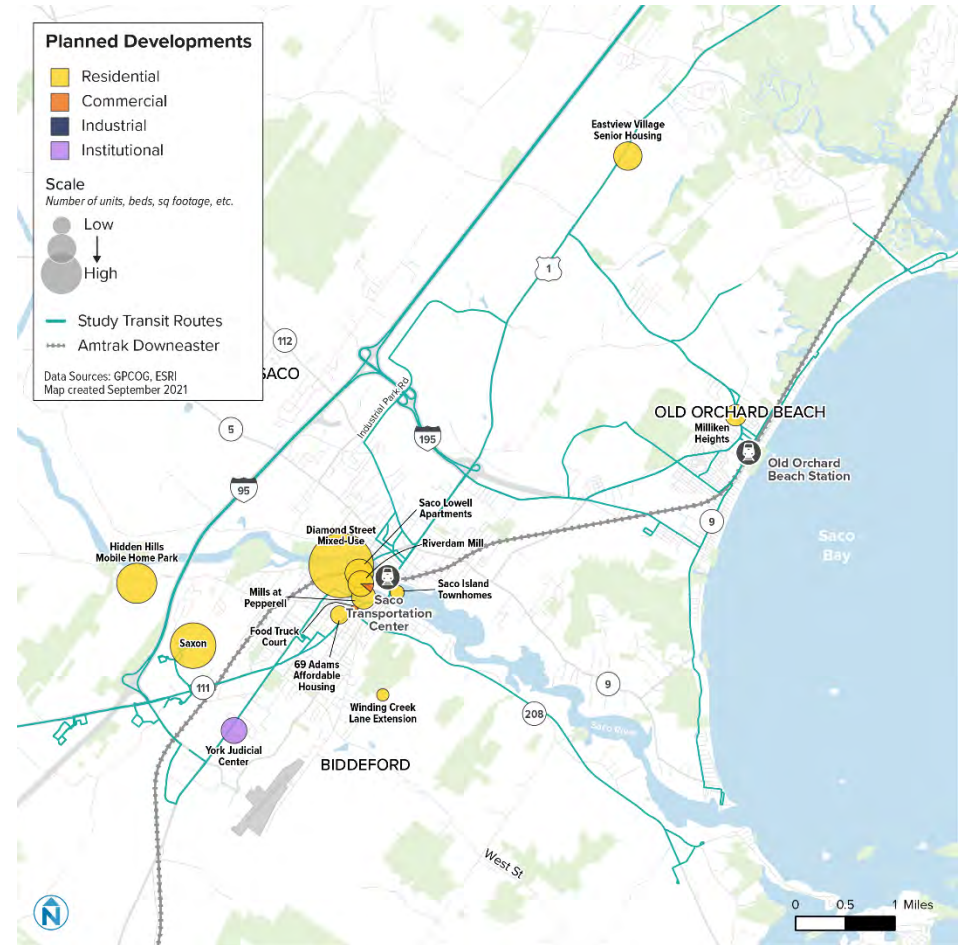


Figure 5-4 Map of Select Developments in Biddeford-Saco-Old Orchard Beach





TRANSIT PLANNING IMPLICATIONS

To continue providing access to important destinations in the Greater Portland region, public transit service must adapt as the region develops. Several imminent developments have implications for short-term transit planning:

Greater Portland Area

- The planned **Riverton homeless services center** is approximately ¼-mile from the current alignment of METRO's Route 2, and there are no sidewalks on much of the west side of Riverside Road. As this building will likely be a major transit trip generator, service may need to be adjusted to serve it.
- Some parts of the **VA clinic** and **Portland Foreside** projects on West Commercial Street in Portland are nearing completion. There is currently no transit service on Commercial Street but these developments—as well as other major waterfront projects—may warrant service in these locations.
- Added housing near the Broadway corridor in **South Portland** may be an opportunity to grow transit ridership on SPBS Route 21, provided improvements are made to the route to make it more direct, fast, and reliable.
- The Malone Family Tower will likely re-orient the main entrance to **Maine Medical Center** to face Congress Street, which will improve transit access to the complex. It will also increase transit demand for service to the hospital.

Biddeford-Saco-Old Orchard Beach

- Considerable **mixed-use development** is occurring in **downtown Biddeford**, particularly in and around mill complex redevelopment projects. This may increase demand for transit service to key destinations in the Biddeford-Saco-Old Orchard Beach area, as well as to and from Portland. GPCOG has an ongoing transit-oriented development plan in this area.¹⁵
- The new **York County Judicial Center** on Elm Street (U.S. Route 1) may increase travel demand to the area among people with limited access to vehicles. This demand could be served by BSOOB Transit, the Southern Maine Connector, or a combination of the two services.

¹⁵ GPCOG. 2022. Biddeford Saco Transit Oriented Development Plan. <<https://www.gpcog.org/388/Biddeford-Saco-TOD>>



Greater Portland Region

- Smaller developments near regional transit routes, such as the **Sweetser** and **Yarmouth Commons** apartments on U.S. Route 1 in Yarmouth, and the **Broad Cove condominiums** in Cumberland, may be opportunities to increase transit ridership and reduce single-occupancy vehicle travel.
- Outside the core regional urbanized areas, much of the development occurring is **tract housing that is not supportive of fixed-route transit**. In places where high concentrations of low-density development is occurring, demand-response service may be an appropriate level of transit service provision.



6 HOW DOES TRANSIT ACCESS TO ESSENTIAL DESTINATIONS VARY?

UNDERSTANDING ACCESS

Providing access to important destinations is the purpose of public transit. In the Greater Portland region, transit planning emphasizes access to healthcare, grocery, and employment destinations. The importance placed on providing transit access to these locations is based on travel demand and community values, and these destinations were the focus of this analysis because of their shared, essential nature for all Greater Portland region residents. Access to other destination types, such as outdoor recreation, may be considered later in the study, based on feedback from the public and the Project Advisory Group.

Understanding the quality of access the regional transit system currently provides to healthcare, groceries, and jobs creates a baseline understanding on which service recommendations in the Transit Together study can be built. For example, if a neighborhood with many people without auto access also lacks access to grocery stores, a study recommendation may be to create a transit connection from the neighborhood to a nearby shopping center.

Equity and Access

Understanding access is also important for understanding equity. If under-resourced communities lack transit access to jobs and medical services, but better-resourced communities nearby do have access, that represents an inequitable distribution of public resources. The first step towards ensuring the Greater Portland region's transit system provides equitable access is understanding how this access is distributed.



HEALTHCARE AND MEDICINE

Because hospitals and healthcare clusters are typically major employers, these places are typically key destinations in a public transit network. Many transit riders that travel to healthcare facilities are workers, but many others are patients. For some low-income patients without access to a car, transit access to medical facilities can be a truly essential service. Understanding which communities have good transit access to healthcare is important context for making service recommendations to improve access for both workers and patients.

The maps in Figure 6-1 and Figure 6-2 show access to healthcare destinations, which were defined as hospitals or major clusters of healthcare services.¹⁶ In general, people living on the Portland Peninsula, in the Oakdale and Deering Center neighborhoods, and along Forest Avenue in Portland have the best transit access to healthcare destinations, while people living further from the Portland Peninsula have less access. Access to healthcare via transit in downtown Biddeford and Saco is also relatively strong.

Places without good transit access to healthcare include much of eastern South Portland, Portland's East Deering neighborhood, Falmouth, much of Westbrook, the Sanford area, and Saco. The SPBS Route 21 stands out as being one of the only transit routes in the Greater Portland region that does not offer access to a healthcare destination.

People living on Casco Bay islands also do not have a one-seat ride to medical facilities; these riders must transfer to METRO Route 8 to access a major hospital. The CBL ferry system is a critical component of access to medical facilities for island residents.

¹⁶ The Northern Light Mercy Hospital in Portland has closed and relocated to the Fore River location since this analysis was conducted.



Figure 6-1 Map Showing Transit Access to Healthcare Destinations in Greater Portland Area

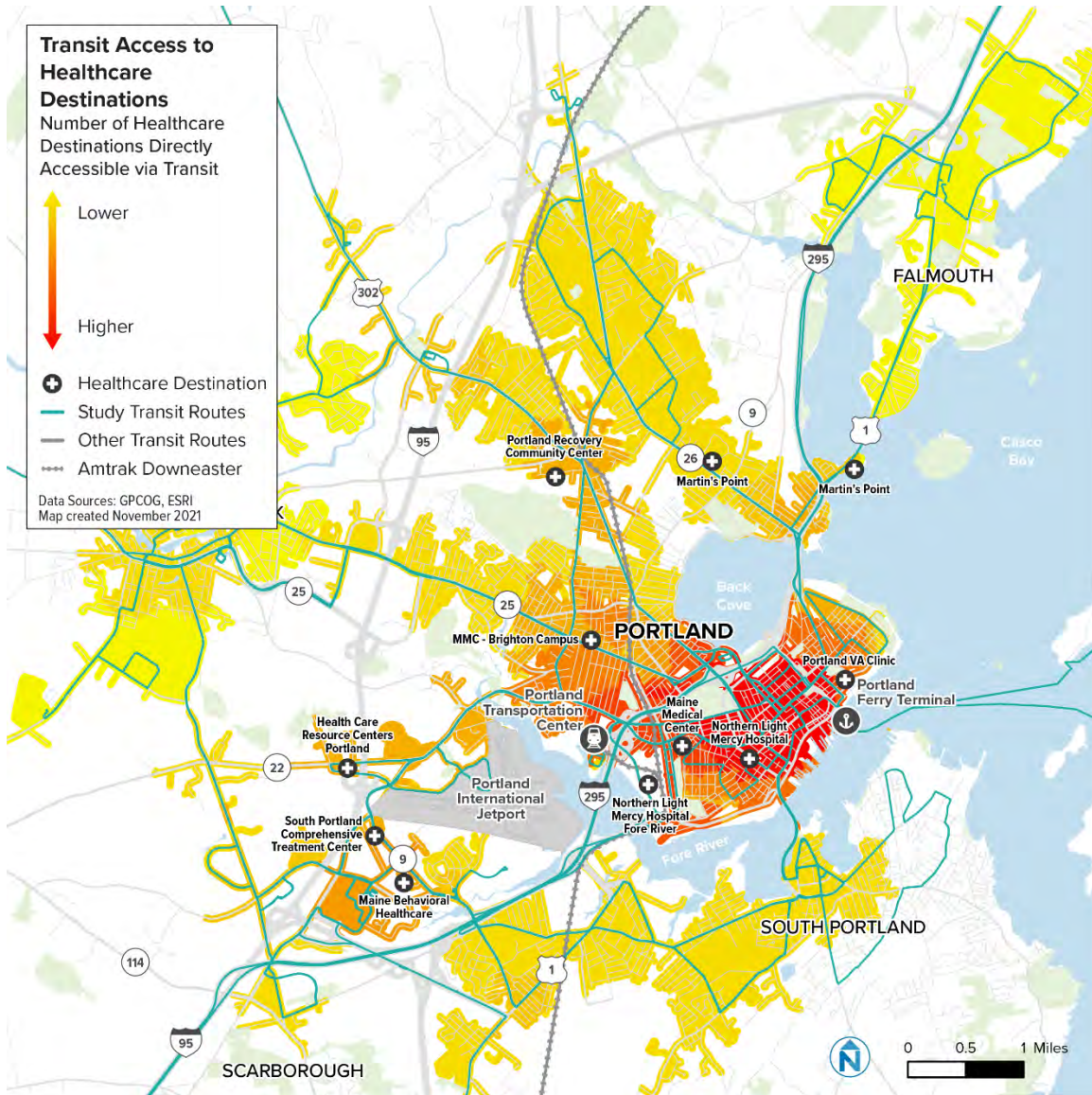
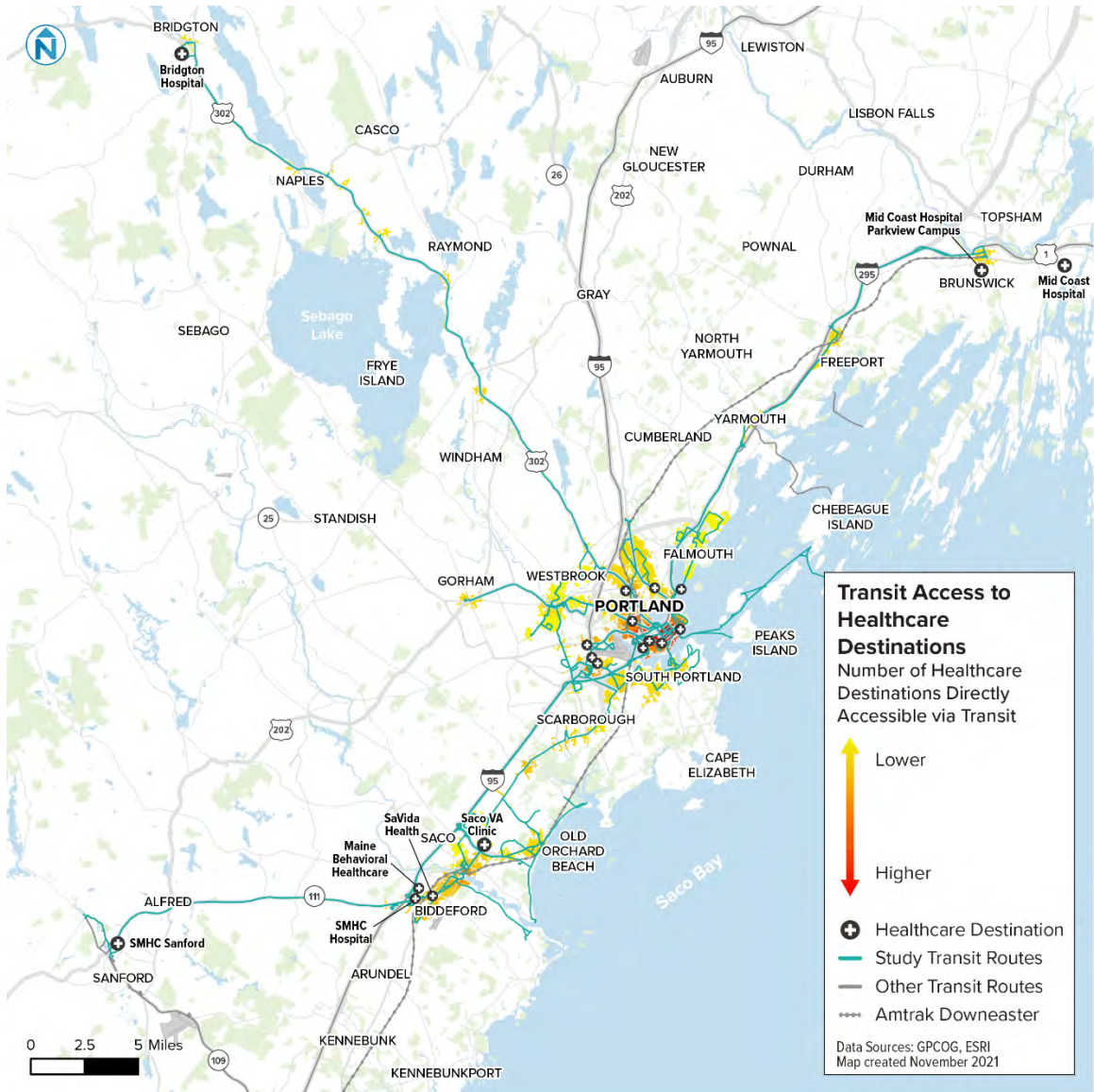




Figure 6-2 Map Showing Transit Access to Healthcare Destinations in Greater Portland Region





GROCERIES

Access to grocery stores is an essential mission of most transit agencies, and people without access to vehicles often depend on transit to help them bring heavy bags of groceries home. Understanding what parts of the Greater Portland region do and do not have good grocery access is essential context for any recommended service changes.

The maps in Figure 6-3 and Figure 6-4 show access to major grocery stores, which were defined as those with significant amounts of fresh produce. Much like healthcare access via transit, grocery access via transit is highest on the Portland Peninsula and in the Deering Center and Oakdale neighborhoods. Nearly every transit route in the Greater Portland region serves a grocery store; the METRO Route 1 and BSOOB Transit Route 54 are the only rubber-tire, year-round fixed routes that do not. The CBL ferries are critical for Casco Bay island residents that need to access a major grocery store via transit (these riders must transfer to bus route to complete a grocery trip using CBL ferries).

Figure 6-3 Map Showing Transit Access to Grocery Destinations in Greater Portland Area

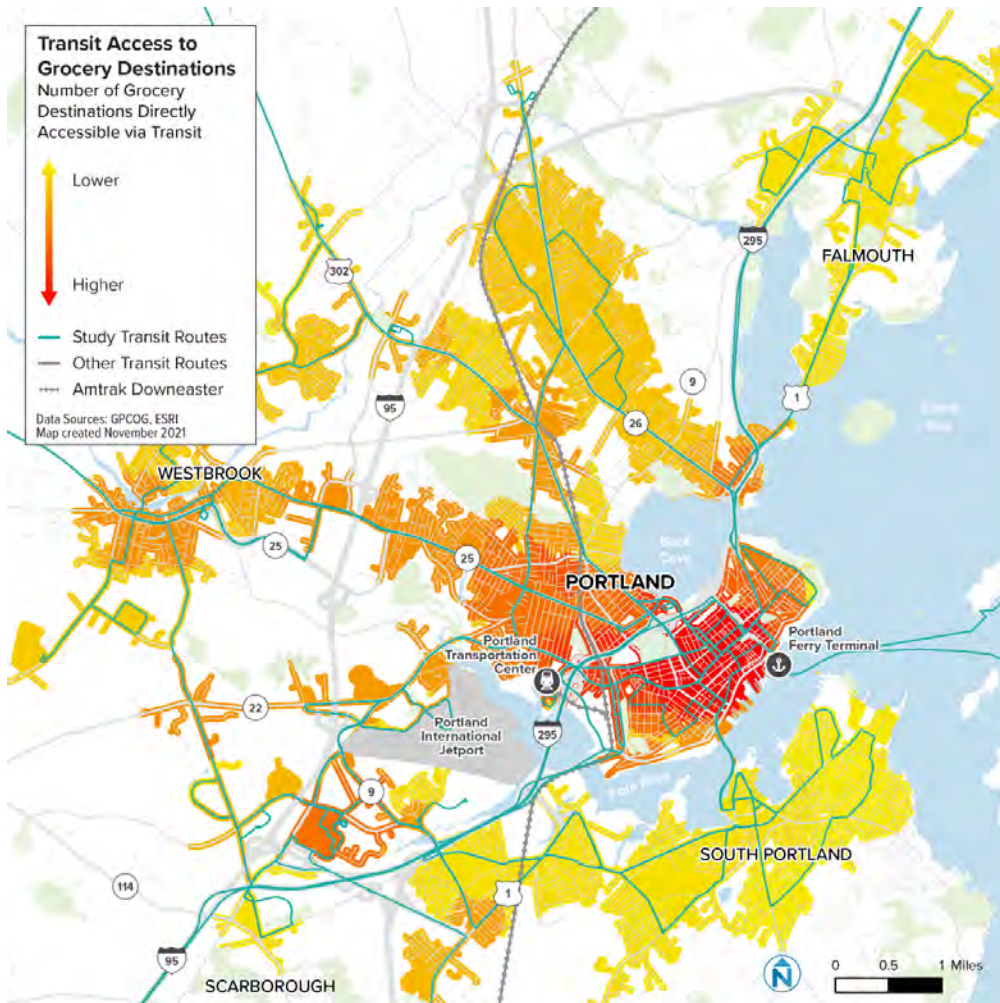
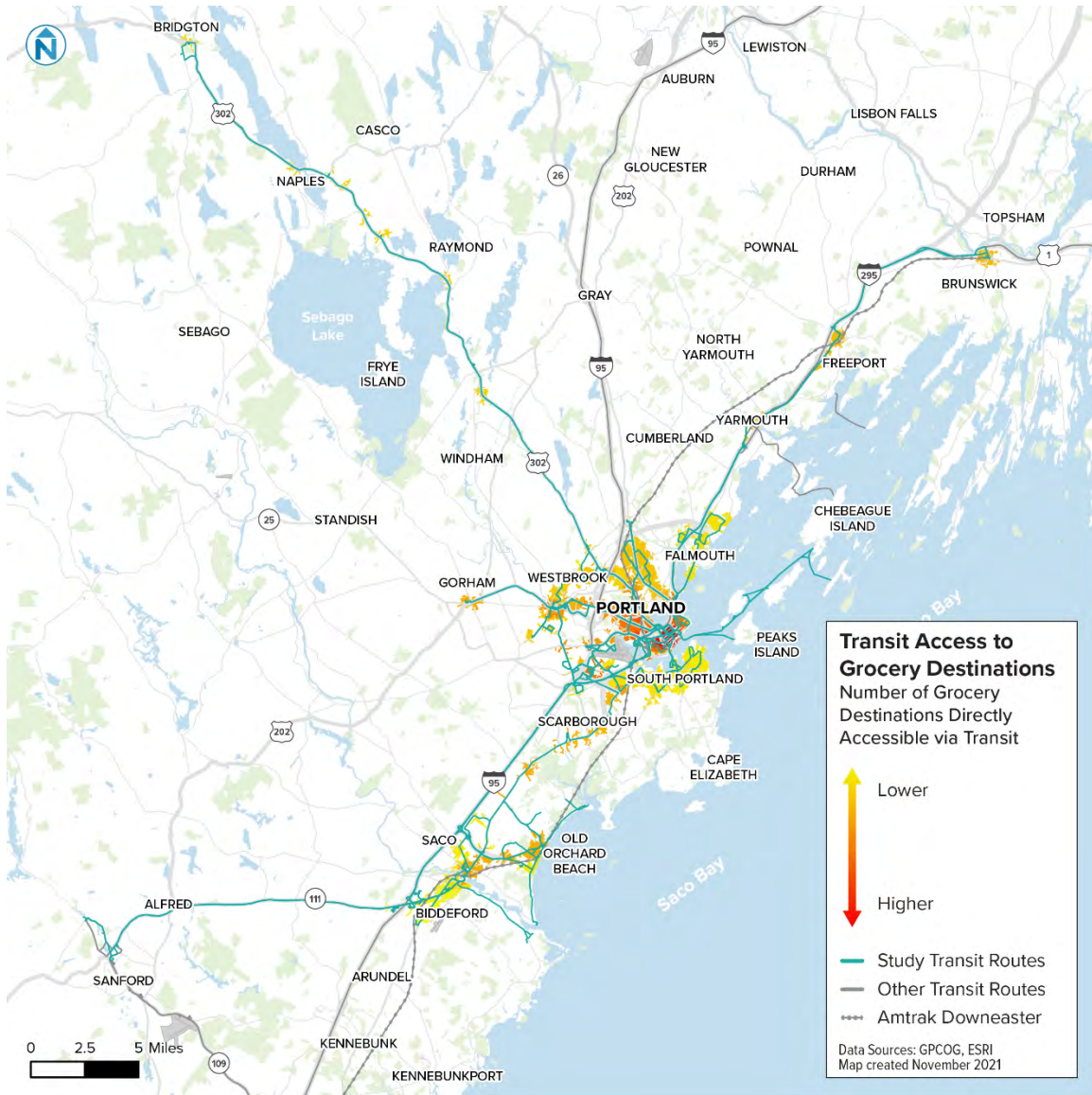




Figure 6-4 Map Showing Transit Access to Grocery Destinations in Greater Portland Region



JOBS

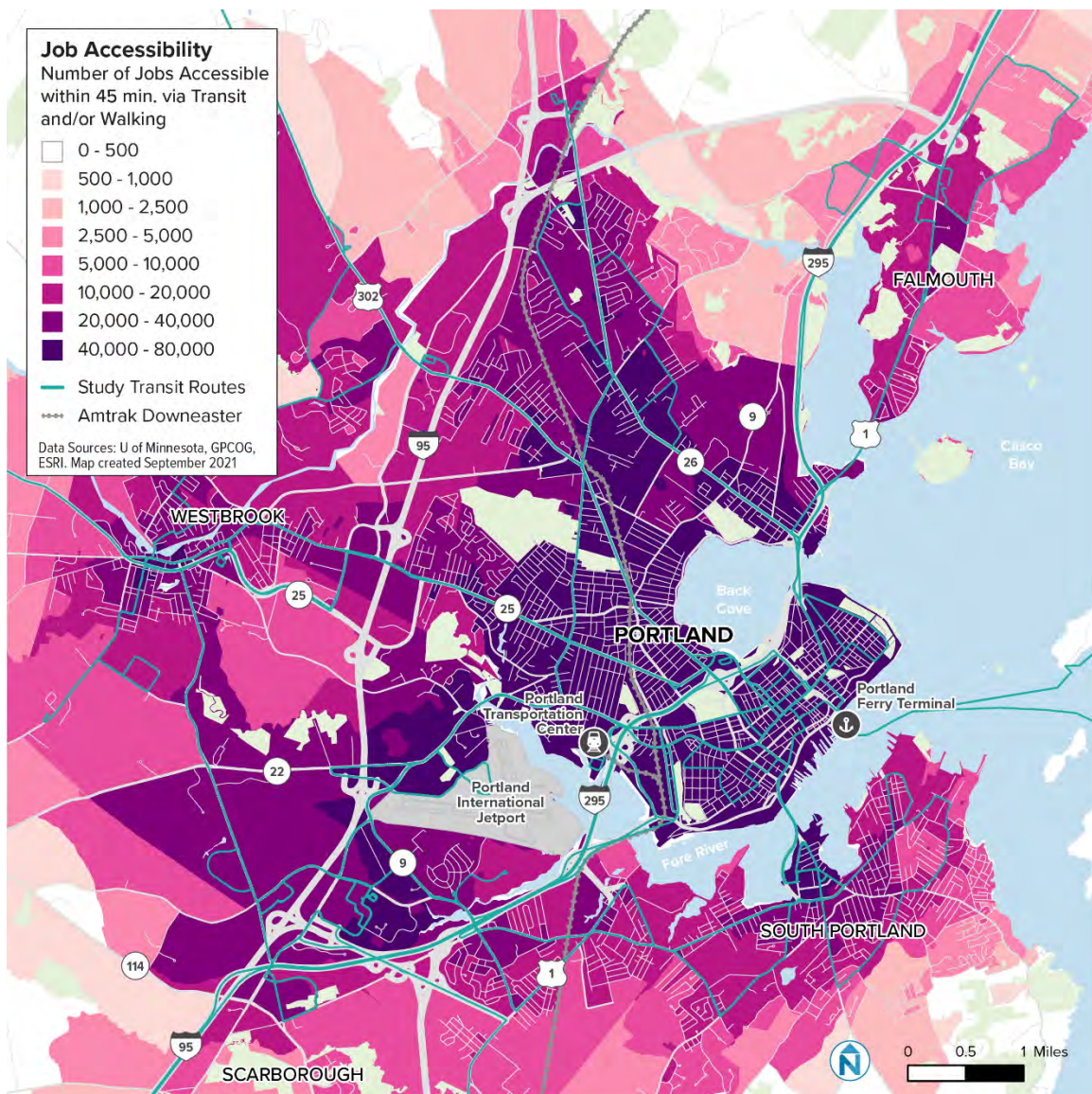
Commuters are the largest market for many transit agencies. Providing transit access to workers has many benefits, including reducing traffic congestion and associated pollution, freeing dense neighborhoods from needing to provide parking, reducing travel costs for riders, and increasing the number of people that can access places with high-intensity land use. Understanding how commute access is distributed in the Greater Portland region is essential to ensuring transit resources are distributed to have maximum community benefit.



The maps in Figure 6-5 and Figure 6-6 show the number of transit-accessible jobs for people living in the Greater Portland region. Generally, people living in the more urbanized parts of Portland have the greatest transit access to jobs, although high levels of access are also present in parts of South Portland and downtown Westbrook. The eastern portion of South Portland has relatively low accessibility to jobs by transit, despite its proximity to downtown Portland jobs centers.

The CBL ferries are critical for Casco Bay island residents employed off-island; for many of these workers, CBL ferry service is the only possible way to commute.

Figure 6-5 Map Showing Transit Access to Jobs in Greater Portland Area

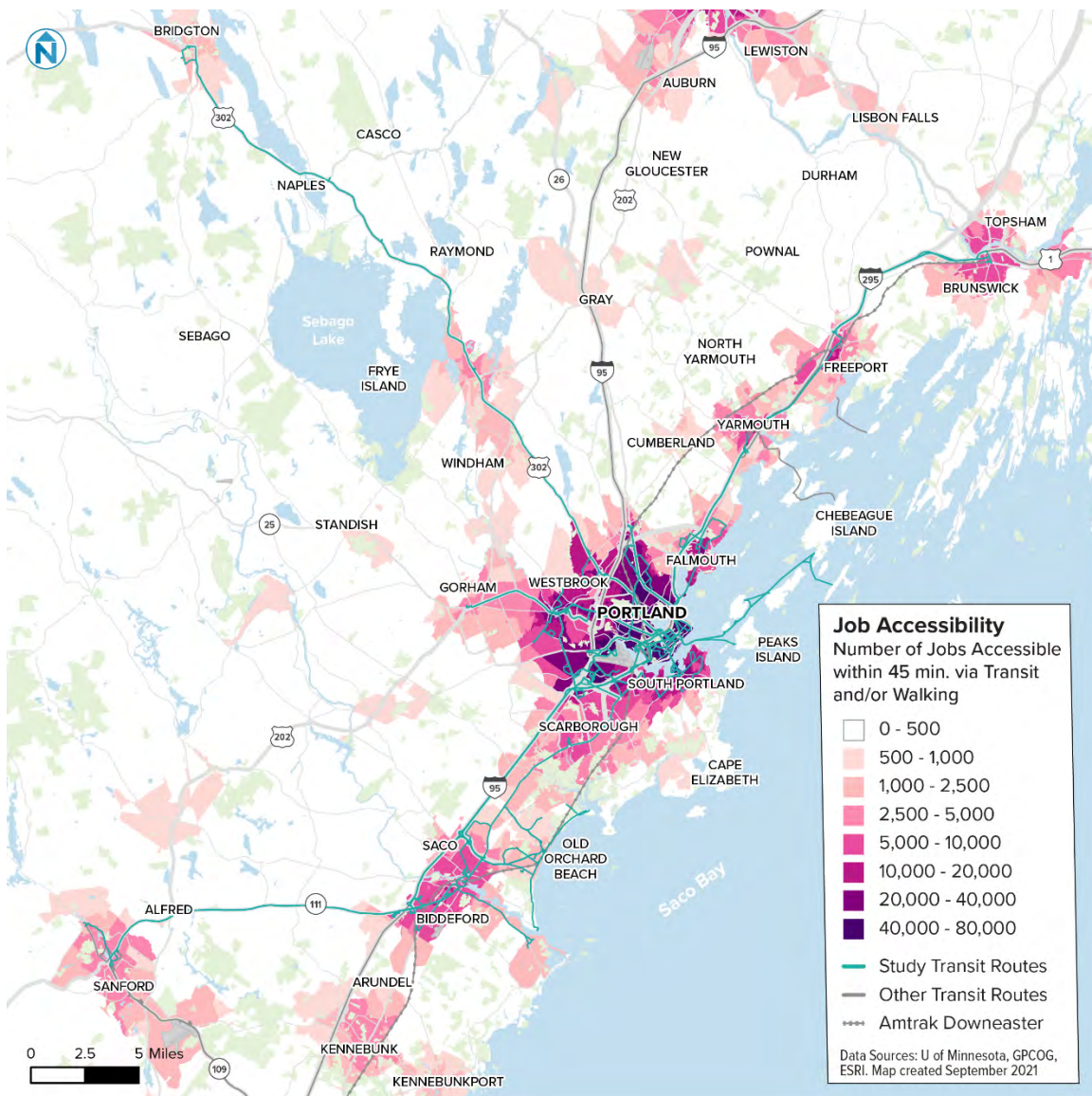




Most of southern Maine does not have transit access to many jobs, as the existing transit network is concentrated in urban communities. Residential communities in Brunswick, Freeport, Yarmouth, Falmouth, Gorham, Windham, Saco, and Biddeford also have relatively high numbers of jobs accessible by transit, although the frequency of this service varies. Addressing frequency and span of service as it relates to access will happen in the service planning portion of this study.

Jobs access shown in places outside the study area (e.g., Brunswick and Lewiston) is largely determined by transit service provided by agencies that are not part of this study.

Figure 6-6 Map Showing Transit Access to Jobs in Greater Portland Region



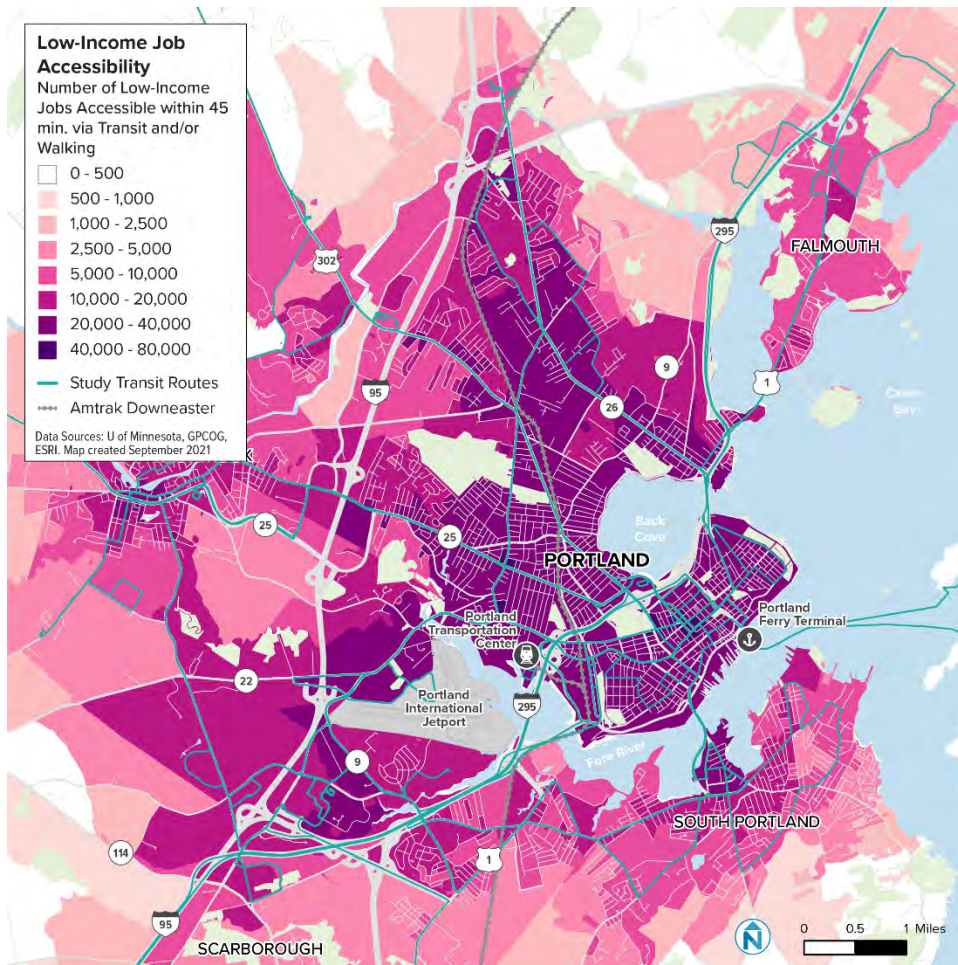


Low-Income Jobs

Transit is an essential commute mode for many low-income workers. Improving transit access to work for low-income workers is not only good practice from a ridership growth perspective, it is also equitable. Understanding how access to lower-income jobs is distributed keeps this equity issue centered in the Transit Together study.

Low-income jobs are defined in this analysis as those paying \$3,333¹⁷ or less each month. Transit access to low-income jobs is distributed in generally the same pattern as access to all jobs, but with fewer low-income jobs accessible from most locations, primarily because there are fewer low-income jobs than overall jobs. Figure 6-7 and Figure 6-8 show these distributions of access in the Greater Portland region.

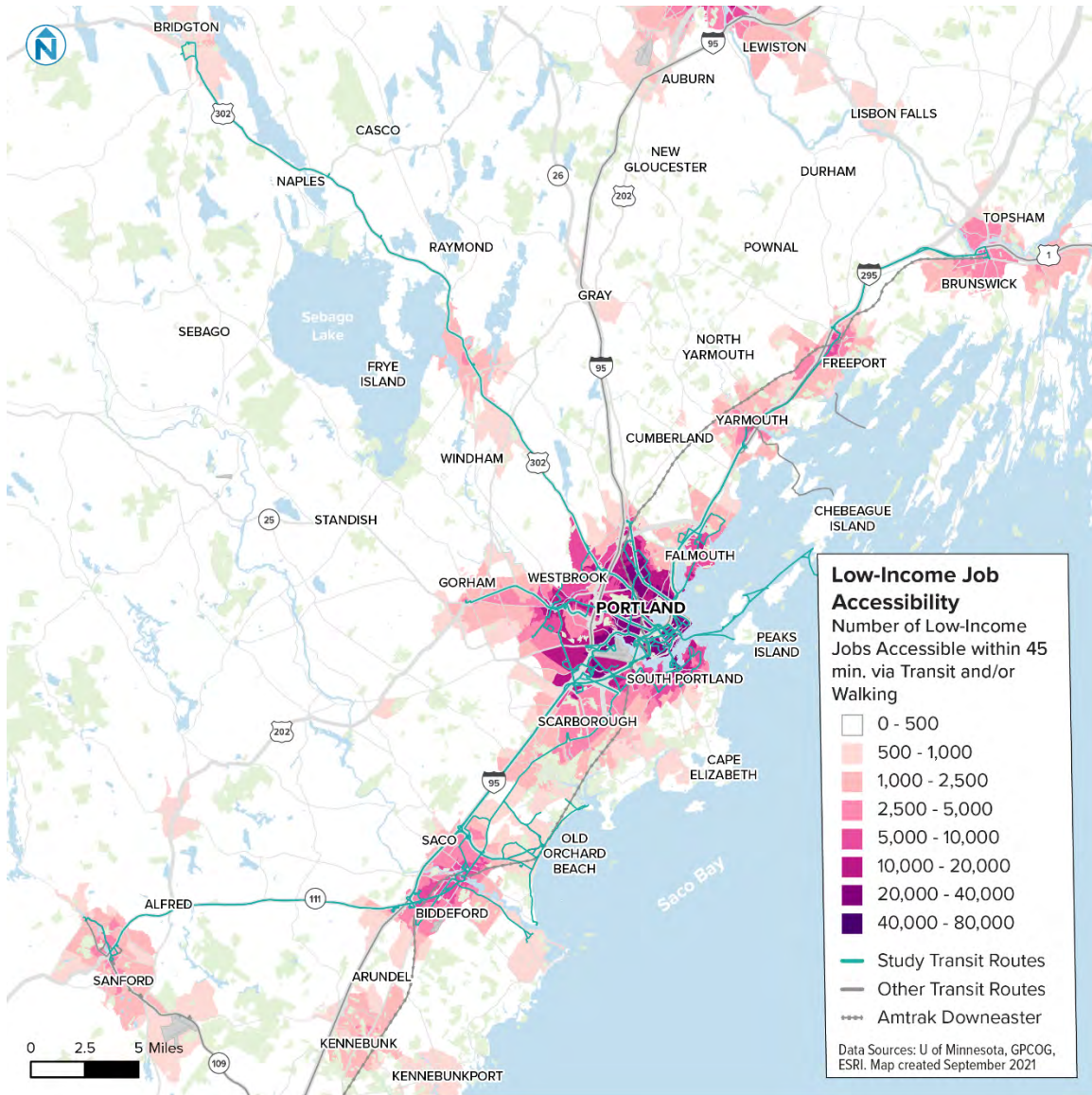
Figure 6-7 Map Showing Transit Access to Low-Income Jobs in Greater Portland Area



¹⁷ This is a break provided in the source data and is equivalent to a wage of approximately \$20 per hour.



Figure 6-8 Map Showing Transit Access to Low-Income Jobs in Greater Portland Region





TRANSIT PLANNING IMPLICATIONS

Comparing the geographic distribution of transit demand to transit-based job accessibility shows places where transit service could be improved. Places with high transit demand but no transit access to jobs likely need better transit service. On the other hand, places with very little demand for transit but high levels of transit access to jobs may accommodate reduced transit service. Reducing transit service in these places allows resources to be re-allocated to places where it will be used by more people.

Transit access is also closely related to transfers that may be necessary for riders to reach certain destinations. Even with timed transfers, switching vehicles increases the amount of time it takes riders to access their destinations; if a timed transfer is missed, that time can be considerable. Without timed transfers, the amount of time it takes riders to reach their destination can also be considerable. Improving transfers within and between agencies, especially at major transfer points, should be considered.

Figure 6-9 through Figure 6-11 show population density compared to transit access in the Greater Portland region, highlighting places that have relatively little transit access compared to their likely underlying demand. In general, the more urban portions of the Greater Portland region have transit access that matches their demand, but several lower-density communities are relatively underserved. Some of the places with larger, consistently underserved communities are:

Greater Portland Area

- The **Frenchtown, Cumberland Mills, and Blue Spruce** neighborhoods in **Westbrook**
- Much of **South Portland**, including neighborhoods off **Broadway** and **Redbank Village**
- Parts of the **East Deering** neighborhood in **Portland**

Biddeford-Saco-Old Orchard Beach

- Much of **Biddeford, Saco, and Old Orchard Beach**, particularly in the denser areas near downtown

Greater Portland Region

- Select higher-density places in **Brunswick, Gorham, Sanford, and Yarmouth.**

Note: Transit demand is somewhat different for Casco Bay island residents, as many residents rely entirely on transit service for access to critical destinations, such as medical facilities, grocery stores, and jobs.



Figure 6-9 Map Showing Transit Demand vs. Transit Access to Jobs in Greater Portland Area

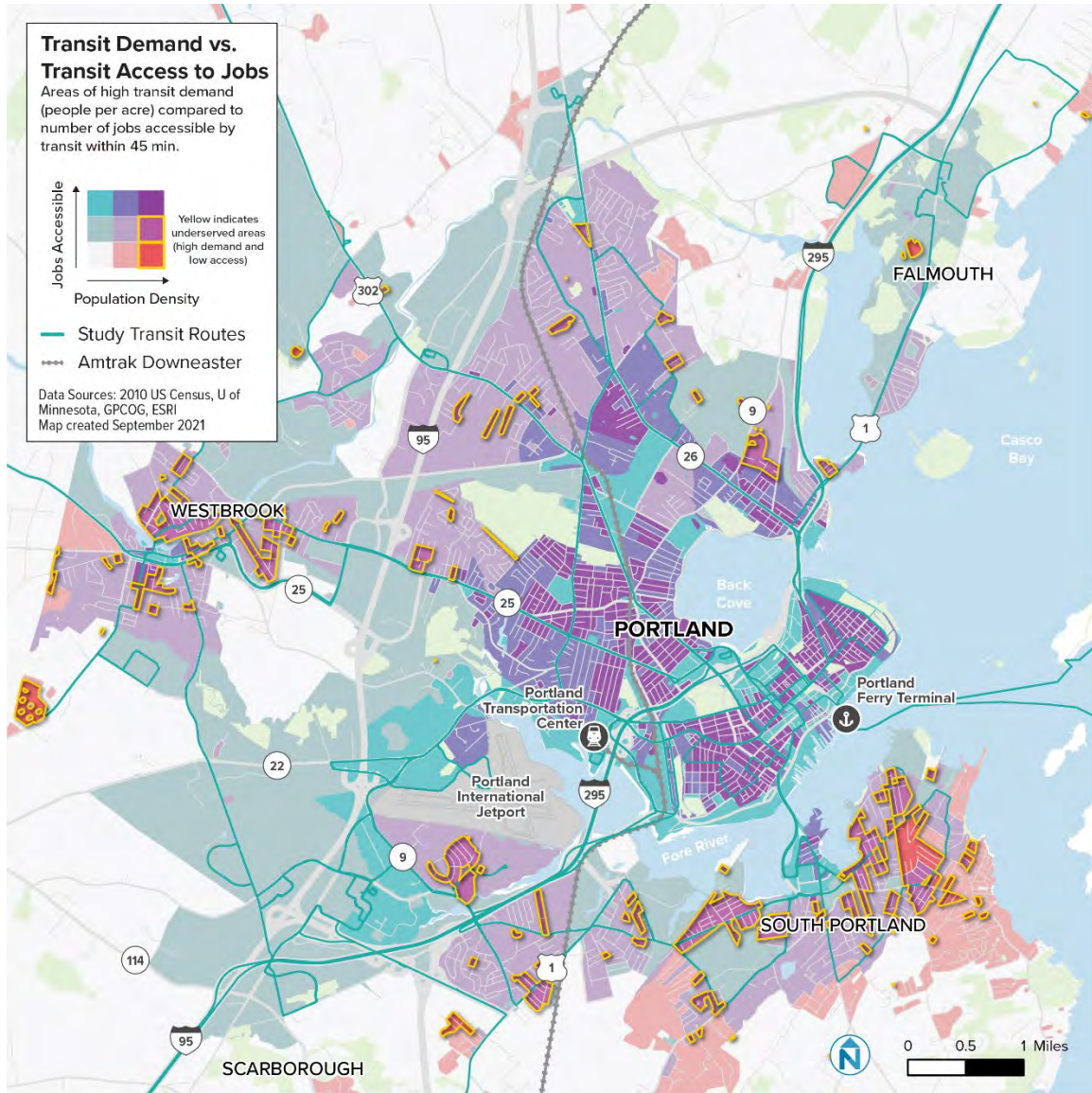




Figure 6-10 Map Showing Transit Demand vs. Transit Access to Jobs in Greater Portland Region

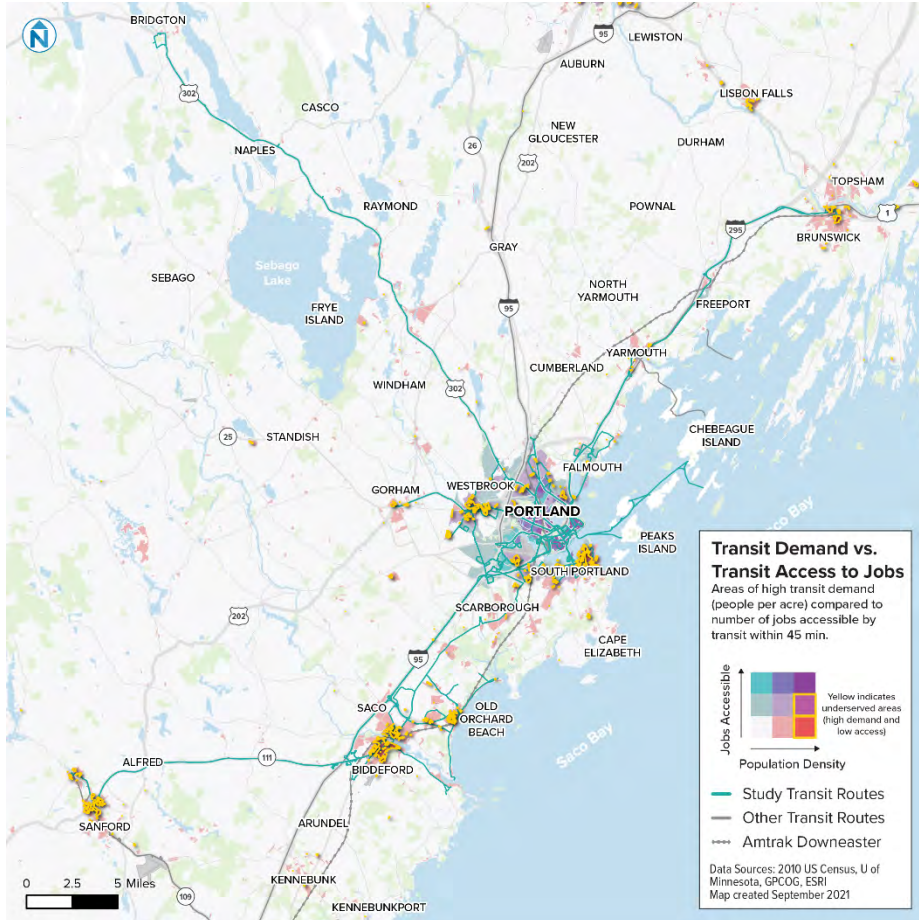
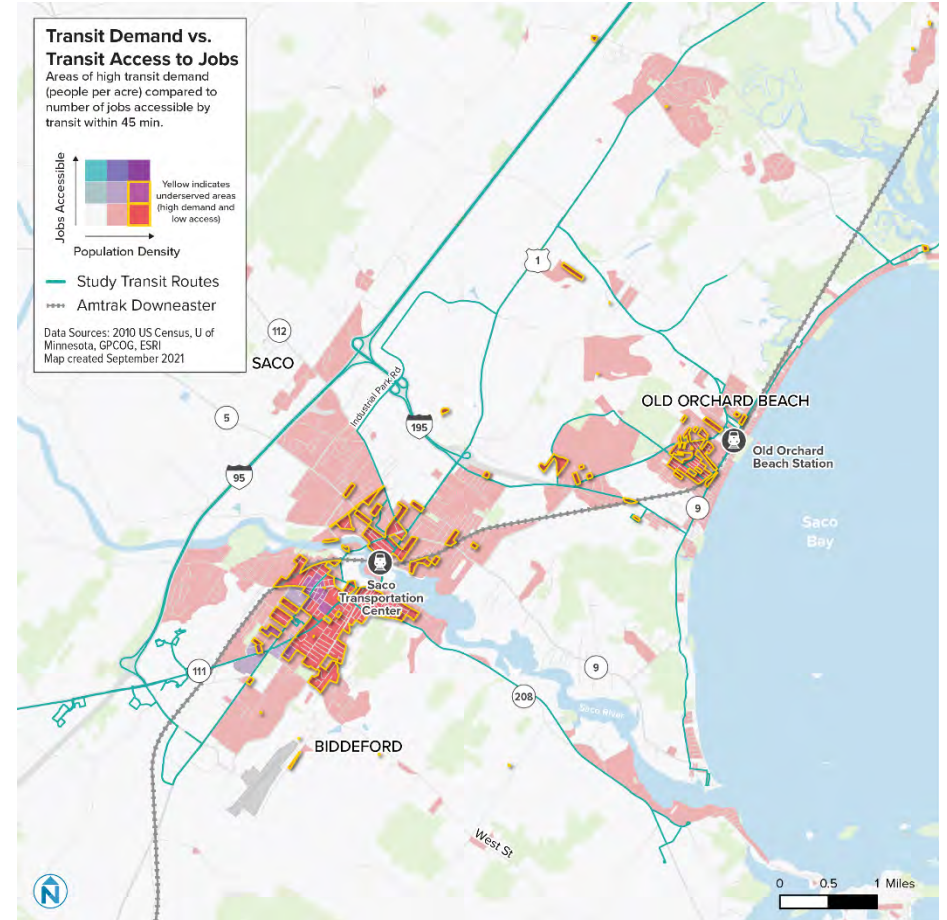


Figure 6-11 Map Showing Transit Demand vs. Transit Access to Jobs in Biddeford-Saco-Old Orchard Beach





APPENDIX B



Transit Together Study

State of Regional Transit Part 2: Existing Service

September 2022

GPCOG
GREATER PORTLAND
COUNCIL OF GOVERNMENTS

N NELSON
NYGAARD

Cover image source: Greater Portland Council of Governments



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1 INTRODUCTION

TRANSIT TOGETHER

In early 2021, the Greater Portland Council of Governments (GPCOG) completed *Transit Tomorrow*, a 30-year strategic transit plan for the region. *Transit Tomorrow* outlines a four-part strategy to achieve its vision:

- Making transit **easier** for riders
- Creating **frequent** connections
- Investing in **rapid** transit
- Creating **transit-friendly places**

Transit Together is a follow-up GPCOG study to identify opportunities for increased coordination and integration in the region's transit network to improve efficiency and cultivate a cohesive and integrated system. It will apply the vision and goals of *Transit Tomorrow* by designing a transit network that is more easily shared, understood, and used by riders, and that improves region-wide mobility.

This Existing Service Report is one of three parts of the *Transit Together State of Regional Transit* report.

- **Part 1 – Market Analysis:** This document assesses transit demand in the Greater Portland region.
- **Part 2 – Existing Service:** This document describes the current condition of the regional transit system.
- **Part 3 – Regional Service Delivery and Coordination:** This document describes the individual transit agencies in the Greater Portland region, their past and ongoing coordination efforts, and common challenges and opportunities.



THE EXISTING SERVICE REPORT

The purpose of this Existing Service Report is to document the transit service currently provided in the Greater Portland region and these services' performance. This information is important context for service planning recommendations that will be made later in the Transit Together study. The Existing Service Report has three chapters:

- **System Characteristics:** Describes the transit service currently provided in the study area, including what service is operated, who operates it, and when and where it operates.
- **Ridership:** Documents transit ridership and productivity at the route and service level, for fixed-route and demand-response service.
- **Passenger Facilities:** Documents the key passenger facilities currently serving the regional transit network.

KEY FINDINGS

This Existing Service Report produces several key findings that will inform service planning performed as part of the Transit Together study.

System Characteristics

- There are seven transit agencies in the Transit Together study and at least four additional private transit providers not included in the study.
- There are four primary transit hubs in the study area: the PULSE, Casco Bay Ferry Terminal, Portland Transportation Center, and Saco Transportation Center. There are three additional secondary transfer points: the Mill Creek Transit Hub, the Westbrook Hub, and the Maine Mall.
- Study agencies operate several service types in the region: local bus, express bus, deviated fixed-route bus, passenger rail, passenger/freight/vehicle ferry, and demand-response service.
- Service in the Greater Portland region is mostly infrequent; the most frequent service is concentrated in Portland and the municipalities immediately surrounding it. Some routes have headways of two hours or more.
- The span of service available on fixed routes is robust, with most bus service operating until about 10:00 p.m.
- METRO and NNEPRA are the only study agencies to collect on-time performance (OTP) data. Neither the Downeaster nor any METRO routes meet their OTP targets.



- There are nearly 1,000 bus stops in the Greater Portland region, about 25 of which are served by multiple agencies. The quality of these stops varies dramatically.

Ridership

- Ridership on regional transit services in summer 2021 was 34% lower than pre-pandemic levels.
- There are several corridors in the study area with relatively high transit ridership. In Portland, these corridors are Brighton Avenue (which becomes Main Street in Westbrook), Forest Avenue, Congress Street, Washington Avenue, and Stevens Avenue. In South Portland, Broadway also has relatively high ridership. In Biddeford-Saco-Old Orchard Beach, these corridors are Alfred Street (Route 111) and Ocean Park Road/Saco Avenue (Route 5). Several of these corridors were identified in Transit Tomorrow as potential future rapid transit corridors.
- The Downeaster and Casco Bay Lines (CBL) are the most productive services in Greater Portland. Among local bus routes, those that serve several key destinations are the most productive, such as METRO routes 9A/9B, Husky Line, and 5. The least productive routes are long-distance express services or those that are indirect and/or infrequent, such as BSOOB Transit Route 50 Orange/51 Black.
- Transit ridership in the study area is highly seasonal for some agencies, especially Biddeford-Saco-Old Orchard Beach (BSOOB) Transit and CBL, which see 300% to 400% increases in summer tourist ridership.

Passenger Facilities

- There are six key passenger facilities in the region: The PULSE, the Portland Transportation Center, the Saco Transportation Center, the Casco Bay Ferry Terminal, the Westbrook Hub, and the Mill Creek Transit Hub.
- Rail-to-ferry connections in Portland are difficult to make by transit, and the current Portland Transportation Center is not located near major transit trip generators.
- South Portland Bus Service (SPBS) and BSOOB Transit do not serve the Portland Transportation Center.
- Intercity bus service is disconnected from most major transit facilities in the Greater Portland area.

Note: This document discusses 'transit' at large but is generally focused on bus transit. The Greater Portland region's ferry and rail services, while critical, are inherently different from bus transit and should be considered as such.



2 SYSTEM CHARACTERISTICS

This chapter of the report describes the basic characteristics of transit in the Greater Portland region. It explains who operates transit, where it operates, what types of transit are available, and when and how often fixed routes are available.

TRANSIT OPERATORS

Greater Portland is served by seven primary public transit providers operating bus, rail, and ferry service:



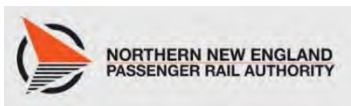
BSOOB Transit: Biddeford-Saco-Old Orchard Beach (BSOOB) Transit operates fixed-route bus service in its namesake member communities, and some service connecting with Scarborough, South Portland, and Portland. In the summer, BSOOB Transit operates tourist trolley service in and around Old Orchard Beach.



CBL: The Casco Bay Island Transit District, which is also known as Casco Bay Lines (CBL), operates year-round scheduled passenger, vehicle, and freight ferry service between Portland and six Casco Bay islands.



METRO: The Greater Portland Transit District operates fixed-route bus service in the Greater Portland region.



NNEPRA: The Northern New England Passenger Rail Authority (NNEPRA) oversees Amtrak Downeaster service, which operates between Brunswick and Boston, with five stations in the study area.



RTP: The Regional Transportation Program (RTP) provides demand-response service in Cumberland County and operates a deviated fixed-route bus connecting the Lakes Region and Portland. RTP provides paratransit for METRO and SPBS.

SPBS: South Portland Bus Service (SPBS) operates fixed-route service in South Portland, with connections to Portland and Scarborough.

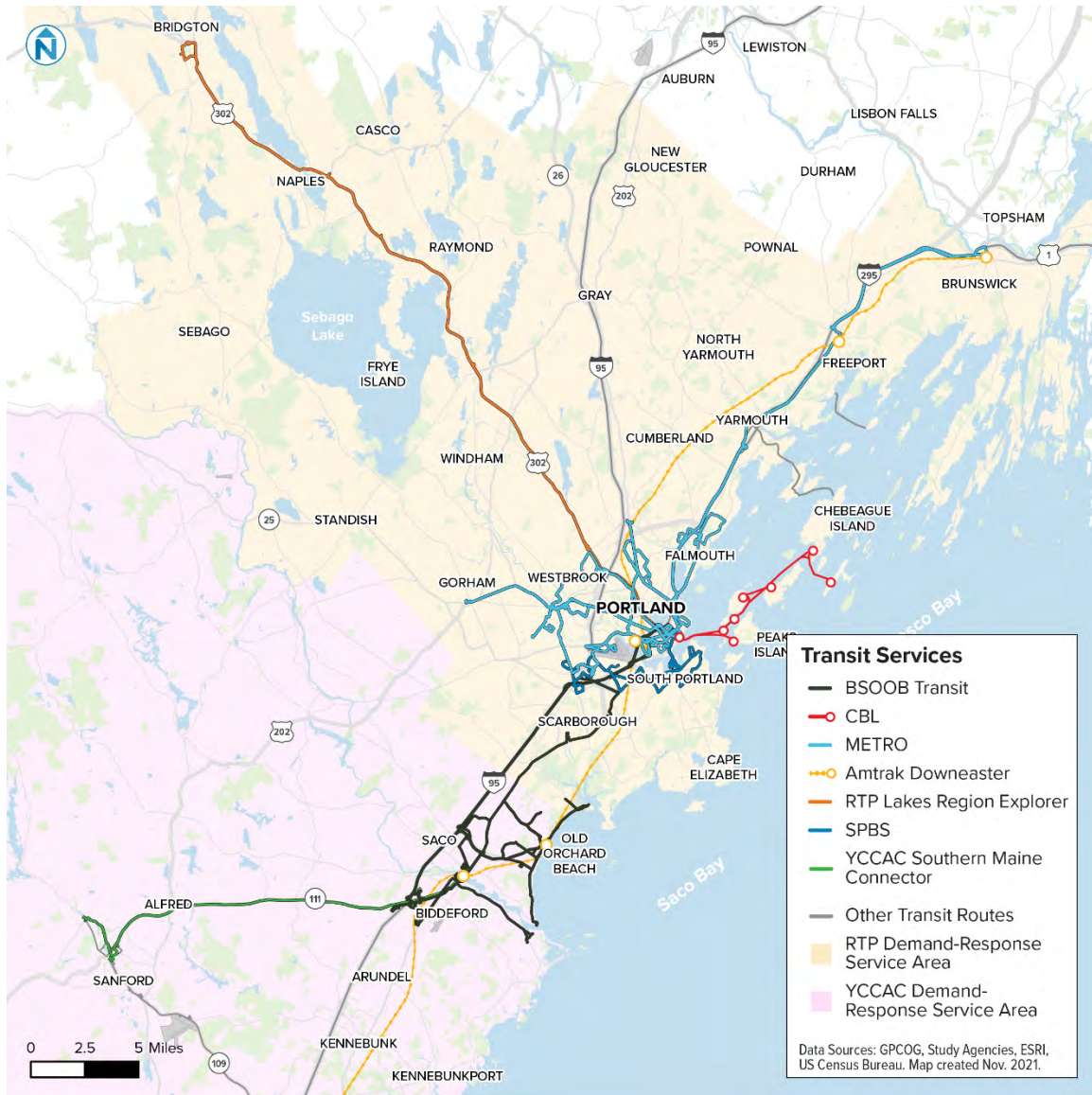
YCCAC: York County Community Action Corporation (YCCAC) is a social service agency providing accessible on-demand services and deviated fixed-routes, including the Southern Maine Connector route connecting Sanford and Biddeford-Saco.

SERVICE AREA

The Transit Together study area includes Portland Area Comprehensive Transportation System (PACTS) member communities, as well as communities served by fixed-route bus or ferry service with at least one stop in a PACTS member community (Figure 2-1). This study area includes all of Cumberland County and some of York County.



Figure 2-1 Map of Transit Services Operated in Greater Portland Region





Portland is home to the most transit in the Greater Portland region; all the study agencies, except for YCCAC, operate at least some service within Portland's municipal boundaries (Figure 2-2). Three of the primary transit hubs in the study area are in Portland, and one is in Saco:

- **Downtown Transportation Center/PULSE:** This is the downtown Portland hub for fixed-route bus service in Greater Portland. Together with nearby stops on Congress Street, the PULSE is served by BSOOB Transit, METRO, RTP, and SPBS fixed routes.
- **Casco Bay Ferry Terminal:** This is the hub for ferry service in Casco Bay. It is served by CBL ferries and METRO Route 8.
- **Portland Transportation Center:** This is the hub for rail and intercity bus service in Portland. It is served by the Downeaster, two METRO bus routes, and Concord Coach Lines.
- **Saco Transportation Center:** This is the transportation hub for the Biddeford-Saco-Old Orchard Beach area. It is served by the Downeaster, BSOOB Transit, and YCCAC Southern Maine Connector.



Figure 2-2 Map of Transit Services Operated in Greater Portland Area

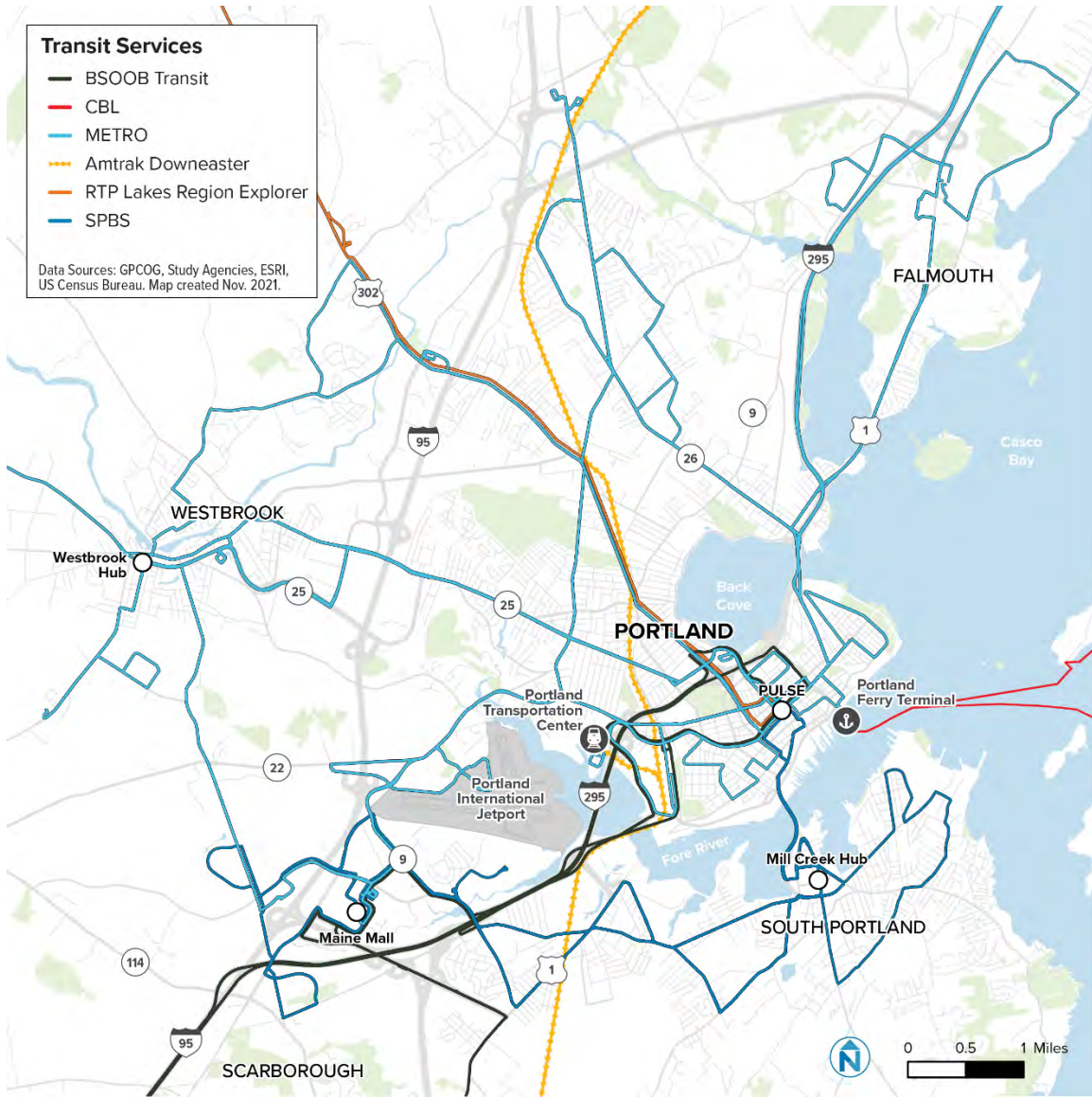




Figure 2-3 Map of Transit Services Operated in Biddeford-Saco-Old Orchard Beach





SERVICE TYPES

The seven study agencies and the four primary modes of transportation they provide are in Figure 2-4 and described below.

Figure 2-4 Transit Agencies and Services Operated in Greater Portland

	Agency	Bus	Demand Response	Ferry	Rail
Study agencies	BSOOB Transit	✓			
	Casco Bay Lines			✓	
	METRO	✓			
	NNEPRA (Downeaster)				✓
	Regional Transportation Program	✓	✓		
	South Portland Bus Service	✓			
	YCCAC	✓	✓		

Bus

Five of the seven study agencies operate bus service. This service can be separated into three categories: local bus, express bus, and deviated fixed-route bus.

Local Bus

- **BSOOB Transit** operates four local fixed routes, seven days a week. These routes serve Biddeford, Old Orchard Beach, Saco, Scarborough, South Portland, and Portland.¹
 - BSOOB Transit also operates four seasonal trolley routes, all providing weekday and weekend service. These routes serve Old Orchard Beach, Scarborough, and Saco and operate consistently from mid-June to Labor Day, with limited service during May, September, and October.
 - BSOOB Transit fixed-route buses deviate to provide ADA paratransit trips.
- **METRO** operates nine local bus routes, seven days a week. These routes serve Falmouth, Portland, South Portland, and Westbrook, with service concentrated on the Portland Peninsula.

¹ BSOOB Transit route names were recently updated to include numbers and slightly altered names. This document refers to BSOOB Transit routes by their public-facing route names and numbers as of March 2022.



- **SPBS** operates three routes on weekdays and two routes on weekends. All routes serve South Portland and downtown Portland, and two routes also provide service at and around the Scarborough Gallery shopping center.

Transfers between local bus operators can be made at:

- **The PULSE:** Transfers at or near the PULSE can be made among METRO routes 1, 2, 4, 5, 7, 8, 9, BREEZ, and the Husky Line, along with all SPBS routes, BSOOB Transit routes 60 and 70, and the RTP Lakes Region Explorer.
- **Maine Mall:** Transfers at the Maine Mall east entrance are possible among the BSOOB Transit Route 60, METRO routes 3 and 5, and SPBS routes 24A and 24B.

Express Bus

- **BSOOB Transit** operates Route 70 Purple/ZOOM between Biddeford-Saco and downtown Portland. This route makes 10 round trips each weekday.
- **METRO** operates two express routes:
 - The BREEZ connects Portland, Yarmouth, Freeport, and Brunswick. BREEZ runs Monday through Saturday with 14 round trips on weekdays and six round trips on Saturdays.
 - The METRO Husky Line operates as a limited-stop service connecting Portland, Westbrook, and Gorham with trips every 30 minutes during most of each weekday, as well as 45-minute service Saturday and Sunday. The route is branded as the Husky Line because it connects University of Southern Maine (USM) campuses in Gorham and Portland.

Deviated Fixed-Route Bus

- **RTP** operates the Lakes Region Explorer between Portland and Bridgton. This route stops in Naples, Casco, Raymond, Windham, and Westbrook, and deviates on request. Four trips are offered each weekday and there is seasonal Saturday service from Memorial Day to Labor Day.
- **YCCAC** operates a deviated fixed-route service called the Southern Maine Connector. This route operates between Springvale and Saco, with stops in Sanford, Alfred, and Biddeford, providing three trips each weekday. Deviations can be requested 24 hours in advance.



Rail

NNEPRA oversees the Amtrak Downeaster train, which runs from Brunswick to Boston, with Maine stops in Brunswick, Freeport, Portland, Old Orchard Beach (seasonally), Saco, and Wells. The train makes five daily round trips and operates on weekdays and weekends. As of March 2022, the Downeaster operates a one-way “Event Nite Train” from Boston to accommodate people attending major events such as concerts and sports games, with trains departing Boston’s North Station at 11:25 p.m.

The Downeaster is both a local and regional transit route. The service operates beyond the Greater Portland region, connecting 12 communities in three states along a 143-mile corridor.

Ferry

Casco Bay Lines (CBL) serves the Casco Bay islands year-round with passenger, vehicle, and freight service. Four CBL ferryboats operate from the Casco Bay Ferry Terminal on Commercial Street, providing:

- Regular passenger service to Peaks, Little Diamond, Great Diamond, Long, Chebeague, and Cliff islands.
- Regular vehicle transportation service to Peaks Island, with advanced reservation vehicle service to Great Diamond, Long, Chebeague, and Cliffs islands available.
- Routes operating weekdays and weekends, with:
 - Hourly service to Peaks Island.
 - Service every two hours or more to all other islands.
- Seasonal service to Bailey Island.²

Demand Response

Dial-a-Ride

RTP provides several demand-response services in Cumberland County’s 27 communities.

² This service has been discontinued since the onset of the COVID-19 pandemic.



- **DHHS-sponsored service:** RTP offers several DHHS-sponsored demand-response rides, including MaineCare-based medical appointment rides, DHHS-based children and families rides, and rides for approved low-income passengers.
- **RTP Rides:** service is available to the general public, with fare discounts for seniors, low-income people, and people with disabilities. Reservations are required 48 hours in advance, except for complementary paratransit trips.
- **Shopper's Shuttle:** trips for older adults to access shopping destinations. Operates at least one weekday per week.
- **Volunteer Rides:** a volunteer-driver program where volunteers use their own vehicles to provide demand-response service and are reimbursed based on mileage.

YCCAC provides multiple demand-response services to meet the unique transportation needs of York County.

- **Connecting to Cancer:** free service for York County residents to area cancer-care facilities. Advanced reservation required.
- **Veteran's Transportation:** trips for veterans to medical and other appointments. Advanced reservation required.
- **Volunteer Rides:** contracted volunteer-driver service for children and families receiving case management from DHHS or Child Development Services. Also serves other private contracts and limited non-emergency medical transportation.
- **Wheels to Access Vocation and Education (WAVE)** connects Springvale, Sanford, Wells, and Biddeford with curb-to-curb dial-a-ride service. 24- to 48-hour advanced reservation is required.
- **Weekly Local Rides:** reservation-based service providing curb-to-curb trips to the closest regional shopping and medical centers. Only offered on Wednesday and Thursday.
 - Biddeford is only served on Wednesdays.
 - Saco and Old Orchard Beach are only served on Thursdays.

Fixed-Route Complementary Paratransit

- **BSOOB Transit** fulfills its complementary paratransit obligation by deviating fixed-route buses to destinations within 0.75 miles of its fixed routes, on request.
- **RTP** operates combined complementary paratransit service for METRO and SPBS routes. This service is called ADAPT (Americans with Disabilities Act Paratransit).



SPAN AND FREQUENCY OF SERVICE

Most weekday service in the Greater Portland region operates throughout the day, from approximately 6:00 a.m. to 9:00 p.m. (Figure 2-5). During this period, there is no transit service that consistently reaches headways of 30 minutes or fewer, although there are bursts of 15-minute service on the BSOOB Transit Route 54 circulator pattern. Several long-distance and express bus services, such as the BSOOB Transit Route 70, METRO BREEZ, and RTP Lakes Region Explorer reduce service or stop operating in the middle of the day. Several routes offer extremely infrequent service, with headways of two hours or more.

On Saturday, the span of service and frequencies for many routes decrease (Figure 2-6). Three routes do not operate at all on the weekends: BSOOB Transit Route 70, SPBS Route 24B, and the YCCAC Southern Maine Connector. On Saturdays, only the BSOOB Transit Route 54 and METRO routes 1, 4, 5, and Husky Line maintain all-day headways of under 60 minutes.

On Sunday, the span of service for most routes decreases by several hours, and frequency also decreases (Figure 2-7). Two routes that operate on weekdays and Saturdays do not operate on Sundays: METRO BREEZ and the RTP Lakes Region Explorer. On Sundays, only the BSOOB Transit Route 54, and METRO routes 4, 5, and Husky Line maintain all-day headways of under 60 minutes. There is no bus service in the Greater Portland region that operates past 8:00 p.m. on Sundays, and the earliest METRO service starts after 7:00 a.m. on Sundays.

Span and frequency of service for ferry and train service in the region are inherently different than bus service, as increasing the span of service or frequency can involve major capital expenses (e.g., a new ferry) or considerable coordination with several stakeholders (e.g., coordinating track usage among freight and passenger rail services).



Figure 2-5 Weekday Span of Service and Frequencies for Greater Portland Region Transit Routes

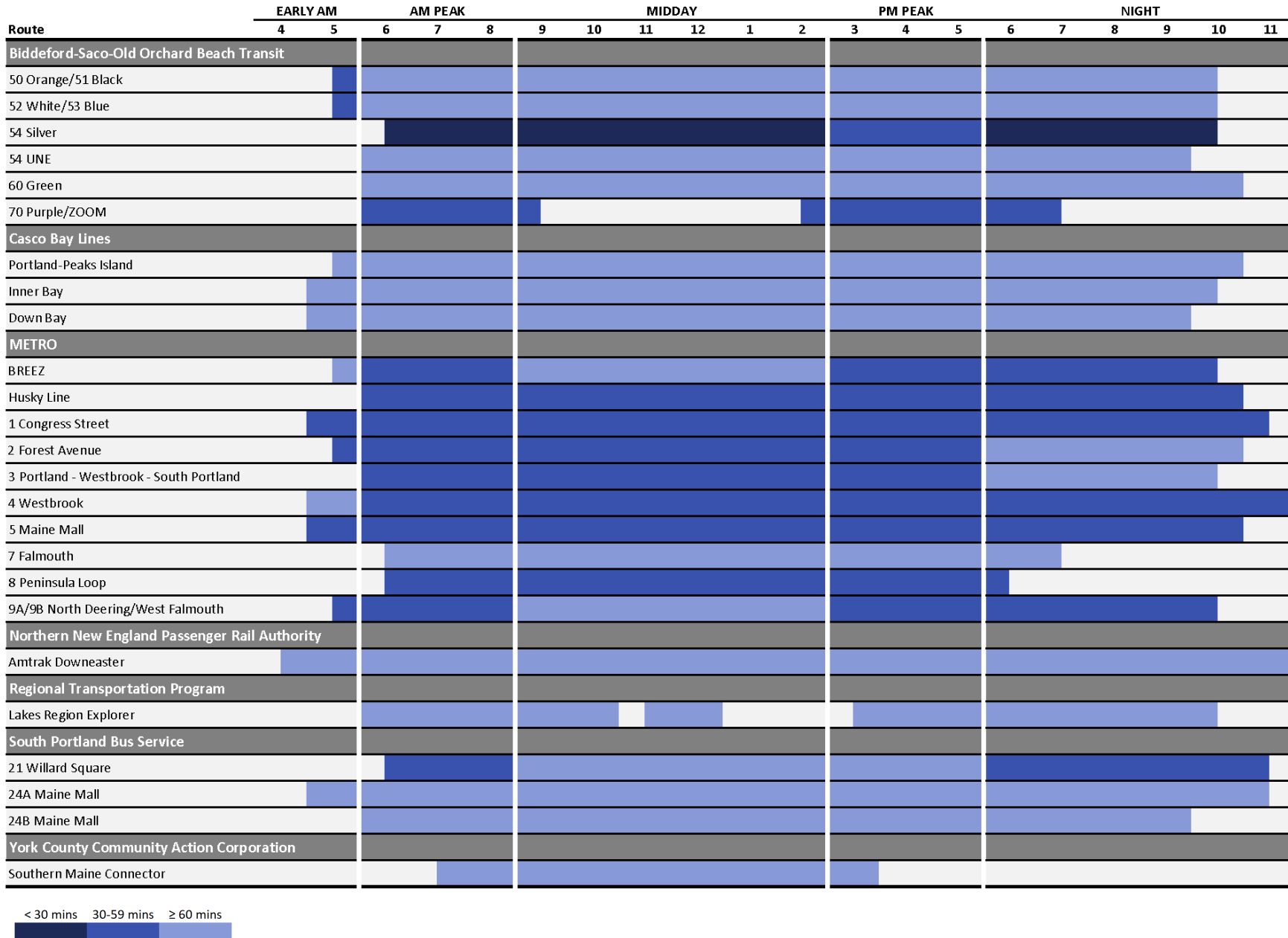
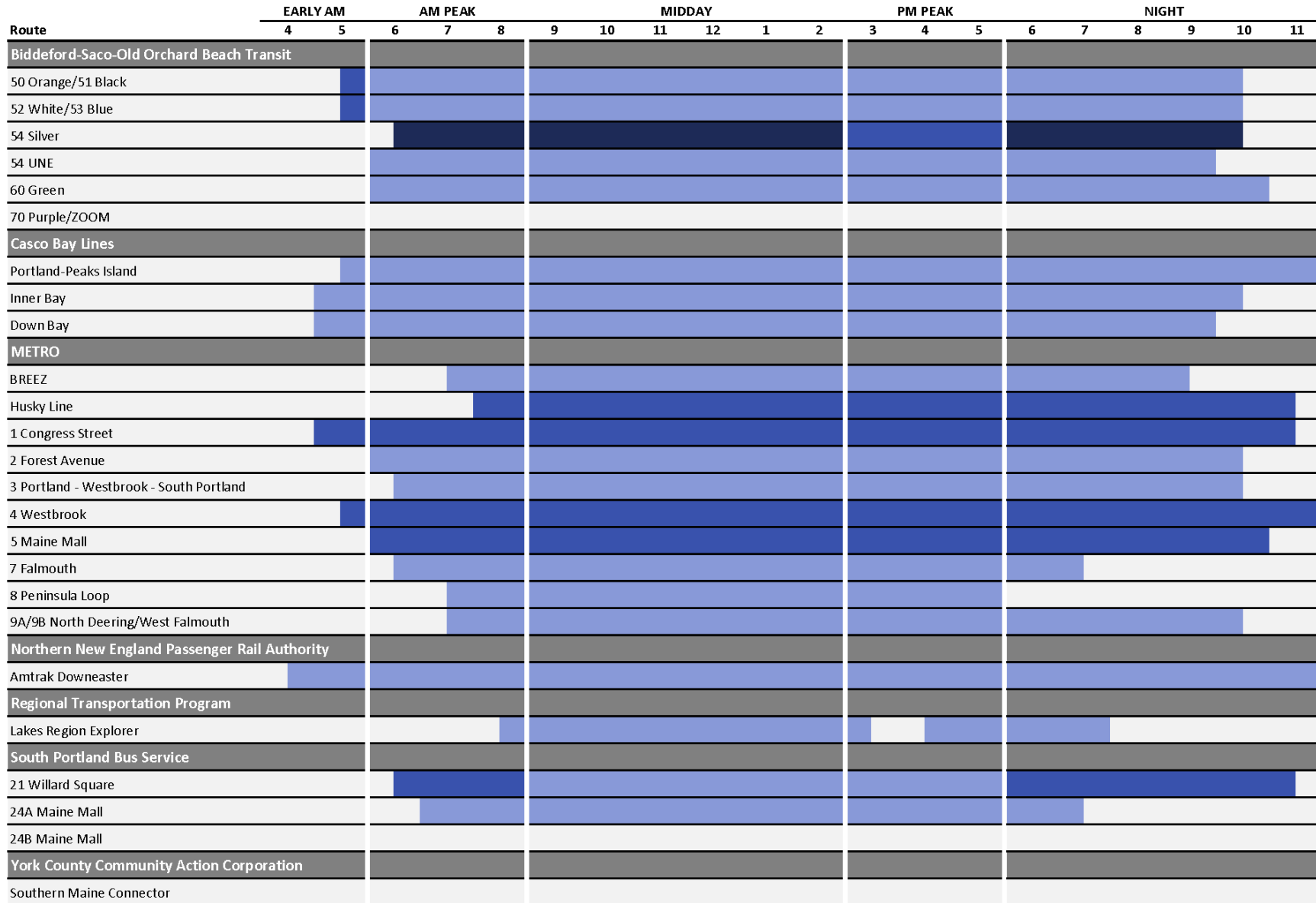




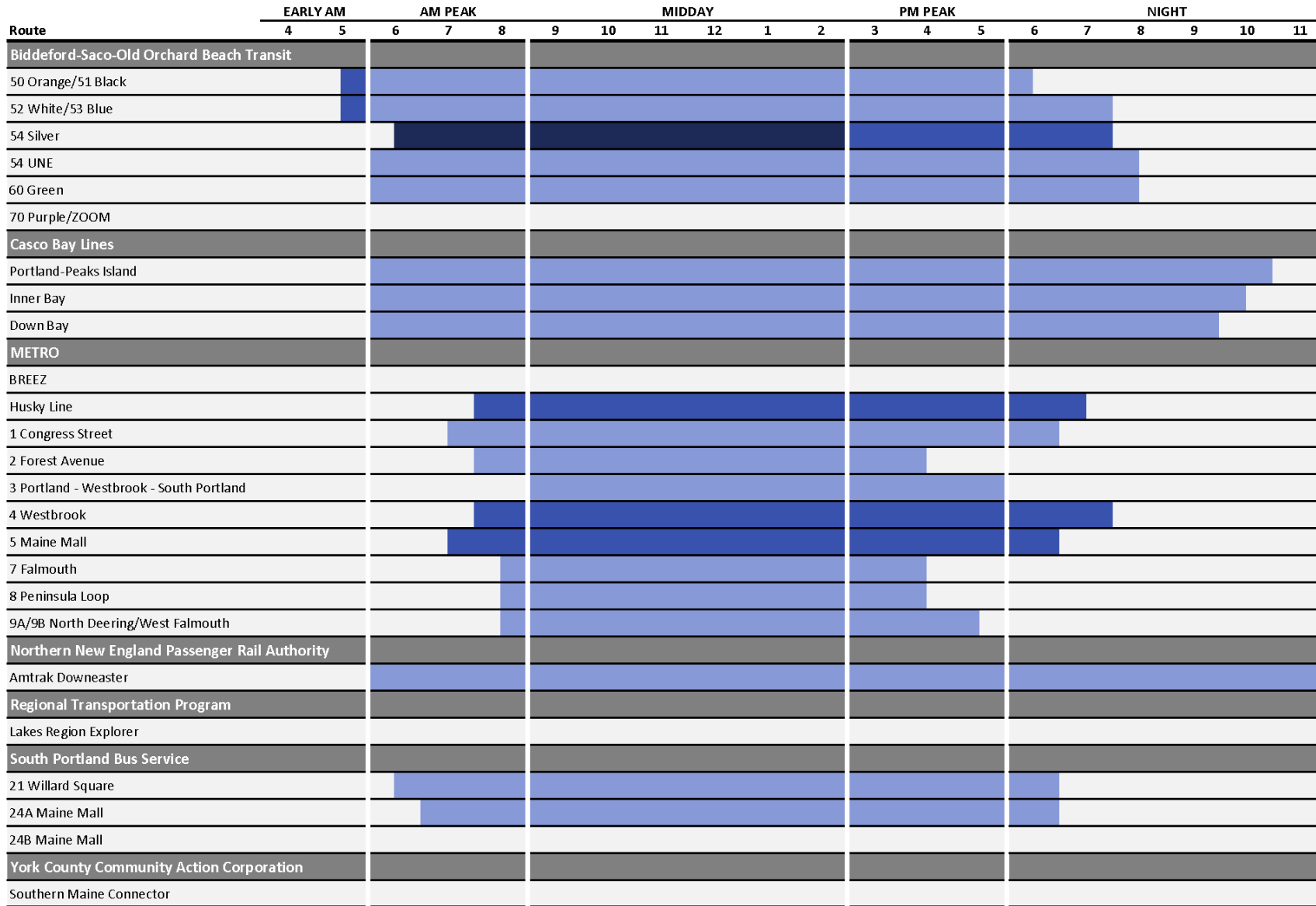
Figure 2-6 Saturday Span of Service and Frequencies for Greater Portland Region Transit Routes



< 30 mins 30-59 mins ≥ 60 mins



Figure 2-7 Sunday Span of Service and Frequencies for Greater Portland Region Transit Routes



< 30 mins 30-59 mins ≥ 60 mins



Maps in Figure 2-8 through Figure 2-11 show transit service frequency in the Greater Portland region by time period. For the most part, higher-frequency service is concentrated in the Greater Portland area. At night and on weekends, higher-frequency service is available in fewer places.

Figure 2-8 Maps of Greater Portland Region Services by Weekday Frequency, Early a.m. and a.m. Peak

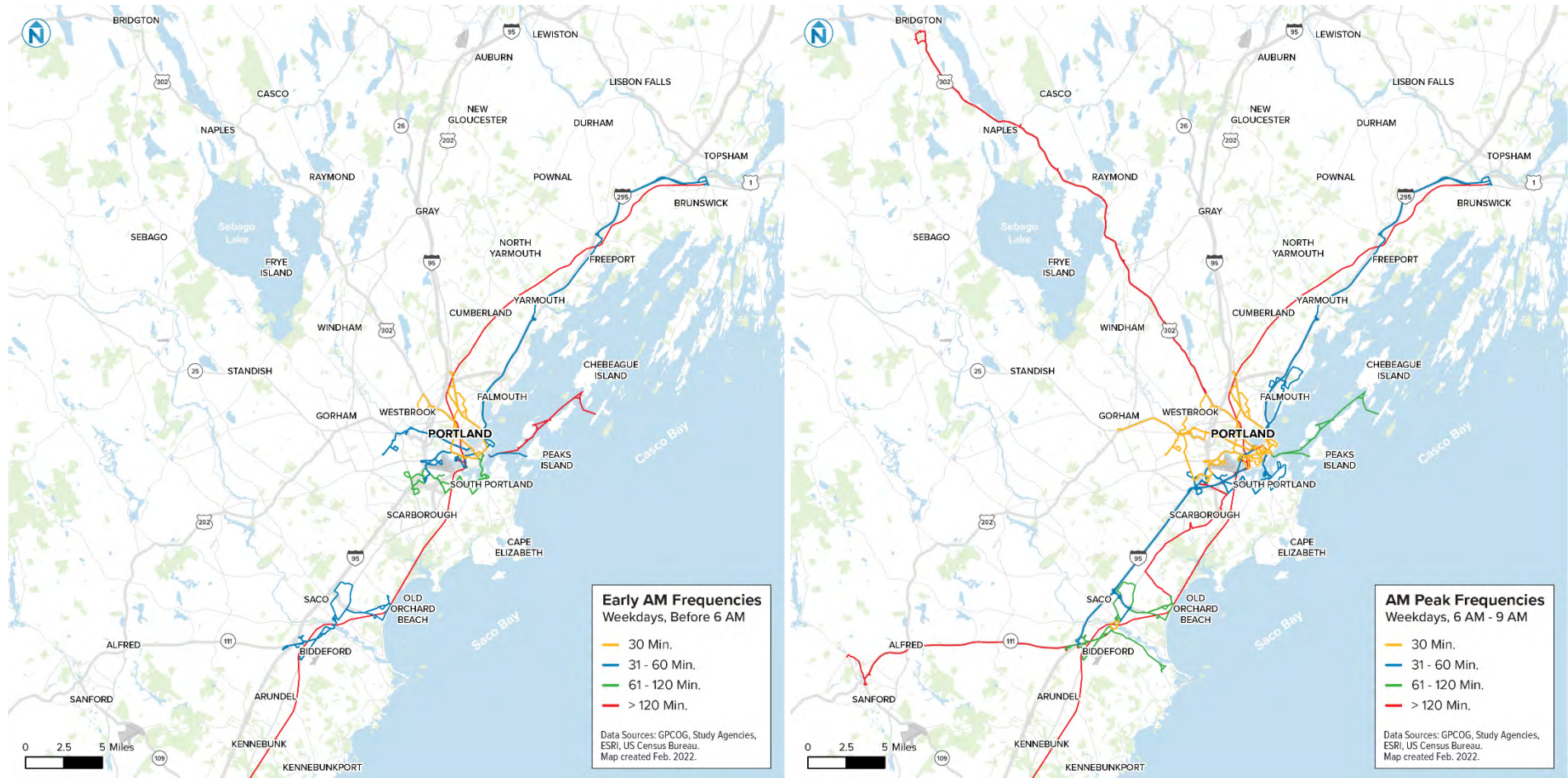




Figure 2-9 Maps of Greater Portland Region Service by Weekday Frequency, Midday and p.m. Peak

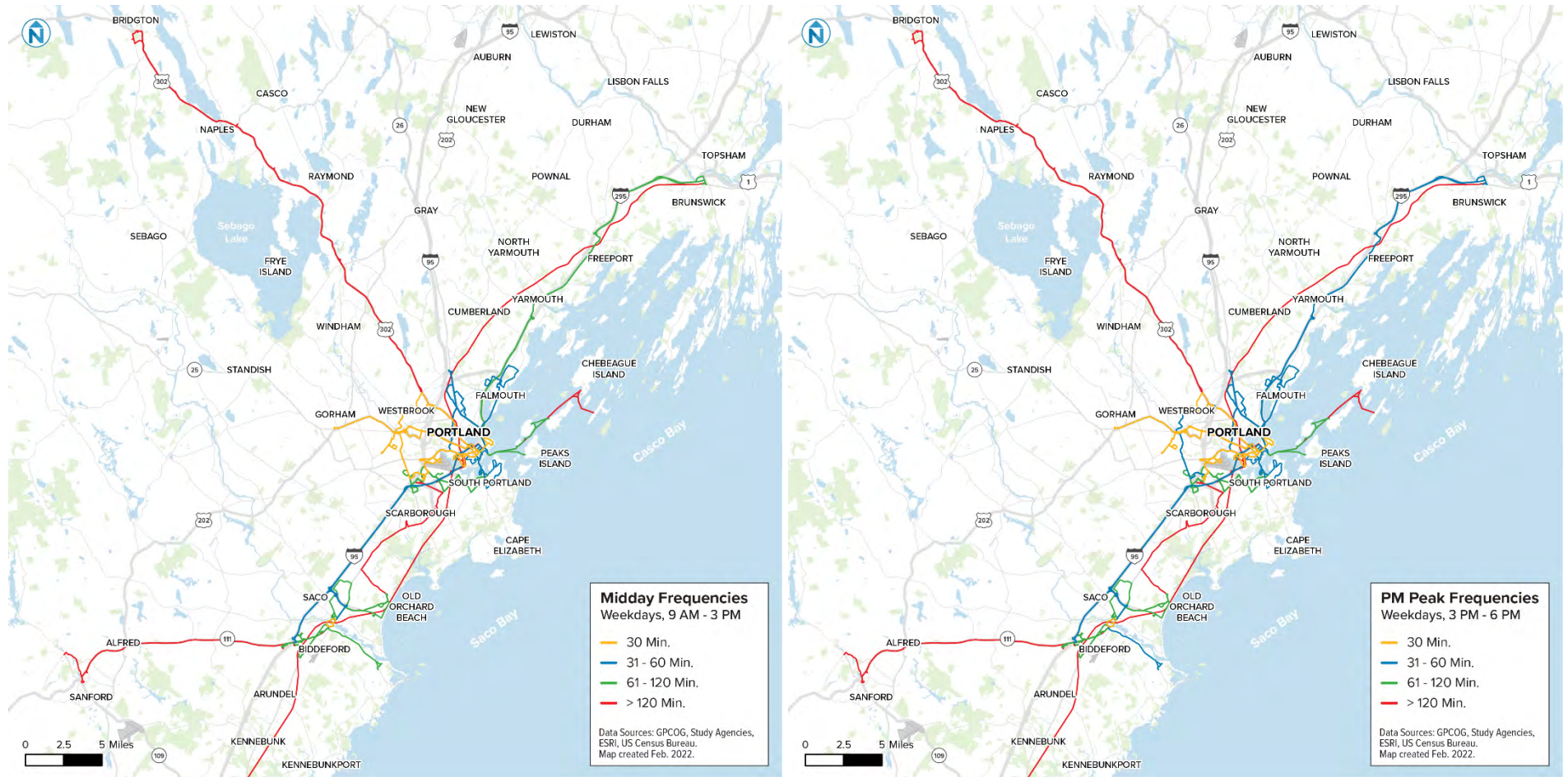




Figure 2-10 Map of Greater Portland Region Service by Weekday Frequency, Night

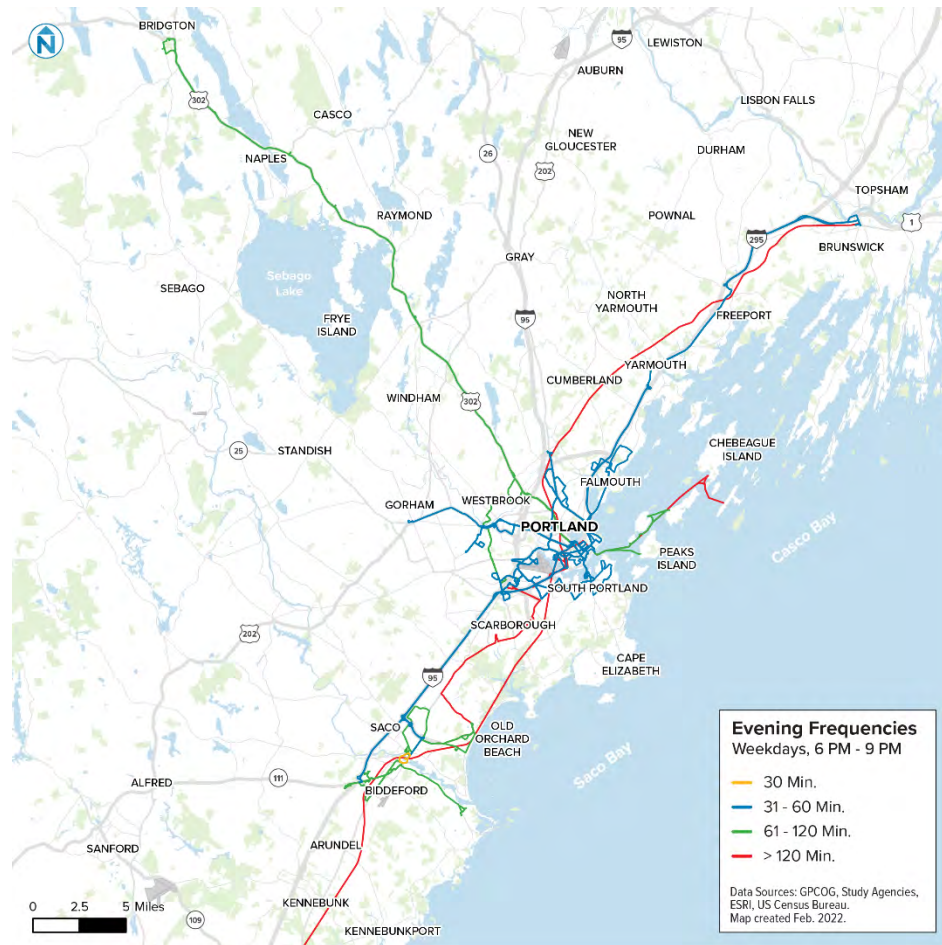
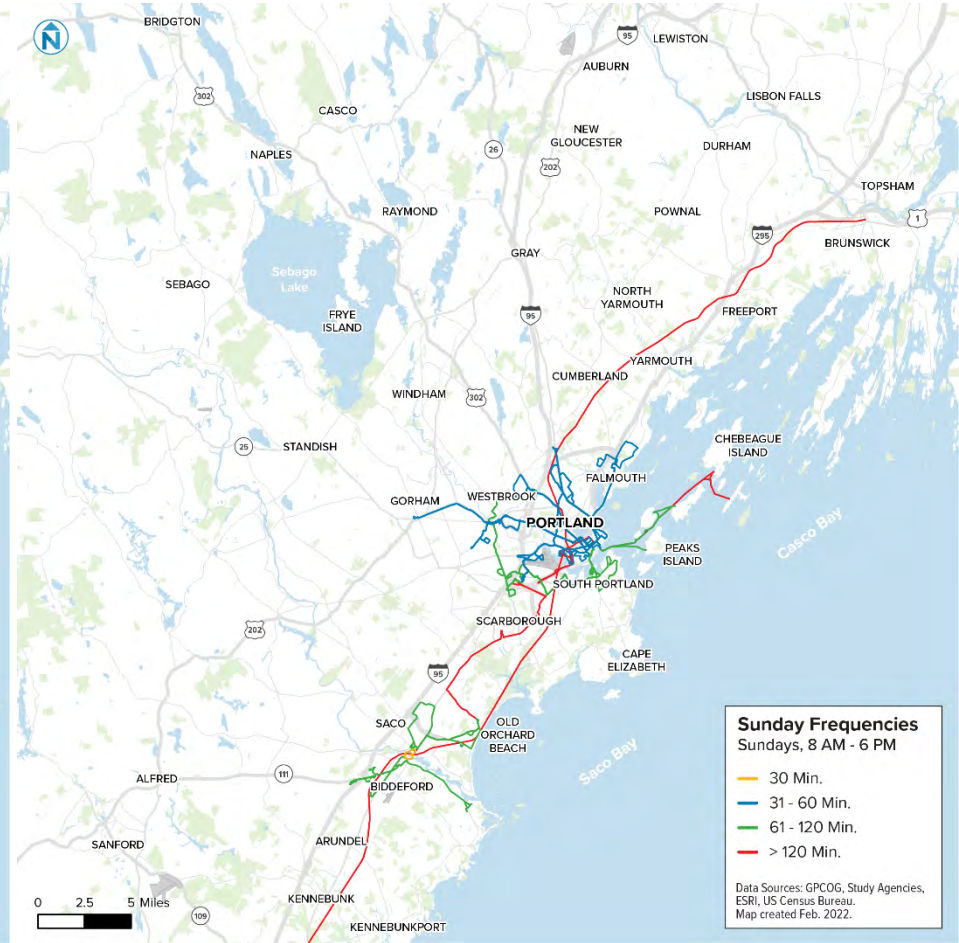




Figure 2-11 Maps of Greater Portland Region Services by Frequency, Saturday and Sunday





ON-TIME PERFORMANCE

Defining On-Time Performance

On-time performance (OTP) is a measure of how often a transit vehicle leaves a stop when it is scheduled to. Vehicles that leave early or late can inconvenience passengers or, in a worst-case scenario, strand passengers without another form of transportation. Several transportation agencies in the Greater Portland region have OTP standards for fixed routes but only two agencies (NNEPRA and METRO) collect fixed-route OTP data. RTP maintains demand-response OTP standards but YCCAC does not.

Figure 2-12 Study Agency On-Time Performance Definitions

Mode	Agency	On-Time Performance Definition
Bus	BSOOB Transit	Departs timepoint no more than 1 minute early and 5 minutes late. ³
	METRO	Departs timepoint no more than 0 minutes early and 5 minutes late. ⁴
	RTP	No information available.
	SPBS	Departs timepoint no more than 0 minutes early and 5 minutes late. ⁵
	YCCAC	No definition or target.
Paratransit	RTP	Departs from pick-up time no more than 0 minutes early and 30 minutes late. Arrives for drop-off time no more than 0 minutes early and 30 minutes late. ⁶
	YCCAC	No definition or target.
Ferry	CBL	No definition or target.
Rail	NNEPRA	Train arrives at final station within 10 minutes of scheduled time. ⁷

Bus agencies with fixed-route OTP standards consider late departures to be five minutes after the scheduled time but differ in considering zero or one minute an early departure.

³ BSOOB Transit. September 3, 2021. Title VI Program. p. 19. <<https://bsoobtransit.org/wp-content/uploads/2021/09/Biddeford-Saco-Old-Orchard-Beach-Transit-Title-VI-Program-9.30.21.pdf>>

⁴ METRO. April 1, 2019. Title VI Program. p. 22. <<https://gpmetro.org/DocumentCenter/View/459/2019-Title-VI-Program-final-with-attachments-040119?bidId=>>>

⁵ 12/8/21 e-mail communication with SPBS staff.

⁶ RTP. February 2020. ADA Complimentary [sic] Paratransit Policies and Procedures. p. 29 <<https://www.rtprides.org/wp-content/uploads/ADA-Complimentary-Paratransit-Policy-and-Procedures-2-2020.pdf>>

⁷ Defined as "end point on-time performance", per 11/5/21 e-mail communication with NNEPRA staff.



Ferry and train on-time performance is inherently different from fixed-route bus on-time performance, as ferries cannot predict the amount of cargo or vehicles that need to be loaded or unloaded at each stop, and train service can be subject to delays that are out of their control.

On-Time Performance Outcomes

Fixed-route OTP data are available only for the Downeaster and METRO. These data show some on-time performance issues on METRO routes in the congested urban area, such as METRO Route 8. Prior to the COVID-19 pandemic,⁸ none of METRO's routes achieved the agency's 90% OTP goal, and the Downeaster did not achieve its 85% OTP goal, although Downeaster customer OTP⁹ for fiscal year 2019 was 87%. Although METRO did not meet its OTP goal, most of the routes perform at over 75% OTP, which is in line with peer agencies.

The primary causes of Downeaster delays are speed restrictions, passenger train interference, and freight train interference, as the Downeaster operates on shared commuter and freight railways for most of its alignment. Downeaster OTP is fundamentally different than bus OTP, as the Downeaster does not have direct control over when it can use railways.

BUS STOPS, SHELTERS, AND SIGNAGE

Bus stops are one of the most important elements of transit service. Bus riders use stops every time they make a trip, and non-riders often gauge the quality of a service based on bus stops they see in their community. Good stops are easy to identify, provide shelter from the elements, allow for safe and easy boarding and alighting of a bus, and include clear information on what service is available at the stop.

⁸ Pre-pandemic OTP data are considered in this assessment because traffic congestion and ridership levels were more representative of a likely future condition. March 2021 OTP shows better performance than pre-pandemic OTP.

⁹ Customer on-time performance is a weighted measure based on the number of passengers arriving to their destination on time, rather than the percent of trains arriving into North Station on time.



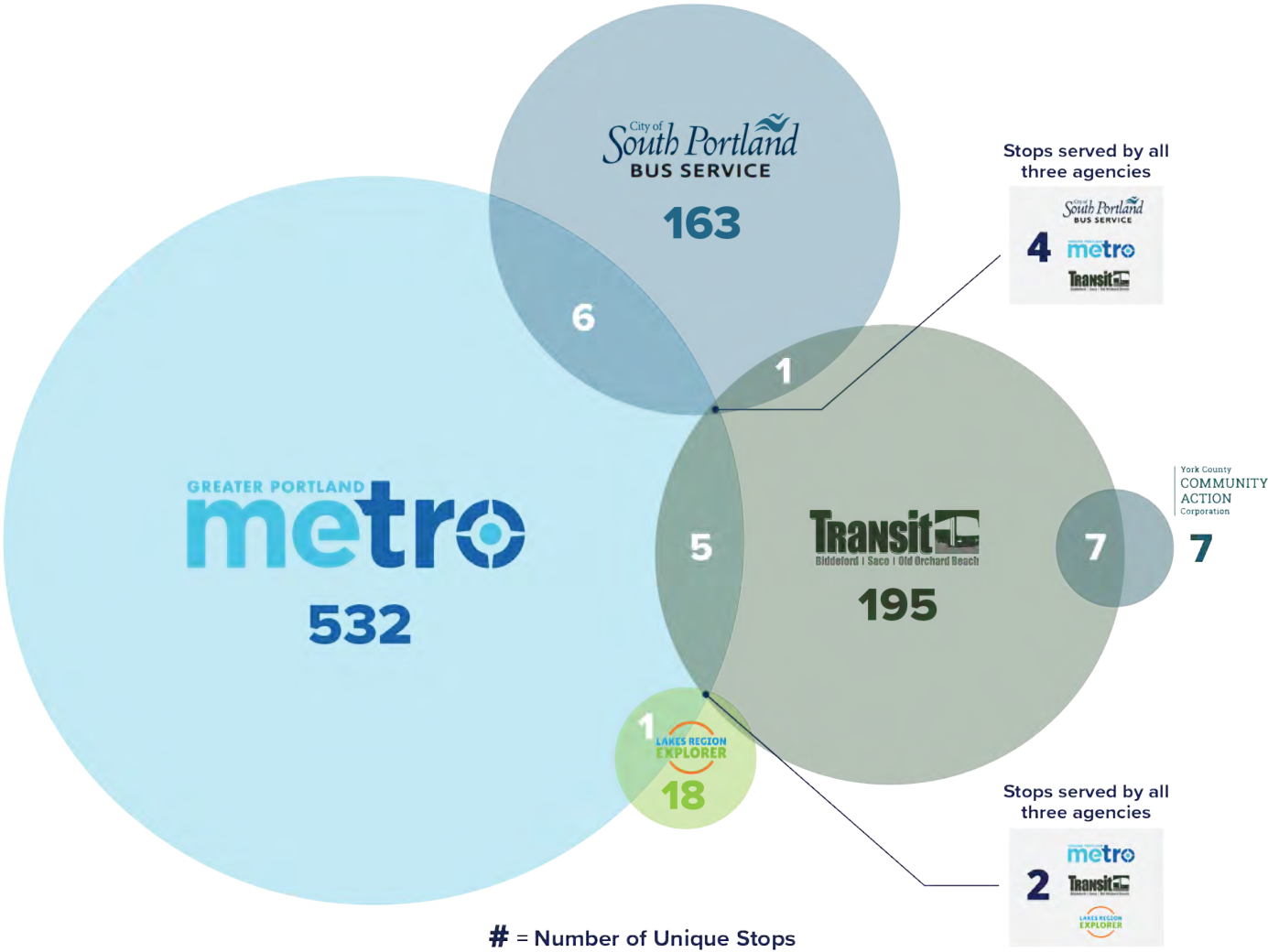
Stops

There are approximately 941 bus stops in the Greater Portland region, about 25 of which are served by multiple agencies.¹⁰ BSOOB Transit and the YCCAC Southern Maine Connector share several stops in Biddeford, and METRO shares several stops with SPBS, BSOOB Transit, and the RTP Lakes Region Explorer in Portland (Figure 2-13). BSOOB Transit and the RTP Lakes Region Explorer are the only study agencies that offer flag stops, and only when the driver considers a flag stop safe.

¹⁰ These numbers are based on GTFS data and are not precise because some agency GTFS may not precisely match real-world operational patterns.



Figure 2-13 Approximate Number of Fixed-Route Bus Stops Served by Each Agency

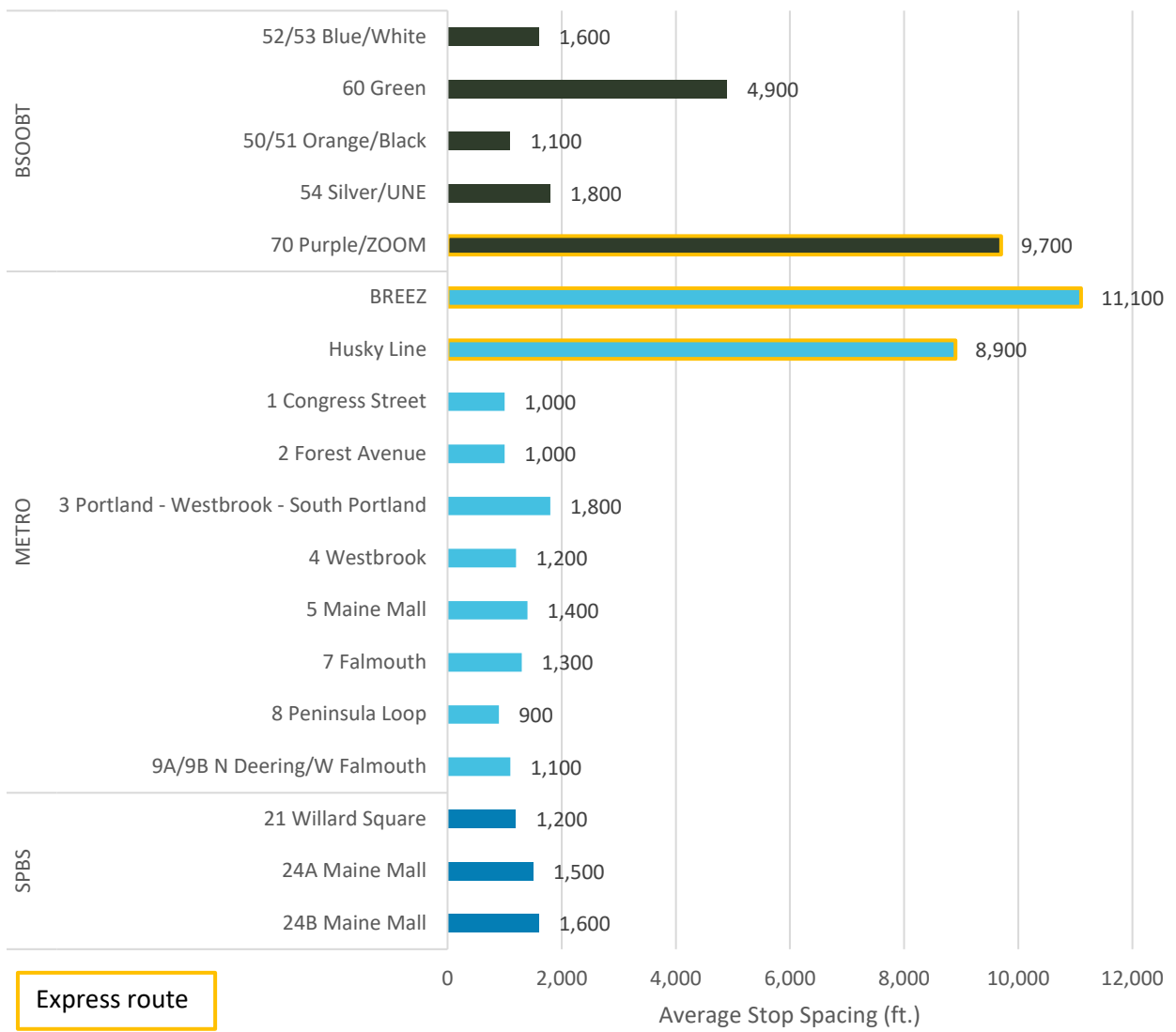




In general, the distance between fixed-route bus stops in the Greater Portland region is between 1,000 and 2,000 feet (Figure 2-14), which is consistent with national best practice. METRO routes 1, 2, and 8 have stops spaced the most closely together, and the METRO Route 3, BSOOB Transit Route 52/53, and SPBS Route 24B have stops spaced the furthest apart. The BSOOB Transit routes 54 and 60 have relatively distant stop spacing but operate on highways for some of their alignment.

Among express routes, the stop spacing varies between 8,900 feet and 11,100 feet (approximately every two miles). Express route stop spacing is largely dependent on the alignment of and key destinations on the corridor served.

Figure 2-14 Average Distance between Fixed-Route Stops by Agency



Source: Agency GTFS.



Stop quality in the Greater Portland region varies dramatically (see images in Figure 2-15). Some stops include shelters, benches, and trash barrels, while others are unmarked or have signs on the wrong side of the road.

Figure 2-15 Bus Stops in the Greater Portland Region



Left to right: A bus stop in Scarborough with homemade bench, damaged stop pole, and trash; a bus stop in downtown Portland with shelter, trash barrel, formal bench, and transit information. Source: Nelson\Nygaard.

Shelters are one of the most important stop amenities for passenger comfort, especially in New England, where rain and snow are common. For some riders, shelter presence is one of the factors that leads them to choose transit over other travel modes. There is currently no database of which stops in the Greater Portland region have shelters.

A regional transit stop database, with fields indicating which amenities are available at each stop, would be a valuable tool for the study agencies as they assess which stops should see amenity upgrades. Typically, stops with higher ridership are prioritized for amenities such as shelters, benches, and trash barrels, although equity factors can also be incorporated into stop amenity prioritization; for example, shelters and benches may be prioritized at stops near senior living facilities or low-income housing.



GPCOG has been working to improve transit stops in the Greater Portland Region since at least 2013, when the *Regional Bus Sign and Shelter Study Report and Implementation Guide*¹¹ was published. Today, GPCOG administers a Transit Stop Access Project.¹²

¹¹ GPCOG. October 2013. Regional Bus Sign and Shelter Study Report and Implementation Guide. <<https://me-gpcog.civicplus.com/DocumentCenter/View/346/2013-Regional-Bus-Shelter-Project-Report---Maps-PDF>>

¹² GPCOG. March 2022. Transit Stop Access Project. <<https://www.gpcog.org/175/Transit-Stop-Access-Project>>



3 RIDERSHIP

INTRODUCTION AND DATA SOURCES

This chapter describes ridership for the study agencies. The data used are collected from a variety of sources and analyzed together. Ridership data in the route profiles are—when available—from before the COVID-19 pandemic. In most cases, these data are from October 2019, as October is considered a ‘typical’ transit ridership month. Pre-pandemic ridership data are used under the assumption that as the COVID-19 pandemic fades, ridership will return to pre-pandemic levels, and any recommendations regarding transit service in the Greater Portland region should be made to accommodate those higher, pre-pandemic levels of transit use.

Figure 3-1 Ridership Data Sources Summary Table

Agency	Ridership Source	Ridership Period
BSOOB Transit	Driver tallies	October 2019
CBL	Ridership database	October 2019
METRO	Automatic passenger counter (APC) and farebox data	October 2019
NNEPRA	Ridership database	October 2019
RTP	Driver tallies	March 2021
SPBS	Ridecheck	Spring 2017
YCCAC	Driver tallies	March 2021

Detailed SPBS ridership data were not available from October 2019 but were available from a spring 2017 ridecheck, so spring 2017 data were used. The YCCAC Southern Maine Connector did not operate prior to the pandemic, so March 2021 ridership data were used. Pre-pandemic data were not available from RTP, so March 2021 ridership data were used.

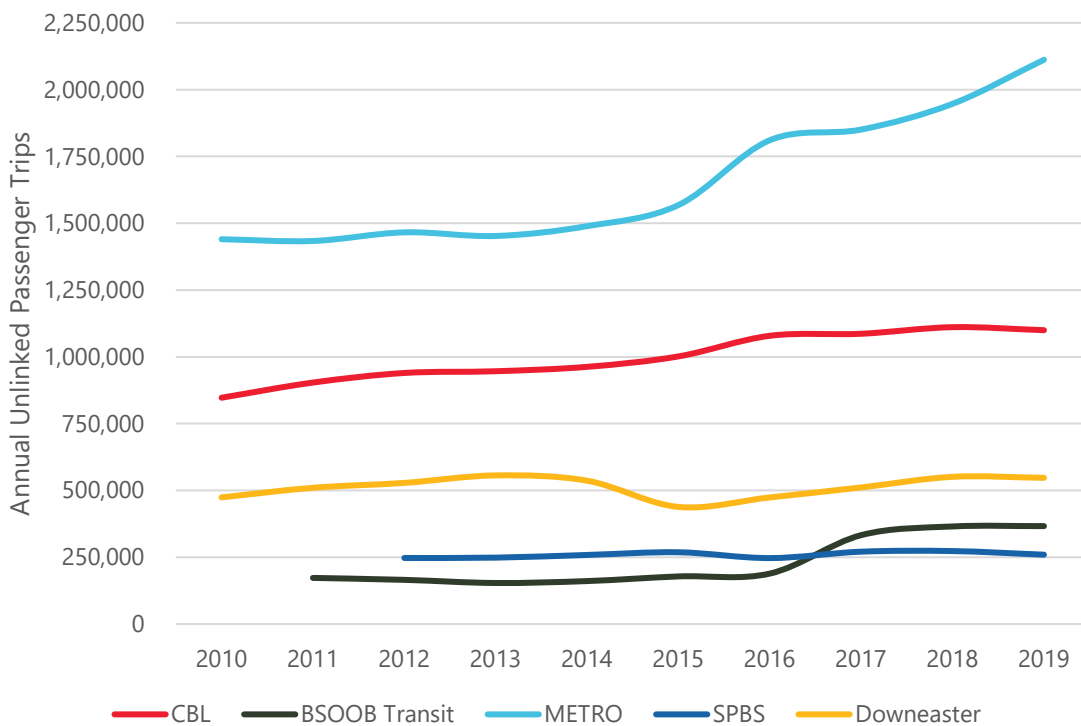


RIDERSHIP

How many people ride a transit service is the most fundamental measure of the utility it provides the community.¹³ In the Greater Portland region, about 11,000 passenger trips on public fixed-route transit occurred on an average August 2021 day, down from approximately 16,500 in August 2019, before the pandemic. This section discusses ridership on fixed-route and demand-response services separately.

METRO has the highest ridership of regional transit operators (approximately 2.1 million annual pre-pandemic passenger trips), followed by CBL and the Downeaster (Figure 3-2). BSOOB Transit and SPBS have historically carried similar numbers of passengers, but BSOOB Transit ridership has increased considerably since 2016 (to about 360,000 annual pre-pandemic passenger trips), and now exceeds SPBS ridership. All the study agencies have experienced ridership growth over the past decade, with METRO and BSOOB Transit experiencing the greatest rate of growth.

Figure 3-2 Annual Ridership by Fixed-Route Service, 2010-2019



Data source: National Transit Database

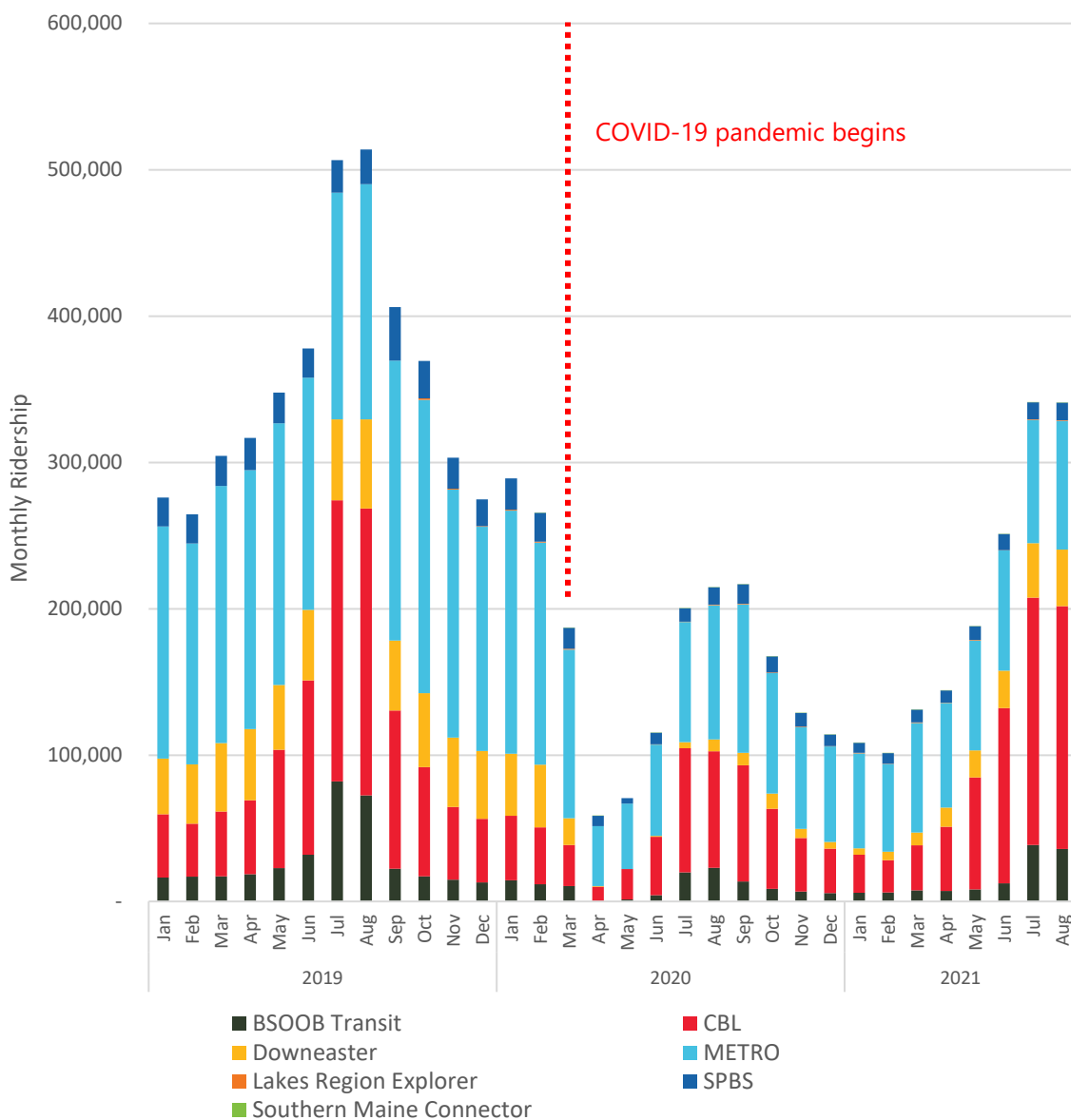
¹³ Casco Bay Lines, as a lifeline service, considers service provision (i.e., the existence of any service at all) the most fundamental measure of its community utility, and ridership a secondary measure.



COVID-19 Ridership Impacts

The COVID-19 pandemic dramatically reduced transit ridership in the Greater Portland region. As the pandemic took hold in Southern Maine in March 2020, ridership for all transit agencies dropped precipitously (Figure 3-3). Although ridership has begun to recover for all providers, it remained 34% lower than 2019 levels in August of 2021, which has historically been one of the region’s highest-ridership months. Over this same period, ridership on local bus services has not recovered as much as ridership on Downeaster and CBL ferry service.

Figure 3-3 Monthly Transit Ridership in Greater Portland by Agency, January 2019 through August 2021





Fixed-Route Ridership

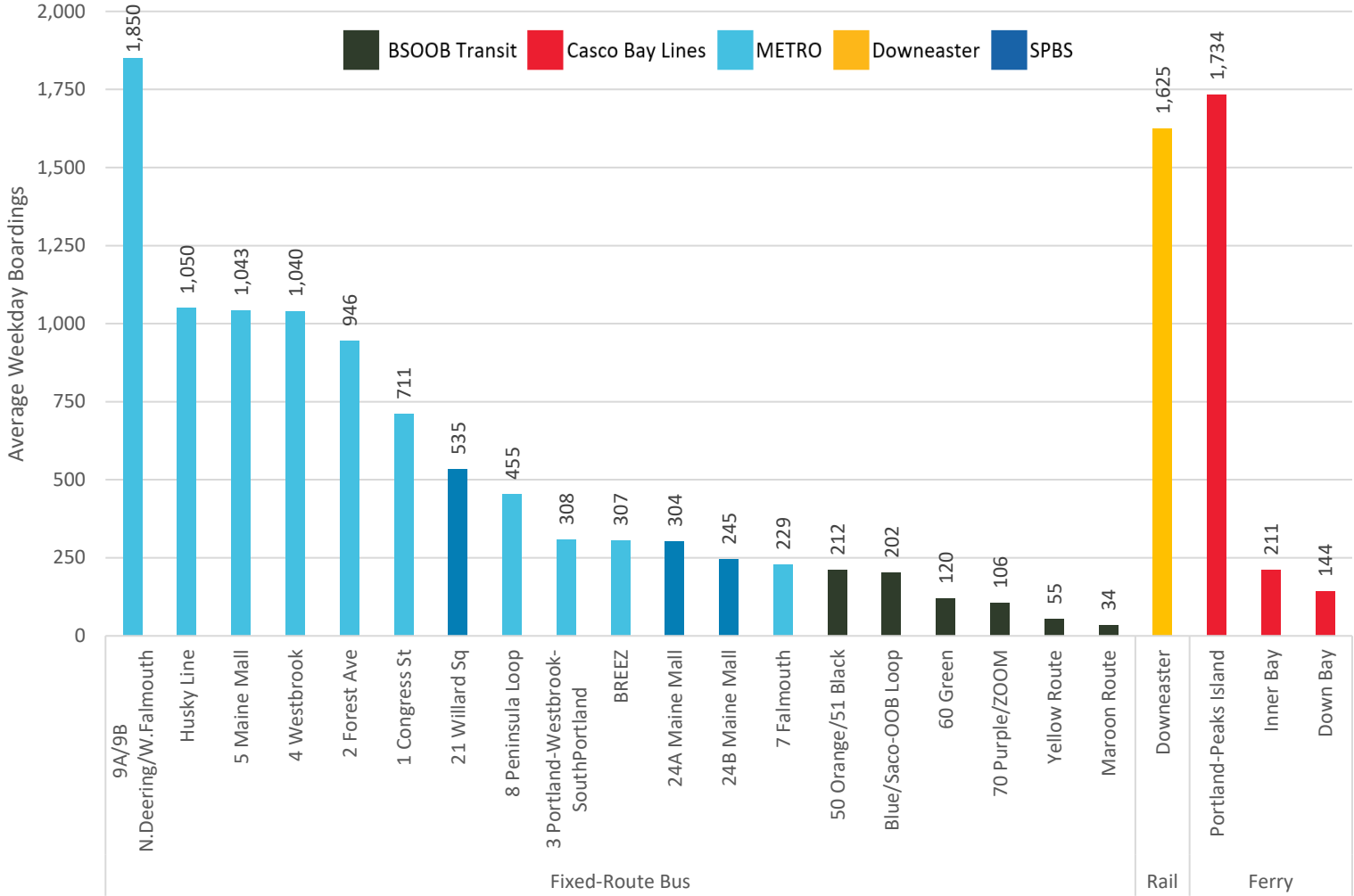
The highest-ridership transit routes in the Greater Portland region are the METRO Route 9A/9B, Portland-Peaks Island ferry, and the Downeaster (Figure 3-4). Among completely fixed bus routes (i.e., not deviated), METRO operates the highest-ridership routes, which are routes 9A/9B, Husky Line, 5, and 4; these routes mostly operate on direct alignments and serve several key destinations. The lowest-ridership fixed routes¹⁴ are long-distance express and local routes (the BSOOB Transit routes 60 and 70) and other BSOOB Transit routes. These routes are generally less direct and frequent than higher-ridership routes. A considerable portion of METRO's ridership comes from university and high school students.

The RTP Lakes Region Explorer and YCCAC Southern Maine Connector are both deviated fixed routes that support fewer than 15 passenger trips each day, as of March 2021 (the Southern Maine Connector did not operate pre-pandemic).

¹⁴ The BSOOB Transit Yellow, Maroon, and Blue/Saco-OOB Loop have been discontinued but are useful estimates of demand on the current routes 52/53 and 54, as the current, numbered routes include segments previously covered by the color-named routes. The Yellow route was incorporated into the current Route 54, and the Maroon and Blue/Saco-OOB Loop were incorporated into the current Route 52/53.



Figure 3-4 Fixed-Route Weekday Boardings by Route, October 2019



Notes: Downeaster ridership is shown as average daily, not average weekday, due to data limitations. Pre-pandemic ridership data for the Lakes Region Explorer are not available. Post-pandemic, the route averages 13 weekday boardings.

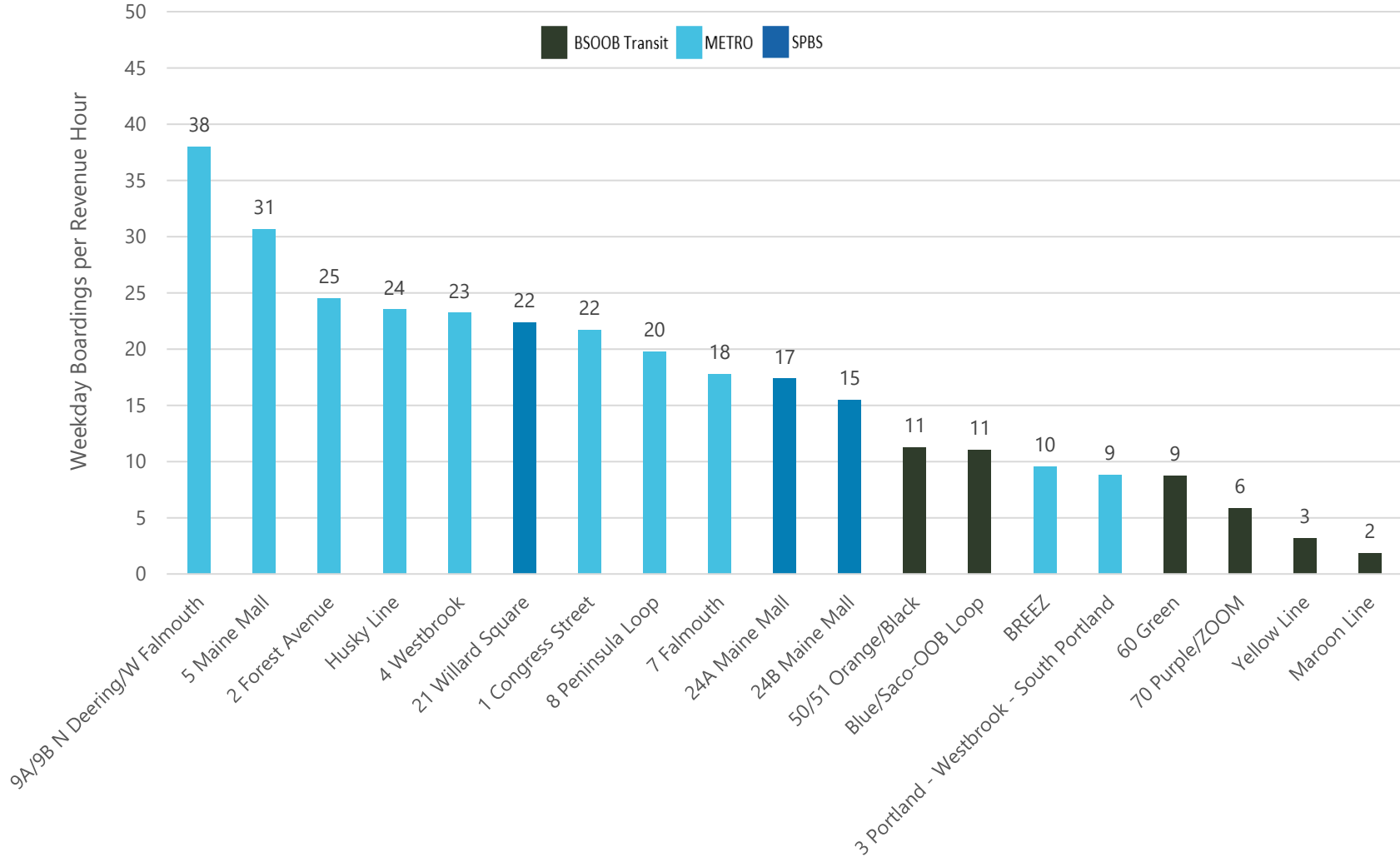


Bus Productivity

Productivity is a measure of how efficiently a transit route uses its resources to carry passengers. Boardings per revenue hour is a common measure of productivity for fixed-route bus, where a higher number of boardings per revenue hour indicates more productive, efficient service. The amount of service provided is often correlated closely and positively with ridership, so routes with the lowest and highest ridership are similar to those with the lowest and highest productivity (Figure 3-5). Routes with the highest productivity are the METRO routes 9A/9B, 5, and 2, which are mostly direct and serve key destinations. Local routes with the lowest productivity are METRO Routes 3 and BSOOB Transit Route 60, which do not serve as many key destinations and/or are infrequent and indirect. Several other routes have lower productivity (for example, the METRO BREEZ) but they are designed as intercity express services and so are often not designed with the same productivity metrics in mind. Some of the routes shown in Figure 3-5 are no longer operated, such as the Yellow Line and Maroon Line, which have been consolidated into new BSOOB Transit service.



Figure 3-5 Fixed Bus Route Weekday Revenue Hour-Level Productivity by Route, October 2019

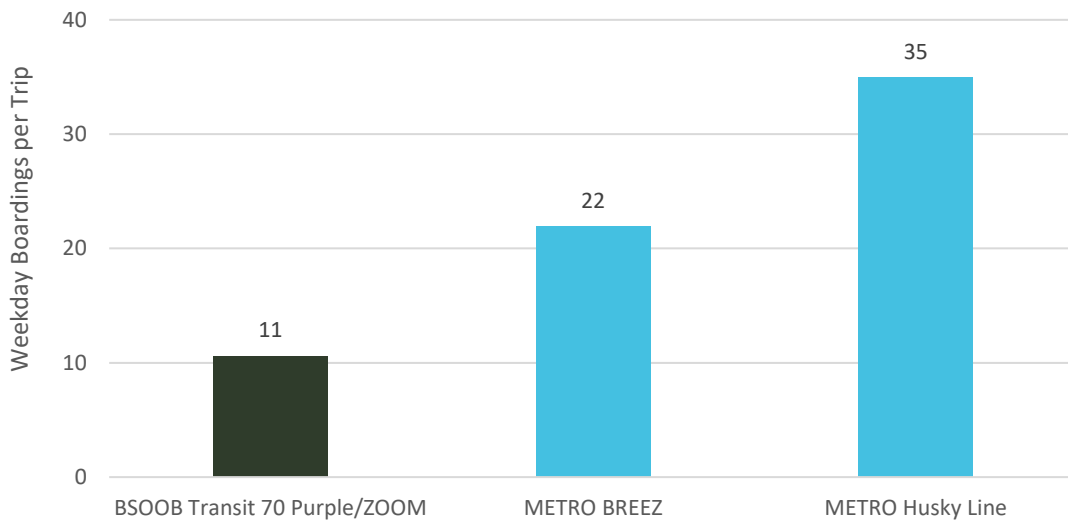




Because several transit routes in the Greater Portland region are express in nature, their productivity may not be best measured in terms of boardings per hour, but instead in terms of boardings per trip. This measure considers that these routes are meant to carry passengers over longer distances and not intended to be as productive, on a per-revenue hour basis, as local routes.

Figure 3-6 shows three express bus routes' average weekday boardings per trip. The METRO Husky Line has the highest per-trip productivity of express bus routes, and BSOOB Transit Route 70 has the fewest, at approximately 11 boardings per trip.

Figure 3-6 Fixed-Route Weekday Trip-Level Productivity by Express/Regional Route, October 2019



Notes: Pre-pandemic ridership data for the Lakes Region Explorer is not available. Post-pandemic, the route averages 4.2 weekday boardings per trip.

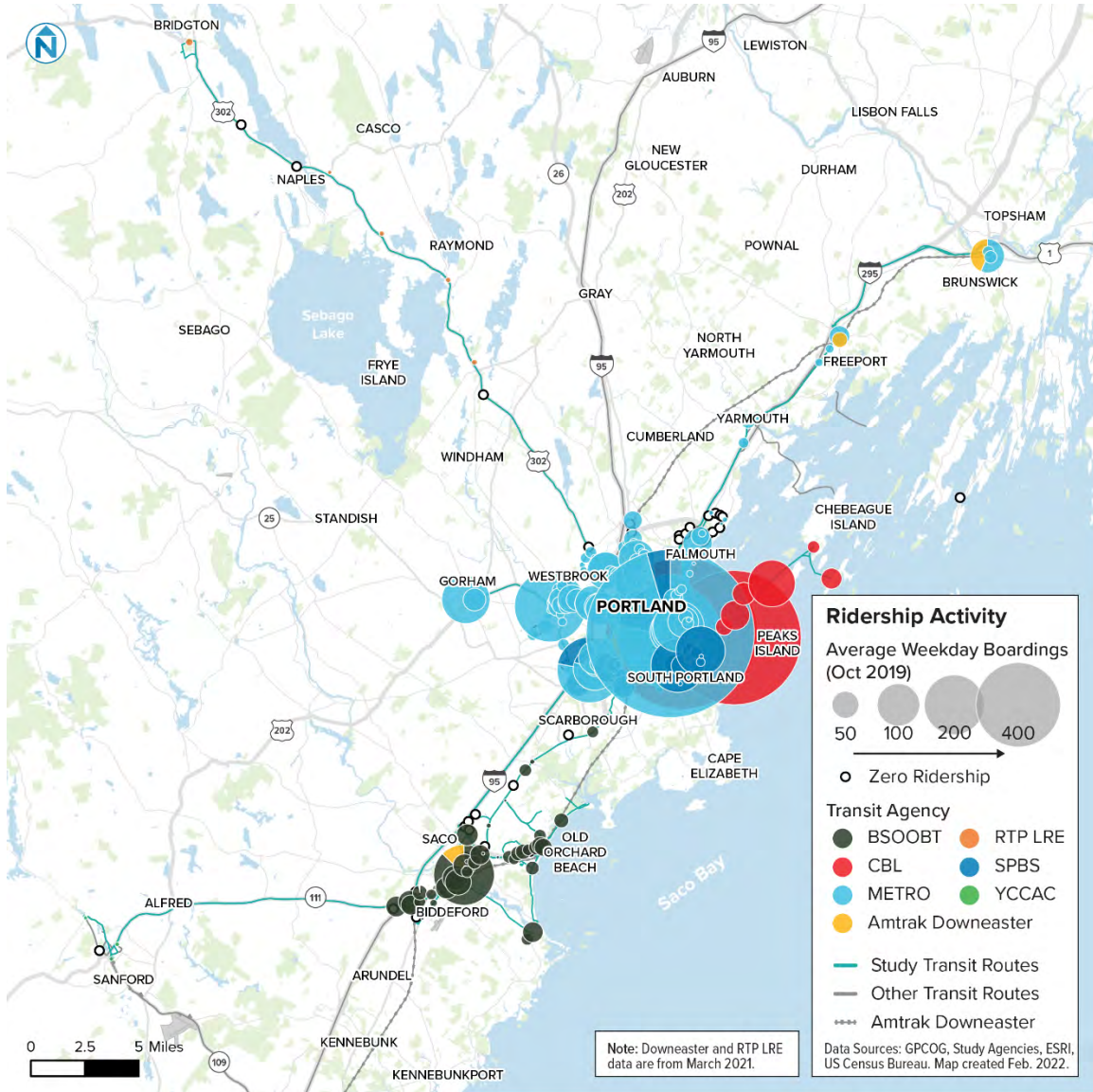
Non-Bus Productivity

Because ferry and rail service are fundamentally different from fixed-route bus service, it is not always appropriate to directly compare ferry and rail productivity to bus productivity. That being said, it is important to note that rail and passenger ferry productivity is typically high: in October 2019, the Downeaster carried approximately 325 passengers per trip and 48 passengers per train revenue hour. In the same period, CBL carried 60 passengers per revenue hour.



Figure 3-7 through Figure 3-10 show average weekday ridership at the stop level in the Greater Portland region. Most of this ridership occurs in the Portland and Biddeford-Saco urban areas, though additional ridership is also generated in Gorham, at the University of New England (UNE) campus, in Freeport, and in Brunswick.

Figure 3-7 Average Weekday Fixed-Route Boardings by Stop, Greater Portland Region

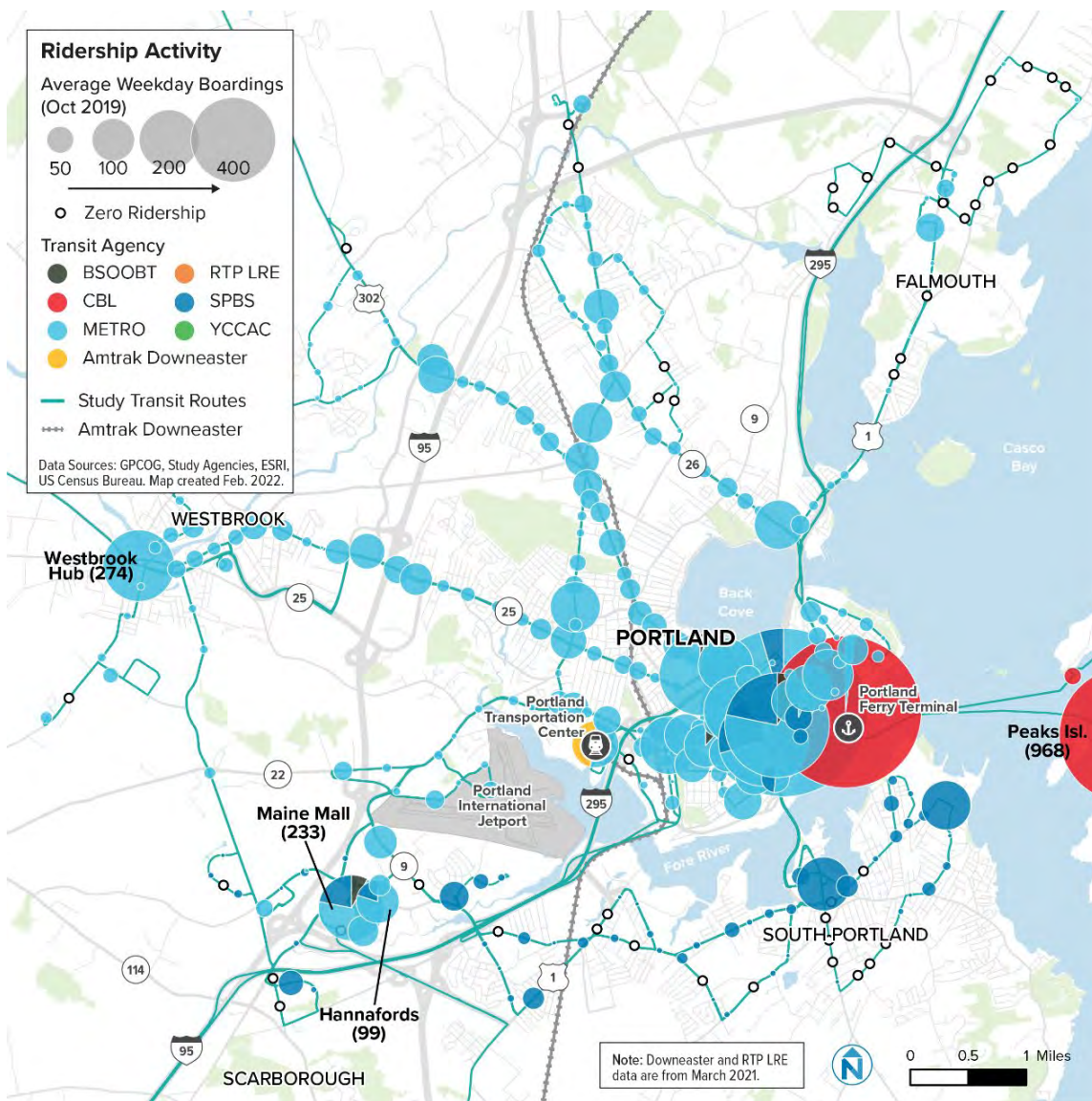


Note: Downeaster and RTP LRE data in this map are from March 2021, due to data limitations. BSOBT Transit data shown here are segment level and aggregated up to stops that represent the segment near the stop.



In the Greater Portland area, stop-level ridership patterns show considerable ridership along several corridors, including Forest Avenue, Stevens Avenue, Washington Avenue, Brighton Avenue/Main Street, Broadway, and near the Maine Mall. Both Forest Avenue (Route 302) and Brighton Avenue/Main Street (Route 25) were identified as potential rapid transit corridors in Transit Tomorrow, as was the corridor from downtown Portland, over the Casco Bay Bridge, and on Broadway to SMCC in South Portland. Ridership in the Greater Portland region is by far the highest on the Portland Peninsula. Several stops outside the Portland Peninsula with high ridership include Southern Maine Community College (SMCC), the Mill Creek Transit Hub, the Maine Mall, and the Westbrook Hub.

Figure 3-8 Average Weekday Fixed-Route Boardings by Stop, Greater Portland Area



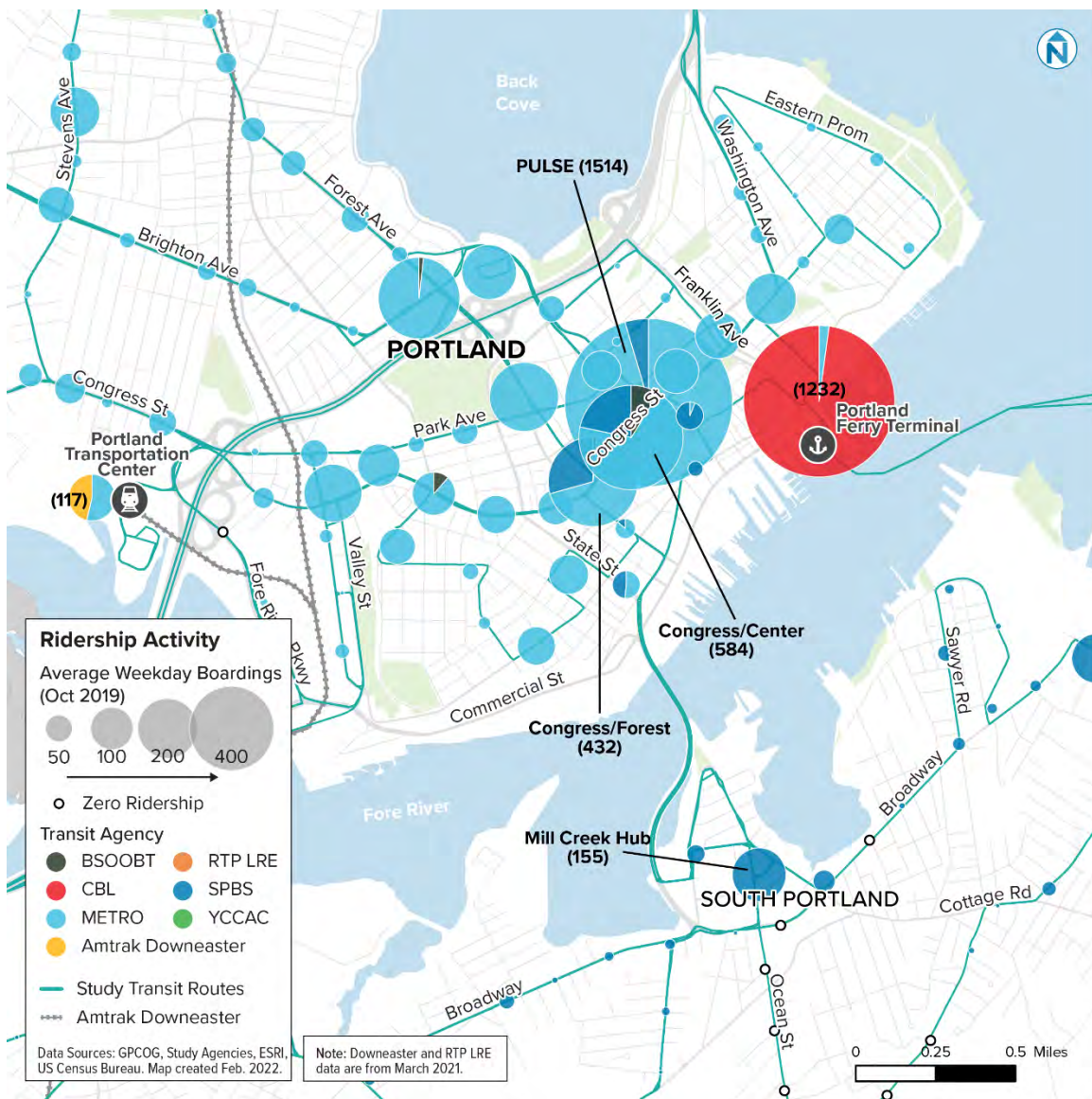
Note: Downeaster and RTP LRE data in this map are from March 2021, due to data limitations. BSOBT Transit data shown here are segment level and aggregated up to stops that represent the segment near the stop.



On the Portland Peninsula, bus ridership is highest along Congress Street and especially near the PULSE, where riders using BSOOB Transit, METRO, the RTP Lakes Region Explorer, and SPBS transfer buses. There is also considerable ridership at several key destinations on the Peninsula, such as Maine Medical Center, USM, and near Deering Oaks Park.

Ridership at the Casco Bay Ferry Terminal is considerable, although it is almost all ferry riders; METRO Route 8 has about 20 average weekday boardings at the ferry terminal stop. Most of CBL's non-Casco Bay Ferry Terminal ridership occurs at Peaks Island.

Figure 3-9 Average Weekday Fixed-Route Boardings by Stop, Portland Peninsula



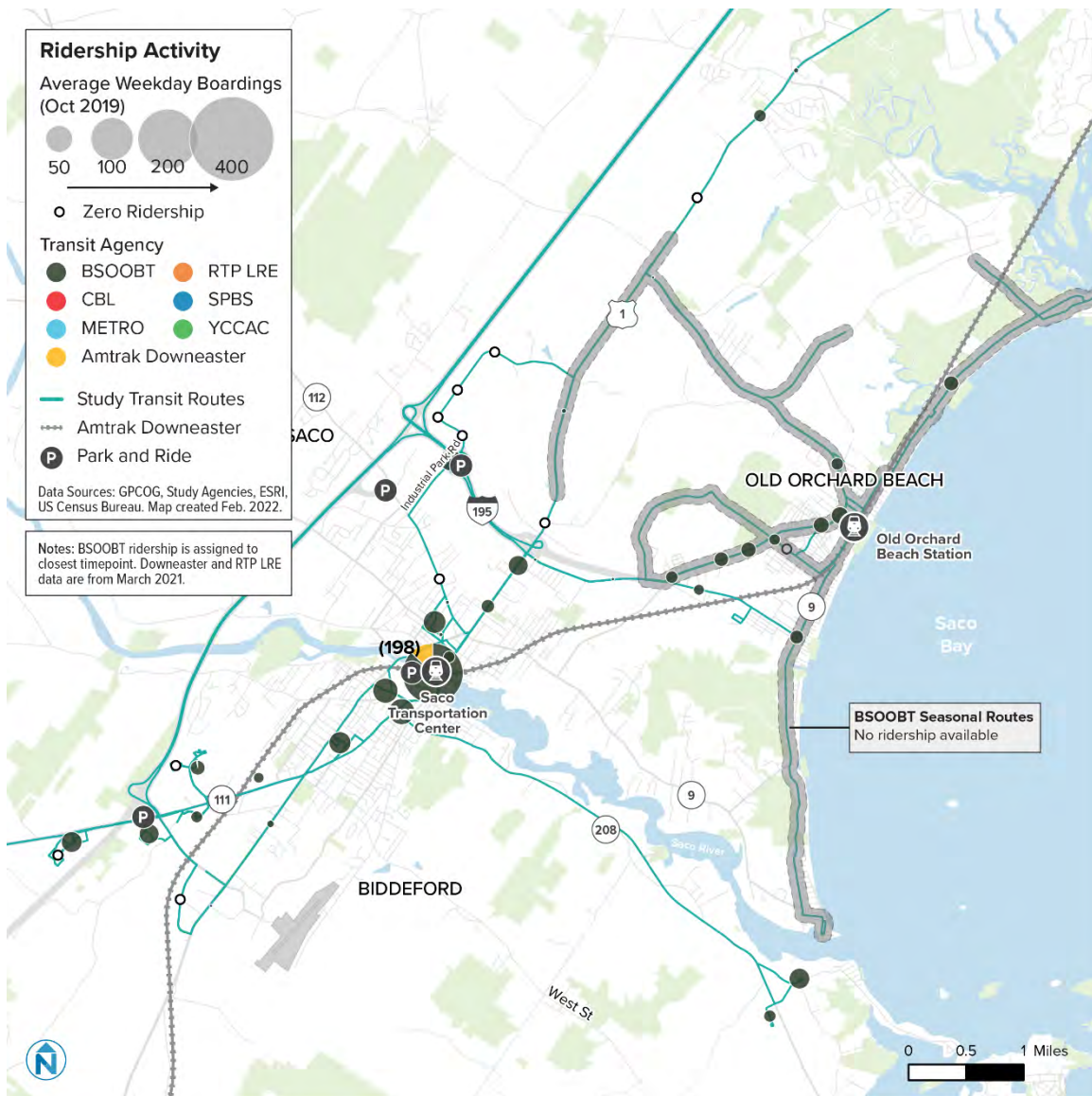
Note: Downeaster and RTP LRE data in this map are from March 2021, due to data limitations. BSOOB Transit data shown here are segment level and aggregated up to stops that represent the segment near the stop.



In the Biddeford-Saco-Old Orchard Beach area, ridership is highest along the Alfred Street (Route 111) corridor, in downtown Biddeford, and at UNE. There is some ridership along Route 5 between Old Orchard Beach and Saco, and very little ridership in the Biddeford Industrial Park Road area.

Ridership on Alfred Street (Route 111) is highest near the Biddeford Crossing shopping center, Walmart, and Hannaford. The highest-ridership area in Saco (excluding the Saco Transportation Center) is near the Saco Valley Shopping Center.

Figure 3-10 Average Weekday Fixed-Route Boardings by Segment, Biddeford-Saco-Old Orchard Beach



Note: Downeaster data in this map are from March 2021, due to data limitations. BSOBT Transit data shown here are segment level and aggregated up to stops that represent the segment near the stop.

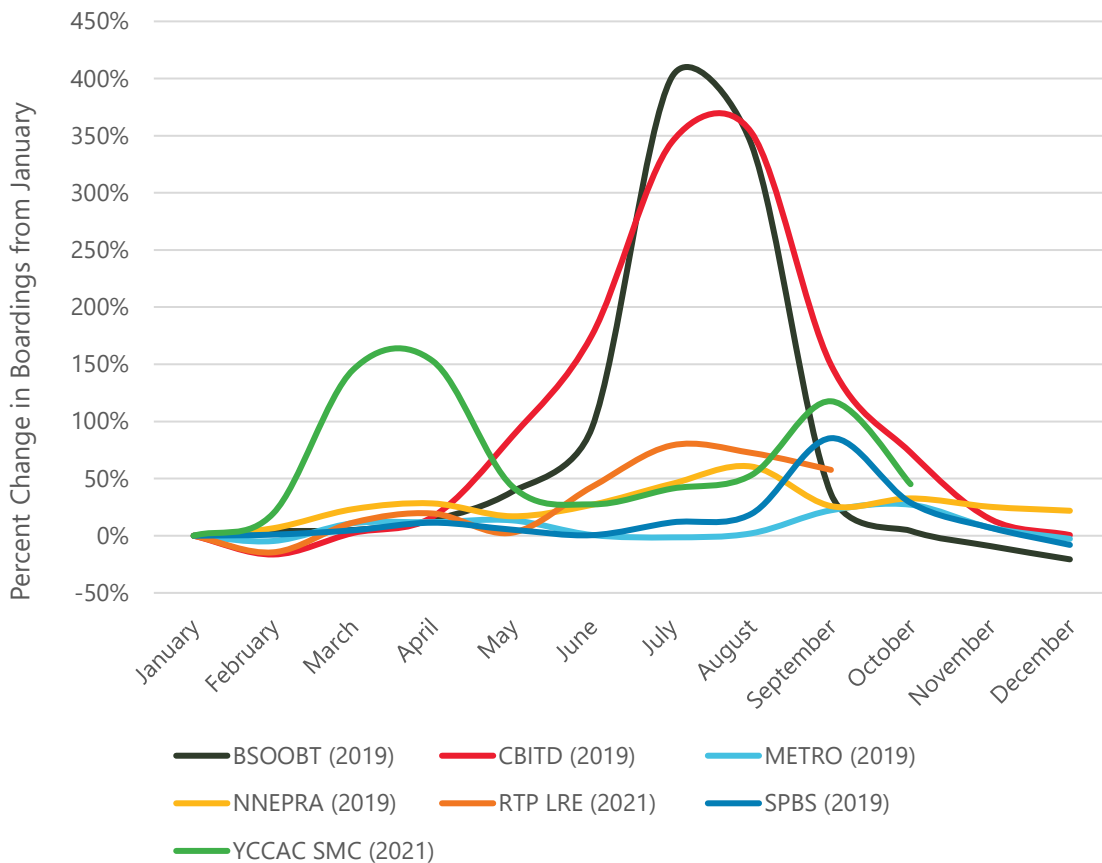


Seasonal Ridership Variation

Millions of tourists visit Maine each year, with most of these visits occurring in the warmer summer months. This influx of people changes transit service demand and ridership patterns to varying degrees. Compared to January, BSOOB Transit sees approximately 400% more ridership in the summer, and CBL over 300% more riders (Figure 3-11). The RTP Lakes Region Explorer and Downeaster also see significant increases in summer ridership.

The YCCAC Southern Maine Connector and SPBS see shoulder-season increases in ridership. SPBS typically sees ridership peak in September, which may be caused by a combination of tourist activity and SMCC returning to session. METRO ridership is among the most stable of the study agencies.

Figure 3-11 Seasonal Variation in Ridership by Agency, Indexed to January



Note: 2019 and 2021 data are used to avoid using 2020 data, which was skewed by the COVID-19 pandemic.

Much of this increase in ridership is borne by additional service. BSOOB Transit and CBL, especially, increase the amount of service offered in the summers significantly. BSOOB Transit operates five summer-only trolley routes in the Old Orchard Beach area.



Demand-Response Ridership

Both RTP and YCCAC provide demand-response service in the Greater Portland region. RTP carries approximately 58 riders each day on its ADA paratransit and general-public demand-response service, and YCCAC carries approximately 52 people each day on its WAVE service.¹⁵ In general, RTP and YCCAC demand-response trips are made to shopping and medical destinations. YCCAC's WAVE service is also used to access employment, particularly near the Sanford Seacoast Regional Airport.

¹⁵ This includes RTP trips operated under 'funding source' codes ADP, ADS, and GPF from 10/1/20 through 2/28/21. Data shown here are for FY21 for WAVE.



4 PASSENGER FACILITIES

Passenger facilities in the Greater Portland region range from multimodal transit centers to simple bus stops, and range in size, quality, and intensity of use. This chapter of the Existing Service Report describes these facilities and the role they play in the regional transit network.

FACILITIES

The study agencies own, operate, and serve six key transit facilities in four municipalities in the Greater Portland region. These facilities are described below and mapped in Figure 4-1 and Figure 4-2.

Portland Transportation Center

The Portland Transportation Center (PTC) is a large intermodal facility with short- and long-term parking and passenger amenities that meet industry standards. The facility is primarily served by Concord Coach Lines and the Downeaster, but transfers are possible to the METRO BREEZ and Route 1. There is no BSOOB Transit or SPBS service at the PTC, and non-Concord Coach intercity buses also do not stop at the PTC. The facility is isolated from most other destinations in Portland but plans to relocate the Downeaster stop onto the mainline, east of I-295, are under consideration.



Image source: Nearmap



Saco Transportation Center

The Saco Transportation Center is a large facility with short- and long-term parking and good passenger amenities. The facility is served by the Downeaster, BSOOB Transit, and the YCCAC Southern Maine Connector. Sight lines are such that passengers can wait indoors, with access to amenities. The facility is located on Factory Island with pedestrian access to downtowns of both communities.



PULSE

The Portland METRO PULSE (also called Downtown Transportation Center) is served directly by METRO and the RTP Lakes Region Explorer, and by nearby BSOOB Transit and SPBS stops. This facility has some indoor passenger amenities and is in downtown Portland, with good pedestrian access to several major destinations. Intercity bus service does not serve the PULSE.



Casco Bay Ferry Terminal

The Casco Bay Ferry Terminal is the mainland terminal for all CBL ferries. This newly renovated facility is served by the METRO Route 8, which allows CBL riders to connect with BSOOB Transit, RTP's Lakes Region Explorer, and SPBS at the PULSE. There is no one-seat ride from the Casco Bay Ferry Terminal to Downeaster or intercity bus service, and the connection to the PULSE via the METRO Route 8 is fairly circuitous.





Mill Creek Transit Hub

The Mill Creek Transit Hub, which serves as a transfer point for SPBS routes, allows riders to wait inside for buses but lacks most amenities, including heating.¹⁶ The facility is in South Portland's Knightville neighborhood, near two malls (Shaw's Millcreek Plaza and Mill Creek Shopping Center) that include key transit destinations: a Shaw's and Hannaford grocery store.



Intermodal Downeaster Stations

Several Downeaster stations are served by local bus connections. The METRO BREEZ stops a few blocks from Freeport Station and directly at Brunswick Station, and BSOOB Transit service is available at the Old Orchard Beach Station (Downeaster trains only stop at this station in summer) and Saco Transportation Center. Brunswick Link local bus and BlueLine Commuter intercity bus serves Brunswick Station.

Other Transfer Points

Key transfer points among transit services also exist at METRO's Westbrook Hub and at the Maine Mall.

The Westbrook Hub serves as a transfer point for METRO routes 3, 4, and the Husky Line. This hub consists of a shelter for north- and eastbound trips, and an unsheltered stop for south- and westbound trips.

The Maine Mall is a transfer point among BSOOB Transit, METRO, and SPBS services. These transfers occur at the eastern entrance to the mall. There is no dedicated transit infrastructure at this location, but riders can wait under an awning and/or on one of several benches.

¹⁶ Plans are underway to heat the Mill Creek Transit Hub.



Figure 4-1 Map of Key Passenger Facilities in Greater Portland Area

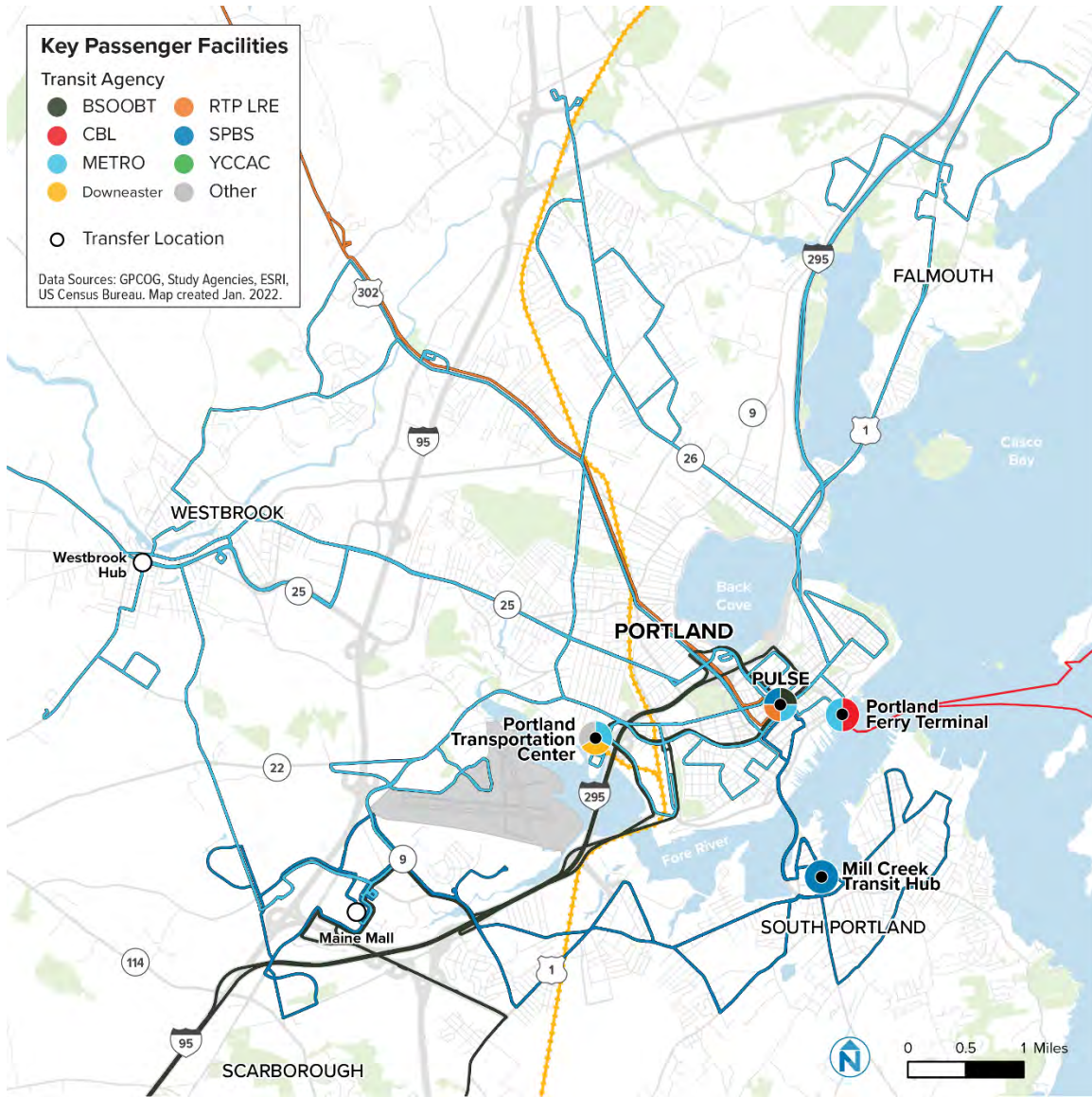
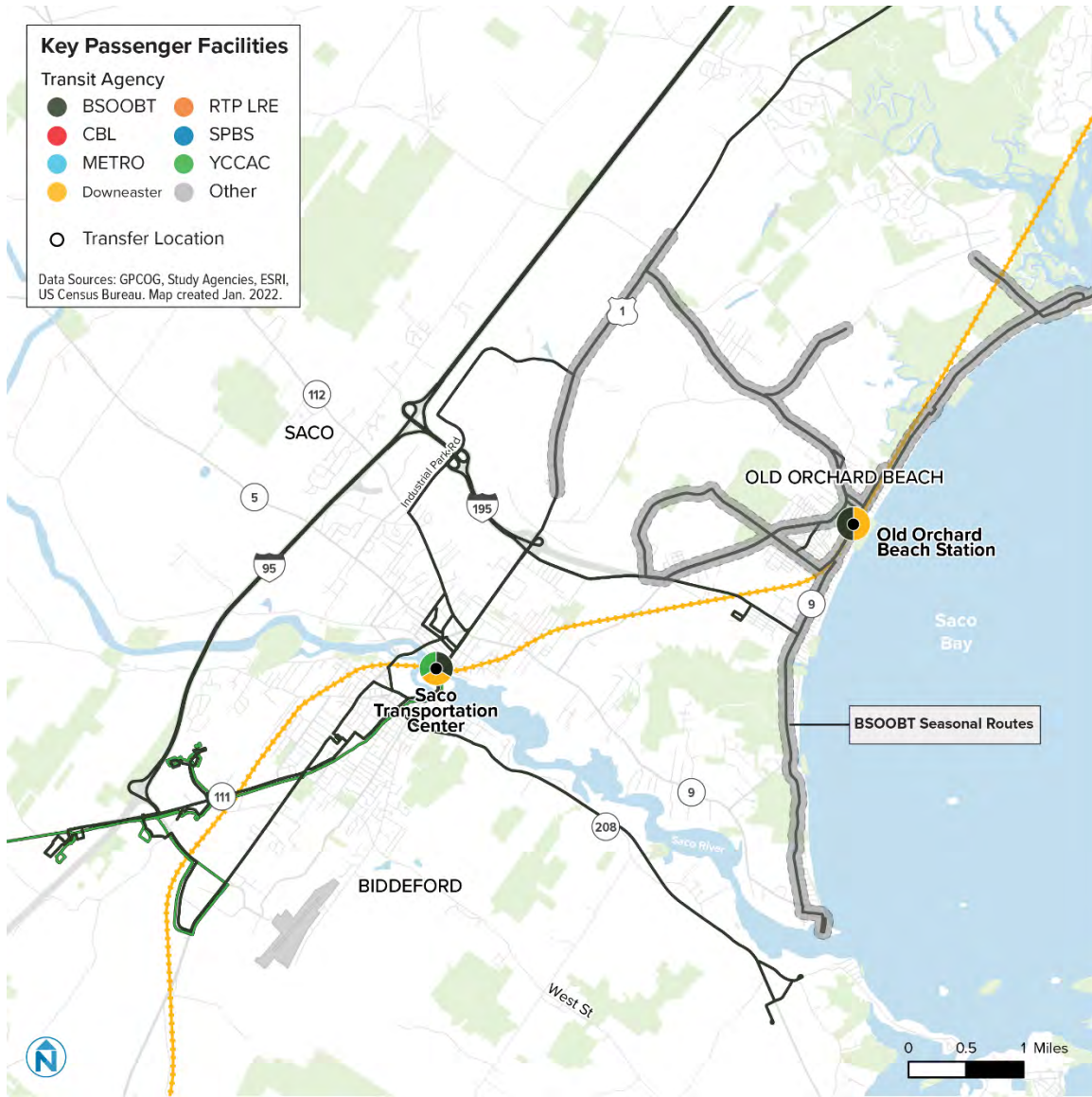




Figure 4-2 Map of Key Passenger Facility in Biddeford-Saco-Old Orchard Beach





APPENDIX C



Transit Together Study

State of Regional Transit Part 3: Regional Service Delivery and Coordination

November 2022

GPCOG
GREATER PORTLAND
COUNCIL OF GOVERNMENTS

N NELSON
NYGAARD

A S G PLANNING

Cover image source: Greater Portland Council of Governments



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1 INTRODUCTION

BACKGROUND

The Portland Area Comprehensive Transportation System (PACTS) is the metropolitan planning organization (MPO) for Maine's Greater Portland urbanized area. PACTS coordinates transportation-planning and -investment decisions with the State of Maine, 18 member municipalities, and regional transportation providers. This includes seven transit agencies that receive federal transit funding.

As part of the federally mandated transportation planning process, PACTS and the Greater Portland Council of Governments (GPCOG) regularly update regional plans and set priorities for transportation investments in the Greater Portland region. Because fiscal resources are limited, the region makes difficult choices about how and where to make investments to best improve and enhance public transit.

Strategies to make service more seamless for transit riders and improve the efficiency of providing that service have been discussed since the 1990s. When adopting the region's most recent long-range transit plan, *Transit Tomorrow*, the PACTS Policy Board continued to stress the need for collaboration, and authorized funding for a study, *Transit Together*, to:

"...make the best use of limited resources, improve efficiency, and create a cohesive and unified system for all users of public transportation...."

THE TRANSIT TOGETHER STUDY

Transit Tomorrow, the 30-year strategic transit plan for the region, specifically recommended advancing a separate *Transit Together* study to advance the regional vision, improve transit for riders, and create a more seamless regional system.

Specific regional goals include:

- Making transit **easier** for riders
- Creating **frequent** connections
- Investing in **rapid** transit
- Creating **transit-friendly places**



This plan will identify opportunities for increased coordination and integration in the region's transit network. This *Transit Together* study is now looking to modify the transit network to be more easily understood and used by riders, and to increase coordination and integration to help improve region-wide mobility. This Regional Service Delivery and Coordination report is one of three parts of the initial study deliverable: the *State of Regional Transit* report.

- **Part 1 – Market Analysis:** This document assesses transit demand in the Greater Portland region.
- **Part 2 – Existing Service:** This document describes the current condition of the regional transit system.
- **Part 3 – Regional Service Delivery and Coordination:** This document describes the individual transit agencies in the Greater Portland region, their past and ongoing coordination efforts, and common challenges and opportunities.

DOCUMENT OVERVIEW

This document reviews of the seven public transportation providers operating in the Greater Portland region, with a focus on regional operational characteristics and interfaces. It also summarizes the regional planning and funding framework that helps guide and support regional transit operations, summarizes past coordination efforts, and highlights current regional goals for greater coordination. Overall, it is focused on the 'non-service'-related topics that in some way have an impact on transit riders.

This information is important context for coordination recommendations that will be made later in the Transit Together study. The report has three primary content chapters:

- **Transit Agency Profiles:** Describes the varying governance structure and mission of each agency.
- **Regional Planning and Funding Framework:** Describes the regional transit-planning process and PACTS' role in allocating federal transit funds. One of these roles is establishing a regional vision and strategies for improving transit; these strategies include a goal for increased regional collaboration.
- **Regional Collaboration:** Reviews the history of coordination among regional transit providers and highlights opportunities for advancing this regional goal.



KEY FINDINGS

Administration and Governance

- The Greater Portland region has seven different public transportation providers, each operating in different geographic areas with different overall missions. However, there are areas where their customer bases and services intersect or overlap.
- Local contributions to support transit service vary greatly. Each community is assessed differently, has a different ability to pay, and uses different sources of funding.

Fleet Planning

- Given the high cost of vehicles, fleet investments can be significant, particularly if several agencies have large replacement needs in any one given year.
- Regional fleet planning could help 'smooth out' the impact of vehicle replacement costs in any given year. For example:
 - Casco Bay Lines (CBL) has the smallest fleet of revenue vehicles (five ferries) but with individual ship replacement costs as high as \$20 million, ferry replacement represents a significant percentage of available capital funds.
 - The BSOOB Transit and METRO fleets comprise the bulk of the region's vehicle replacement needs, and a large wave of vehicle replacement is expected in about 10 years.
- All current transit fleets are primarily diesel-fueled. Some agencies are beginning to deploy electric vehicles.
- Additional electrification studies (e.g., an ongoing Maine Department of Transportation study) and this study will inform how agencies could conduct more joint procurement/asset sharing.

Passenger Facilities and Bus Stops

- Except for the Saco Transportation Center, intermodal terminals lack strong transit connections. The Portland Transportation Center (PTC) is minimally served and does not have a direct connection to the Casco Bay Ferry Terminal. The ferry terminal is only served by METRO Route 8, which provides circuitous connections to the METRO PULSE; there are no direct



connections between the ferry terminal and the PTC, South Portland, or the Portland International Jetport.

- There is limited covered or sheltered outdoor waiting space at the METRO PULSE.
- There are several common stops where fixed-route transit providers meet, but schedules are not coordinated, few passenger amenities are offered, and operators use a confusing mix of transit-stop signage.

Marketing, Branding, and Customer Service

- Each of the seven individual agencies operates under a distinct brand. Marketing activities and customer service are also largely independent, except for occasional joint efforts (e.g., DiriGO) or other special events.
- Better coordinating branding, marketing, and customer service is one of several regional coordination actions agreed to by the boards of all seven agencies in 2007 and a subsequent *Regional Branding and Marketing Plan* was led by PACTS in 2013.
- The recommendations proposed a unified logo for the three fixed-route bus operators that was designed to work with existing logos. It would be used on signage and promotional materials to tie regional services together.
- The recommendations were never implemented due to concerns about eliminating individual brands. However, these recommendations are still relevant and would help make regional transit more seamless for the rider. They include:
 - Developing a unified logo and color scheme for the bus operators.
 - Developing a coordinated website in two phases: Phase 1 would build a splash webpage with links to individual providers; Phase 2 would build an integrated website, giving each agency access and the ability to make updates.
 - Coordinating customer service: one phone number for all three providers
- More recently, in response to the COVID-19 pandemic, GPCOG convened a Regional Transit Marketing Task Force to jointly direct a portion of federal Coronavirus Aid, Relief, and Economic Security (CARES) Act funding toward marketing and reattracting riders to the transit system. The group could potentially be re-established to conduct further regional marketing or to address other related topics such as signage, branding, and a central website with transit information.



Technology

- Some regional transit providers collaborate on efforts such as DiriGO. However, most efforts are still undertaken independently.
- Stronger collaboration and coordination in several areas could further the development of a seamless regional system, such as:
 - Adoption by all providers of schedule information via GTFS-RT (General Transit Feed Specification Realtime) for mapping websites and third-party travel apps.
 - DiriGO fare payment for all providers.

Fare Policies and Payment

- Base bus fare is largely consistent for local routes, but not for longer-distance regional routes. Other fare policies and discounts vary more widely across agencies.
- Advance ticketing availability also varies. DiriGO offers the most convenient fare-payment system that automatically makes certain discounts available, however the availability of fare sales off the Peninsula could be enhanced.
- Although both have broader missions and provide human services transportation, Regional Transportation Program and York County Community Action Corporation could be brought under the DiriGO umbrella. Casco Bay Lines has their own online reservation and ticketing system, but it may also be possible to provide scanners that could read DiriGO cards as passengers are boarding.

Regional Planning and Coordination

- Regional transportation and transit goals have been developed with broad public input and remained relatively consistent over the past 15 years. Overarching strategies to enhance regional transit include:
 - Promoting seamless transit connections across the region
 - Improving the frequency, travel time, and convenience of transit
 - Extending transit services and increasing the use of transit services
 - Prioritizing investments in key transit corridors
 - Embedding a regional focus into PACTS decision-making and investments
- There are limited financial resources to advance regional goals and public priorities for enhanced transit. Regional plans emphasize the need to capture



operational efficiencies or identify new revenues to support desired improvements.

- Although transit agency consolidation has been discussed since the 1990s as a way to be more efficient, when interviewed for this project each agency director expressed little appetite for consolidation. However, each explicitly recognized the benefits of recent coordination efforts, expressed a willingness to do more, and suggested potential opportunities. They indicated general support for regional priorities identified through the PACTS planning process, as well as the critical need to improve service and attract riders in the wake of COVID-19 and amid climate concerns.

Joint board meetings have periodically been hosted by GPCOG to reaffirm regional goals and seek support for interagency cooperation. At a 2020 meeting, attendees voiced support for better unifying the regional network to provide more seamless travel, and for investing in regional branding, priority corridors, and transit frequency. They expressed a willingness to meet more frequently to advance such goals.



2 TRANSIT AGENCY PROFILES

The seven public transit providers in the Greater Portland region include:

- Biddeford, Saco, Old Orchard Beach Transit (BSOOB Transit)
- Casco Bay Lines (CBL), formally known as Casco Bay Island Transit District (CBITD)
- Greater Portland Transit District (METRO)
- Northern New England Passenger Rail Authority (NNEPRA; operates Downeaster)
- Regional Transportation Program (RTP)
- South Portland Bus Service (SPBS)
- York County Community Action Program (YCCAC)

The sections below provide information on each agency's governance structure and other operational and administrative characteristics. These providers serve varying markets (see Figure 1) and operate a range of modes. More detail on the actual services provided by each agency can be found in Part 2 of the *State of Regional Transit* report.

GOVERNANCE STRUCTURE

Public transportation in Maine is primarily administered through three state statutes.¹ These statutes enable the seven regional transit providers.

Transit Districts

One or more municipalities may vote to form or join a transit district. METRO and BSOOB Transit are transit districts. Alternatively, a single municipality may vote to provide transit without the creation of a formal district. South Portland provides such a service.

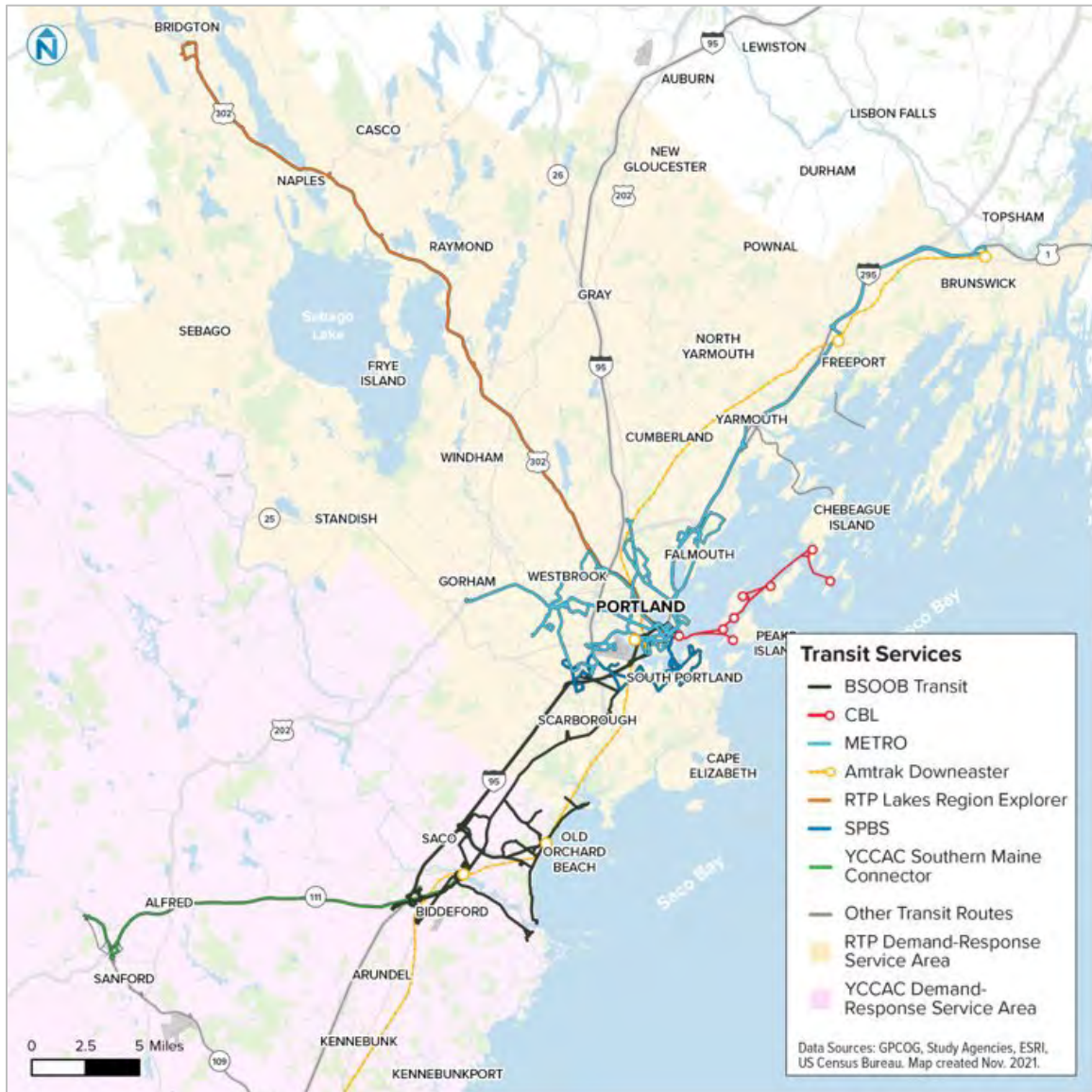
By statute, each municipality is entitled to appoint one representative to a transit district board of directors for each 10,000 inhabitants; METRO is specially enabled to use a

¹ Titles 23 (Transportation), 30-A (Municipalities and Counties) and 35-A (Public Utilities).



modified board structure. In the case of a municipal operator (like SPBS), local officials serve on a transportation oversight committee.

Figure 2-1 Map of Transit Service in the Greater Portland Region





Special Transit Districts and Providers

The State of Maine enables other types of districts and providers to operate or contract for transit service. In Greater Portland, these special entities include:

- **Regional Transportation Corporations:** Non-profit entities may provide public transportation services to one or more municipalities. The corporation must be approved by each community receiving service and certified by the Maine Department of Transportation (MaineDOT). RTP and YCCAC are regional transit corporations, each managed by autonomous boards of directors.
- **Casco Bay Island Transit District:** CBITD is a quasi-public entity administered and regulated by MaineDOT and the Public Utilities Commission. It was established to provide affordable year-round passenger, freight, and vehicle transportation to the islands as a critical service for these communities.

CBITD is the only public transit agency authorized to transport passengers to and from Peaks, Great Diamond, Little Diamond, Long, Chebeague, and Cliff islands. Representation on its Board of Directors is by statute.
- **Northern New England Passenger Rail Authority:** NNEPRA is a quasi-public entity established to initiate, establish, and promote regularly scheduled passenger rail service within Maine or to points outside the state. Representation on its board of directors is by statute.



Figure 2-2 Agency Governance Structures

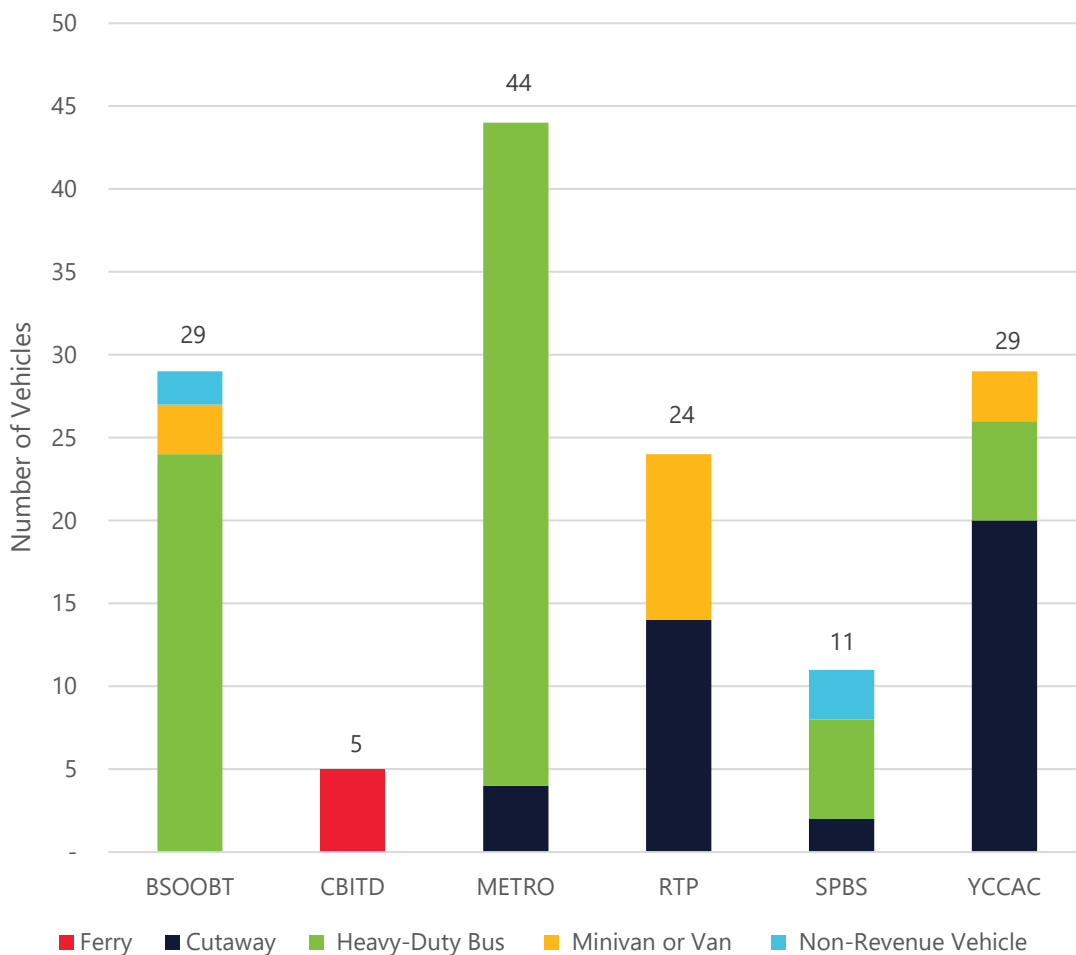
Provider	Primary Services Provided	Governance Structure	Board Structure/ Members
BSOOB Transit	<ul style="list-style-type: none"> ▪ Accessible fixed-route service in member communities ▪ Connections to Scarborough, South Portland, and Portland 	Transit district	<ul style="list-style-type: none"> ▪ 3 representatives from each member municipality
CBITD	<ul style="list-style-type: none"> ▪ Year-round scheduled passenger, freight, and auto ferry service between Portland and Casco Bay Islands 	Special transit district	<ul style="list-style-type: none"> ▪ Representatives from Peaks Island (3), other islands (5), other state residents (2), Portland (1), and MaineDOT (1)
METRO	<ul style="list-style-type: none"> ▪ Fixed-route bus service in member communities, Gorham, and South Portland. 	Transit district	<ul style="list-style-type: none"> ▪ Representatives from Portland (5), Westbrook (3), Falmouth (2), Yarmouth (1), Freeport (1), and Brunswick (1) ▪ Weighted votes: Portland 50%
NNEPRA	<ul style="list-style-type: none"> ▪ Supports and coordinates Amtrak Downeaster service 	Quasi-public entity	<ul style="list-style-type: none"> ▪ Five gubernatorial appointees and two ex-officio (MaineDOT and Maine Department of Economic and Community Development)
RTP	<ul style="list-style-type: none"> ▪ Deviated fixed-route bus service between Portland and Bridgton ▪ On-demand transportation for people in Cumberland County ▪ ADA paratransit for METRO and SPBS 	Regional transportation corporation	<ul style="list-style-type: none"> ▪ 8-member autonomous board
SPBS	<ul style="list-style-type: none"> ▪ Fixed-route service in South Portland with connections to Portland 	Transit district	<ul style="list-style-type: none"> ▪ Subcommittee of City Council ▪ 3-member Transit Advisory Committee
YCCAC	<ul style="list-style-type: none"> ▪ Deviated fixed-route bus service between Sanford and Saco ▪ Accessible on-demand and flex services 	Regional transportation corporation	<ul style="list-style-type: none"> ▪ 14-member autonomous board



FLEETS AND FLEET PLANNING

The study agencies own and operate about 140 total transit vehicles, excluding Downeaster vehicles, which are owned and operated by Amtrak. Over half of these vehicles are heavy-duty buses, about a quarter are cutaway buses, five are ferries, and the remainder are vans, minivans, and non-revenue vehicles. METRO operates the most vehicles (44), while BSOOB Transit and YCCAC operate the second-most vehicles, at 29 (Figure 2-3). SPBS has the smallest revenue vehicle fleet, with six heavy-duty buses and two cutaways.

Figure 2-3 Greater Portland Transit Vehicles by Agency



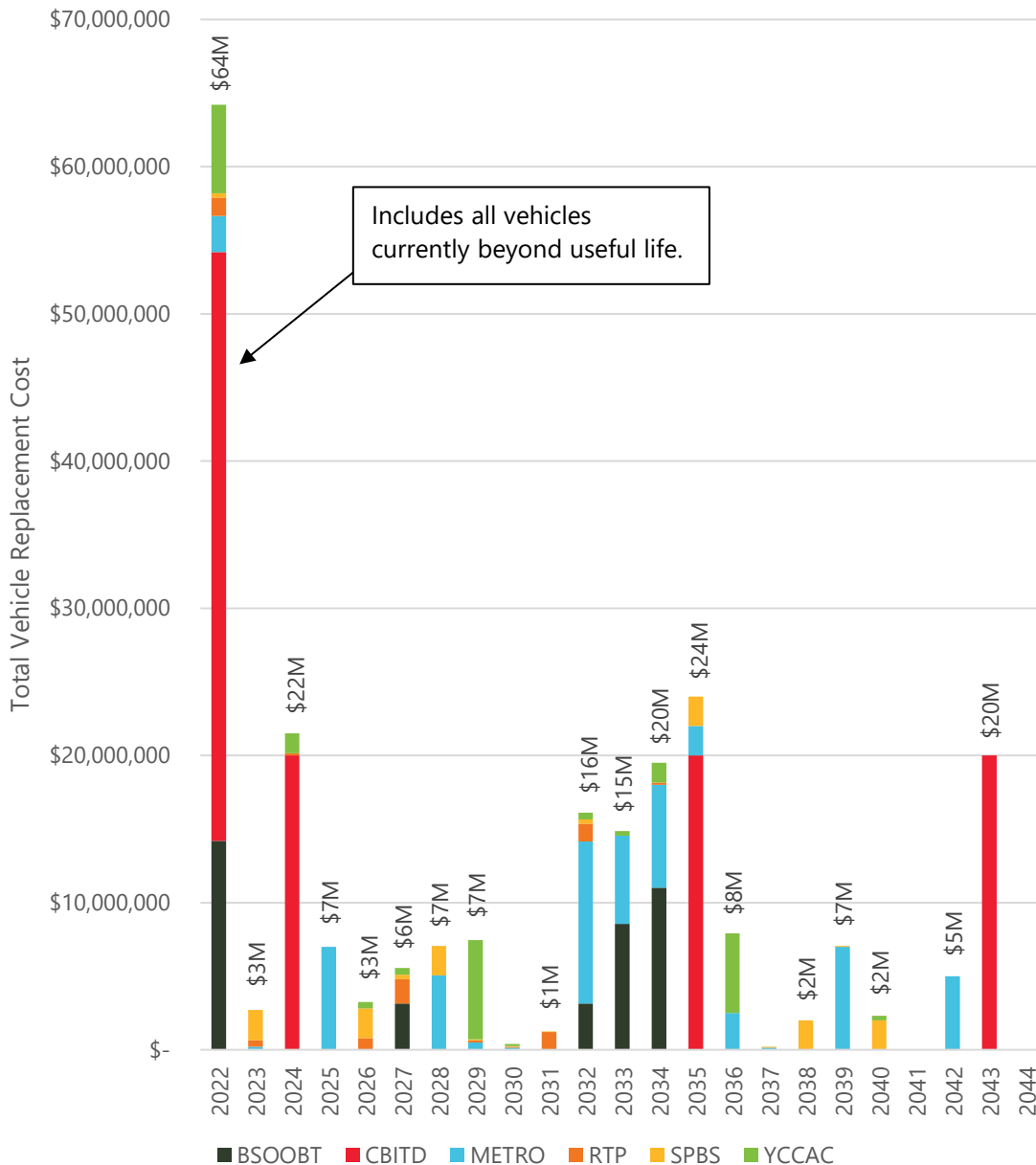
Note: Vehicles used for the Downeaster are not shown because NNEPRA does not own or operate the vehicles.

Using industry standards for this metric, a rough estimate of region-wide transit agency vehicle replacement needs finds that nearly 50 vehicles in the region’s fleet are beyond their useful life and 13 more have less than 20% of their useful life remaining. Fleet replacement needs are most pressing for BSOOB Transit, RTP, and YCCAC.



Using assumed replacement values for each vehicle type, Figure 2-4 shows the annual total costs for transit vehicle replacement in the region (with the cost of replacing all vehicles currently beyond their useful life allocated to 2022). Ferry replacement, at a high-level estimate of \$20 million, is by far the largest driver of regional vehicle replacement costs. Outside of CBITD, the BSOOB Transit and METRO fleets comprise the bulk of the region’s vehicle replacement needs, with the largest wave of vehicle replacement expected to be needed in approximately 2032 to 2034.

Figure 2-4 Annual Vehicle Replacement Costs by Agency



Note: Chart assumes vehicles are replaced at the end of their useful lives.



FACILITIES

The study agencies serve a total of 21 key transit facilities in the Greater Portland region.

Passenger Facilities

There are two large multimodal facilities in the Greater Portland region.

- The **Saco Transportation Center (STC)** is served by the Downeaster, BSOOB Transit, YCCAC, and Greyhound intercity bus lines. It has an indoor passenger waiting area within view of both the rail and bus loading platforms. Located on the town line just north of Biddeford, it has good pedestrian access to both downtown Saco and Biddeford.
- The **Portland Transportation Center (PTC)** is located west of I-295 off Fore River Parkway and serves the Downeaster, METRO, and Concord Coach Lines. Two METRO routes stop at the station; there are no BSOOB Transit or SPBS connections. NNEPRA has proposed relocating this facility to the mainline, between Congress Street and W Commercial Street, to improve operations and decrease travel times for people riding through Portland.

Other **Downeaster stations** in the region have local bus connections and serve as smaller intermodal facilities. The METRO BREEZ stops a few blocks from Freeport Station and at Brunswick Station; the Brunswick Link local bus and BlueLine Commuter also serve this station. BSOOB Transit service is available at the Old Orchard Beach Station.

There are two bus hubs:

- The Portland **METRO PULSE** (also called Downtown Transportation Center) is on Elm Street between Congress Street and Cumberland Avenue. The PULSE is served directly by METRO and the RTP Lakes Region Explorer (LRE), and by nearby METRO, BSOOB Transit, and SPBS stops. This facility has some passenger amenities, but the outdoor waiting area is largely exposed to the elements. Intercity bus service does not serve this stop.
- The **Mill Creek Transit Hub** is on the corner of Ocean and Thomas streets in South Portland. This serves as a transfer point for SPBS routes and has an indoor waiting area for riders.
- The **Casco Bay Ferry Terminal** is the mainland dock for all CBL ferries. This newly renovated facility is served by METRO Route 8, which deviates into the terminal from Commercial Street. Ferry passengers looking to connect with other bus services must transfer at the METRO PULSE. There is no one-seat ride from the ferry terminal to the PTC, Jetport, or South Portland.



Bus Stops

There are about 940 transit stops in the Greater Portland region. Twenty-six are served by BSOOB Transit and YCCAC, and METRO serves several stops with BSOOB Transit, SPBS and/or RTP’s LRE. BSOOB Transit and RTP also allow passengers to flag down their vehicles at any safe location along a route.

Schedules are not coordinated at these locations and all five bus operators use a mix of different signage to identify their stops (Figure 2-6).

One of the highest-ridership of these common stops is at the Maine Mall, which is served by BSOOB Transit, METRO, and SPBS. This stop does offer real-time information.

Figure 2-5 Summary Table of Agency Bus Stop Sign Elements

Flag Element	BSOOB Transit	METRO	RTP	SPBS	YCCAC
Stop ID		✓			
Agency name	✓	✓	✓	✓	✓
Route name or number	✓	✓	✓	✓	
Route destination				✓	
Contact information		✓	✓	✓	
Lift-capable bus icon (where applicable)		✓			
Vehicle bike rack icon (where applicable)		✓	✓		



In general, METRO and SPBS signs include more information than BSOOB Transit signs, which have not all been updated since the agency changed its branding from SH-ZOOM to BSOOB Transit. Most METRO and SPBS stops in the Greater Portland region include a sign advertising the Southern Maine Transit Tracker (SMTT), which helps riders understand when the bus is arriving at the stops. YCCAC signs include very little information.

Figure 2-6 Photographs of Stop Flags for Study Fixed-Route Bus Agencies



Clockwise from top left: A BSOOB Transit flag showing silver duct-tape that indicates the stop is served by the Silver/UNE Line; a METRO flag with route schedule below; a SPBS flag; an RTP LRE flag; a YCCAC flag. Source: Nelson\Nygaard.



Maintenance/Administrative Facilities

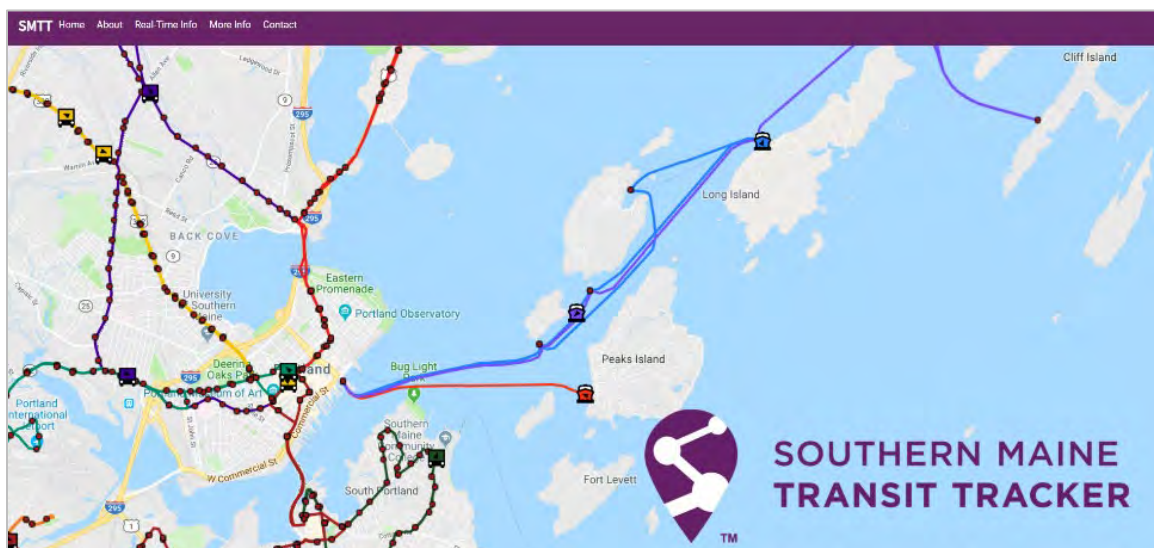
All seven agencies own or lease offices. Four agencies (BSOOB Transit, METRO, RTP, and SPBS) also have a vehicle maintenance facility. SPBS offices and a dedicated maintenance bay are in the City of South Portland's public works facility. These maintenance facilities support diesel and or diesel-electric technology, as well as some electric bus pilots; the agencies have just begun experimenting with zero-emissions vehicles.

YCCAC and CBL contract for maintenance, with YCCAC currently using BSOOB Transit for certain maintenance tasks. NNEPRA doesn't own or maintain vehicles; the Downeaster service is operated by Amtrak, which performs their own maintenance.

TECHNOLOGY

There is some technological coordination among agencies. METRO, SPBS, BSOOB Transit, RTP, CBL, and Downeaster fixed-route vehicles are equipped with automatic vehicle location (AVL) technology, which provides real-time information on vehicle locations. AVL provides several benefits, including the ability to understand and address service problems, and to provide real-time passenger information. This technology could be extended to YCCAC vehicles to provide similar benefits.

Transit AVL data can be sent to websites and smartphone apps to give riders real-time vehicle location information. METRO, SPBS, and CBL already do this, sharing their information via the Southern Maine Transit Tracker (SMTT). Real-time information is available on the SMTT and other third-party apps, such as Transit App. Information on SMTT can be difficult to access and sometimes does not appear.



A screenshot of the SMTT landing page.



RTP and BSOOB Transit provide real-time information via their own website and—in the case of RTP—smartphone app. Although the BSOOB Transit real-time tracker is currently not functioning, they and RTP both equip their fixed-route vehicles with AVLS and could join others to publish real-time information via a consolidated third-party service. YCCAC could also install AVLS on their fixed-route vehicles and provide real-time information.

Amtrak provides Downeaster real-time information on its website and third-party apps.

Finally, METRO, SPBS, and BSOOB Transit use a common fare payment system, which is described in more detail below in the 'Fare Payment and Policies' section.

MARKETING, BRANDING, AND CUSTOMER SERVICE

Each of the seven individual agencies has their own service area and market and operates under a distinct brand. Marketing activities and customer service are also largely independent, except for occasional joint efforts (e.g., DiriGO) or other special events. In general, customers looking to travel across the region may not be aware of the scope and breadth of services or how to find schedules and stops.

Better coordination of branding, marketing, and customer-service efforts was initially recommended (among other actions) as part of a PACTS Regional Transit Coordination Study in 2007 (see the Regional Collaboration chapter of this document). The boards of all seven agencies signed a joint resolution agreeing to advance these recommendations.

Following this study, the bus transit providers worked together to produce a regional map and timetable, and a subsequent 2013 Regional Branding and Marketing Plan (led by PACTS) with the following recommendations:

- Developing a unified logo and color scheme for the three fixed-route bus operators.
- This unified logo was designed to work with (rather than supersede) existing logos, and to be used on signage and promotional materials to tie regional services together.
- Developing a coordinated website in two phases: Phase 1 would build a splash webpage with links to individual providers; Phase 2 would build an integrated website, giving each agency access and the ability to make updates.
- Coordinating customer service: one phone number for all three providers.

Ultimately, the regional map and timetable was not regularly updated, and the branding and marketing recommendations were not advanced due in part to continued concerns about loss of individual agency brands.



On a more positive note, in response to the COVID-19 pandemic, GPCOG convened a Regional Transit Marketing Task Force to jointly direct a portion of federal CARES Act funding toward attracting riders back to transit. This group met successfully for over a year before disbanding in early 2022 when funding was expended.

FARE PAYMENT AND POLICIES

There are differences across the region in fare-payment technologies, base fares, the availability of pass products and other discounts, and transfer policies.

One-way base fare is consistent on BSOOB Transit, METRO, and SPBS. However, base fares on longer-distance regional bus routes varies:

- YCCAC's Southern Maine Explorer is currently \$2.00
- RTP charges \$3.00 for the Lakes Region Explorer
- METRO charges \$4.00 for BREEZ
- BSOOB Transit charges \$4.00 for Green Line trips² and \$5.00 for ZOOM

Base fares vary by destination and time of travel on both CBL and the Amtrak Downeaster.

BSOOB Transit, METRO, and SPBS are all part of the DiriGO fare system, which allows riders to pay for transit with a smartcard or mobile app. DiriGO allows riders to load money on their stored-value accounts with their mobile phone or at partner retailers. The Downeaster and CBL offer advance online ticket purchases.

² As of December 2022, this fare had been temporarily reduced to \$2.00.



Agencies offer a variety of pass products and discounts, including round-trip, day, monthly, annual, and 10-ride passes. Fixed-route bus riders using the DiriGO fare system receive fare capping, ensuring they receive the benefit of discounts without needing to purchase a pass. DiriGO also provides free transfers between DiriGO agencies (within a 90-minute window). Figure 2-7 summarizes media accepted by each agency.

Figure 2-7 Fare Media Accepted by Study Agencies on Fixed-Route Services

Fare Media	BSOOB Transit	CBL	METRO	Down-easter	RTP	SPBS	YCCAC
Cash*	✓	✓	✓	✓	✓	✓	✓
DiriGO smartcard	✓		✓			✓	
DiriGO mobile app	✓		✓			✓	
Paper tickets		✓		✓	✓		
Other pass products		✓	✓	✓	✓		✓

* Cash accepted on buses and at CBL and Downeaster ticket windows. Credit/debit accepted via DiriGO, via Amtrak online ticketing, at the CBL and Downeaster ticket windows.



3 REGIONAL PLANNING AND FUNDING FRAMEWORK

THE ROLE OF PACTS AND GPCOG

PACTS is the designated MPO for Greater Portland. Members include representatives from 18 communities, the seven regional transit providers, other federal and state transportation entities, and regional planning organizations. As noted in the introduction to this report, PACTS is responsible for creating plans and setting priorities related to local investment and expenditure of federal transportation funds, as well as coordinating other transportation activities.

GPCOG serves as technical staff to PACTS and performs other transportation-planning activities, including:

- Preparation of the annual Transportation Improvement Program (TIP) to prioritize and program the spending of federal transportation dollars. The Five-Year Capital and Operating Plan (FYCOP) for transit is a TIP input.
- Preparation of short- and long-range strategic transportation plans and work programs.
- Other transit-planning and -support activities.

PACTS Committees

Strategic policy and investment decisions are largely the responsibility of the PACTS Policy Board. The Policy Board is supported by other standing committees, with the Executive Board and Regional Transportation Advisory Committee (RTAC) having the greatest influence over transit-planning and -investment decisions.

The Policy Board also periodically appoints special committees or working groups. The Transit Task Force Working Group is a non-voting group established to advise on transit-related technical matters.



The role and membership of these key committees is shown in Figure 3-1.

Figure 3-1 PACTS Committees Involved with Transit

Committee	Membership	Key Roles
Policy Board	<ul style="list-style-type: none"> ▪ All member communities ▪ 7 regional transit providers ▪ Other federal and state transportation entities ▪ Other regional stakeholders 	<ul style="list-style-type: none"> ▪ Establishes regional vision and sets strategic direction ▪ Endorses long-range transp. plans ▪ Adopts the annual TIP ▪ Integrates transportation work with other regional issues ▪ Appoints standing committees and special committees (e.g., the Transit Together Project Advisory Group)
Executive Committee	<ul style="list-style-type: none"> ▪ Policy Board Chair and Vice-Chair ▪ 3 transit providers (nominated by the 7 providers) ▪ MaineDOT and Maine Turnpike Authority ▪ 5 municipal members ▪ 1 RTAC member ▪ 1 active-transportation specialist. 	<ul style="list-style-type: none"> ▪ Makes strategic recommendations to the Policy Board ▪ Amends adopted TIP ▪ Adopts updates to the FYCOP for transit ▪ Coordinates allocation of FTA funds (the 'split process')
RTAC	<ul style="list-style-type: none"> ▪ 12 municipal representatives ▪ 4 transit providers (nominated) ▪ MaineDOT and Maine Turnpike Association ▪ 5 other regional stakeholders 	<ul style="list-style-type: none"> ▪ Focuses on transportation-planning and -management issues ▪ Endorses the FYCOP ▪ Advises the Executive Committee on other technical, planning, and funding issues
Transit Task Force Working Group	<ul style="list-style-type: none"> ▪ 7 transit providers ▪ MaineDOT ▪ Policy Board Chair ▪ RTAC Chair 	<ul style="list-style-type: none"> ▪ Serves an advisory role to RTAC, GPCOG staff, and Policy Board ▪ Provides input to the FYCOP



THE ROLE OF MAINEDOT

MaineDOT plays many roles in the State of Maine. As the organization related to transportation in the Greater Portland region, the agency's primary roles are:

- Oversee the formation and administration of transit districts. MaineDOT approval is required if a district wants to provide service to a non-member municipality.
- Has legislative authority related to rail and water transportation.
- A direct recipient of federal transportation funds. MaineDOT is the direct recipient of federal funds for rural, senior, and human-services transportation and distributes these funds by geographic region. RTP and CBL are subrecipients in the Greater Portland region.
- Offer competitive state grants for senior and human-services projects.
- Provide support for intercity services.
- Responsible for compiling the Statewide Transportation Improvement Program and ensuring federal and statewide performance targets are met.

REGIONAL TRANSIT FUNDING FRAMEWORK

PACTS Five-Year Capital and Operating Plan

GPCOG staff help prepare and update the Five-Year Capital and Operating Plan (FYCOP) for transit. The FYCOP prioritizes available federal funding for transit across the region on an annual basis. Local match is provided by a mix of state and local funds.

There are five designated direct recipients of Federal Transit Administration (FTA) funds in the Greater Portland urbanized area: METRO, BSOOB Transit, SPBS, CBL, and NNEPRA. All recipients must agree on the process to split these annual funds (the 'split process'). The PACTS Executive Committee coordinates this process with input from the RTAC and Transit Working Group. As currently allocated:

- All FTA Preventative Maintenance (PM) funding is directed toward PM projects
- Other FTA funds support transit operations (88%) and system enhancements (12%)

The amount directed to each regional recipient is negotiated each year using metrics (such as staffing, operating budgets, etc.) as well as priority needs (e.g., fleet replacement). The Transit Task Force Working Group provides input on these needs. Ultimately, the FYCOP is endorsed by the RTAC and becomes part of the annual TIP.

The Split Process

PACTS recently convened a special committee to review and refine this process.



Rural and Human-Services Transportation

MaineDOT is the direct recipient of FTA formula funds for rural and senior/human-services transportation. The State of Maine has established eight geographic regions for the distribution of these funds. CBL, RTP, and YCCAC are subrecipients.

Federal funds for rural transportation, as well as additional funding through the Maine Department of Health and Human Services, are prioritized through regular updates to the federally mandated Coordinated Plan for Public Transit and Human Services Transportation.

Direct FTA funding recipients may also apply for federal discretionary grants to support capital projects and other efforts.

REGIONAL TRANSIT GOALS AND STRATEGIES

To comply with federal guidelines, MPOs such as PACTS are required to regularly update long-range transportation plans to establish regional investment strategies and priorities. PACTS has also prepared a long-range transit plan to further focus on and develop transit strategies.

Destination 2040

The current long-range transportation plan for the region, *Destination 2040*, was adopted in 2016. The plan recognizes that transportation issues are regional and require a coordinated response. The plan further recognizes the role of transit as a solution to some of the region's mobility challenges.

Despite significant support for expanded transit, there is a gap between the funding available and the level of investment needed to meet demand. To address these challenges, the 20-year vision for regional transportation aims to create a more efficient multi-modal network.

The 2040 Vision for Regional Transportation

Provide a safe, fully developed, and well-maintained multi-modal means of travel for all people and goods as efficiently and cost-effectively as possible. The transportation system will be coordinated with land-use decisions promoting compact livable development that preserves community character while retaining open and natural spaces, which enhance the natural and human environments.

Destination 2040 (2016)



Figure 3-2 lists the six regional transportation goals established in *Destination 2040* and summarizes specific implementation strategies most relevant to regional transit and the *Transit Together* effort. GPCOG is now working to update this vision as part of a new long-range plan update, *Connect 2045*.

Figure 3-2 Long-Range Transportation Goals and Relevant Transit Strategies (*Destination 2040*)

Goal	Key Strategies Related to Transit
<p><u>Goal 1:</u> Maintain a Regional Focus</p>	<ul style="list-style-type: none"> ▪ Tighten the relationship between regional funding and Destination 2040's vision and goals ▪ Incentivize collaboration by prioritizing projects that coordinate planning across jurisdictions ▪ Collect data to assess outcome-oriented performance metrics
<p><u>Goal 2:</u> Enable Economic Development</p>	<ul style="list-style-type: none"> ▪ Prioritize investments in Priority Corridors and Centers ▪ Improve the frequency, travel time, convenience, and amenities of bus and rail services
<p><u>Goal 3:</u> Improve Mobility, Safety, and Accessibility</p>	<ul style="list-style-type: none"> ▪ Increase mode share ▪ Increase frequency and effectiveness of transit service ▪ Provide express-bus service ▪ Provide linkages to major hubs, centers and transfer points ▪ Implement ITS for real time information and ▪ Continue efforts to coordinate transit services, fares, and operations ▪ Continue implementation of ADA accessibility ▪ Expand capacity for aging and special-needs populations ▪ Increase the availability and accessibility of transit, including through improved frequencies, operating hours, and reliability ▪ Increase rider satisfaction and grow ridership through improved inter-agency connections and coordination ▪ Promote transit corridor development across municipal boundaries through regional transit planning
<ul style="list-style-type: none"> ▪ <u>Goal 4:</u> Integrate Energy Conservation ▪ <u>Goal 5:</u> Strengthen the Land Use/Transportation Connection ▪ <u>Goal 6:</u> Protect Environmental Quality 	<ul style="list-style-type: none"> ▪ Convert transit fleets to alternative fuels ▪ Use TDM strategies to increase the attractiveness of transit ▪ Define TOD areas around transit nodes ▪ Prioritize transportation investments in Priority Centers



Transit Tomorrow

Developing a long-range transit plan for the region was a key recommended action of *Destination 2040*. Adopted in early 2021, *Transit Tomorrow* is that long-range transit plan and sets a 30-year vision for enhancing public transit in the Greater Portland region by focusing on improving the efficiency of regional transit operations while growing the attractiveness and convenience of service.

The 2050 Regional Vision for Transit

Using our region's public transportation is faster and more affordable than driving a car. Our system is funded sustainably and provides reliable and seamless transportation for our community, including commuters, mainland and island residents, and people with mobility challenges. Our communities support the long-term viability of public transportation by focusing new homes and jobs where people already live and work

Transit Tomorrow (2021)



Transit Tomorrow's overarching goals are to make transit more seamless, to bring a regional perspective to planning and funding decisions, and to maximize the overall benefits of transit investments. As shown in Figure 3-3, the plan sets four goals for regional transit and detailed strategies intended to guide PACTS as it makes regional funding decisions, sets infrastructure priorities, invests in new technology, and leads regional coordination.

Figure 3-3 Regional Transit Goals and Strategies (*Transit Tomorrow*)

Goal	Recommendations/Action Steps
<p><u>Goal 1:</u> Make Transit Easier</p>	<ul style="list-style-type: none"> ▪ Adopt innovative customer service technology <ul style="list-style-type: none"> – Unified mobility platform, web-based trip planning, fare payment, enhance paratransit communications ▪ Advance partnerships with businesses and institutions ▪ Enhance first- and last-mile connections <ul style="list-style-type: none"> – Better bus stops, ped. and bike connections, and microtransit pilots ▪ Strengthen coordination among transit providers <ul style="list-style-type: none"> – Mobility management program to provide support across providers – Local working group to pursue/monitor coordination ▪ Improve door-to-door options <ul style="list-style-type: none"> – On-demand pilot programs and support for other paratransit and community-based programs
<p><u>Goal 2:</u> Create Frequent Connections</p>	<ul style="list-style-type: none"> ▪ Improve frequency and service hours ▪ Add new local circulator routes ▪ Create new regional routes ▪ Advance the Transit Together study to develop an implementation plan and advance strategies to make the system more seamless and efficient
<p><u>Goal 3:</u> Improve Rapid Transit</p>	<ul style="list-style-type: none"> ▪ Develop regional rapid-transit corridors to connect key activity centers
<p><u>Goal 4:</u> Create Transit-Friendly Places</p>	<ul style="list-style-type: none"> ▪ Incentivize planning and funding to support development in areas served by transit and along future transit corridors.



4 REGIONAL COLLABORATION

SUMMARY OF PAST COLLABORATION

Although strategies to increase coordination for improved delivery of public transit in the Greater Portland region have been discussed for more than three decades, efforts to advance these strategies have accelerated in the past 15 years.

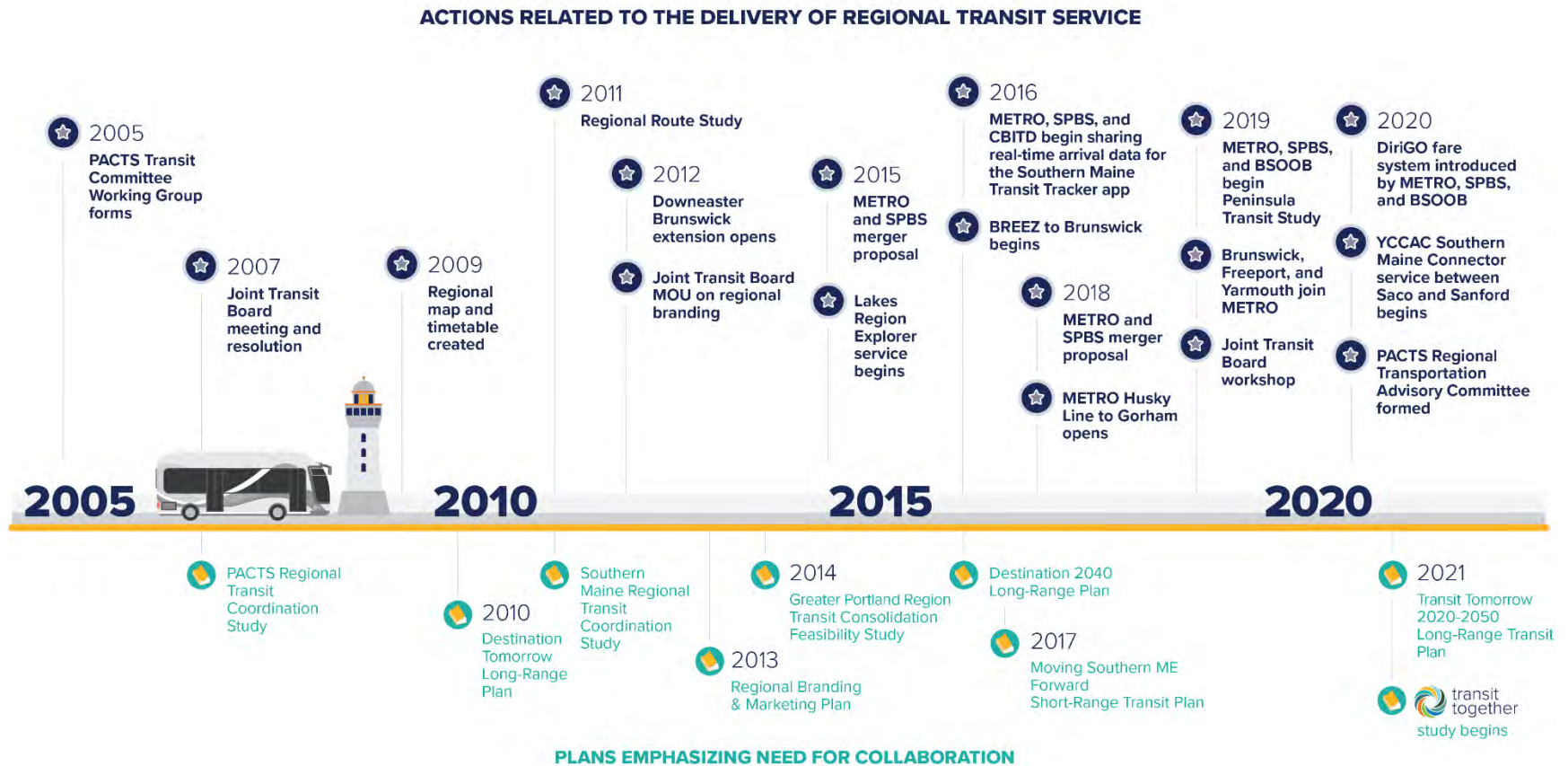
Initially, the topic of coordination focused on the potential for consolidating two or more of the regional transit providers, with PACTS conducting a *Consolidation Feasibility Study* in 1990. A primary outcome of this study was the formation of the first PACTS transit committee. Although this committee has evolved and expanded over time, the transit agencies continue to meet and inform the PACTS process through the Transit Task Force Working Group today.

In 2007, a *Regional Transit Coordination Study* looked to identify operational efficiencies in terms of regional transit-service delivery, as well as continuing to assess potential consolidation. This study also introduced the concept of better coordinating service delivery from the *riders' perspective*, which continues to be a regional goal today.

Since the conclusion of this 2007 study, regional transit providers have collaborated on numerous projects to try to make regional travel more seamless, introducing new regional routes and technologies. A timeline of coordination efforts is in Figure 4-1.



Figure 4-1 Timeline of Regional Transit Collaboration Efforts (2005-2021)





CURRENT AND ONGOING COLLABORATION

In addition to the Transit Task Force Working Group that advises the PACTS RTAC and GPCOG on transit issues of regional interest, the following collaboration efforts are ongoing.

Service-Planning Coordination

Transit agencies have worked together on periodic and specific efforts to better coordinate services in areas where more than one provider operates. Examples include:

- The *Peninsula Transit Study* which looked to better coordinate BSOOB Transit, METRO, and SPBS operations along Congress Street and other Peninsula corridors. It included coordination with Casco Bay Lines and RTP. This study was put on hold pending the service redesign efforts of this Transit Together study.
- BSOOB Transit and SPBS are working to create a new connection near MaineHealth facilities in Scarborough.
- GPCOG is advancing a *Gorham-Westbrook-Portland Rapid Transit Study* with close involvement of METRO and NNEPRA. The study will consider bus and rail alternatives to offer faster, higher-capacity service connecting Gorham, Westbrook, and Portland. The study will consider both bus and rail alternatives.

Regional Transit Marketing Task Force

As mentioned earlier, GPCOG convened a Regional Transit Marketing Task Force in 2021 to direct a portion of federal COVID-19 relief funding for regional marketing and to help bring riders back to transit. The group facilitated the marketing of regional transit and publicized ongoing transit plans, transit improvement projects, and other regional efforts. The group met for over a year before disbanding in early 2022, when funding was expended.



Joint Transit Board Workshops

Representatives from the boards of directors of the seven transit providers occasionally meet to discuss or formally endorse regional transit strategies and significant transit projects.

Three joint board meetings have been held over the last 15 years:

- **2007:** All seven boards signed a resolution recognizing the need for regional integration of planning, operations, marketing, and capital investment to make the system more seamless for riders. The resolution endorsed recommendations for regional branding, marketing, timetables/maps, and route studies. It further emphasized that transit policy and service delivery should be made with a regional perspective while balancing local control over operating and funding decisions with a need for greater integration.
- **2012:** Six boards signed a joint memorandum to: 1) continue to advance recommendations from the *2007 Regional Coordination Study*; 2) develop a *Regional Branding and Marketing Plan* (completed in 2013); and 3) coordinate on other regional projects and initiatives. NNEPRA signed as a supporting partner. Although the boards agreed to use existing operating revenues to implement branding and marketing recommendations, the final recommendations of the 2013 study (to create a unified logo, color scheme, and centralized information resources) were never implemented.
- **2020:** All seven boards reconvened as part of Transit Tomorrow to discuss the long-term regional vision, identify priority investments, and build relationships for further collaboration. They voiced support for better unifying the regional network to provide more seamless transit, investing in regional branding and priority corridors, and increasing transit frequency. Board members also recognized challenges to achieving these goals, such as:
 - Long-term funding/sustainability
 - Barriers to interagency transfer (timetables, route alignments, fare policies)
 - Misperceptions about transit reliability and convenience
 - Fragmentation across the seven agencies
 - Land-use patterns that don't efficiently support transit and the need for more political support for transit

Joint Board Priorities

At their most recent meeting, board members voiced support for better unifying the regional network to provide more seamless travel and investing in:

- Common regional branding
- Priority corridors
- Transit frequency

Most attendees indicated a willingness to hold joint meetings several times a year.



POTENTIAL FUTURE EFFORTS

In a series of one-on-one interviews in fall 2021, the Transit Together team asked stakeholders about the success of past collaboration efforts and to elaborate on any challenges or opportunities related to future collaboration.

Executive directors at the seven transit providers voiced strong commitments to their constituents, with most expressing little interest in agency consolidation. However, each interviewee was able to point to one or more examples of recent interagency coordination that introduced operating efficiencies or improved service for their customers (e.g., the DiriGO fare system, open procurements, shared YCCAC/BSOOB Transit maintenance practices).

Recognizing the benefits of this coordination (as well as the challenges and tradeoffs), these directors expressed a willingness to further collaborate to better serve regional transit riders and increase the efficiency and reach of limited regional transit funding. Providers further recognized that recovering from recent ridership drops due to COVID-19 increased the need to seek regional efficiencies.

Short-Term Needs, Gaps, and Opportunities Identified by Regional Stakeholders

Areas suggested by regional stakeholders as providing opportunity for further coordination include:

- **Improve interdistrict and intermodal connections:** Extend routes, identify new connection points, and/or coordinate schedules to offer timed connections.
- **Increase the frequency of transit on high-ridership routes.**
- **Consider microtransit or other new service models in lower density areas.**
- **Offer enhanced passenger amenities** at hubs and more consistent bus signage across the region.
- **Improve branding, marketing, and customer information:** Make transit more accessible, easier to navigate, and more seamless by re-assessing the previous proposal for regional branding, considering regional 'U-Pass' or other products, and sharing customer information resources.
- **Coordinate:** Pursue avenues to share knowledge, pursue new technologies, conduct joint procurements, engage in workforce development and training, pursue grants for regional programs, install regional bus-charging stations, etc.
- **Enhance technology and interoperability:** Make the benefits of technologies such as SMTT and DiriGO more consistently available across the region and



introduce other new capabilities. Improve interagency communications and GTFS feeds to support regional information-sharing, emergency operations and other functions.

- **Improve data collection:** Improve data collection capabilities with automated passenger counters and regional AVL capabilities.
- **Ensure Equity:** Allocate funding in a fair, logical, and transparent manner. Consider the impact of varied fare levels and local contributions across the region. Set baseline service standards, use performance metrics, and set incentives to increase service efficiency and effectiveness.

Some providers cited limited staff resources as a key hurdle to coordination. Others stressed the need to achieve greater regional parity in terms of transit investment.

The two non-providers interviewed (PACTS and MaineDOT) also expressed a desire to improve regional transit service for riders, but their primary concerns related to delivering services in the most efficient manner across the region.

Finally, many of those interviewed reiterated transit's critical role in helping to achieve broader state, regional, and local goals such as reduced greenhouse gas emissions, economic development, improved public health, and rider education.



APPENDIX D



TRANSIT TOGETHER

The State of Regional Transit Summary Report

September 2022

The Future of Transit



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Image source: GPCOG

1 INTRODUCTION

Before the COVID-19 pandemic, about 16,500 riders used the Greater Portland region's transit services on an average day—to get to and from work, to shop, for medical appointments, to see friends, and do all the other things that are important in our lives. Many riders in Greater Portland use public transit because it is the travel option that works best for them. For others, public transit is a lifeline that connects them to daily needs that would otherwise be difficult to access.

Transit agencies throughout the world experienced significant declines in ridership during the pandemic. While ridership in Greater Portland has returned to roughly 70% of pre-pandemic levels, other transit systems have avoided such significant declines and recovered more quickly by investing in transit improvements that make transit more competitive with auto trips.

Public transit providers in Greater Portland are also committed to improving the attractiveness of transit and achieving the goals outlined in the region's long-range transit plan, *Transit Tomorrow: Make Transit Easier, Create Frequent Connections, Improve Rapid Transit, and Create Transit-Friendly Places*.

The Transit Together effort is designed to determine how to best advance these goals so using transit is easier, faster, more reliable, and a more competitive option for more people.

Today, the Greater Portland region is served by seven public transit providers, each with a distinct service area, route structure, facilities, funding, and brand. Although the region's independently operated agencies do work together in some ways, the Transit Together study will recommend how these providers might increase collaboration to

make regional transit more seamless to use and efficient to deliver—all with the aim of improving regional mobility.

This State of Regional Transit summary report is an overview of the state of Greater Portland's regional public transit system. It identifies potential improvement opportunities and sets the stage for specific improvement recommendations. The summary report has five main sections:

- The demand for transit in the Greater Portland region
- The region's transit services
- Ridership
- Regional practices
- Findings and opportunities

The State of the Regional Transit outlines existing conditions and needs in the region, as well as to identifies opportunities for a more coordinated service network. More detailed information on these subjects is available in three companion documents:

- State of Regional Transit Part 1: Market Analysis
- State of Regional Transit Part 2: Existing Service
- State of Regional Transit Part 3: Regional Service Delivery and Coordination

Route profiles of each existing transit route in the Greater Portland region have also been developed as part of this effort. All documents are all available on the project website, www.transittogether.org.



Image source: GPCOG

2 THE DEMAND FOR TRANSIT IN GREATER PORTLAND

The underlying demand for year-round transit in Greater Portland varies greatly and is strongly related to six factors:



Population and Population Density: Because transit relies on having more people near service, higher population density makes it feasible to provide higher levels of service.



Socioeconomic Characteristics: Different people have a different likelihood to use transit, with some differences related to socioeconomic characteristics. For example, households with many cars are much less likely to use transit than those with one or none.



Employment and Employment Density: The location and density of jobs is also a strong indicator of transit demand, as traveling to and from work often accounts for the most frequent type of transit trip.



Development Patterns: There is a strong correlation between development patterns and transit ridership. Areas with denser development, mixed-use development, and a good pedestrian environment are the most conducive to transit use.



Major Activity Centers: Large employers, universities, tourism destinations, and other high-activity areas attract large volumes of people and can generate many transit trips.



Travel Flows: People use transit to get from one place to another. Major transit lines such as commuter rail and high-frequency bus corridors are designed to serve corridors with high-volume travel flows. Some travel flows are constrained by geography, such as those from Casco Bay islands to the mainland.













More than any other factor, population and employment density drives the underlying demand for transit. This is because:

- The reach of transit is generally limited to a quarter-mile of a transit stop. As a result, the size of the travel market is directly related to the density of development in that area.
- Transit service frequencies, in turn, are closely related to market size. Bigger markets support more frequent service, while smaller markets support less frequent service.
- To attract travelers who have the option of using private automobiles, transit service must be relatively frequent and get riders to their destination in a time and at a cost competitive with private vehicle travel.

Population and job densities also indicate demand for transit in terms of the type and frequency of service that is most appropriate. For example, to support 30-minute service, there generally must be at least 15 households or more than 15 jobs per acre, or a combination thereof. However, these densities broadly indicate demand across contiguous and nearby areas. Clusters of density throughout an area or along a corridor are strong indicators of demand, while a dense but small neighborhood in an isolated area would not produce sufficient demand by itself. Demand can also accumulate along corridors to produce demand for more frequent service than the densities alone would indicate. For example, long corridors where most places have the density to support 15- to 30-minute service will often produce accumulated demand for 15-minute or better service.

Areas with fewer than 10 residents or five jobs per acre, or a combination thereof, rarely provide an environment where fixed-route transit can succeed. In very low-density areas with specific needs, fixed-route transit alternatives such as shuttles, demand-response

(for example, microtransit), and volunteer-driver services are more appropriate. In longer-distance markets, point-to-point or limited-stop services are most appropriate.

Land Use			Transit	
Land Use Type	Residents per Acre	Jobs per Acre	Appropriate Types of Transit	Frequency of Service
Local Transit				
 Urban Core	>30	>15	 Commuter rail, light rail/streetcar, BRT, express bus, local bus	15 mins. or less
 Urban and Mixed-Use Neighborhoods	15-30	10-15	 Commuter rail, light rail/streetcar, BRT, express bus, local bus	15-30 mins.
 Mixed-Density neighborhoods	10-15	5-10	 Light rail/streetcar, express bus, local bus	30-60 mins.
 Low Density	2-10	2-5	 Demand response (microtransit)	60 mins. or less, or on-demand
 Rural	<2	<2	 Demand-response (microtransit)	On-demand
Mid- to Long-Range Point-to-Point Services				
 Community-to-Community	Varies		 Passenger rail or ferry	Varies

Greater Portland Region Population Density

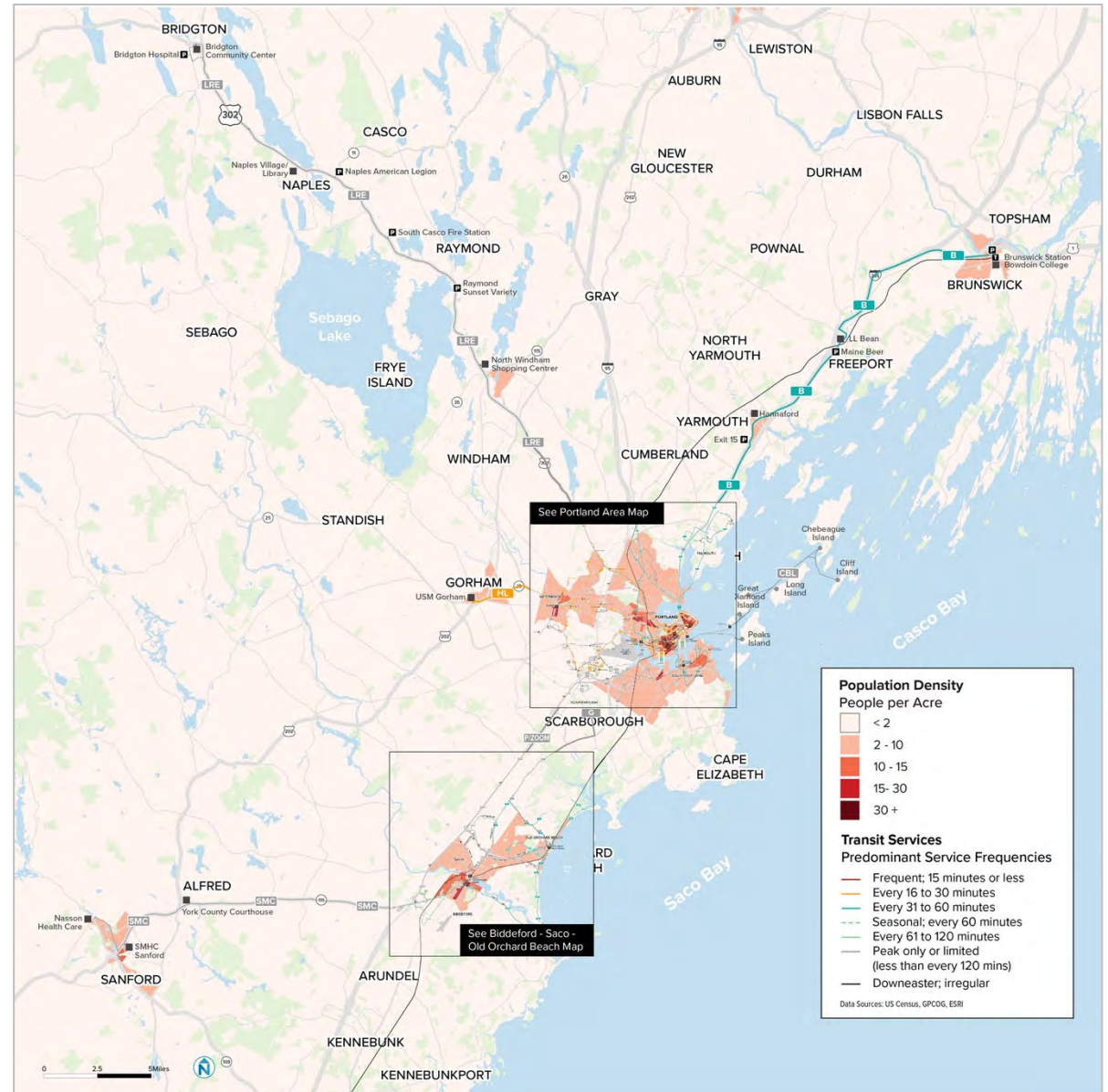
POPULATION-BASED DEMAND

Population Density

The highest population densities are in the Portland area and the Biddeford-Saco-Old Orchard Beach area.

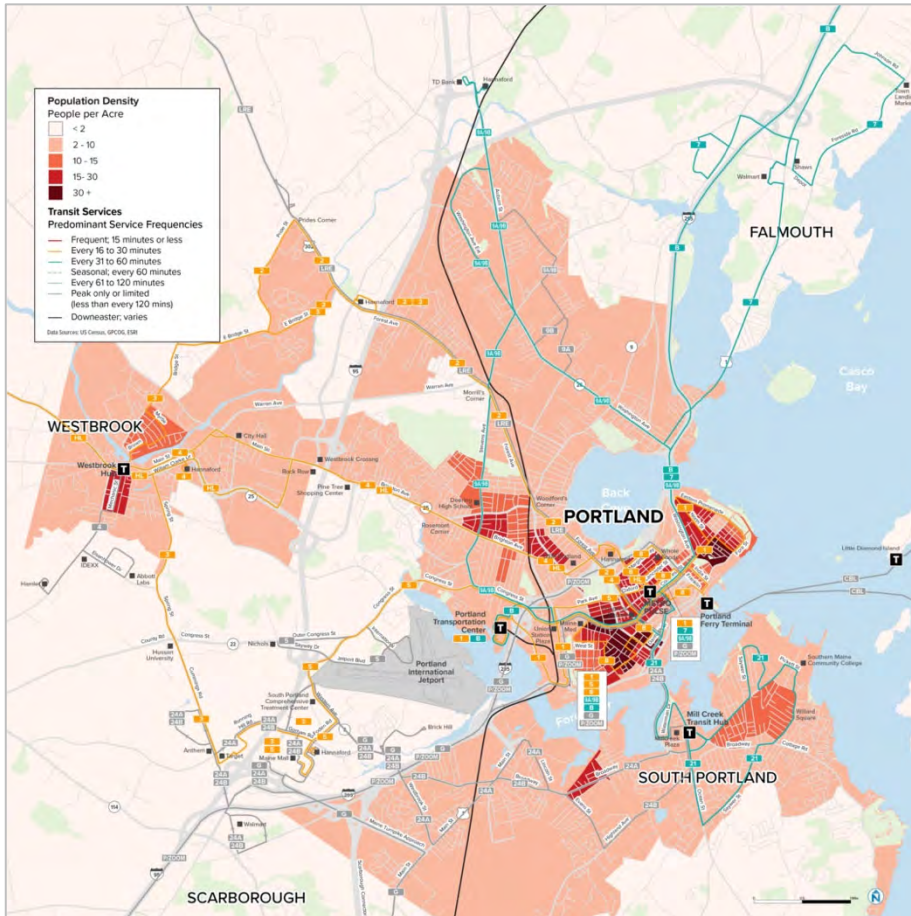
Population density is one of the most important factors in determining underlying demand for transit. Not only does density indicate where there are many people in close proximity, it also indicates land use types more suited for transit. Denser areas tend to be more walkable and less auto-oriented, with more limited access to parking and less reason and incentive to own a private automobile.

As shown in the map to the right, population in the Greater Portland region is heavily concentrated in the Portland and Biddeford-Saco-Old Orchard Beach areas, with much smaller pockets of population in places like Brunswick, Freeport, Yarmouth, Windham, Gorham, and Sanford. All other areas in the Greater Portland region are very lightly populated. Some unique places, like islands, have inherently different relationships between population density and transit demand.



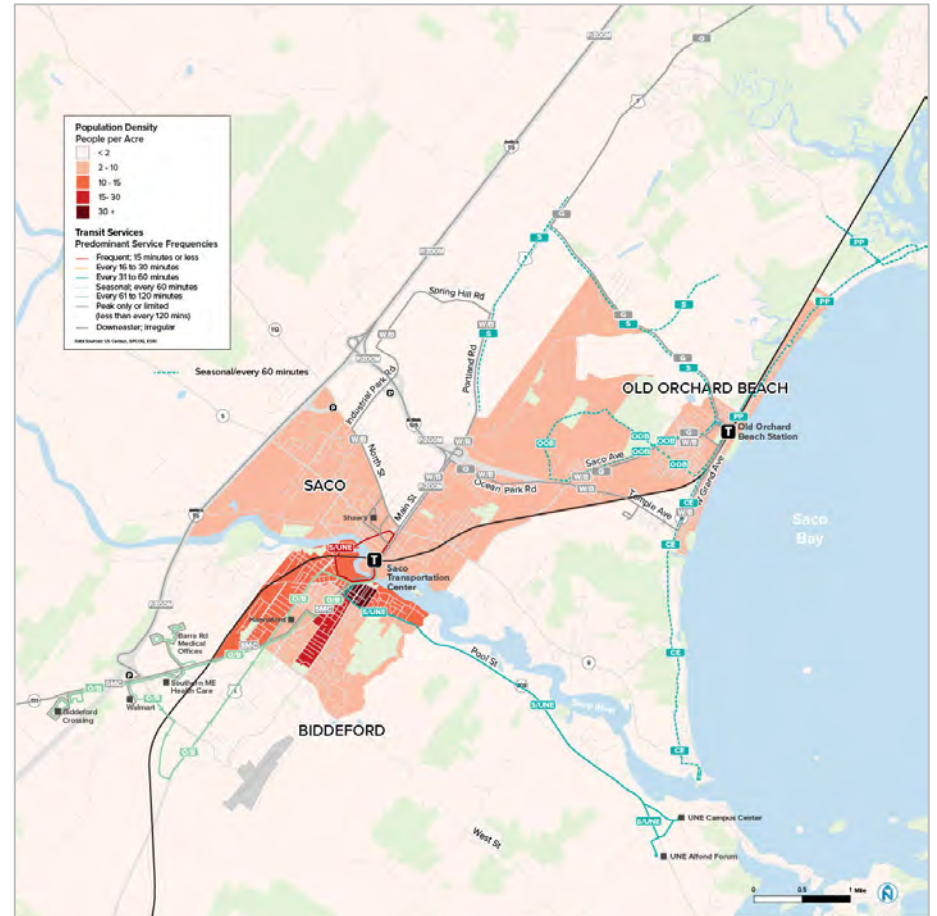
In the Portland area, population densities are highest on the Portland Peninsula, Portland's Deering neighborhood, South Portland's Willard Square and Pleasantdale neighborhoods, and parts of Westbrook north and south of downtown. Even in the Portland area, population densities are low in many places, particularly in Falmouth and in some places near the Maine Mall and Jetport.

Portland Area Population Density



In the Biddeford-Saco-Old Orchard Beach area, population is most heavily concentrated in downtown Biddeford. Population densities are moderate in Old Orchard Beach and Saco northwest of downtown and between downtown and Old Orchard Beach. Elsewhere, population densities are very low.

Biddeford-Saco-Old Orchard Beach Population Density



Socioeconomic Characteristics

Minority residents, low-income residents, and zero-car households use transit at higher rates than the population at large. About 12% of the region's residents are people of color, 25% earn below 200% of the federal poverty level, and 9% of households do not have access to a vehicle.

In addition to population density, socioeconomic characteristics influence people's propensity to use transit. National research shows that many population groups have a higher propensity for transit use than the overall population. Socioeconomic characteristics that are particularly important include:

Race and Ethnicity

Minority residents generally have higher rates of transit use, and the provision of effective transit service to minorities is also particularly important to the Federal Transit Administration as a requirement under Title VI of the Civil Rights Act of 1964. **In Greater Portland, 88% of residents are white and 12% are people of color.** The highest densities of people of color live in:

- Portland's Bayside and East End neighborhoods
- South Portland's Pleasantdale neighborhood
- Westbrook's Frenchtown neighborhood
- Biddeford, south of Alfred Street
- Parts of Sanford

Income

Residents with lower incomes tend to use transit more because it is less expensive than owning and operating a personal vehicle, and many rely on transit as their primary mode of transportation.

Members of households earning fewer than \$35,000 a year use transit more than higher-income people.

About 25% of Greater Portland residents earn below 200% of the federal poverty level. Low-income populations are densest in:

- Much of the Portland Peninsula
- Portland's Deering Center and Oakdale neighborhoods
- South Portland's Pleasantdale neighborhood
- Westbrook's downtown and Frenchtown neighborhood
- Downtown Biddeford
- Downtown Saco

Vehicle Ownership and Access

Households with limited or no access to a personal vehicle, either by choice or by necessity, are more likely to rely on transit. Some living on the Portland Peninsula may choose to live car-free because they can access jobs and other amenities via transit or by walking or biking. Other residents may use transit for other reasons, such as cost or inability to drive. Some households have fewer cars than workers, and one-vehicle households also typically have higher rates of transit use than households with two or more vehicles.

In the Greater Portland region, 9% of households do not have a vehicle. The highest density of zero-vehicle households is on the Portland Peninsula, where the street network is highly walkable, there is a high concentration of key destinations and jobs, and more frequent transit service operates.

Impact on Transit Demand

When people and households from high-transit propensity groups cluster together, they can influence the underlying demand for transit to an extent that is not captured when simply considering total population. In many locations, the clustering of people with a high propensity of transit use increases transit demand to levels

Relative Transit Propensity by Population Group

Demographic Group	Relative Transit Propensity
Race and Ethnicity	
White Alone	0.8
Black	8.8
Asian	1.2
Hispanic/Latino	2.3
Other	2.3
Household Vehicle Ownership	
No Car	9.8
One Car	1.1
Two or More Cars	0.7
Household Income	
Less than \$10,000	2.0
\$10,000 - \$14,999	1.7
\$15,000 - \$24,999	1.2
\$25,000 - \$34,999	1.3
\$35,000 - \$49,999	0.6
\$50,000 - \$64,999	0.6
\$65,000 - \$74,999	0.4
\$75,000 and more	0.6

Note: Propensities developed using 2019 American Community Survey five-year estimates.

higher than those indicated by population density alone. Similarly, in areas with populations with a lower propensity to use transit, demand will be lower. In the Greater Portland area, and as shown left, Black residents are 8.8 times more likely to use transit as the average resident, while white residents are only 0.8 times as likely to take transit. Very low-income riders are two times as likely to use transit as the average resident, and higher-income households are only 0.6 times as likely.



Image source: GPCOG

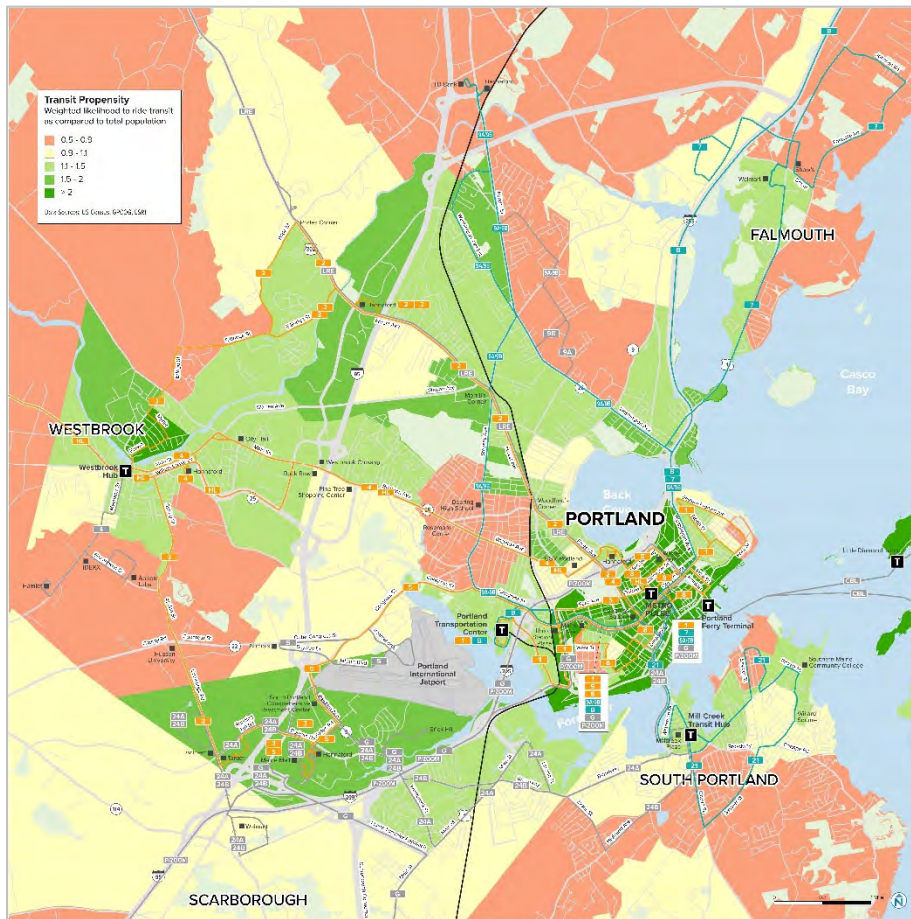
In the Greater Portland region, residents of a few key areas have a higher propensity to use transit than the average resident, and these areas are shown on the maps below in green. These areas include:

- Most of Portland, particularly on the Portland Peninsula
- Much of South Portland
- Much of Westbrook

- Downtown Biddeford
- Parts of Saco
- Much of Old Orchard Beach

Conversely, the residents of most areas have a lower propensity to take transit. These areas are shown in pink and red on the maps.

Portland Area Population Relative Propensity to Use Transit



Biddeford-Saco-Old Orch. Beach Population Relative Prop. to Use Transit



EMPLOYMENT-BASED DEMAND

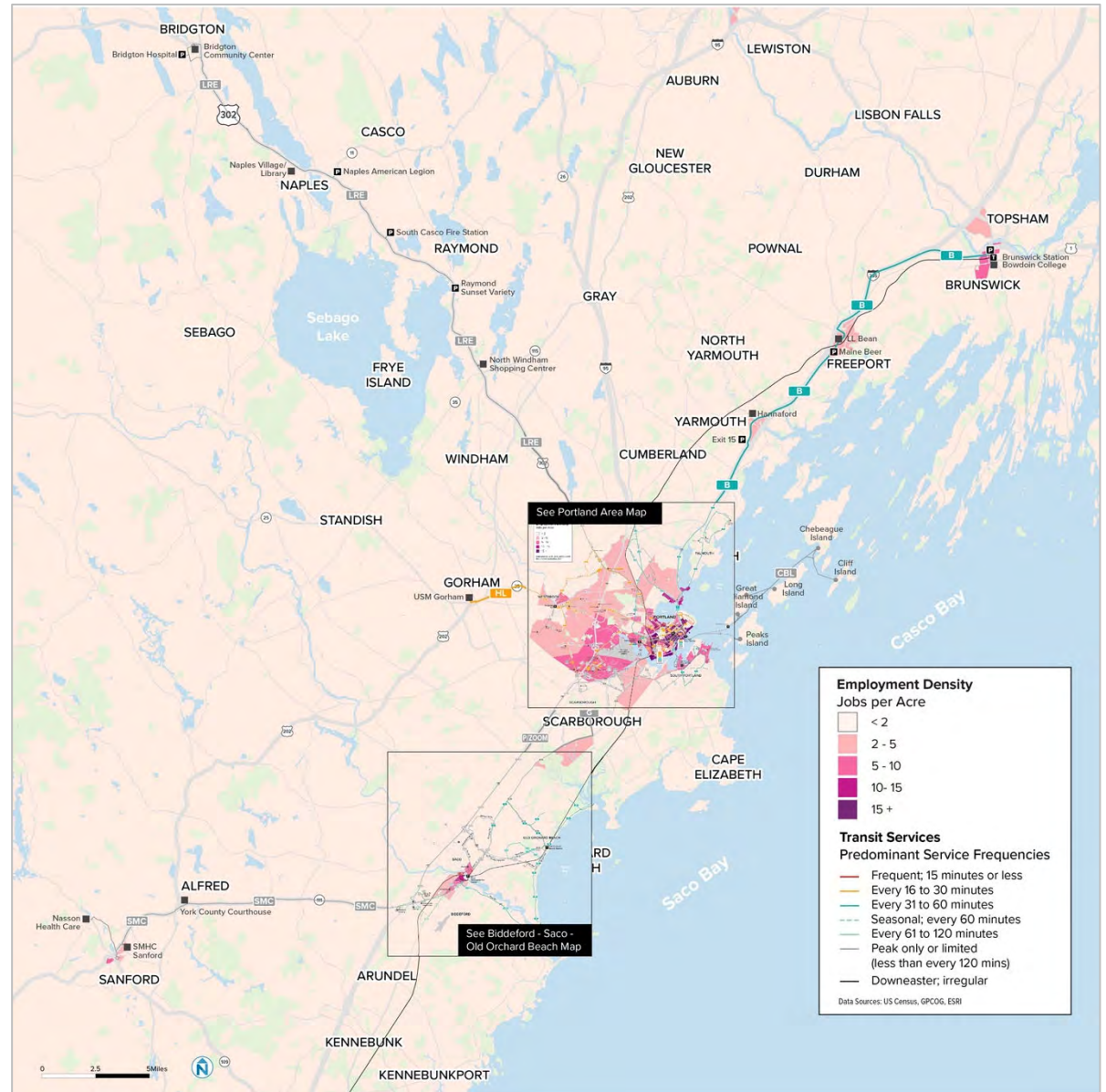
Employment Density

The highest employment densities are in the Portland and Biddeford-Saco-Old Orchard Beach areas.

Commutes are one of the most common and consistent reasons riders take transit. As a result, employment density is another major source of transit demand. Employment density is also an important indicator of demand because it is one of the easiest ways to represent other types of potential travel activity as well; where restaurant and retail employees commute to is also where their customers are traveling, for example. As densities increase, the demand for transit grows, particularly for more frequent service.

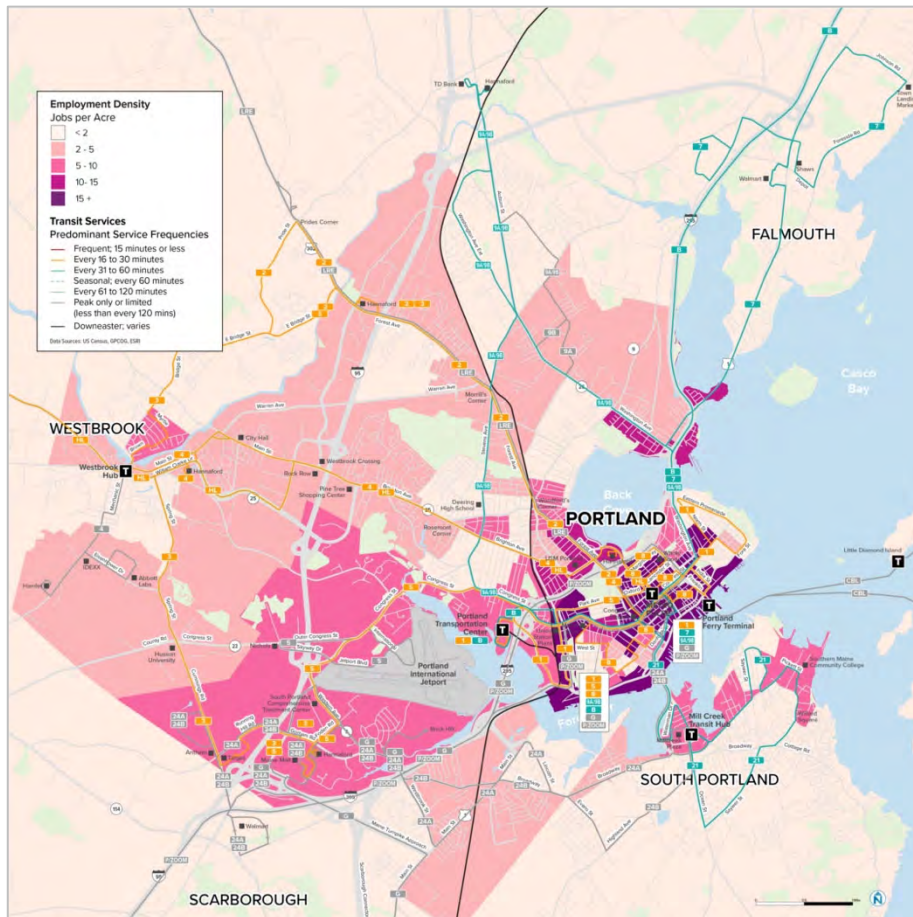
The highest employment densities in the Greater Portland region are very concentrated in the Portland area and the Portland Peninsula, specifically. There are smaller concentrations of employment in the Biddeford-Saco-Old Orchard Beach area, and in Brunswick, Freeport, Yarmouth, Scarborough, and Sanford.

Greater Portland Region Employment Density



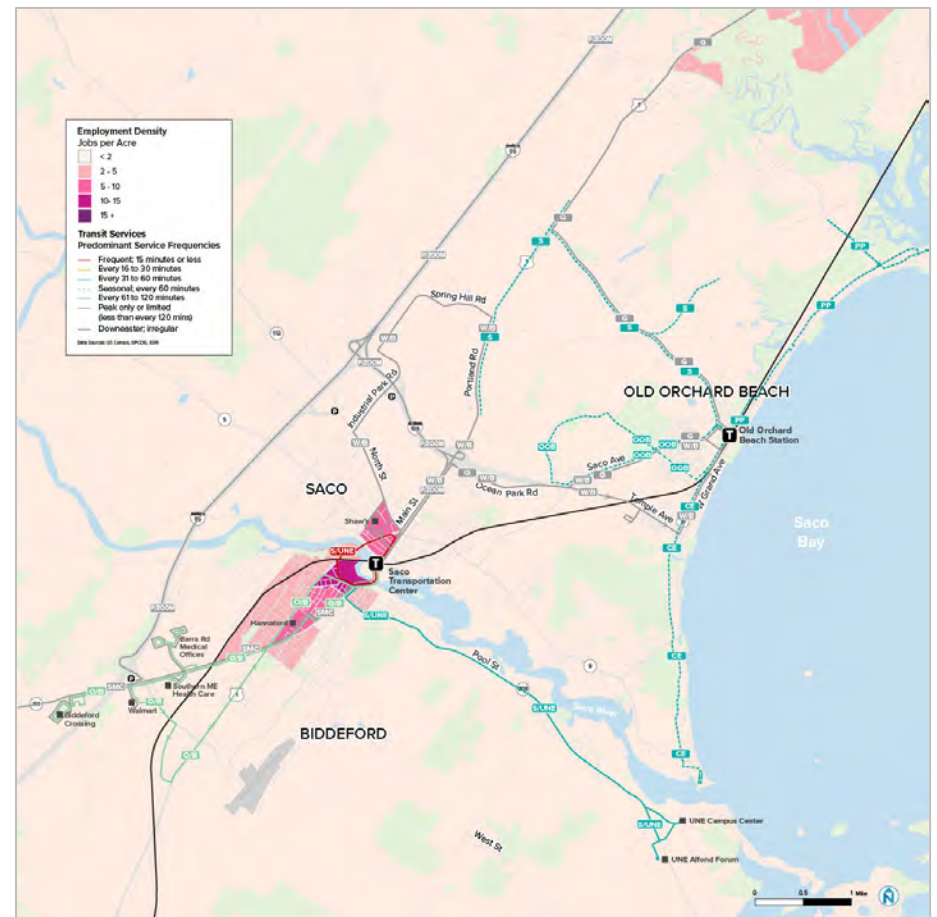
In the Portland area, employment densities are highest on the Portland Peninsula, particularly in Old Port/Downtown and the Valley Street/Maine Medical Center (MMC) area. They are also high in Portland's East Deering and Oakdale neighborhoods. Employment densities are much lower in other areas but still significant on the east side of South Portland, in the Maine Mall area, and northwest of the Jetport.

Portland Area Employment Density



In the Biddeford-Saco-Old Orchard Beach area, employment is most heavily concentrated in downtown Biddeford and downtown Saco, and along US Route 1 in Scarborough. Elsewhere, employment densities are very low. This includes the many areas in Saco and Biddeford where there are industrial parks, as employment is spread relatively thinly throughout these parks. Employment density likely increases considerably in Old Orchard Beach in the summer.

Biddeford-Saco-Old Orchard Beach Employment Density



KEY ACTIVITY CENTERS

Key locations for transit demand are those that typically generate high numbers of transit trips, or trips made by riders with few other travel options. In many cases, these key destinations are the same places that auto and active transportation users travel to, such as grocery stores and major employment centers. Other types of destinations, such as social services, are also heavily frequented by transit riders.

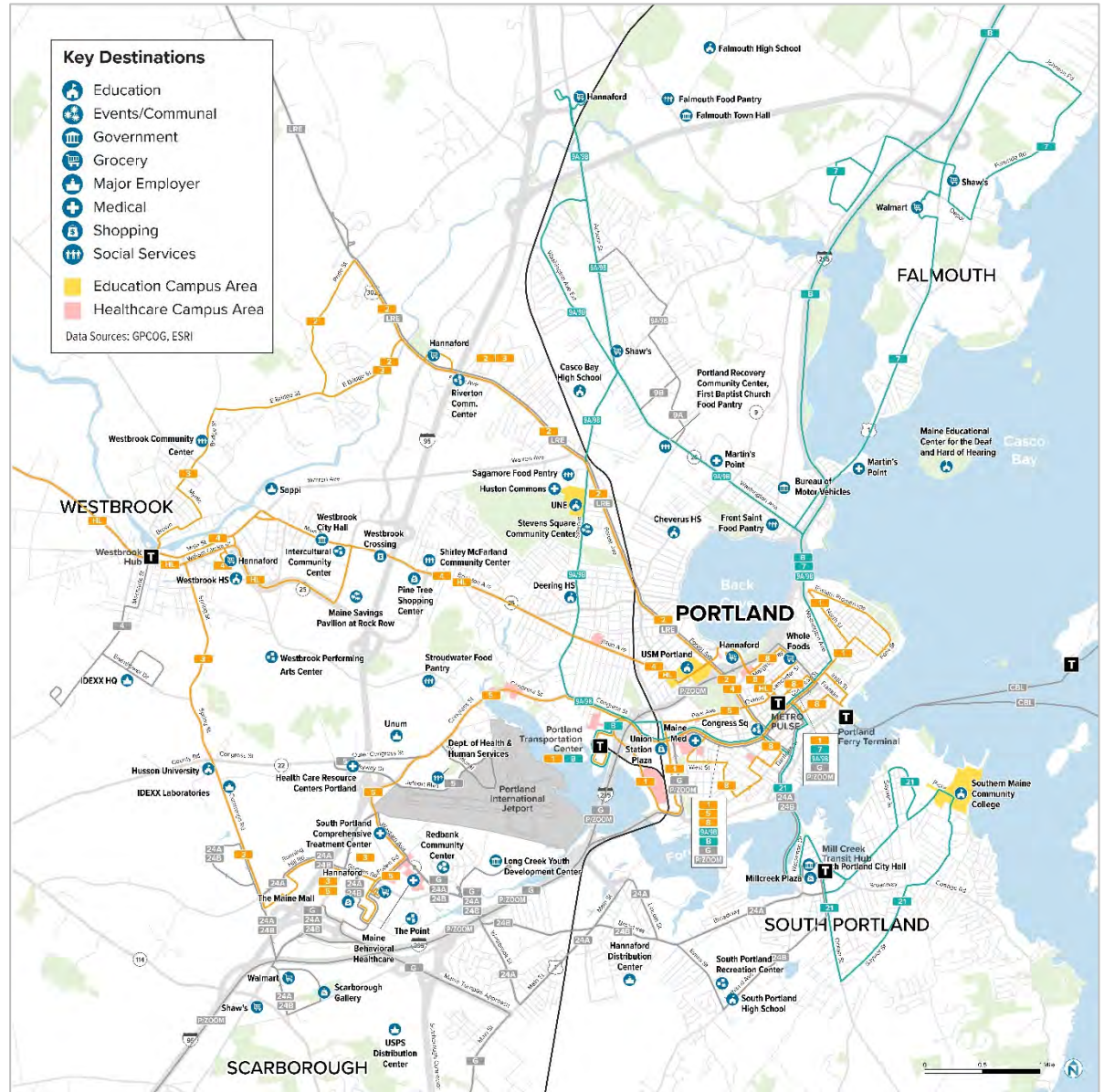
Key activity centers in the Greater Portland region are heavily concentrated on the Portland Peninsula, where shopping, major employment, medical, government, and social service organizations are clustered. Social services, in particular, are concentrated in Portland's Bayside neighborhood.

Maine Medical Center



Image source: "Maine Medical Center - Level 1 Hospital in Portland, ME, Main Entry" by Medic454 CC BY SA 4.0.

Key Activity Centers in Portland Area



Outside downtown Portland, there are clusters of key activity centers:

- In the Maine Mall area
- In South Portland's West End and Knightville neighborhoods
- Near MaineHealth facilities on US Route 1 in Scarborough
- In Saco and Biddeford
- In downtown Sanford and along Main Street/Route 109
- In downtown Brunswick

Key transit locations that are clustered together can usually be efficiently served with fixed-route transit. However, key locations that are isolated typically cannot be efficiently served with fixed-route transit and are better served with social service or specialized transportation. Examples of these types of locations include:

- The Westbrook Community Center
- Healthcare facilities on Barra Road in Biddeford
- Isolated employment sites like the Unum campus in Portland

Key Activity Centers in Biddeford-Saco-Old Orchard Beach



COMPOSITE UNDERLYING DEMAND

The previous sections described how population density, socioeconomic characteristics, employment density, and activity centers separately produce demand for transit. Looking at them combined, however, is the best way to get a complete understanding of the underlying demand, as none of the individual measures paint the entire picture.

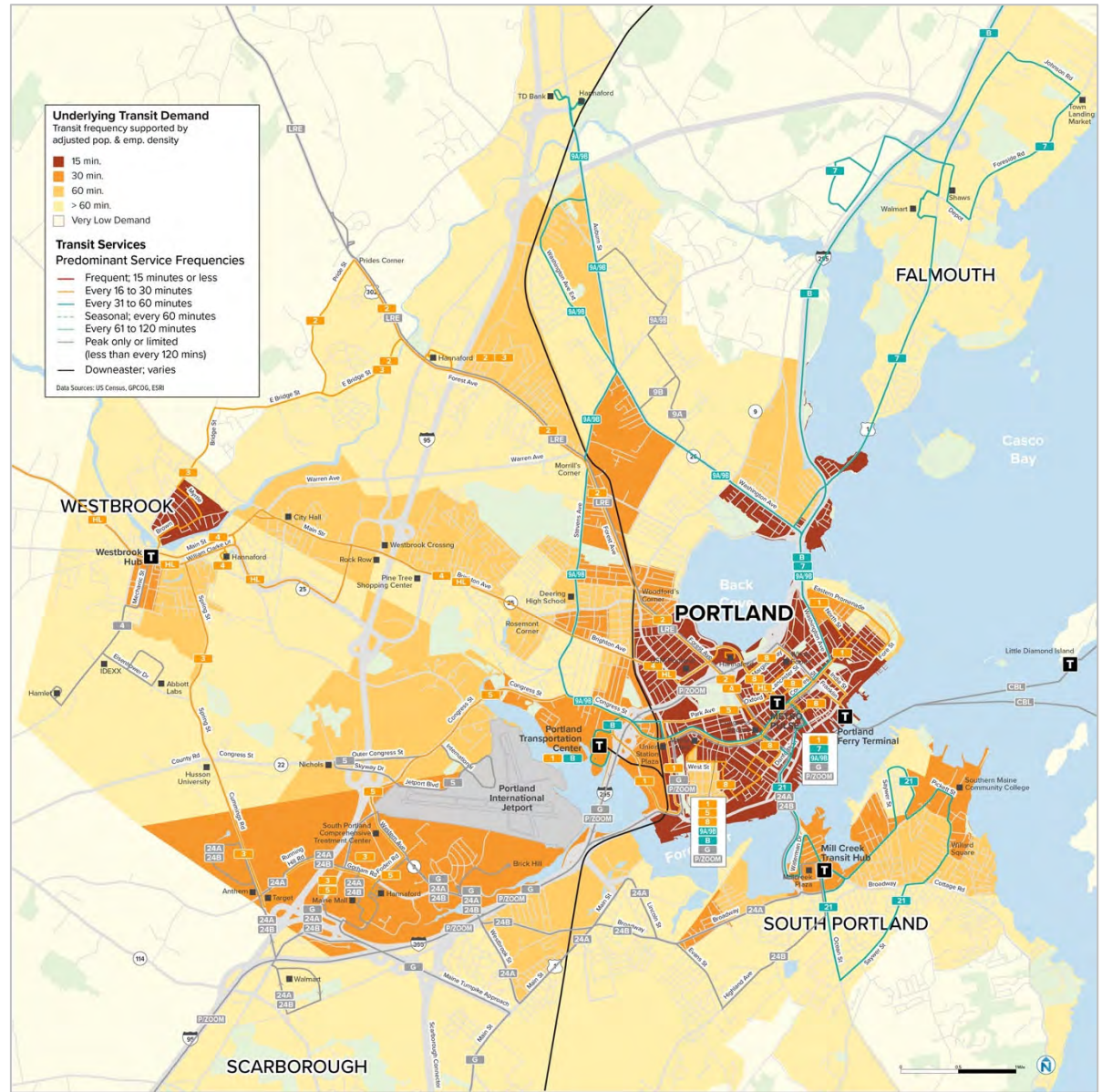
Portland Area

Demand is moderate to high in many areas.

The overall underlying demand for transit is highest in Portland, with demand concentrated on the Portland Peninsula, Portland's Washington Avenue and Forest Avenue corridors, and downtown Westbrook. These areas are already served by some of the region's most frequent services, but there appears to be underlying demand for more frequent service.

Demand is also relatively high in South Portland in the Maine Mall/Redbank Village area, and the Knightville and Willard Square areas of South Portland. Most of these areas are served by South Portland Bus Service (SPBS) 24A and 24B Maine Mall routes, which only operate infrequently.

Transit demand is highest on the Portland Peninsula, but is also high in many other areas



There are also some areas with fixed-route transit where the demand for transit is low. These include:

- All of Falmouth, except the Walmart and Shaw's
- Most of South Portland south of Broadway
- Westbrook, between Cumberland Street and Forest Avenue

Ridership in these areas is very low, which matches the demand analysis in this report. If service in these places is to be maintained, alternative service models, such as microtransit, should be considered. Potential microtransit services could include:

- Falmouth, with service focused on the Falmouth Walmart
- Parts of Westbrook, with service focused on the Westbrook Hub
- South Portland south of Broadway, with service focused on the Mill Creek Transit Hub

Ridership demand on the Casco Bay islands is unique, as most island residents must take transit to access the mainland. For many island residents, transit is a lifeline service.

Biddeford, Saco, and Old Orchard Beach Area

Demand ranges from high to very low.

The Biddeford-Saco-Old Orchard Beach urban area is smaller and less dense than much of Portland. Year-round underlying demand is strongest in and around

Underlying demand is highest in and around downtown Biddeford and Saco



downtown Saco and Biddeford and the area’s major destinations such as supermarkets, Walmart, Biddeford Crossing, and the University of New England. Year-round demand is moderate in Old Orchard Beach. Demand is low to very low in other areas, including nearly all the area served by Biddeford-Saco-Old Orchard Beach (BSOOB) Transit’s Route 52 White/53 Blue.

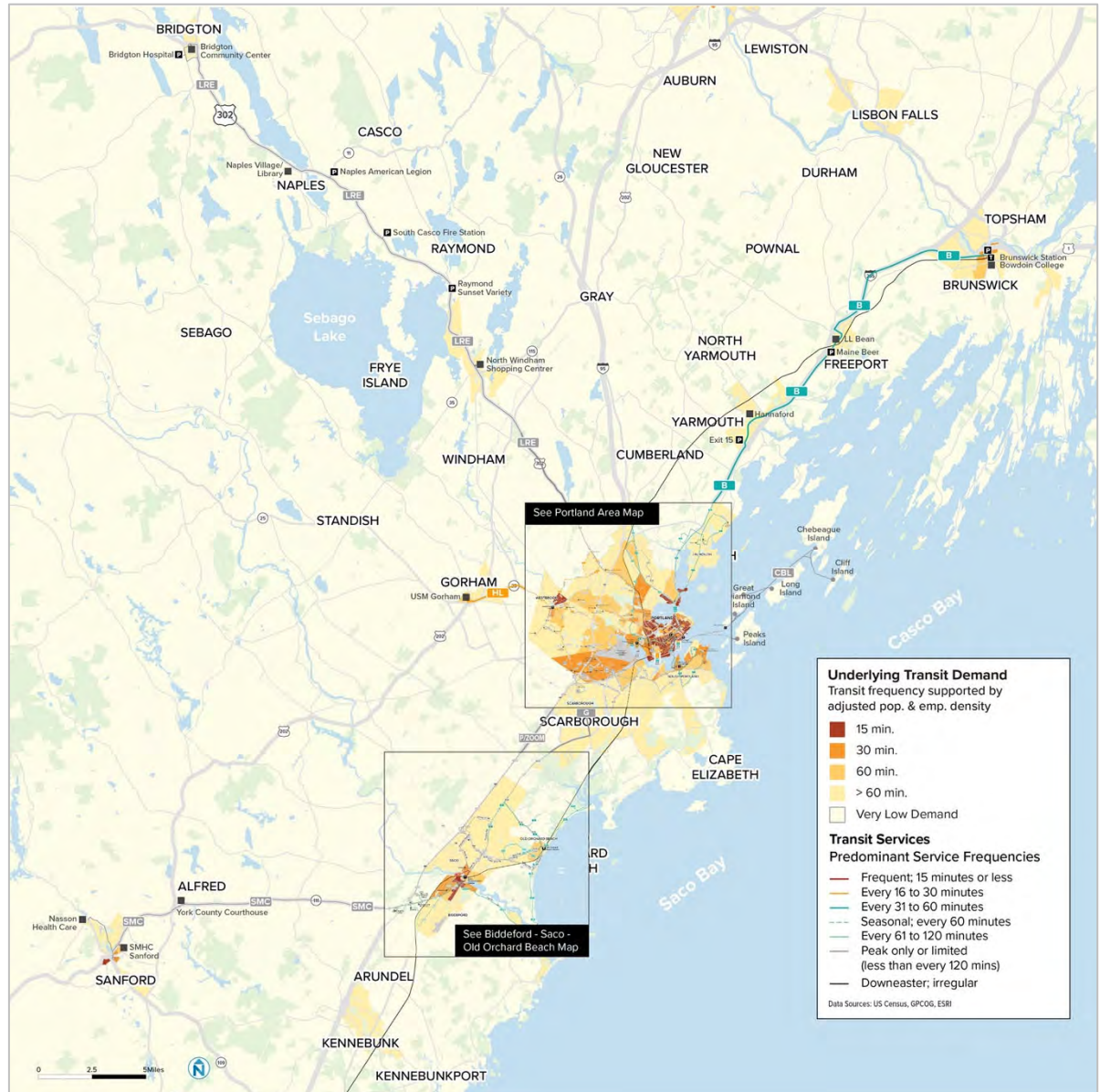
Although limited tourism data are available, we know that Old Orchard Beach’s population swells by over 700% in summer, which creates significant demand for BSOOB Transit’s seasonal services. Most of this demand appears to be focused in Old Orchard Beach.

Other Communities

There is some demand in small downtowns but demand in most areas is very low.

Although much of the remaining Greater Portland region is very low-density, there are pockets of relatively high composite transit demand outside Portland and Biddeford-Saco-Old Orchard Beach. These include Brunswick, Freeport, Yarmouth, the University of Southern Maine campus in Gorham, and Sanford. These areas are served by Greater Portland Metro’s (METRO) BREEZ and Husky Line, and York County Community Action Corporation’s (YCCAC’s) Southern Maine Connector.

Outside of Portland and Biddeford-Saco-Old Orchard Beach, transit demand is low in all but a few key communities



TRAVEL FLOWS

Travel flows are heavily focused on Portland.

For transit to be effective, it must take people from where they are to where they want to go. In Greater Portland, the highest volumes of commute trips (by all modes) are:

- Within Portland
- Between Portland and outlying communities
- Within Biddeford-Saco-Old Orchard Beach

Other significant flows include:

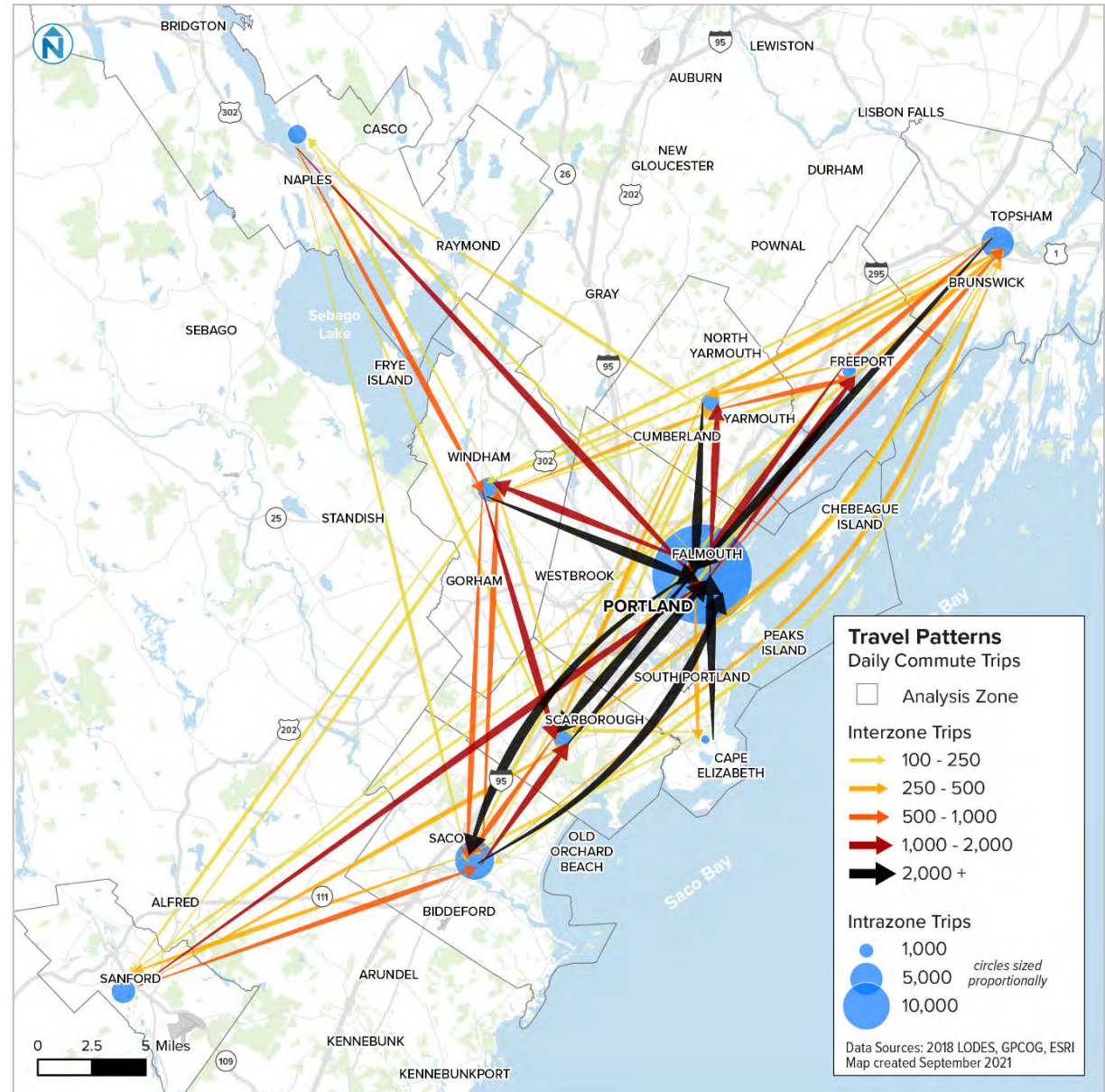
- The Biddeford-Saco and Gorham/Windham areas to Scarborough

It is also notable that many people reverse commute from Portland to Biddeford-Saco-Old Orchard Beach and Scarborough.

In the Portland area, and as shown on the map on the next page, most commute flows are from residential neighborhoods to downtown Portland. In addition:

- Relatively few commute trips are made to and from Falmouth.

Greater Portland Regional Commute Flows



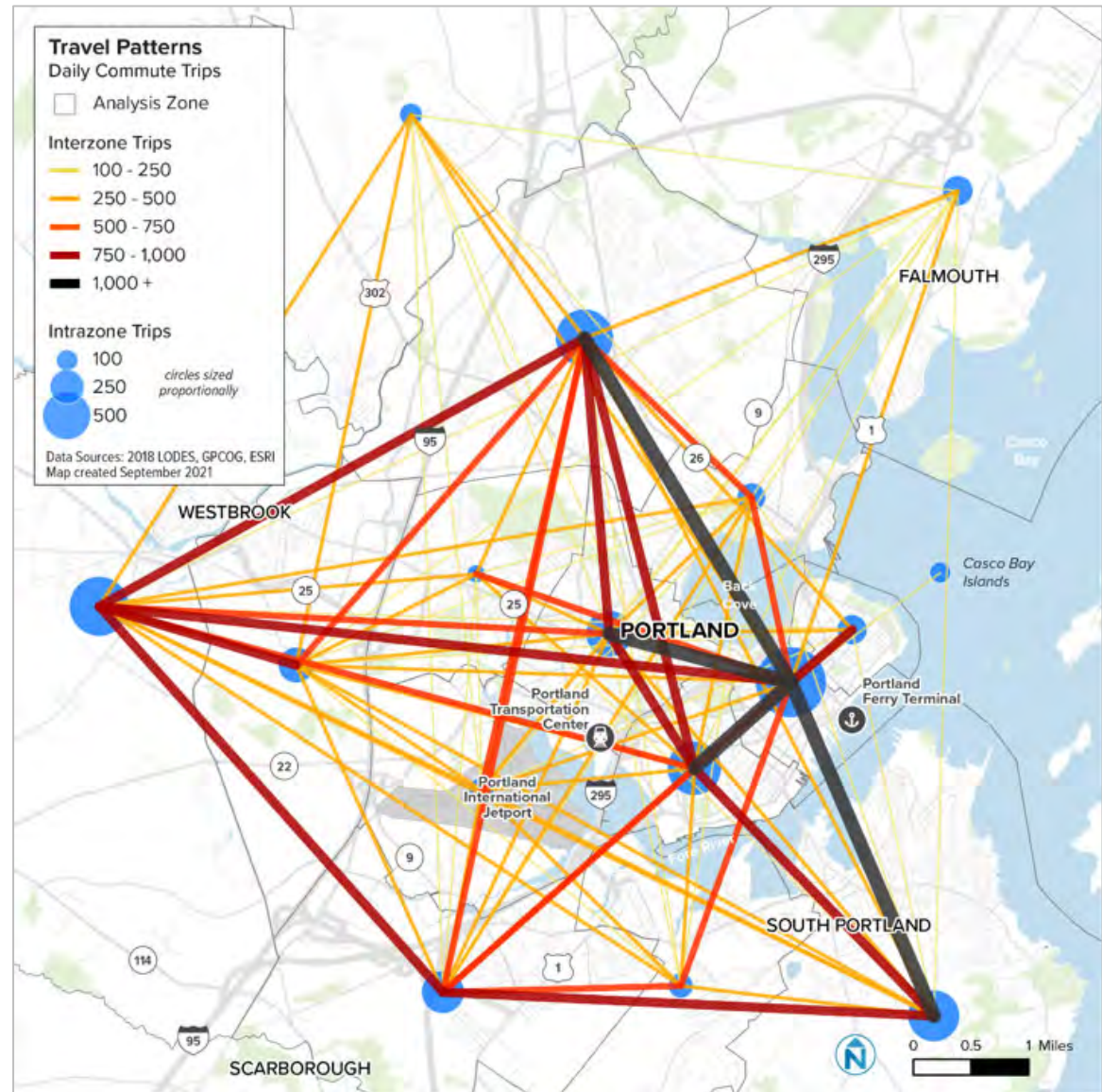
- A similar number of trips are made between the Westbrook and North Deering areas as between Westbrook and the Portland Peninsula.
- More trips are made between the Scarborough and South Portland areas, and the Scarborough and Westbrook areas, than between the Scarborough area and downtown Portland.

TOURISM

The summer tourist season is a major driver of transit demand in Greater Portland.

Tourism plays a major role in travel demand in Maine and especially in the Greater Portland region. In 2018, over 37 million people visited Maine. In the Greater Portland region, many of those visitors travel to area cities, beaches, and the Lakes Region. Old Orchard Beach, in particular, has a population growth of over 700% in summer. The Casco Bay islands also see dramatic summer population increases. All these visitors travel, and many choose—or want—to use public transit. For the vast majority of Casco Bay island tourists, ferry is the only means of transportation to and from the islands.

Portland Area Travel Flows



SUMMARY

The underlying demand for transit in the Greater Portland region is heavily concentrated in the Portland, Westbrook and South Portland areas, in and around downtown Saco and Biddeford, and at key destinations within and near these areas. In these areas, underlying demand ranges from moderate to high. Elsewhere, there are smaller pockets of moderate demand, including in Old Orchard Beach, Brunswick, Freeport, Yarmouth, Gorham, and Sanford. Beyond these areas, the underlying demand for transit is very low.

Areas that have moderate to high demand for transit all have fixed-route bus service today, and some are also served by other modes. However, with a few exceptions, the level of service provided is not adequate to meet underlying demand. As will be discussed in the next chapter, the most frequent consistent routes operate every 30 minutes. Especially on the Portland Peninsula and other parts of Portland and Westbrook, there is demand for service that operates as frequently as every 15 minutes. There is also demand for more frequent service along South Portland's Broadway corridor.

There are also some areas that have only low or very low underlying demand for transit that are currently served with fixed-route transit. These include Falmouth, Westbrook between Cumberland Street and Forest Avenue, much of South Portland south of Broadway, and most of Saco. In these areas, alternative service approaches such as microtransit could provide more convenient service at similar or lower costs.

Note: transit demand for some non-local transit services, like long-distance rail and ferries, can be very different from that for local transit services. Discussion in this chapter has focused primarily on local transit service, and conclusions drawn may not be fully applicable to rail and ferry service.



Image source: Nelson\Nygaard

3 THE REGION'S TRANSIT SERVICES

The Greater Portland region is primarily served by seven public transit providers: Greater Portland Metro (METRO), South Portland Bus Service (SPBS), Biddeford-Saco-Old Orchard Beach Transit (BSOOB Transit), Casco Bay Lines, the Northern New England Passenger Rail Authority (NNEPRA), Regional Transportation Program (RTP), and York County Community Action Corporation (YCCAC). These agencies provide local, regional, and express bus service, ferry service, intercity rail service, and paratransit and human-service transportation.

	<p>The Greater Portland Transit District, which operates under the name Greater Portland Metro (METRO), is the region's largest transit provider. METRO provides local and express bus service in many communities in the Portland area.</p>
	<p>South Portland Bus Service (SPBS) provides fixed-route service within South Portland with connections to and from Portland and the Scarborough Gallery mall district.</p>
	<p>Biddford-Saco-Old Orchard Beach Transit (BSOOB Transit) provides year-round and seasonal fixed-route bus service in its namesake member communities, as well as service to and from Scarborough, South Portland, and Portland.</p>
	<p>The Casco Bay Island Transit District, also known as Casco Bay Lines (CBL), provides passenger, vehicle, and freight ferry service between Portland and the Casco Bay islands.</p>
	<p>Amtrak Downeaster, which is administered by the Northern New England Passenger Rail Authority (NNEPRA), provides intercity rail service between Brunswick and Boston, with stops in the Greater Portland region in Portland, Freeport, Old Orchard Beach (seasonally), and Saco.</p>
	<p>Regional Transportation Program (RTP) provides demand-response and volunteer-driver service in Cumberland County and deviated fixed-route bus service between the Lakes Region and Portland. RTP also provides paratransit service for METRO and SPBS.</p>
	<p>York County Community Action Corporation (YCCAC) provides demand-response and volunteer driver service in York County and operates the Southern Maine Connector deviated fixed-route bus between Sanford's Springvale neighborhood and Saco.</p>

TRANSIT SERVICES

The region's seven major transit agencies provide a variety of local bus, express bus, deviated fixed-route bus, ferry, rail, and demand-response services.

Local Bus

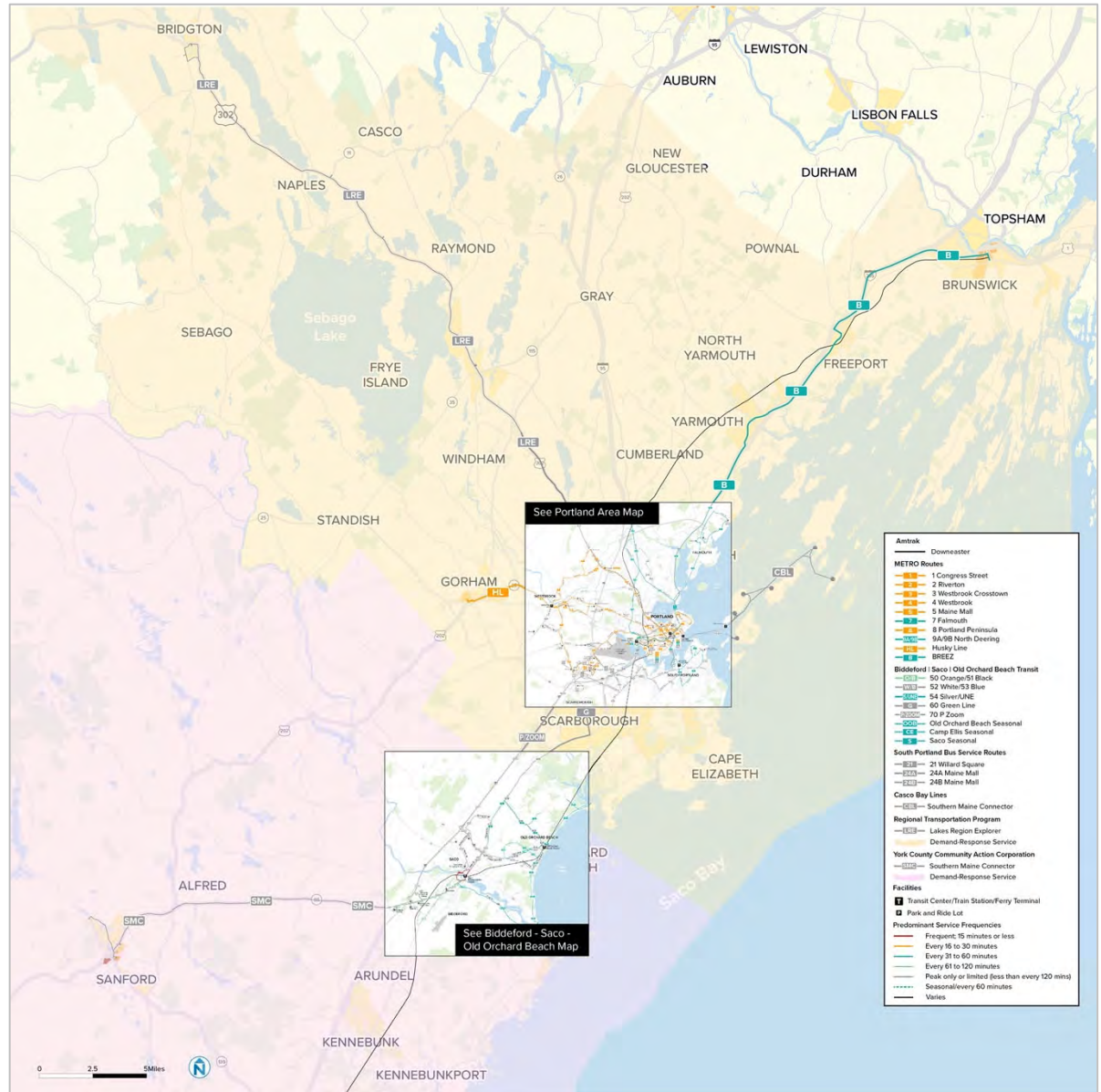
METRO, SPBS, and BSOOB Transit all provide local bus service:

METRO operates nine local bus routes, all of which operate seven days a week. These routes serve Falmouth, Gorham, Portland, South Portland, and Westbrook. METRO's routes include:

- 1 Congress Street
- 2 Forest Avenue
- 3 Portland - Westbrook – S. Portland
- 4 Westbrook
- 5 Maine Mall
- 7 Falmouth
- 8 Peninsula Loop
- 9A/9B North Deering/West Falmouth
- Husky Line

Service is most heavily concentrated on the Portland Peninsula and all routes except

Greater Portland Region Transit Services



Route 3 operate to, from, or via the METRO PULSE transit center on Elm Street near Monument Square in downtown Portland.

South Portland Bus Service (SPBS)

operates three routes, all of which travel between South Portland and Portland, with a focus on service to downtown Portland and the Maine Mall:

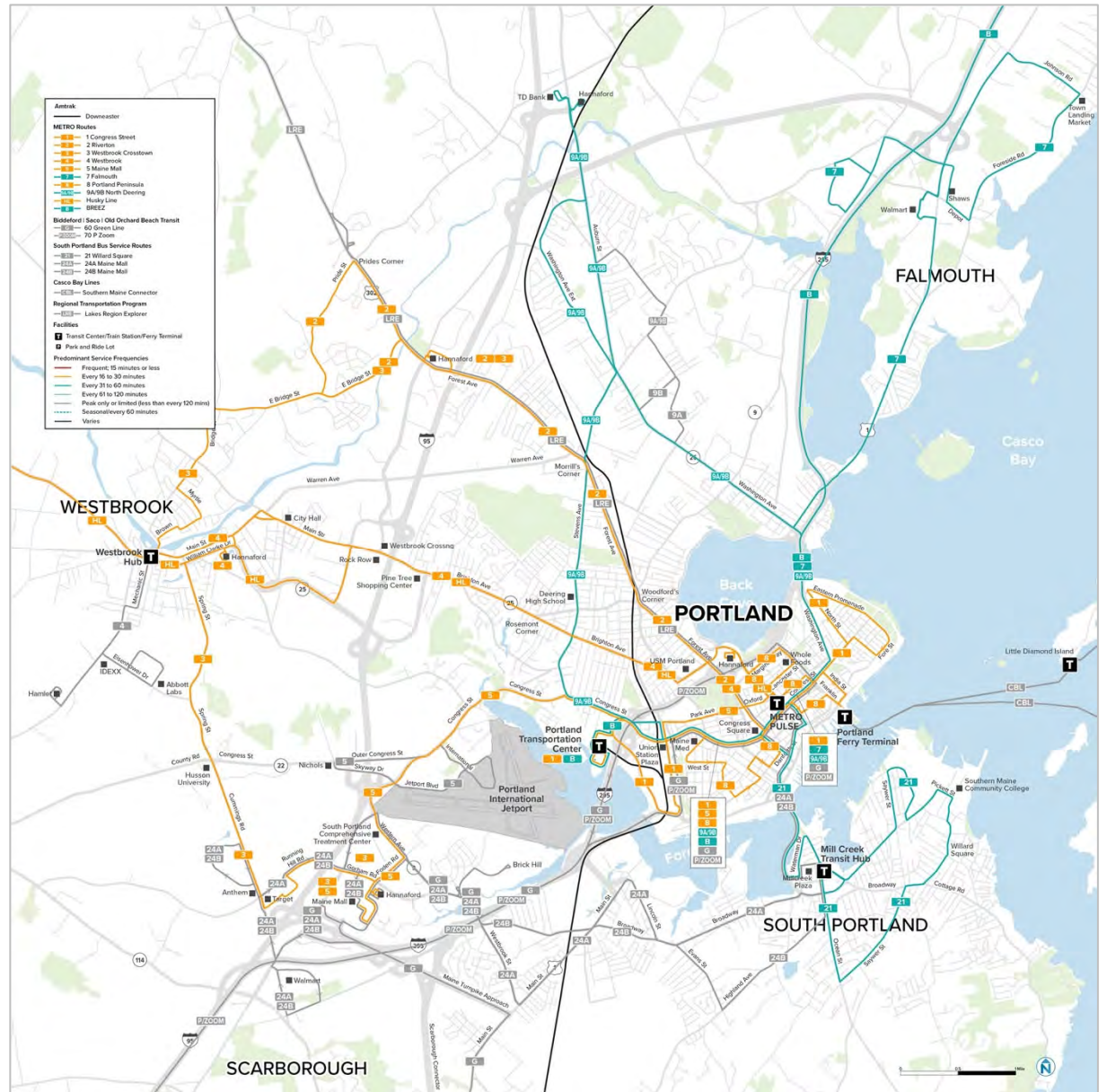
- 21 Willard Square
- 24A Maine Mall
- 24B Maine Mall

SPBS' Mill Creek Transit Hub



Image source: GPCOG

Portland Area Transit Services



Biddeford-Saco-Old Orchard Beach Transit (BSOOB Transit) operates four year-round local fixed routes, all of which operate seven days a week and are focused on service to and from the Saco Transportation Center:

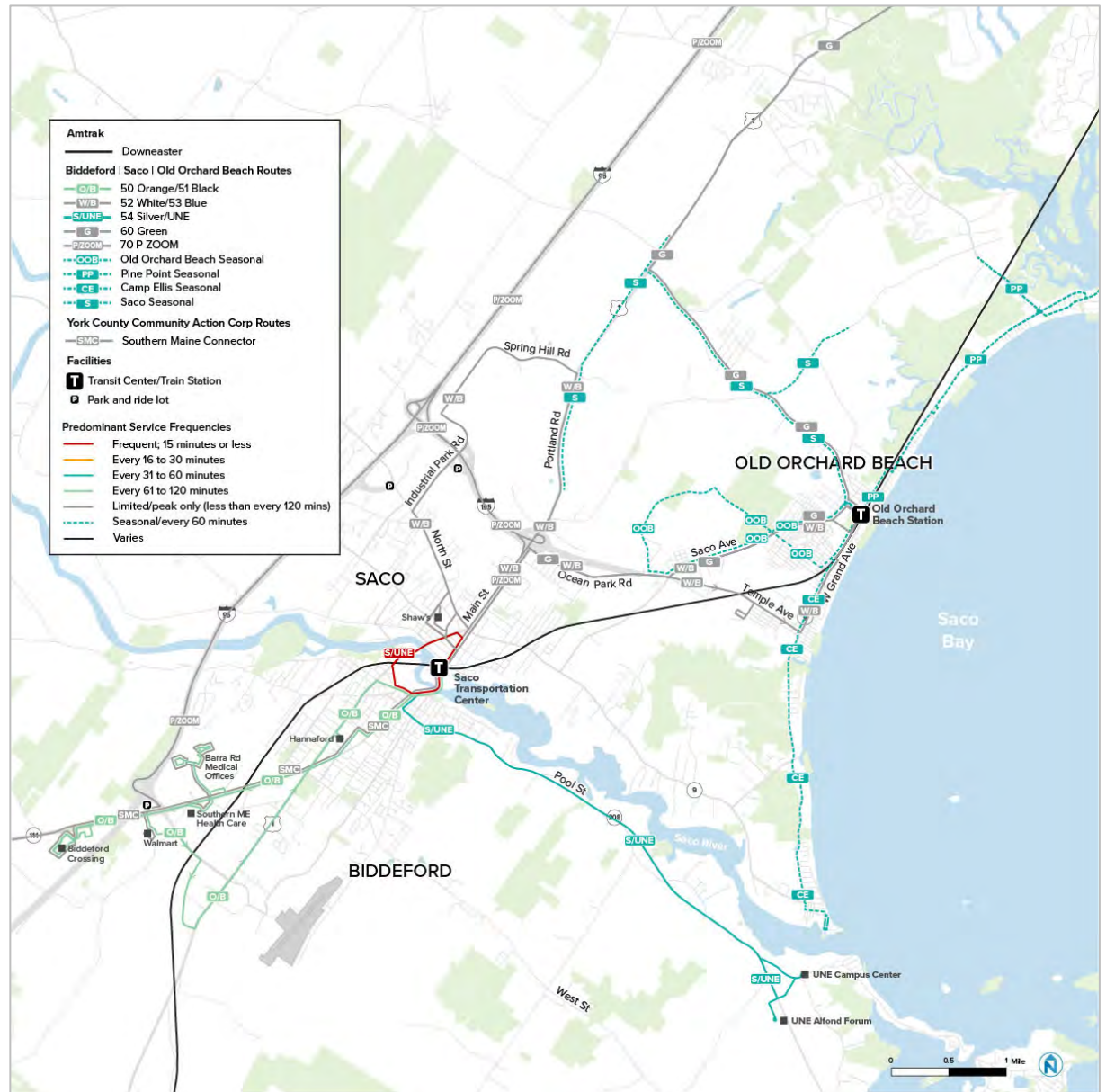
- 50 Orange/51 Black
- 52 White/53 Blue
- 54 Silver/UNE
- 60 Green

BSOOB Transit also operates five seasonal trolley routes. These routes serve Old Orchard Beach, Scarborough, and Saco and are focused most heavily on serving Old Orchard Beach seasonal tourism. Each operates seven days a week between mid-June and Labor Day, with limited service in May, early June, and September:

- Camp Ellis
- Old Orchard Beach 1
- Old Orchard Beach 2
- Pine Point
- Saco

BSOOB Transit buses also deviate to provide ADA paratransit trips.

Biddeford-Saco-Old Orchard Beach Transit Services



BSOOB Transit Buses at Saco Transportation Center



Image source: Nelson\Nygaard

Express Bus

The region is served by two express bus routes that provide regional, limited-stop service:

METRO operates the BREEZ, which operates between Brunswick and Portland with stops in Freeport and Yarmouth.

BSOOB Transit operates Route 70 Purple/ZOOM, which provides weekday service between Saco, Biddeford, and Portland.

Deviated Fixed-Route Bus

RTP and YCCAC each operate deviated fixed-route bus service along a designated route but also make reservation-based deviations:

RTP operates the Lakes Region Explorer between Portland and Bridgton via Naples, Casco, Raymond, Windham, and Westbrook.

YCCAC operates the Southern Maine Connector between Sanford's Springvale neighborhood and Saco, with stops in downtown Sanford, Alfred, and Biddeford.

Ferry

Casco Bay Lines ferries provide year-round passenger, vehicle, and freight service between the Casco Bay Ferry Terminal in Portland and the six regulated Casco Bay islands. Four ferries (and one spare) provide service to Peaks, Little Diamond, Great Diamond, Long, Chebeague, and Cliff islands. All routes operate seven days a week. Seasonal service is also provided to Bailey Island, although this service has been temporarily discontinued due to the COVID-19 pandemic. These ferries provide a lifeline transportation link between the islands and the mainland.

Casco Bay Lines Ferry



Image source: Casco Bay Lines

Rail

Amtrak's Downeaster provides intercity rail service between Brunswick and Boston with stops in the Greater Portland region in Freeport, Portland, Old Orchard Beach (seasonally), and Saco.

Demand Response

Both RTP and YCCAC provide demand-response services that are available to the general public. These services require reservations.

RTP provides demand-response service throughout Cumberland County, under the service name RTP Rides. RTP Rides is available to the general public, with fare discounts for seniors, low-income people, and people with disabilities. Reservations must be made 48 hours in advance, except for complementary paratransit trips.

YCCAC provides multiple demand-response services to transport people to cancer care facilities, medical and other appointments, educational opportunities, and shopping.

Volunteer Driver

Both RTP and YCCAC provide volunteer-driver services, where volunteers use their own vehicles to provide demand-response service and are reimbursed based on mileage.

Fixed-Route Complementary Paratransit

RTP provides complementary paratransit service for METRO and SPBS routes, and throughout Cumberland County. This service is called ADAPT (Americans with Disabilities Act Paratransit). BSOOB Transit provides complementary paratransit by deviating its fixed-route buses on request.

NETWORK DESIGN

Most transit services in the Greater Portland region are designed to operate to, from, or via one or more transit centers.

Each of Greater Portland's transit providers design their fixed-route services to operate to, from, or via a transportation center:

METRO operates a largely radial system, with nearly all service operating to, from, or via the PULSE.

SPBS service is designed primarily to connect South Portland residents with downtown Portland via the PULSE and Mill Creek Transit Hub, as well as with the Maine Mall.

BSOOB Transit's year-round services largely operate radially to and from the Saco Transportation Center, plus express service to Portland. Its seasonal services operate radially to and from downtown Old Orchard Beach.

RTP's single deviated fixed route, the Lakes Region Explorer, operates to and from the PULSE.

YCCAC's Southern Maine Connector operates to and from the Saco Transportation Center.

Casco Bay Lines ferry routes all operate to and from the Casco Bay Ferry Terminal.

The **Downeaster** operates via the Portland Transportation Center.

This network design facilitates transfers among routes provided by the same provider, and often between systems. However, there are also missing links, the most significant of which are between the Casco Bay Ferry Terminal, the PULSE, and the Portland Transportation Center. Although connections can be made between these locations, they are not particularly convenient due to relatively infrequent service.

SERVICE DESIGN

Many local services prioritize service coverage over convenience.

Note: Discussion in this section is primarily focused on land transit and is not as applicable to ferry and rail service.

There are two fundamentally different ways to provide transit service. The first is to focus it in areas where demand is highest and make it as convenient as possible. This is called **demand-based service**. The second is to provide service to as many places as possible. This requires service to be spread much more thinly, meaning less frequent service and service for fewer hours. It also typically means that routes are designed to be more circuitous, to serve as many areas as possible. This is called **coverage-based service**.

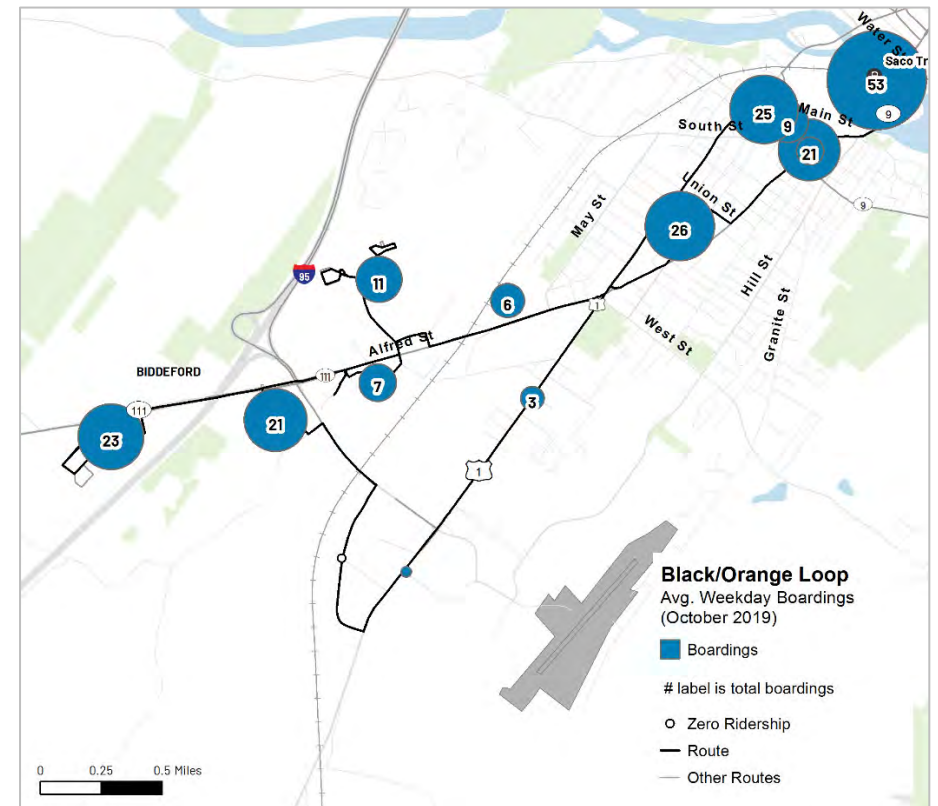
Coverage-based services are generally available to more people. However, because the service is less convenient, fewer people actually use it. Demand-based services are generally available to fewer people, but because they are more convenient, more people use them.

Most transit systems provide both types of service, but a key to providing great transit service is to provide the most appropriate types of service to different markets. A ‘family of services’ approach can help better match services with demand. For example, many transit systems are built around frequent local routes. Other services fill gaps, provide connections to the frequent network, and extend service coverage to lower demand areas.

Today, the Greater Portland region’s transit services lean more towards providing coverage-based service, which creates a gap in service quality in higher-demand areas. One example of a coverage route is BSOOB Transit’s Route 50 Orange/51 Black, which operates as a figure-eight with multiple deviations. As shown in the figure below, one leg of the figure-eight along US Route 1 has very low ridership,

and that service is provided largely so some service is available and not because there is significant demand in that area.

Service is provided along US Route 1 on BSOOB Transit’s Route 50 Orange/51 Black largely so service is available, and not due to demand



Note: Ridership data in this map are segment-based. The bubbles on the map indicate the general area in which passengers board the vehicle, not the precise location.

A second example is METRO Route 8 Peninsula Loop, which is used mostly by people travelling to and from Hannaford. Because Route 8 is so circuitous, buses take 50 minutes for each trip and, consequently, traveling between two places that are close together on this route can take a long time on transit.

A third example is METRO's Route 5 Maine Mall. Most Route 5 trips deviate to either Nichols or the Portland International Jetport. Boardings at stops on each of these deviations is relatively low, and they take through-passengers a significant distance out of their way.

METRO's Route 8 Peninsula Loop takes 50 minutes, end-to-end



METRO Route 5 Maine Mall's alignment includes two deviations to relatively low-ridership locations



SERVICE FREQUENCIES AND SPANS

The best way to make transit convenient is to make it frequent and operate when people need it.

People want transit to be convenient, and an essential element of convenience is frequency. This is because people want and need the flexibility to travel when they desire and on their own schedule. Infrequent service means long waits—both waiting for the bus and needing to get somewhere early because that is when the bus arrives.

The generally accepted definition of frequent local service is transit that arrives every 15 minutes or less. This allows people to make trips without planning them around a transit schedule. Frequencies of up to 30 minutes are moderately convenient. However, as frequencies lengthen to beyond 30 minutes, transit demand drops off significantly, as most people will choose other ways to travel. Beyond 60 minutes, demand decreases to the relatively few people without other options.

A major opportunity to make transit service in the Greater Portland region more convenient—and to attract more riders—will be to shift toward a demand-based service model. This will mean making service straighter and more direct, and minimizing deviations. This will make service faster, which is the improvement passengers generally want most. There are likely also opportunities to develop microtransit to expand the coverage network.

Service Frequencies

Most transit services in Greater Portland do not provide frequent service, and many bus routes operate very infrequently.

The most frequent route—part of BSOOB Transit’s Route 54 Silver/UNE—operates every 15 minutes, but irregularly. Only five routes—all operated by METRO—consistently operate every 30 minutes from the beginning of the AM peak to the end of the PM peak:

- Husky Line
- 1 Congress Street
- 2 Forest Avenue
- 4 Westbrook
- 5 Maine Mall

Two others fall just short:

- 3 Portland - Westbrook - S Portland, which operates every 30 to 36 minutes
- 8 Peninsula Loop, which provides service every 30 to 31 minutes

One BSOOB Transit year-round route (Route 54 Silver/UNE) switches between providing 15- and 45-minute service on one of its patterns, and one BSOOB Transit seasonal route (Old Orchard Beach 1) operates every 30 minutes from the beginning of the AM peak to the end of the PM peak.



Early AM Frequencies Before 6 AM



Most routes begin service before 6:00 AM

- Only two provide service every 30 minutes
- Most provide service every 31 to 60 minutes
- Four provide infrequent service

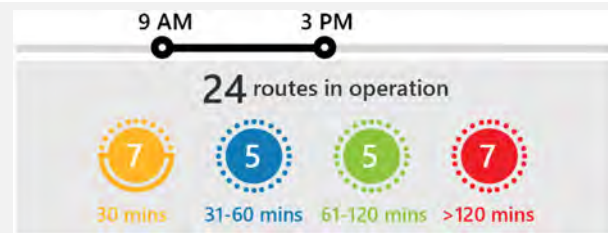


AM Peak Frequencies 6 AM - 9 AM



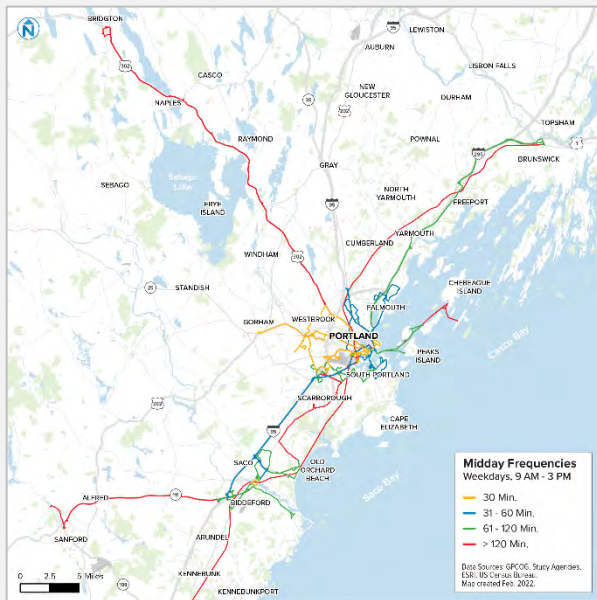
All 24 routes operate in the AM peak

- Nine provide service every 30 minutes
- Four provide service every 31 to 60 minutes
- 11 provide infrequent service



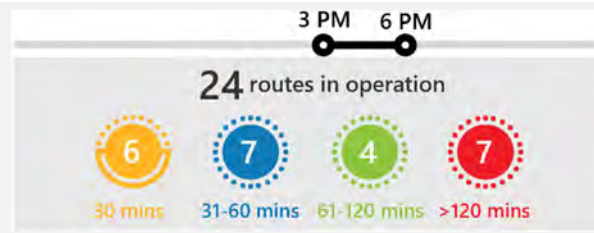
Midday Frequencies

9 AM – 3 PM



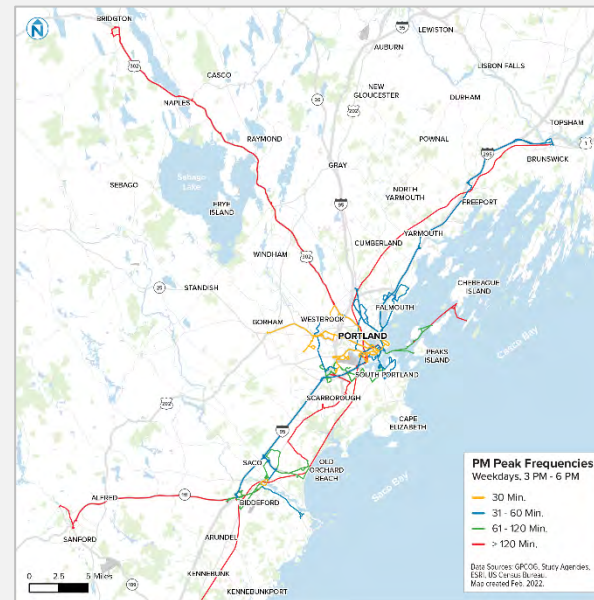
All 24 routes operate during the midday

- Seven provide service every 30 minutes
- Five provide service every 31 to 60 minutes
- 12, or about half of all routes, provide infrequent service



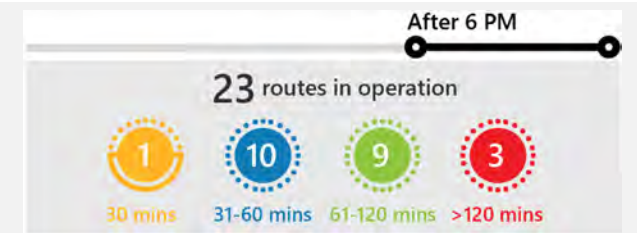
PM Peak Frequencies

3 PM – 6 PM



All 24 routes operate during the PM peak

- Six provide service every 30 minutes
- Seven provide service every 31 to 60 minutes
- 11, or nearly half of all routes, provide infrequent service



Evening/Night Frequencies

6 PM – 9 PM



23 routes operate after 6:00 PM

- Only one provides service every 30 minutes
- 10 provide service every 31 to 60 minutes
- 12, or about half of all routes, provide infrequent service

Two routes provide service every 30 to 60 minutes:

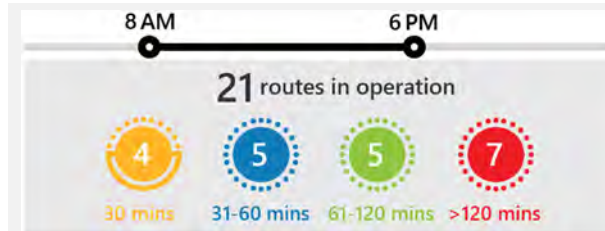
- METRO Route 9A/9B North Deering/West Falmouth, which provides service every 60 minutes during the midday (and every 30 minutes during the peaks)
- SPBS Route 21 Willard Square, which operates every 50 minutes in the AM peak and every 60 minutes in the midday and PM peak

One route, METRO Route 7 Falmouth, operates every 60 minutes. Eight routes operate less frequently than every 60 minutes and some operate less frequently than every two hours:

- SPBS routes 24A Maine Mall and 24B Maine Mall
- BSOOB Transit routes 50 Orange/51 Black, 52 White/53 Blue, 54 Silver/UNE, and 60 Green
- RTP Lakes Region Explorer
- YCCAC Southern Maine Connector

On weekends, service is less frequent.

- As on weekdays, no routes or lines provide consistently frequent service



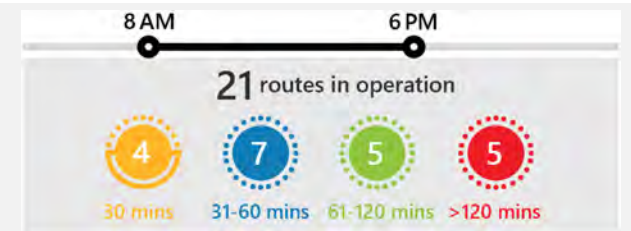
Saturdays

8 AM – 6 AM



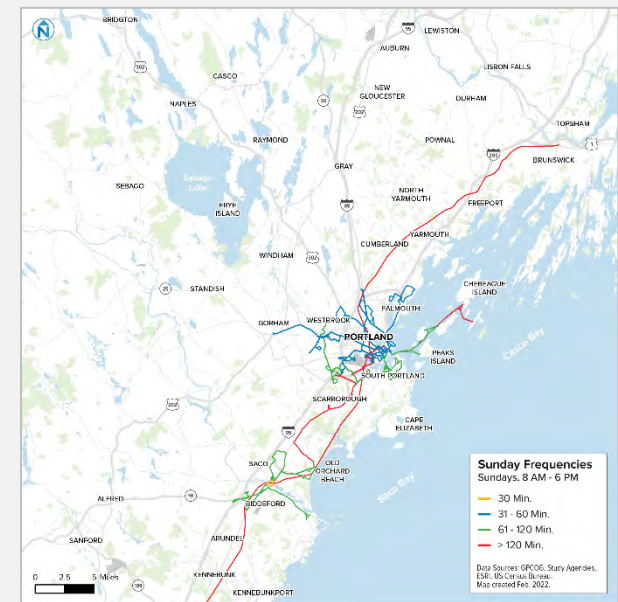
21 of 24 routes operate on Saturdays

- Only four METRO routes provide service every 30 minutes
- Most provide very infrequent service



Sundays

8 AM – 6 AM



21 of 24 routes operate on Saturdays

- Only four METRO routes provide service every 30 minutes
- Most provide very infrequent service

- Only four year-round routes operate every 30 minutes for most of the day
- Most BSOOB Transit seasonal routes only operate every 60 minutes
- About half of all routes operate less frequently than every 60 minutes
- As on weekdays, many routes operate less than every two hours for significant parts of the day

One of the most important improvements that can be made to Greater Portland region transit is to improve frequencies.

Hours of Service

Weekday and Saturday spans of service—or the hours that services operate in the Greater Portland region—are generally good.

Service that runs for a long period of time throughout the day is more convenient, as it allows people to travel when they want. While transit service in the Greater Portland region is generally infrequent, weekday and Saturday hours of service are generally good, while Sunday spans are more limited, especially in the case of METRO services.

Weekdays

On weekdays, 14 of 25 year-round routes begin service by 6:00 AM and operate until at least 10:00 PM:

METRO

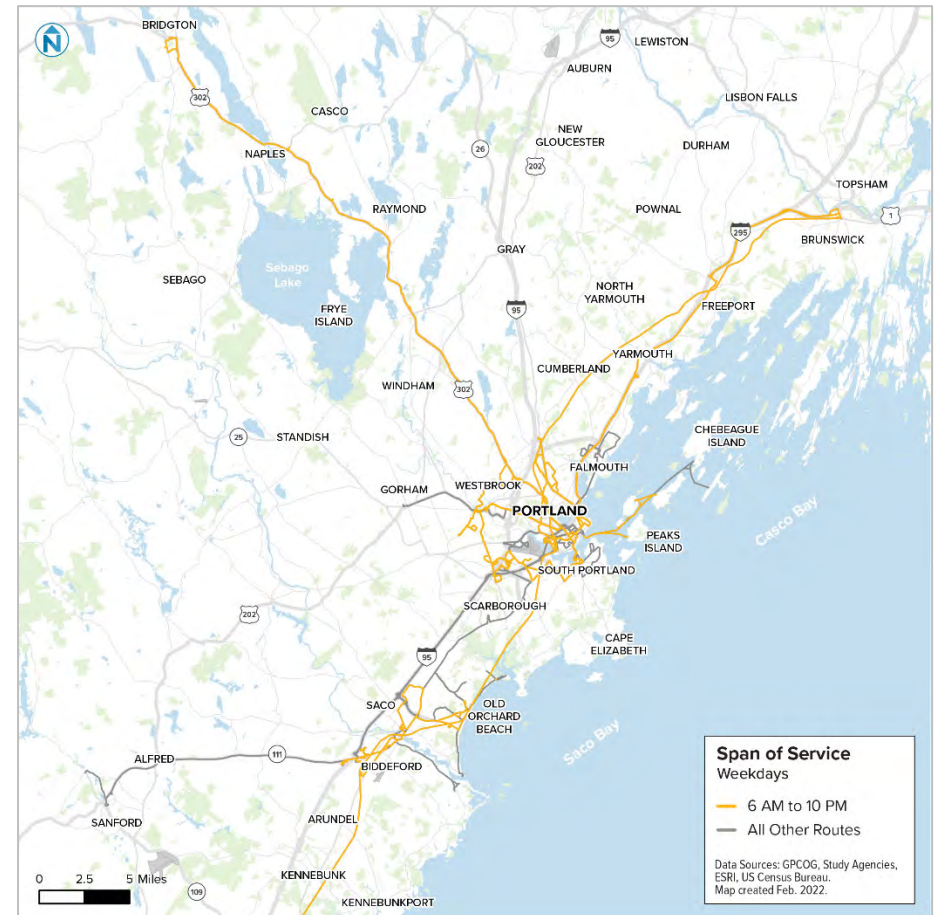
- BREEZ
- 1 Congress Street
- 2 Forest Avenue

- 3 Portland - Westbrook - South Portland
- 4 Westbrook
- 5 Maine Mall
- 9A/9B North Deering/West Falmouth

South Portland Bus Service

- 24A Maine Mall

Weekday 6 AM to 10 PM Services



Weekday Spans of Service and Service Frequencies

Route	EARLY AM		AM PEAK			MIDDAY						PM PEAK					NIGHT		Service Start	Service End	Service Frequencies					
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9			10	11	EARLY AM	AM PEAK	MIDDAY	PM PEAK
METRO																										
BREEZ	[Service]					[Service]						[Service]					[Service]		5:45 AM	10:18 PM	60	50	98	53	52	
Husky Line	[Service]					[Service]						[Service]					[Service]		6:20 AM	10:44 PM		30	30	30	46	
1 Congress Street	[Service]					[Service]						[Service]					[Service]		5:08 AM	11:10 PM	32	30	30	30	37	
2 Forest Avenue	[Service]					[Service]						[Service]					[Service]		5:45 AM	10:56 PM	30	30	30	30	63	
3 Portland - Westbrook - South Portland	[Service]					[Service]						[Service]					[Service]		5:40 AM	10:25 PM		30	30	36	62	
4 Westbrook	[Service]					[Service]						[Service]					[Service]		5:15 AM	11:40 PM	60	30	30	30	53	
5 Maine Mall	[Service]					[Service]						[Service]					[Service]		5:20 AM	10:40 PM	40	30	30	30	44	
7 Falmouth	[Service]					[Service]						[Service]					[Service]		6:30 AM	7:25 PM		60	60	60	60	
8 Peninsula Loop	[Service]					[Service]						[Service]					[Service]		6:40 AM	6:15 PM		30	31	31	31	
9A/9B North Deering/West Falmouth	[Service]					[Service]						[Service]					[Service]		5:35 AM	10:25 PM	30	30	60	35	45	
South Portland Bus Service																										
21 Willard Square	[Service]					[Service]						[Service]					[Service]		6:35 AM	11:15 PM		45	60	60	36	
24A Maine Mall	[Service]					[Service]						[Service]					[Service]		5:20 AM	11:15 PM	100	117	130	122	95	
24B Maine Mall	[Service]					[Service]						[Service]					[Service]		6:20 AM	9:50 PM		120	125	130	87	
Biddeford-Saco-Old Orchard Beach Transit																										
50 Orange/51 Black	[Service]					[Service]						[Service]					[Service]		5:30 AM	10:30 PM	45	75	75	75	75	
52 White/53 Blue	[Service]					[Service]						[Service]					[Service]		5:30 AM	10:10 PM	45	75	75	75	75	
54 Silver	[Service]					[Service]						[Service]					[Service]		6:45 AM	10:08 PM		27	23	30	28	
54 UNE	[Service]					[Service]						[Service]					[Service]		6:15 AM	9:57 PM		68	78	60	70	
60 Green	[Service]					[Service]						[Service]					[Service]		6:15 AM	10:44 PM		150	150	150	150	
70 Purple/ZOOM	[Service]					[Service]						[Service]					[Service]		6:00 AM	7:10 PM		38	38	43	43	
Casco Bay Lines																										
Portland-Peaks Island	[Service]					[Service]						[Service]					[Service]		5:45 AM	10:55 PM	60	82	86	80	65	
Inner Bay	[Service]					[Service]						[Service]					[Service]		5:00 AM	10:10 PM	165	67	100	110	85	
Down Bay	[Service]					[Service]						[Service]					[Service]		5:00 AM	9:40 PM	180	120	150	165	160	
Northern New England Passenger Rail Authority																										
Amtrak Downeaster	[Service]					[Service]						[Service]					[Service]		4:30 AM	1:45 AM	160	230	202	207	320	
Regional Transportation Program																										
Lakes Region Explorer	[Service]					[Service]						[Service]					[Service]		6:00 AM	10:15 PM		190	395	205	70	
York County Community Action Corporation																										
Southern Maine Connector	[Service]					[Service]						[Service]					[Service]		7:30 AM	3:41 PM		157	171	171		

Note: South Portland Bus Service plans to operate Route 21 every 30 minutes, as it has in the past. Current operator shortages have prevented this.

Saturday Spans of Service and Service Frequencies

Route	EARLY AM		AM PEAK			MIDDAY				PM PEAK				NIGHT			Service Start	Service End	Service Frequencies																				
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7			8	9	10	11	EARLY AM	AM PEAK	MIDDAY	PM PEAK	NIGHT												
METRO																																							
BREEZ																											8:00 AM	9:28 PM						150	150	150	150		
Husky Line																												8:00 AM	11:18 PM						45	45	45	57	
1 Congress Street																												5:08 AM	11:10 PM						32	30	30	30	37
2 Forest Avenue																												6:20 AM	10:23 PM						60	60	60	60	66
3 Portland - Westbrook - South Portland																												6:35 AM	10:26 PM						60	60	60	60	
4 Westbrook																												5:45 AM	11:35 PM						30	30	30	30	53
5 Maine Mall																												6:05 AM	10:40 PM						36	30	30	30	53
7 Falmouth																												6:30 AM	7:25 PM						60	60	60	60	
8 Peninsula Loop																												7:50 AM	6:17 PM						60	60	60		
9A/9B North Deering/West Falmouth																												7:30 AM	10:25 PM						60	60	60	60	
South Portland Bus Service																																							
21 Willard Square																												6:35 AM	11:15 PM						45	60	60	60	36
24A Maine Mall																												7:00 AM	7:15 PM						120	120	120	120	
24B Maine Mall																																							
Biddeford-Saco-Old Orchard Beach Transit																																							
50 Orange/51 Black																												5:30 AM	10:30 PM						45	75	75	75	75
52 White/53 Blue																												5:30 AM	10:10 PM						45	75	75	75	75
54 Silver																												6:45 AM	10:08 PM						27	23	30	28	
54 UNE																												6:15 AM	9:57 PM						68	78	60	70	
60 Green																												6:15 AM	10:44 PM						150	150	150	150	
70 Purple/ZOOM																																							
Casco Bay Lines																																							
Portland-Peaks Island																												5:45 AM	11:55 PM						60	82	86	80	63
Inner Bay																												5:00 AM	10:10 PM						165	67	100	110	85
Down Bay																												5:00 AM	9:40 PM						180	120	150	165	160
Northern New England Passenger Rail Authority																																							
Amtrak Downeaster																												4:30 AM	1:45 AM						160	230	202	207	320
Regional Transportation Program																																							
Lakes Region Explorer																												8:30 AM	7:45 PM						210	365	365	365	
York County Community Action Corporation																																							
Southern Maine Connector																																							

Sunday Spans of Service and Service Frequencies

Route	EARLY AM		AM PEAK		MIDDAY				PM PEAK			NIGHT				Service Start	Service End	Service Frequencies															
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6			7	8	9	10	11	EARLY AM	AM PEAK	MIDDAY	PM PEAK	NIGHT						
METRO																																	
BREEZ																																	
Husky Line																											8:05 AM	7:10 PM	45	45	45	45	
1 Congress Street																											7:43 AM	6:35 PM	60	60	60	60	
2 Forest Avenue																											8:20 AM	4:15 PM	60	60	60		
3 Portland - Westbrook - South Portland																											9:15 AM	6:00 PM		90	90		
4 Westbrook																											8:15 AM	7:45 PM	45	45	45	45	
5 Maine Mall																											7:55 AM	6:40 PM	45	45	45	45	
7 Falmouth																											8:30 AM	4:25 PM	60	60	60		
8 Peninsula Loop																											8:50 AM	4:17 PM	60	60	60		
9A/9B North Deering/West Falmouth																											8:30 AM	5:10 PM	60	60	60		
South Portland Bus Service																																	
21 Willard Square																											6:40 AM	6:35 PM	147	83	82	120	
24A Maine Mall																											7:00 AM	6:35 PM	150	82	102	120	
24B Maine Mall																																	
Biddeford-Saco-Old Orchard Beach Transit																																	
50 Orange/51 Black																											5:30 AM	6:25 PM	45	75	75	75	75
52 White/53 Blue																											5:30 AM	7:40 PM	45	75	75	75	75
54 Silver																											6:45 AM	7:53 PM	27	23	30	30	
54 UNE																											6:15 AM	8:27 PM	68	78	60	60	
60 Green																											6:15 AM	8:14 PM	150	150	150	150	
70 Purple/ZOOM																																	
Casco Bay Lines																																	
Portland-Peaks Island																											5:45 AM	10:55 PM	60	82	86	80	63
Inner Bay																											5:00 AM	10:10 PM	165	67	100	110	85
Down Bay																											5:00 AM	9:40 PM	180	120	150	165	160
Northern New England Passenger Rail Authority																																	
Amtrak Downeaster																											4:30 AM	1:45 AM	160	230	202	207	320
Regional Transportation Program																																	
Lakes Region Explorer																																	
York County Community Action Corporation																																	
Southern Maine Connector																																	

Biddeford-Saco-Old Orchard Beach Transit

- 50 Orange/51 Black
- 52 White/53 Blue

Casco Bay Lines

- Peaks Island
- Inner Bay

Amtrak

- Downeaster

Regional Transportation Program

- Lakes Region Explorer

In addition, there are five routes that begin service just after 6:00 AM and/or end service just before 10:00 PM:

South Portland Bus Service

- 21 Willard Square
- 24B Maine Mall

Biddeford-Saco-Old Orchard Beach Transit

- 60 Green
- 54 Silver/UNE

Casco Bay Lines

- Down Bay

Three routes operate for much more limited hours, starting service between 6:00 AM and 6:30 AM and ending service between 6:15 PM and 7:10 PM:

METRO

- 7 Falmouth
- 8 Peninsula Loop

Biddeford-Saco-Old Orchard Beach Transit

- 70 Purple/ZOOM

Finally, the YCCAC Southern Maine Connector operates from 7:30 AM to 3:43 PM.

Saturdays

Twenty-one routes operate on Saturdays with spans of service that are very similar to weekday spans, but in some cases slightly shorter:

- 10 routes operate from before 6:00 AM to at least 10:00 PM.
- Four routes begin service just after 6:00 AM and/or end service just before 10:00 PM.
- The remaining routes start service between 6:30 AM and 8:30 AM and end service between 6:17 PM and 7:45 PM.

Sundays

Nineteen routes operate on Sundays, with significantly shorter spans of service than on weekdays and Saturdays:

- METRO has the shortest Sunday spans, with service beginning between 7:00 AM and 8:00 AM and ending between 4:00 PM and 7:00 PM.
- SPBS routes begin service between 6:30 AM and 7:00 AM and end at 7:00 PM.
- BSOOB Transit routes begin service between 5:30 AM and 6:00 AM and end between 6:30 PM and 7:30 PM.

- Casco Bay Lines service begins at 5:30 AM and operates until between 9:30 AM and 10:30 PM.
- Amtrak's Downeaster operates from 4:30 AM until 1:45 AM.

SUMMARY

As described above, Greater Portland is served by seven transit providers that provide a combination of regional and local service. Although local and regional bus routes provide some service to many destinations, service frequencies are low throughout the region. Nationally, transit is generally considered convenient when it operates every 15 minutes or less and inconvenient when it operates every 60 minutes or more. No transit services in the Greater Portland region consistently operate every 15 minutes and many services operate every 60 minutes or more.

Over the last several years, public input has identified more frequent service as one of the transit improvements the public wants most. For METRO, SPBS, and BSOOB Transit, providing more frequent service in a cost-neutral manner will require making trade-offs—for example, balancing serving more areas with inconvenient service or fewer areas with convenient service. One example of this trade-off is SPBS' two Maine Mall routes, both of which serve similar areas in different ways, and each of which operates only every two hours. An alternative approach would be to consolidate the two routes along a single alignment that focuses on higher-demand areas, with consolidated service operating every 60 minutes.

The public also identified the need for faster service. The current focus on maximizing coverage results in many routes operating in a very circuitous pattern and/or including many alternative service patterns. These practices can make many short trips time-consuming. Focusing

transit service in places where demand is higher would also allow routes to be straightened, which would make them faster.

Another important transit improvement the public wants is better connections between routes and services. When the Greater Portland transit system is viewed purely in terms of lines on a map, connections appear available. However, these connections are often between infrequent services. A shift toward more frequent service would also greatly improve connections locally and throughout the region.



Image source: GPCOG

4 RIDERSHIP

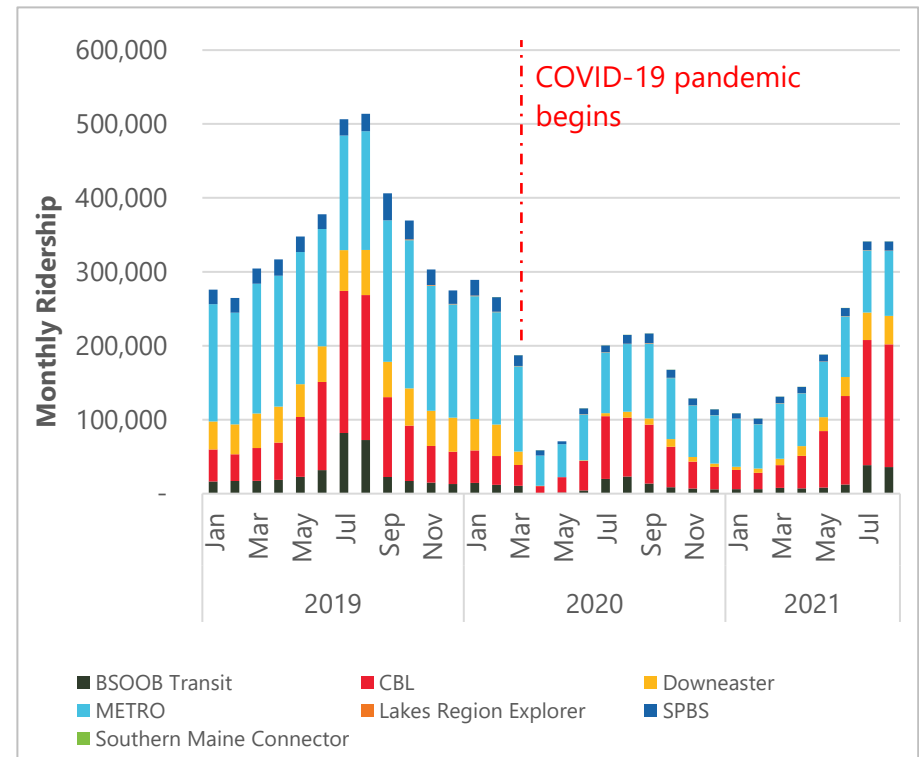
Pre-pandemic, Greater Portland's transit services provided about 16,500 passenger trips per day. Ridership declined dramatically during the pandemic but has since recovered to about 11,000 average daily passenger trips.

Ridership declined sharply due to the pandemic, but riders are starting to come back

	Aug. 2019	Aug. 2020	Aug. 2021
Average Daily Ridership	16,500	6,900	11,000
Percent Change from 2019	-	-58%	-34%

As the region recovers from the pandemic, it is unknown how many former transit riders will return and how their use of transit may change. Ridership recovery modeling being conducted by some of the nation's larger transit systems suggests ridership will return to about 85% to 90% of pre-pandemic levels. The lower overall level assumes many people will continue to work from home, at least part-time, as well as other factors. This modeling also assumes many employees' working hours will continue to be flexible, which will shift

Transit ridership in Greater Portland declined precipitously during the pandemic but has begun to return



the hours that people travel. These shifts will likely be from the peaks to the shoulders of the peaks, rather than more dramatic changes such as from day to night.

Even with these changes, future ridership patterns will likely be much more like pre-pandemic conditions and for this reason, the following analysis focuses primarily on ridership data collected in fall 2019.

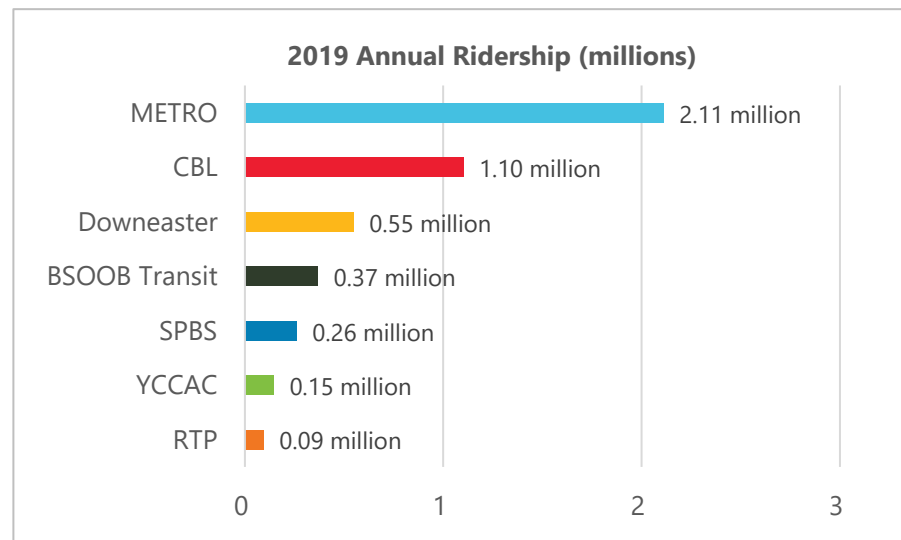
RIDERSHIP BY TRANSIT PROVIDER

The highest numbers of passengers ride METRO, Casco Bay Lines, and the Downeaster.

In 2019, Greater Portland’s transit providers carried about 4.6 million passengers. Ridership was highest on METRO, at about 2.1 million passenger trips per year, followed by Casco Bay Lines, at about 1.1 million, and the Downeaster, with about 550,000. BSOOB Transit and SPBS each carried fewer than 400,000 passenger trips. RTP’s Lakes Region Explorer and YCCAC’s Southern Maine Connector each carried fewer than 5,000 riders annually.

In terms of pre-pandemic weekday ridership, METRO carried about 8,000 passengers, Casco Bay Lines approximately 2,100, the Downeaster about 1,600, SPBS about 1,100, and BSOOB Transit approximately 730. In 2021, RTP’s Lakes Region Explorer and YCACC’s Southern Maine Connector carried fewer than 15 passengers per weekday.

METRO carries the most riders in Greater Portland



Note: This chart includes all transit service provided by each agency; YCCAC numbers include passenger trips from Southern Maine Connector, WAVE, Sanford Transit, Kennebunk In Town Transportation, Orange 5, and other services. Source: National Transit Database.

RIDERSHIP BY ROUTE

Pre-pandemic ridership per route ranged from over 1,800 passengers per day to fewer than 50. METRO’s Route 9A/9B North Deering/West Falmouth, Casco Bay Lines’ Peaks Island Ferry, and the Downeaster carried the most riders.

In the fall of 2019, weekday ridership on individual routes averaged from over 1,800 passengers to fewer than 50. Three services had much higher ridership than any others:

- METRO's Route 9A/9B North Deering/West Falmouth, with 1,850 passengers per weekday¹
- Casco Bay Lines' Peaks Island route, with 1,734 passengers per weekday
- The Downeaster, with 1,625 average daily passengers

The next five-highest average-weekday ridership routes were all METRO routes:

- The Husky Line, with 1,050 passengers
- Route 5 Maine Mall, with 1,043 passengers
- Route 4 Westbrook, with 1,040 passengers
- Route 2 Forest Ave, with 946 passengers

South Portland Bus Service's highest-ridership route was Route 21 Willard Square, which carried an average of 535 passengers per weekday. The agency's other two routes, 24A Maine Mall and 24B Maine Mall, carried 304 and 246 riders, respectively.

BSOOB Transit's highest-ridership route was Route 50 Orange/51 Black, which carried 212 passengers per weekday. Its other year-round routes carried from 120 to fewer than 50 passengers per day.

Pre-pandemic ridership data are not available for RTP's Lakes Region Explorer or YCACC's Southern Maine Connector (this route launched during the pandemic). However, as of March 2021, the Lakes Region Explorer and the Southern Maine Connector provided very few passenger trips, at only 13 and five average trips per weekday, respectively.

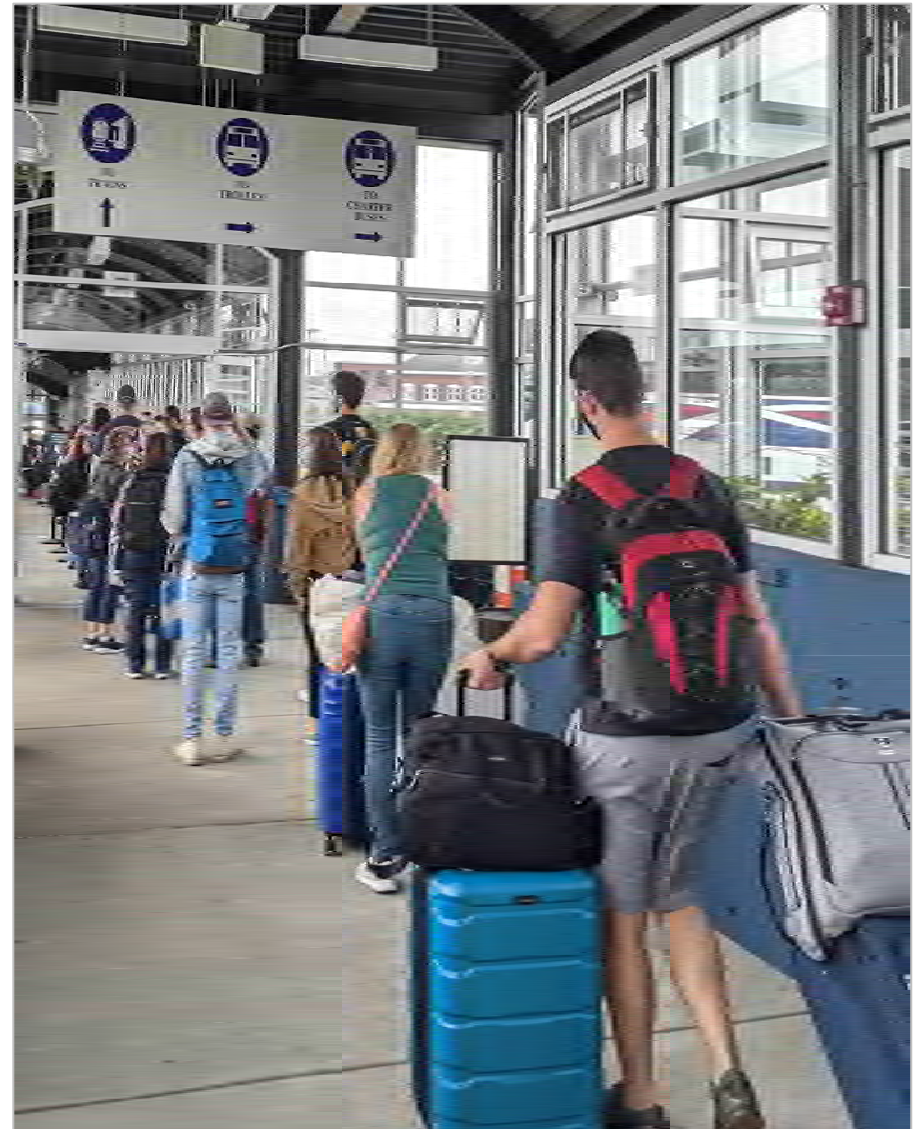
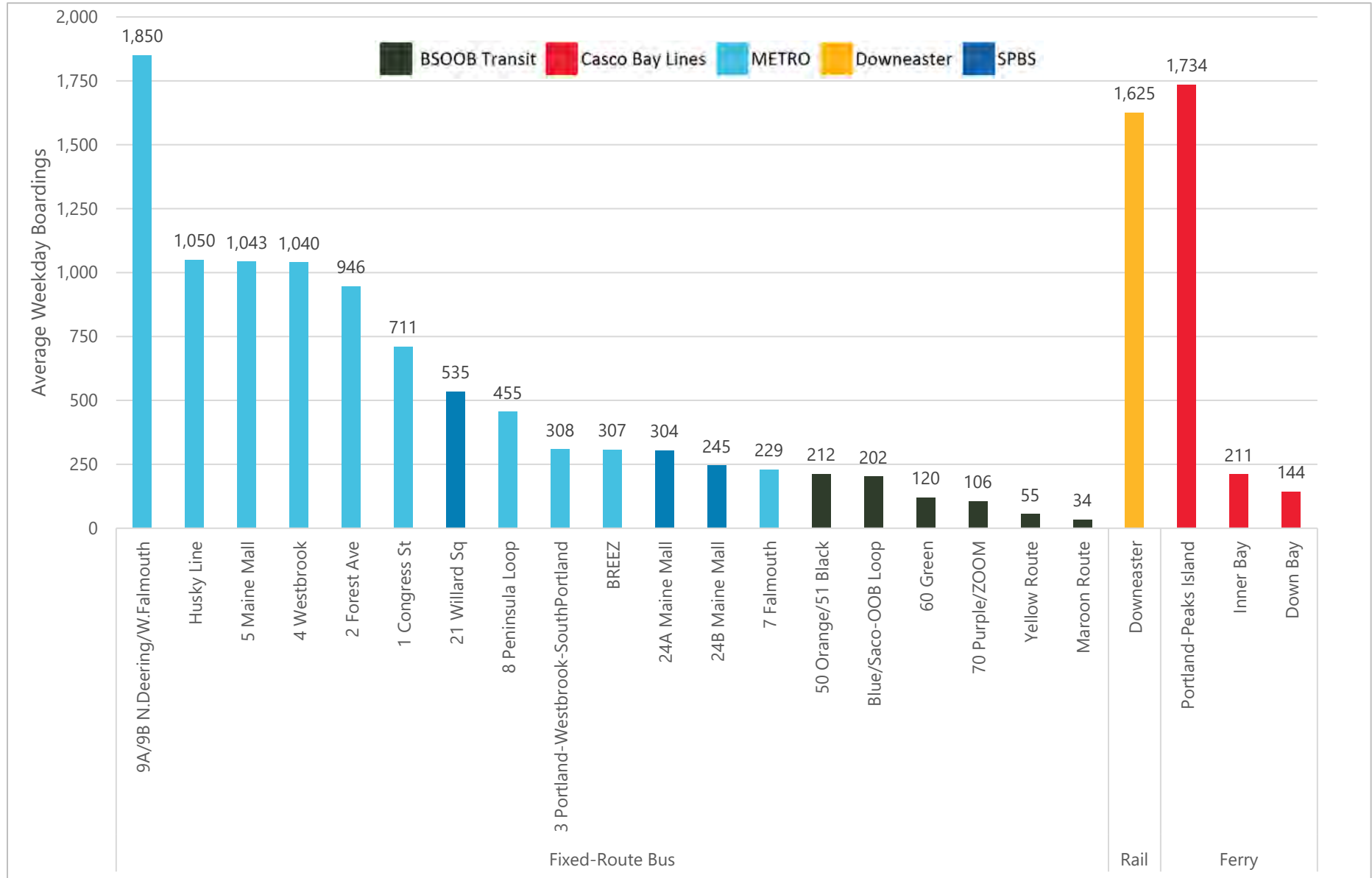


Image source: Nelson\Nygaard

¹ These figures are from October 2019 data; ridership may be higher during certain times of year and lower during other times of year. A considerable portion of METRO ridership on some routes is Portland Public Schools students; this is the case on Route 9A/9B.

Fixed-Route Weekday Boardings by Route, October 2019



Note: Weekday ridership data are not available for RTP's Lakes Region Explorer or YCCAC's Southern Maine Connector. 2021 ridership on each was less than 15 trips per weekday. Downeaster ridership shown above is average daily.

RIDERSHIP BY STOP

The highest-ridership stops in the Greater Portland region are the METRO PULSE and the Casco Bay Ferry Terminal. Other very high-ridership stops are on Congress Street in Portland, USM Portland, the Westbrook Hub, and the Maine Mall.

The highest-ridership stop in the Biddeford-Saco-Old Orchard Beach area is the Saco Transportation Center.

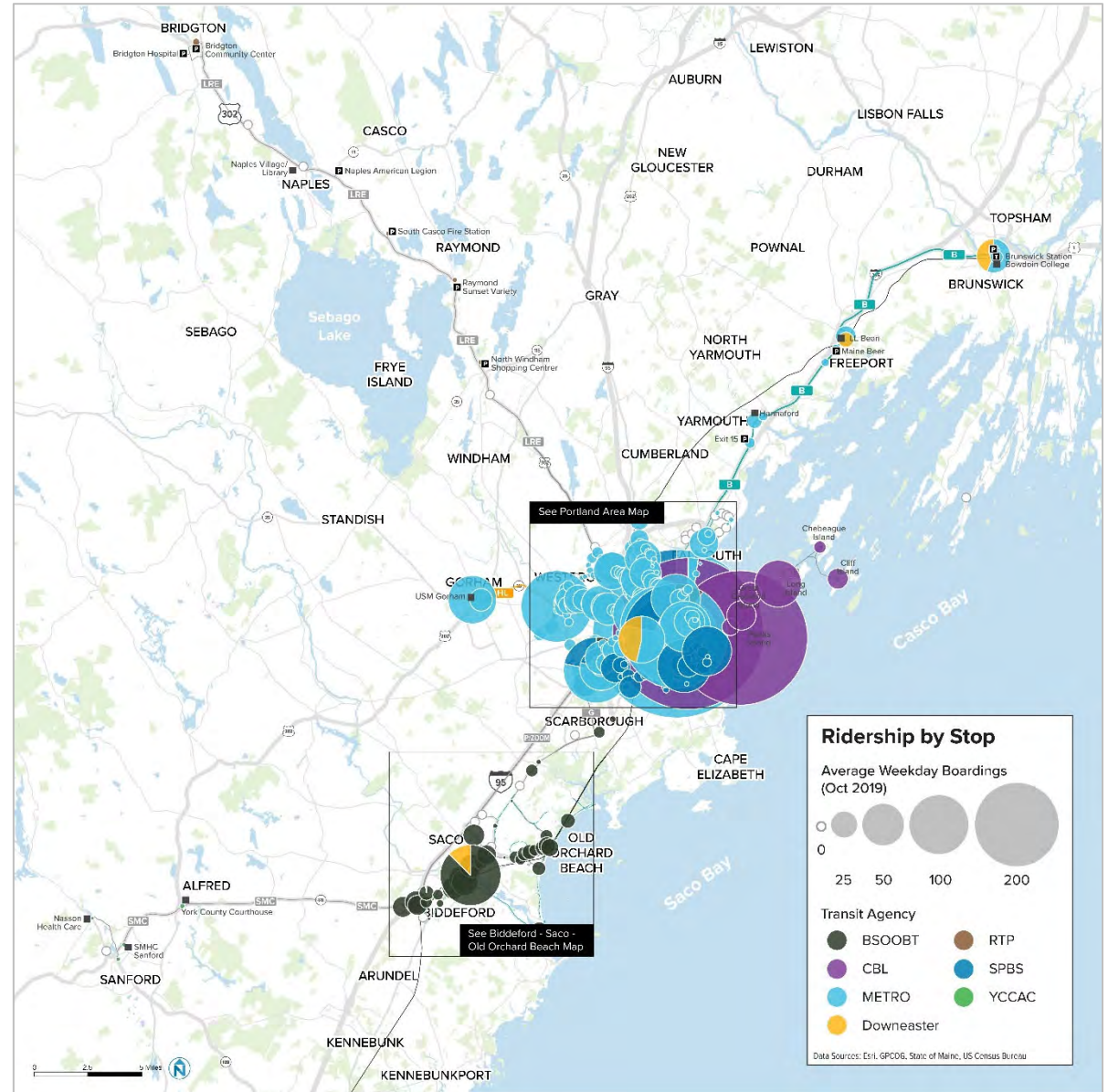
Ridership by stop is highest in the Portland area and second highest in the Biddeford-Saco-Old Orchard Beach area. There are also pockets of significant ridership in Brunswick, which is served by the METRO BREEZ, at USM Gorham, which is served by METRO's Husky Line, and at UNE, which is served by BSOOB Transit's Route 54 Silver/UNE. Ridership is relatively low in most other areas.

Portland Area

In the Portland area, ridership is high on the Portland Peninsula and along:

- Forest Avenue
- Stevens Avenue
- Washington Avenue
- Brighton Avenue/Main Street

Ridership is highest in the Portland area



Other high-ridership locations include:

- Deering High School
- Downtown Westbrook
- The Maine Mall area
- The Mill Creek Transit Hub
- Southern Maine Community College
- The Rock Row/Westbrook Crossing area

Some areas with bus service have very low ridership. These include:

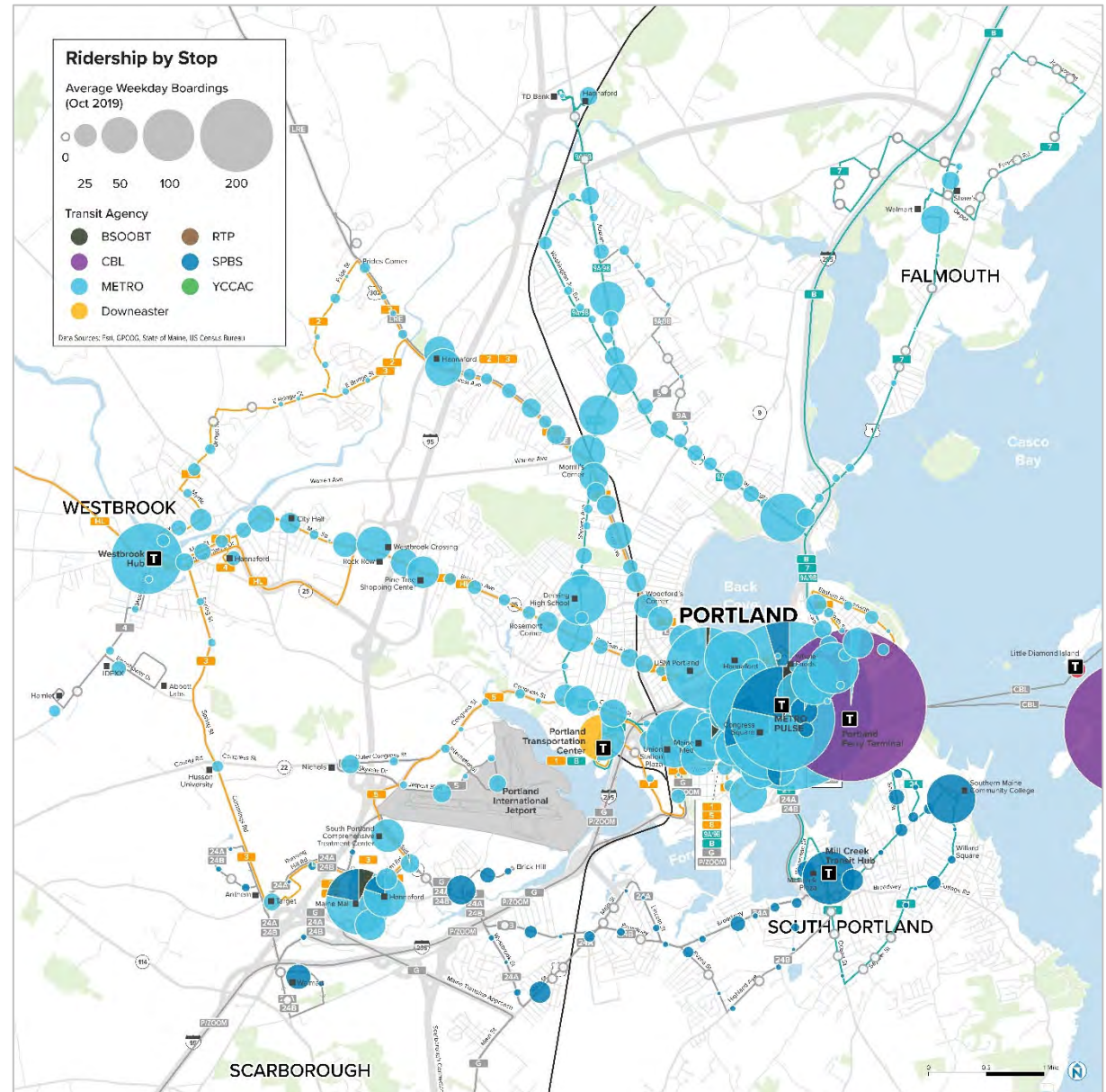
- METRO Route 7 Falmouth service north of Walmart and west of I-295.
- METRO Route 3 Portland – Westbrook – South Portland between Westbrook and Forest Avenue and between Westbrook and the Maine Mall area
- Variant services on METRO Routes 9A/9B North Deering/West Falmouth east of Forest and Washington Avenues
- Some segments of SPBS' Routes 24A and 24B Maine Mall routes

Portland Peninsula

On the Peninsula, bus ridership is highest along Congress Street, especially near the PULSE, and at:

- Stops serving Maine Medical Center
- USM Portland
- Hannaford

Portland-area ridership is highest on the Portland Peninsula, at the Westbrook Hub, at South Portland's Mill Creek Transit Hub, and in the Maine Mall area



- Union Station Plaza
- The intersection of Forest and Park avenues
- 100 State Street apartments
- Harbor Terrace Apartments on Danforth Street
- The intersection of Congress Street and Washington Avenue

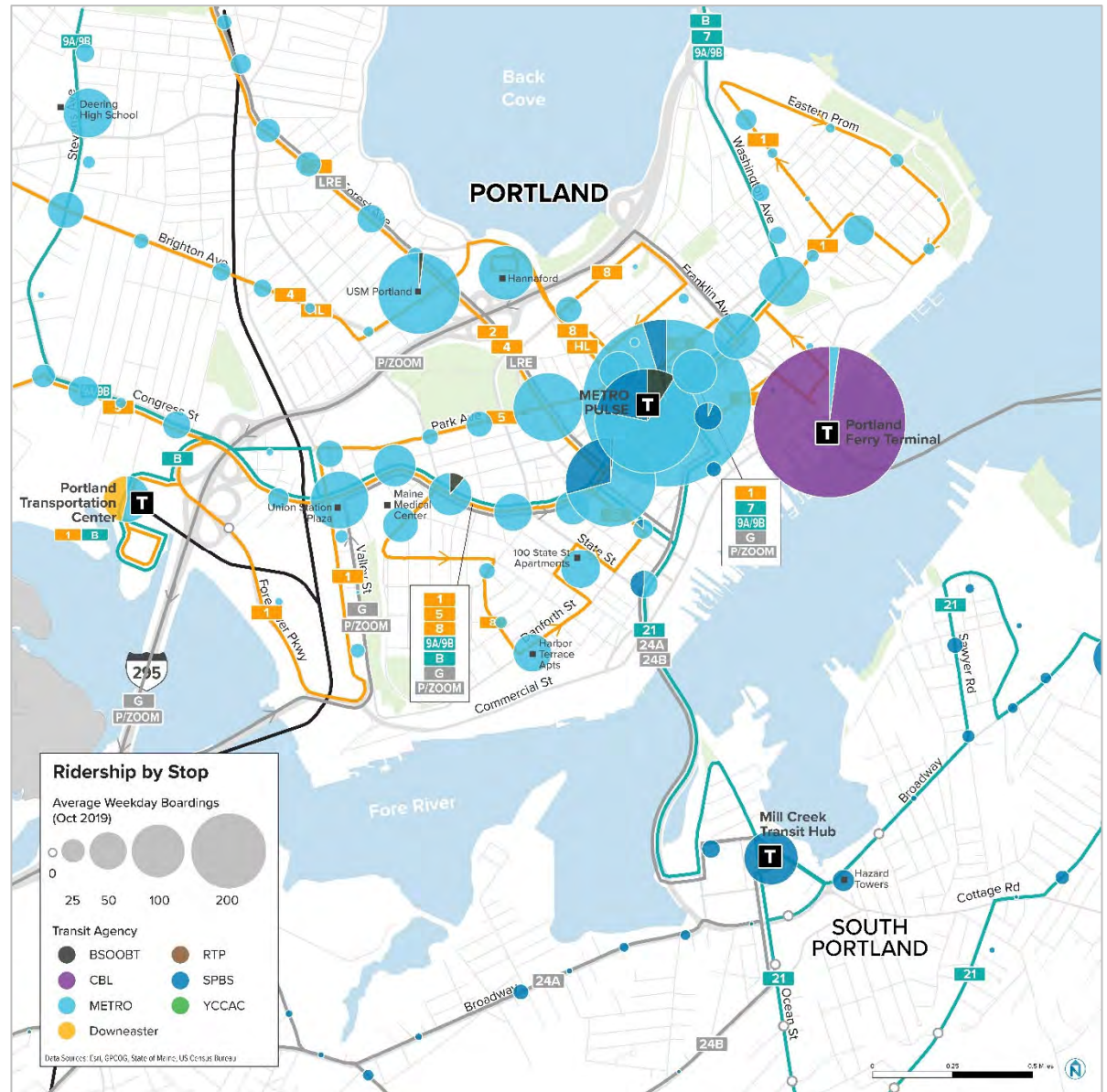
Ridership at the Casco Bay Ferry Terminal is high, at over 600 passengers on an average winter day and over 3,000 per day in the summer. Nearly all these boardings are ferry riders; METRO's Route 8 has only fewer than 10 average weekday boardings at the ferry terminal.

Biddeford-Saco-Old Orchard Beach Area

In the Biddeford-Saco-Old Orchard Beach area, year-round ridership is highest:

- In downtown Saco, primarily at the Saco Transportation Center
- Along the Route 111 corridor, particularly at Hannaford, Walmart, and Biddeford Crossing
- At UNE

Ridership on the Portland Peninsula is highest along Congress Street



Aside from the Saco Transportation Center, the highest-ridership stops in Saco are the Saco Valley Shopping Center, Hannaford, and park-and-rides.

Ridership along Ocean Park Road/Saco Avenue between Old Orchard Beach and Saco is higher than elsewhere in Saco and Old Orchard Beach. Ridership in the Industrial Park Road area is very low.

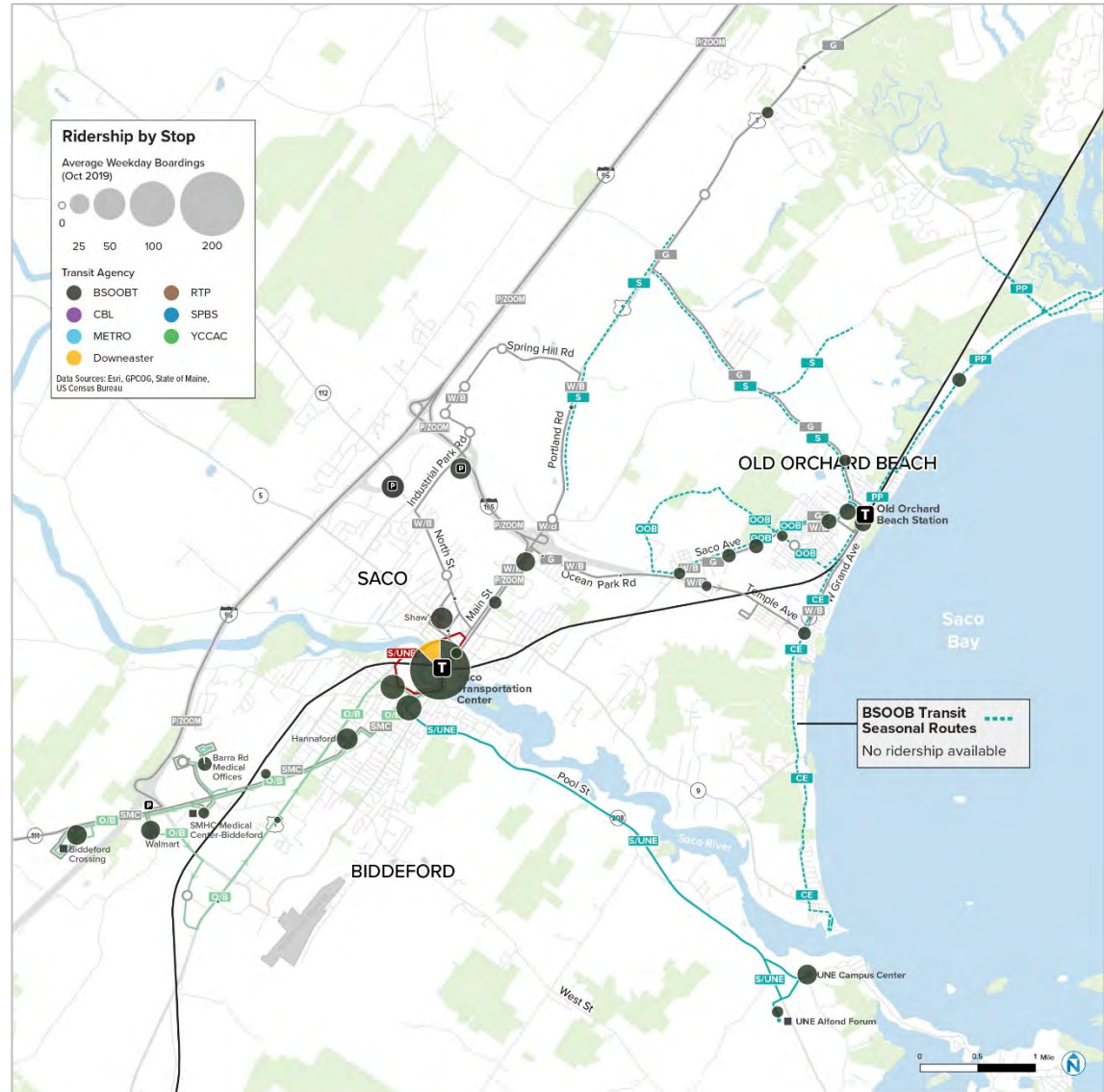
SEASONAL RIDERSHIP VARIATIONS

Millions of tourists visit Maine each year, with most of these visits in the warmer months. This influx translates into much higher peak-season ridership on BSOOB Transit and Casco Bay Lines.

Ridership on BSOOB Transit starts to increase in April, peaks in July, and then drops through September. July ridership is approximately four times year-round levels, and to serve this ridership, BSOOB Transit operates five seasonal routes:

- Camp Ellis
- Old Orchard Beach 1
- Old Orchard Beach 2
- Pine Point
- Saco

Biddeford-Saco-Old Orchard Beach ridership is highest in downtown Saco



Note: The map above shows ridership by segment, where the size of the bubble indicates the average weekday boardings that occur on the segment of the route near the location of the bubble.

Ridership on Casco Bay Lines also starts to increase in April. It then peaks in July and August at approximately 350% of off-season ridership, and then declines through November. Casco Bay Lines also runs additional peak-season service.

Seasonal changes on other services are much smaller (although ridership on YCCAC’s Southern Maine Connector also shows seasonal peaks, the increase in riders, in absolute terms, is very small).

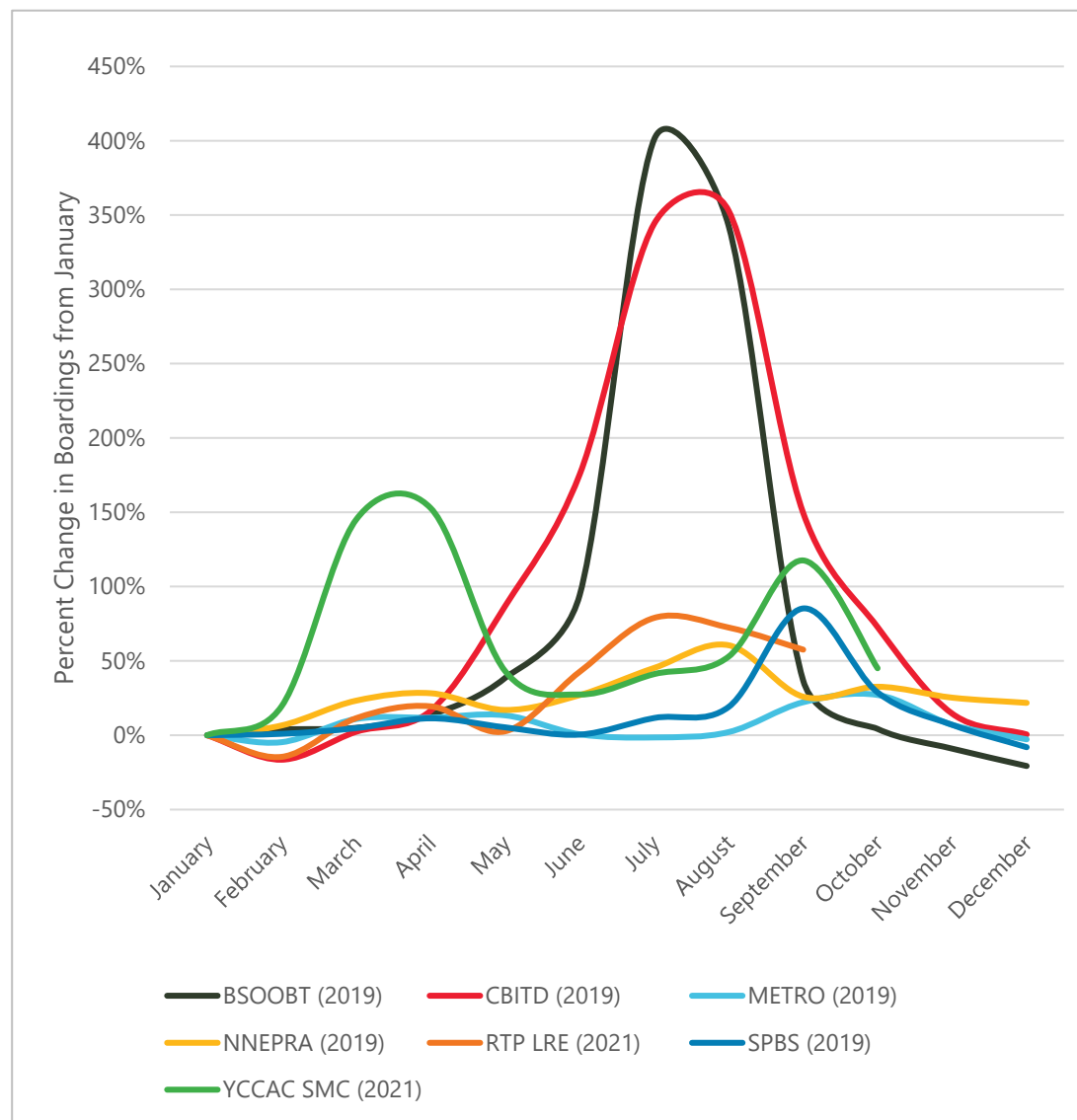
BUS RIDERSHIP COMPARED TO UNDERLYING DEMAND

There are mismatches between current bus ridership and underlying demand. These mismatches are related to the types and amount of service provided.

In most cases, actual bus ridership levels match underlying demand. However, there are exceptions:

- Areas that can support more frequent service than what is currently provided.
- Areas where ridership levels are lower than what would be expected based on underlying demand. In many of these cases, lower-than-expected ridership is likely because available services are infrequent and circuitous, and these characteristics deter many from using transit.

Ridership on BSOOB Transit and Casco Bay Lines in mid-summer is about four times as high as other times of the year



Note: 2019 and 2021 data are used to avoid using 2020 data, which was skewed by the COVID-19 pandemic.

There are also some areas that are served by bus routes where the underlying demand for transit is very low and ridership is also very low. These are areas where alternative service approaches such as microtransit should be considered.

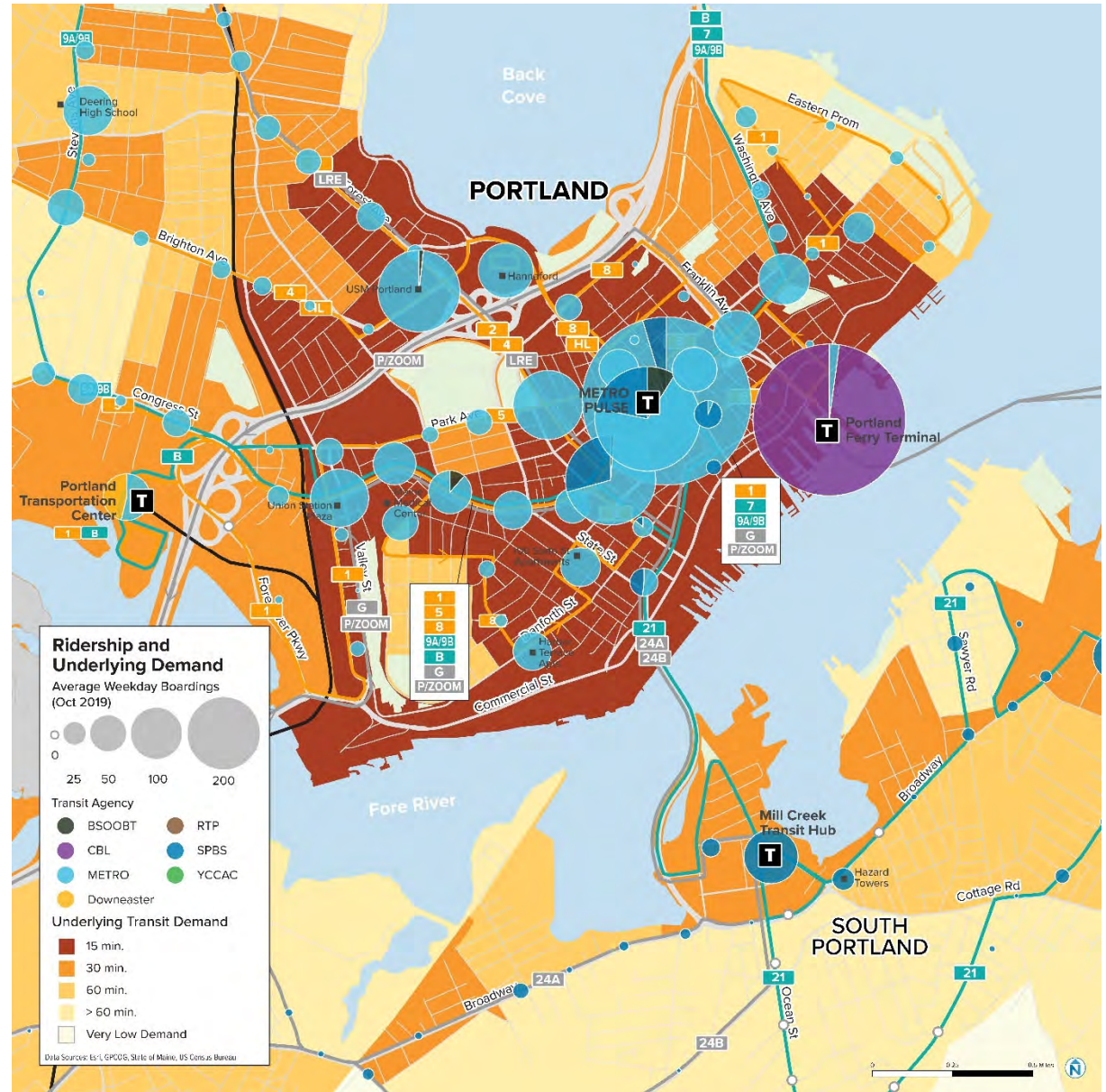
Portland Peninsula

Most of the Peninsula can support frequent service (every 15 minutes). At present, the combination of service on Congress Street provides frequent service, with one route—Route 9A/9B—providing continuous service along the corridor. Additional continuous service could be provided by coordinating routes that operate from the east and west. Ridership and service levels along Congress Street could also warrant transit priority and infrastructure improvements to turn Congress Street into a transit-priority corridor.

Other areas could also support more frequent service. These include:

- Parts of the East End, which are now served every 30 minutes by METRO’s Route 1 Congress Street.
- Parts of the West End, which is now served by METRO’s Route 8 Portland Peninsula, which is very circuitous and operates every 30 minutes.

Portland Peninsula Actual Ridership Compared to Underlying Demand



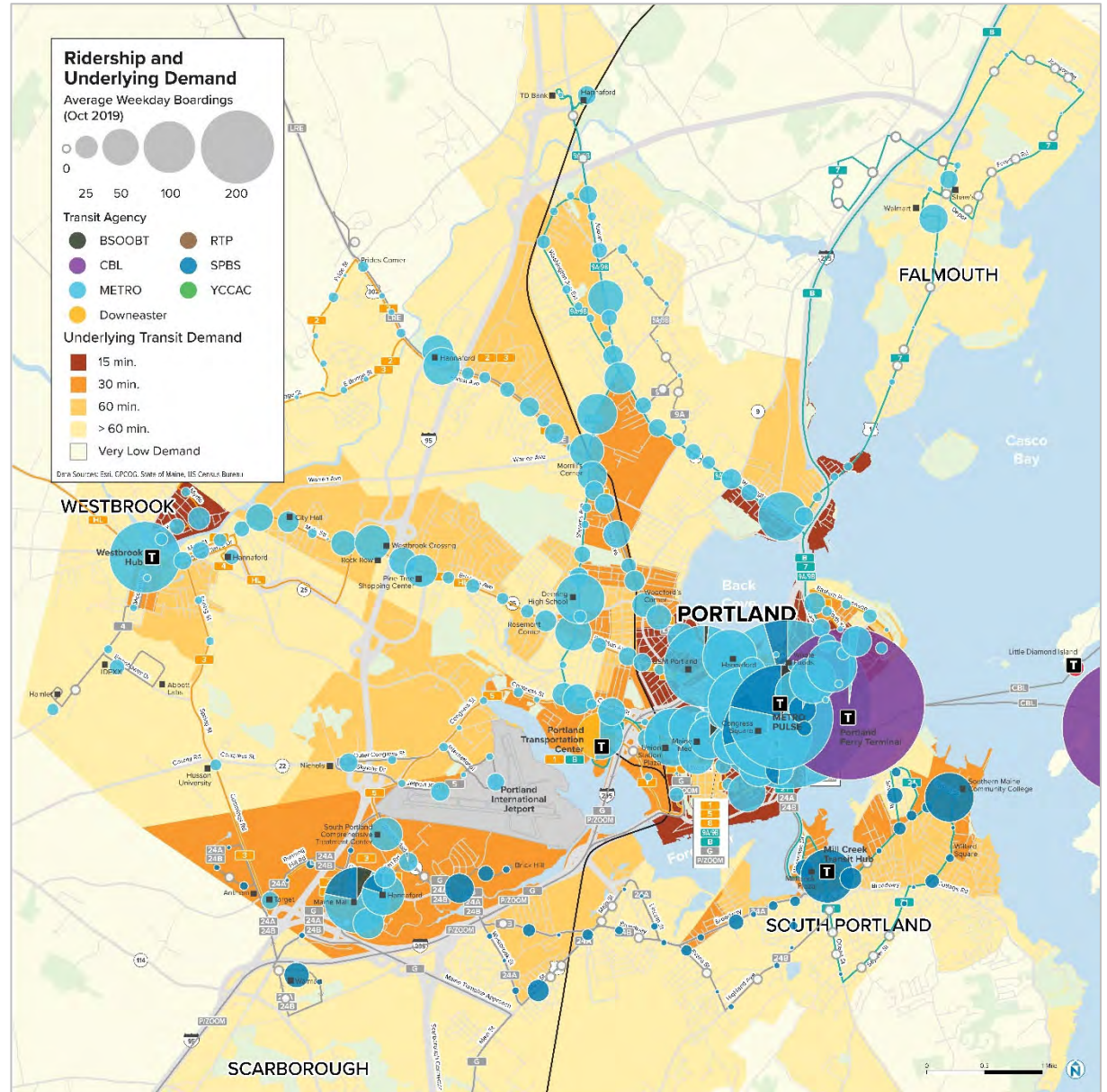
Portland Area

Beyond the Portland Peninsula, parts of East Deering and Westbrook can likely support more frequent service. Conversely, there are some areas where fixed-route transit is provided but the underlying demand for transit is low. In some of these areas, key destinations drive ridership. However, in many of these areas, the low current ridership is consistent with underlying demand:

- Most of Falmouth east of I-295, where the only significant ridership drivers are Walmart and Shaw's.
- West Falmouth, where the only significant ridership driver is Hannaford.
- Westbrook, between Cumberland Street and Forest Avenue.

In South Portland, underlying demand is generally moderate to high north of Broadway and low south of Broadway. However, ridership in areas where demand is moderate to high is lower than would be expected. This is almost certainly because Route 24A Maine Mall and Route 24B Maine Mall operate infrequently and are circuitous. Across the length of South Portland, this indicates that service should be

Portland Area Actual Ridership Compared to Underlying Demand



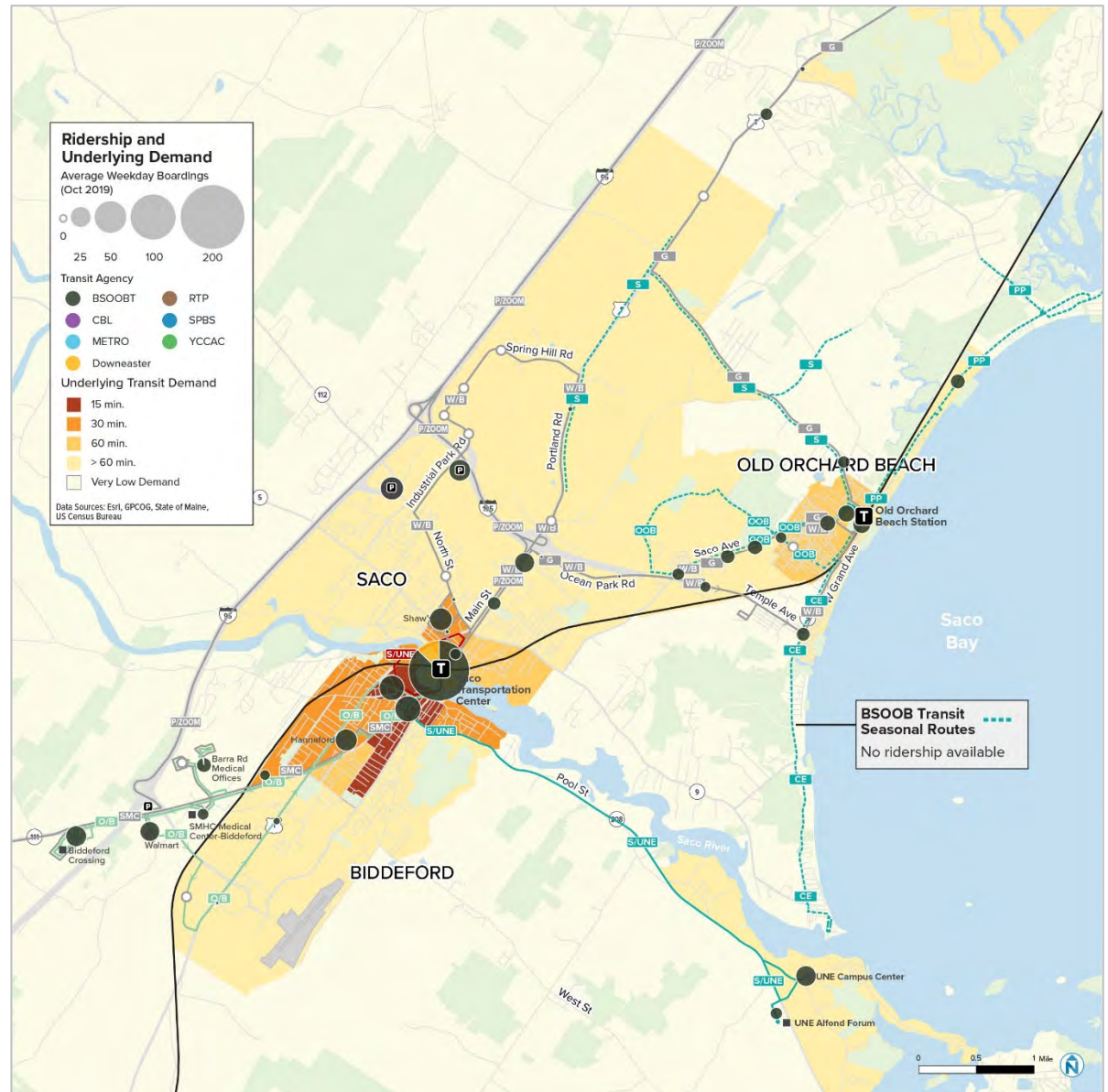
improved to be more direct and frequent in ways that better serves areas with higher demand. This could include straightening service and combining Route 24A and 24B to provide service with one route that is stronger than the existing two routes.

Biddeford-Saco-Old Orchard Beach Area

In the Biddeford-Saco-Old Orchard Beach area, underlying demand is high in downtown Biddeford and parts of Saco, moderate in Old Orchard Beach, and low almost everywhere else. In areas with low overall underlying demand, ridership is driven almost exclusively by key destinations. Much of BSOOB Transit's service is coverage-based and serves low-demand places and/or key destinations. These areas include:

- The US Route 1 corridor in Biddeford that is served by BSOOB Transit's Route 50 Orange/51 Black.
- Most of the alignment served by BSOOB Transit's Route 52 Blue/53 White in Saco.

Biddeford-Saco-Old Orchard Beach Area Ridership Compared to Underlying Demand



The same also may be the case with at least some segments of BSOOB Transit seasonal trolley routes, although sufficient ridership data are not available to know if this is the case.

In these areas, it may be appropriate to discontinue service to improve service frequencies on other routes, and/or to explore alternative service models such as microtransit.

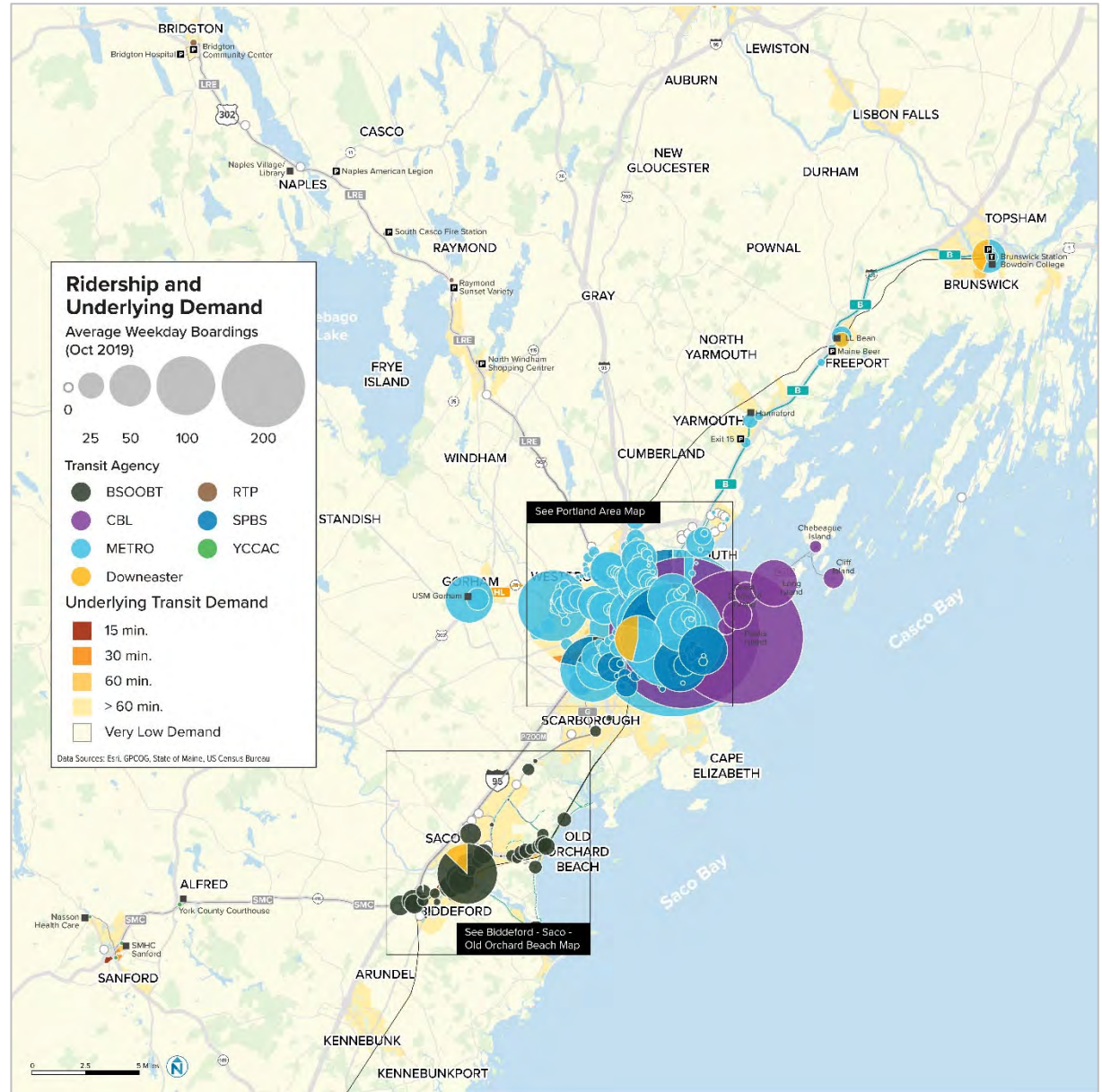
Outer Communities

Demand in outer areas of the Greater Portland region is generally concentrated in downtown centers and shopping areas in places like Brunswick, Yarmouth, Gorham, and Sanford.

Key takeaways from these areas are:

- I-295 corridor communities are served by the METRO BREEZ, which operates infrequently. This market could potentially support 60-minute service.
- The Route 302 corridor is served by RTP's Lakes Region Explorer. Demand and ridership on this are very low. One reason for this low ridership is the infrequency of the route (it operates every two hours or less). However, very low underlying demand is likely the major reason ridership is very low. In this market, alternative approaches such as volunteer-driver service or microtransit may be

Greater Portland Region Ridership Compared to Underlying Demand



appropriate. The market could also be served with RTP's demand-response services.

- Demand in Gorham is driven by USM Gorham, which is well-served by METRO's Husky Line.
- The Alfred Street (Route 111) corridor is served by YCCAC's Southern Maine Connector. Demand along this corridor is very low, as is ridership. Issues with this route are similar to those with the Lakes Region Explorer: service is very infrequent and underlying demand is very low. Potential alternative approaches for this route are volunteer-driver service, microtransit, and serving the corridor with existing demand-response services.

discontinuing service to focus resources in higher-demand areas—particularly for more frequent service—or alternative service approaches such as microtransit.

- The Lakes Region Explorer and Southern Maine Connector both serve areas with very low demand and carry very few riders, and alternative service models such as volunteer driver, microtransit, or traditional demand-response service could be more effective alternatives and provide additional coverage.
- Casco Bay Lines ferry service is a lifeline service and so service levels cannot be matched to demand the same way bus service can be.

SUMMARY

Transit ridership in the Greater Portland region generally reflects the underlying demand for transit, and the array of transit services provided are largely matched to demand. However, as described above, there are several exceptions, the most significant of which are:

- Some areas, particularly in the Portland area, can likely support more frequent service than is provided.
- Transit ridership in South Portland is lower than would be expected based on underlying demand. This is almost certainly because existing resources are stretched thinly; service operates infrequently to serve as many areas as possible, including some areas with very low transit demand. Making service simpler, more direct, and more frequent could serve more riders.
- Fixed-route service is provided in many areas where demand is very low. In these areas, providers should consider either



Image source: GPCOG

5 REGIONAL PRACTICES

Transit Together is tasked with identifying opportunities for increased coordination and integration among Greater Portland's seven public transit providers. This chapter describes existing regional practices, as well as regional assets including bus stops, transit facilities, fleets, and technology. The chapter also explores where the different providers already or could better collaborate around the design and delivery of services, including in the general areas of:

- Branding
- Public information
- Fares
- Transit facilities
- Vehicles
- Technology

BRANDING

The use of seven different brands, including some sub-brands, makes service difficult to learn and understand.

All seven providers operate under separate brands and largely market only their own information to the public. While some brand autonomy may be necessary and appropriate, it is difficult for riders to learn and understand the full array of service. As described in the Opportunities chapter of this document, there are several options to develop common branding for Greater Portland transit services while still allowing each agency to operate independently. Transit information could also be provided in a manner that makes it easier for the public to find and understand.

The region's transit providers use seven different major brands. There are also many sub-brands for different services and programs.



PUBLIC INFORMATION

Public information is mostly provided through separate channels, which makes service difficult to learn and understand.

All seven agencies provide their own public information, and the type and format of this information varies greatly. Each agency publishes schedules and real-time information (when available) on their own websites; METRO, SPBS, and Casco Bay Lines also publish real-time information on the Southern Maine Transit Tracker. Regional transit information is available on the Transit Together website map, but this map is difficult to use.

The quality of transit information in the Greater Portland region also varies greatly. METRO, RTP, and SPBS publish schedules with geographically accurate maps that are easy to interpret. BSOOB Transit's maps are primarily diagrammatic and harder to understand

(BSOOB Transit has recently begun redesigning some maps to be geographically accurate). YCCAC publishes a simple map for the Southern Maine Connector which only highlights the first and last stops. One way to make service easier to understand would be for all local transit providers to publish maps in a consistent manner, using a geographic template and—when relevant—including the routes and services of other providers.

METRO's route maps are geographically correct and show activity centers to help riders orient themselves and understand service.



To understand BSOOB Transit's route maps, users must already have a fundamental understanding of the service area.



FARES

Although there are similarities among the fare structures of Greater Portland transit agencies, there are also differences.

Greater Portland's transit agencies use three base fare structures:

- METRO, SPBS, BSOOB Transit, and RTP's Lake Region Explorer charge a **flat fare** for each service type. This is the most common structure for local transit service throughout the country.
- Casco Bay Lines and the Downeaster charge **distance-based fares**. This is a common approach for long-distance services.
- YCCAC's Southern Maine Connector uses a **hybrid of flat and distance-based fares** with "In Town" and "Out of Town" fares.

Each agency sets its own fares. METRO and SPBS charge the same fares and BSOOB Transit, RTP, and YCCAC charge similar but slightly different fares:

- For local trips, METRO, SPBS, and BSOOB Transit all charge an adult cash fare of \$2; YCCAC charges \$2 for in-town trips and \$4 for out-of-town trips on the Southern Maine Connector; and RTP charges \$3 for Lakes Region Explorer trips.
- For express trips, METRO charges \$4 and BSOOB Transit charges \$4 on Route 60 Green and \$5 on Route 70 Purple/ZOOM.

These base fares are very similar and only minor changes would be required to implement a more unified fare across all bus services. Transfer policies and fare discounts differ considerably across

agencies. For example, CBL child fares end at age 13, while agencies using Dirigo have child fares for riders 18 and younger.

Casco Bay Lines and Downeaster fares are generally higher and reflect the types of service provided and, for the Downeaster, the longer trip lengths and fact that the service is part of a national network. Casco Bay Lines also charges higher single-ride fares in the peak season than during the rest of the year:

- Casco Bay Lines off-season round-trip fares range from \$4.10 (Peaks Island) to \$7.45 (Cliff Island), or the equivalent of \$2.05 to \$3.75 each way. During the peak season, these fares increase to \$7.70 to \$11.55, or the equivalent of \$3.85 to \$5.78 each way.
- Downeaster fares range from \$3 for short trips to approximately \$60 for longer trips.

The seven agencies provide a wide variety of multi-ride discount fares, including:

- METRO, SPBS, and BSOOB Transit all cap total costs for Dirigo users (see below) at \$6 per day and \$60 per month for local trips.
- Round trips can be purchased for YCCAC's Southern Maine Connector for only 50% more than the single-ride price. 15-ride tickets can also be purchased for \$15 for in-town trips and \$25 for out-of-town trips.
- RTP sells a Lakes Region Explorer 10-ride pass for \$25 and a monthly pass for \$50.

Greater Portland's different transit providers charge similar but different fares.

	Local	Express	Daily Pass	Monthly Pass	General-Public Demand Response	Paratransit
	\$2	\$4	\$6 local \$12 express	\$60 local \$120 express	--	\$2.50
	\$2	--	\$6.00-\$7.50	\$60	--	\$2.50
	\$2	\$4-\$5	\$6 local \$12 express	\$60 local \$120-\$150 express	--	\$4 (via route deviation)
	\$4.10-\$11.55	--	--	\$82.45-\$125.15 (annual pass available)	--	--
	\$3-\$58	--	--	--	--	--
 Lakes Region Explorer	\$3	--	--	\$51	\$2.50-\$5.00	--
 So. Maine Connector	\$2-\$4	--	--	--	\$3-\$6 (WAVE)	--

- Casco Bay Lines sells commuter books with five round-trip tickets for a cost of slightly more than three round trips. As with round-trip fares, these fares are higher during the peak season. It also sells monthly passes that range in price from \$82.45 to \$125.15. These passes cost the same year-round. Ferry fares are regulated by the Maine Public Utilities Commission.

- Amtrak offers 10-ride and monthly passes.
- All the providers also offer 50% discounts for children, and most provide this same discount to seniors.

The wide variety of discount fares would make the implementation of a unified structure for multi-ride tickets and passes more complicated.

TRANSIT FACILITIES

The region has eleven major transit facilities for passenger service, administration, operations, and maintenance.

Transit Centers

Major passenger facilities, most of which are also transfer locations, include transit centers, ferry terminals, and Downeaster stations:

- The **Downtown Transportation Center/METRO PULSE**, in downtown Portland, is the major hub for bus service in greater Portland. The PULSE is served by almost all METRO and SPBS routes, two BSOOB Transit routes, and RTP's Lakes Region Explorer. This facility has some passenger amenities, including a waiting area, vending machines, water fountain, lost and found, and customer service desk where Dirigo cards can be purchased and reloaded.
- **The Portland Transportation Center (PTC)**, which is just west of I-295, is the Portland stop for the Downeaster and Concord Coach Lines. The PTC is a large facility with very good passenger amenities, including a waiting area, bathrooms, vending machines, and customer service counters, as well as short- and long-term parking. However, the location is not close to major activity centers in Portland. The station is served by METRO's Route 1 Congress Street and BREEZ, which provide connections to the PULSE. The METRO bus stop is not incorporated into the facility's indoor space, so passengers waiting for a METRO bus do not have access to PTC passenger amenities while waiting.

The PULSE is the focal point of METRO service



The Saco Transportation Center provides a comfortable waiting environment



Image sources above: Nelson\Nygaard

Many major passenger facilities support transit service throughout the region

	Owner	Operator	Description	Served by
Passenger Facilities				
METRO PULSE	City of Portland	METRO	Downtown Portland Transit Center	METRO, SPBS, RTP, BSOOB Transit
Casco Bay Ferry Terminal	City of Portland	Casco Bay Lines	Casco Bay Lines' Portland Terminal	Casco Bay Lines, METRO
Portland Transportation Center	Concord Coach Lines	Amtrak/Concord Coach Lines	Intercity bus and train station	Downeaster, METRO, Concord Coach Lines
Mill Creek Transit Hub	City of South Portland	City of South Portland	South Portland's transit center	SPBS
Saco Transportation Center	City of Saco	City of Saco	Transit center and Downeaster station	BSOOB Transit, Downeaster, YCCAC
Old Orchard Beach Station	Town of Old Orchard Beach & OOB Chamber of Commerce	Town of Old Orchard Beach & OOB Chamber of Commerce	Summer-only Downeaster station	Downeaster, BSOOB Transit
Freeport Station	L.L. Bean & Town of Freeport	Town of Freeport	Downeaster station	Downeaster
Brunswick Station	NNEPRA & private owner	Town of Brunswick & Brunswick Downtown Association	Downeaster Station and Brunswick transit center	Downeaster, METRO, Brunswick Link, BlueLine Commuter

- **The Casco Bay Ferry Terminal**, which is the Portland terminal for all Casco Bay Lines services. It is also served by METRO's Route 8 Peninsula Loop, which serves the PULSE.
- The **Mill Creek Transit Hub**, which serves as a transfer point for SPBS routes. This transit hub has an indoor waiting area but lacks many amenities.
- **The Saco Transportation Center**, which is the transportation hub for the Biddeford-Saco area and a Downeaster station. It is served by BSOOB Transit, the Amtrak Downeaster, and YCCAC's Southern Maine Connector.
- **Old Orchard Beach Station**, which is served by the Downeaster and BSOOB Transit seasonal trolleys.

Casco Bay Lines operates to and from the Casco Bay Ferry Terminal.



The Mill Creek Transit Hub is the focal point of SPBS service.



The Saco Transportation Center is BSOOB Transit's hub and a Downeaster station.

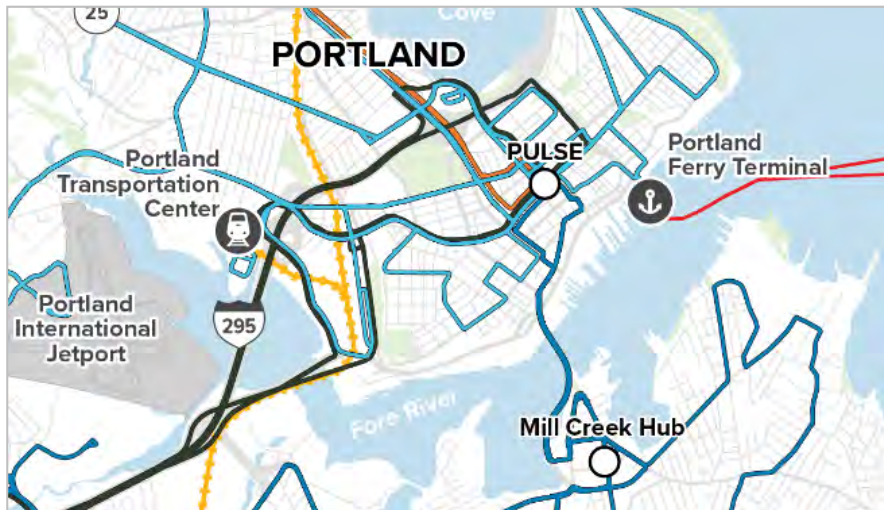


Image sources, this page: Nelson\Nygaard

- **Freeport Station**, which is served by the Downeaster and METRO BREEZ.
- **Brunswick Station**, which is served by the Downeaster, Brunswick Link, BlueLine Commuter, and METRO BREEZ.
- **Old Orchard Beach Station:** During the tourist season, connections can be made at Old Orchard Beach Station between Amtrak's Downeaster and BSOOB Transit's 52 White/53 Blue and seasonal trolley routes.

In general, these locations provide convenient connections between services. One significant exception, however, is that Portland's three major transit centers are not well linked. As a result, it can be difficult to make connections among the Downeaster, downtown Portland, and the Casco Bay Ferry Terminal.

Portland's three major transit centers are not well connected



Administration, Maintenance, and Operating Facilities

Each agency oversees its own administration, operating, and maintenance operations. NNEPRA and CBL are unique in their fleet type and operating needs, and the one bus-agency exception to in-house maintenance is that BSOOB Transit maintains YCCAC’s vehicles at their Biddeford base.

Many major operating facilities support transit service throughout the region

	Owner	Operator	Description
Administrative, Operating, and Maintenance Facilities			
Brunswick Layover Facility	NNEPRA	Amtrak	Maintenance and storage of Downeaster trains
BSOOB Transit Base	BSOOB Transit	BSOOB Transit	Maintenance for BSOOB Transit and YCCAC vehicles. Administrative and operating facility for BSOOB Transit.
Casco Bay Ferry Terminal	City of Portland	Casco Bay Lines	Casco Bay Lines’ Portland Terminal
RTP Base	RTP	RTP	Administrative, operating, and maintenance facility
METRO Base	METRO	METRO	Administrative, operating, and maintenance facility
SPBS Base	City of South Portland	City of South Portland	Administrative, operating, and maintenance facility shared with other City of South Portland departments.
YCCAC Base	YCCAC	YCCAC	Administrative offices and bus storage

Stops, Shelters, and Signage

Stops are one of the most important elements of transit service. Regular riders use transit stops every time they make a trip, and non-riders often gauge the quality of a service based on stops they see in their community. Good stops are easy to identify, provide shelter from the elements, allow safe and easy boarding and alighting of a vehicle, and include clear information on what service is available. Most of this section is about bus stops.

There are approximately 940 bus stops in the Greater Portland region, 26 of which are served by multiple agencies. BSOOB Transit and YCCAC share several stops in Biddeford, and METRO shares several stops with SPBS, BSOOB Transit, and RTP's Lakes Region Explorer in Portland. BSOOB Transit and RTP also allow passengers to flag down buses at any safe location along a route.

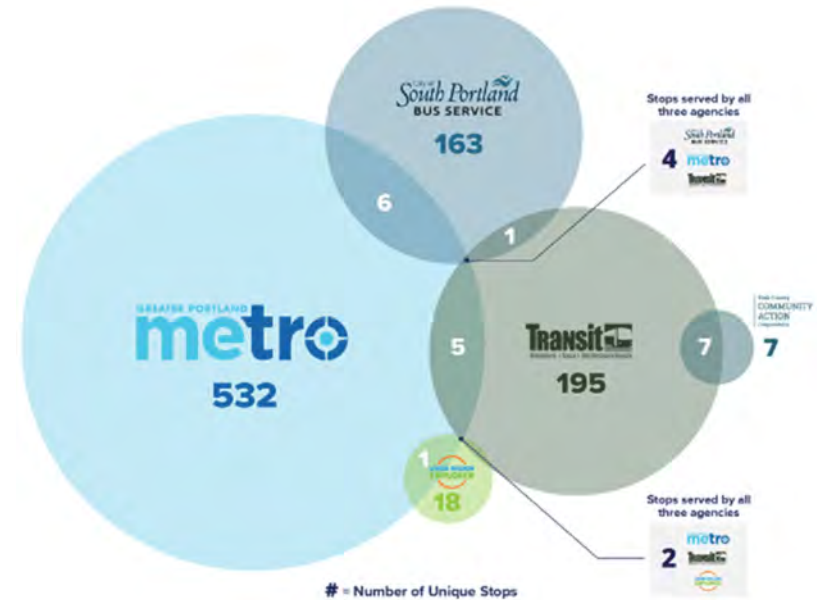
The quality of these stops varies greatly. Some stops include shelters, benches, and trash barrels, while others are unmarked or have signs on the wrong side of the road.

It is unknown how many stops have shelters, as there is no comprehensive stop and amenity database. Shelters are particularly important for passenger comfort, especially in New England, where rain and snow are common. For some riders, having a shelter at their bus stop is one of the factors that leads them to choose transit over other travel modes. Typically, stops with higher ridership are prioritized for amenities such as shelters, benches, and trash barrels.

Stop signage in the Greater Portland region varies greatly. All five bus operators use different signs to identify their stops. They also provide different information.

Images source to right: Nelson\Nygaard

There are about 940 bus stops in Greater Portland



Bus stop quality varies greatly throughout the region



Each bus operator uses different sign styles and provides different information.



Image source: Nelson\Nygaard

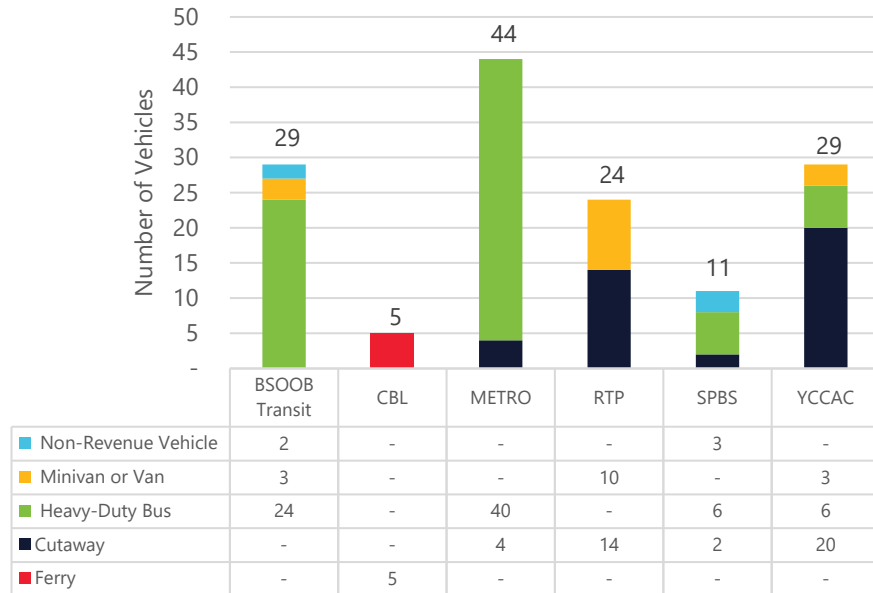
VEHICLES

The region's transit providers have a total of about 140 vehicles, excluding Downeaster trains, which are owned by Amtrak. METRO, BSOOB Transit, and YCCAC have the largest fleets, with 44, 29, and 29 vehicles, respectively. METRO and BSOOB Transit primarily operate standard transit buses (including BSOOB Transit's 12 vintage trolley replicas). YCCAC primarily operates smaller cutaway vehicles, and RTP operates cutaway vehicles, vans, and minivans.

Transit vehicle replacement costs are relatively significant capital outlays for each of the agencies (except for NNEPRA), and for the region as a whole. This is particularly true for ferries, which are expensive compared to buses and vans.

None of Greater Portland's transit agencies have transitioned to fully zero-emission vehicles, although METRO and BSOOB Transit are preparing to, and MaineDOT is conducting a study to help develop electrification plans for several transit providers in the region and across the state. As the State of Maine shifts public transit vehicles to zero-emissions models, there will be opportunities to further consider shared fleet procurements and charging infrastructure.

Most service is provided with standard transit buses, although many smaller vehicles are also used.



Note: Chart above includes spare vehicles. For example, Casco Bay Lines operates four ferries with one spare.

TECHNOLOGY

METRO, SPBS, and BSOOB Transit use a common fare payment system called DigiGO. In addition, METRO, SPBS, and Casco Bay Lines participate in the Southern Maine Transit Tracker, which provides real-time information for those services. These systems could be expanded to many other transit services in the region and provide a model for how other technologies could be shared. One exception to regional transit technology implementations is the Downeaster, which is commonly incorporated into national systems administered by Amtrak.

Fare Payment

All the region's transit providers accept cash for payment; Casco Bay Lines and Amtrak also accept credit cards for ticket purchases. METRO, SPBS, and BSOOB Transit have most recently focused on fare payment through the joint Dirigo system, which allows riders to pay using a mobile app or smartcard. To use this system, users load money into their Dirigo account via the app or their smartcard at CVS, 7-Eleven, or transit agency locations in the Portland area. The Dirigo system also tracks daily and monthly usage to cap fares at \$6 per day and \$60 per month.

Dirigo makes fare payment easier and enables fare capping



The Dirigo system provides the opportunity to implement a uniform fare payment system and fare capping throughout the Greater Portland region. There are also many examples of joint fare arrangements between local agencies and Amtrak that could potential be utilized for Downeaster service.

Automatic Vehicle Location

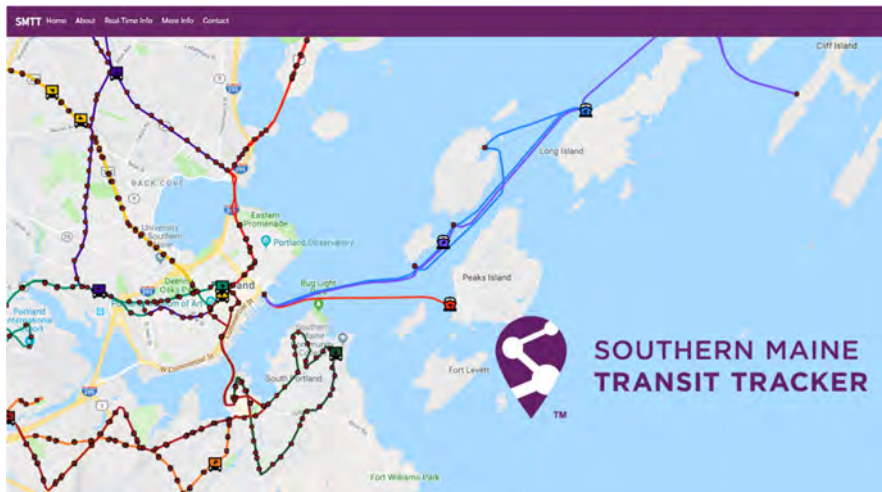
METRO, SPBS, BSOOB Transit, RTP, Casco Bay Lines, and Downeaster fixed-route vehicles are equipped with automatic vehicle location (AVL) technology, which provides real-time information on vehicle locations. AVL provides several benefits, including the ability to understand and address service problems, and to provide real-time

passenger information. This technology could be extended to YCCAC vehicles to provide similar benefits.

Real-Time Passenger Information

Transit AVL data can be sent to websites and smartphone apps to give riders real-time information about the current location of their vehicle and expected arrival times. METRO, SPBS, and Casco Bay Lines already do this, sharing their information via the Southern Maine Transit Tracker. This system publishes the information on its own website and to widely used third-party smartphone apps such as Transit App and Google Maps. RTP and BSOOB Transit provide real-time information via their own website and—in the case of RTP—smartphone app. The BSOOB Transit real-time tracker is currently down. Amtrak provides real-time information on the Downeaster on its website and third-party apps.

The Southern Maine Transit Tracker website provides real-time transit information for METRO, SPBS, and Casco Bay Lines



Because BSOOB Transit and RTP equip their fixed-route vehicles with AVLs, they could join other regional agencies and publish real-time information via the Southern Maine Transit Tracker. YCCAC could also install AVLs on their fixed-route vehicles and join the Southern Maine Transit Tracker.

SUMMARY

The region's transit providers already share or jointly serve many of the same facilities and have collaborated on efforts such as DiriGO and the Southern Maine Transit Tracker. However, most efforts are still undertaken independently. Stronger collaboration and coordination in several areas could further the development of a seamless regional system:

- Unified branding
- The provision of public information in common formats and via the same channels
- Bus stop standards
- Coordinated fleet planning
- The adoption by all providers of schedule information via GTFS-RT (General Transit Feed Specification Realtime) for inclusion on mapping websites and third-party travel apps
- The use of DiriGO fare payment by all providers

Other efforts, such as joint service planning and joint procurement, could provide additional benefits.



Image source: GPCOG

6 FINDINGS AND OPPORTUNITIES

Public transit services in the Greater Portland region largely operate independently, rather than as a cohesive system. As a result, it can be difficult to fully understand what services are available. In addition, services are not as frequent, convenient, or direct as riders desire, and many could attract more riders if better matched to underlying demand. Ways to do this are described below, and are mostly (but not entirely) related to bus services:

1. Plan together/work together

While Greater Portland's transit systems do collaborate in some ways, the collaboration is typically between select

operators and on select efforts. Greater collaboration among all operators would improve transit across the entire region, rather than just parts of it.

2. Provide more frequent service

Greater Portland's bus services operate too infrequently to make service convenient and attractive, and infrequent schedules can make for long travel times.

3. Better match bus service with demand

One major reason Greater Portland bus services operate infrequently is that they are stretched thin to maximize coverage in places where demand is low. A greater focus on serving higher-demand areas with fixed-route service and consideration of microtransit for lower-demand areas could provide the resources necessary to increase bus frequencies.

4. Make service easier to understand and use

Greater Portland's transit services are provided under many primary brands. In addition, many similar services, such as regional express routes, have their own unique names. Comprehensive information is not provided in one place and is also provided in different ways across agencies. Unified branding and marketing, and the use of common information formats and distribution methods, could present the overall system in a seamless manner.

5. Make service more reliable and faster

Travel times are long due to the challenges outlined above: service is infrequent and many bus routes are indirect, to maximize service coverage. Combined with long wait times for transfers, travel times by transit can be very long. Making routes more direct by focusing on higher-demand areas and providing more frequent service could significantly reduce travel times.

6. Improve bus network design

A large proportion of existing bus services prioritize service coverage over meeting demand. This is done through

circuitous alignments and variants that provide part-time service to low-ridership locations. These factors are major reasons that travel times are long and service is infrequent. These service characteristics also typically deter more people from using transit than they attract. A comprehensive redesign of bus services based on service-design best practices could improve service for nearly all existing riders and attract new riders.

7. Improve bus stops

Bus stops are the front door to most transit services, but most stops in Greater Portland are very basic and present information in different ways. The implementation of a regional bus stop improvement program could improve stops in a consistent manner throughout the system.

1. PLAN TOGETHER/WORK TOGETHER

Developing a more seamless transit system will require the region's transit providers to collaborate more.

Although the Greater Portland region's transit providers work together in many ways, developing a truly seamless transit system will require more collaboration, cooperation, and coordination in many areas, including to:

- Develop regional approaches to service improvements and investments (for example, a regional bus stop improvement program and the implementation of microtransit)
- Develop common information formats and distribute this information via the same channels
- Develop a regional route-numbering and naming convention

- Expand the DiriGO fare-payment system to more agencies
- Collaborate to ensure consistency across technology platforms, for example, fare collection, vehicle electrification, and regional charging
- Identify clear roles for all regional stakeholders and clearly define the standards or metrics upon which capital investment and other decisions are made. Develop regional service standards that ensure appropriate levels of consistency for service in similar areas.

Today, the region's transit providers collaborate through both formal and informal means. However, the implementation of the types of improvements described above would require additional collaboration on more topics and at multiple levels of agency leadership.

One way to do this is through the PACTS Transit Task Force, which can provide a more formal mechanism to determine, address, and coordinate regional transit needs and activities. Meeting on a regular basis could further support increased coordination among agency staff to implement Transit Together recommendations. Working in a framework of agreed-upon service standards and performance metrics would ensure a more consistent approach to service planning and transit decision-making.

In addition, periodic joint board meetings could help ensure agency and community support to further advance regional goals.

At a Joint Transit Board Workshop in 2019, board members voiced support for better unifying the regional network to provide more seamless travel and invest in:

- ***Common regional branding***
 - ***Priority corridors***
 - ***Transit frequency***
-

2. PROVIDE MORE FREQUENT SERVICE

For people to want to use transit, it must be reasonably convenient, and to be reasonably convenient, it must be reasonably frequent.

People want transit to be convenient, and an essential element of convenient transit is frequency. This is because people want and need the flexibility to travel when they desire and when their schedules require. Infrequent service means long waits—waits for the bus and the need to get somewhere early because that is when the bus runs. Recent regional planning efforts have identified more frequent transit as one of the public's top desired improvements.

A common industry definition of frequent transit for local services is every 15 minutes or less. This frequency allows people to make trips without planning them around a schedule. Frequencies of up to 30 minutes are moderately convenient. However, as frequencies lengthen to beyond 30 minutes,

demand drops off significantly, as most people will make other transportation choices. Beyond 60 minutes, demand decreases to the relatively few people who don't have other options.

At present, no Greater Portland region transit routes provide consistently frequent service, and only six routes (including one seasonal route) operate every 30 minutes or better from the beginning of the AM peak period to the end of the PM peak period. Most other weekday services operate less frequently than every 60 minutes and many operate less frequently than every two hours. On weekends, service is even less frequent.

One of the most important improvements that can be made to Greater Portland regional transit is improving service frequencies. For local services, frequencies are typically set in one of two ways: (1) based on demand, which means providing enough service to meet demand, and (2) based on policy minimums, which are most often set at 60 minutes.

The Transit Together market analysis shows that much of the Portland Peninsula can support service every 15 minutes, and that other parts of the region can support more frequent service than is currently provided. One potential approach to developing regional policy frequencies is to adopt minimum frequencies of every 60 minutes for local bus routes and every 120 minutes for regional bus routes. This would improve service on many SPBS and BSOOB Transit routes, the Lakes Region Explorer, and the Southern Maine Connector.

Most service is infrequent, much is very infrequent

Route	Service Frequencies (Minutes)				
	Early AM	AM Peak	Midday	PM Peak	Night
METRO					
BREEZ	60	50	98	53	52
Husky Line		30	30	30	46
1 Congress Street	32	30	30	30	37
2 Forest Avenue	30	30	30	30	63
3 Portland - Westbrook - S Portland		30	30	36	62
4 Westbrook	60	30	30	30	53
5 Maine Mall	40	30	30	30	44
7 Falmouth		60	60	60	60
8 Peninsula Loop		30	31	31	31
9A/9B North Deering/West Falmouth	30	30	60	35	45
South Portland Bus Service					
21 Willard Square		45	60	60	36
24A Maine Mall	100	117	130	122	95
24B Maine Mall		120	125	130	87
Biddeford-Saco-Old Orchard Beach Transit (Year-Round Routes)					
50 Orange/51 Black	45	75	75	75	75
52 White/53 Blue	45	75	75	75	75
54 Silver		27	23	30	28
54 UNE		68	78	60	70
60 Green		150	150	150	150
70 Purple/ZOOM		38	38	43	43
Regional Transportation Program					
Lakes Region Explorer		190	395	205	70
York County Community Action Corporation					
Southern Maine Connector		157	171	171	

Note: Ferry and rail service not included in above table. Frequencies shown above are approximate, as some service frequencies vary throughout the day.

3. BETTER MATCH BUS SERVICE WITH DEMAND

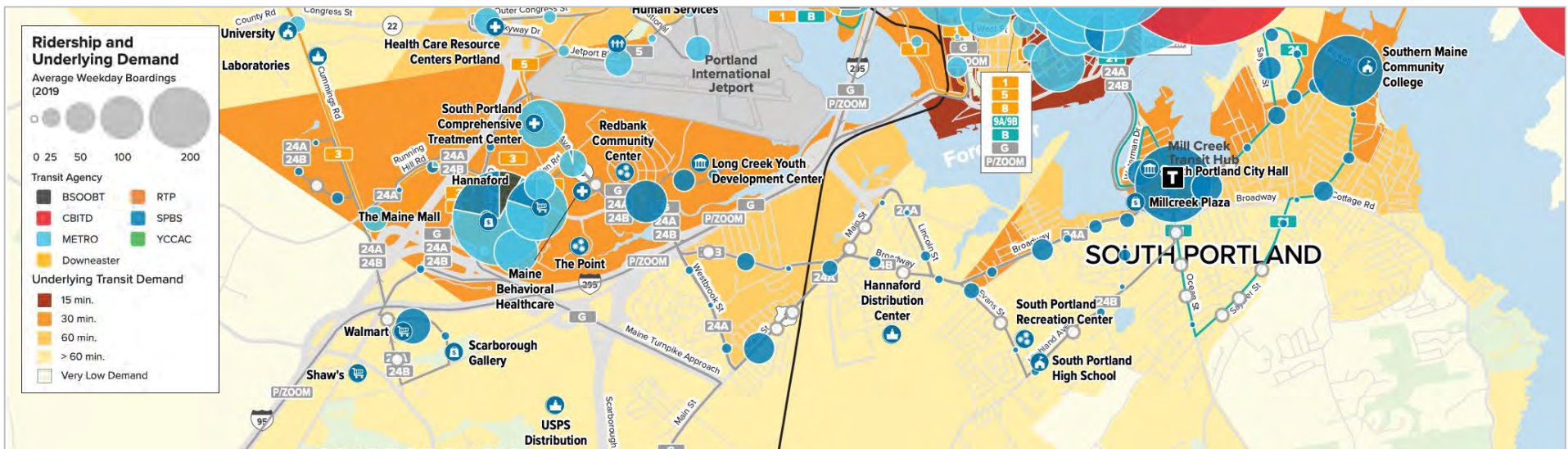
A shift to more demand-based service would increase ridership.

As described earlier in this report, there are two fundamentally different ways to provide transit service. The first is to focus service in areas where demand is highest and make it as convenient as possible. This is called demand-based service. The second is to provide service to as many places as possible. This requires service be spread much more thinly, which results in less frequent service and service for

fewer hours. It also typically means that routes are less direct, to serve as many areas as possible. This is called coverage-based service.

Coverage-based services provide availability to more people, but because the service is less convenient, fewer people will use it, and ridership is typically low. In some instances, bus routes provide approximately as much service to low-demand areas as to high-demand areas. Service to low-demand areas is only lightly used while service to higher-demand areas is much better used. A greater focus on more-direct and frequent service to higher-demand areas, and less service to low-demand areas, could provide better service to most riders, making these routes more useful to more people.

In South Portland, about as much service is provided to low-demand areas as to higher-demand areas



4. MAKE SERVICE MORE RELIABLE AND FASTER

Faster service would attract more riders.

Greater Portland regional transit outreach has shown that shorter travel times (and faster service) is one of the public’s most-desired improvements. Faster service is important for two reasons: (1) people want to get places faster rather than slower, and (2) slower service means less access to opportunities and activities—when it takes too long to get somewhere by transit, those opportunities and activities are out of reach for many riders.

Today, many transit trips in the Greater Portland region take a long time because many routes are circuitous. Two examples (at right) are BSOOB Transit’s 50/51 and METRO’s Route 8. These types of circuitous alignments are a consequence of trying to maximize service coverage.

Another reason transit trips take a long time is because service is infrequent. This means transit riders often must spend a long time waiting for a bus that then operates circuitously to their destination. Trips that involve transfers can be especially long, as riders can then encounter two long waits. Some of the most effective ways to make trips faster are to straighten routes, minimize off-route variations, and improve frequencies.

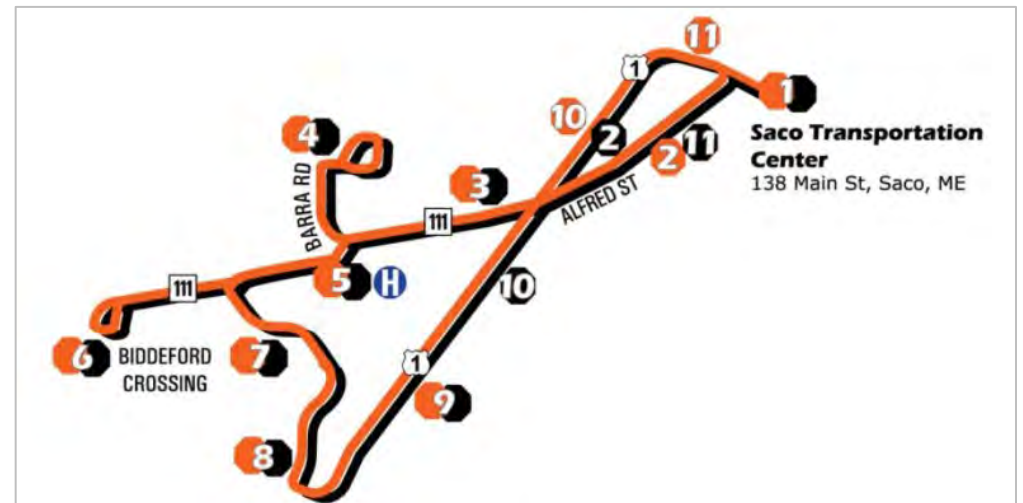
An additional opportunity to improve overall travel times will be to develop transit priority corridors that incorporate transit-priority measures such as bus lanes, queue jumps, and transit signal priority, along with other infrastructure improvements such as high-quality stops. Portland’s Congress Street corridor

is the most likely transit priority corridor, although other corridors are planned for upgrades. Transit priority measures could also be implemented on a more targeted basis to avoid delays at chokepoints and other areas where service is slow.

METRO Route 8 Portland Peninsula



BSOOB Transit’s Route 50 Black/51 Orange



5. MAKE SERVICE EASIER TO UNDERSTAND AND USE

Several actions could make service much easier to learn and understand.

Greater Portland is served by seven different transit providers, which is a high number for an urban area of its size. This is confusing, especially for new riders and the region's many visitors. Several measures could make service easier to understand and use:

- Develop a unified brand
- Improve rider information and create one consistent, common source for regional information
- Develop regional route numbering and naming convention
- Use Dirigo on all systems

Develop a Unified Brand

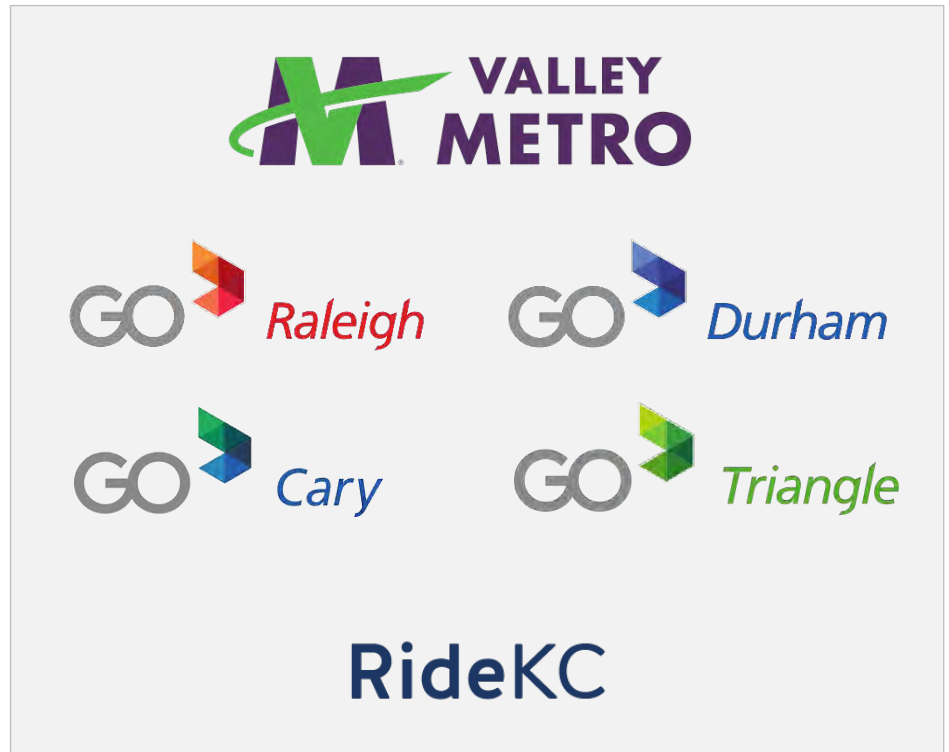
Several other regions in the United States are served by multiple providers and present their services to the public using a single brand. In these cases, different agencies still provide their own services, but it appears to the public that all services are part of a single system.

One of the best examples of this approach is the Phoenix area, where services are all presented to the public as Valley Metro. Kansas City transit operators have also recently taken this approach and three agencies are now operating under the RideKC brand.

A third example is North Carolina's Research Triangle, where most operators wanted to develop a common brand while maintaining their own unique identities. In this case, services were rebranded using a

"GO" name and brand following by the geographic location of the individual system (e.g., GoRaleigh, GoTriangle, GoDurham, GoCary).

Phoenix, North Carolina, and Kansas City are examples of places with multiple providers that use common branding



An important note about these approaches is that the unified branding is designed solely to make service easier for the public to understand and does not prevent individual agencies from determining how or when service operates. In the Greater Portland region, bus riders would benefit most from improved branding; however, a cohesive, regional transit brand would benefit all users. A regional brand may not be applicable to all agencies, as some brands, like Amtrak, are national.

Improve Information

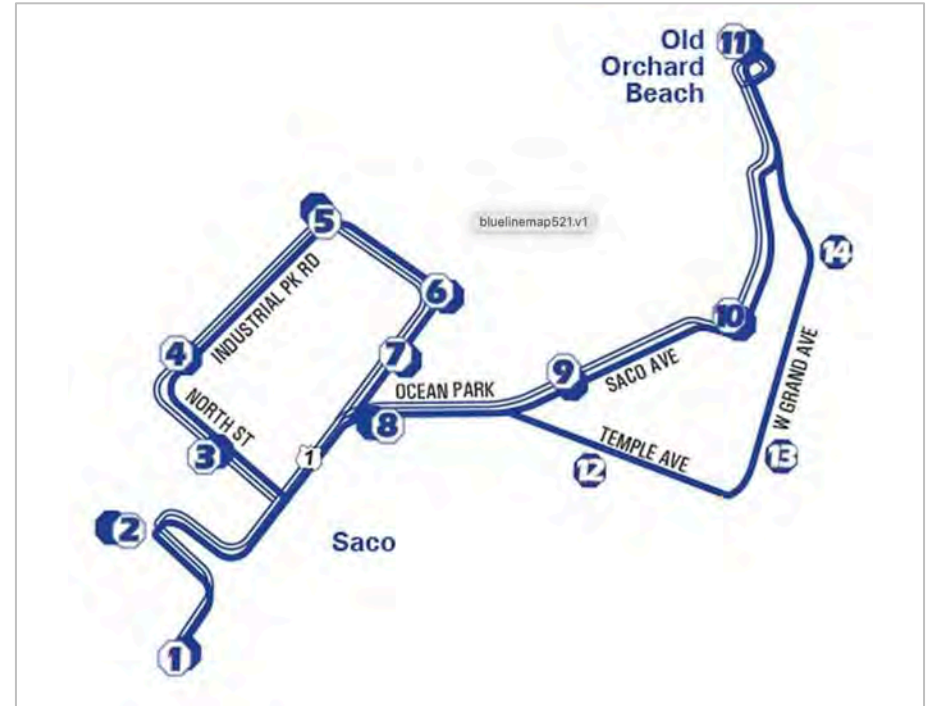
Each transit agency in the Greater Portland region provides information on its services in different ways, and the quality of information varies significantly. There is also no single source of information, either via a local website or more broadly used platform such as Google Maps. This makes it difficult for riders to learn and understand the full array of available services.

METRO's maps are clear and informative



For example, a potential rider who wants to travel from Saco to most locations in Portland won't be able to find a trip option on either the BSOOB Transit or METRO websites. This rider will not use Google Maps or third-party transit apps unless they know to search two different websites to plan their trip. Potential new riders often won't know they have to search multiple websites, and nor will short-term visitors who make up a significant proportion of the summertime population.

BSOOB Transit's maps have less detail and are difficult to interpret



Ways to make information easier for the public to find are for all operators to:

- Provide transit information through a single website with a real-time regional transit map, schedule, and other information.
- Provide information in the same formats across all systems.
- Publish GTFS-RT files of schedule information for third-party applications such as Google Maps and Transit App.
- Provide a common real-time information source for all transit agencies; consider an already-available provider, such as Transit App, which requires little to no staff time to keep updated and provides a useful, intuitive interface that reaches many people.

Develop Regional Route-Numbering and -Naming Conventions

Each provider currently develops its own route-naming conventions. For local routes, METRO and SPBS use a route number and a name that describes the area or areas served. This is, by far, the most common approach to route numbering and naming used in the United States.

NNEPRA, Casco Bay Lines, RTP, and YCCAC simply name their routes. The Downeaster name is part of Amtrak's national naming convention, and Amtrak service is sufficiently different than other Greater Portland services that the name and brand is well understood. Casco Bay Lines routes are named after the islands they serve and are also well understood. RTP's and YCCAC's Lakes Region Explorer and Southern Maine Connector names provide a general idea of the areas served.

BSOOB Transit mostly gives their year-round routes color names, and in some cases two routes are numbered and named together to represent variations or directions of a similar alignment. This naming convention does not indicate areas served.

The simplest way to implement a regional naming convention would be to use a number and name for all routes, including express bus routes but excluding the Downeaster and ferry services.

Use DiriGO on All Systems

METRO, SPBS, and BSOOB Transit have most recently focused on fare payment through the joint DiriGO system, which allows riders to pay using a mobile app or smartcard. To use this system, users load money into their DiriGO account via the app or their smartcard at CVS, 7-Eleven, or transit agency locations in the Portland area. The DiriGO system also tracks daily and monthly usage to cap fares at three times

the one-way fare per day and 30 times the one-way fare per month, with any use over those levels being free.

DiriGO makes fare payment easier and enables fare capping



Standardized fare payment and fare capping could be implemented throughout the region by expanding use of the DiriGO system to Casco Bay Lines, RTP's Lakes Region Explorer, and YCCAC's Southern Maine Connector. Through investment in fare technology, RTP, YCCAC and CBL may be able to accept DiriGO stored-value payment.

Establishment of regional fare capping and transfer policies between the five bus providers would ensure more seamless, affordable travel among systems. Although more complicated, it may be possible for the Downeaster to accept DiriGO, as Amtrak has other joint fare agreements with local transit providers in the United States.

6. IMPROVE BUS NETWORK DESIGN

A comprehensive redesign of services could make them more attractive to more people.

As described in detail in the Transit Together route profiles, the design of many existing bus routes in the Greater Portland region is circuitous and/or overly complex, and there are many opportunities for improvement. The redesign of individual services based on fundamental service design principles can make service more convenient for the overwhelming majority of existing riders, and attract new riders. These types of changes can be implemented on a route-by-route basis but

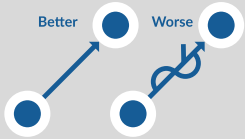
could produce the greatest improvements if implemented systemwide or regionally—for example, comprehensively redesigning Biddeford-Saco-Old Orchard Beach, South Portland, Maine Mall area, and Portland Peninsula service all at once.

Network design improvements could also include using a ‘family of services’ approach to assign different service types to different markets. For example, rail can be matched with high-volume markets, express bus with long-distance markets, local bus with moderate-volume local markets, and microtransit with critical low-volume markets. This approach is already used to some extent in the Greater Portland region but could be strengthened.

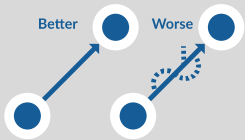
Additional network design opportunities include:

- Better connections between air, rail, ferry, and bus service. In this respect, it appears that the potential relocation of the Portland Downeaster station to the mainline could significantly improve connections.
- Sharing costs and vehicles for ‘cross-border’ services, which could make service more seamless for riders.
- Changes to or the development of new seasonal services, particularly in the Old Orchard Beach area.

Using service-design best practices can improve service



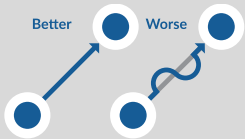
Simple is better than complicated: A simpler route structure will attract more riders than a complex system.



Alternative patterns should be minimized: Alternative patterns should be provided only when there is a very sound basis for doing so.



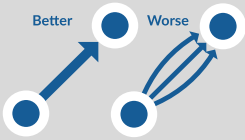
Fast is better than slow: Virtually all passengers prefer to get places faster rather than slower. Service will be made faster by making it more direct, consolidating stops, and—where possible—implementing transit-priority measures.



Routes should operate along a direct path: Routes should not deviate from the most direct alignment unless there is a compelling reason.



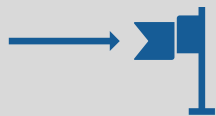
Major routes should operate along arterials: Keeping bus routes on major arterials will make transit service easier to understand.



A few good choices are better than many mediocre choices: Providing better service on fewer routes can provide most riders with better choices.



Routes should serve well-defined markets: Reconfiguring service around clearly defined markets will make service easier to understand, provide a basis for developing premium bus services, and minimize service duplication.



Routes should operate to and from strong anchors: Routes should have a strong anchor on at least one end or, where possible to serve demand in both directions, at both ends.







Routes should be bi-directional: Wherever local street networks allow, routes should operate along the same alignment in both directions to make it easy for riders to know how to make their return trip

7. IMPROVE BUS STOPS

Stop improvements make using transit easier and more comfortable.

As described by TransitCenter, which is a foundation that works to improve public transit in the United States: *“Bus stops are the front door to American public transit systems: they are where half of transit riders wait for service, they are a visual representation of transit service in every region in the country, and they can and do serve all transit riders. Great bus stops are comfortable places to wait, surrounded by safe and accessible walking conditions—and they are important drivers of bus ridership and customer satisfaction.”*¹

Example Bus Stop Hierarchy and Amenity Types

SIGNATURE STOP	ENHANCED STOP	REGULAR STOP	BASIC STOP
<p>USE: Stops with high boarding volumes Stops near major activity centers</p> <p>STANDARD ELEMENTS: Distinctive standardized design Large shelter with seating and lighting Raised platform/level boarding Real-time schedule information and maps Bicycle racks Trash receptacles</p> <p>OTHER POTENTIAL ELEMENTS: Off-board fare payment Local maps and information Landscaping Artwork Scooter coral</p> <p>RIDERSHIP: 200+ daily boardings</p> <p>NUMBER OF STOPS: 11 inbound; 8 outbound</p> 	<p>USE: Stops with moderate boarding volumes</p> <p>STANDARD ELEMENTS: Distinctive standardized design Medium-sized shelter with seating Raised platform/level boarding Real-time schedule information Maps Lighting Bicycle racks Trash receptacle</p> <p>OTHER POTENTIAL ELEMENTS: Off-board fare payment Local maps and information Landscaping Scooter coral</p> <p>RIDERSHIP: 50-199 daily boardings</p> <p>NUMBER OF STOPS: 31 inbound; 15 outbound</p> 	<p>USE: Stops with lower boarding volumes</p> <p>STANDARD ELEMENTS: Distinctive standardized design Regular-sized shelter with seating Raised platform/level boarding Bus stop sign Trash receptacle</p> <p>OTHER POTENTIAL ELEMENTS: Lighting (if street lighting insufficient)</p> <p>TYPICAL RIDERSHIP: 15-49 daily boardings</p> <p>NUMBER OF STOPS: 33 inbound; 31 outbound</p> 	<p>USE: Stops used mostly for alightings</p> <p>STANDARD ELEMENTS: Bus stop sign Bench</p> <p>TYPICAL RIDERSHIP: < 15 daily boardings</p> <p>NUMBER OF STOPS: 7 inbound; 38 outbound</p> 

¹ From Sorry to Superb: Everything You Need to Know about Great Bus Stops, TransitCenter, October, 2018.

The most effective way to improve stops and ensure consistency throughout the region would be to implement a regional program that develops a hierarchy of stops based on boarding levels and other factors, and that defines the specific elements that should be implemented at each type of stop.

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