Transit Together Study

State of Regional Transit Part 1: Market Analysis

March 2022 DRAFT

GPCOG
GREATER PORTLAND COUNCIL OF GOVERNMENTS

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Cover image source: Greater Portland Council of Governments

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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 – Assessment of Regional Transit Collaboration:** This document describes the individual transit agencies in the Greater Portland region, their past and ongoing coordination efforts, and common challenges and opportunities.

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	Commuter Rail, Light Rail /Streetcar, BRT, Express Bus, Local Bus	15 mins. or less	Interstate Rail; Land Use and Frequency Varies; Passenger Ferry
Urban and Neighborhood Mixed-Use	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	

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 residents[1], 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

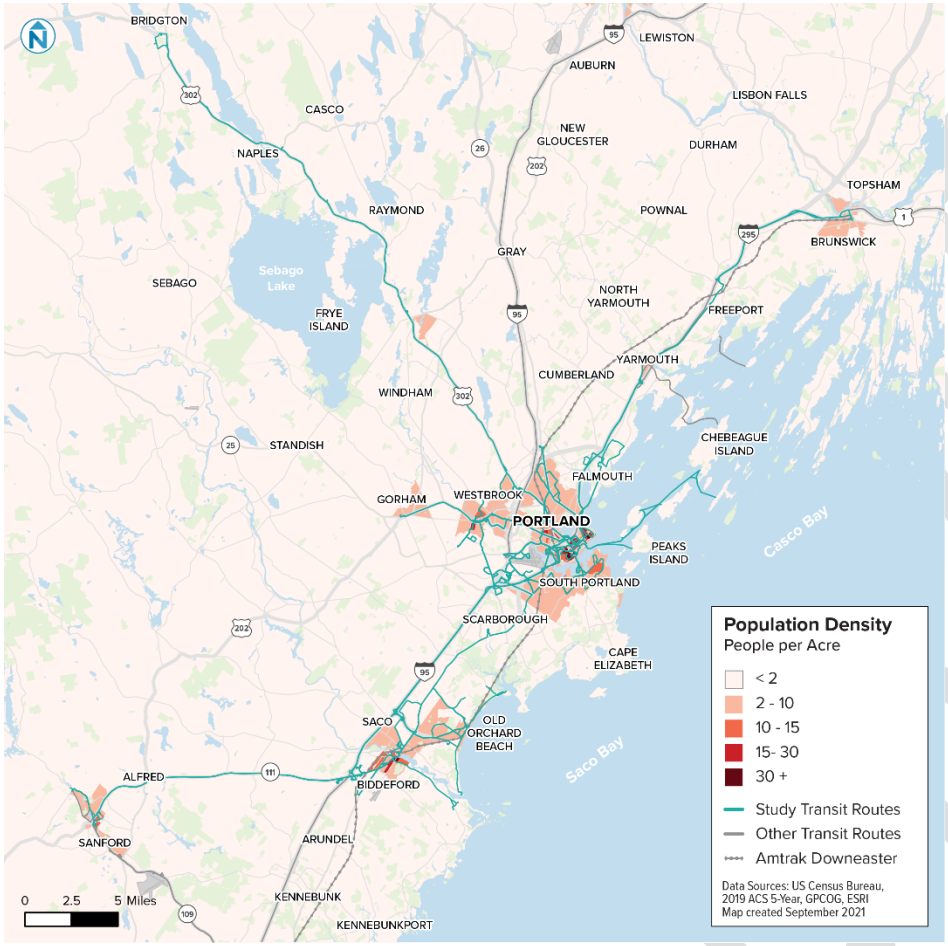


Figure 2-3 Population Density in Greater Portland Area

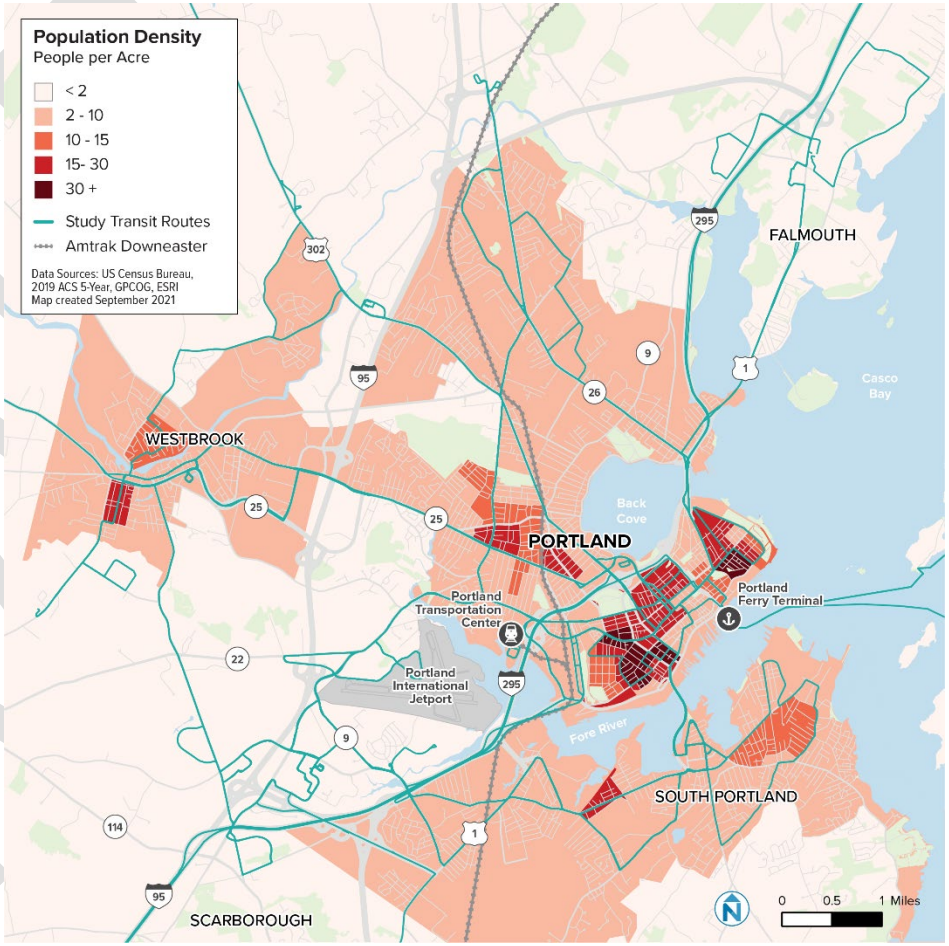


Figure 2-4 Population Density on the Portland Peninsula

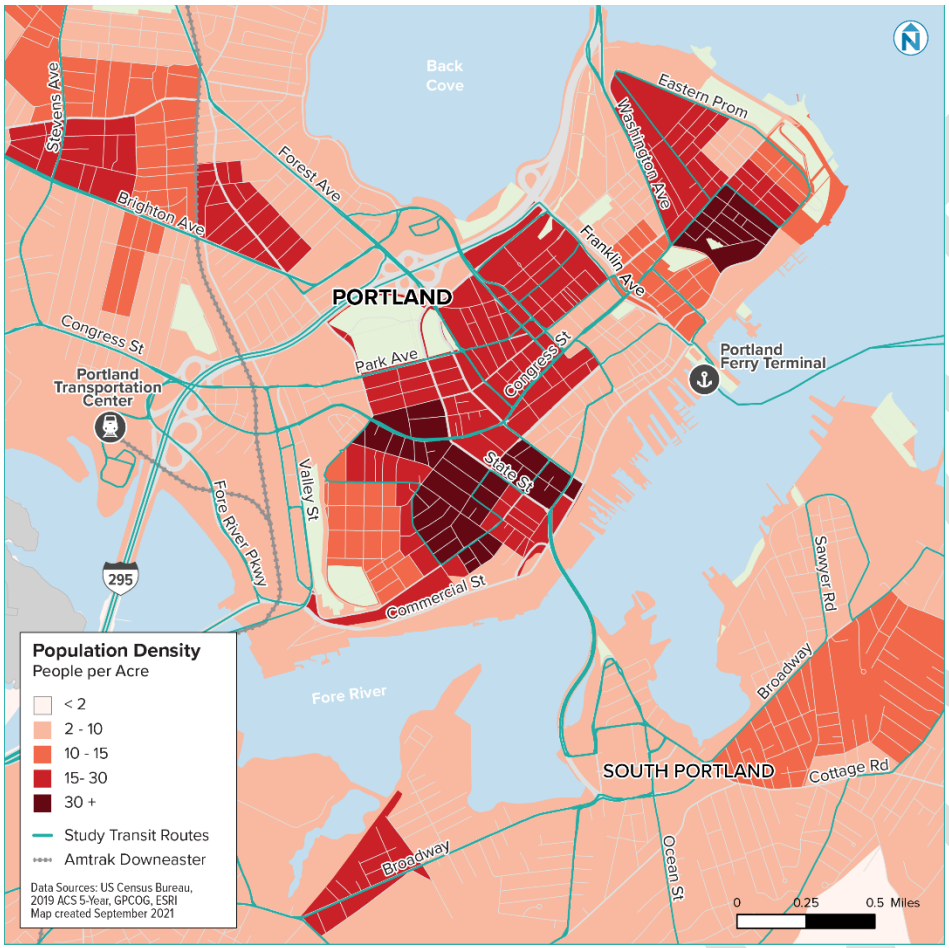
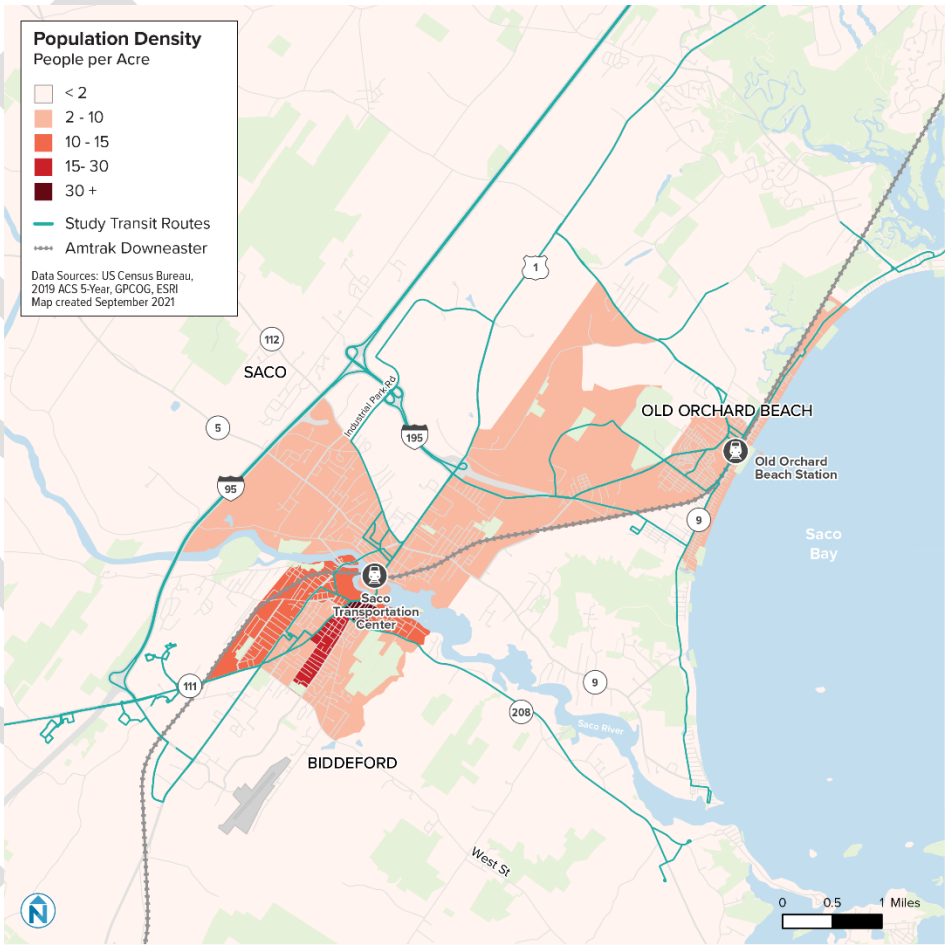


Figure 2-5 Population Density in Biddeford-Saco-Old Orchard Beach



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

Portland Old Port/Downtown		**Urban Core** *30+ people per acre*	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.
Biddeford Downtown		**Urban and Neighborhood Mixed-Use** *15-30 people per acre*	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.
Saco King Street		**Low Density** *2-10 people per acre*	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.
Cumberland Blanchard Road		**Rural** *<2 people per acre*	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.

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

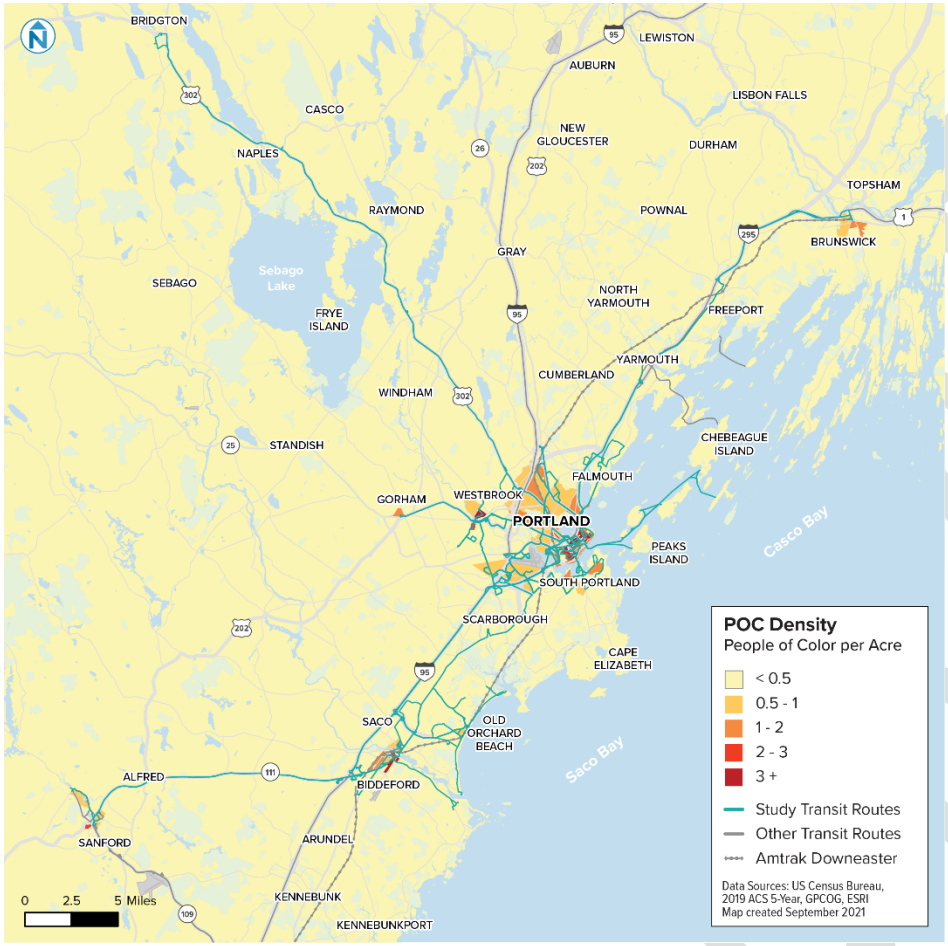


Figure 2-8 Density of People of Color in Greater Portland Area

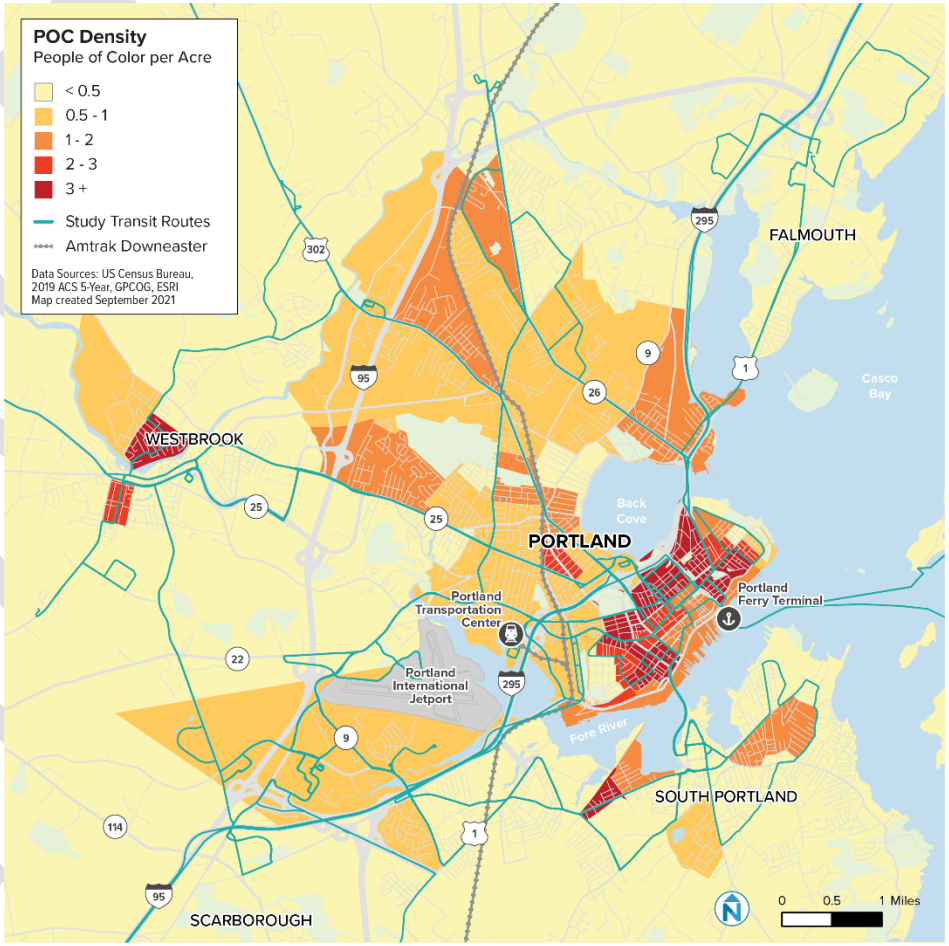


Figure 2-9 Density of People of Color on the Portland Peninsula

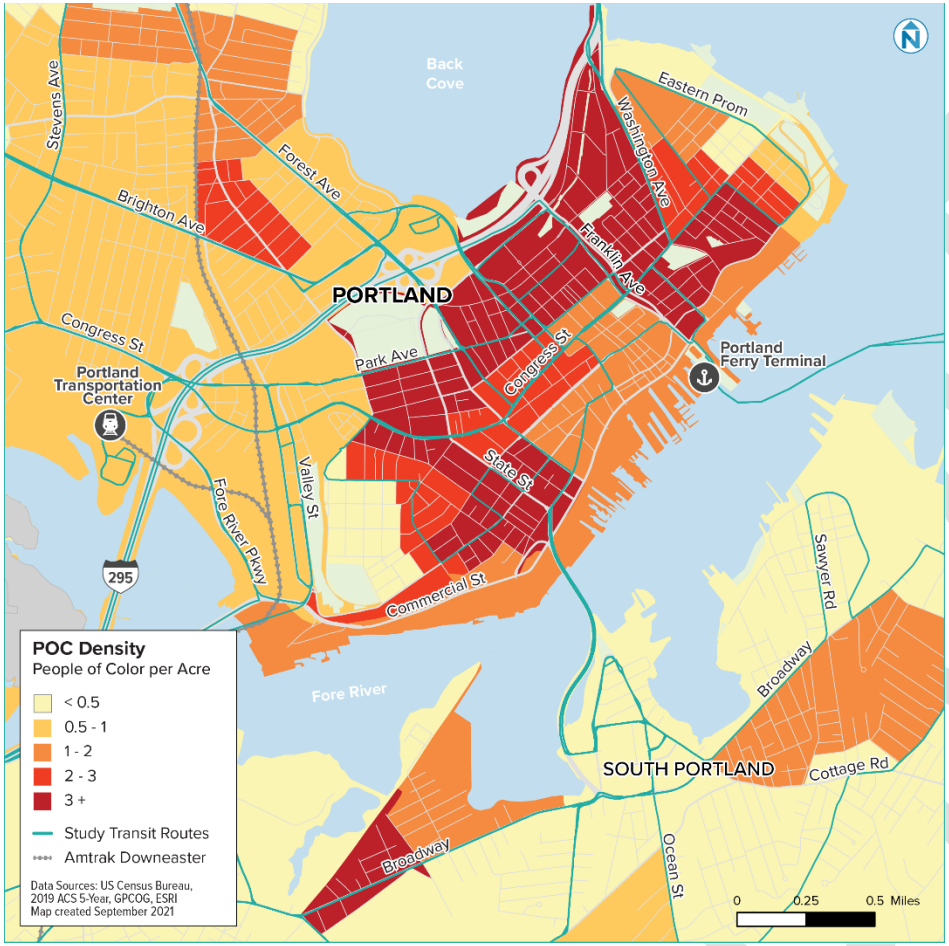
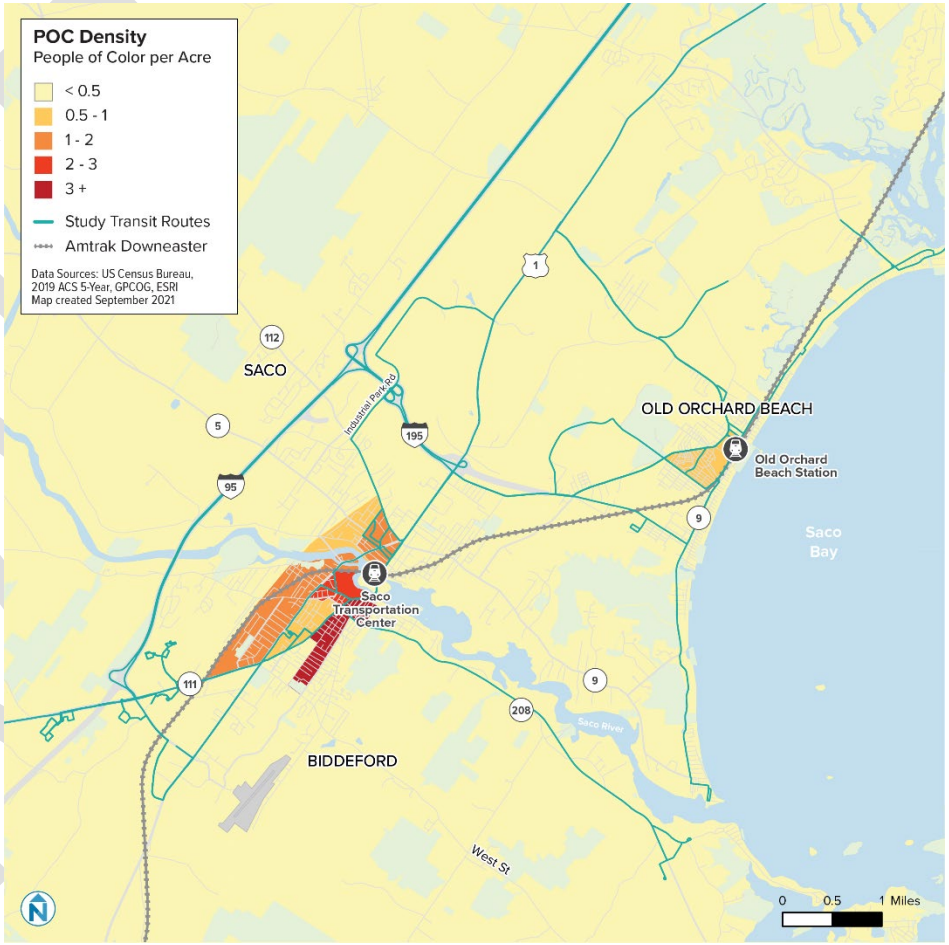


Figure 2-10 Density of People of Color in Biddeford-Saco-Old Orchard Beach



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

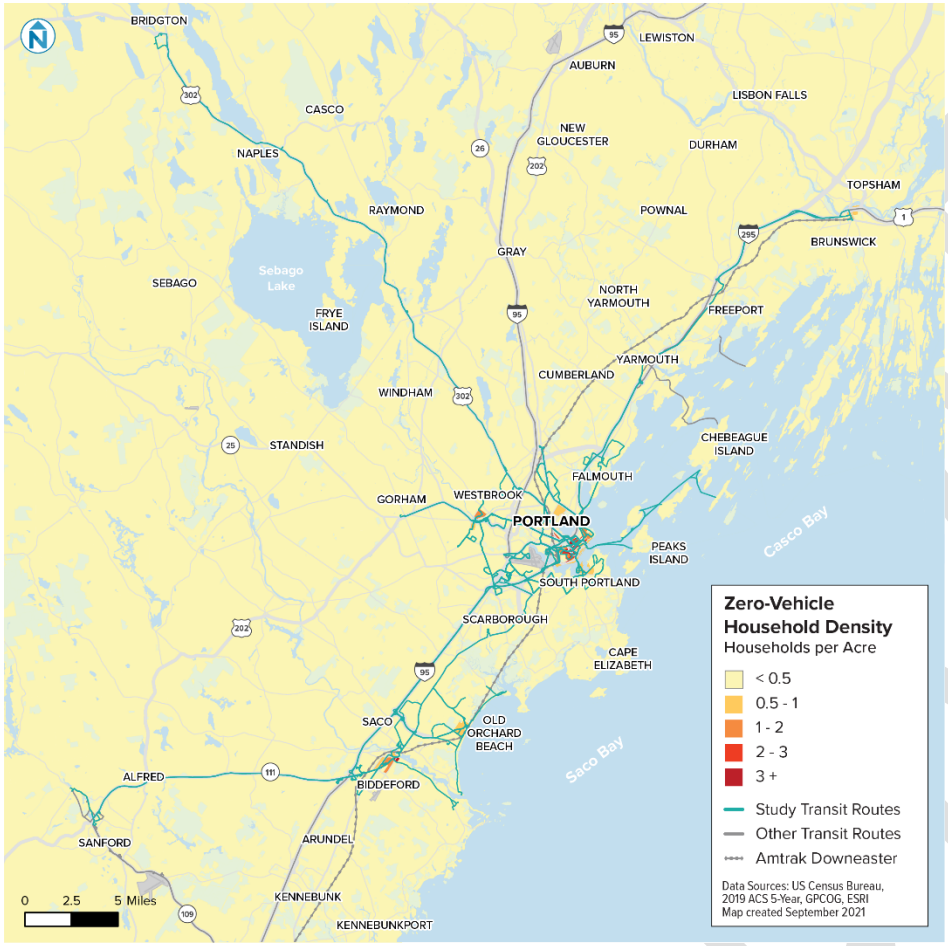


Figure 2-12 Density of Zero-Vehicle Households in Greater Portland Area

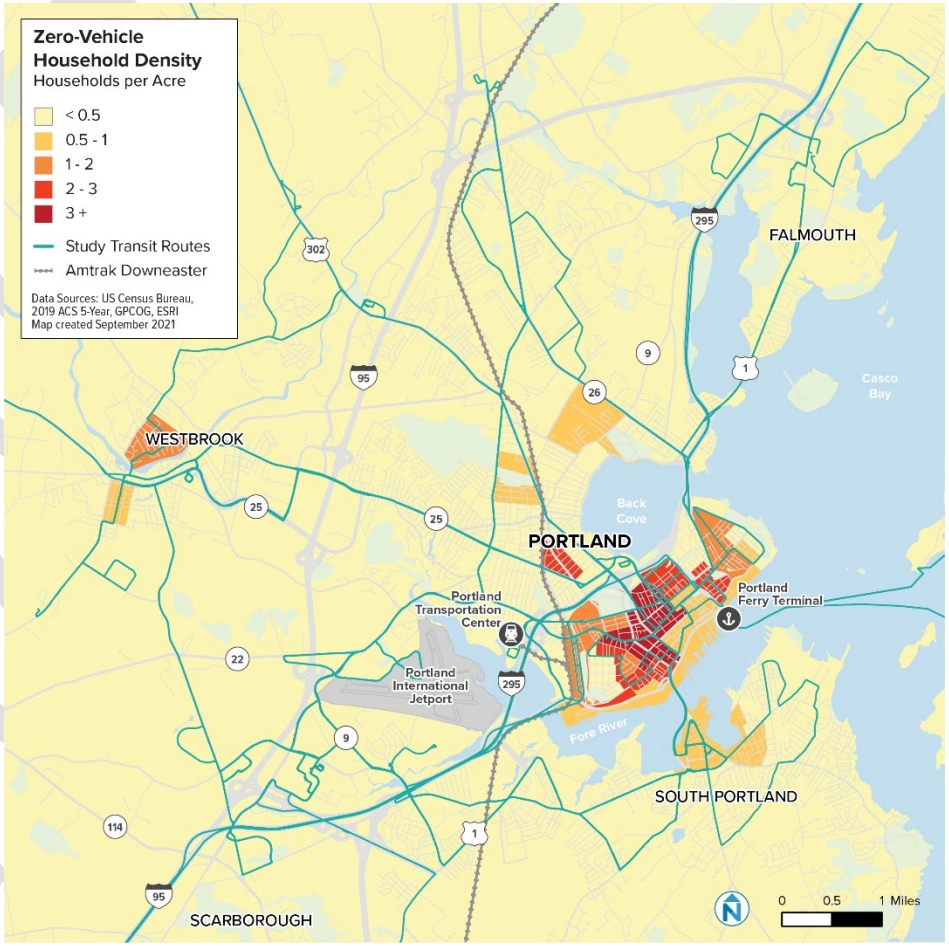


Figure 2-13 Density of Zero-Vehicle Households on the Portland Peninsula

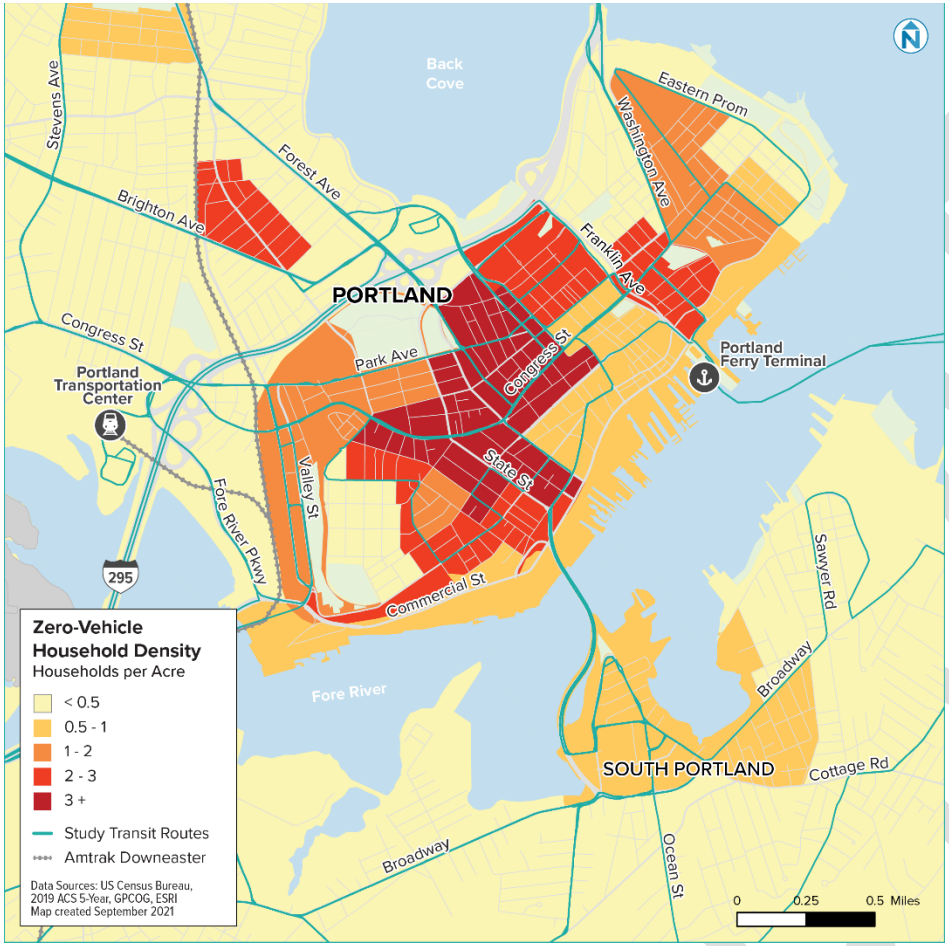
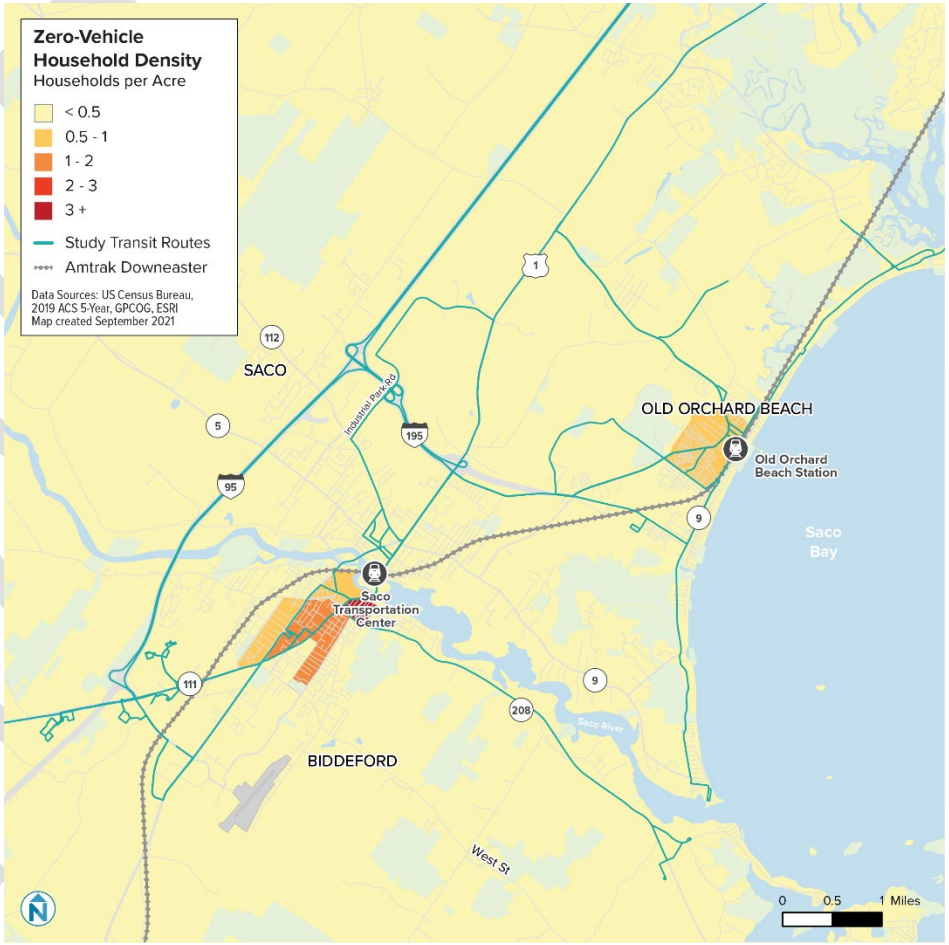


Figure 2-14 Density of Zero-Vehicle Households in Biddeford-Saco-Old Orchard Beach



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

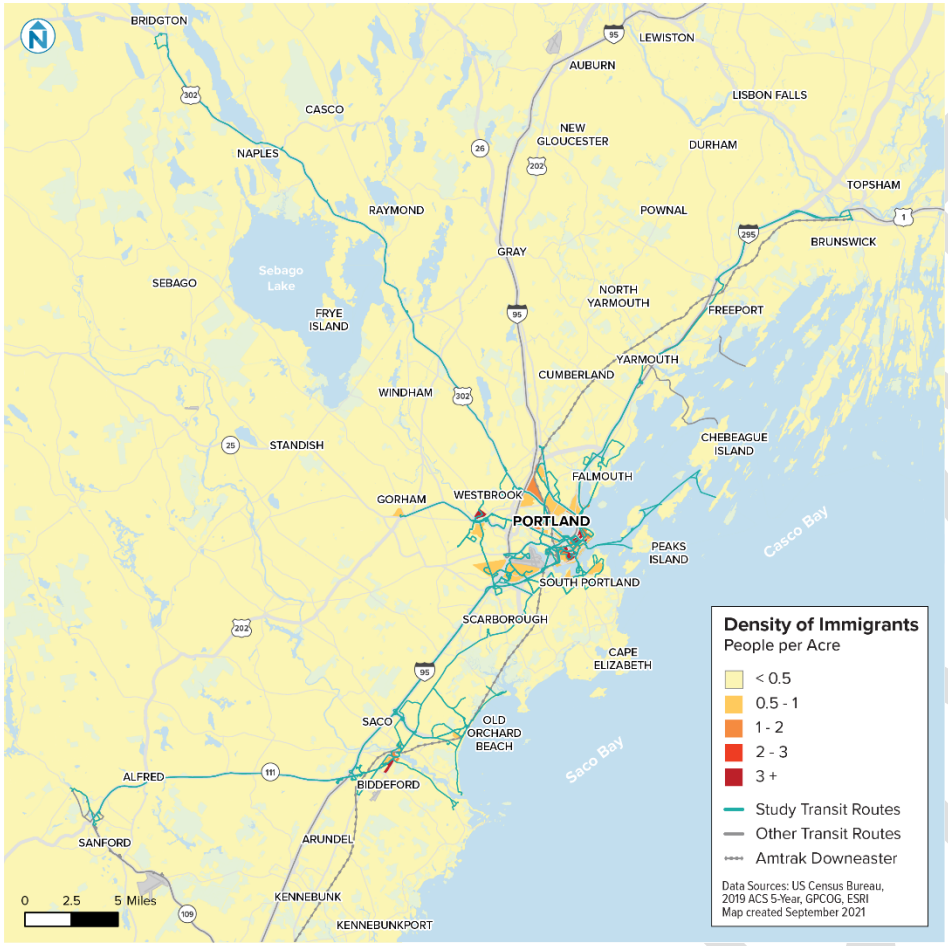


Figure 2-16 Immigrant Population Density in Greater Portland Area

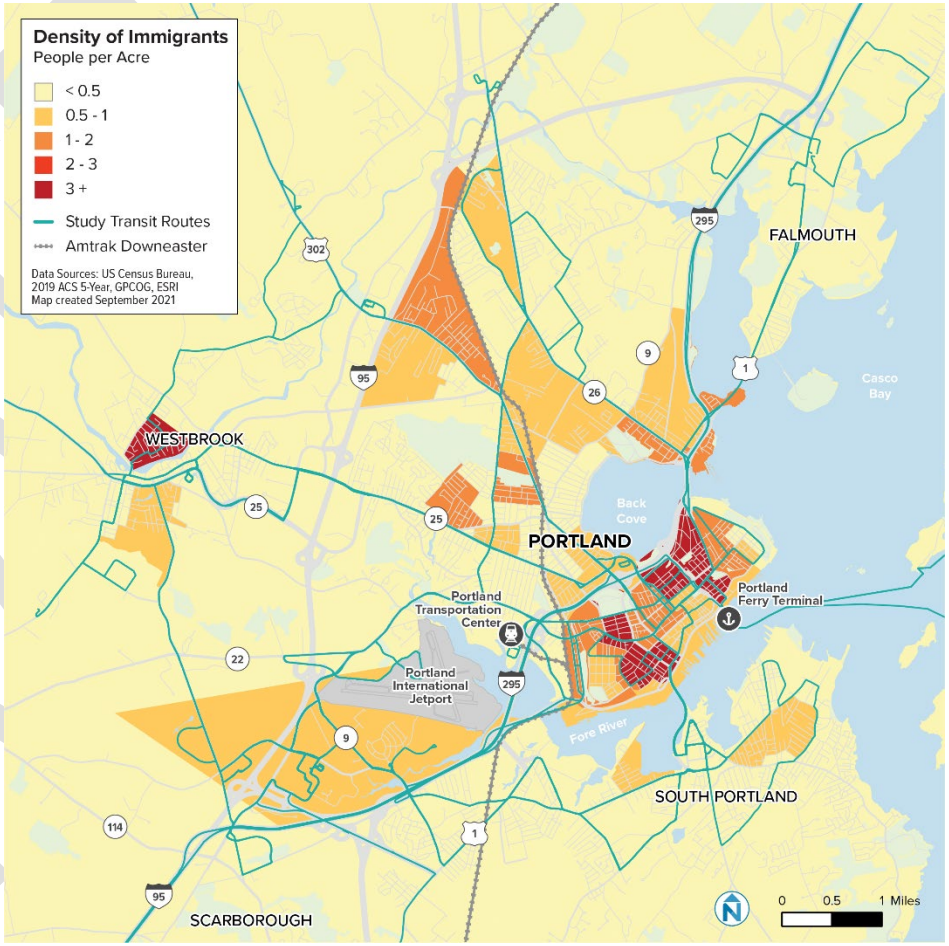


Figure 2-17 Immigrant Population Density on the Portland Peninsula

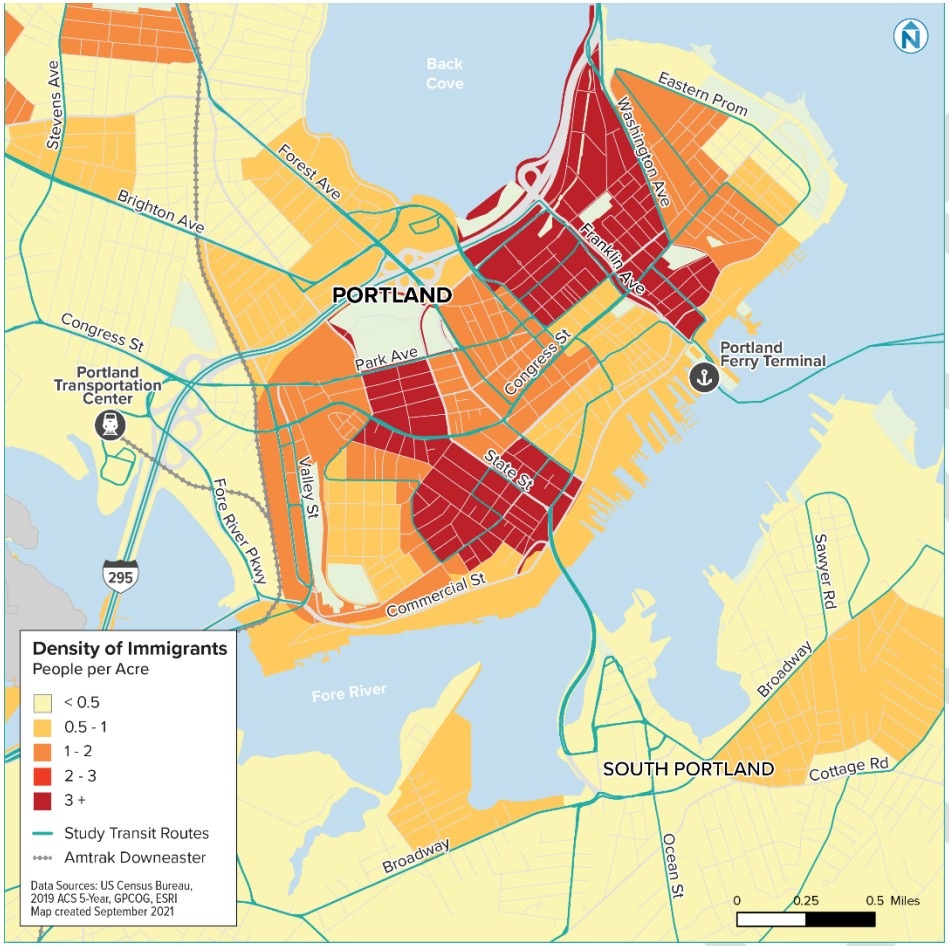
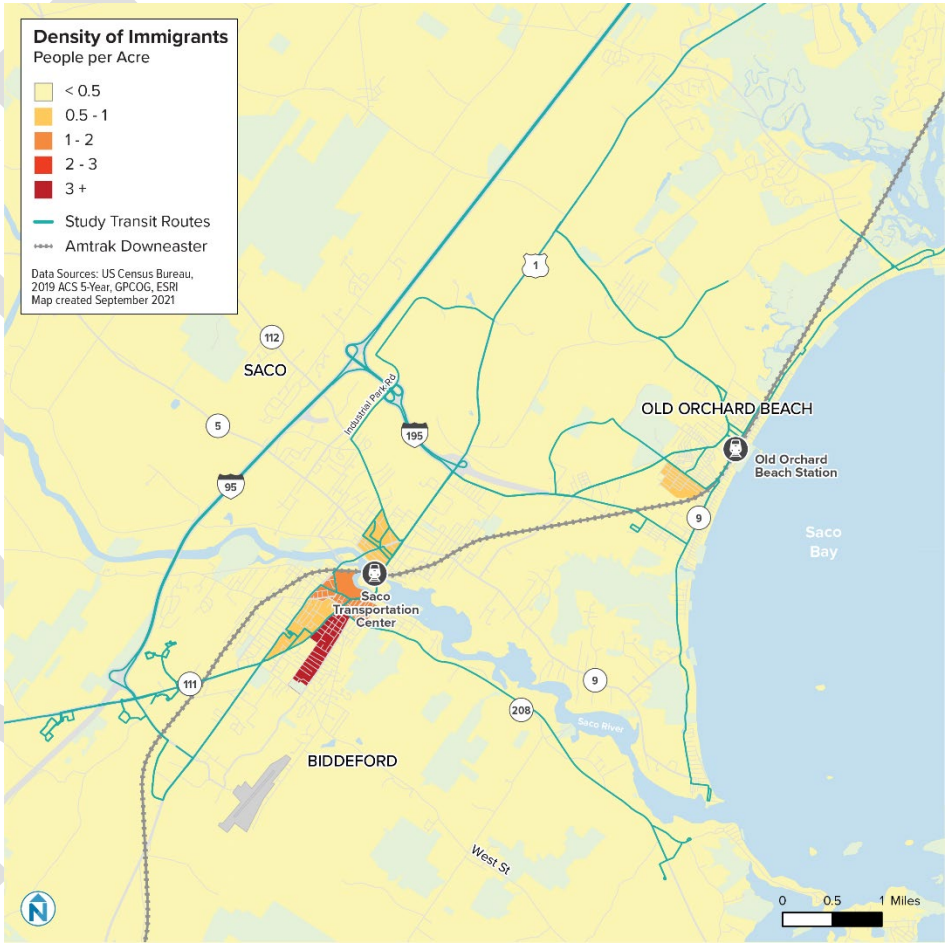


Figure 2-18 Immigrant Population Density in Biddeford-Saco-Old Orchard Beach



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

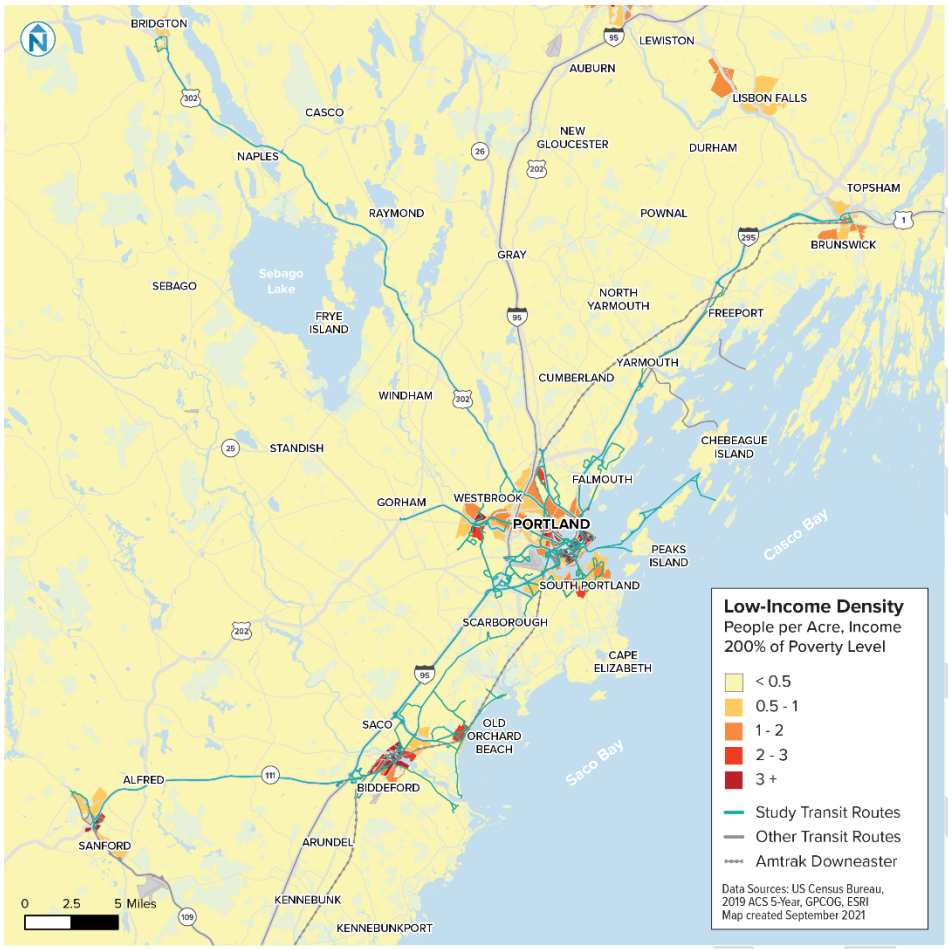


Figure 2-20 Low-Income Population Density in Greater Portland Area

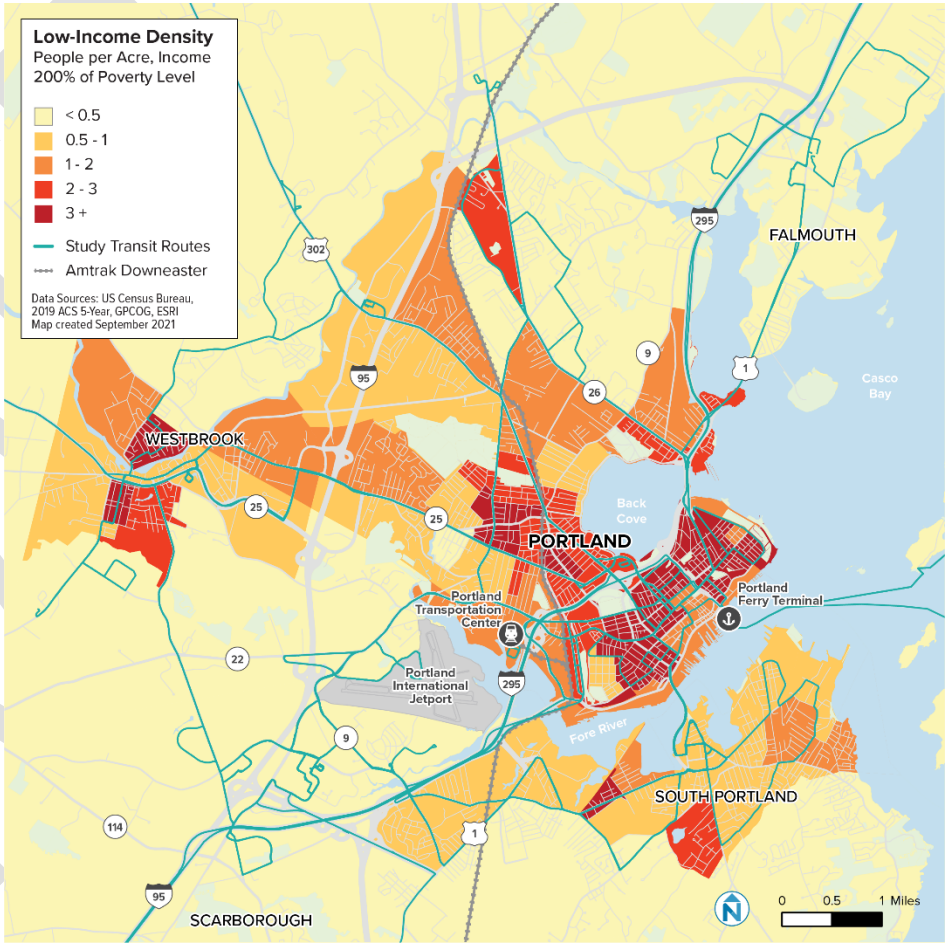


Figure 2-21 Low-Income Population Density on the Portland Peninsula

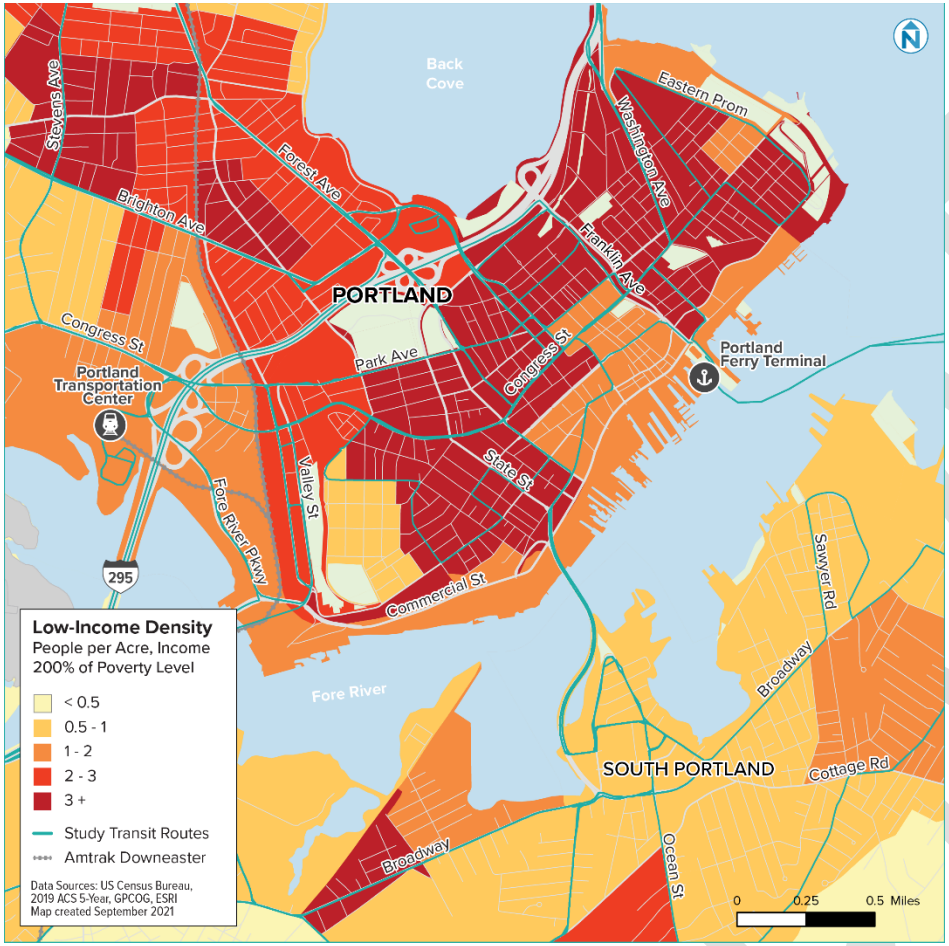
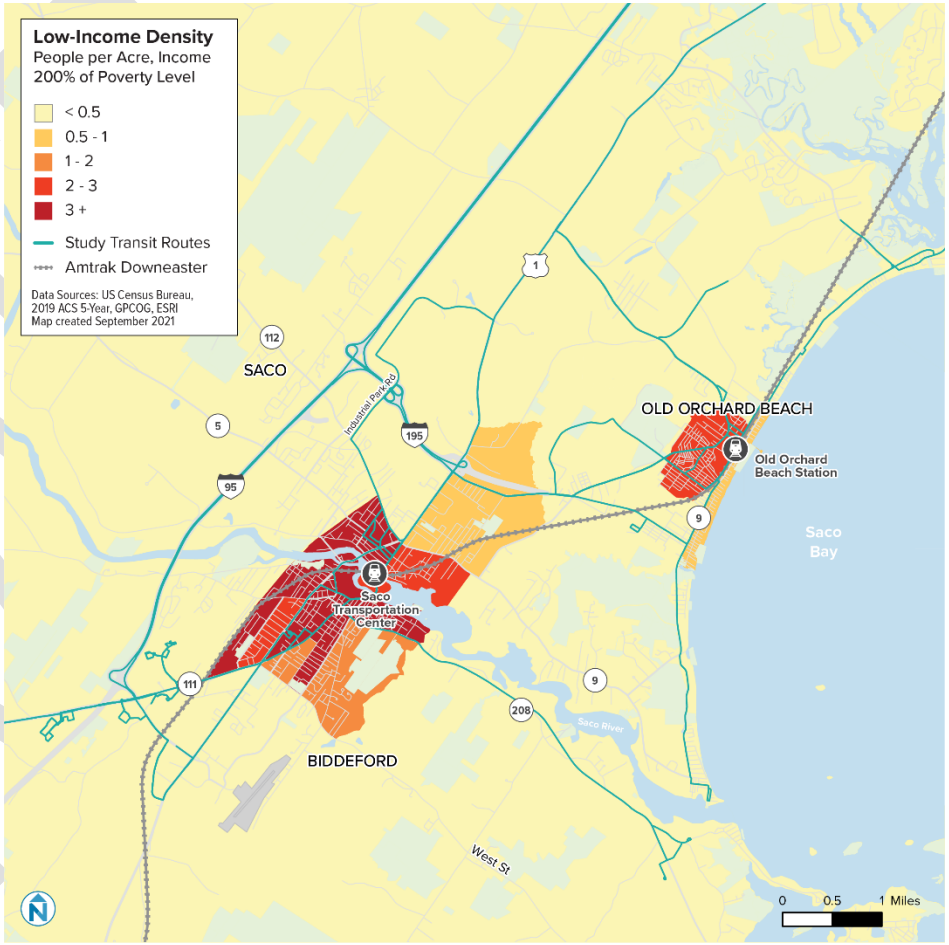


Figure 2-22 Low-Income Population Density in Biddeford-Saco-Old Orchard Beach



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

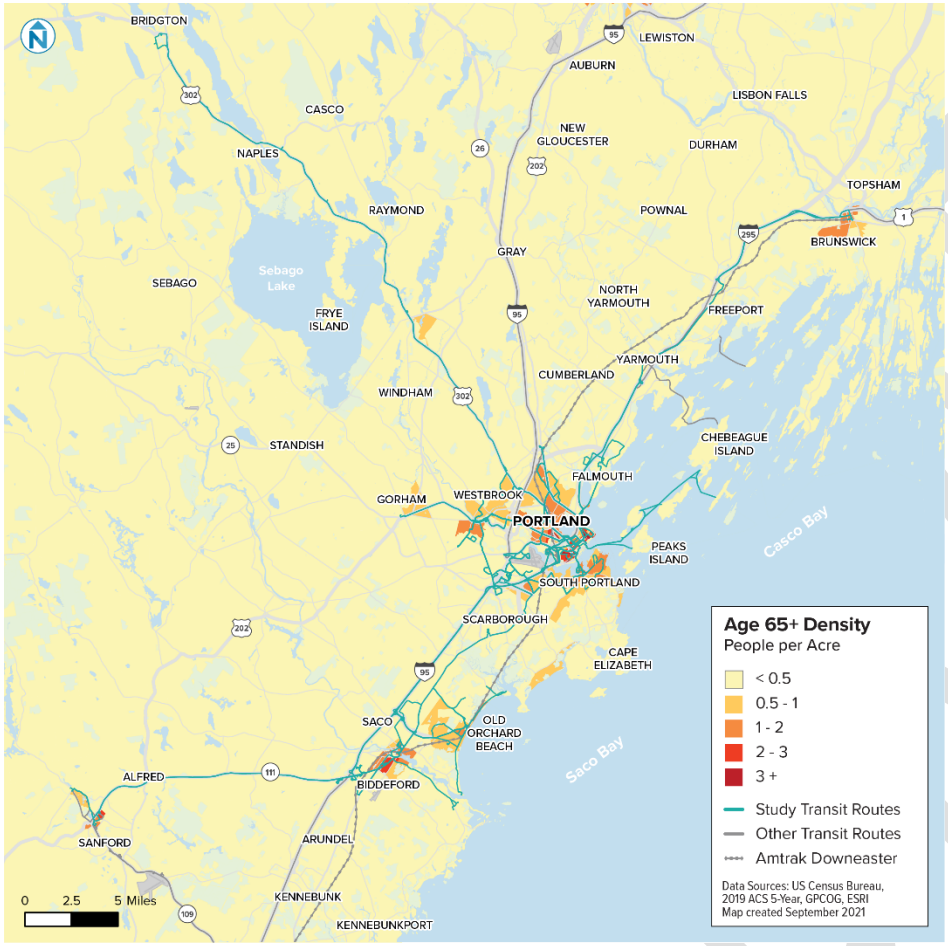


Figure 2-24 Age 65+ Population Density in Greater Portland Area

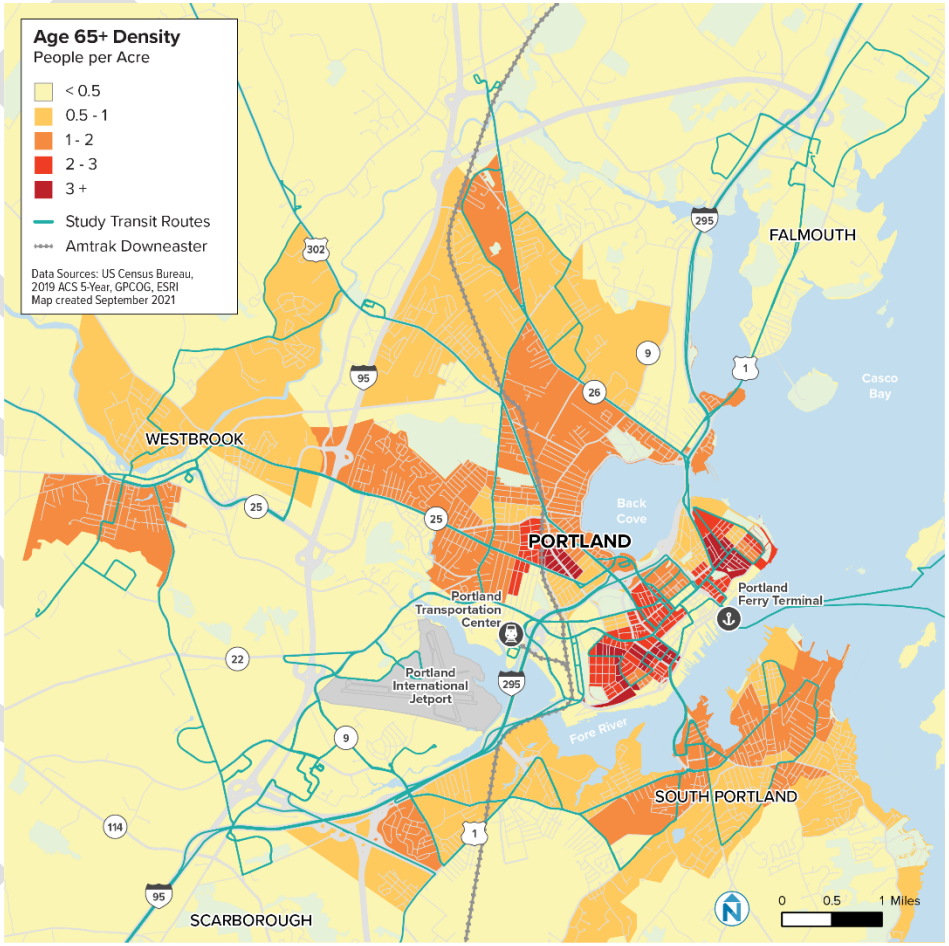


Figure 2-25 Age 65+ Population Density on the Portland Peninsula

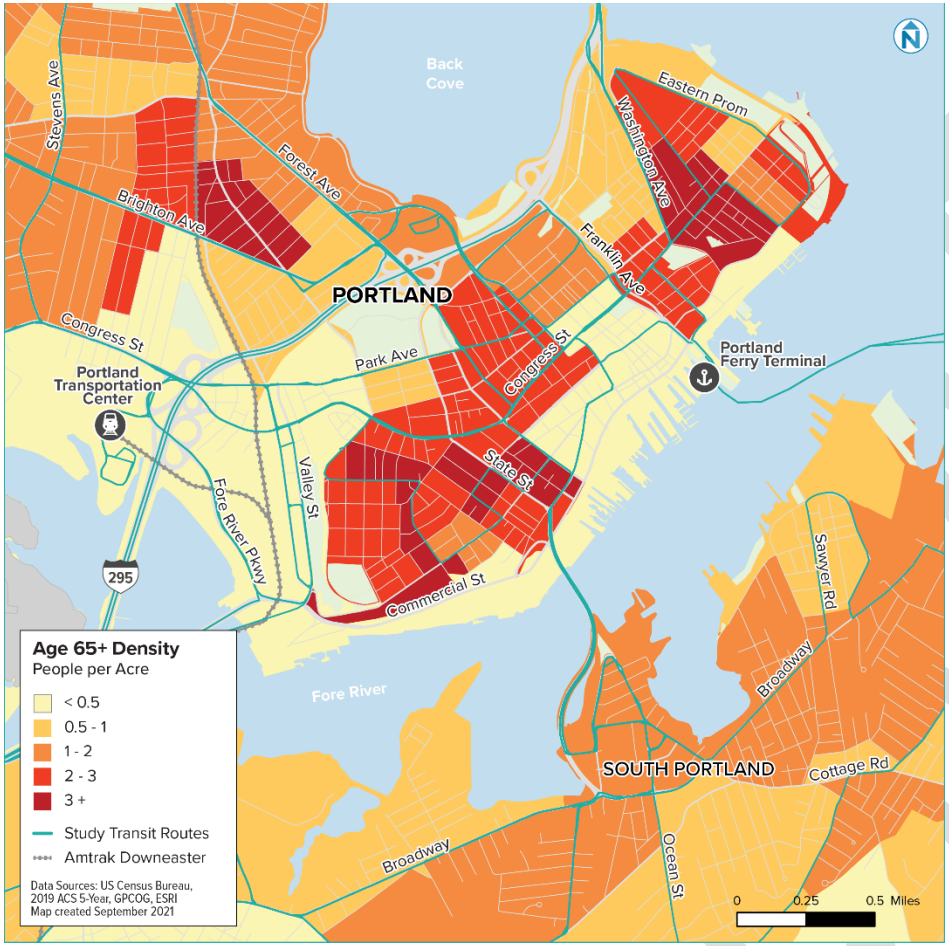
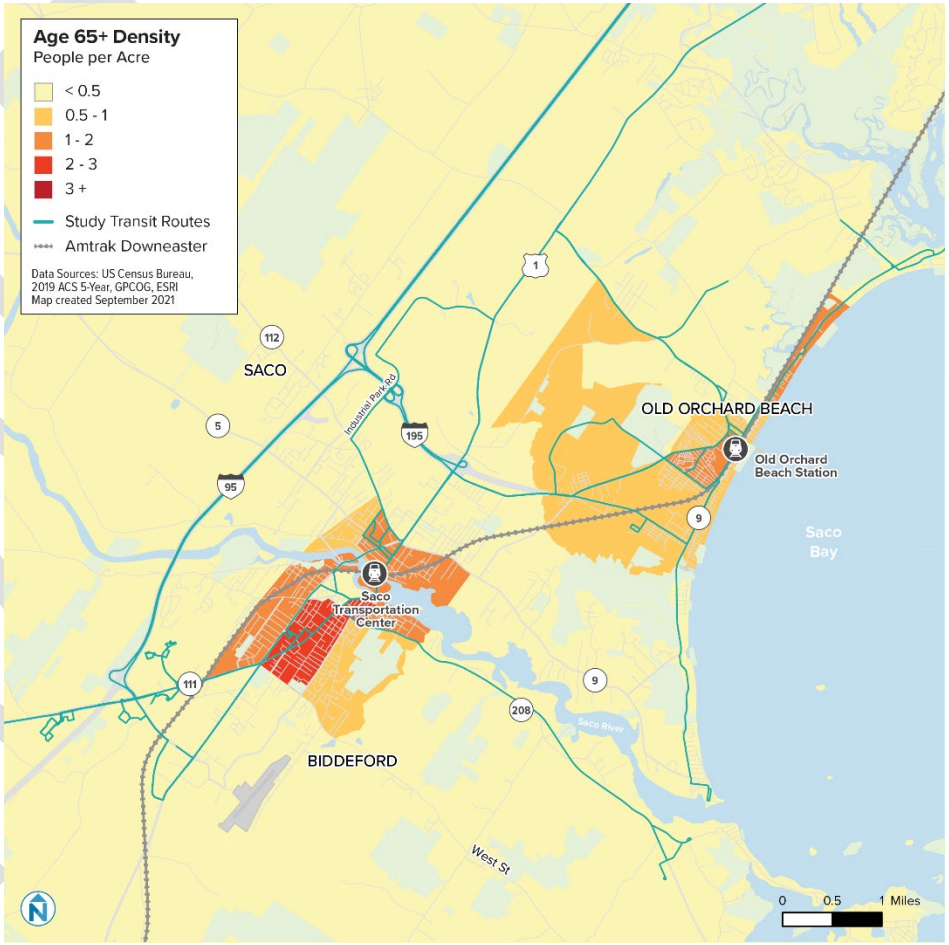


Figure 2-26 Age 65+ Population Density in Biddeford-Saco-Old Orchard Beach



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

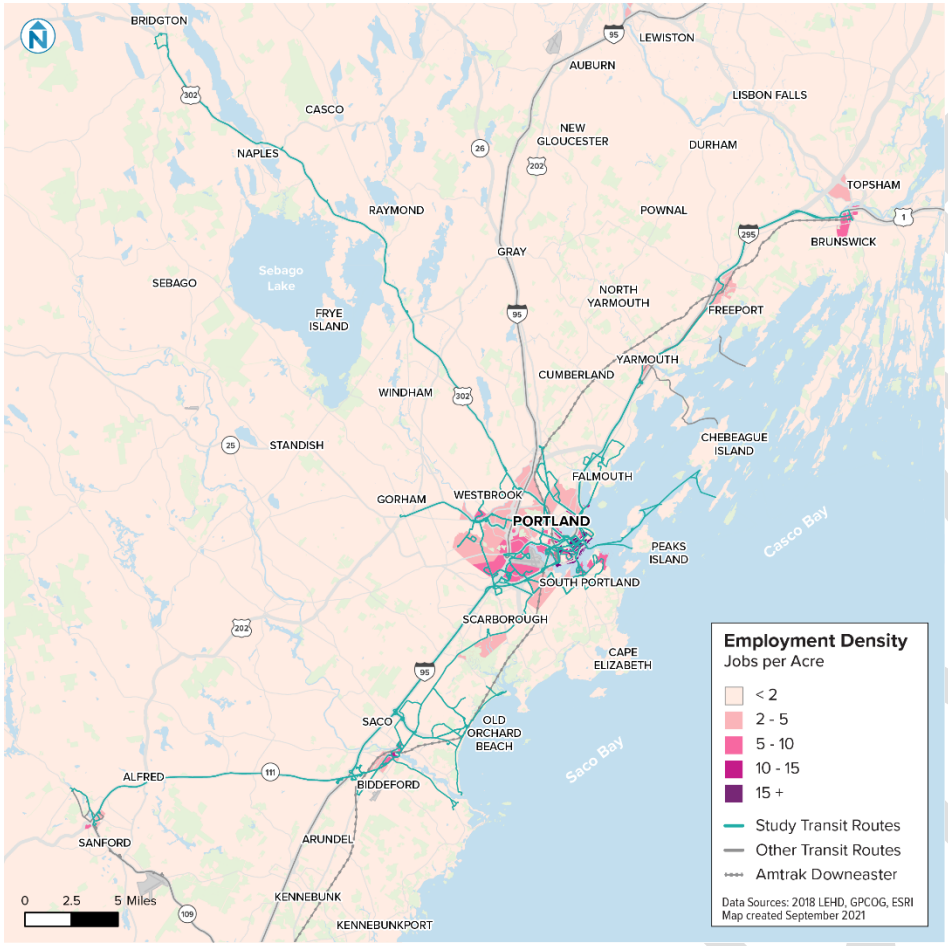


Figure 2-28 Employment Density in Greater Portland Area

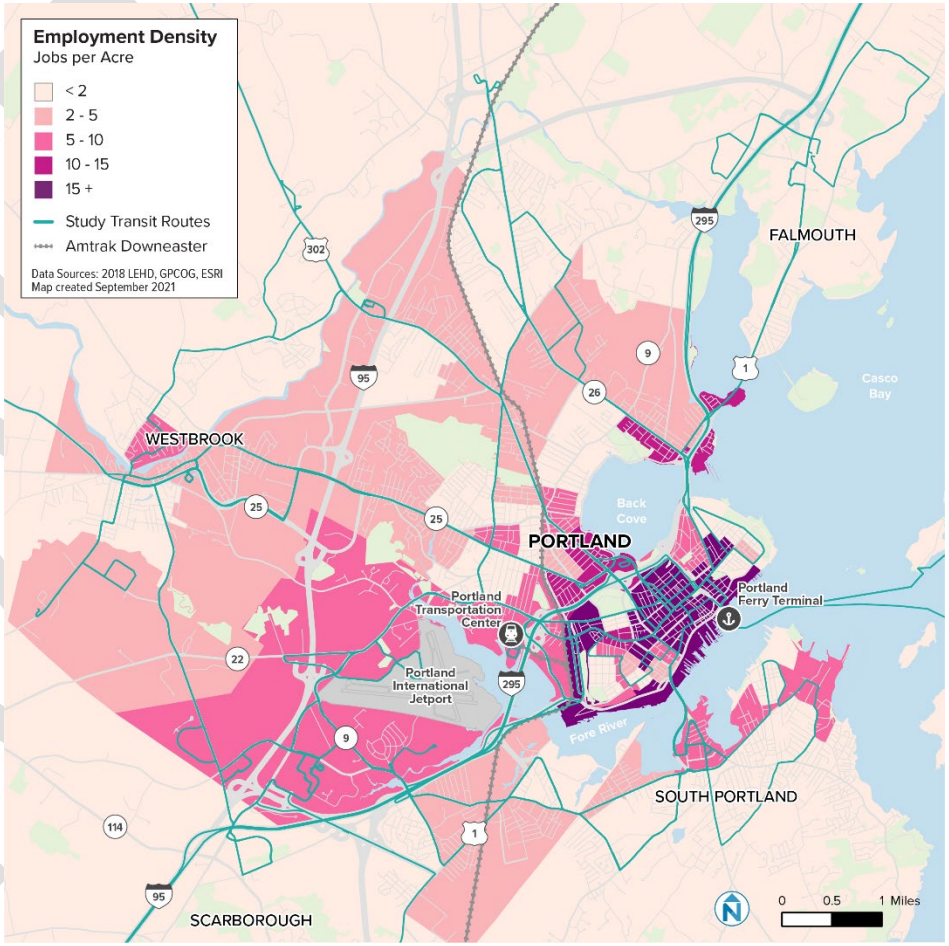


Figure 2-29 Employment Density on the Portland Peninsula

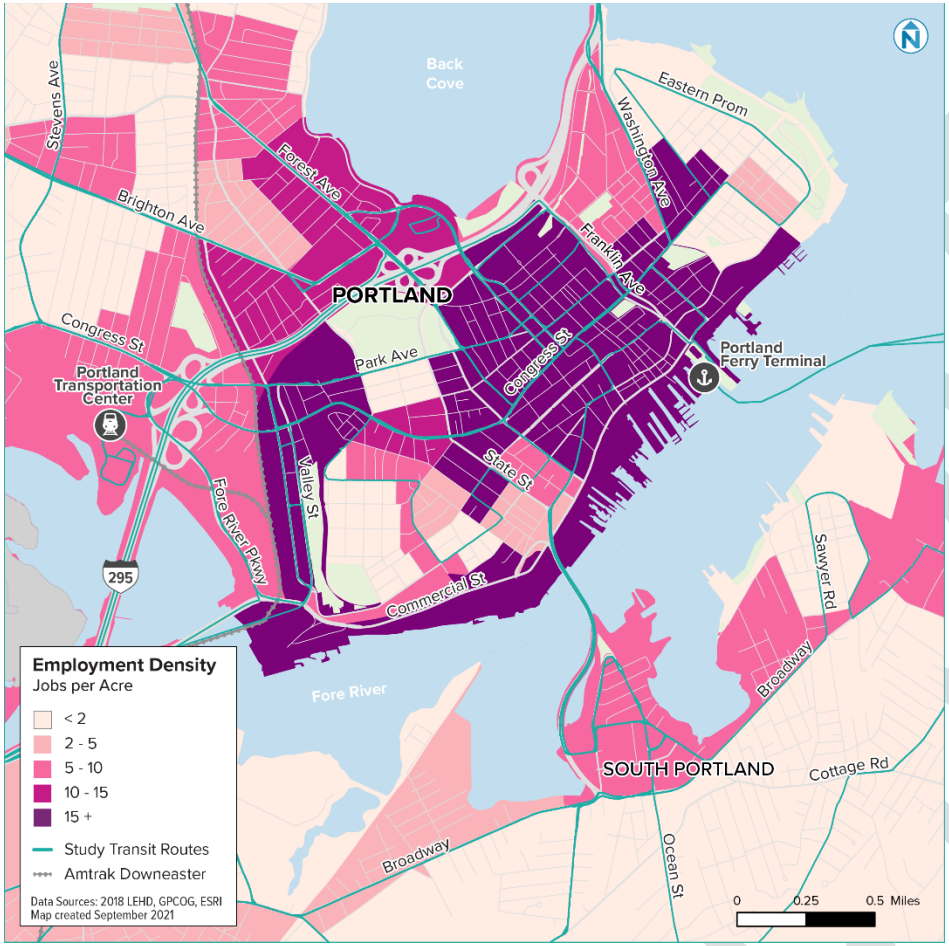
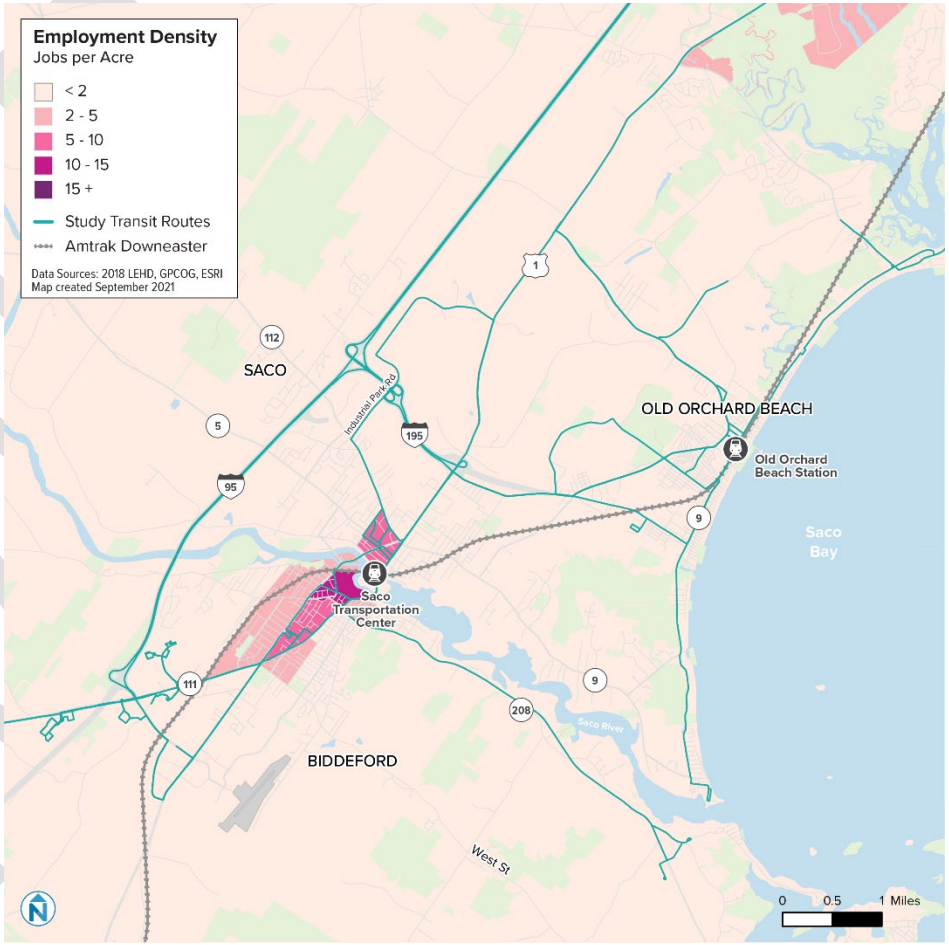


Figure 2-30 Employment Density in Biddeford-Saco-Old Orchard Beach



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

Portland Congress Street		**Urban core** *25+ jobs per acre*	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.
Portland Forest Avenue		**Urban and neighborhood mixed-use** *10-15 jobs per acre*	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.
Scarborough Industrial Park		**Low density** *2-5 jobs per acre*	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.
Yarmouth Garmin Offices		**Rural** *>2 jobs per acre*	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.

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

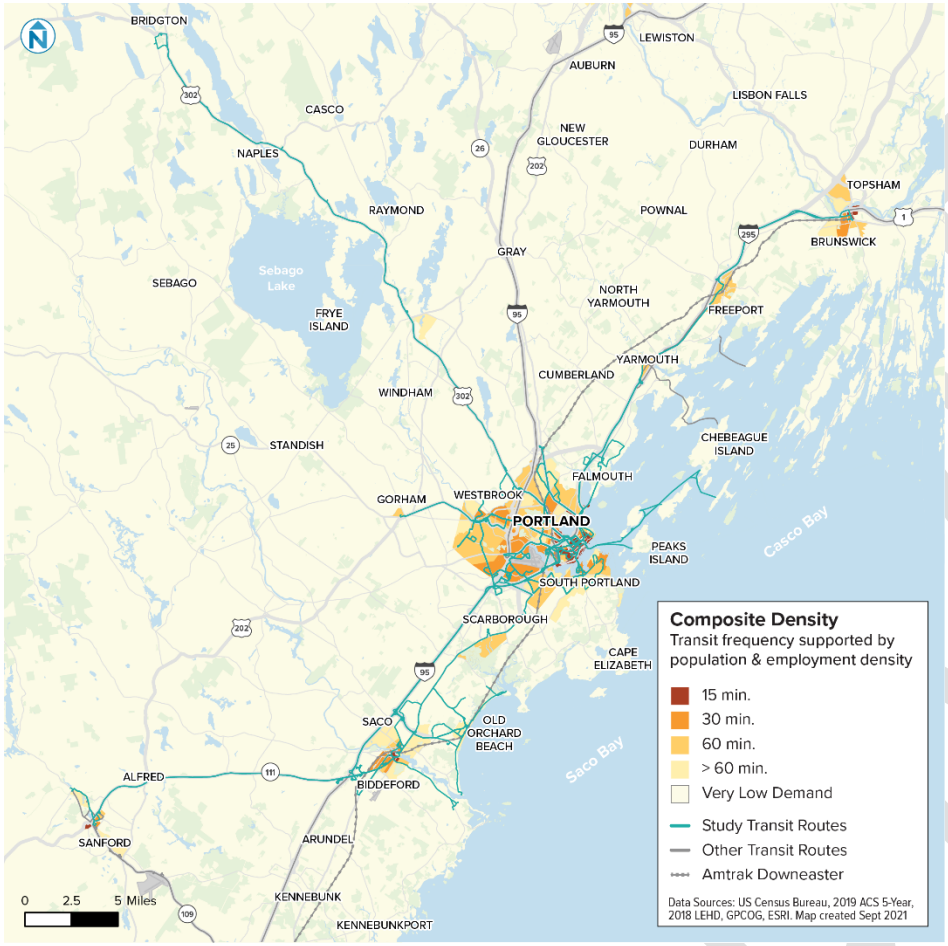


Figure 2-33 Composite Transit Demand in Greater Portland Area

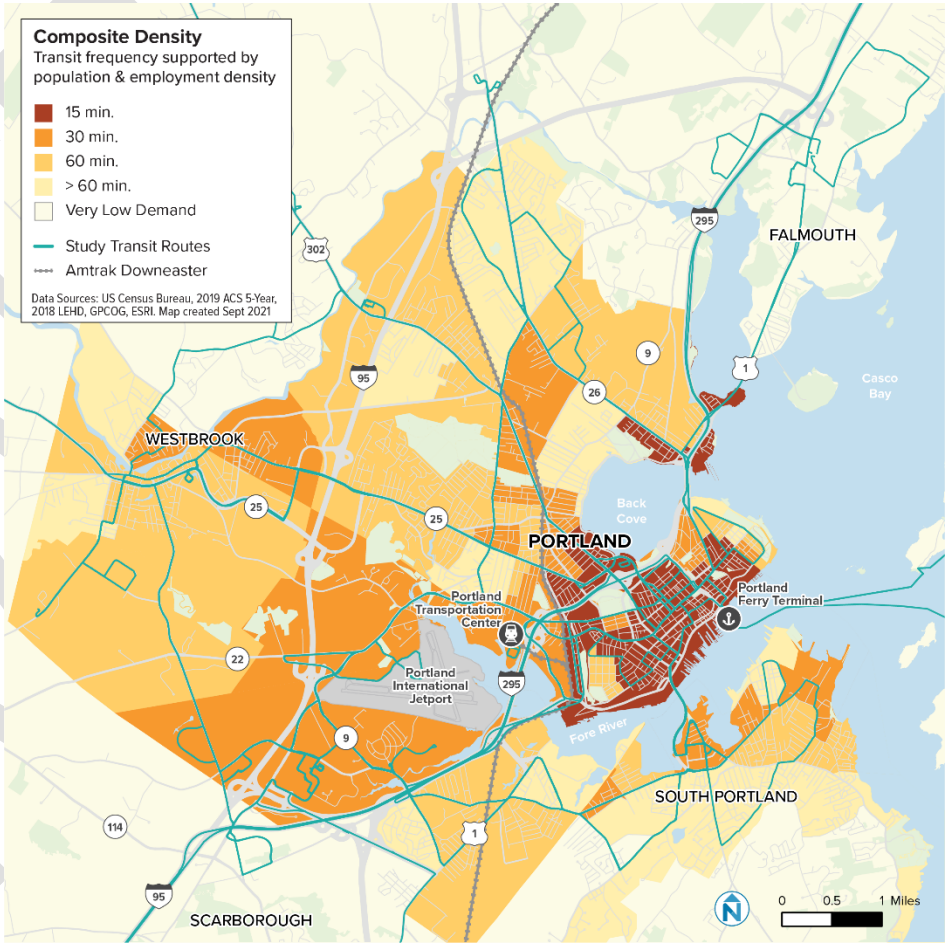
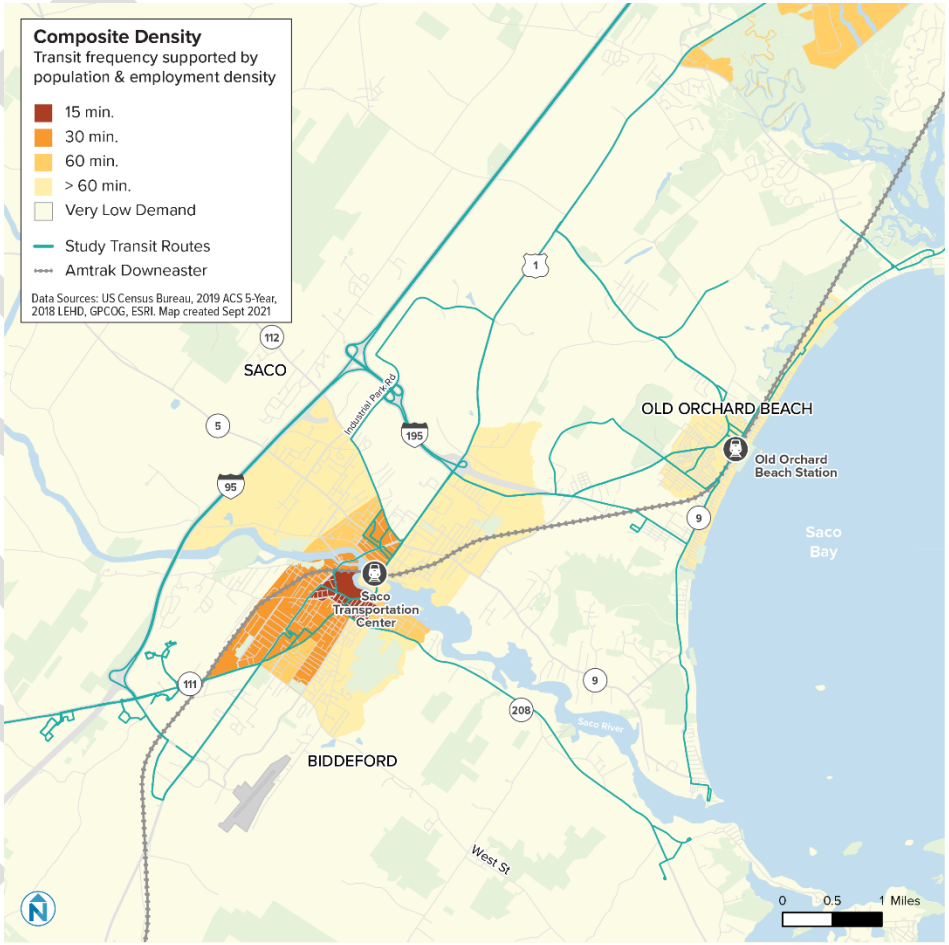


Figure 2-34 Composite Transit Demand on the Portland Peninsula

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.
- **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 data[13] 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

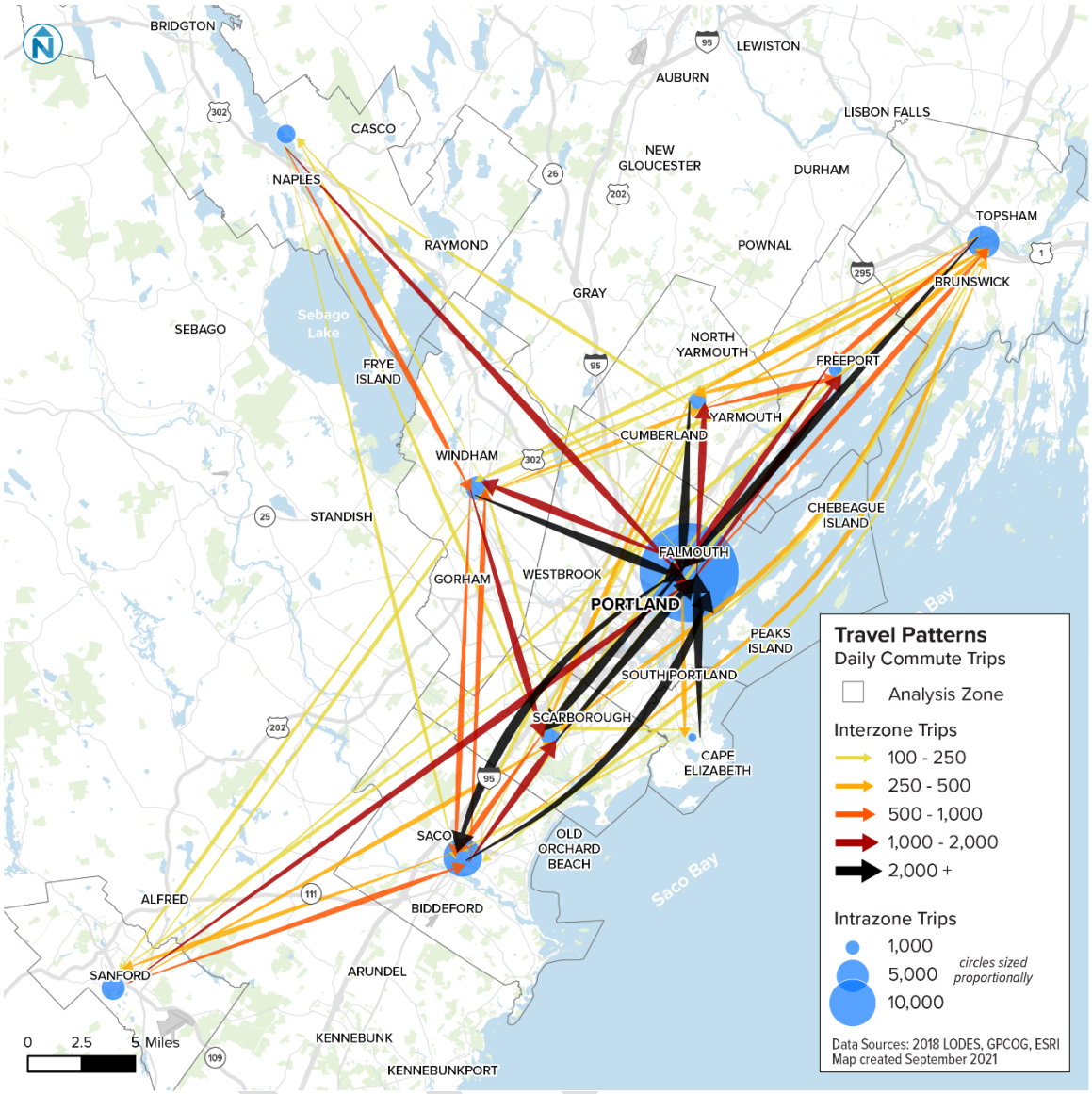
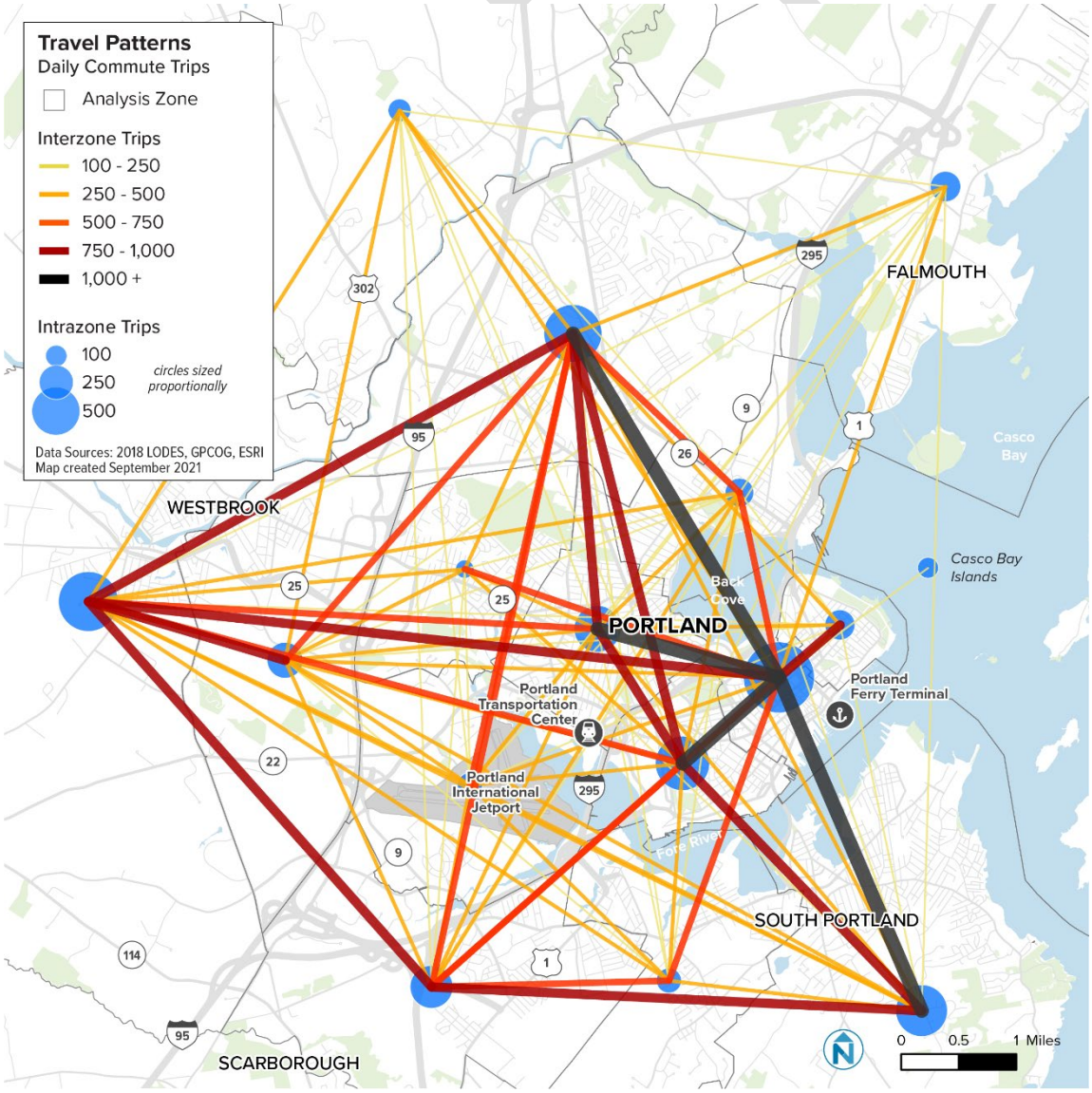


Figure 3-2 shows commute flows in the Greater Portland area. Key findings from this analysis show the largest commute flows are:

- **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. 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. In other instances, these key destinations are disproportionately frequented by transit riders; for example, food banks and other social services.

METHODS

Destinations identified in this chapter are not selected based on quantitative values, such as building square footage, but on qualitative assessments of their importance to transit riders. Typically, key destinations include major medical facilities, social service providers, grocery stores with produce departments, 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**

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

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

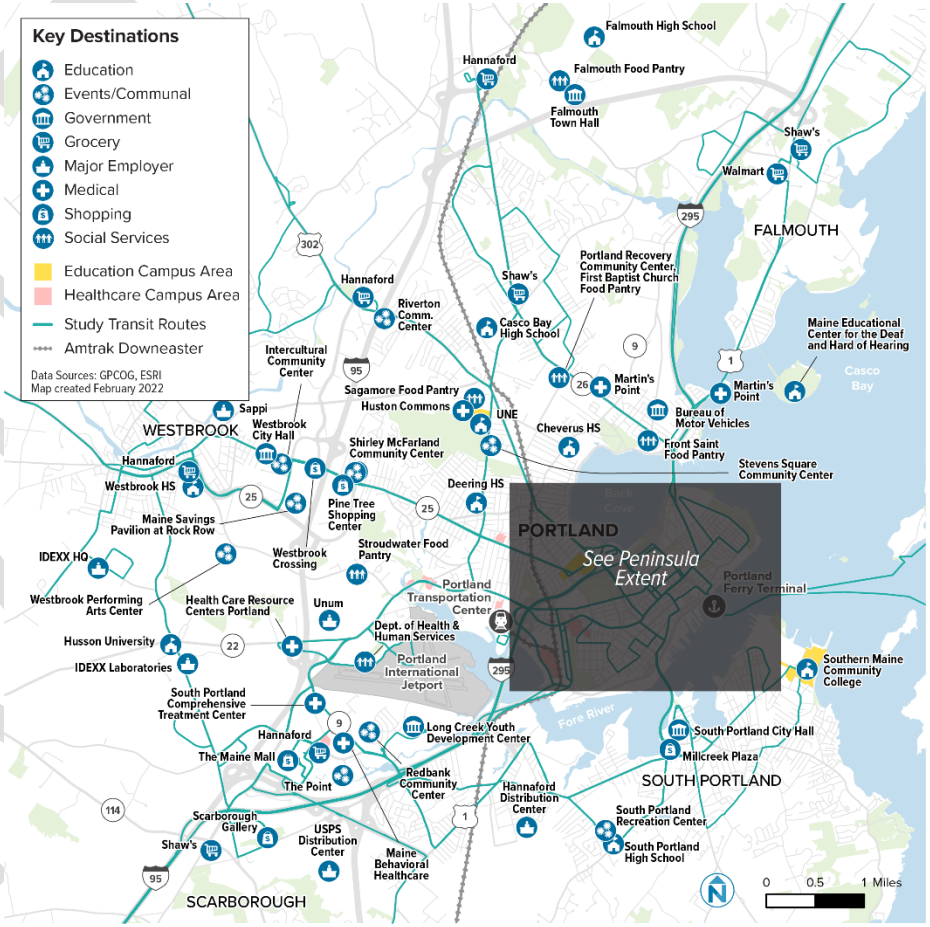


Figure 4-3 Map of Key Trip Generators, Biddeford-Saco-Old Orchard Beach

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

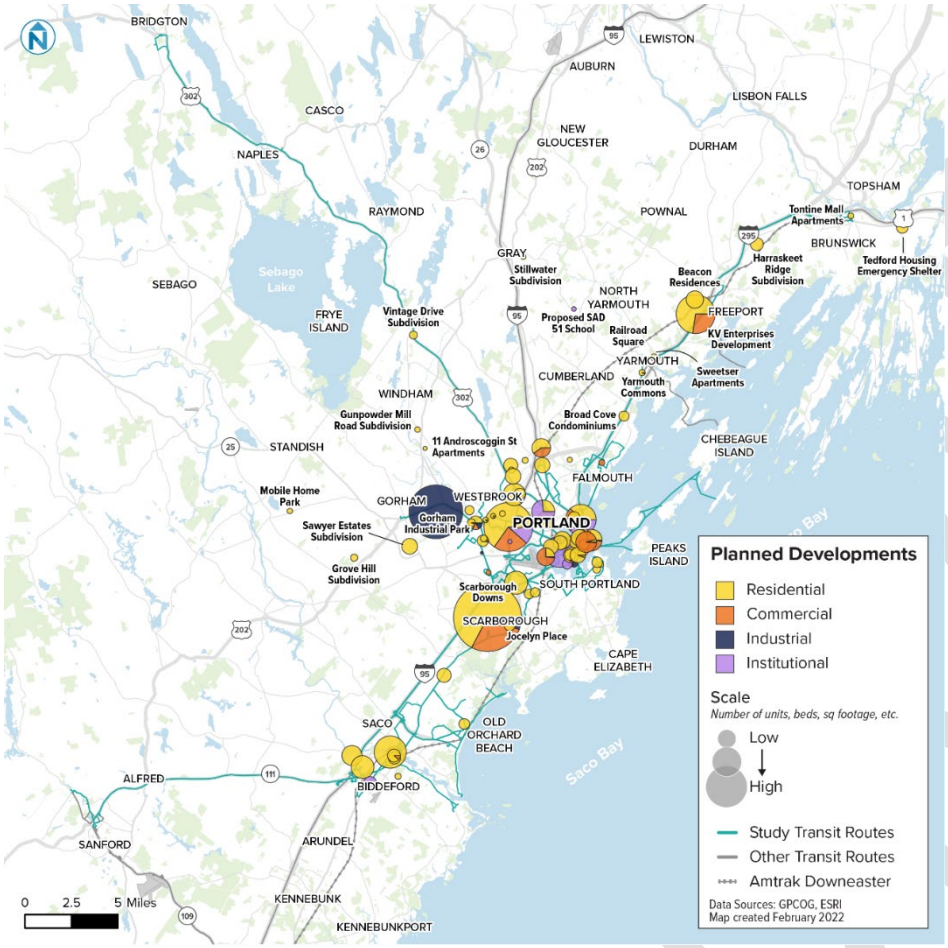


Figure 5-2 Map of Select Developments on the Portland Peninsula

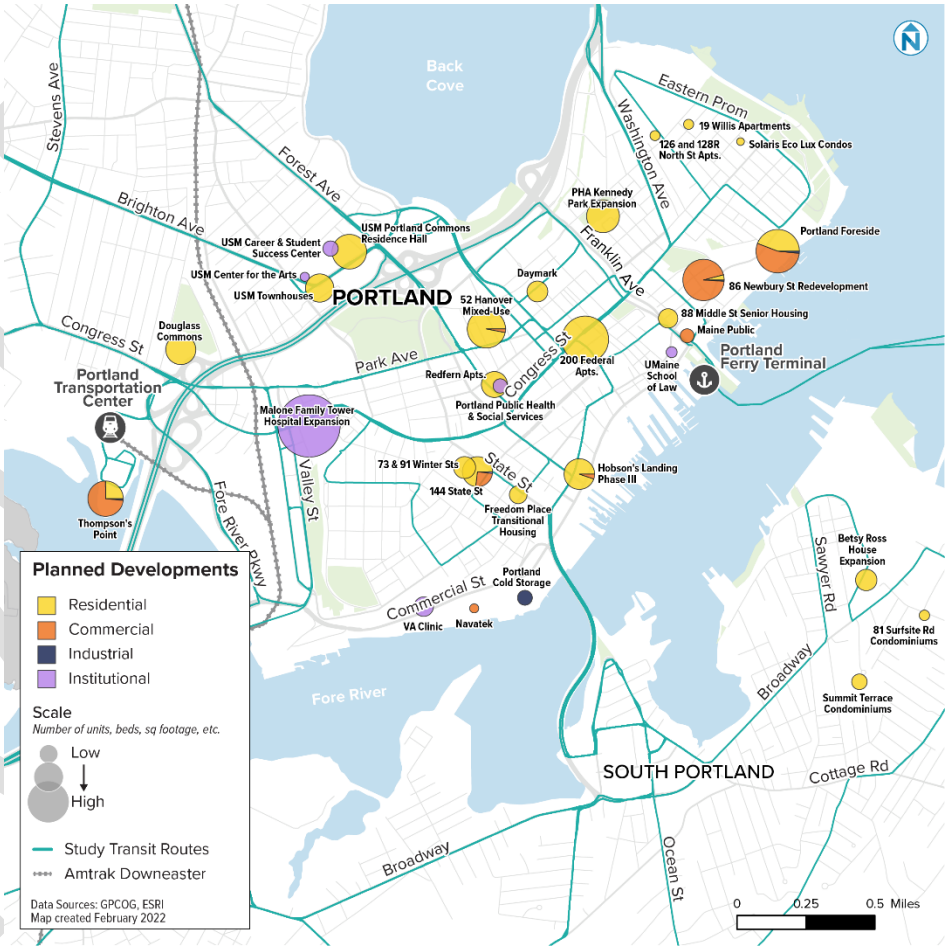


Figure 5-3 Map of Select Developments in Greater Portland Area

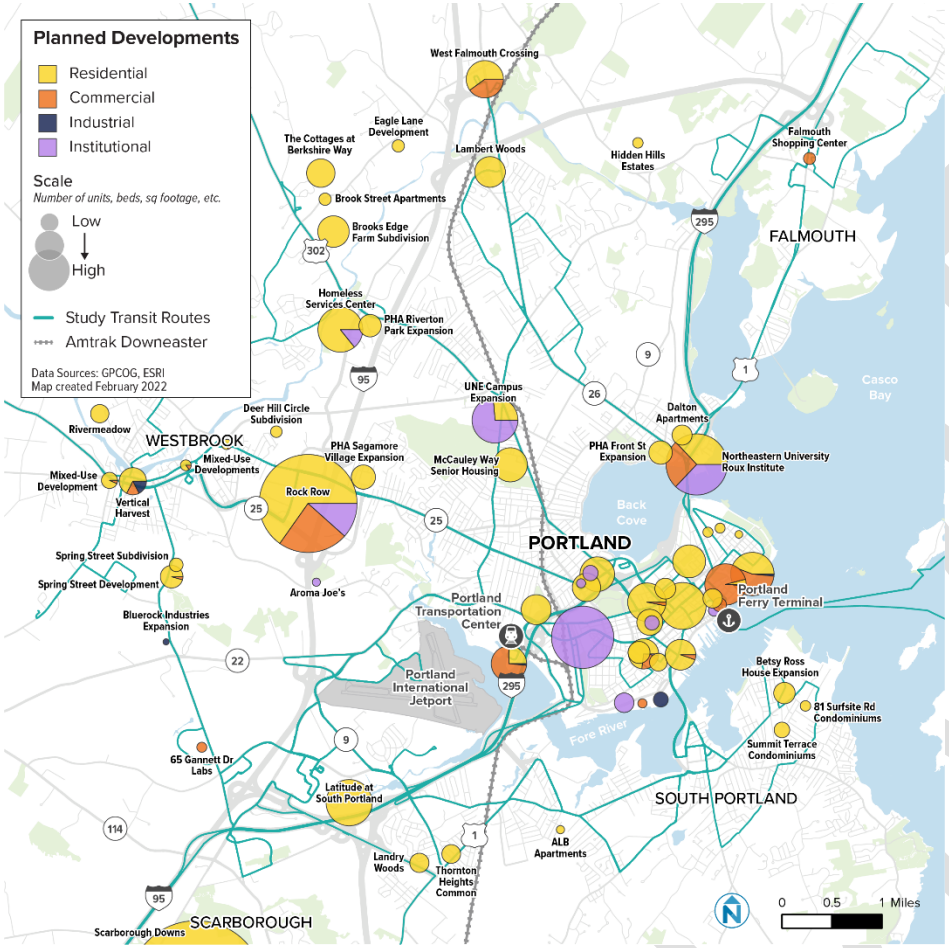
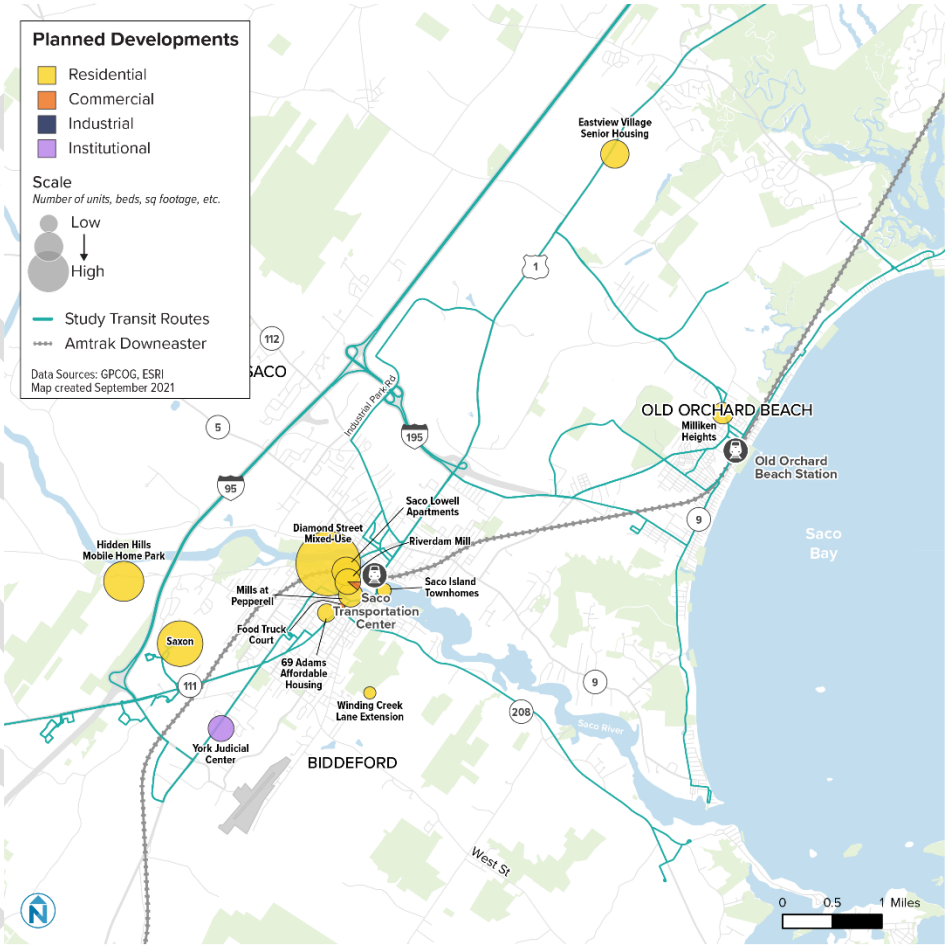


Figure 5-4 Map of Select Developments in Biddeford-Saco-Old Orchard Beach



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.

[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

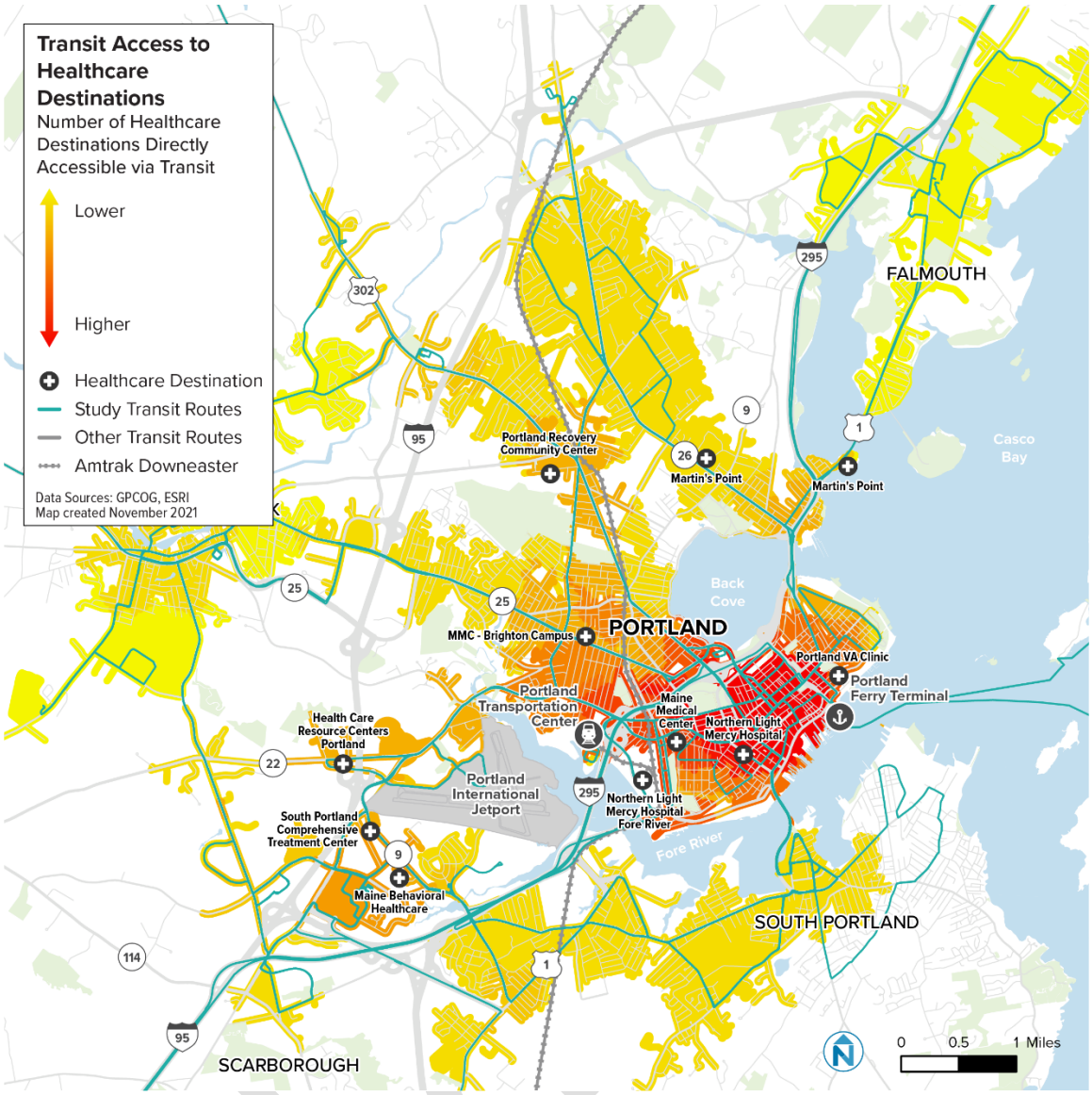
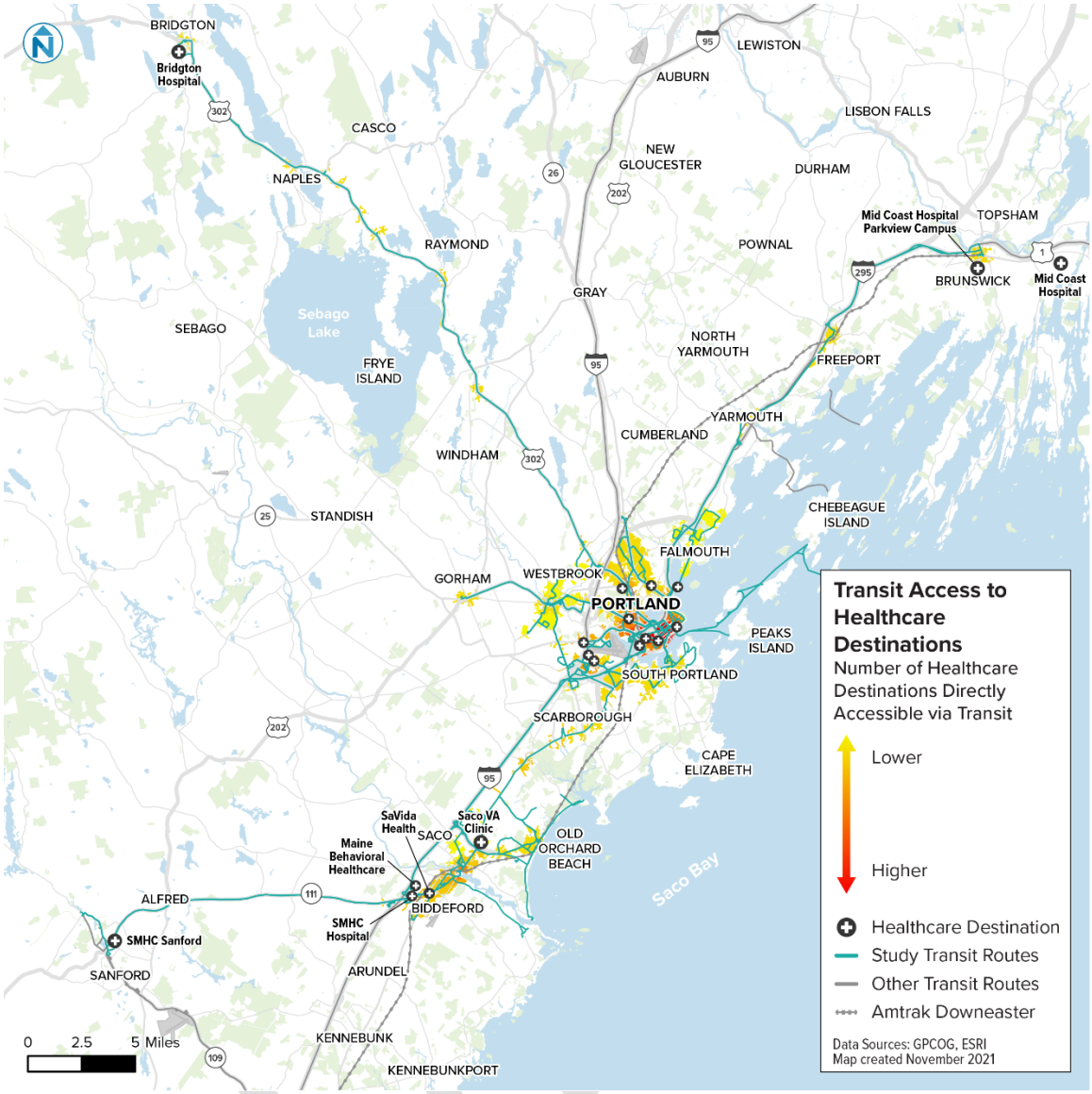


Figure 6-2 Map Showing Transit Access to Healthcare Destinations in Greater Portland Region



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-time, year-round fixed routes that do not.

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

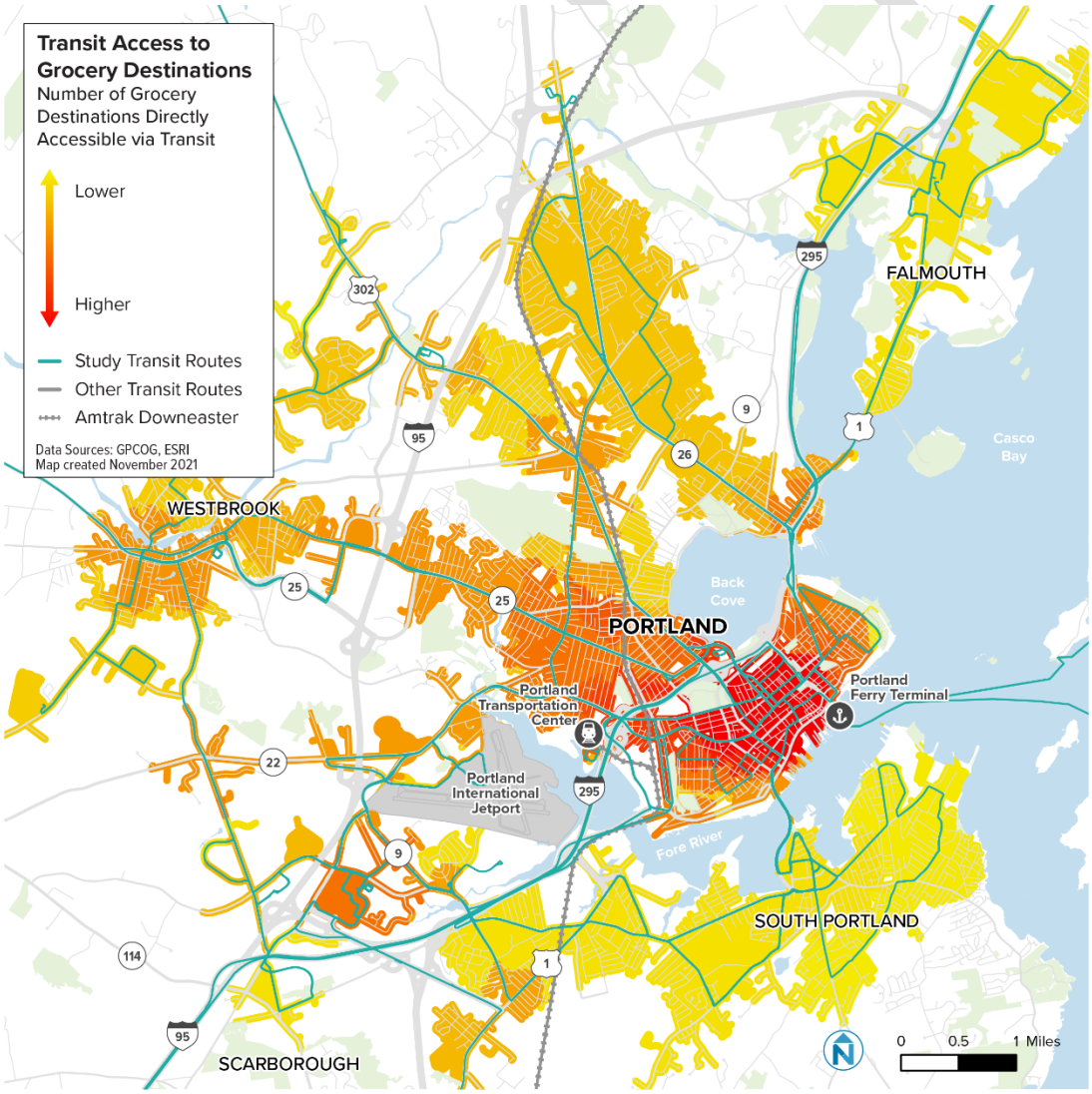
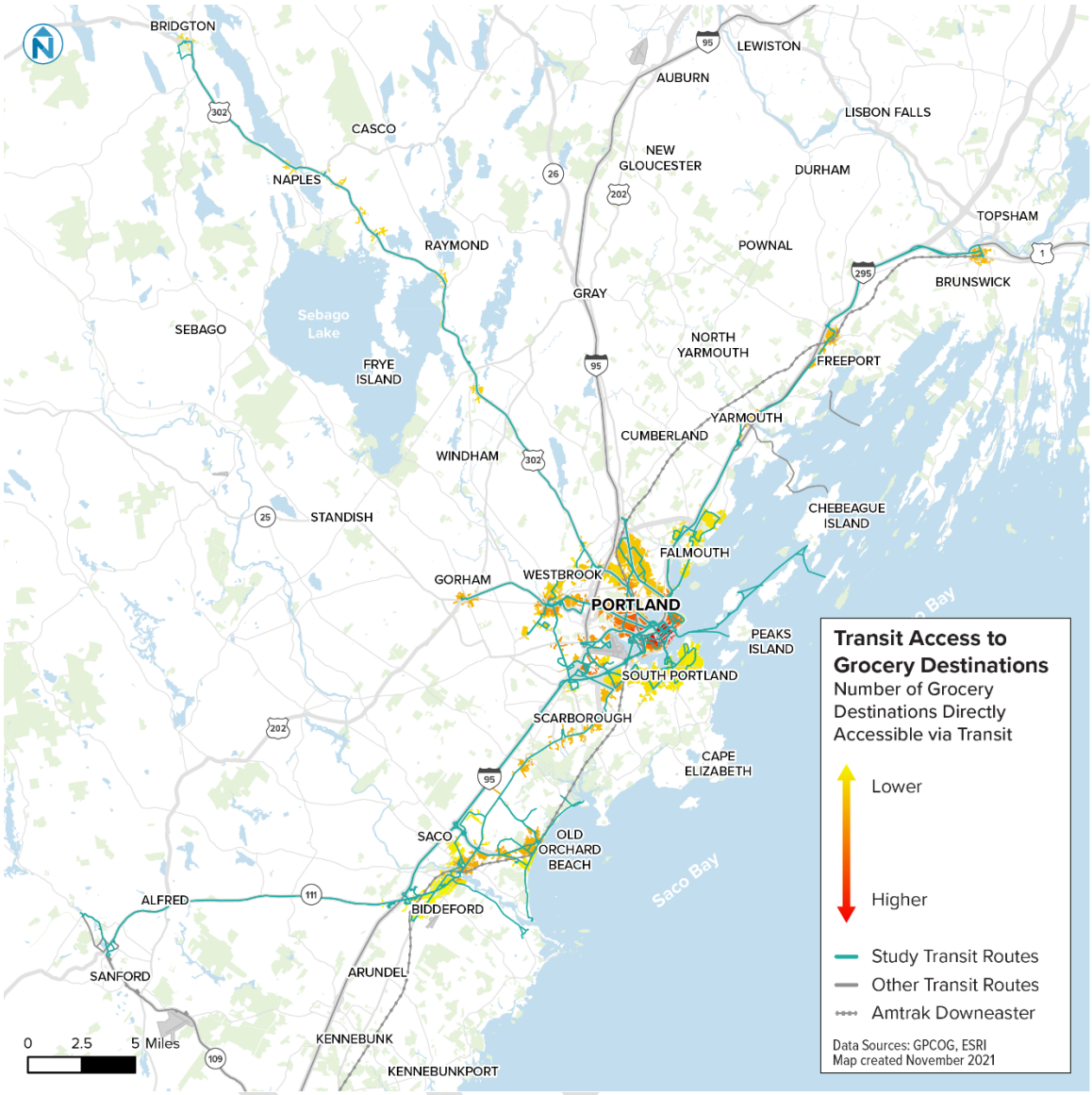


Figure 6-4 Map Showing Transit Access to Grocery Destinations in Greater Portland Region

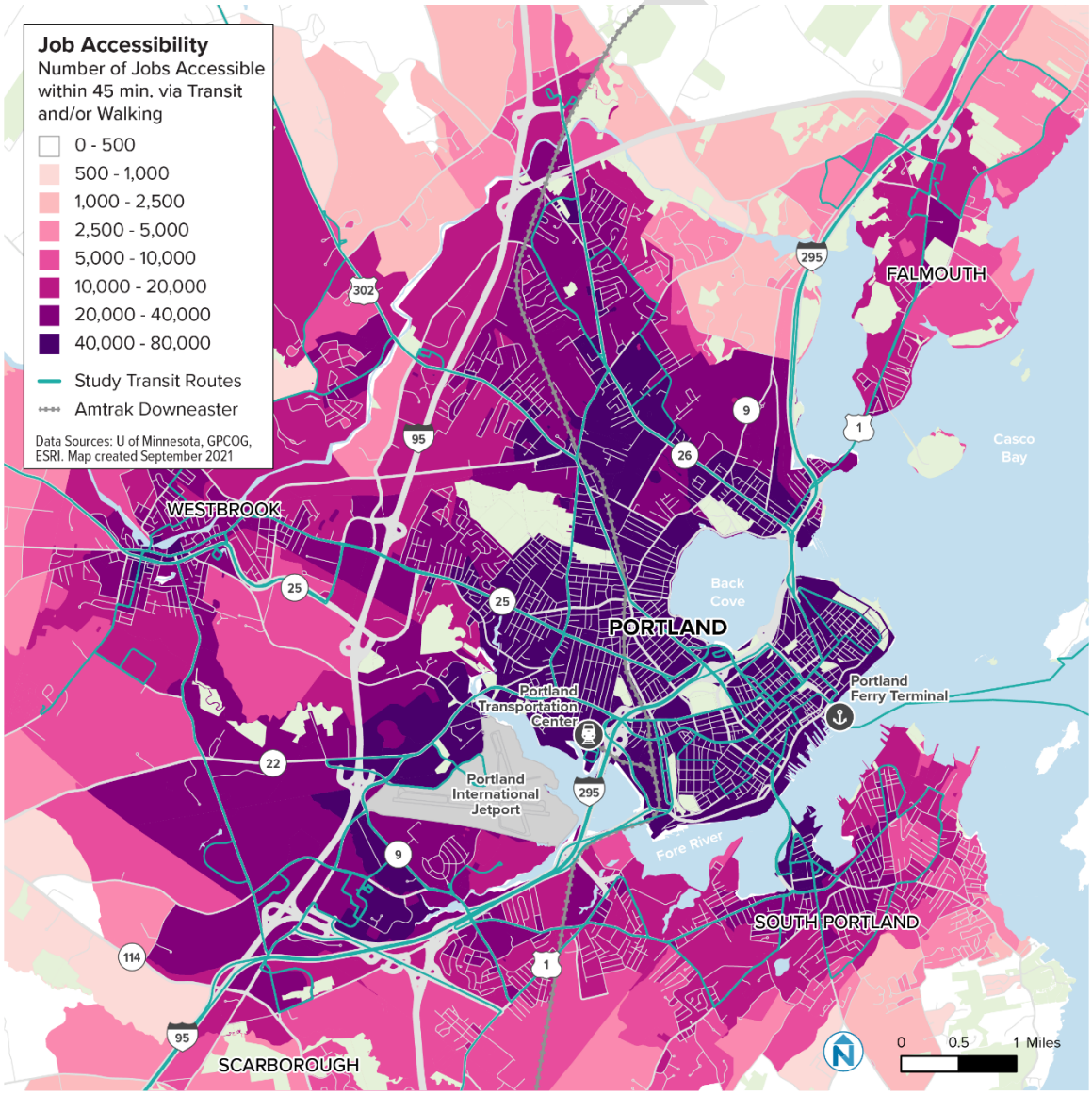


JOBS

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.

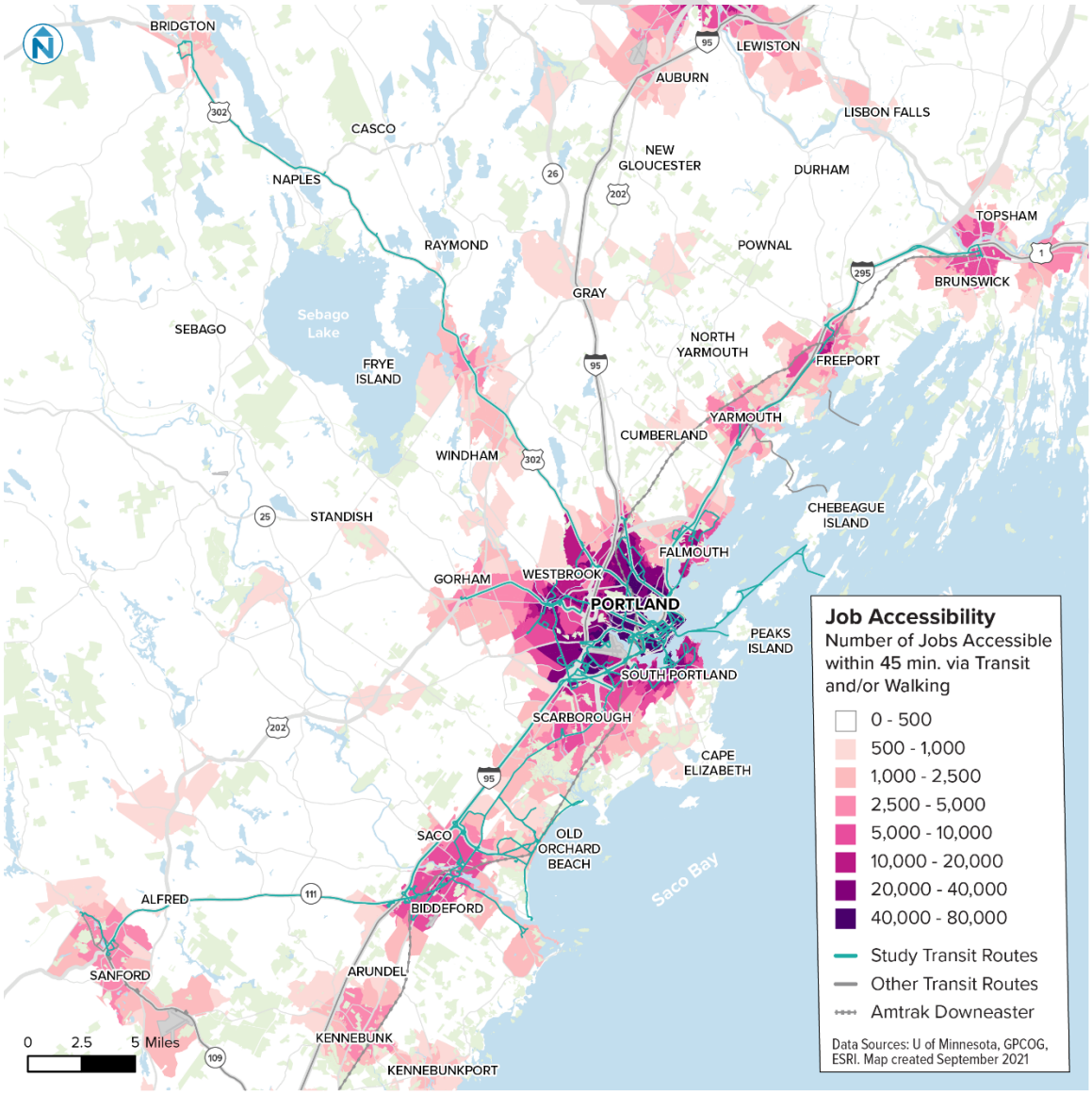
Figure 6-5 Map Showing Transit Access to Jobs in Greater Portland Area



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

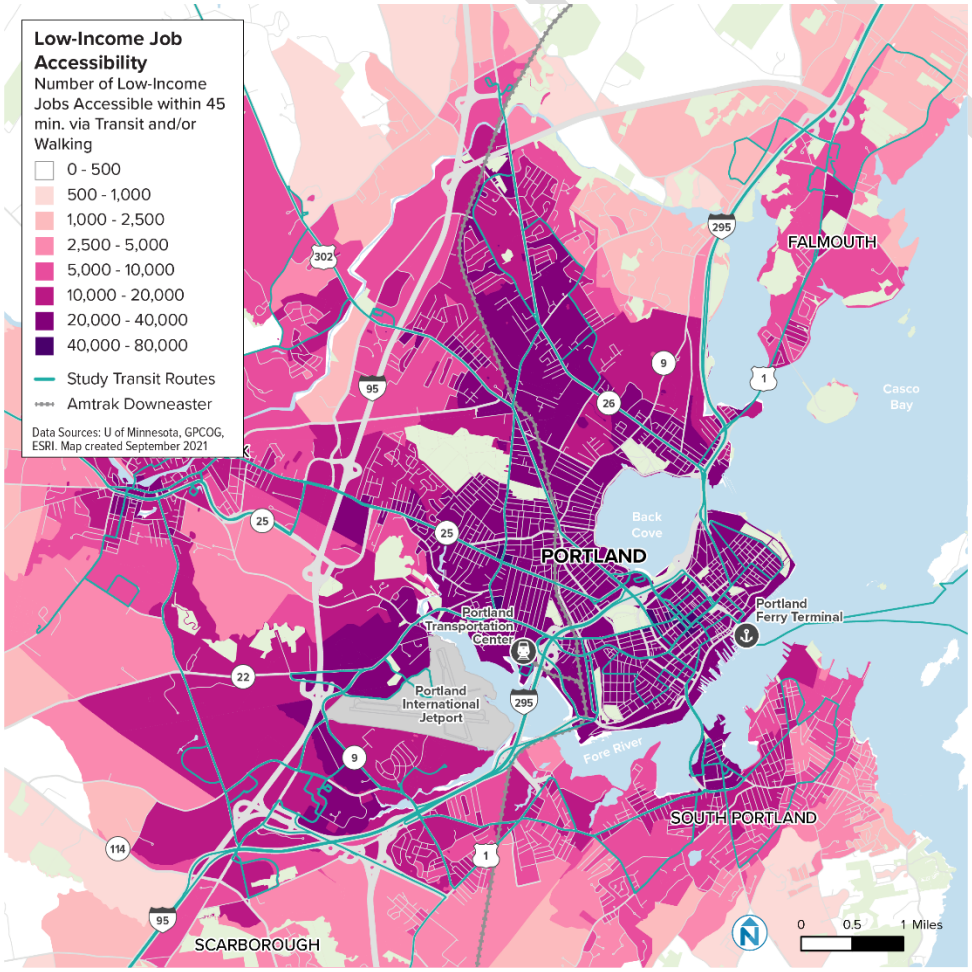


Low-Income Jobs

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.

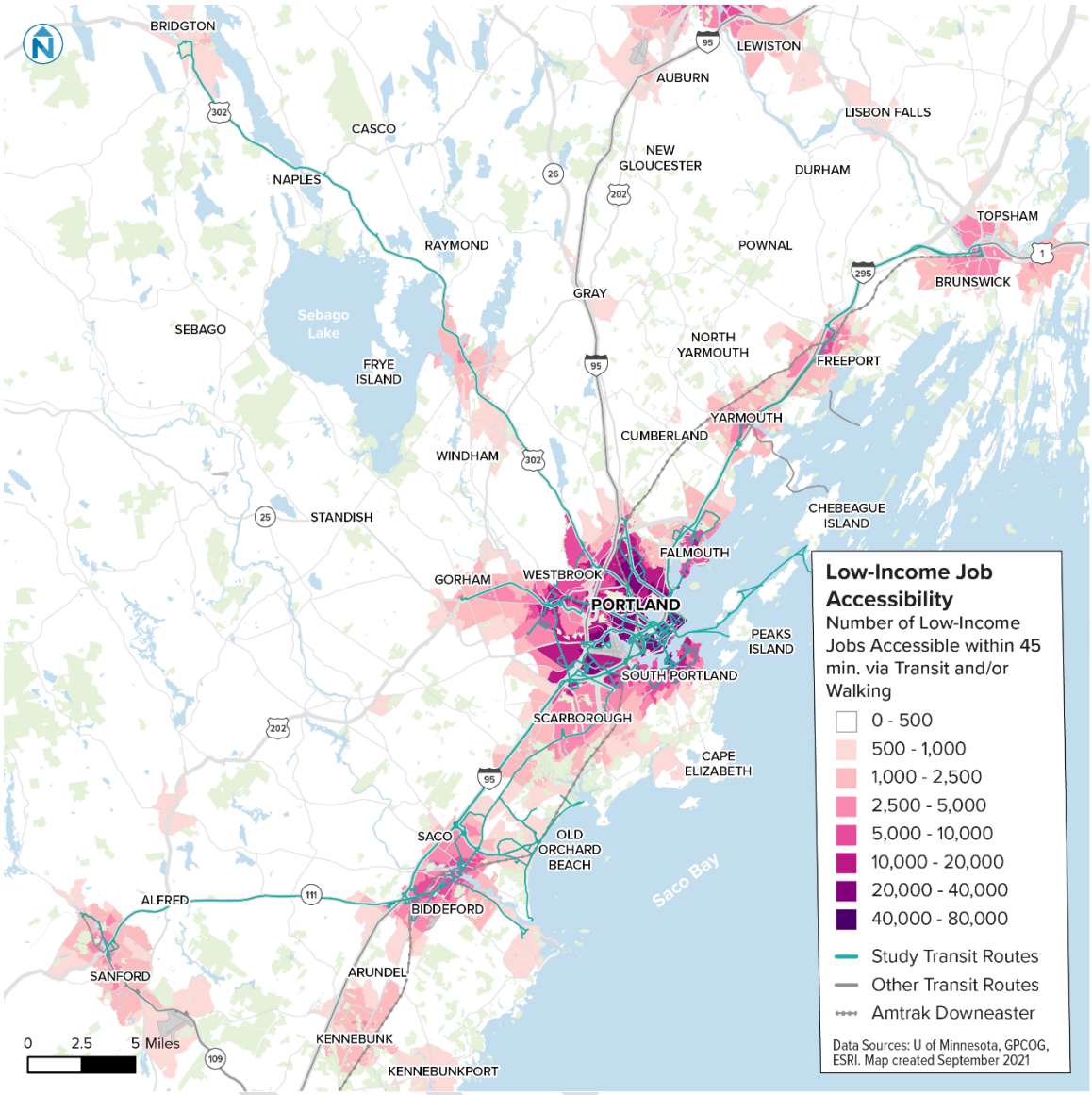
Low-income jobs are defined in this analysis as those paying $3,333[17] or less each month. Transit access to low-income jobs is distributed in generally the same pattern as access to all jobs, but with fewer low-income jobs accessible from most locations, primarily because there are fewer low-income 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 neighborhoods in **Brunswick**, **Gorham**, **Sanford**, and **Yarmouth**.

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

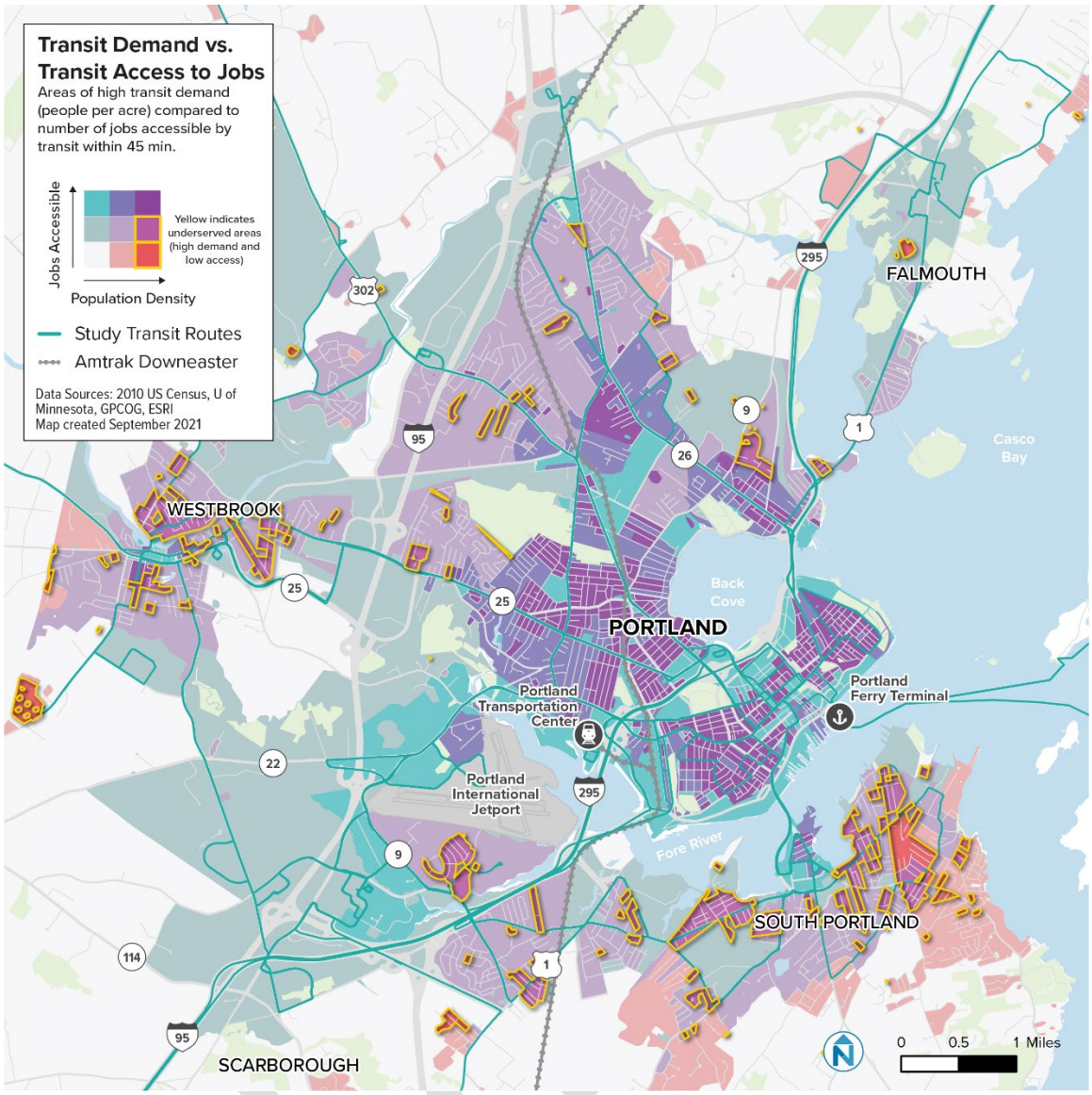


Figure 6-10 Map Showing Transit Demand vs. Transit Access to Jobs in Greater Portland Region

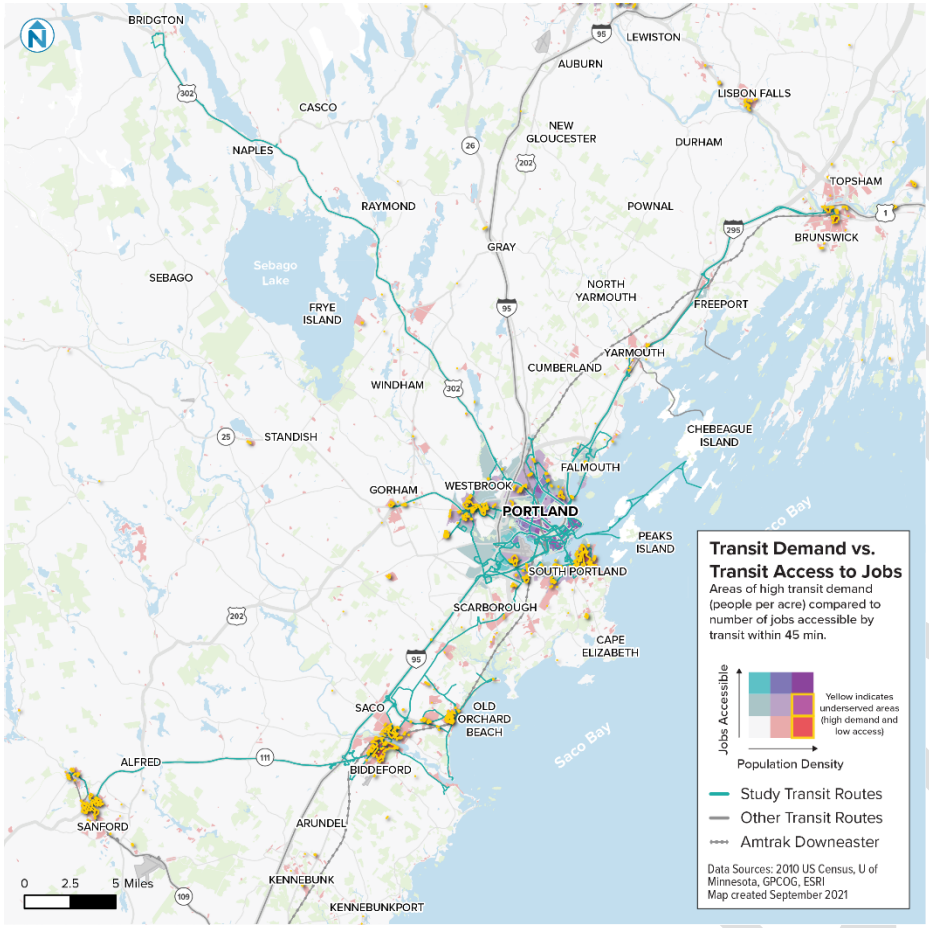


Figure 6-11 Map Showing Transit Demand vs. Transit Access to Jobs in Biddeford-Saco-Old Orchard Beach