

# Existing Conditions and Choices

NOVEMBER 2020

Salem-Albany Corridor Feasibility Plan



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# 1 Introduction and Summary

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This report is the first step in the Salem-Albany Corridor Feasibility Study, which will examine needs and potential goals for a new transit service between these two major Willamette Valley cities. This study continues a conversation about transit between Oregon cities - and in the Willamette Valley - that has been taking place for years.

## Transit planning beyond county borders

The cities of Salem and Albany are not linked by low-cost public transit. Currently, the only options are Amtrak or the Cascades POINT bus, which are four to six times as expensive as the current Cherriots Regional fare. There is no transit at all in the small towns between Salem and Albany (Jefferson and Millersburg) which are bypassed by Amtrak and POINT. Cherriots's recent transit plans have identified an affordable connection with Albany as a high priority for further study. While connecting the two urban areas is the focus of this study, service among smaller communities will also be considered.

Historically, regional transit service funding has flowed from the state to counties, and the Marion and Linn County lines

have been barriers to providing service across those lines in towns like Jefferson. However, with the introduction of new statewide transportation improvement funds in 2018, raised through a payroll tax, these administrative barriers are being erased. Transit service can now be studied and potentially funded on a larger, region-wide basis instead of county by county.

## A new link in the statewide transit network

Public transit service is available among the smaller towns of Polk and Marion County, connecting to Salem as well as to Wilsonville, McMinnville, Portland, and the coast.

Riders can access other transportation services via regional public transit service, such as Woodburn Transit, the Silverton Silver Trolley, Canby Area Transit, Wilsonville SMART transit, and Yamhill County Transit.

These regional services are used by people traveling for work, for study, to visit friends or family, to access medical services, for shopping, and more. Thanks to collaboration among many of the regional providers, these services also let people travel longer distances across the state, for a reasonable

price and sometimes with short and easy connections between routes. Connecting downtown Salem with downtown Albany would also create a link between other regional providers.

For example, the Tillamook County Transportation District operates the Coastal Connector transit service between Lincoln City and Salem. Currently, people trying to get from Albany to Lincoln City have to go through Corvallis and Newport, but the connection via Salem would be much shorter. This is also true for all points north of Salem including McMinnville, Newberg, and the greater Portland Metro area.

Cherriots, the City of Albany and the Albany Area MPO would like to add one more link to that network, with the addition of a Salem-Albany service. In any network, each additional link multiplies the value of all other links. A Salem-Albany route would be useful to people traveling between those cities, but because it is part of a larger statewide network it also increases the usefulness of routes between Salem and Wilsonville, for example, or between Albany and Corvallis.

## Purpose

The following chapters lay out relevant facts about transit and development along the corridor, and draw the reader's attention to major choices that these facts present. The purpose of this report is to assess the nearby existing transit network and the geometry of the corridor. It is also intended to start a conversation with the public, stakeholders, and elected officials about what types of services could be offered along the corridor and how Cherrriots and its partners might choose to prioritize its investments in those services.

## Timeline

The next steps will be the development of transit service alternatives that help to illustrate how Cherrriots and other local partners could provide service along the corridor, if funding were available.

The alternatives will be presented to the public in 2021, allowing the communities to voice which design would best meet their own goals for transit.

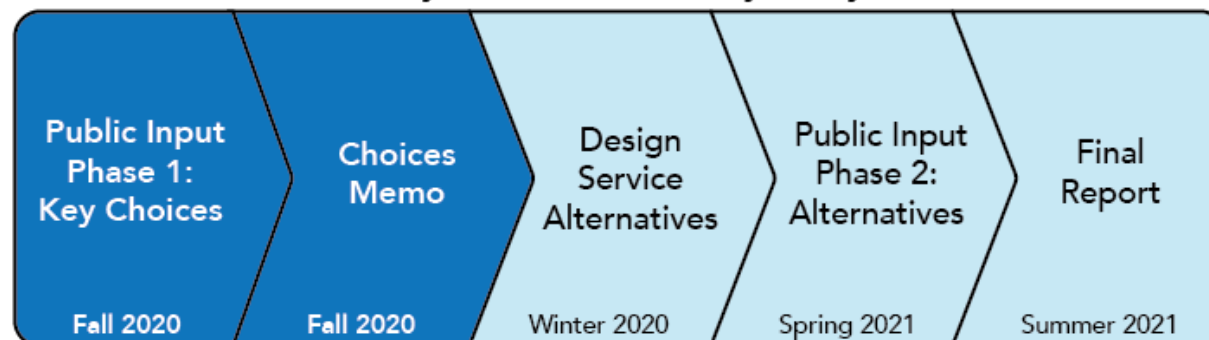
A final report will then summarize previous work and make recommendations for future Albany-Salem services.

## Learn More and Get Involved

For more information about this Study and to get involved, please:

- Send an e-mail to [info@cherrriots.org](mailto:info@cherrriots.org)
- Call (503) 588-2424
- Or visit [www.cherrriots.org](http://www.cherrriots.org)

### Salem-Albany Corridor Feasibility Study Timeline



# Maximizing Ridership is Not the Only Goal

If a transit agency wants to maximize ridership, then it will focus its budget into services that have the largest number of potential customers. In other words, such an agency would think like a private business and target a market where its product is competitive.

Yet maximizing ridership is not the only goal of public transit systems. While *private* transit companies may focus on profits, and therefore on exclusively high-ridership routes, *public* transit is almost always expected to meet other goals. In nearly every region, there is an expectation that transit service should be provided in some or all places regardless of the ridership it attracts.

Unlike governments, businesses are under no obligation to open storefronts in places where they would spend a lot of money to reach few potential customers, or where their products can't compete. For example, Dutch Bros. is under no obligation to provide a coffee stand within 1/2 mile of every resident in the Willamette Valley. If it were, then thousands of houses in rural Oregon would have their own coffee stand at the end of a quiet dirt road. The company would quickly go bankrupt, as a result of operating all those coffee shops across the state for tiny numbers of

customers.

People understand that in a low-density, rural place they will have to drive many miles to reach a Dutch Bros., because Dutch Bros. will be located only in places with enough potential customers. We wouldn't describe this situation as Dutch Bros. being *unfair* to people in rural areas; Dutch Bros. is just acting like a business. It has no coverage obligation, only a goal of maximizing profit.

To provide an example more related to public transit, this is what Bolt Bus does: it focuses all of its resources into the few routes where there are enough people traveling to fill its buses.

Transit agencies are often accused of failing to maximize ridership, as if that were their only goal. But they are not private businesses, and as public agencies they are intentionally providing coverage services that they know will not generate much ridership.

The elected officials who ultimately make public transit decisions hear their constituents say things like *"We pay taxes too"* and *"If you cut this bus line, we will be stranded"* and they decide that coverage, even in low-ridership places, is a worthy transit goal.

There are two basic categories of goals that transit can serve:

- Goals that are reached through **high ridership** relative to costs.
- Goals that are reached despite low ridership, because they arise from **coverage** or service availability.

Many transit agencies have adopted goals like *"We will provide access for all"* and *"We will run efficiently and maximize ridership."* Yet these two goals come into conflict within any limited budget for service.

# Transit's Conflicting Goals

Ridership and coverage goals are both underpinned by commendable values, and most individuals would support both. Unfortunately, they come into conflict with one another. If a transit agency wants to do more of one, it must (within a fixed budget) do less of the other.

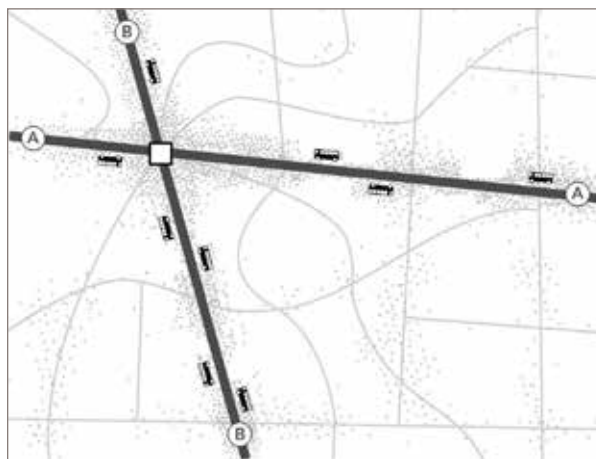
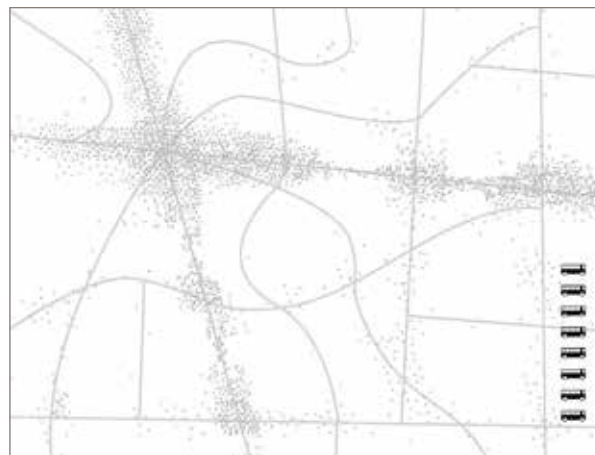
Here is an illustration of how ridership and coverage goals conflict with one another, due to geometry and geography.

In the fictional county shown in the top figure, the little dots indicate homes and commercial buildings and other activities. The lines are roads. Most of the activity in this county is in just a few cities, concentrated around the main roads. The rest of the county is small towns and rural areas.

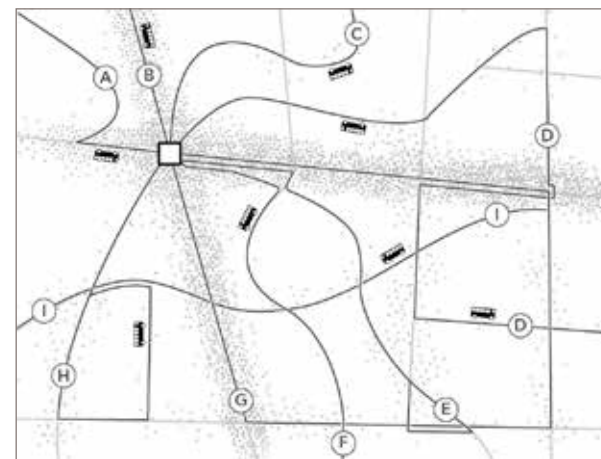
A transit agency pursuing *only* a ridership goal would run all of its buses between the biggest cities, where there are large numbers of people, where walking to transit stops is easy, and where the straight routes feel direct and fast to customers. This would result in a network like the one at bottom left.

If the agency were pursuing only a coverage goal, on the other hand, the transit agency would spread out services so that nearly everyone in the area had a bus route nearby, as in the network at bottom-right.

Imagine you are the transit planner for this area. Your budget is enough to run 8 buses. What routes should you run?



You can concentrate service between the cities and towns with the most people. The bus comes many times a day and the routes are very direct, so many people choose to ride. You'll get the maximum potential ridership...but some parts of your area have no service at all.



You can spread your service out so that most places have a little bit of service. The bus doesn't come very often, and the routes are circuitous and indirect. Fewer people choose to ride, even from the biggest cities. But you've provided maximum coverage of the area.

But because the limited budget of 8 buses would be spread over many miles of routes, the frequency of service would be poor, with perhaps just a couple of trips per day, even between the largest cities.

In these two scenarios, the imaginary agency is using the same number of buses. These two networks cost the same amount to operate, but they deliver very different outcomes.

Within a limited budget, designing transit for both ridership and coverage is a zero-sum game. In the networks on the previous page, each bus that the transit agency runs between the biggest cities, to provide more frequent and competitive service there, is not running on the roads through smaller towns and rural areas, providing coverage. While an agency can pursue ridership and provide coverage within the same budget, *it cannot do both with the same dollar*. The more it does of one, the less it can do of the other.

## Key Choices

Just like the imaginary agency on the previous page, Cherriots and its partners will ultimately have to balance ridership goals and coverage goals in the design of services between Salem and Albany.

Some of the key choices that will arise during planning or, in later years, as any new service is implemented, relate to this tension between goals. They include:

- Should the new service focus on achieving the highest potential ridership above all other goals, or on providing lifeline service to communities currently without access?
  - ▶ There are ways to make the route better at covering lots of places, but worse at attracting high ridership; and vice versa. These competing goals will have to be balanced somehow.
- When balancing levels of service and costs, what days of the week and times of the day should be prioritized?
  - ▶ Any service would likely start with weekday daytime trips. But what other days or times should be added if additional funds became available?
- How much should the service provide for local travel within communities, as opposed to inter-city travel over long distances?
- Which connections with other transit services should be prioritized? Some connections could be timed, to make transfers short and predictable, but *all* connections cannot be timed.
  - ▶ Potentially connecting services include Cherriots Local and Regional routes; the Albany Transit network; the Linn-Benton Loop; the Linn Shuttle; the Amtrak/POINT trains and buses; and more.



## 2 Ridership Potential and Needs

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In this chapter, we present and discuss data that inform two different types of considerations in transit planning:

- Where is there potential for high ridership, and low costs to provide service?
- Where do people have severe needs for transit, regardless of potential ridership and cost?

## Market Assessment

The maps and diagrams in this chapter help us visualize the places where *large numbers of people* might use a new transit service based on:

- The density of residents, jobs and other activities.
- Linearity and directness of the route that connects the densest places.
- People traveling for work or for other purposes in large numbers.

None of these data alone tell us that a place has high ridership potential and is therefore a strong transit market. Rather, *we must consider them in combination.*

If you asked a transit planner to draw you a very high-ridership bus route, that planner would look mostly at densities of all residents and jobs; at the walkability of streets and neighborhoods; and at the cost of

running a bus route long enough to reach them. Only secondarily would that planner look into the income or age of those residents or workers.

However, the “who” attribute that has the strongest influence on transit ridership potential is income. This is especially true in rural areas and small cities where driving and parking cars is so easy.

People living on low incomes are, as individuals, more likely to choose transit. That said, the density of all people (including low-income people) around a transit stop will still be the overriding factor in predicting whether that stop gets high ridership. All else being equal, density trumps income (and age) if you are trying to predict where transit will get high ridership.

This is not to say that who people are or their current life situations are unimportant. These elements are very important, especially when contemplating whether and how to provide service whose goal is something other than high ridership.

## Needs Assessment

If asked a transit planner to draw you a route that met as many needs as possible, that planner would look at where seniors, youth, people living on low incomes, and

people with disabilities live and where they need to go.

The densities at which these people live matters, because at higher densities a single bus stop can be useful to more people in need. Yet the planner might still try to get the route close to very small numbers of people with severe needs for transit. In fact, the more distant and scattered people are, the more isolated they may be, and the more badly they might need access to transit.

Finally, some transit funding sources are meant to address severe or particular transit needs, rather than to attract high ridership. Some federal and state funds are designated for use serving seniors, people with disabilities, people living in poverty, or schools.

## Ridership Recipe

The geographic and land use conditions that contribute to high transit ridership are crucial, though they are not controlled by the transit agency. The ‘Ridership Recipe’ on the following pages illustrates their effects.

## Density

Density is the first measure of how many people might ride a transit service. Density describes the amount of stuff in a space - and for transit, the “stuff” that matters is people. A place might be dense with residents if it has many apartment buildings. It might be dense with jobs if it has office buildings.

One factor that doesn’t exactly show up as density and yet has the same effect is how much people travel to a certain place. For example, a shopping center has moderate job density, but also has a very high number of shoppers arriving throughout the day and week. A school has some jobs (the teachers and staff), but a large number of students going there to study. And a medical office has some jobs, but also has some patients coming throughout the day.

Park-and-rides can be a form of density, in which people leave their cars close to a transit stop. However, even very busy park and rides rarely generate as many trips relative to their space as do places that are dense with apartments, offices or services. A busy transit center or station, where people get on and off of trains and buses to other places, can also be thought of as dense if a large number of people are making those connections.

## The Ridership Recipe: Density, Linearity and Walkability

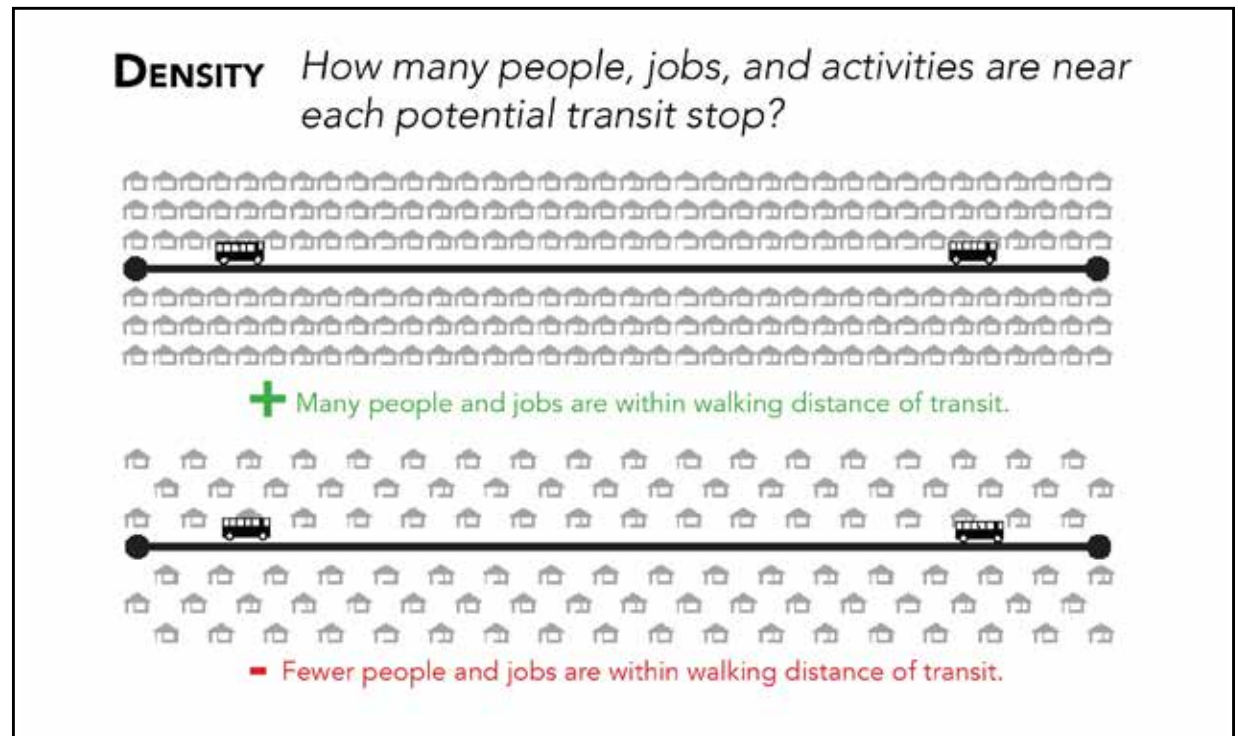


Figure 1: The ‘Ridership Recipe’ includes geographic land uses that have direct impact on a transit route’s ability to achieve high ridership.

For whatever reason they are traveling, the more people going to and from the small area around a bus stop, the more potential ridership is there. Bus stops located in such dense or busy places will, all else being equal, attract more riders than bus stops in less dense places. The figure above

provides a visual illustration of this point.

For the Salem-Albany corridor, the Activity Density map on page 16 gives a sense of where in the corridor the density of people and jobs is high.

## Walkability

Density alone is not enough to result in high ridership. Even if people are close to a stop, they aren't likely to ride unless they can safely reach the stop.

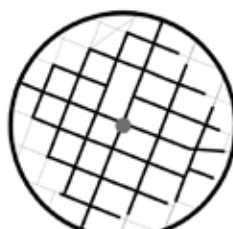
Most transit ridership comes from people walking to the stop. Some ridership can come from people cycling, or getting a ride from a friend, hiring a car or driving and parking their own car. People are more likely to take these extra steps to reach a transit stop if they're making a long trip, because then it's worth the trouble (and they can't just bike the whole way, or ask their friend to drive them all the way). Some transit ridership can also come from people who transfer from other transit lines.

Because most transit riders arrive on foot, the walkability around the bus stop is critical. Are there sidewalks or safe places to walk on nearby roads? Do enough roads connect to the stop that peoples' walk to the stop is fairly direct, and not circuitous? Can people walk across the road or highway to reach the stop on the other side without fear?


A very dense place where these things are not true will probably not generate high ridership. Even if a great number of people can see the bus stop, few will use it if it's


## The Ridership Recipe: Density, Linearity and Walkability

**WALKABILITY** *Is it possible to walk between the stop and the activities around it?*

**+** 

The dot at the center of these circles is a transit stop, while the circle is a 1/4 mile radius.



**-** 

The whole area is within 1/4 mile, but only the black-shaded streets are within a 1/4 mile walk.

**+** It must also be safe to cross the street at a stop. You usually need the stops on both sides for two-way travel!

Figure 3: The 'Ridership Recipe' includes geographic land uses that have direct impact on a transit route's ability to achieve high ridership.

too hard or dangerous to reach. The graphics above show how poor walkability greatly decreases the number of places you can easily and safely walk to from a transit stop.

Most of the cities covered by this study have fairly walkable centers. Salem, Albany

and Jefferson all have well-connected streets in their centers, with sidewalks and crossing signals. However, outside of their centers and outside of these cities there are places where poor walkability would make it hard for people to reach a bus stop even if it's nearby.

## Linearity

If a place is dense and walkable, many people can reach the bus stop, but will they find the service useful? Will it go where they want, when they want to travel? And how long will the trip take?

One factor affecting trip length is linearity. Although transit agencies cannot control linearity, it has a big effect on the cost and usefulness of the service. When cities and counties develop along linear roads where buses can stop, it allows for direct routes. This tends to result in higher ridership.

If dense places are arranged along a state highway like 99E, a bus can run down the highway, stopping at corners on the way. In doing so, it gets close to many people while offering a direct and fast ride. In contrast, if dense places are down side streets or cul-de-sacs, then the transit agency must choose: run a bus line that gets close to those dense places, OR run a bus line that is direct and fast. But they cannot do both. The figure to the right illustrates this choice.

One large-scale linearity problem in the study area, especially for North Albany and Millersburg, is that the most linear route between Salem and Albany would be I-5 - but of course buses can't stop on freeways! In addition, development around freeways is only half-accessible to transit - whichever

## The Ridership Recipe: Density, Linearity and Walkability

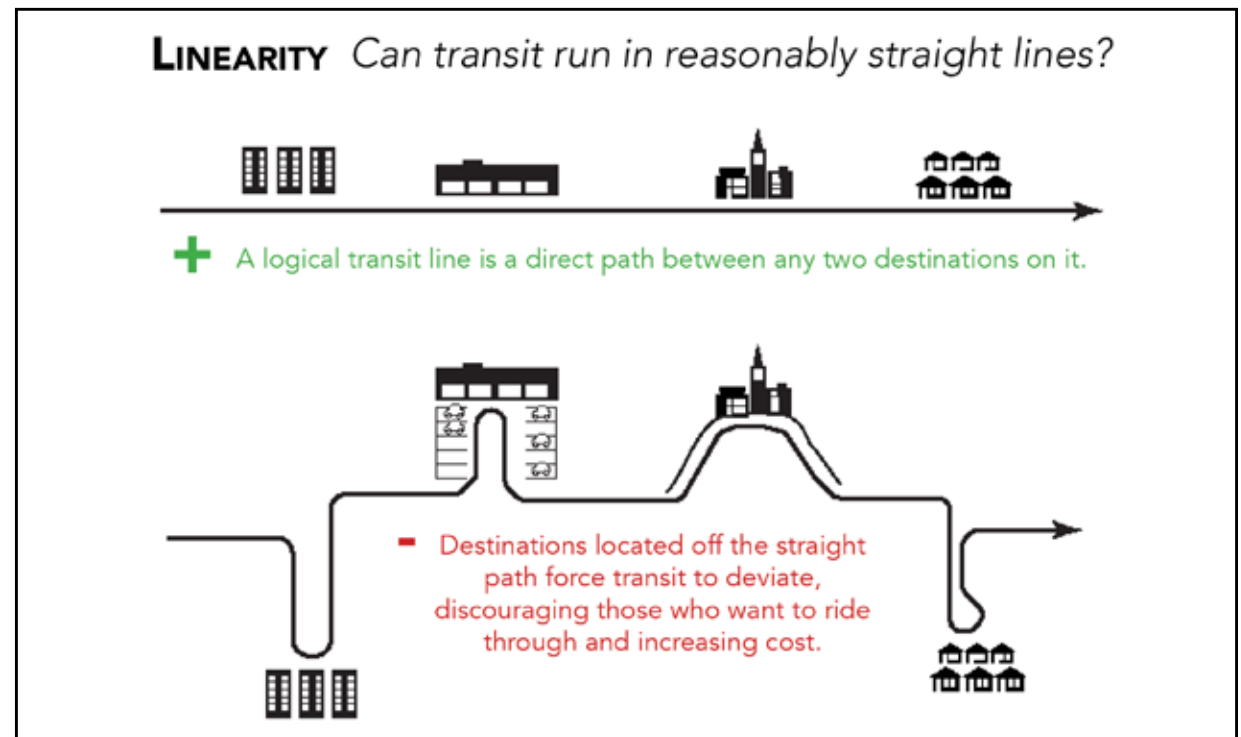


Figure 5: The 'Ridership Recipe' includes geographic land uses that have direct impact on a transit route's ability to achieve high ridership.

side of the freeway the route is on, people on the other side can't walk to it.<sup>1</sup>

Among the smaller cities, Jefferson is fairly linear, but there are still challenges. For

<sup>1</sup> In this situation, the transit agency might have to spend twice as much to run routes on both sides of the freeway, or provide half the level of service on each side.

example, Jefferson High School is set back 1/3 mile from the main road. Whenever important locations - such as high schools, hospitals, senior housing or stores - are located far from the main road, the transit provider has to choose between offering direct service or getting close to those locations.



## Residential Density

A density map can help us evaluate the question, “How many people are probably traveling from the area around each bus stop?” Residential density is the simplest measure of public transit’s ridership potential. Nearly everybody makes at least one trip starting or ending at their place of residence every day.

The map to the right shows the estimated residential density for the study corridor. The highest residential densities can be seen in the larger cities of Salem and Albany. Jefferson emerges as the densest third area along the study corridor.

It’s important to note that these densities use Census block groups. A single Census block group can contain higher residential density communities - such as subdivisions, small towns, or mobile home developments (which can be super dense) - as well as surrounding open spaces or very low density developments. By combining the overall densities within the block group, the end result can lead to an area that appears as a low- to moderate-density zone on the map, despite containing pockets of high density.

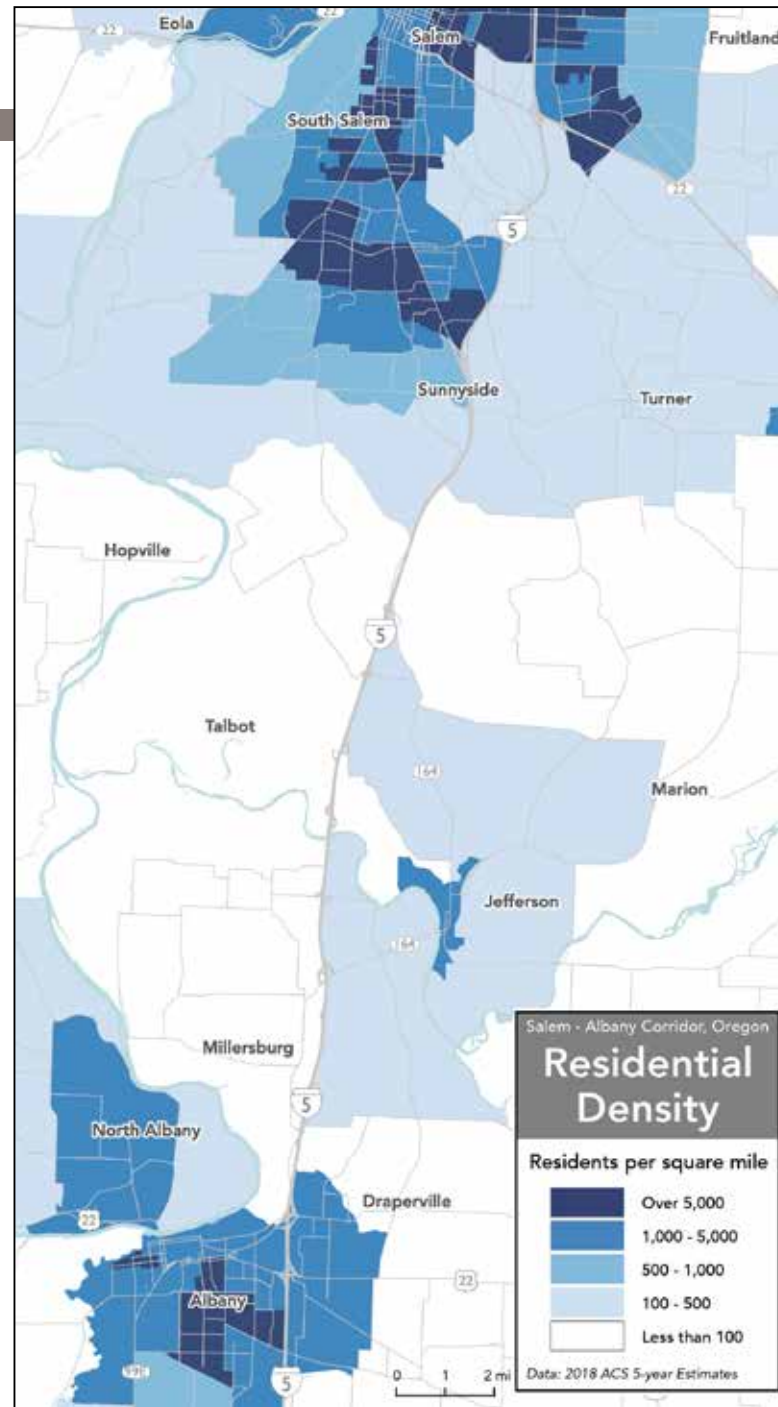


Figure 6: Map of the residential density along the Salem-Albany Corridor.

## Density of Jobs

The map to the right shows the existing job density along the Salem-Albany corridor. Employment density is highest in the larger cities of Salem and Albany, but can be seen at lower densities in Millersburg and Jefferson along the corridor.

This map shows the places people travel for work, and also places people go for shopping, services, health care, and more. One person's workplace may be, throughout the day, a destination for dozens or even hundreds of people.

Note that different types of employers cause different levels of transit demand, and we cannot differentiate among them using this map alone.

- Retail and service job sites attract numerous customers and visitors all day.
- Some industrial job sites attract workers at only a few times of day.
- Industrial and logistics companies may have a large number of employees, but sometimes they are spread out across such a huge site that it's quite hard to get close to them with transit.
- Schools and colleges have few jobs, but tend to attract many riders because of their students.



Figure 7: Map of the job density along the Salem-Albany Corridor.

## Activity Density

The map on this page compares job density and residential density along the study corridor. Unsurprisingly, the densest places are the urban areas and small cities: Salem, Albany and, to a much lesser degree, Jefferson.

This map helps us see not only total densities, but also the mix of uses along the corridor, which affects how much ridership transit can achieve, relative to cost. This is because a mix of uses tends to generate demand for transit in both directions, at many times of day. Transit lines serving purely residential areas tend to be used in mostly one direction and mostly during rush hours — away from the residential neighborhood, towards jobs and services. Buses serving a mix of uses can be more full in both directions.

Serving a mix of uses, and two-way travel demand, is particularly important for long routes, like the one for the Salem-Albany Corridor. Attempting to focus service on a certain direction of travel during rush hours is expensive for a long route, as it requires a transit agency to spend a lot of time driving empty buses back to the starting point.



Figure 8: Map of the activity density along the Salem-Albany Corridor.

Activity Density compares both Job Density and Residential Density on the same map.



## Low-Income Density

People who are living on limited incomes can represent either a strong market for transit or a need for coverage service (regardless of ridership), depending on the built environment around them.

The highest levels of low-income density in the study corridor are concentrated within the largest cities, but low levels of low-income density exist along the majority of the corridor.

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In 2018, the Federal Poverty Line for a household of 4 was \$25,100 per year.

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A common misconception is that transit, especially all-day transit, is only useful to low-income people who cannot afford a car. People at all points on the income spectrum make choices about how to travel, based on their evaluation of cost, time, safety, comfort and other factors.

The more carefully a person must manage their money, the more attractive transit's value proposition may be. This doesn't mean that lower-income people will automatically choose transit because it's the cheapest option. Transit service must be useful and reliable for the kinds of trips they need to make.

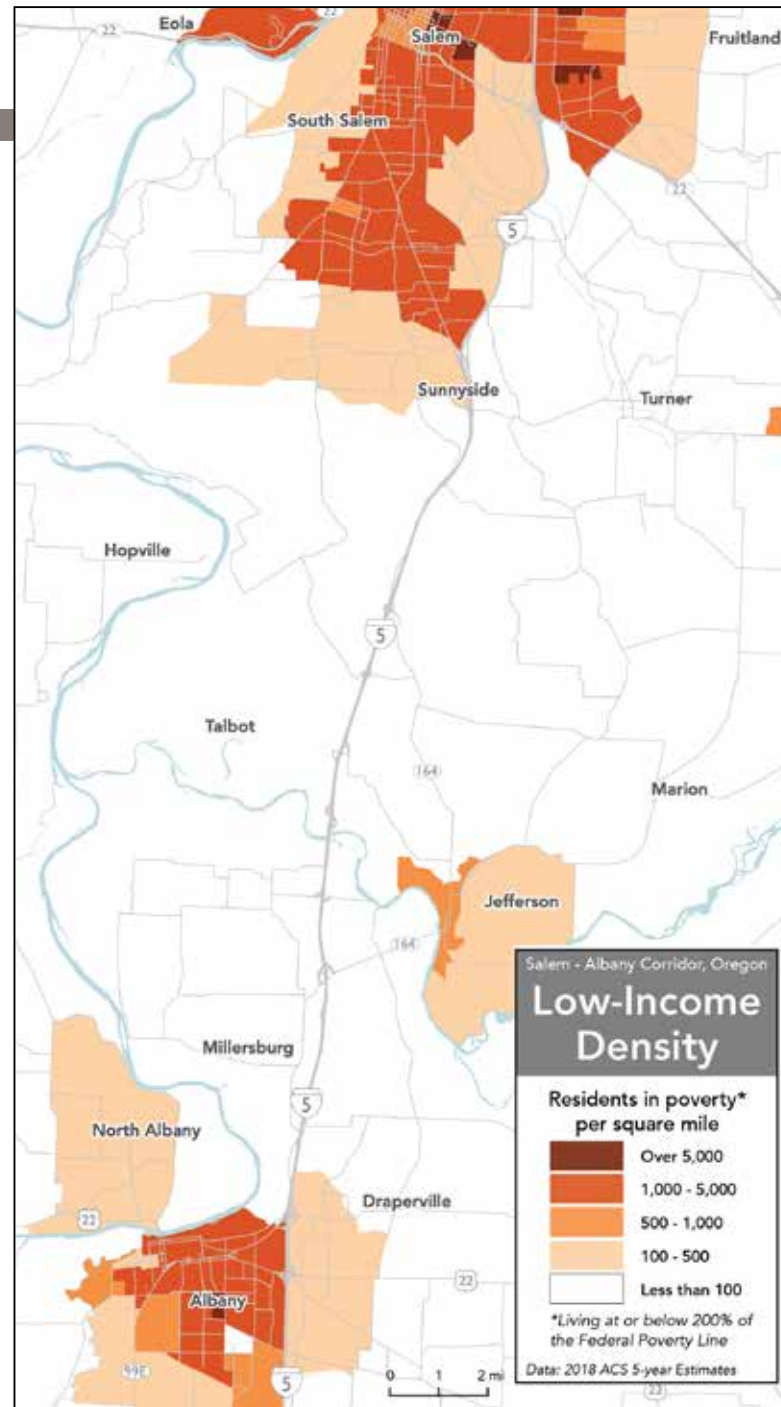


Figure 9: Map of the density of low-income residents along the Salem-Albany Corridor.

## Race & Ethnicity of Residents

The map at right shows where white, black, Hispanic and people of other races and ethnicities live (as of 2018). Each dot represents 25 residents.

We can observe visually from this map that the residents of small towns and rural areas outside of the main cities are majority white, but with many Hispanic residents as well. Salem and Albany (especially East Salem) have a greater density of Hispanic and Asian residents, and a small number of Black residents.

While information about people’s income tells us something about their potential interest in or need for transit, information about ethnicity or race alone does not tell us how likely someone is to use transit.

However, an essential component of the planning process is to avoid placing disparate impact on people of color through transportation decisions. Federal civil rights law protects people from discrimination in the provision of transit service on the basis of their race or ethnicity.

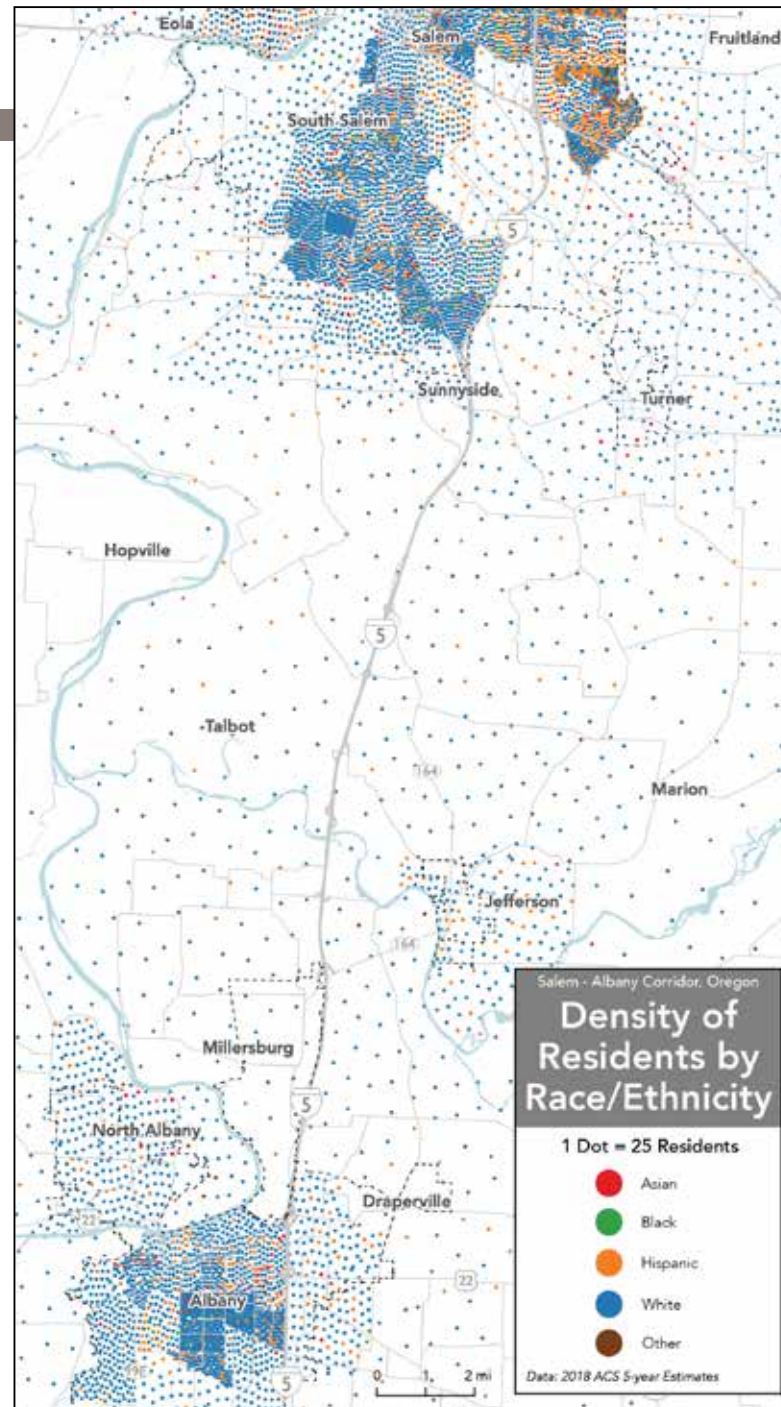


Figure 10: Map showing the ethnicity and race of residents along the Salem-Albany Corridor.

## Zero-Vehicle Households

Not everybody has ready access to a personal automobile, and people who have less or no access will depend on other modes when they need to travel. This might include walking, cycling, getting a ride from a friend or family member, or transit.

The map at right shows the number of households without any vehicles available along the corridor. Darker areas have more households without vehicles.

Areas in Salem, Albany and Jefferson with a high density of zero-vehicle households also appear on the map of low-income population density on page 17, suggesting that these are places with many potential transit riders who also have a severe need for transit.

Understanding where there are large numbers of households without vehicles can be helpful in designing high rider-ship services, as well as coverage services. These households represent a strong market for transit, if they are arranged in linear and proximate patterns. They can also represent a severe need for transit, if they have few other options for travel.



Figure 11: Map of the density of households with zero-vehicles along the Salem-Albany Corridor.



## Regional Commuting Patterns

The graphic at right shows how residents and workers commuted along the Salem-Albany corridor, in 2017.

Work commutes are but a small proportion of the total trips people make throughout the day and week. In addition, this diagram does not include travel by students to schools and universities, which tend to contribute a great deal to transit ridership.

### Rush Hour Caveats

Another caution about work commutes is that they happen during all times of day and week. The transportation profession has traditionally been focused on the professional rush hour commute, but that is changing. Work schedules are more variable and flexible than they once were; a greater proportion of Americans work in retail and services than used to; and there is greater awareness among the professionals who plan roads and transit that their own commuting patterns are not a good guide to what the rest of working people are doing.

Now, with **Covid-19** sending most professional workers home with laptops, rush hour commutes seem less important relative to

all-day and all-week retail, industrial, restaurant and medical commutes. How much importance rush hours will regain in the next decade is unknown.

In addition, pulling out buses just for rush hour services is costly. Drivers have to work split shifts, which can be unpleasant, expensive and complicated to schedule. The agency has to buy and maintain buses that are only used for a few hours each day.

### All Day Service

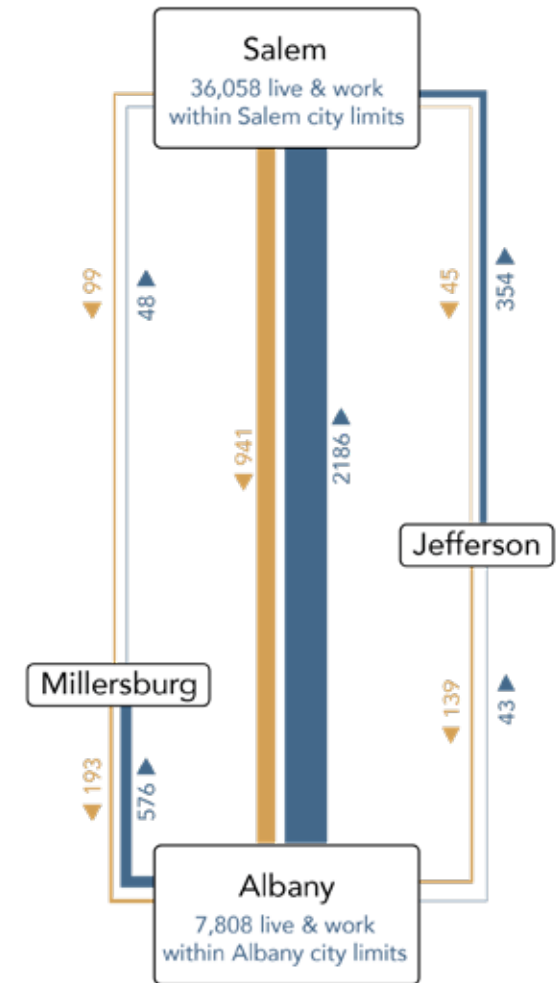
Transit service that runs all day and all week is often part of a long-term high ridership strategy, because it allows households to give up a car and depend on transit for many different trips.

Long-span transit service can also serve coverage goals, even when it doesn't attract high ridership, because it can help small numbers of people with severe needs for transit.

For all these reasons, many transit agencies are providing services all day and all week, not just during traditional rush hours.

**Figure 12: Commute flows show the strongest corridor connection between Salem and Albany. Millersburg has a strong connection with nearby Albany, while Jefferson slightly favors Salem.**

## Work Commutes Along the Salem-Albany Corridor



Data source: US Census Longitudinal Employer-Household Dynamic, 2017

## **3 Existing Services and Performance**

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# Local Transit

While Amtrak/POINT is the only service between Salem and Albany, local transit operators serve some nearby areas.

## Cherriots Local

Cherriots Local operates 20 fixed routes and paratransit for the Salem and Keizer region.

## Cherriots Regional

Cherriots Regional consists of 5 express fixed routes serving 17 communities in Marion, Polk, and Linn Counties which connect to Cherriots Local buses at the Salem Downtown Transit Center; 1 flex route serving 3 major cities in Polk County, but does not travel to Salem<sup>1</sup>; and 1 commuter express service between Salem and Wilsonville, operated in cooperation with the City of Wilsonville.

## Albany Transit

Albany Transit operates 3 fixed routes and paratransit services for the City of Albany.

## Linn-Benton Loop

The Linn-Benton Loop has 3 fixed routes connecting Linn-Benton Community College to Oregon State University, Corvallis, and Albany.

## Linn Shuttle

The Linn Shuttle operates 2 fixed routes connecting Sweet Home, Lebanon and Albany.

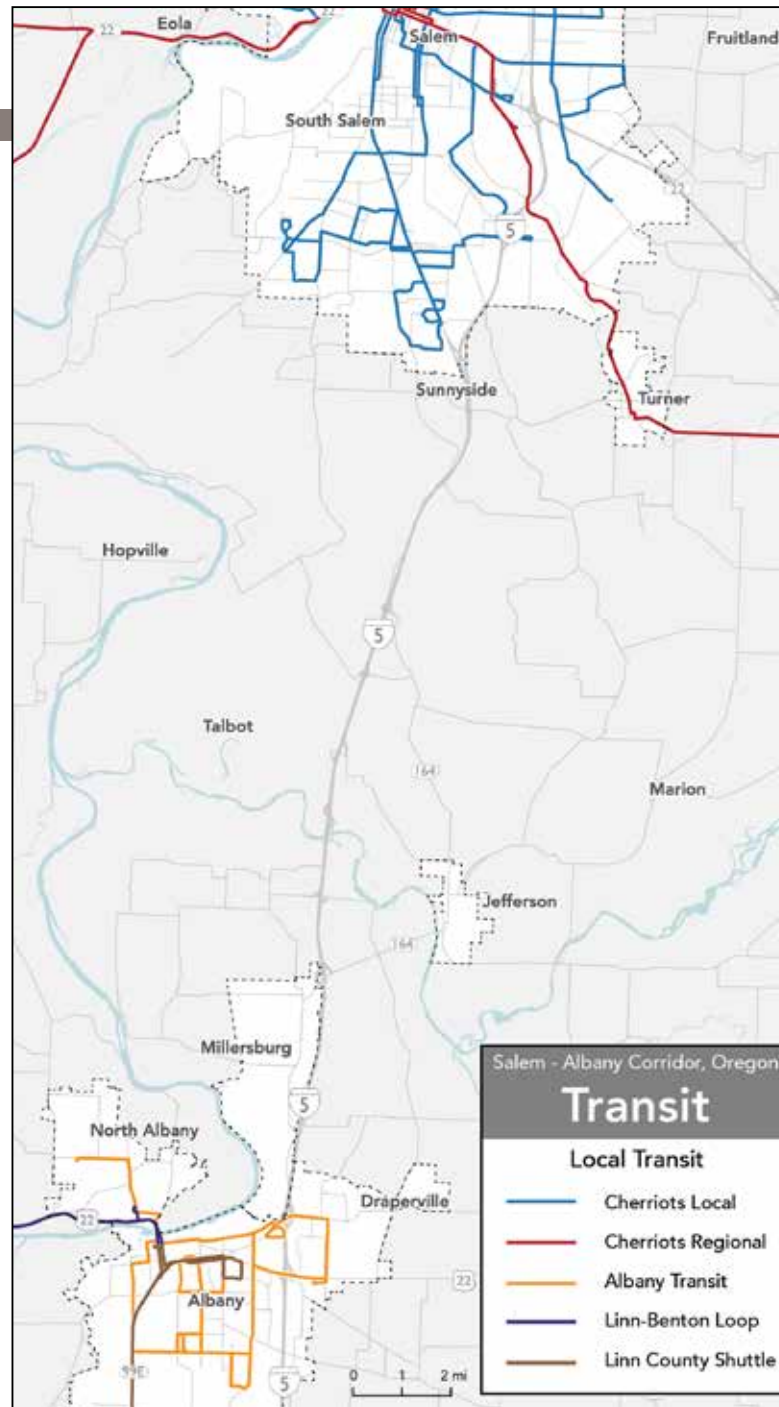


Figure 13: Map of existing local transit along the Salem-Albany corridor.

<sup>1</sup> To be converted to a deviated fixed-route in early 2021.

# Intercity Connections

## Northwest Connector

Northwest (NW) Connector is an umbrella organization that works to integrate five transit system along the Oregon Coast and Columbia River to provide seamless connections and create the ability to use public transit for regional travel.

- Columbia County Rider
- Sunset Empire Transportation District
- Tillamook County Transportation District
- Benton County Transit
- Lincoln County Transit

## Amtrak Train

Amtrak is a passenger railroad service that provides intercity service across the United States and Canada.

Amtrak operates train service along the corridor helping to provide a point-to-point connection between the Amtrak Station in Salem, OR and the Amtrak Station in Albany, OR.

## POINT Bus

The POINT Bus is a public intercity bus service funded by the Oregon Department of Transportation (ODOT) and the federal government.

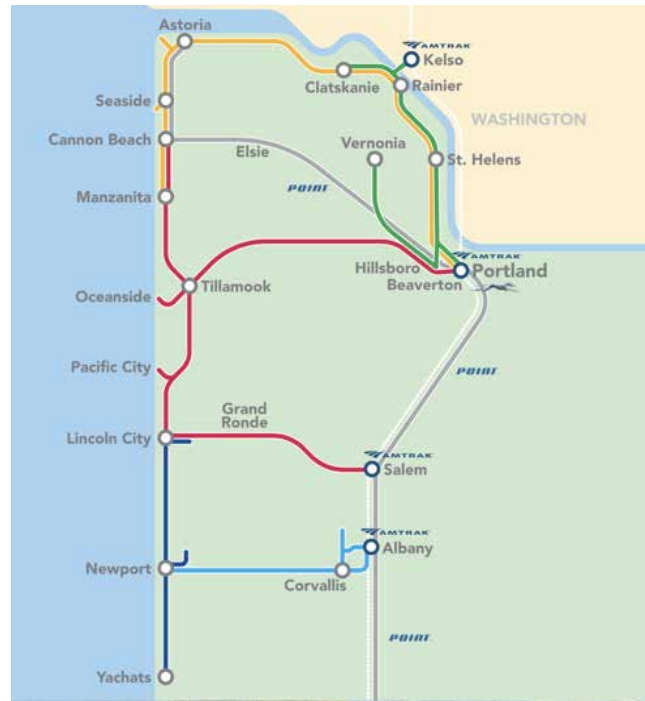


Figure 14: NW Connector network allows regional transit trips across northwest Oregon. While the connection between Salem and Portland is possible using low-cost transit, the gap between Salem and Albany relies on the pricier Amtrak and POINT services.



POINT Bus operates four routes in Oregon, one of which works in partnership with Amtrak train service providing additional point-to-point bus service between the Amtrak Station in Salem, OR and the Amtrak Station in Albany, OR.

See the next page for more information on Amtrak and POINT bus service along the study corridor.

Amtrak service between Salem and Albany operates seven days a week and provides service between Salem and Albany as a part of its larger regional system.

While some trips during the day are able to provide two way service, meaning that you can travel either north from Albany or south from Salem, there are often times where only one-direction of travel is available. Most notably only southbound trips are available after 7 PM on weekdays. You can see other gaps in service times on the chart to the right.

Yearly ridership numbers for Amtrak services between Albany and Salem can be seen below. On average POINT bus ridership is 2/3 to double that of train ridership between the two cities. This reflects POINT running twice the amount of daily trips versus Amtrak train.

Albany to Salem (Bidirectional)	Yearly Ridership
Amtrak Train	2019 - 1544 2020 - 321*
POINT Bus	2019 - 2,627 2020 - 664*

\*Ridership data through June

### Weekday Amtrak Service Between Salem and Albany

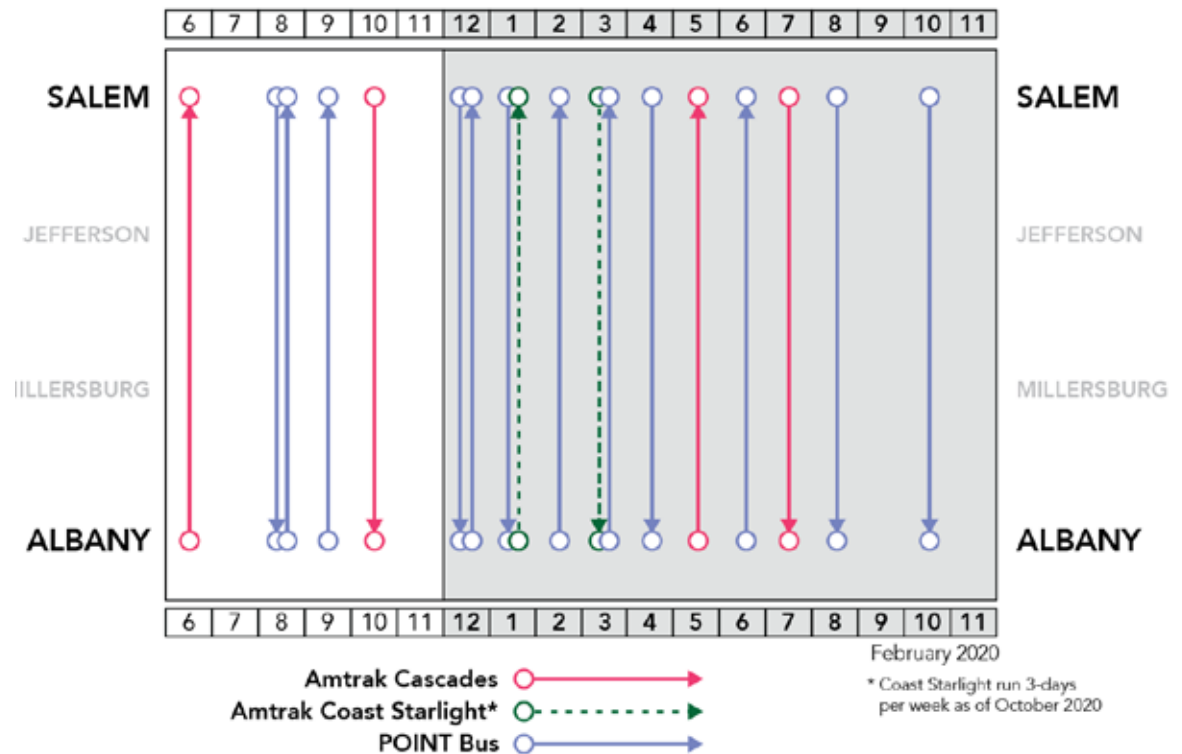


Figure 15: Existing weekday transit between Salem and Albany, by hour of the day. With only 8 round trips per day, the chance that the schedule matches someone’s work hours or doctor’s appointment time are low. In addition, these services do not stop in Jefferson or Millersburg.



# Fares

Public transit pricing is predictable. Fares are set far in advance and change only occasionally, and incrementally. Fares are set low enough that working people can afford to pay the fares every day.

Fares are a limitation of the current Amtrak and POINT services. Some workers might decide that the fares are affordable for daily use, but for most people they would be out of reach, and don't provide a big cost savings over driving.

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Public transit pricing should be predictable.

Fares are set far in advance and change only occasionally, and incrementally.

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Public transit agencies often provide a reduced fare option for low-income, senior, or youth riders.

Amtrak's business model only offers a dynamic fare structure that is more like airline pricing, which makes sense given the huge peaks in demand that happen around holidays and breaks, and also given that Amtrak can't do "standing room only" whereas public transit on local routes can generally squeeze in more people if demand peaks on a certain day.

Intercity Transit Service	One-way Cash Fare
Amtrak Train (Cascades, etc...)	\$9.00 - \$15.00 (or higher)*
POINT Bus	\$9.00 - \$15.00 (or higher)*

\*Amtrak Fares are dynamically priced, meaning last-minute tickets or tickets for crowded vehicles may cost significantly more.

Public Transit Service	Adult Fare	Reduced Fare	Youth Fare
Cherriots Bus Local	\$1.60	\$0.80	\$0.50
Cherriots Regional 10X - 50X	\$2.25	\$1.50	\$1.00
Cherriots Regional 1X	\$3.00	\$1.50	\$1.50
Albany Transit System	\$1.00	\$0.50	\$0.50
Linn-Benton Loop	\$1.50	\$0.75	\$0.75
Linn Shuttle	\$1.00	\$1.00	\$1.00
Coastal Connector (Zone Based Fares)	\$1.00 to \$10.00	\$1.00 to \$7.00	\$1.00 to \$7.00

All of these factors can produce unexpected increases in fare cost if demand spikes or if someone is purchasing tickets at the last minute.

Amtrak does this in order to recover nearly all of its costs from fares. In contrast, public transit is understood to require large public subsidies, and recovers just a small amount of its costs from fares, the same way that

public parks and libraries are mostly funded through taxes but charge small fees for some uses.

# Potential Transit Service Types

Cherriots Regional provides express bus service from Salem to 17 communities in Marion, Polk, and Linn Counties. This system to the north gives us some good examples of service types that could be used between Salem and Albany.

The three types of routes described here do not require “complementary paratransit,” which is a door-to-door service for people with disabilities commonly offered in major cities (federal funding for fixed-route bus service mandates complementary paratransit service). Such door-to-door service is valuable for the people who use it, but it is very costly to provide alongside long-distance routes.

## Cherriots Regional Transit Service Types



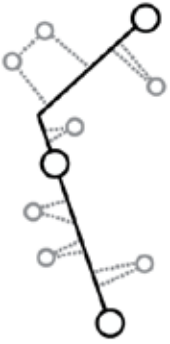
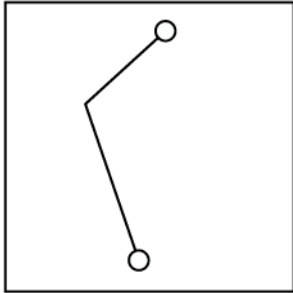
Point-to-Point Service	Intertown Service	Flex Service
		
<ul style="list-style-type: none"> <li>● Fastest end to end travel time</li> <li>● Highest reliability, with only two stops.</li> <li>● Only accessible at end points.</li> </ul>	<ul style="list-style-type: none"> <li>● Stops along entire corridor</li> <li>● Useful for shorter, local trips.</li> <li>● Slower travel time for end to end trips</li> </ul>	<ul style="list-style-type: none"> <li>● Doesn't require people to get themselves to a stop</li> <li>● Reliability decreases as ridership increases.</li> <li>● Slowest travel times, sometimes leaving fixed route path.</li> </ul>

Figure 16: Regional transit can take many forms to best suit the communities it serves. Above are three service types that Cherriots Regional currently operates, each with its own strengths and weaknesses.

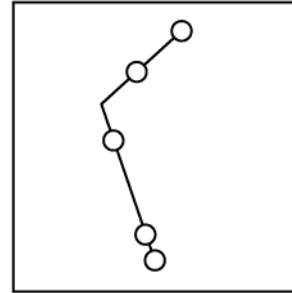


**Point-to-Point "Express"**

Example: Route 1X

Point-to-Point Express provides a non-stop ride on the fastest possible route (I-5) between Wilsonville and Salem. This route style tends to focus trips around the AM/PM rush hours looking to capture workers operating on the traditional 9-5 working week.

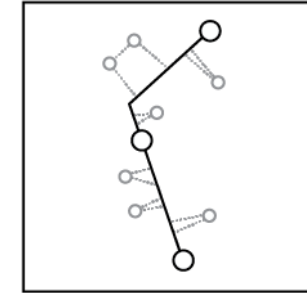
The Amtrak/POINT buses and trains linking Salem and Albany could also be described as "expresses" because they only make a single stop in the biggest cities.



**Intertown "Express"**

Example: Route 10X

Intertown "Express" runs along Highway 99E between Salem and Woodburn, providing one to three stops in each town. Trips are provided throughout the day maintaining a wider range of working hours and providing a basic level of service for a diversity of users. A connection is made in Woodburn to buses from Oregon City and Canby as well as the City of Woodburn transit buses.



**Flex Service**

Example: Polk County Flex

Flex Service serves the cities of Dallas, Monmouth, and Independence. Currently, Polk County Flex riders must call 24 hours in advance. Once this route transitions to a deviated fixed-route it will serve designated stops approximately 1/4 mile apart, but people can still call and ask the bus to stop at an origin/destination within 3/4 mile of the route. This helps seniors and others who have difficulty walking reach an inter-town route, without requiring expensive door-to-door paratransit. However, it can be a slow and deviating trip for other riders.

# Impacts of Covid-19

An overall loss of ridership has been seen by all US transit agencies during the Covid-19 pandemic, on weekdays and weekends. In most places, weekend ridership fell less. Although ridership has been increasing recently, capacity constraints due to social distance practices and the existing number of buses limits this growth.

The graph to the right compares weekday ridership on Cherrlots Regional before the pandemic (in blue), in June during the pandemic (in green) and in July during the pandemic (in red). Throughout the day, weekday ridership has been lower during the pandemic. Two main points emerge when looking at this local data.

## Loss of peak ridership

The largest losses in ridership for Cherrlots Regional have been in the weekday morning rush hour. This is surely due to a combination of job loss, many professionals working from home, and workers finding alternative modes of transportation. Given the current uncertainty of Covid-19, it remains to be seen what the long term impacts to rush hour peaking will be.

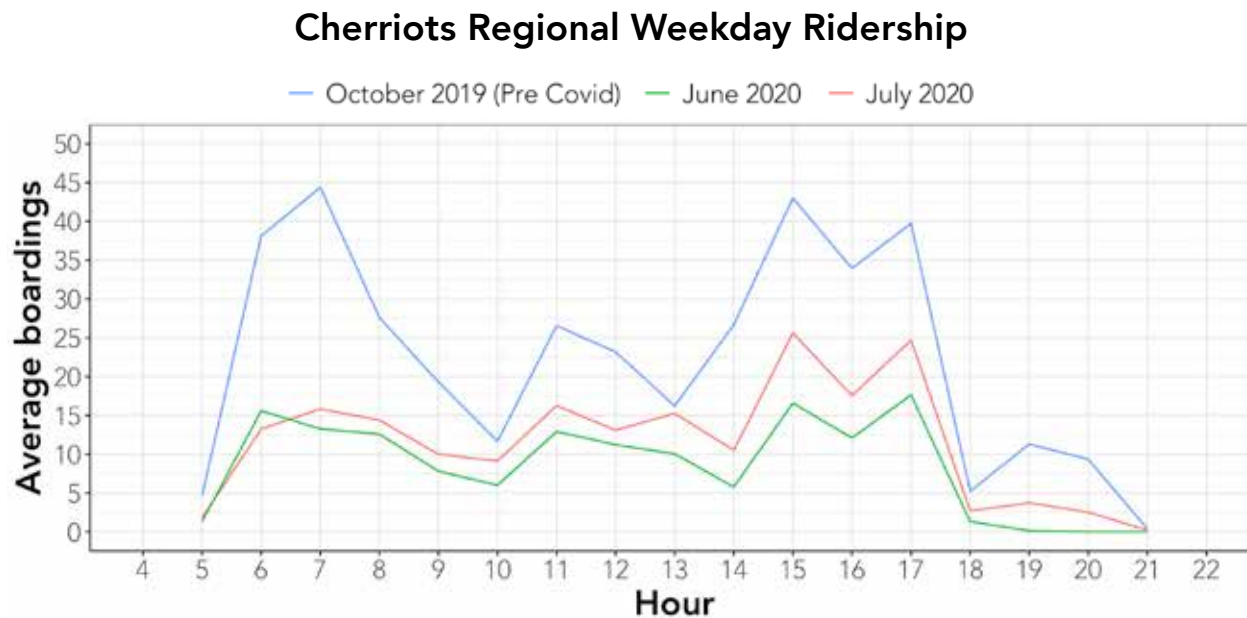


Figure 17: This chart shows weekday ridership by time of day for the Cherrlots Regional Routes. The impact of Covid-19 on ridership loss can be seen throughout the day with the highest losses in the morning rush hour.

## Midday ridership grew slightly in the summer

In contrast to rush hour ridership losses, midday ridership on Cherrlots fell less overall. This is likely because midday trips include commutes for retail, service or medical jobs, which continued despite the pandemic. Midday trips are also often made for essential errands, like going to grocery stores or medical appointments, which people can't completely eliminate

during the pandemic. Between June and July this summer, ridership grew slightly on Cherrlots Regional, in the midday and afternoon and PM rush hour.

## Saturday ridership

Cherriots Regional provides some service on Saturdays and no service on Sundays. Before the pandemic, average Saturday ridership on Cherriots Regional routes peaked at more than 22 boardings per hour, and was highest around 10 am and 4 pm each day.

The graph at right shows Saturday ridership before the pandemic (in blue), in June during the pandemic (in green) and in July during the pandemic (in red). Overall Saturday ridership is lower during the pandemic, just as it is on weekdays.

## Ridership is beginning to return

As we saw for weekdays on the previous page, ridership does appear to be returning slowly on Saturdays. Ridership in July increased over June, and was approximately half of the pre-Covid-19 ridership seen in October 2019.

## Who is Riding

Many of the riders taking Cherriots Regional buses during these months were likely commuting to essential service jobs or making trips to access vital services, health care, and other needs. Most people

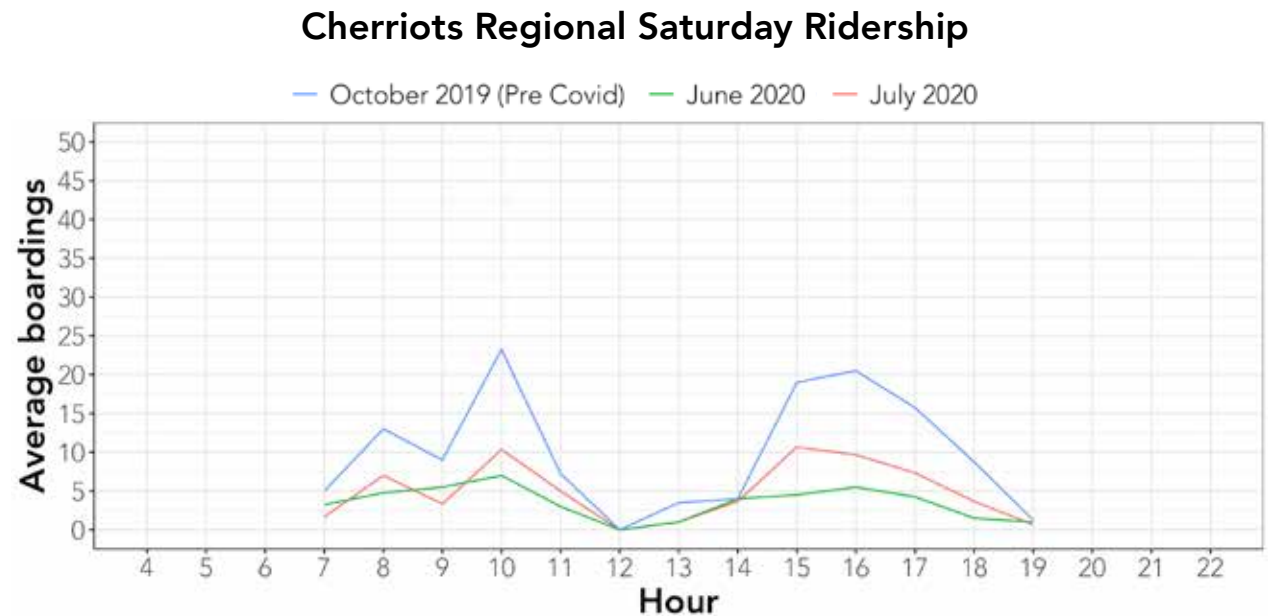


Figure 18: This graph shows Saturday ridership by time of day for the Cherriots Regional Routes in operation before and during the pandemic

with the opportunity to make a trip by car, or by getting a ride from a family member, or to avoid traveling at all were doing so in June of 2020. Yet a small number of people were still riding Cherriots Regional routes, on weekdays and Saturdays.

# 5 Key Service Choices

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## How Important is High Ridership?

If the purpose of a new route were to maximize ridership relative to cost, then:

- Service would be concentrated to offer the best frequency between the places with the most people and jobs, i.e. Salem and Albany.
- Service would be offered all day on weekdays (not just at rush hours), so that it can be used for different types of trips (not just professional commutes).
- No service should go through smaller communities, i.e. Jefferson and Millersburg, if doing so would make the trip between the big cities slower.

If maximizing ridership were not the entire goal, and some coverage were also important, then:

- Service would cover more places, and in particular, would get close to people with severe needs.
- Service may not be as frequent, with fewer daily trips.
- Service may be slower and more circuitous.
- Ridership on the service would be lower.

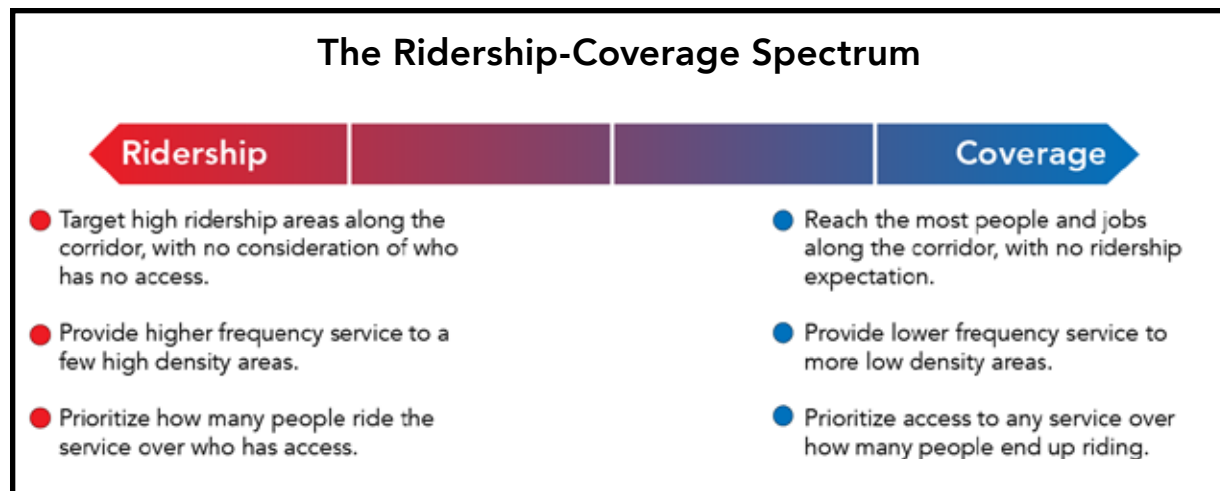


Figure 19: This spectrum of choices describes the different design choices that can serve these two competing goals within a limited budget.

## Connections are Powerful

Connections between transit routes are important for attracting ridership and for providing mobility for people with severe needs. A good connection means that someone is free not only to go places along a single route, but along any other route that connects with their route.

However, timed connections or “pulses” are tricky to design. Each route takes a unique amount of time to make its round trip, yet the buses need to arrive in the same place at the same time, reliably.

For a single route, it is generally feasible to make one timed connection, extremely challenging to make two, and impossible to make three. Thus timed connections with other services in the area will have to be prioritized, as only one or two pulses will be possible.

Pulses happen in the center of both Salem and Albany. In Albany, the Amtrak station acts as the primary transit center for Albany, and is a 10 minute walk from the center of the city. Albany Transit uses the station for timed transfers between local routes and multiple regional transit services are able to connect.

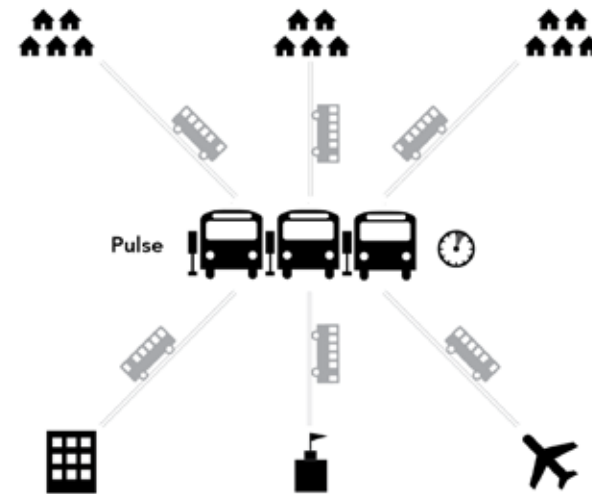
Unlike Albany, Salem’s Amtrak Station is

located on the periphery of the downtown area, a 20-minute walk from the Downtown Transit Center (DTC). The DTC is where Cherriot’s Local and Regional buses pulse and is one promising end point for a Salem-Albany route.

It may also be possible to end the route in South Salem, at a future transit center, with connections to Cherriot’s Local buses with

frequent trips to downtown, South, and Southeast Salem. If this allows the Salem-Albany route to be more frequent, it might actually save riders time.

Potential route end points and connections in both Salem and Albany will be explored in the next phase of this project, as alternatives are designed.



**Figure 20:** In a pulse, routes are scheduled so that they all arrive at a single point at the same time. People can transfer in both directions, with a reliably short wait. Pulses are important in systems with poor frequencies, because otherwise the waits to transfer between routes would be extremely long.