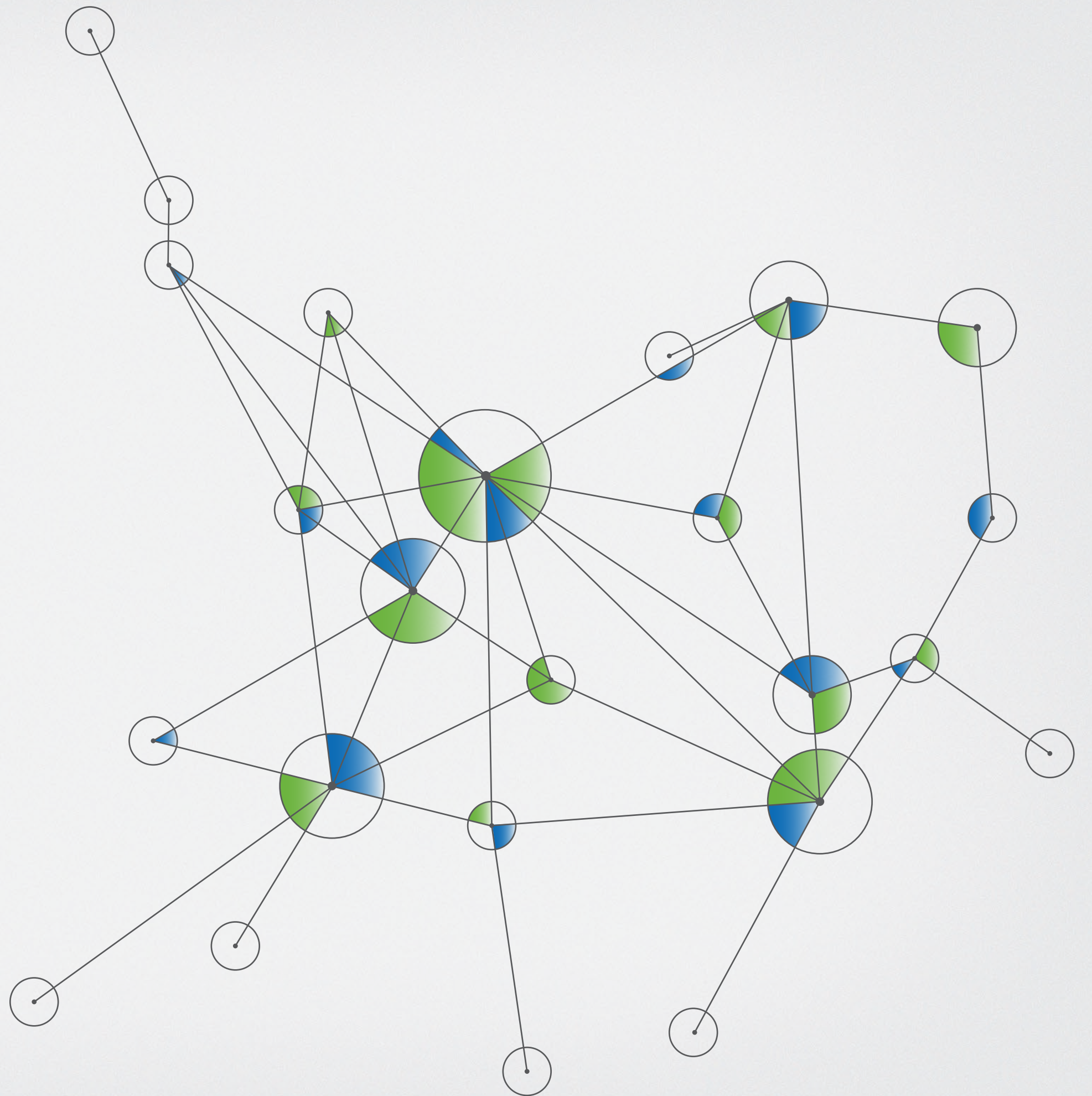


DESTINATION

2040



Pierce Transit • Long Range Plan



ACKNOWLEDGEMENTS

This plan represents the efforts of many dedicated individuals. We thank them for their time and support in creating this vision document.

Pierce Transit Board of Commissioners

Rick Talbert, *Pierce County Council Chair*

Steve Vermillion, *Puyallup Council Vice Chair*

Don Anderson, *Mayor of Lakewood*

Daryl Eiding, *Represents Cities of Edgewood, Fife, and Milton*

Lauren Walker, *Tacoma City Council*

Marilyn Strickland, *Mayor of Tacoma*

Pat McCarthy, *Pierce County Executive*

Kent Keel, *University Place Council*

Nancy Henderson, *Represents Cities of Auburn, Fircrest, Gig Harbor, Pacific, Ruston, and Steilacoom*

Our Partners

Puget Sound Regional Council

Sound Transit

King County Metro Transit

Intercity Transit

Kitsap Transit

Pierce County

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Adopted April 11, 2016

Copies of the Pierce Transit Destination 2040 Plan can be found at:

www.piercetransit.org/destination-2040

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EXECUTIVE SUMMARY

LETTER FROM THE CEO

As the agency's new Chief Executive Officer, I am pleased to offer Pierce Transit's Long Range Plan, Destination 2040, as a vision for where I will guide the agency during my tenure.

The document was developed during the past year with input from community members to comprehensively answer, "Where do we want to go and how do we plan to get there?" The plan will serve as our blueprint for increasing service hours and coverage, and providing alternatives to the single-occupant vehicle (SOV). We have evaluated those that best align with the expected growth in population and employment in Pierce County and the greater South Sound region.

While it is generally known that Pierce Transit has been maintaining the status quo over the past few years, I quickly discovered when I joined the agency that the state's second-largest county is repositioning itself to attract a large portion of the additional million residents that the Puget Sound region can expect by horizon year 2040. In other words - like it or not - growth is coming to Pierce County too! At Pierce Transit we see an opportunity to strategically plan for that influx with partners such as the Puget Sound Regional Council Metropolitan Planning Organization, the Washington State Department of Transportation, and our regional transit agency partners. Our task at Pierce Transit is to offer safe and reliable mobility options that promote intentional development in key cities such as Tacoma, Lakewood, and Puyallup. Just as local and regional transit is vital to economic opportunities in King, Kitsap, and Snohomish Counties, it is perhaps even more significant in Pierce County. Not only are we planning for new residents and the best way to serve their transportation needs, we will also address the needs of our aging population and those who rely on our transit services for their daily transportation.

I am optimistic that Pierce Transit can – and will – grow over time, provided we can realize the future visions depicted in this plan. In the short term, steadily increasing sales tax revenues equate to restoring service hours. And with cities such as Tacoma prioritizing mass transit usage, walking, and bicycling over single-occupant automobiles in its long-range transportation plans, I am confident that foresight will spread countywide during the next 25 years.

In closing, I believe that Destination 2040 demonstrates Pierce Transit's long-term commitment to sustainable mobility options. My personal commitment as CEO is for Pierce Transit to provide a world-class public transportation system, while attracting passengers of all ages, income levels, and communities, in this unique and future-focused part of the Pacific Northwest.

Sincerely,



Sue Dreier
Chief Executive Officer
Pierce Transit



PIERCE TRANSIT IMPROVES PEOPLE'S QUALITY OF LIFE BY PROVIDING SAFE, RELIABLE, INNOVATIVE, AND USEFUL TRANSPORTATION SERVICES THAT ARE LOCALLY BASED AND REGIONALLY CONNECTED.

VALUES

- **Integrity**...we do what is right, legally and ethically
- **Accountability**...we are responsible stewards of public resources
- **Teamwork**...we all make it happen

LONG-RANGE PLAN VISION

Pierce Transit hereby submits its Long Range Plan for Horizon Year 2040 – to be known as Destination 2040 – as a comprehensive guiding documentation of the agency's vision and blueprint for providing safe, efficient, and integrated public transport services throughout the South Sound region of today, tomorrow, and beyond.

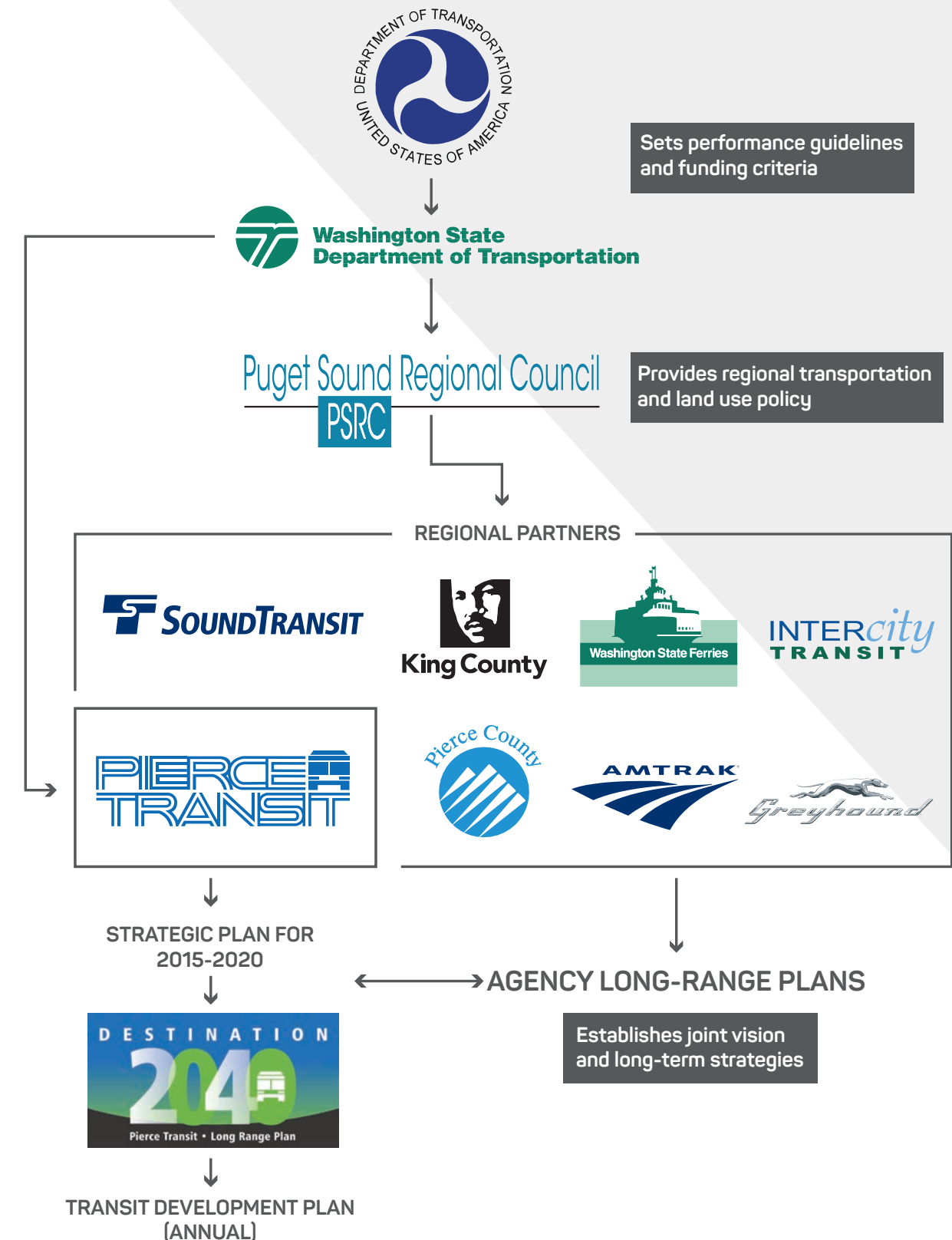


PURPOSE

What this plan accomplishes:

- Destination 2040 **establishes a vision for the agency**. It provides guidance as Pierce Transit begins developing implementation strategies for capital projects and service improvements during both the mid term and long term.
- The plan builds upon the agency’s Strategic Plan for 2015-2020 and the six-year Transit Development Plan, creating an **integrated approach** to agency and service design.
- Destination 2040 embraces **performance-based** planning, which was encouraged in USDOT’s MAP-21 transportation authorization and funding bill of 2012, and has been renewed under the recently adopted Fixing America’s Surface Transportation (FAST) Act of 2015.
- The plan **coordinates with and complements** long-range plans authored by other transit providers, such as Sound Transit, Intercity Transit, King County Metro Transit, Pierce County Ferry, and Washington State Ferries.
- The plan coordinates with our **local partners**, the 13 local jurisdictions the agency serves: Auburn, Edgewood, Fife, Fircrest, Gig Harbor, Lakewood, Milton, Pacific, Puyallup, Ruston, Steilacoom, Tacoma, University Place, and unincorporated Pierce County.
- Destination 2040 depicts three hypothetical **fixed-route transit network scenarios** for incremental growth, plus one for a short-term “worst case” reduction in services beyond the agency’s control.

Transportation policy integration



GOALS GUIDING OUR WORK

The seven Strategic Plan goals for 2015-2020, as adopted by the Board of Commissioners, also guide our long range plan.



SERVICE EXCELLENCE

Pierce Transit executes service delivery in an efficient and effective manner, combining leadership, teamwork, and problem solving with a focus on delivering safe, courteous, and reliable service to our customers.



FINANCIAL STABILITY

An organization achieves financial stability when it is able to provide a consistent level of service over time. Financial stability is accomplished by balancing financial resources and service needs, making necessary modifications to resolve long-term concerns.



COMMUNITY ENGAGEMENT

Pierce Transit maximizes opportunities to: a) Increase awareness of the Agency's value to the community; b) Build trust through frequent dissemination of transparent and accurate information and; c) Ensure active participation from a supportive network of stakeholders. Pierce Transit is an integral part of the broader economic stability of the region and often the only form of transportation for many individuals.



INNOVATIVE COMMUNITY SOLUTIONS

Pierce Transit will develop transportation services with community involvement, tailored to meet the diverse needs of our residents. The Agency will maintain a highly efficient network of routes, while developing coverage service for low-density communities. In order to support our vibrant community, Pierce Transit will partner with a wide variety of organizations both public and private. Because our customers have different needs, we need to innovate and work with those communities to develop tailored transportation solutions.



ECONOMIC DEVELOPMENT

The success of Pierce Transit and the local economy are directly related. A diverse and sustainable economy depends on availability of useful public transportation. Conversely, the growth of safe, courteous, and reliable service is most likely to happen in communities with strong economic development. Pierce Transit is committed to supporting local and regional development by increasing useful transit options in areas of economic activity. To reach annual goals, the agency has identified key drivers that connect people with jobs, education, training, and commerce. By improving local and regional mobility, Pierce Transit will build on the 238 valuable community and business partnerships that have been established in recent years. Specifically, direct engagement with employers, schools, and community organizations will be expanded to find effective solutions to transportation needs.



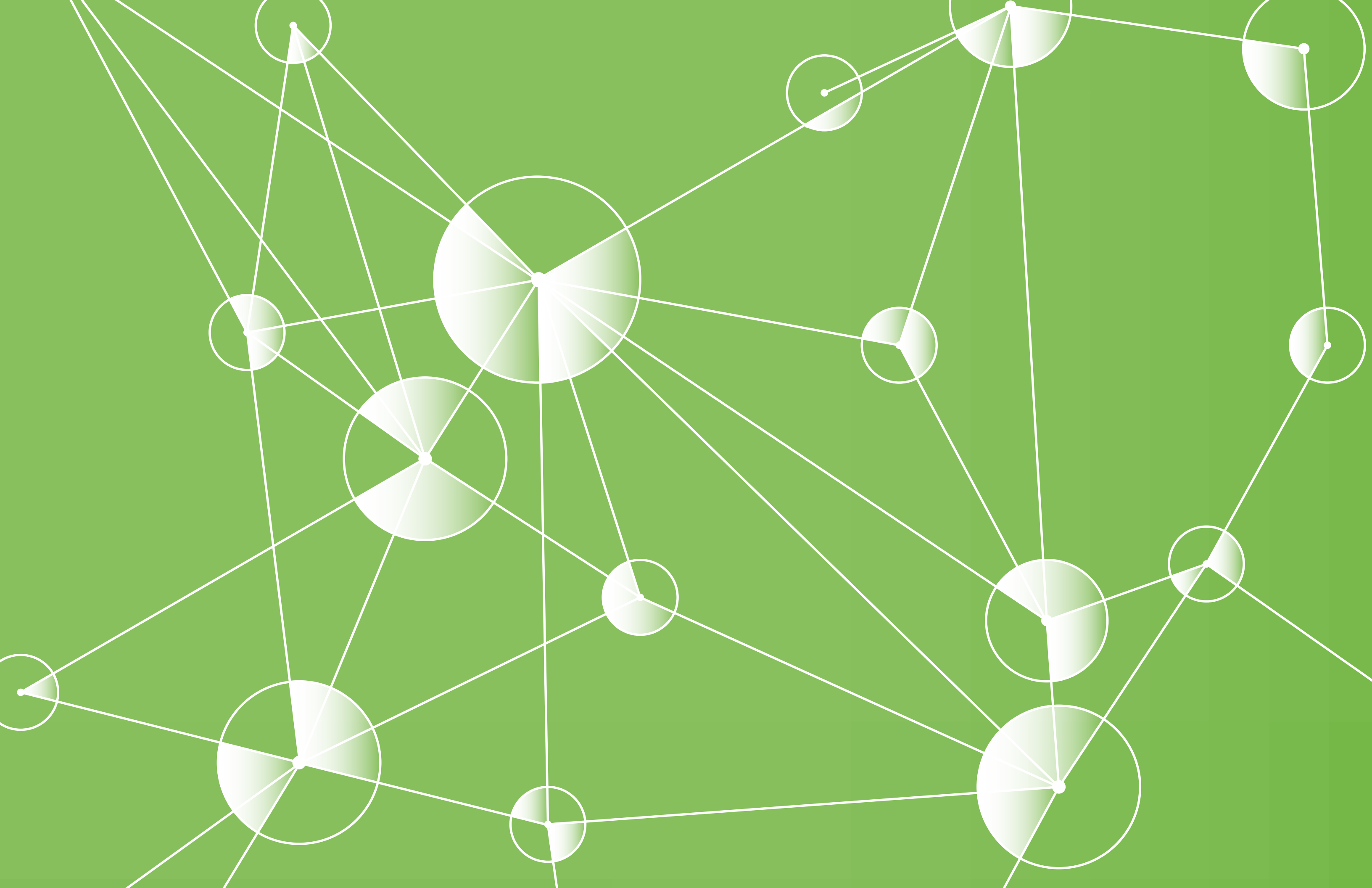
SUSTAINABILITY

Sustainability encompasses preserving the environment, being socially responsible, and maintaining economic vitality with an overall contribution to quality of life. Pierce Transit has a long-standing commitment to environmentally-friendly sustainability efforts as documented by Executive Order 1 issued April 14, 2008. Our core purpose of providing public transportation options to move people helps protect the environment by providing alternatives to single-occupant vehicle (SOV) travel, reducing the number of vehicle miles traveled (VMT), and by encouraging compact urban development at regional centers, consistent with the Washington Growth Management Act (GMA) of 1990.



ENGAGED WORKFORCE

An "engaged employee" is enthusiastic about his or her work. The engaged employee takes positive action to further the organization's reputation and interests. Pierce Transit's leadership is committed to engaging all employees. Through strategies for recruiting and retaining talented individuals, we will ensure that our workforce reflects the populations we serve and exceeds our Equal Employment Opportunity policy and plan expectations.



THE STATE OF PIERCE TRANSIT

Pierce Transit operates a network of express, local, paratransit, and vanpool services across the 292-square mile Public Transportation Benefit Area (PTBA).

Local buses operating on a fixed route with a published schedule make up the bulk of Pierce Transit's operations, while vanpool and express service continues growing. Pierce Transit's vanpool program is similar to a carpool but the commuters use a Pierce Transit van rather than a personal car. Express service within Pierce County, as well as to Thurston and King Counties, is made possible through a partnership with Sound Transit. The network of services complement each other and meet a variety of trip types (work, school, errands, medical, etc.) while cost-effectively serving the diverse neighborhoods of the PTBA and the region (downtown core, long-distance, suburban, town center).



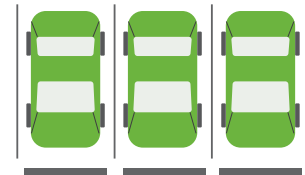
2015

PIERCE TRANSIT NETWORK

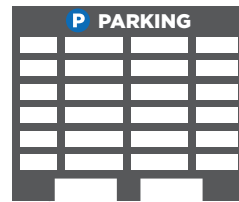
10.3
MILLION
ANNUAL
BOARDINGS



*2014 Counts



5,700
park-and-ride spaces



6 transit centers

36 routes



843
employees



147 buses
in the fleet



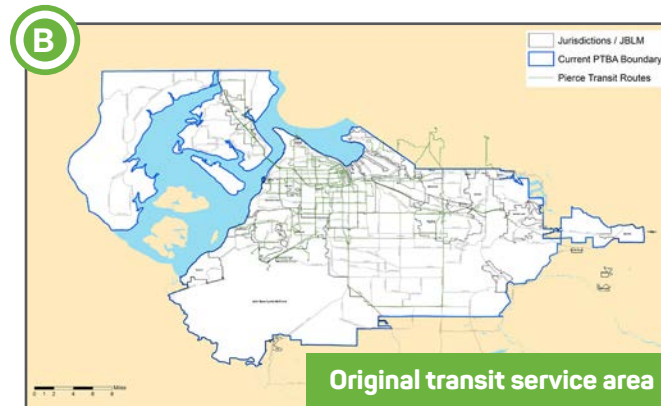
Pierce Transit System Map, 2015

THE EVOLUTION OF PIERCE TRANSIT

In May 1978, Pierce County elected officials called for a Public Transportation Improvement Conference to consider the desirability of forming an enlarged public transportation district in Pierce County. One year later, a public forum was held during which an overwhelming majority of community leaders agreed that improved and expanded public transportation was needed. In a November 1979 election, 61 percent of Pierce County voters approved a small sales tax to fund operation of a new Pierce County Public Transportation Benefit Area (Pierce Transit). Areas comprising the new public transportation district included Fife, Fircrest, Lakewood, Milton, Parkland, Puyallup, Ruston, South Hill, Spanaway, Steilacoom, Sumner, Tacoma, and University Place. During the past three decades Pierce County has witnessed continuous growth, despite funding setbacks that have led to transit service reductions. Restoring service hours and exploring new markets through innovative services is critical for both the agency and the future of transit in the region. Pierce Transit is excited to explore new directions as the Agency approaches its 40th anniversary in 2020.



Tacoma Transit bus



Original transit service area



First era CNG bus



Continue growing ridership and providing services that meet local and regional transportation needs

1978 – Pierce County officials begin exploring a public transit service beyond existing provider Tacoma Transit

1979 – 61% of voters approve a 3/10 of one cent sales tax to fund the Pierce County Public Transportation Benefit Area – and Pierce Transit was born

1982 – RIDEPOOL, a program promoting carpool, vanpool, ridematching, and park-and-ride is begun to complement bus service

1985 – Pierce Transit completes purchase of Tacoma Transit

1986 – Pierce Transit unveils the nation's first two natural gas-fueled buses

1989 – Cumulative Ridership reaches 100 million mark on July 27

1990s – Service evolves to include transit centers and park-and-rides in downtown Tacoma, Lakewood Mall, and the Tacoma Dome

1995 – Sound Transit begins express service to Seattle

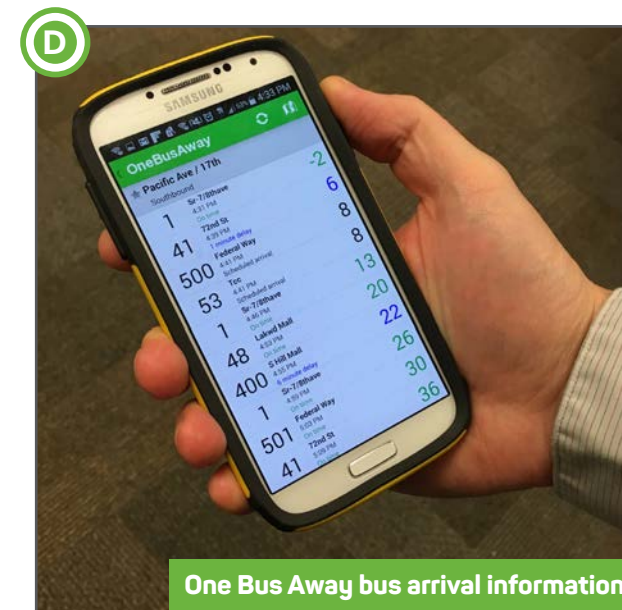
1999 – U.S. Department of Energy awards Pierce Transit a Clean Cities award, calling the agency “an alternative fuels pioneer”

2004 – Pierce Transit fleet becomes 100% compressed natural gas (CNG)

2008 – Local effects of the national recession force a 43% cut in service and 19% cut in staffing

2010 – Real-time bus arrival information becomes available to riders via the regional One Bus Away collaboration. One Regional Card for All (ORCA) goes live, allowing for a single fare medium across all Puget Sound transit providers

2015-16 – Destination 2040 created to guide agency's long-term vision for growth



One Bus Away bus arrival information

SYSTEM PERFORMANCE & FINANCE

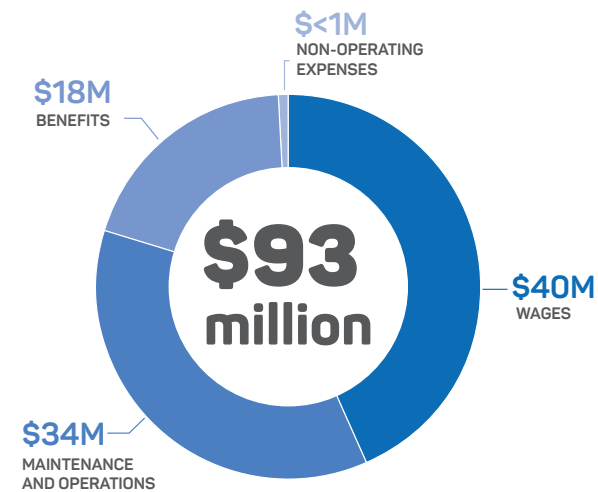
Today, Pierce Transit finds itself in a fortunate fiscal situation. Despite the recession of 2009-2013 that forced a 37 percent cut in service hours, Pierce Transit is now on a path toward growth. As of 2015, the Agency is experiencing stronger and more consistent sales tax collections, which account for 73 percent of its operating revenues. At the current level of growth, Pierce Transit sales tax revenues are expected to exceed the projected budget by \$2.5 million by the end of 2015. If this surplus is realized, funds may become available for slow but steady service improvements or capital purchases.

Pierce Transit is experiencing some tangible benefits from its approach to service delivery refocused upon what customers care about the most: safety, reliability, and frequency. The agency witnessed immediately how community involvement, rapid design, and interagency cooperation could strengthen its service delivery. The Gig Harbor Trolley and the Puyallup Connector are all recent examples of this new approach. And in September 2014, Pierce Transit provided express bus service to the Washington State Fair in Puyallup for the first time in three years.

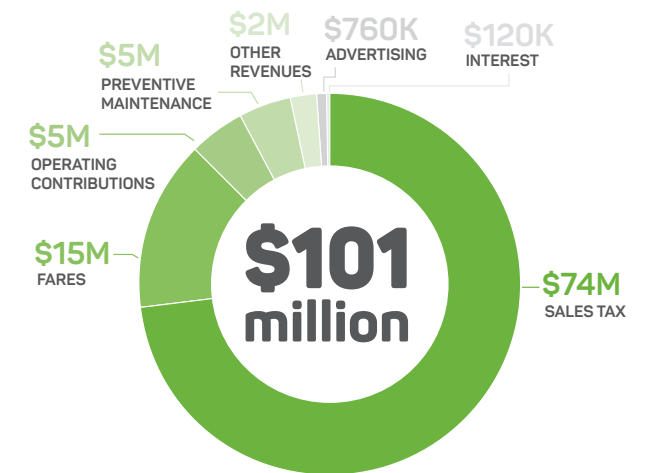
Perhaps the biggest proof of the impact of the Board's change in direction shows up in Pierce Transit's six-year Transit Development Plan. The agency is financially stable through 2020, and currently operates approximately 454,000 service hours per year with an annual growth target of 1.5-2.0 percent.

Although the Pierce Transit of today is one-third smaller than it was in 2009, a feeling of confidence permeates the Agency as it has weathered the economic recession and come out with greater clarity and commitment to its mission – to connect communities to safe, reliable, and customer-friendly transit options.

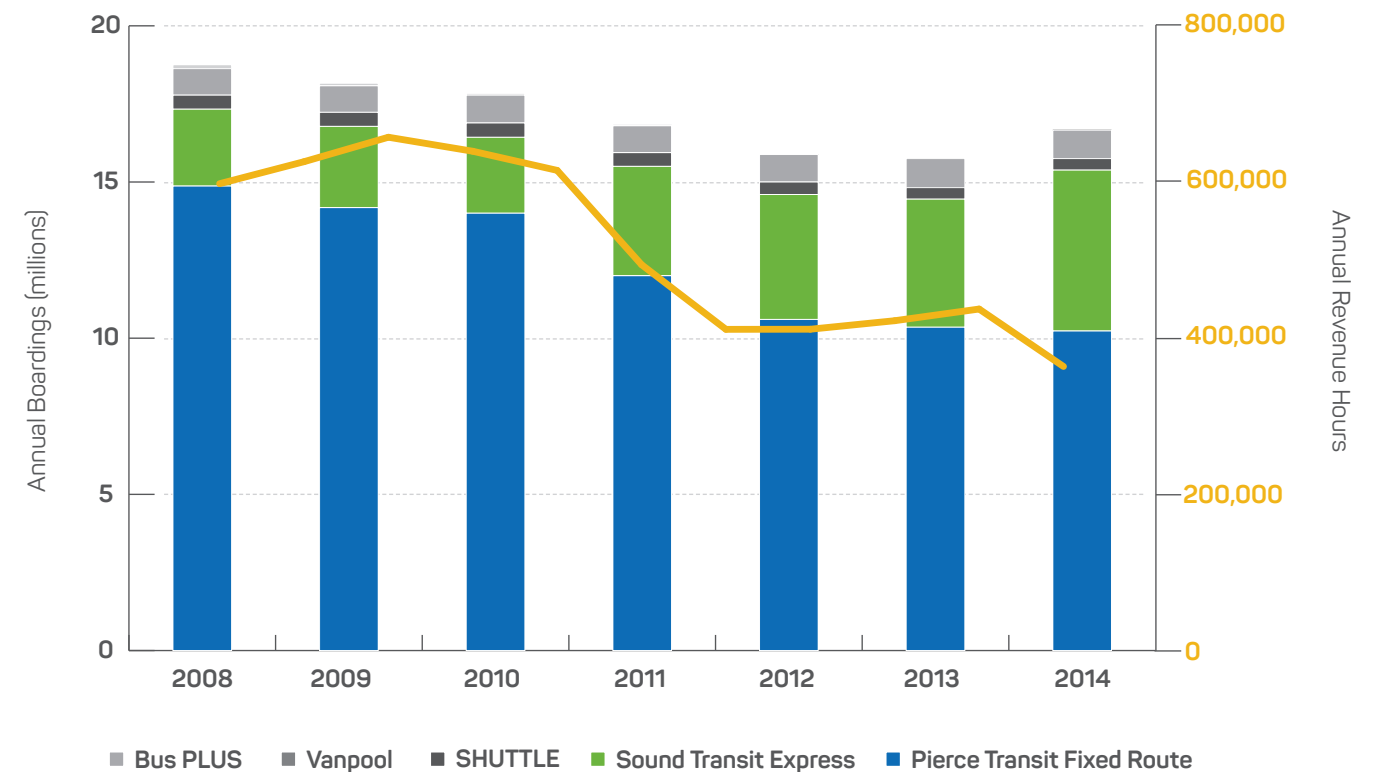
Operating Expenditures, 2016
(excludes Sound Transit)



Operating Income, 2016
(excludes Sound Transit)



Pierce Transit Ridership by Service Type and Annual Revenue Hours



Source: Pierce Transit Transit Development Plan 2015-2020

Note: Bus PLUS is a deviated fixed-route service that operated from 2003 to 2011

OUR CHALLENGES

UNCERTAIN LOCAL FINANCIAL OUTLOOK

Pierce Transit relies heavily on sales tax to operate - for 2016, this one source makes up 70-73 percent of the total operating budget. Like most communities, consumer spending dipped during the recession, resulting in reduced sales tax revenues. According to economic experts, two key economic growth indicators – employment and personal income – are expected to rise higher in the Puget Sound region than the national average. This bodes well for Pierce Transit, and trends are already moving in the right direction.

UNCERTAINTY OF FEDERAL SUPPORT

On December 4, 2015, the president signed a five-year \$305 billion Surface Transportation Reauthorization known as the FAST Act (Fixing America's Surface Transportation), replacing the expired MAP-21 legislation. In general, FAST maintains current funding programs for both highways and transit, albeit adjusted for inflation, at the same levels as SAFETEA-LU and MAP-21; however, the act does include some positive trends that will affect Pierce Transit. For public transportation, FAST raises the annual authorization amounts from the current \$10.7 billion to \$12.6 billion by 2020. Total public authorizations are programmed to grow by 17.8 percent over the five-year life of the bill. Another positive

provision is the reinstatement of the Buses and Bus Facilities Grant program, which funds capital investments. This desirable information comes at a time when Pierce Transit will be relying on its federal partners to help fund new or replacement vehicles, upgrades to its customer-facing facilities and infrastructure, and implement its first high-capacity rapid transit emphasis corridor.

Pierce Transit and other transit agencies around the nation have also been hurt by the stagnant Highway Trust Fund and the Mass Transit Account. This account relies upon a portion of the federal gasoline excise tax, which has been stuck at 18.4 cents per gallon since 1993. While the general consensus nationally is that both highways and transit are grossly underfunded, the political will in both Olympia and Washington D.C. now exists to proactively meet the challenges head on.

SHIFTING THE PUBLIC'S PERCEPTION OF THE AGENCY

The general public's perception is that only those without other transportation options use Pierce Transit. This belief holds water – in the agency's 2014 customer survey, 66 percent of participants do not have a driver's license and 39 percent do not have access to a vehicle. Yet another common perception is that "captive" or transit dependent riders are generally

heading to social services or medical appointments; however, 52 percent of Pierce Transit riders surveyed were actually traveling to work. This shows the importance of Pierce Transit to the economy and its role in connecting people to jobs. Better marketing and information can demonstrate the importance of transit in the community and attract new riders.

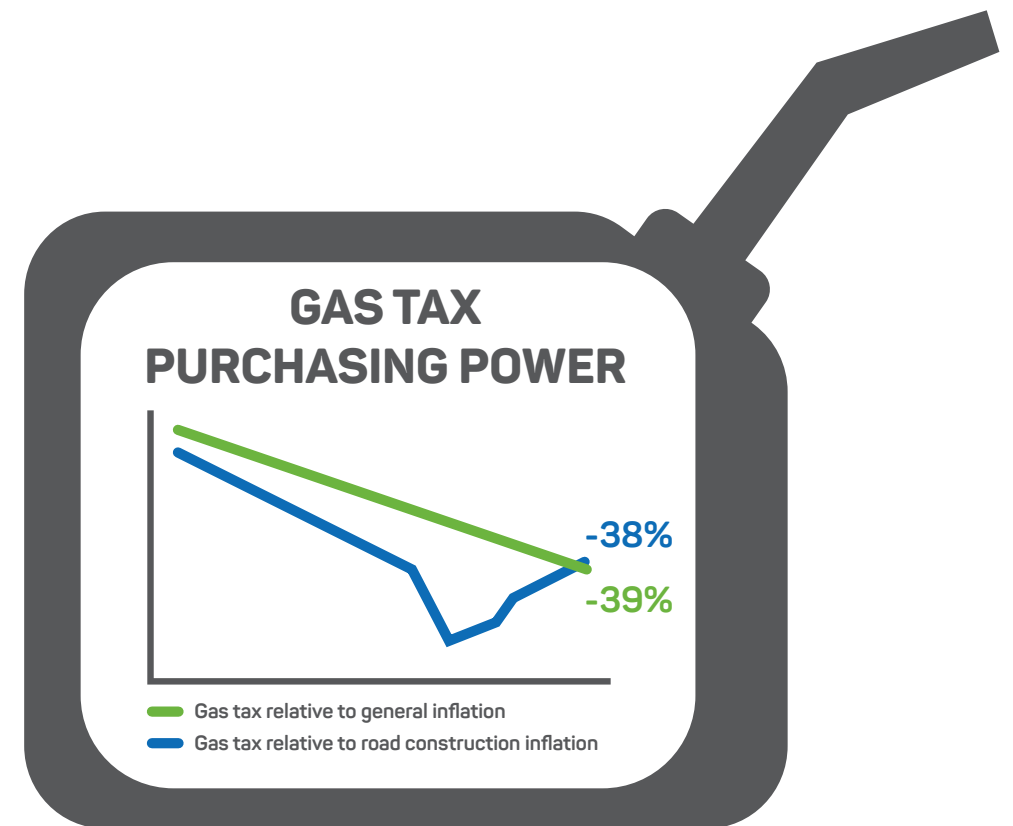
CREATING A CULTURE OF TRANSIT

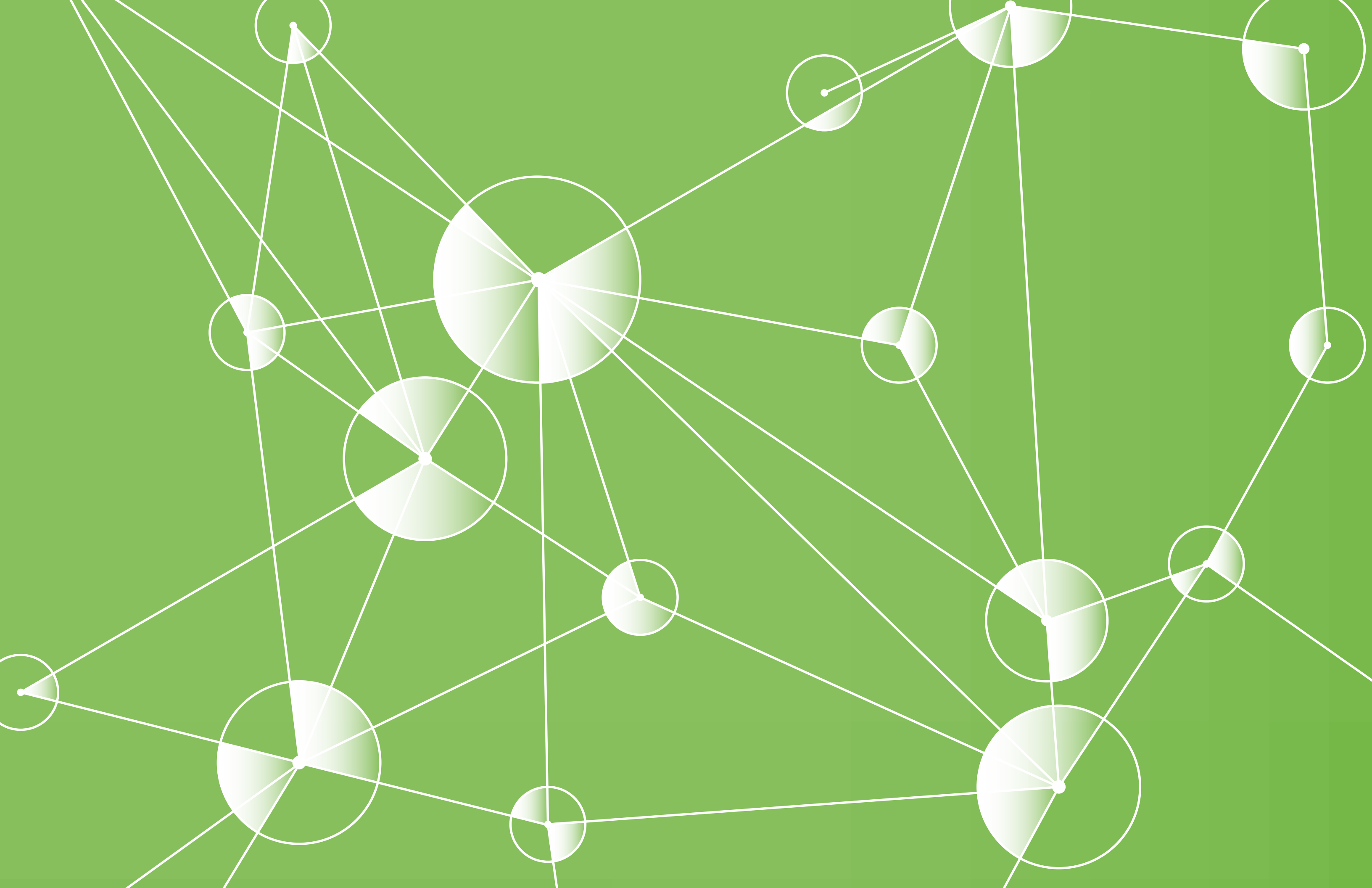
Perhaps any transit agency's most daunting objective is to market itself to a customer base that would rather drive a car than ride the bus. If traffic in the transit service area is relatively light while parking is abundant and usually free, few incentives exist for people to ride transit.

As noted above, a large portion of Pierce Transit's customers do not have other transportation options. The challenge lies in keeping this customer base while also marketing the system to those who do own a car. In addition, housing is still relatively affordable in Pierce County and many people who work in King, Kitsap, and Snohomish Counties to the north choose to live in Pierce County because they desire a single-family home in the suburbs that can only be accessed by car.

AGING WORKFORCE

Transit agencies across the country face huge challenges in hiring and retaining bus operators. School districts face similar hurdles. The pay level, in combination with increasingly strict requirements to obtain a commercial driving permit, make driving a bus a challenging career. As Pierce Transit bus operators age and retire, finding new employees, including front line employees, drivers, service support, and mechanics, has become increasingly difficult.







OPPORTUNITIES FOR GROWTH

Successful transit systems respond to changes in user preferences, lifestyle, demographics, and national trends.

In 2014, nearly two-thirds of Americans reported owning a smartphone, which profoundly changes both how people access information and users' expectations about information availability. America's population has also become increasingly urban, and more young people are choosing to live and work in cities. At the same time, the older adult population continues to grow quickly as life expectancy increases and the large Baby Boomer population reaches retirement age. These changes present challenges to transit agencies, but also great opportunities. Real-time arrival information, ticket purchases via smartphone, and instant service alerts make transit reliable and convenient. Layers of transit service such as express limited-stop routes and shopping shuttles meet trip patterns of both commuters as well as retired customers. Pierce Transit can harness the momentum around transit and increase local ridership by responding to ever changing user needs.



CHANGING NATIONAL LANDSCAPE

Changing demographics are driving demand for public transportation and walkable communities.

A record 10.8 billion trips were taken on public transportation in 2014, the highest ridership in 58 years. In addition, the nation continues to urbanize, with urban population growth outpacing non-urbanized areas from 2000 to 2010. The changing national landscape is exhibited in the transportation and lifestyle preferences of the nation's two largest generations: Baby Boomers (those born between 1946-1964) and Millennials (those born between 1982-2004).

Baby Boomers are growing older, and are expected to remain active for much longer than previous generations. Many want to age in place, while others are looking to downsize to more urban or close-in areas. As with older adults before them, however, they have a greater desire and need to use transit than middle-aged residents. As the Baby Boomer population ages and begins to drive less, transit will be a critical way to provide mobility for this generation so they can remain active and independent once they retire.

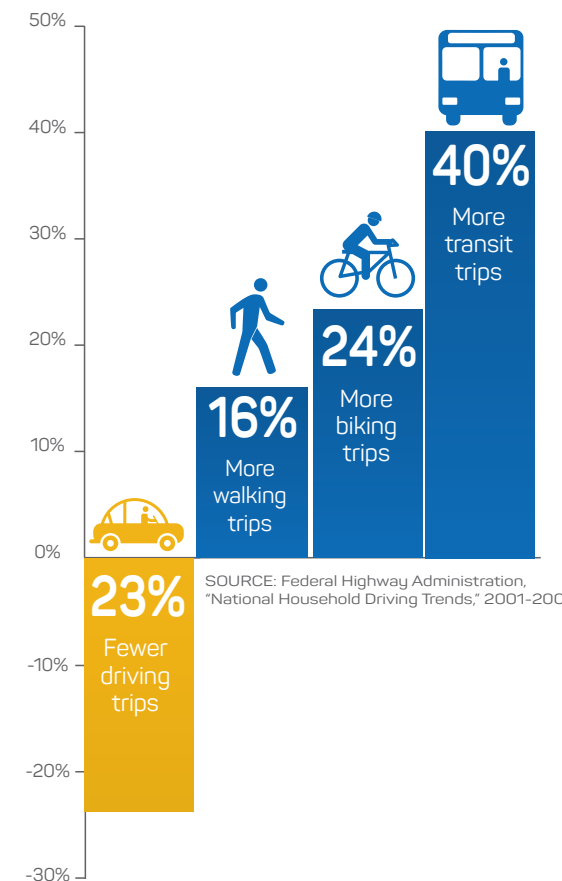
Throughout the United States, Millennials (the population between 12 and 34 years of age) are also driving demand for better transit. In particular, Millennials want to use transit and other options more and to drive less, and they want to live in communities that provide access to these options.

These demographic changes mark major opportunities to increase transit usage, serve new markets, and change the culture around transit in Pierce County.



Retirees are traveling differently

The most desired amenity close to home was **"Bus Stop"** according to a 2014 AARP survey



Millennials are traveling differently

72% of millennials say they would prefer to live in a place where most people have transportation options so they do not need to rely only on cars

OPPORTUNITIES FOR PIERCE TRANSIT

TRANSIT-SUPPORTIVE LAND USE

For every major city in the United States who recognizes that we cannot continue to build ourselves out of traffic congestion and should instead invest in more compact, diverse communities and the transit systems to support them, there are others who already invested so heavily in the post-World War II “drive everywhere at any time” infrastructure that any changes in their development patterns will take many years to bear fruit. As the Congress for the New Urbanism observes, “After half a century of mounting economic, health, environmental, and social consequences, America has finally begun to turn away from the post-WWII pattern of suburban sprawl.”¹

An automobile-dominant pattern of urban development is simply not sustainable for the 21st century. Much like its neighbors to the north, Pierce County has realized it must start building up more than out, as outlined by the Puget Sound Regional Council’s award-winning Growing Transit Communities Strategy. The county must also work with developers to demonstrate the value for investing in mixed-use areas and more compact or multi-family housing closest to the Pierce Transit and Sound Transit systems.

Transit-supportive policies include:

- Shared long-term vision for land use in the benefit area across public and private sectors.
- Zoning that encourages compact, mixed-use, pedestrian-oriented development.
- Finding developers with the knowledge, interest, and capital to invest in urban infill projects.
- Transportation Demand Management (TDM) practices that increase system efficiency by changing how and when people travel.
- Adopting smart parking policies that use technology and pricing to balance supply and demand, and seek to create “park-once” districts where people can park then walk to numerous destinations.

While undoing the past will take time, the rebirth of downtowns or “park-once” commercial areas is evident in Pierce County. A unique opportunity exists to create

1. <https://www.cnu.org/our-projects/sprawl-retrofit>

RESIDENTIAL LAND USES

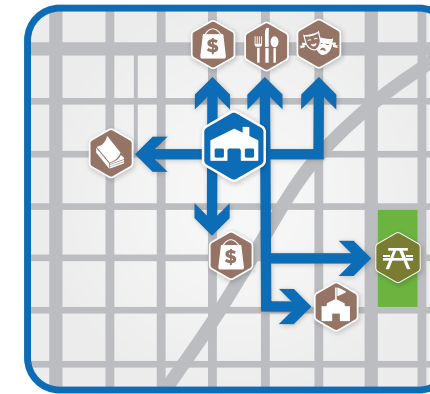
DISCONNECTED NETWORK



\$

Poor access to goods and services decreases home values

CONNECTED NETWORK



\$\$\$

High walkability increases home values

(\$4,000 to \$30,000 Higher Sales Price)

SOURCE: CEOs for Cities. “Walking the Walk: How Walkability Raises Home Values in US Cities.” 2009.

COMMERCIAL LAND USES

DISCONNECTED NETWORK



Poor access to goods and services reduces commercial property values

CONNECTED NETWORK



High walkability increases commercial property values
(Valued at 54% higher per square foot)

SOURCE: Pivo, Gary And Jeffrey D. Fisher. “The Walkability Premium in Commercial Real Estate Investments.” Working Paper Responsible Property Investing Center, University Of Arizona Benecki Center For Real Estate Studies, Indiana University, February 2010.

transit villages or “nodes” along high-capacity transit corridors, such as Pacific Avenue/SR 7 from Tacoma to Spanaway, for example.

Another national trend shifts away from indoor malls anchored by “big box” retail stores surrounded by massive parking lots to outdoor “lifestyle centers” offering smaller specialty stores or services, cafés, and inviting pedestrian spaces where people can congregate, often with multi-family dwelling units above. This concept will come to life locally under the 485-acre *Tacoma Mall Neighborhood Subarea Plan*.

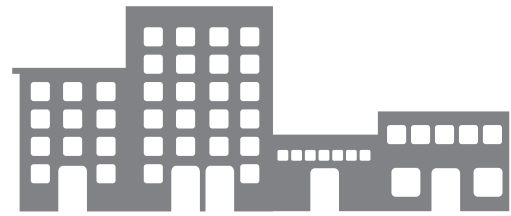
CREATING MULTIMODAL CENTERS

Transit-Oriented Development (TOD) refers to mixed-use development that typically includes housing, commercial or retail space, services, and jobs, all located within walking distance of public transportation.

To the transit agency, the most direct benefit of TOD is increased ridership. Pierce Transit plans to support TOD by assisting with implementation of local comprehensive plans and by providing technical assistance to communities and developers.

In the short term, Pierce Transit will investigate the feasibility of using two of its properties for TOD. This would act as a catalyst for further private investment around transit centers. For example, the agency recently partnered with the Tacoma Housing Authority for a feasibility study to examine the potential for a mixed-use development at a catalyst site adjacent to Tacoma Dome Station.

In the future, Pierce Transit plans to explore TOD, or more dense infill development, at or adjacent to other transit centers (e.g., Parkland) to achieve the benefits of TOD and to provide convenience to customers.



A density of 45 Activity Units (i.e., population + employment; residents + jobs) per Gross Acre (AU/per acre) can support high capacity transit. Downtown Tacoma is currently at 30 AU/acre.

Transit service is positively affected by a variety of affordable or inclusionary housing near transit stations/stops and also by a strong Central Business District (CBD).

Transit is supported by easy and direct access to stations and stops for pedestrians, bicyclists, and people with disabilities (e.g., continuous sidewalks, curb cuts, crosswalks, traffic calming devices).

Residents living near stations are 5 to 6 times more likely to commute via transit.

Good station location and potential for densification and redevelopment in pocket areas leads to transit success.



TRANSIT-FRIENDLY STREET DESIGN

Pierce Transit will team with the City of Tacoma, Pierce County, and other cities to implement roadway improvements that better integrate transit into the community.

Improvements could include HOV lanes, intersection improvements (such as queue jumps), and pedestrian improvements (street crossings, sidewalks, more direct access, and lighting). Pedestrian improvements outside of Pierce Transit's control (such as density and walking amenities throughout communities), could be encouraged by the agency through rewarding well-planned pedestrian and bicycling environments with better transit coverage and potentially more frequent service.



The threshold for all day, frequent bus service is 17 Activity Units per Gross Acre.

Lower housing densities cannot support high frequency transit service.





MARKETING TRANSIT LIKE A BUSINESS

Sue Dreier, Pierce Transit's CEO, suggests that public transit districts should think and act like a business that is selling a consumer product to attract new riders. Rather than focusing on attracting those residents from the higher income brackets to take transit instead of driving, Pierce Transit will focus on providing the best possible service to those who are most likely to try transit, such as the younger generation who place little value on automobile ownership and potential customers who have considered but never tried it in the past. "Public agencies sometimes forget they're a business," Dreier said. She stressed that not everyone uses public transit, but she wants to inform people about the services available to them. "It's our job to educate people on transit."

Messaging might include:

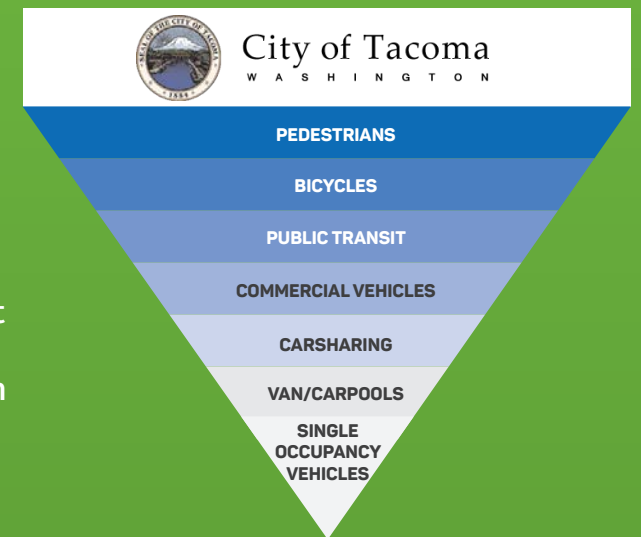
- Positive personal views on living near transit alignments, stations and stops.
- Positive local attitudes about using transit.
- Strong sense of personal safety at stations or stops and aboard transit vehicles.

Service Characteristics that attract riders:

- Shorter frequencies (<15-20 minutes between arriving/departing vehicles).
- Fewer and more convenient transfers (i.e., offer one-seat rides on the most productive routes).
- Interconnectedness of all transit modes (i.e., a seamless transition between transit modes and systems).
- Increased local and regional access via transit (i.e., must be somewhat time-competitive with the door-to-door, on-demand service offered by the private automobile).

Tacoma Vision

Tacoma's new Transportation Master Plan embraces transit, bicycling, and walking as primary travel modes. The City has turned the auto-dominant hierarchy on its head in the planning and design of all future streets. One of six key goals is to "prioritize the movement of people and goods via modes that have the least environmental impact and greatest contribution to livability, in order to build a balanced transportation network that provides mobility options, accessibility, equity, and vitality for all." While transportation and transit planning begin at the local level, the City of Tacoma's Transportation Master Plan recognizes that they cannot build a regional transportation system alone, so will be seeking public-private partnerships for infrastructure investments that support multimodality. As has been proven in King County, reducing transit travel times through close coordination with both public entities and the private sector can be very effective.



Passenger Amenities that attract riders:

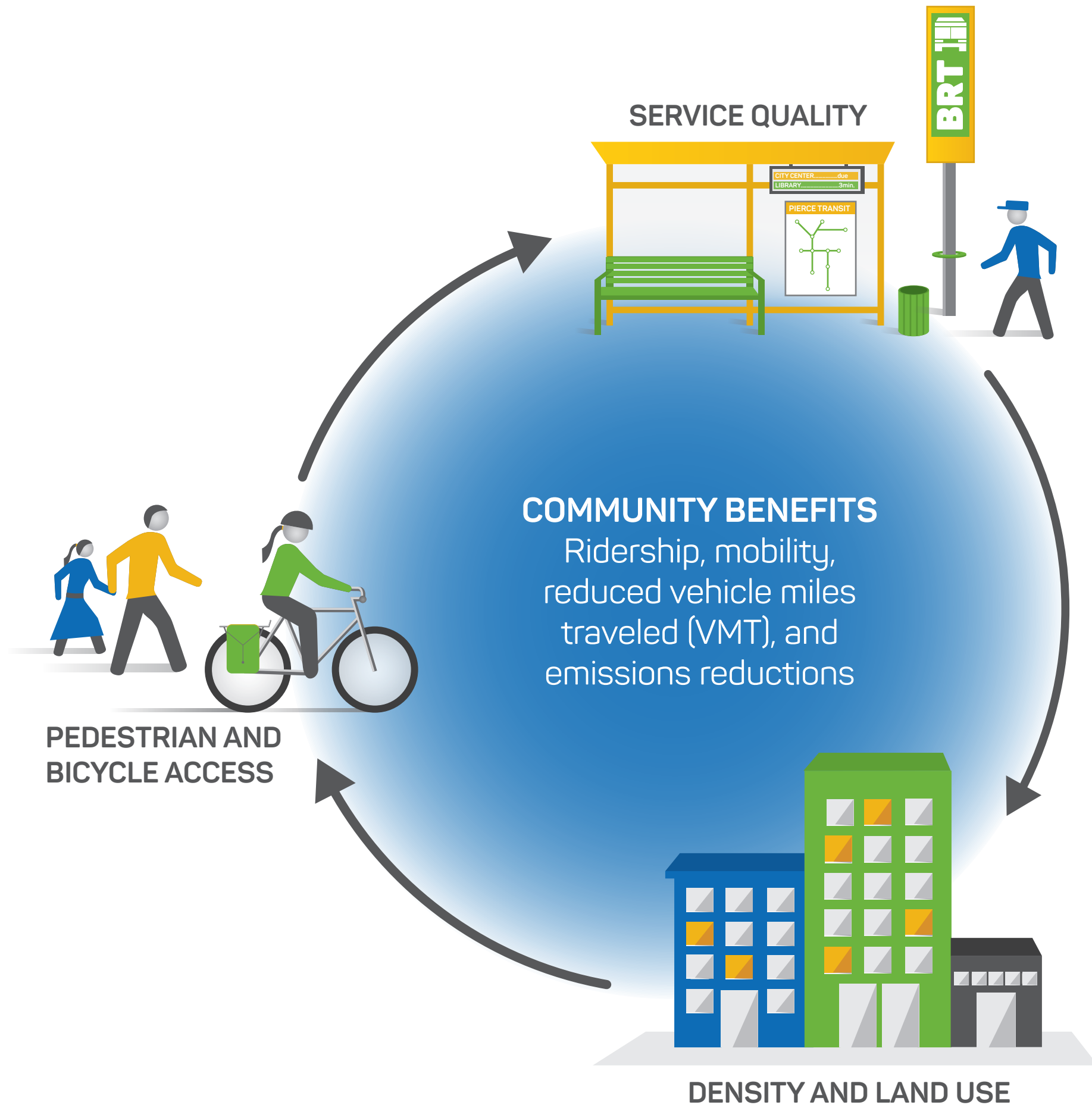
- Clean, comfortable, safe, and spacious vehicles that easily accommodate both bicycles and wheelchairs.
- Safe, comfortable, highly visible, weatherproof waiting areas that patrons can use with dignity.

INVESTING IN HIGH CAPACITY TRANSIT

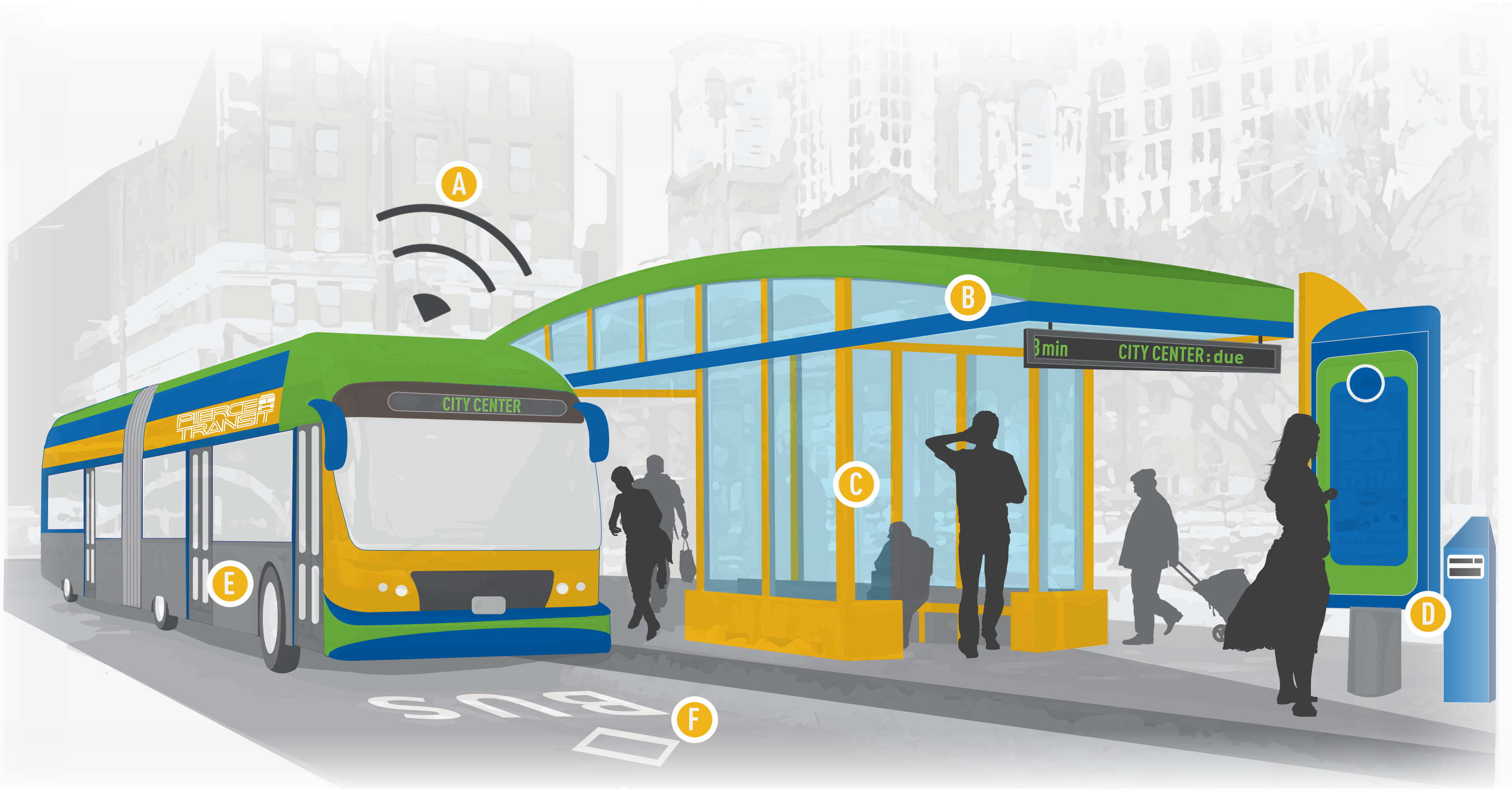
At the apex of the agency's historical service hours in late 2008, Pierce Transit initiated feasibility studies for two high capacity or express service corridors with limited stops as a precursor to bus rapid transit (BRT): Pacific Avenue/SR 7 and South Meridian Avenue E/SR 161. Opportunity still exists to further evaluate express service in the Pacific Avenue/SR 7 corridor, which continues to be the most heavily traveled in the entire transit system. In fact, Pierce Transit Route 1 boardings reached almost 2 million in 2013, or 19.3 percent of the system-wide total. The 18.9-mile Route 1 corridor operates from Tacoma Community College to Spanaway via Downtown Tacoma which is now the southernmost terminus of its service area.

In the interim, while Pierce Transit considers applying for funding, the agency may implement "BRT-like" service upgrades to the corridor, such as offering higher capacity articulated or double decker buses with limited stops.

Adding BRT service to a major corridor is a top priority. BRT provides high capacity transit service with improved travel speeds and reliability. Major characteristics of BRT projects include: transit stations/stops with a high level of amenities (signage, shelters, off-board fare payment, "next bus" technology letting passengers know the amount of time before the next bus arrives), transit signal priority (TSP), special branding of service, frequent service (no more than 15-minute headways), span of 14 hours a day or longer. To be competitive for federal funding under the Small Starts Program, a BRT corridor should carry at least 3,000 passengers per day and cost \$5-\$15 million per mile to construct (excluding vehicles).

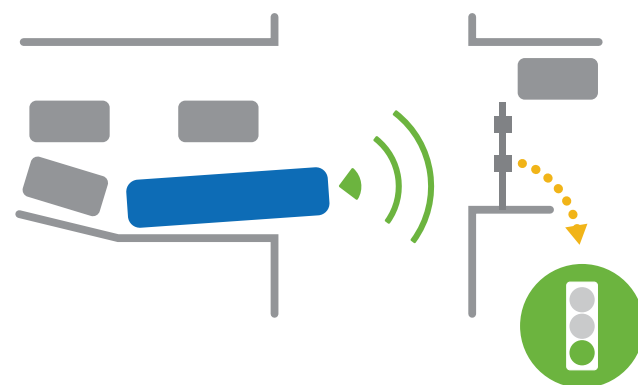


STANDARD BRT FEATURES



A TRANSIT SIGNAL PRIORITY

Intersection improvements including transit signal priority (TSP) allow buses to bypass congestion. TSP does so by giving buses earlier and/or longer green lights.



B BRT BRANDING

Unique designs make buses and stations more visible, raising awareness of BRT and increasing customer expectations for higher levels of service.



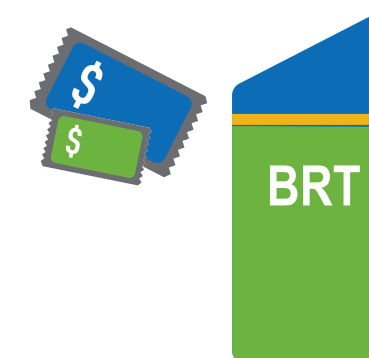
C ENHANCED STATIONS

BRT stations include raised platforms, off-board fare payment, real-time arrival information, larger shelters, and other passenger amenities.



D ENHANCED FARE COLLECTION SYSTEMS

Off-board fare collection using ticket vending machines, card readers, and other tools at stations allow passengers to load without waiting in line to pay their fares.



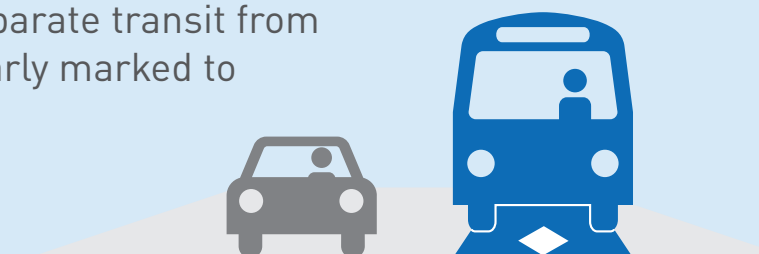
E SPECIALIZED VEHICLES

Custom buses have unique designs and provide more capacity, more doors, and lower floors for easier loading and unloading.



F DEDICATED RUNNING WAY

Bus-only lanes separate transit from traffic and are clearly marked to increase visibility.



HARNESS EMERGING TRANSIT TECHNOLOGIES

Investments in technology assure reliability, efficiency, and transparency. Transit technology tools enhance the customer experience, streamline reporting requirements, and provide data that can be tracked over time.

Intelligent Transportation Systems



Use of Intelligent Transportation Systems reduce travel times. For example, transit signal priority (TSP) reduces transit delay and increases schedule reliability by extending green signal timing or truncating red signal timing to allow buses to pass. TSP is used at 60 intersections throughout the Pierce Transit service area. A Computer Aided Dispatch/Automated Vehicle Locator (CAD/AVL) system enabled in 2008 facilitates rapid responses to vehicle breakdowns and traffic detours, feeds real-time departure data to third parties such as OneBusAway, and provides data for service planners to make schedule adjustments.

An upgraded CAD/AVL system would allow Pierce Transit to implement automatic headway management (i.e., avoiding the bunching phenomena often seen on high frequency transit lines) and passenger load-based signal priority, meaning a crowded bus would be granted higher priority through a signal than one with only a few passengers.

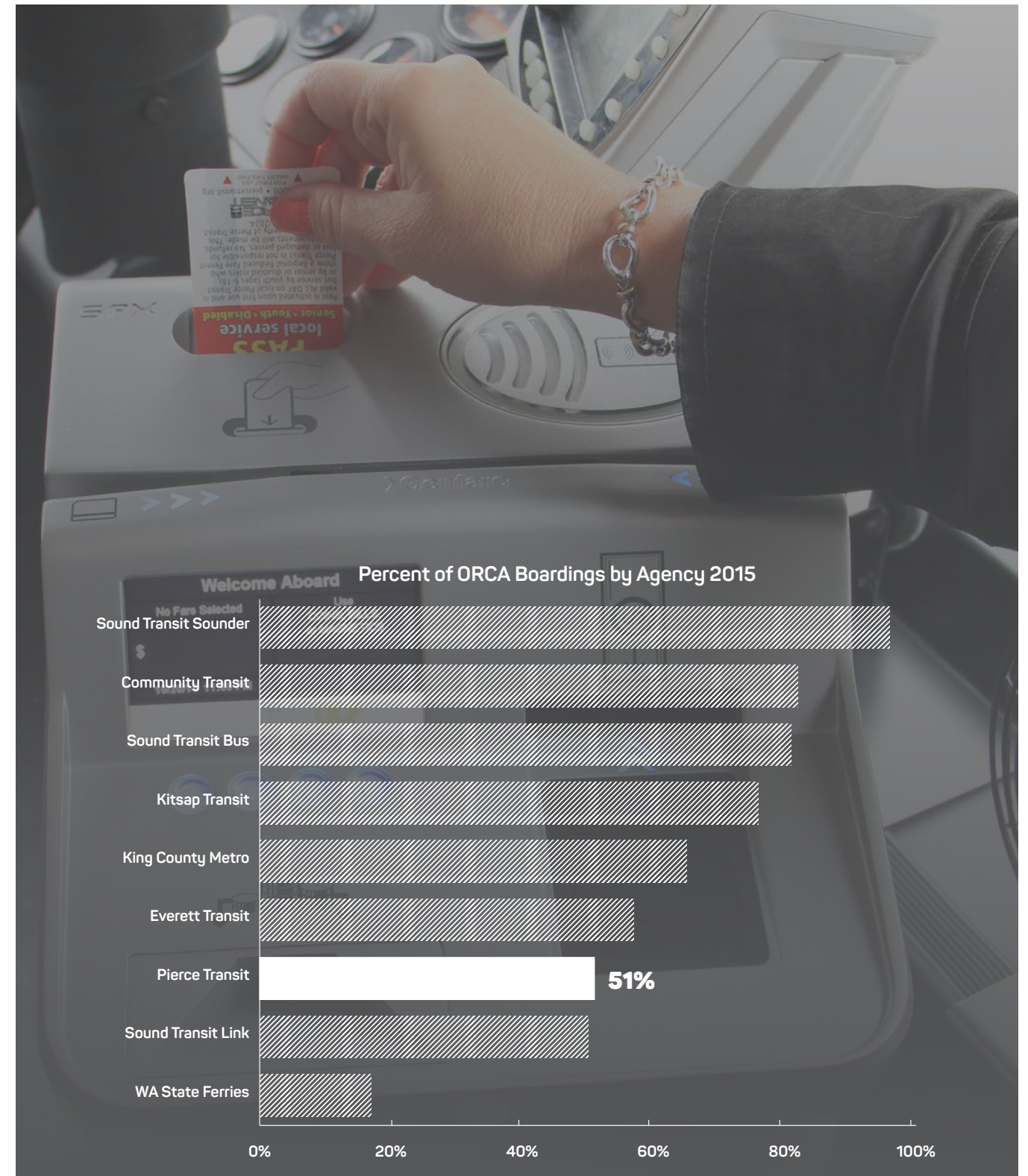
Fareboxes

Pierce Transit installed new fareboxes in 2014 that have updated capabilities including:

- Ability to issue and accept magnetic stripe all-day passes
- Better data reporting on when and where fares are collected
- Adaptability for future fare types such as credit cards, smartphone payment systems, and smart (i.e., radio-frequency identifier) cards that might emerge under ORCA 2.0

Open & Transparent Data

As a public agency, Pierce Transit has the responsibility to make its schedule and performance data easy to use. Critical to this mission is the adoption of data standards like General Transit Feed Specification (GTFS) which ensure that other transit agencies, researchers, and third-parties can access data with minimal effort. This enables regional collaboration and innovation, such as developers creating travel apps.



ORCA usage on Pierce Transit rose from 40 percent to 51 percent of all boardings from June 2014 to June 2015

Looking Further Ahead: Autonomous Vehicles

Nearly every major auto maker and several Silicon Valley tech giants are developing autonomous vehicles. Integrating decades of progress in sensors and software, these companies strive to eventually eliminate the need for a driver behind the wheel. While no technology is flawless, in safety terms driverless vehicles hold the promise of reducing the more than 32,500 deaths that happen every year from motor vehicle collisions.

For several reasons, transit shows promise as an early adopter of this technology. Most autonomous vehicles rely on detailed maps and 3-dimensional surveys of the corridors in which they operate—and most transit operates on fixed routes. Transit agencies have used driverless vehicles for years in the form of automated guideway systems (e.g., Vancouver, BC’s Skytrain and Miami’s Metromover); the next application is a driverless transit bus or vanpool operating in mixed traffic. Many of the perceived public safety barriers to driverless buses have already been addressed by light rail systems, which rely on random security officers to enforce fares and provide a level of emergency response.

History contains many successful examples of how transportation technologies reduced the role of human labor but opened the door to new industries. Much like how wagons gave rise to the locomotive and the horse-drawn plough gave rise to the tractor, autonomous vehicles have the potential to create new opportunities for growth in transit services in ways which cannot presently be imagined.



VANPOOL

Launched in 1986, Pierce Transit’s vanpool program has grown from 105 seats to a program serving 2,600 commuters aboard 366 vans. The program eliminates 925,000 single-occupant vehicle (SOV) trips and reduces congestion in the region, helping achieve Pierce Transit’s mission to promote environmental stewardship by conserving natural resources and support the state’s Growth Management Act.

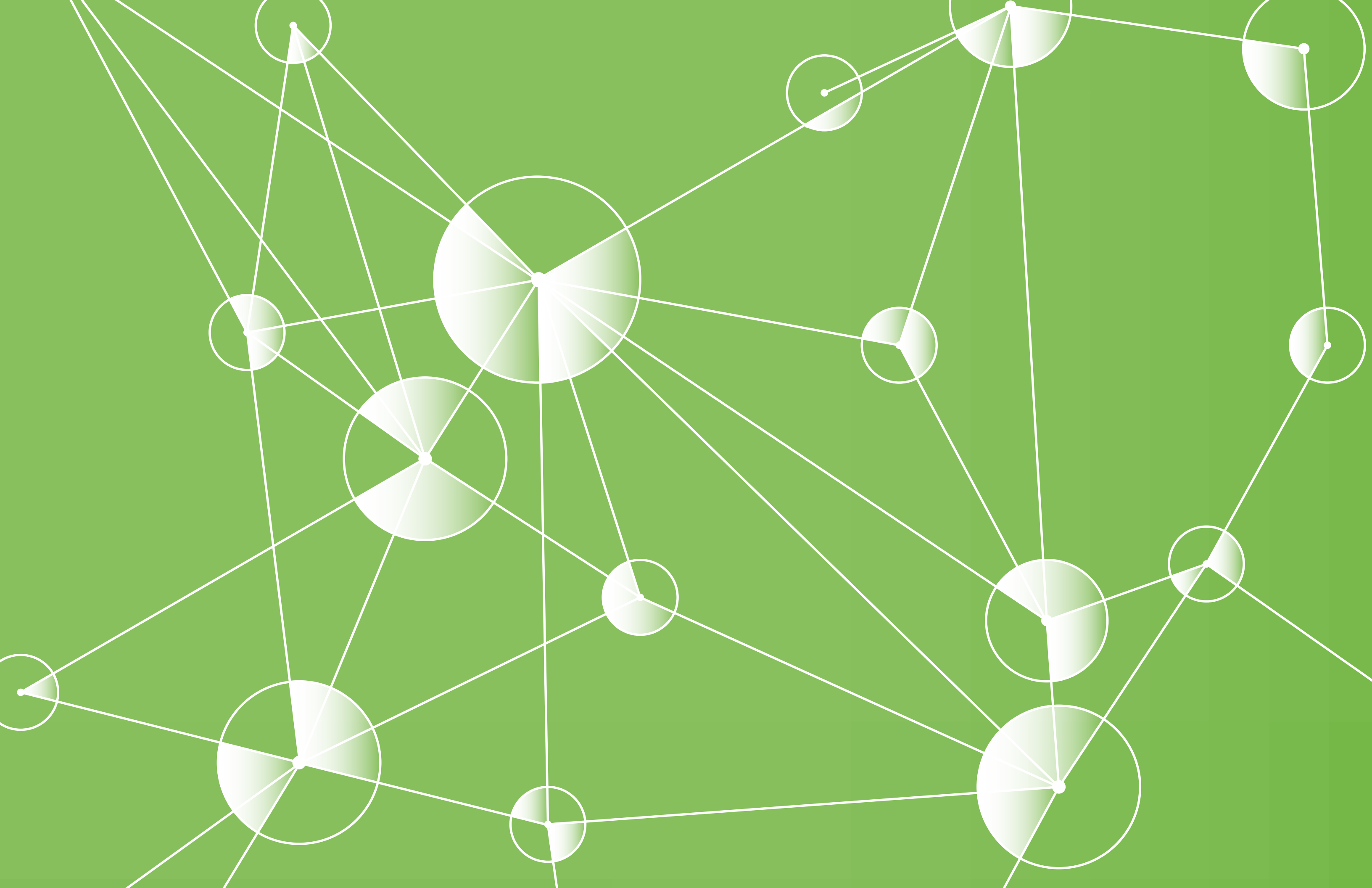
Vanpools provide a more flexible option to commuters than fixed route bus service as the vanpool can arrange its own schedule and travel pattern to better align with customer demand. Vanpool origin and destination data show that the fleet provides connections to almost every jurisdiction in Pierce County. Vanpool usage has the potential to continue climbing as the population grows and as new employers move into the county.

If a dedicated capital and operating fund were found to expand the vanpool program, Pierce Transit would invest additional funding in the following program goals:

- Expand the fleet by 260 vehicles by 2040, which would bring the fleet total to 606
- Diversify the fleet by adding smaller 7-seat 151 minivans and explore alternative fuel, hybrid, or electric vehicles
- Implement and administer ongoing incentive programs that will attract and retain vanpool riders and incentivize safety (already begun; ongoing)
- Build collaborative relationships with employers that help retain and increase vanpools at all qualifying worksites in Pierce County by meeting with multiple employers throughout the year (already begun; ongoing)

Puyallup Moves

“Puyallup Moves,” as the City’s forward-thinking Transportation Element is known, established six goals and related policies to accomplish its overall vision for transportation. Goal 4 reads: “Build an interconnected transit, walking, and bicycle network.” And its related policy states: “By creating a safe and welcoming transportation system for all users, the City can support vibrant regional growth centers that are accessible in several ways. Puyallup’s geographic size makes walking, bicycling, and transit attractive options for getting around with proper facilities in place.”



3

SERVICE EXPANSION BENEFITS

Transit service is a public good. Similar to schools, utilities, libraries, roads, and parks, transit provides one of life's necessities – transportation.

After housing, transportation makes up the second-largest expenditure in a typical household's budget. For those who choose not to or cannot drive a car, public transportation provides the means to get to work, school, run errands, and visit friends.

In 2014, 10.8 billion trips were taken on public transportation in America. Transit has become a vehicle not just for transportation, but for achieving goals of economic growth, public health, and environmental stewardship. The implementation of transit investments like bus rapid transit (BRT) and rail projects resulted in more jobs, more retail, and more employers in cities such as Cleveland, Seattle, Portland, Minneapolis, and many others.

Transit also has proven environmental benefits - a transit vehicle, even half-full, emits fewer harmful pollutants than a person driving a car. Cities like Washington, D.C. and Seattle are now linking all these benefits of transit into a push for sustainable development. Innovative cities are welcoming development, while also requiring transit investments that allow growth to occur without increases to congestion, or without building costly new highway lanes. Transit provides the answer to the question of how to accommodate growth without turning communities into parking lots.



MEASURE TRANSPORTATION IN PEOPLE TERMS

Measuring transportation investments in terms of how they meet community goals can help people weight and prioritize projects and policies. All forms of transportation — from roads to bridges — are subsidized by taxpayers. Supporting public transportation can create an equitable and sustainable community where all people have equal access to jobs, education, and services.

 <p>Mobility</p>	 <p>Accessibility & Quality of Life</p>	 <p>Environment</p>	 <p>Economy</p>	 <p>Public Health</p>
<ul style="list-style-type: none">• Can I travel easily to where I need to go?• Can I get around both within my community and regionally?	<ul style="list-style-type: none">• Can I get to the goods and services I want?• Are investments spread equitably?	<ul style="list-style-type: none">• Do I enjoy good air quality?• Can I reduce my carbon footprint?	<ul style="list-style-type: none">• Will my real estate retain its value and appreciate over time?• Can I attract and retain employees?	<ul style="list-style-type: none">• Can I walk or bicycle to school, grocery stores, etc.?• Are public spaces available for recreation?

MOBILITY

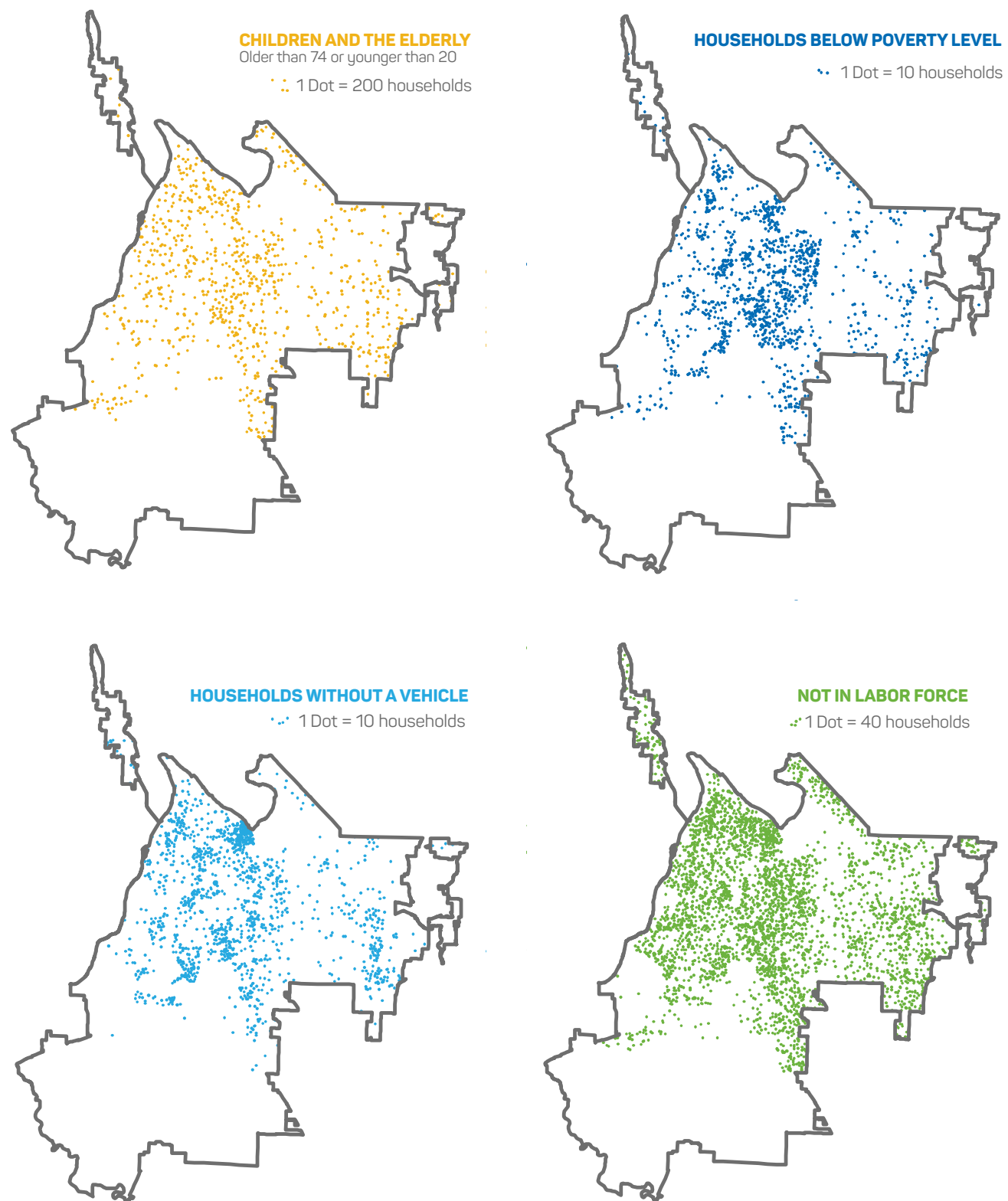
Today a large share of Pierce Transit riders are transit-dependent, meaning the bus system likely serves as their primary mobility option. Transit is their link to housing, jobs, services, and achieving social equity and fully participating in society. As service levels increase and public perception of transit continues to change, Pierce Transit also has an opportunity to attract riders who own a car but choose to use transit for at least some of their trips. A larger customer base, in turn, increases transit's profile in the community and gains wider public support. Providing multiple transportation options in a community also achieves equity goals by reducing the amount of money a household needs to spend on transportation.

Offering transit as a viable alternative to driving is paramount to continuously attracting new riders. For fixed-route transit, this is achieved through frequency of service (i.e., how often the bus arrives at a given point in the route), reliability, and span of service (i.e., the number of hours during the day when transit is in service). In other words, provide convenient service when and where people want to go. Other actions the Agency can take to continue to maintain current riders or attract new riders are offering accurate, real-time, and personalized travel information, offering an uncomplicated fare structure, and making sure vehicles are clean, comfortable, and well maintained.

Public transportation furthers the equitable distribution of resources and bolsters quality of life. On average, Americans spend 18 cents of every dollar on transportation; however, lower income families end up spending more than double that figure. In communities with viable walking, bicycling, and transit options, families tend to spend a smaller share of their household income on transportation. By providing public transportation, households have an opportunity to shift spending toward other uses.

Densities of people who tend to rely on transit are concentrated throughout Pierce Transit's service area

TRANSIT-DEPENDENT POPULATION DISTRIBUTION



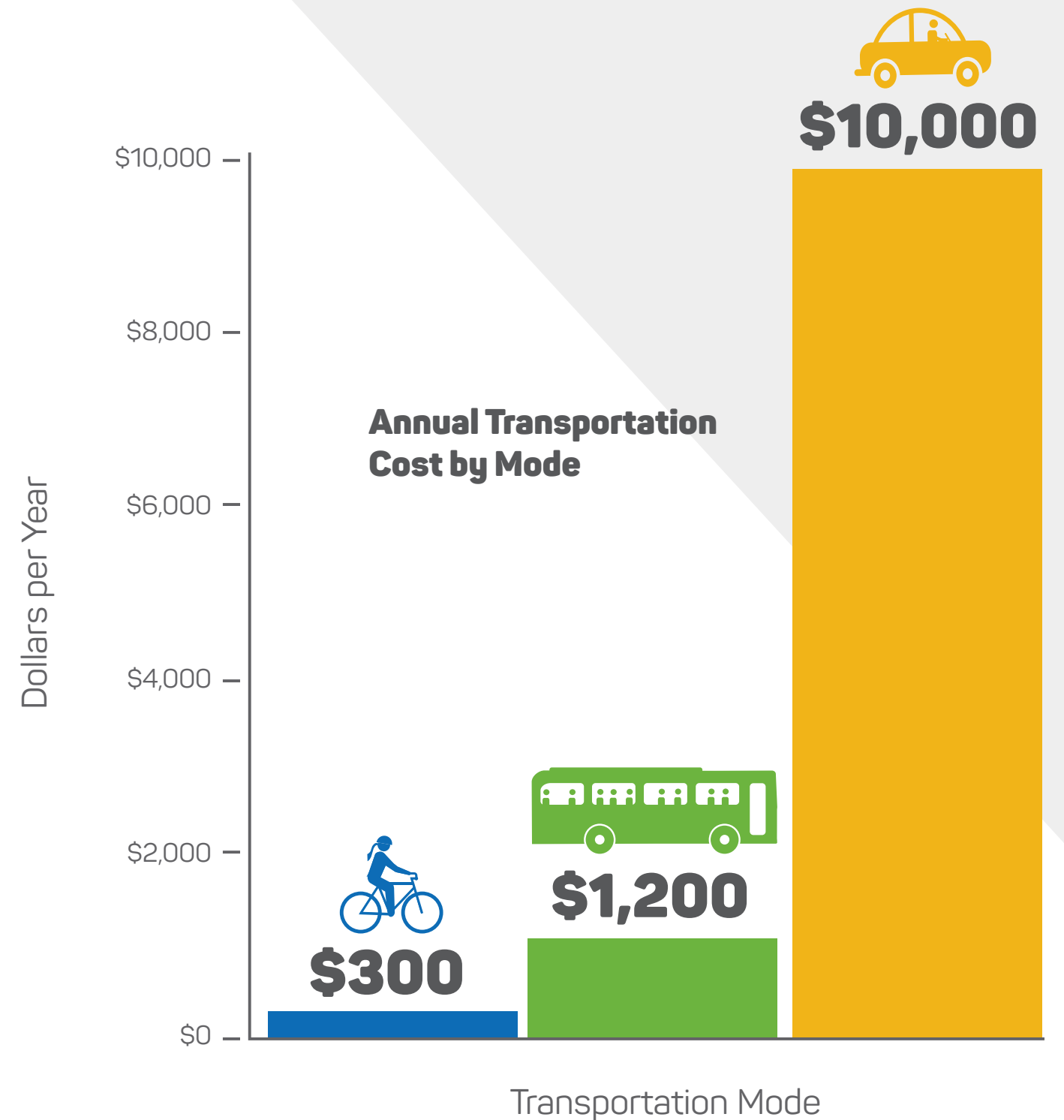
ACCESSIBILITY AND QUALITY OF LIFE

In addition to fixed-route service, Pierce Transit fills a crucial need for the community's vulnerable populations. The 2010 U.S. Census Bureau data estimate that 19 percent of the total population has a disability. Under the Americans with Disabilities Act (ADA) of 1990, a transit provider must offer services for individuals with disabilities in an integrated setting. Pierce Transit's SHUTTLE service provides curb-to-curb trips for those with a temporary or permanent disability making them unable to use fixed-route service. The SHUTTLE system operates 365 days a year, taking patrons to any destination within ¼-mile of a fixed route during regular hours of operation.

For Pierce Transit, the majority of paratransit trip destinations are located in the urban centers, such as downtown Tacoma, Lakewood, and Puyallup. Due to the high cost of operating paratransit service, Pierce Transit is continuously seeking opportunities to improve service efficiency and productivity. For example, in 2014 Pierce Transit completed an update to the ADEPT trip scheduling software. SHUTTLE staff continues to work with primary stakeholders, such as health care centers and human service agencies, to coordinate SHUTTLE service delivery to group trips that can better meet the needs of customers.

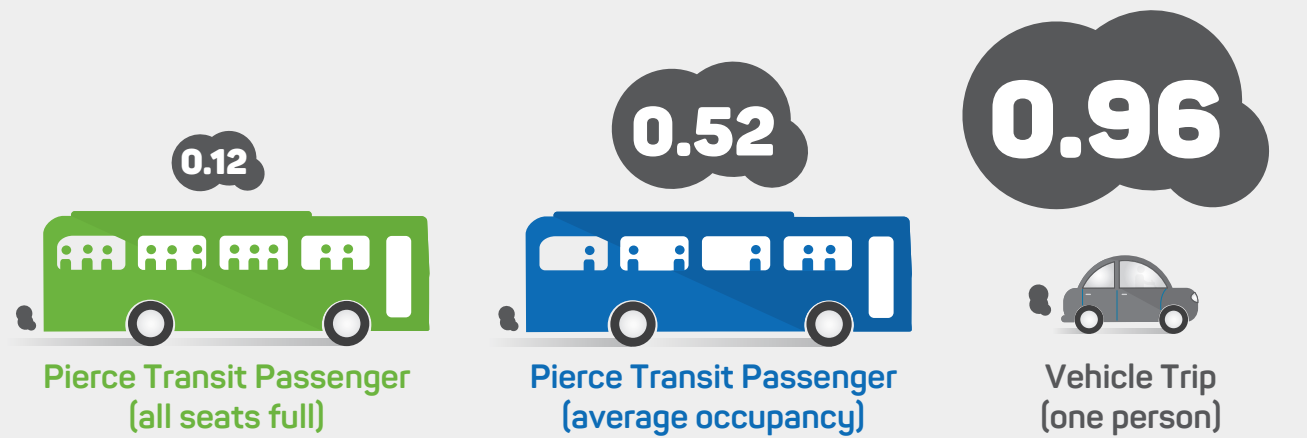
“TO LOVE ONE’S CITY, AND HAVE A PART IN ITS ADVANCEMENT AND IMPROVEMENTS, IS THE HIGHEST PRIORITY AND DUTY OF A CITIZEN.”

– Daniel Burnham, American Architect and Urban Designer



Sources: (1) Biking: The League of American Bicyclists and the Sierra Club. "The New Majority: Pedaling Towards Equity." (2) Transit: Based on an average of the transit costs for monthly Pierce Transit rides (\$864 or \$72 per month) or a monthly ORCA card traveling through multiple counties (\$1,512 or \$126 per month). (3) Driving: American Automobile Association. "Your Driving Costs." 2013.

Pounds of CO₂ per passenger mile



ENVIRONMENT

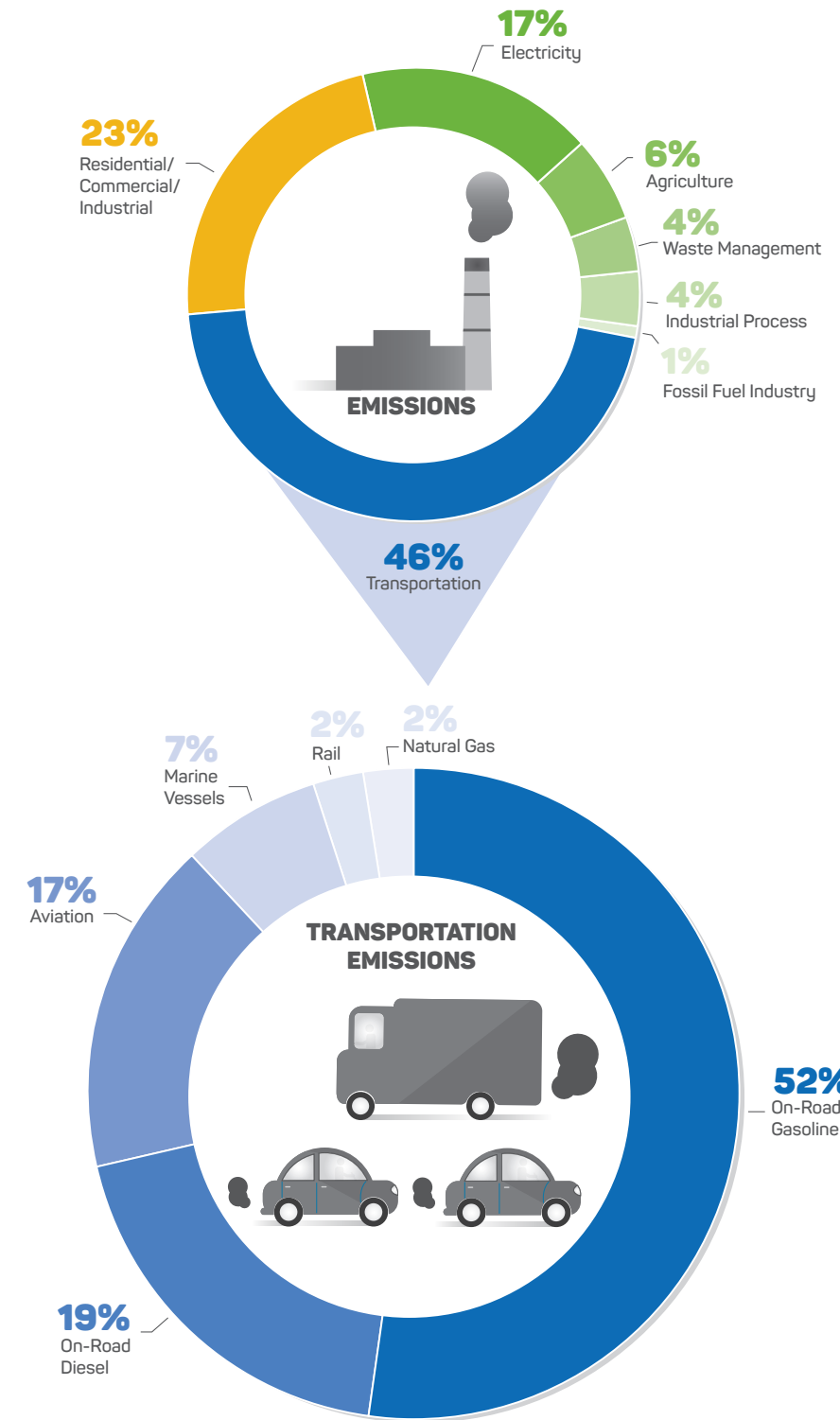
Anyone traveling throughout the South Sound region over time can attest to noticeably increased congestion on the area's streets and highways, and the data prove it. The Federal Highway Administration's (FHWA) annual Highway Statistics report showed 3.1 million motor vehicles registered in Washington in 1979, the year Pierce Transit was established. By 2009 that figure had increased to 5.5 million - a 78 percent spike. The increase in car travel results in more greenhouse gas (GHG) emissions both from movement as well as from idling - annual travel delay in the South Sound more than doubled from 2012 to 2014, to 1,627,500 hours.

In Washington State, the transportation sector produces nearly half of the 91.7 million metric tons of CO₂ equivalent each year. One of transit's many benefits to the region includes reducing emissions and achieving better air quality. The American Public Transportation Association (APTA) reports that public transportation on average produces 95 percent less carbon monoxide, 92 percent less volatile organic compounds, 45 percent less carbon dioxide, and 48 percent less nitrogen oxide per passenger mile when compared to private motor vehicles.

For 30 years, Pierce Transit has been at the forefront of regional air quality conformity by operating far below the limits of pollutant standards for motorbuses. The agency began testing compressed natural gas (CNG) vehicles in 1985, well before the national trend toward alternative fuels. By 2004, the agency had transitioned its entire fleet to CNG. Another benefit of CNG is that up to 90 percent is domestically produced, making it immune from supply disruptions common to petroleum imports.

Pierce Transit is now embracing the next step in sustainable vehicles by applying for a grant to purchase six electric-powered buses. Based on initial tests, CO₂ emissions per mile are nearly 10 times less than a CNG or diesel hybrid bus. Washington State ranks No. 1 for production of electricity using sustainable resources according to the U.S. Energy Information Administration. More than 75 percent of electricity is created using hydropower, making electricity an especially clean form of energy for Pierce Transit.

WASHINGTON STATE GREENHOUSE GAS EMISSIONS



Note: Do not equal 100% due to rounding
Source: Washington State Greenhouse Gas Inventory

ECONOMY

Studies by Smart Growth America show that compact communities cost less to develop, saving up to one-third in upfront capital infrastructure costs. They also generate ten times more tax revenue per acre than conventional suburban development. Providing multiple routes and multiple types (redundancy) in transportation options are both key to an efficient transportation system. When Pierce County streets are connected in a complete network, travelers can choose from many different routes to get from origin to destination, plus get there faster and more easily. Providing access to public transportation reduces congestion by carrying more people in the same road space. Reducing congestion makes commutes easier and is more efficient for businesses. Finally, collaboratively working with municipalities in our service area to encourage infill development and a more dense urban form that is conducive to transit access and usage is something that Pierce Transit regularly engages in as part of its day-to-day planning activities.

COMPACT COMMUNITIES COST LESS TO DEVELOP AND GENERATE TEN TIMES MORE TAX REVENUE

Reaping the benefits of High Capacity Transit

Communities across the nation embraced High Capacity Transit, or express-style services using articulated vehicles and dedicated operating lanes, to both provide mobility as well as spur economic development.

The Emerald Express (EmX) system operated by Lane Transit District serves 2.6 million passengers per year along its four-mile corridor connecting downtown Eugene and Springfield.¹ EmX opened in 2008 and within the first two years of operation, EmX generated \$9 million in economic development.² Economic analysis showed that jobs in the Eugene-Springfield metro area grew most within 0.25 miles of EmX station.³ The \$25 million capital cost of the EmX Franklin Corridor was primarily covered by FTA New Starts funding.⁴



1. http://www.ntdprogram.gov/ntdprogram/pubs/profiles/2012/agency_profiles/0007.pdf

2. http://www.fta.dot.gov/documents/EmX_FranklinCorridor_BRTProjectEvaluation.pdf

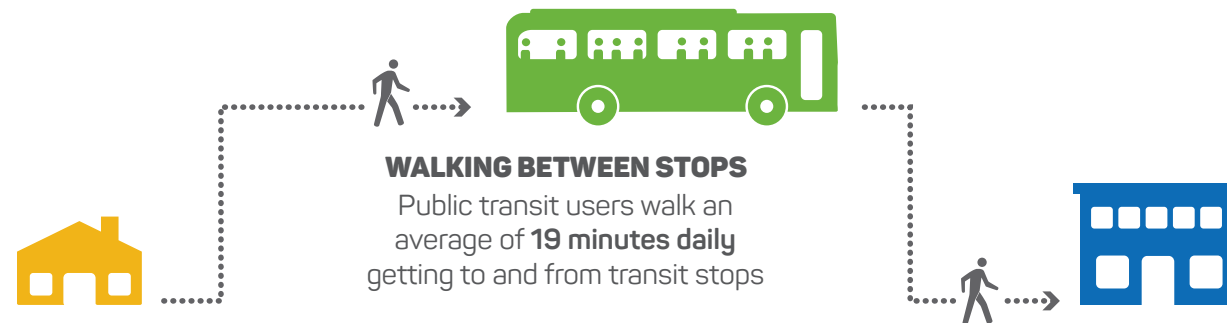
3. Nelson, Arthur et al. "Bus Rapid Transit and Economic Development: Case Study of the Eugene-Springfield BRT System." Journal of Public Transportation Vol 16, No 3, 2013, 41-57.

4. http://www.fta.dot.gov/documents/EmX_FranklinCorridor_BRTProjectEvaluation.pdf

PUBLIC HEALTH

Urban transit supports public health goals and quality of life objectives by encouraging walking and bicycling to and from stations and stops, provided that the non-motorized surface transportation infrastructure to support it exists and is fully integrated. It can also help reduce traffic congestion when automobile trips shift to transit trips, bicycling, and walking. In urban areas with continuous sidewalks and connecting streets, studies show bus patrons are willing to walk up to a third of a mile to access stations and stops along a frequent and reliable network, especially to those stops with shelters and benches where people can safely wait in comfort and dignity. Regarding Pierce Transit patrons specifically, it is worth noting that 18 percent of respondents to the 2014 customer survey indicated that walking is their only mobility option when the bus is not available.

TRANSIT USERS ARE ACTIVE



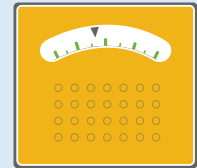
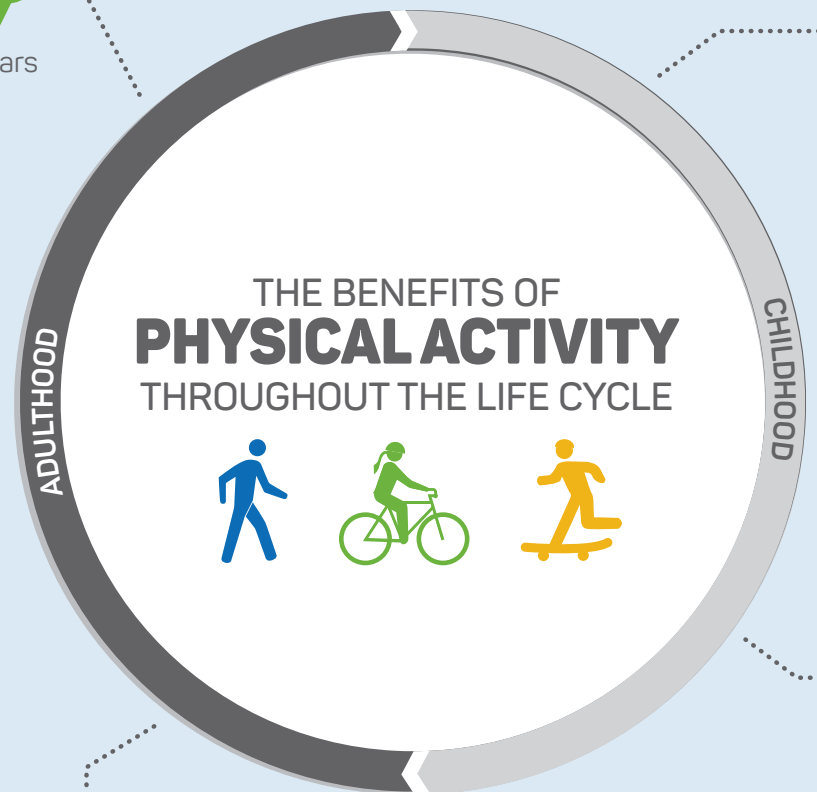
SOURCE: Besser, Lilah, and Andrew Dannenberg. "Walking to Public Transit: Steps to Help Meet Physical Activity Requirements." *American Journal of Preventive Medicine* 29:4 (2005): 273-80.

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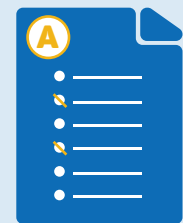
Live 5 years longer ^(F)



Save \$2,741 per year in health care costs due to reduced risk of heart disease, stroke, cancer and diabetes ^(D,E)



Have smaller increases in body mass index (BMI) over time compared to inactive peers ^(A)



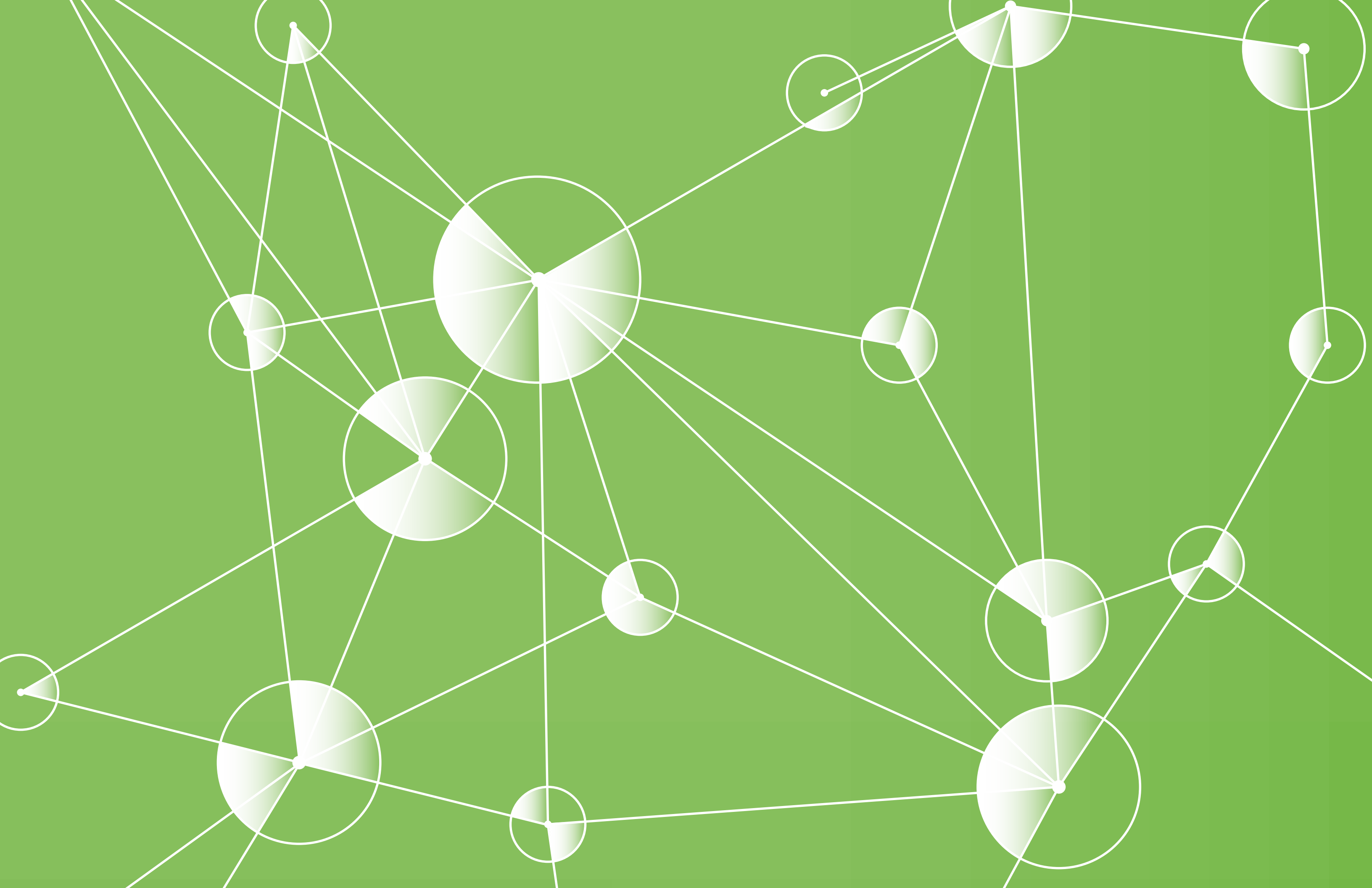
Can achieve 40% higher test scores than inactive peers ^(B)

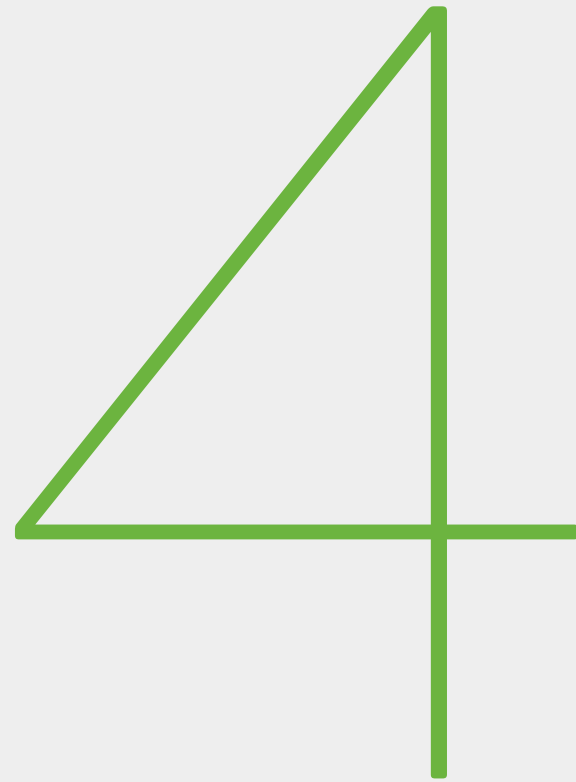


Take fewer sick days from work ^(C)

SOURCES:

- A. Moore, L., Gao, D., Loring Bradley, M., Cupples, L.A., Sundarajan-Ramamurti, A., Proctor, M., Hood, M., Singer, M., and Ellison, R.C. (2003). Does early physical activity predict body fat change throughout childhood? *Preventive Medicine*, 37, pp. 10-17.
- B. Grissom, J. (2005). Physical Fitness and Academic Achievement. *Journal of Exercise Physiology*, 8 (1), pp. 11-25.
- C. Proper, K.I., Van den Heuvel, S.G., De Vroome, E.M., Hildebrandt, V.H., and Van der Beek, A.J. (2006). Dose-response relation between physical activity and sick leave. *British Journal of Sports Medicine*, 40 (2), pp. 173-178. doi:10.1136/bjsem.2005.022327.
- D. U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. United States Department of Health and Human Services 2008 [cited 2009 Aug 10]. Available from: URL: <http://www.health.gov/pa-guidelines/default.aspx>.
- E. Cawley, J. and Meyerhoefer, C. (2012). The medical care costs of obesity: An instrumental variables approach. *Journal of Health Economics*, Vol. 31, Iss. 1, January 2012, pp. 219-230.
- F. Olshansky, S.J., Passaro, D.J., Hershov, R.C., Layden, J., Carnes, B.A., Brody, J., Hayflick, L., Butler, R., Allison, D., and Ludwig, D. (2005). A Potential Decline in Life Expectancy in the United States in the 21st Century. *New England Journal of Medicine*, 17 Mar 2005, 352 (11), pp. 1138-1145.





THE SOUTH SOUND AND PIERCE COUNTY OF TOMORROW



The Puget Sound population will swell to 4.9 million people and 2.9 million jobs by 2040. Of that growth, 20 percent will locate in Pierce County, a place ripe for development given its many characteristics of a great place.

The county enjoys proximity to large employment centers in King County but enjoys lower cost of living than the Seattle metro area. Parks and a world-class waterfront offer an attractive place to live and work. Established communities like Tacoma have been named to the list of 100 best places to live by livability.com, while places like Puyallup and Lakewood are also growing and attracting residents through good city planning and compact redevelopment projects.

With growth comes increased demands on infrastructure. The county's gridded street network is optimal for bus service, and regional transit providers hope to extend rail service to Tacoma –helping move people without costly roadway expansion. In a state well-known for its growth management efforts, land use policies encouraging infill and transit-friendly developments support growth without growing pains, such as vehicle congestion or increased pollution.

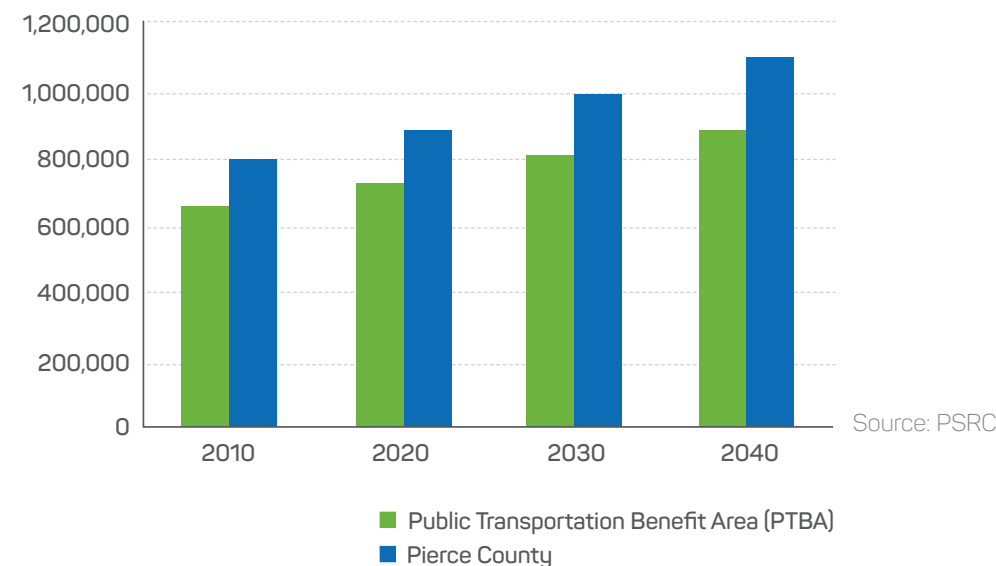


As community needs changed, this site at Port Ruston will transform from industrial to housing, retail, and open space.

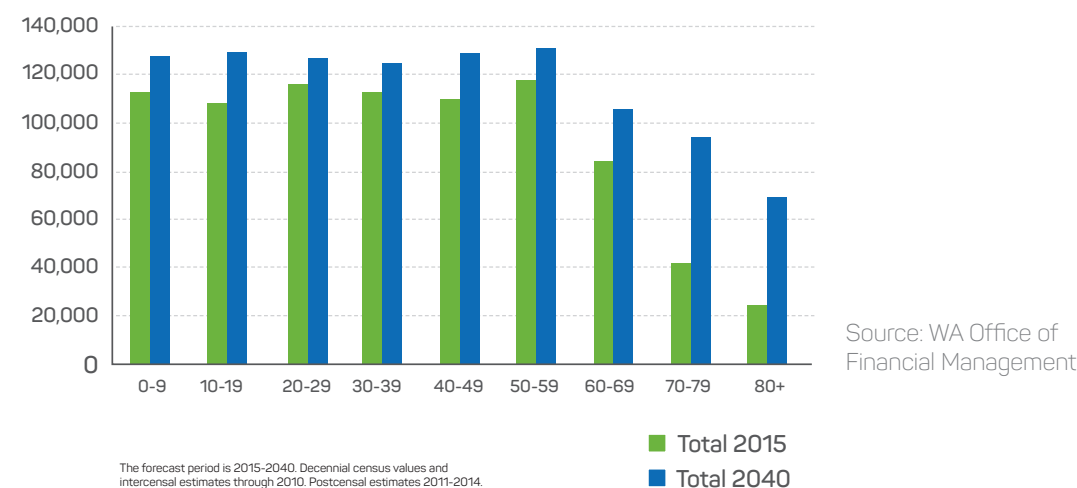
POPULATION GROWTH

By 2040, Pierce County's population will surpass the 1 million mark, for an increase of 302,932 people from 2010. In addition, 500,000 employees will work in Pierce County. The county's adopted housing targets place just over half the new housing in communities that are part of the Public Transportation Benefit Area (PTBA), meaning those newcomers will have access to transit.

Population Growth 2010 - 2040



Pierce County Population Forecast by Age Group 2015 - 2040

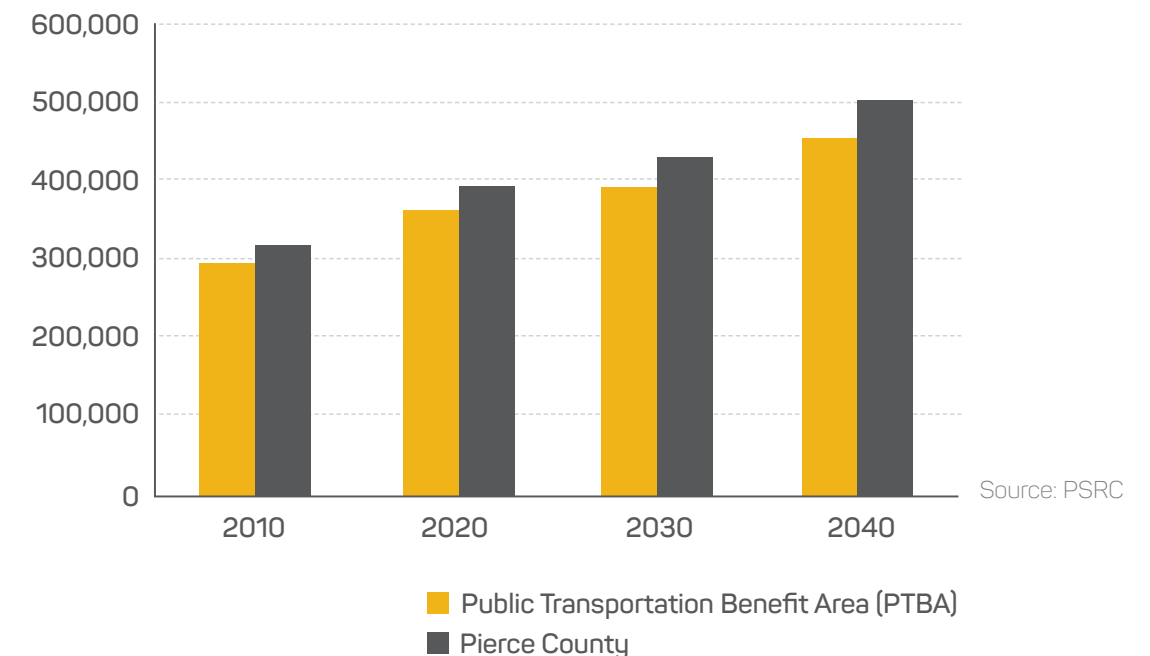


Similar to national trends, Pierce County's older adult population will rise as a proportion of the total population, leading to the need for more specialized transportation services.

EMPLOYMENT PATTERNS

Transit agencies seek to accommodate common travel patterns, and employment trips that occur several days per week can provide a steady base of ridership. Whether employees travel within one county or across a region also dictates the need for service types such as local or express.

Employment Growth 2010 - 2040



Data from the US Census Bureau's Longitudinal Employer-Household Decisions (LEHD) dataset were analyzed to observe changes in employment trends for residents living within the present PTBA boundaries from 2003 to 2013. The number of residents both living and working within the PTBA declined slightly to 108,000. Meanwhile, the county shows strong flows of employees regionally, with 107,000 daily commuters traveling within the PTBA to work and 120,000 people traveling from homes outside the PTBA to work. Together these data tell us that people today travel ever further to their jobs, and that the region's ten public transit agencies must work together to create an integrated and coordinated system. It may also indicate a need to eventually consider expanding the PTBA to accommodate Pierce County residents not served by transit.

WHERE PTBA RESIDENTS WORK

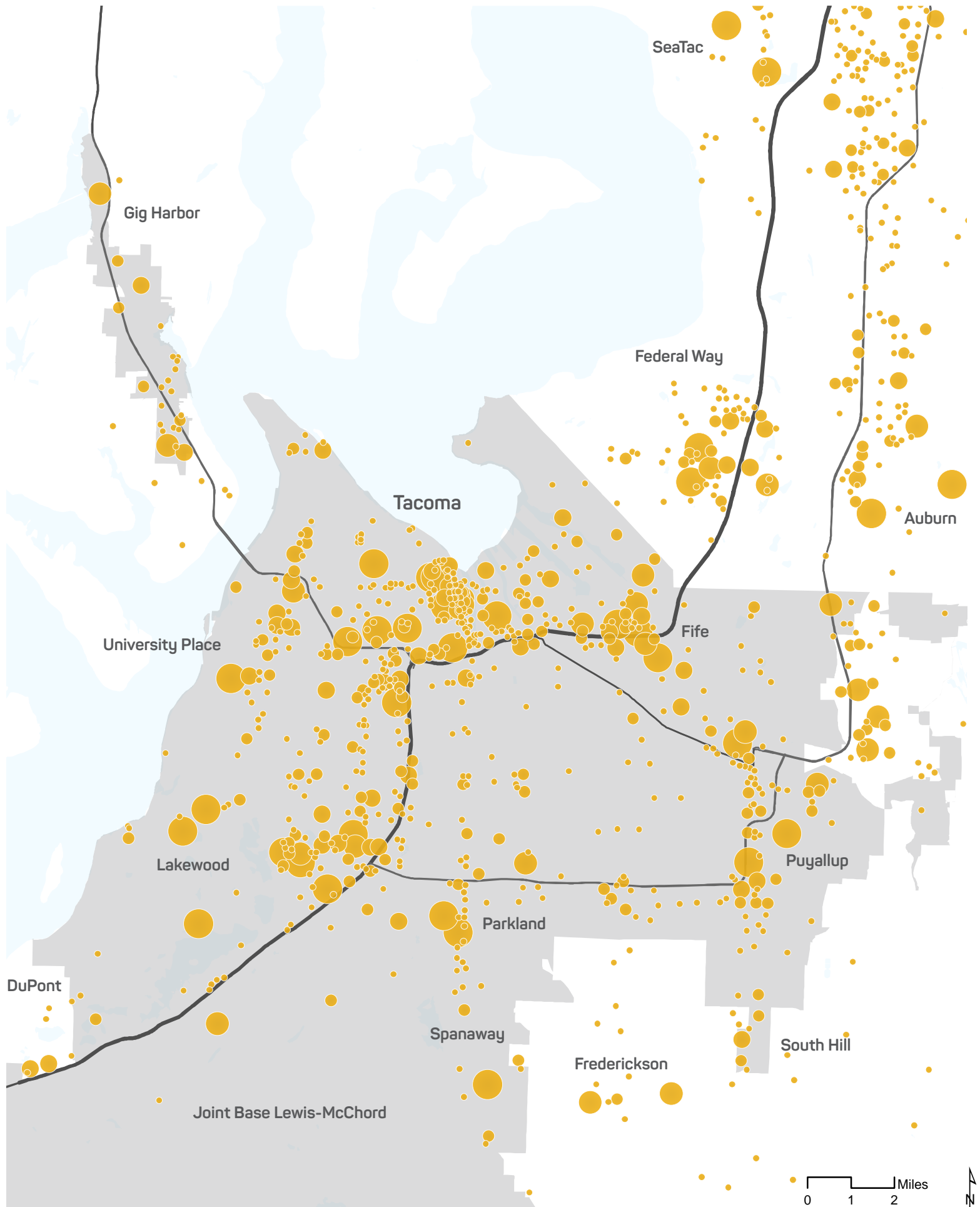
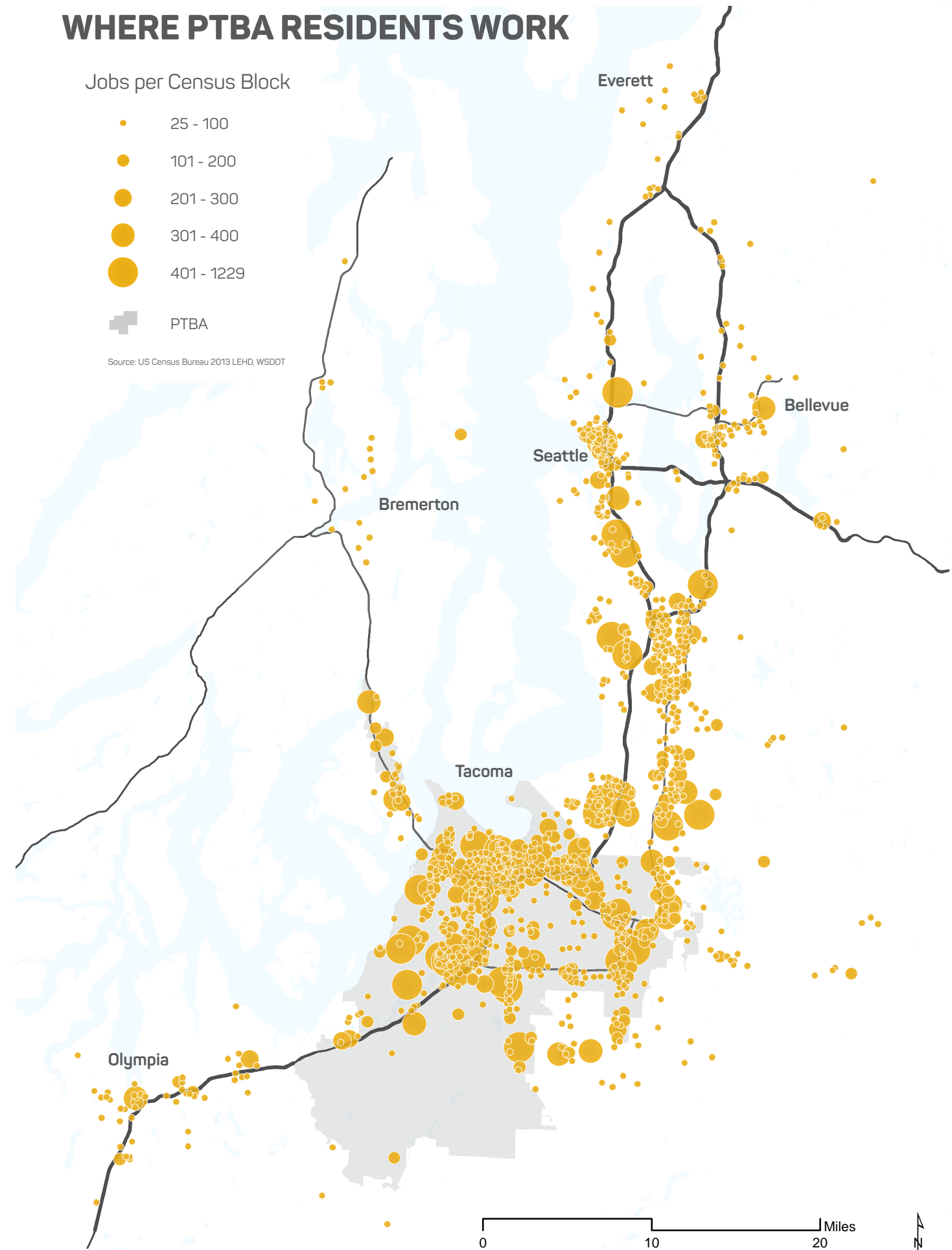
Jobs per Census Block

- 25 - 100
- 101 - 200
- 201 - 300
- 301 - 400
- 401 - 1229



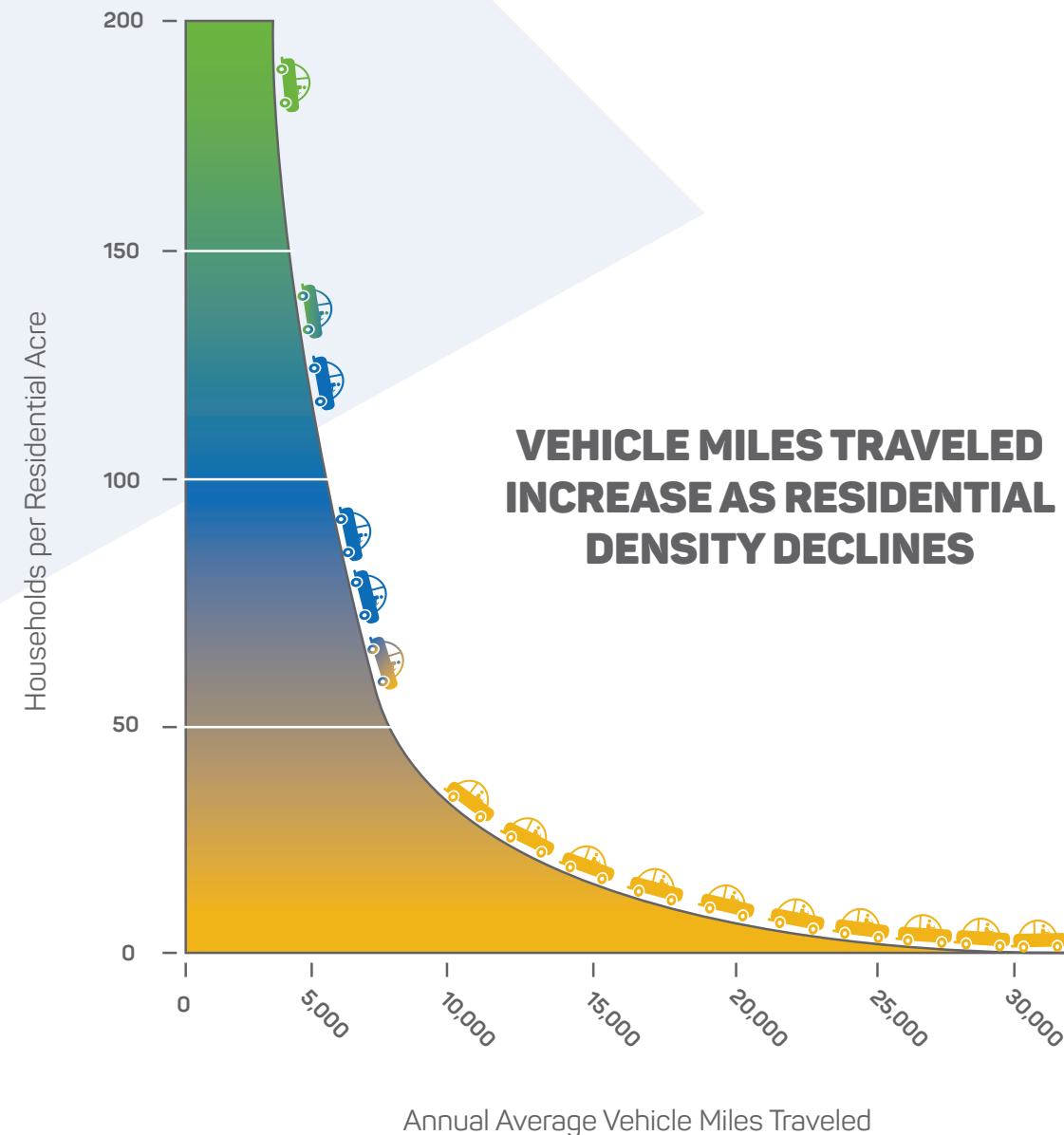
PTBA

Source: US Census Bureau 2013 LEHD, WSDOT



CHANGING LAND USES

Density of land uses and a variety of destinations supports transit by creating travel demand throughout the day. Yet these two crucial variables are controlled by land use laws including zoning, parking requirements, urban design guidelines, and municipal code. Ensuring that land use policies support transit can be implemented through comprehensive planning, as mandated in the state's Growth Management Act (GMA) of 1990. Pierce Transit's vision for a viable, dynamic, and regionally connected urban public transportation system supports the GMA by providing transportation options to growth corridors.



A Leader in Growth Management

In 1990, the Washington State Legislature created the Growth Management Act (GMA) to protect natural areas and channel growth in population centers. The GMA builds in flexibility and local communities retain control over decision-making; GMA controls growth by requiring comprehensive planning to be implemented at the local or regional level. The benefits of the GMA are described below:

“Concentrating development allows people to live and work within walking distance of a variety of shops, services, recreational opportunities and transit stations. Neighborhoods and towns that succeed in developing more compact housing and concentrated job centers will make transit more feasible, reduce public facilities costs, increase affordable housing opportunities and conserve open space. A higher average density does not necessarily result in apartment buildings. Many existing neighborhoods, consisting primarily of single-family homes, achieve densities necessary to support transit and lower public facilities costs.”

– A Growth Strategy for Washington State – Final Report

CRITICAL TRANSPORTATION INVESTMENTS

As population and jobs grow, supporting demographic changes with transportation investments ensure mobility and access for all with cost-effective and environmentally friendly measures.

SOUND TRANSIT ST3

Sound Transit's ST3 consists of a package of service changes up for public vote in November 2016. Several projects would greatly benefit transit in Pierce County, including:

- Extension of LINK light rail from Sea-Tac Airport to Tacoma, providing a direct connection from Tacoma to Seattle without transfers (i.e., a one-seat ride)
- Expansion of Sounder commuter rail service to all-day operation rather than the current morning and evening commute period schedules
- High Capacity Transit along Pacific Avenue/WA State Route 7 via Tacoma Dome Station
- Bus capital enhancements along Meridian Avenue/SR 161 in Puyallup

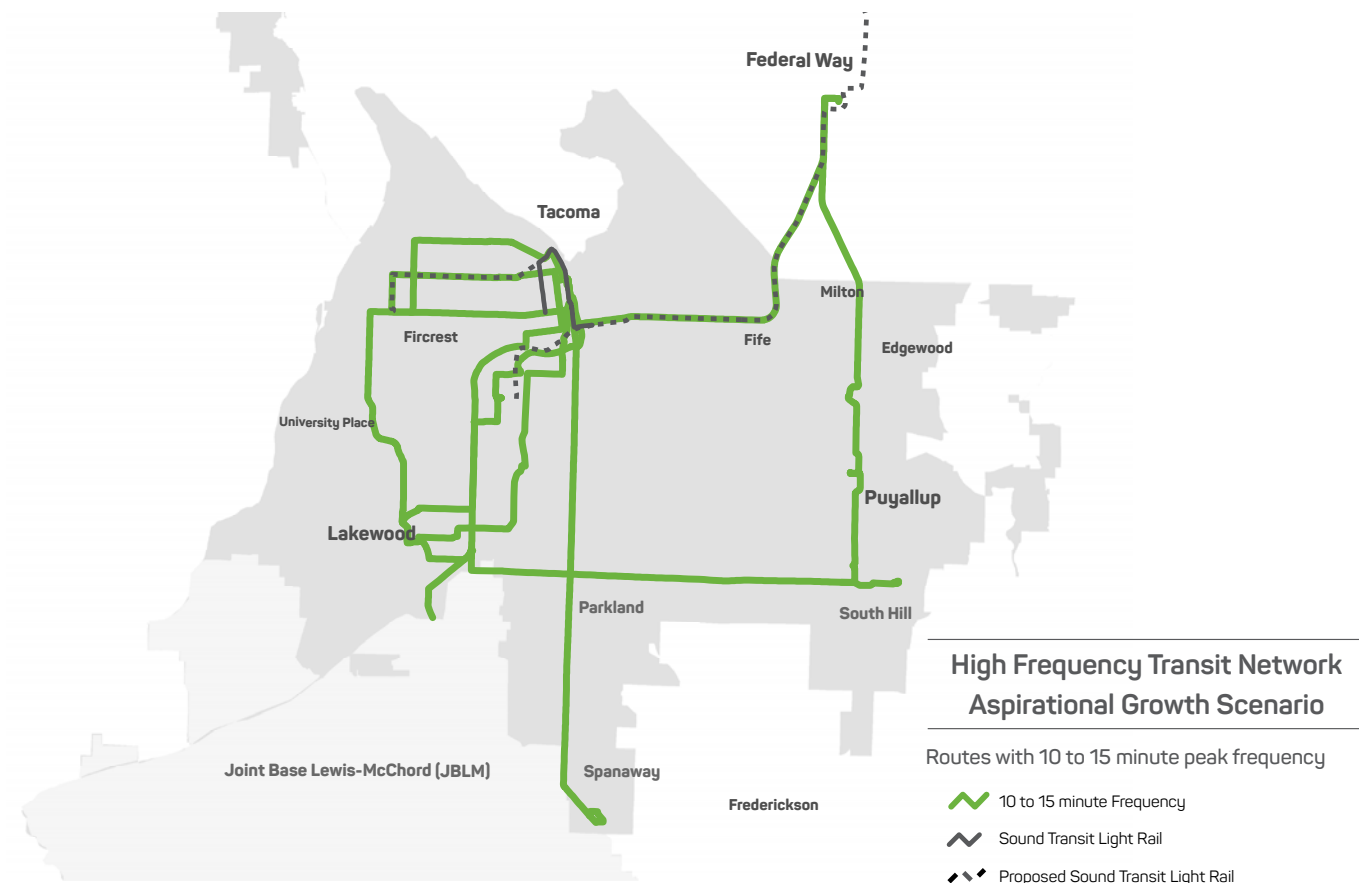
EXPANDING PIERCE TRANSIT SERVICE

Pierce Transit fixed routes serve the urban and suburban communities of the PTBA with local and express services. A transit agency must balance service productivity, or direct service on high-density corridors such as Pacific Avenue, with coverage, or routes that circulate throughout neighborhoods.

To classify service changes by type, Pierce Transit categorizes its many routes into a hierarchy. This helps the agency determine service levels, such as frequency and hours of operation. The Puget Sound Regional Council (PSRC) has adopted a service typology similar to Pierce Transit's hierarchy outlined as follows:

1. Core Transit Service: High frequency local buses and high capacity transit services travel to or through areas with high densities of population and/or employment. These services have the highest ridership in the system and run all day. Examples of core corridors include SR 7, SR 161, 112th Street South, and 6th Avenue.

2. Community Connector Transit Service: These routes serve lower density and suburban areas not dense enough to warrant core service. Service runs most of the day, but might have service breaks midday or end in early evening. Over time, Community Connector routes may evolve into Core Service.



3. Specialized Transit Service: These routes run at limited times and serve a specific market, such as peak period commute trips from park-and-ride lots to employment centers. These service operate at high speed due to limited stops and carry high volumes of passengers over a short time frame each day. Specialized services complement core service.

As part of Destination 2040's fiscally constrained service scenario (described in Chapter 5), Pierce Transit plans to increase services in each category.

Annual transit service increase by type of service through 2040

TYPE	PEAK	OFF-PEAK
CORE	2.3%	2.1%
CONNECTOR	1.1%	0.5%
SPECIALIZED	2.0%	0.1%
TOTAL	2.1%	1.8%

Source: Puget Sound Regional Council-Transportation 2040-Constrained Plan (p. 66)

GROWING TRANSIT CORRIDORS

In looking forward to the long term, Pierce Transit and its partner communities must try and predict where population and employment will concentrate to plan future transit networks. The Puget Sound Regional Council (PSRC) creates regional travel demand models that take into account population and employment trends, any known major developments, zoning code and any projected changes, and predicts future densities by Transportation Analysis Zone (TAZ).

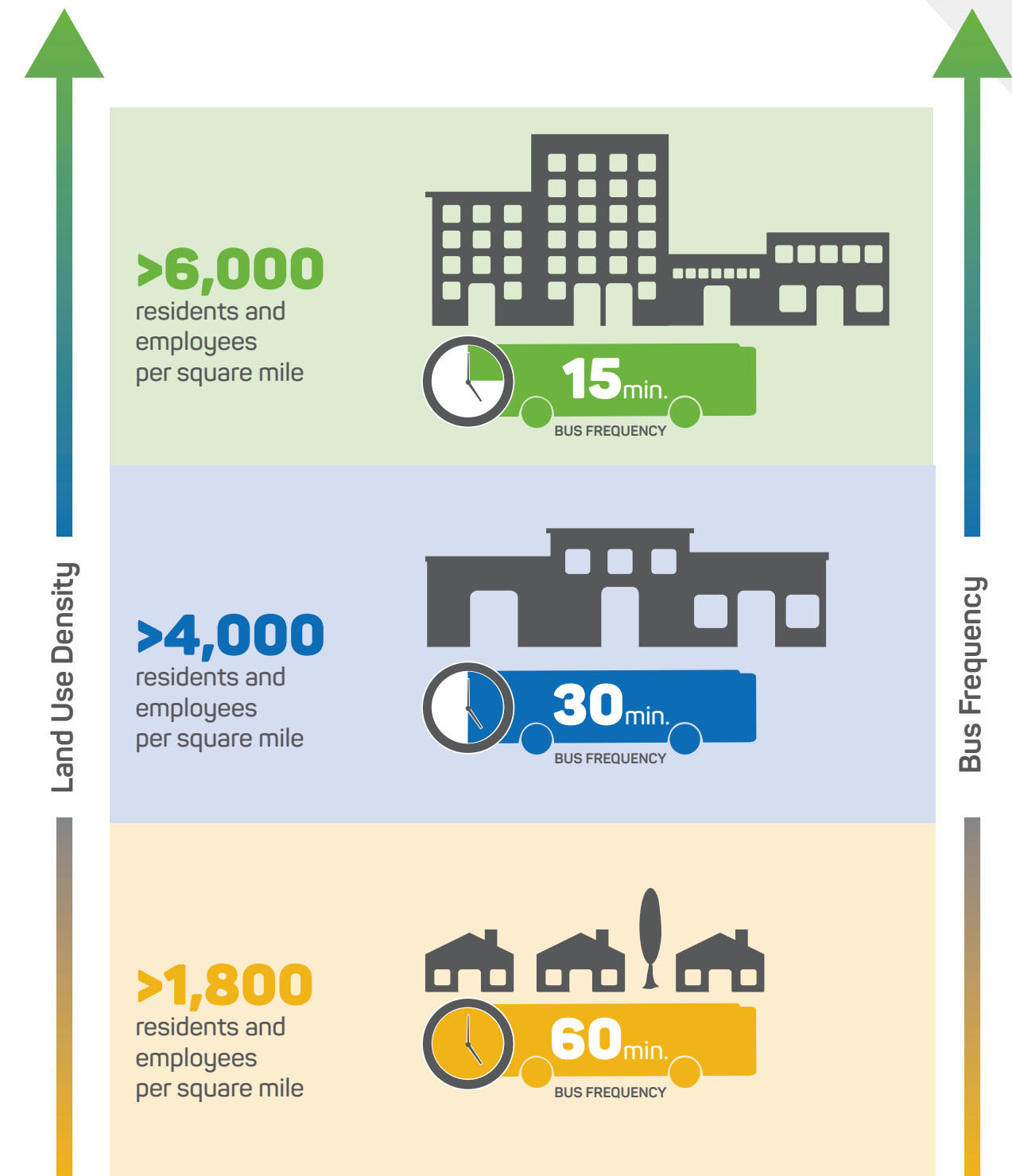
Pierce Transit used the PSRC model outputs to create four future scenarios for service growth (discussed further in Chapter 5). These scenarios include where routes will run and at what frequencies. PSRC took Pierce Transit’s scenarios and ran them through the regional travel demand model to ensure that where the region will grow and where Pierce Transit plans to grow are closely aligned.

The modeling results showed extremely high ridership on the corridors Pierce Transit plans to serve with high capacity transit (HCT), meaning those corridors are the best candidates for increased service investments. The results also predicted ridership growth in step with increases in service provided, showing that better frequencies yield more riders.

The crucial nexus between land use and transportation means that as land uses densify and diversify, transit service succeeds. PSRC’s predictions about how the South Sound will change will be matched with high-quality public transportation.

Modeling Results

SCENARIO (RATE)	2014 DAILY BOARDINGS (ACTUAL)	2040 DAILY BOARDINGS (PROJECTED)	2040 SERVICE HOURS TARGET	2040 PASSENGERS PER SERVICE HOUR (PROJECTED)
BASELINE (NO GROWTH)	34,500	49,900	454,000	33
INCREMENTAL (2.0% ANNUAL)	---	70,200	727,000	29
RAPID (2.5% ANNUAL)	---	73,400	821,000	27
ASPIRATIONAL (3.0% ANNUAL)	---	106,600	928,000	34



LAND USE AND TRANSIT FREQUENCY RELATIONSHIP

A NEW VISION FOR THE TACOMA DOME STATION

Pierce Transit bought the Tacoma Dome Station site (north side of East 25th Street, just beyond East D Street) for staging during construction of the dome. Today that space is being used for storage. But Tacoma Dome Station has become a major intermodal link in the transit network, served by Pierce Transit, Tacoma Link light rail, Sounder commuter rail, Amtrak (in 2017), Intercity Transit, and Greyhound. The site also has 2,283 park-and-ride spaces. The site has been identified as a catalyst property in the South Downtown Subarea Plan. Pierce Transit recognized the opportunity for creating urban infill, mixed-use development, placemaking, and transit-friendly urban design.

Pierce Transit partnered with the City of Tacoma's Economic Development Department to find developers for the parcel. Initial plans indicate that up to 100 market-rate units could be built in a six-story building, with the ground floor retained for commercial or retail use. By developing this site, Pierce Transit is working in tandem with the private sector and the City of Tacoma, to create a lively downtown Tacoma neighborhood with high-quality transit options.

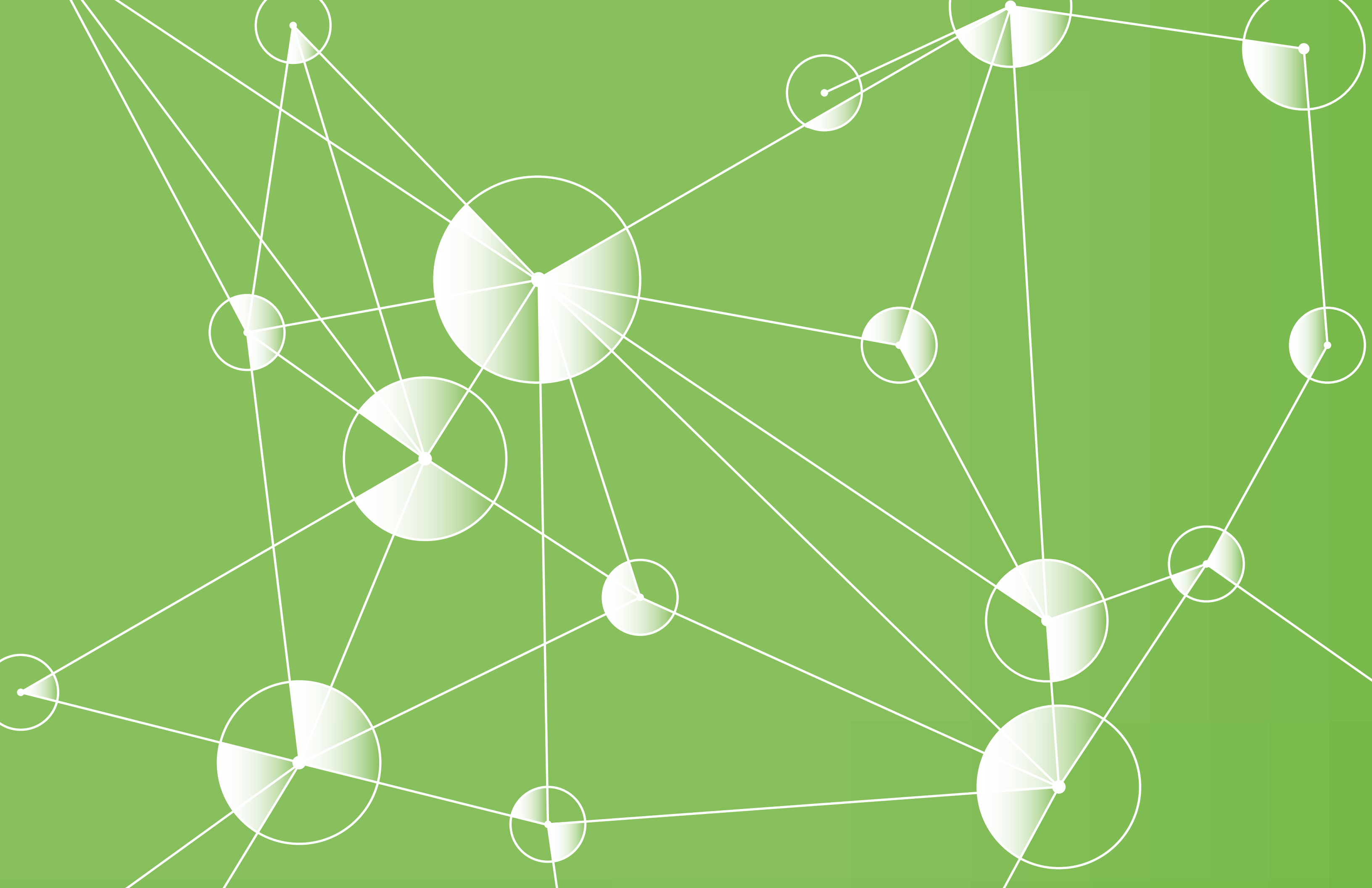


Lakewood Comprehensive Plan

The city of Lakewood's long-range plan provides a vision for achieving a healthy city and carries out the state's Growth Management Act (GMA) requirement. The plan supports transit-friendly design, as evidenced in the following text.

"Urban design is especially important in multi-family residential areas to create satisfying and aesthetic places for residents. The following factors should be considered in developing multifamily properties:

- Encourage infill development along key pedestrian streets and in proximity to public transit routes or centers. Use design to create a pedestrian scale along key pedestrian streets.
- Encourage the development of high-density multi-family residential neighborhoods in proximity to public transit and the commuter rail station. Neighborhood character should reinforce a pedestrian orientation along key pedestrian streets and linkages to commuter rail or public transit."



5

FOUR FUTURES FOR TRANSIT

How will Pierce Transit expand to meet the needs of the region in 2040?

Destination 2040 developed four scenarios for growth that align with Puget Sound Regional Council's (PSRC) expectations of 1.1 million people and 500,000 jobs in Pierce County. PSRC's travel demand model projects where people and jobs will be located in the horizon year of 2040. Pierce Transit used these inputs to lay out a network of services from minimal to ideal growth levels. To be prepared for another recession or other financial setback, even if temporary, the agency also developed a network of reduced services (Scenario 0 in Appendix H).

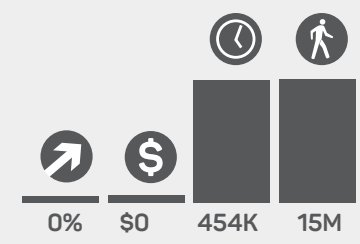
These four growth scenarios will be used to evaluate a range of service and capital projects during the mid term and long term. Service scenarios include where services will run, at what frequency (both listed in Appendix F), and during which hours of the day (depicted in Appendix G). They are based on which land uses and demographics provide the greatest demand for transit, including metrics such as:





- Buildable land or development potential
- Household densities
- Employment densities
- Major activity or industrial centers
- Other criteria or data known to generate transit ridership and related demand

Each of the four growth scenarios are described in this chapter using text and maps.

HOW TO READ THIS CHAPTER

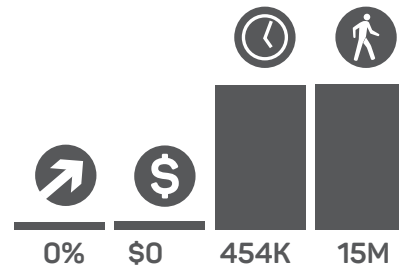

SCENARIO 1 ← Scenario Number
BASELINE ← Scenario Name



-  = percent of added annual service hours
-  = additional funding needed to operate service hours
-  = total number of service hours provided under scenarios
-  = total number of Pierce Transit riders predicted



SCENARIO 1 BASELINE

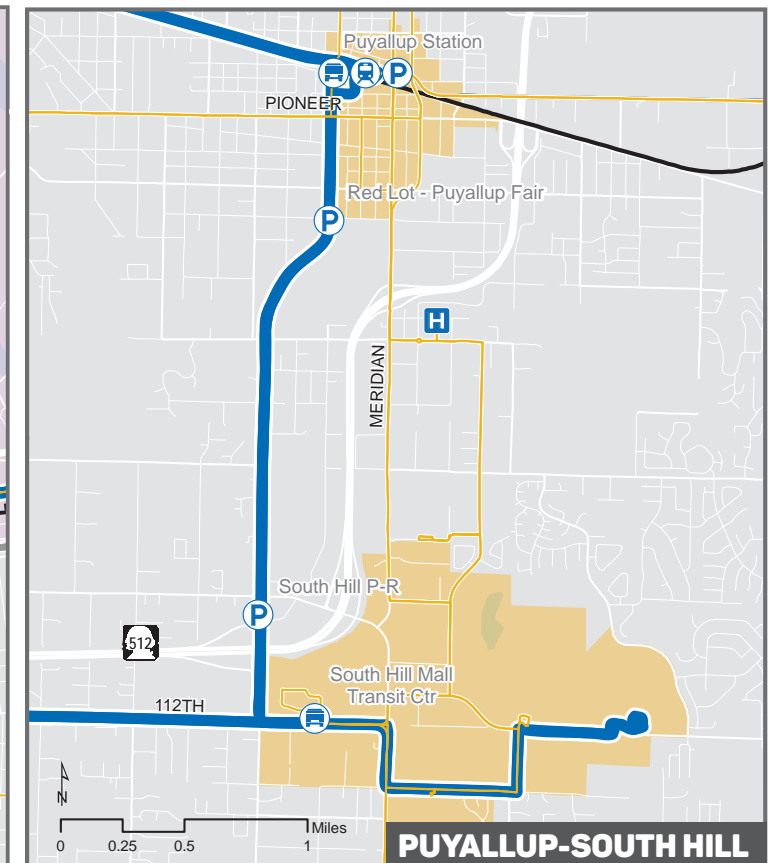
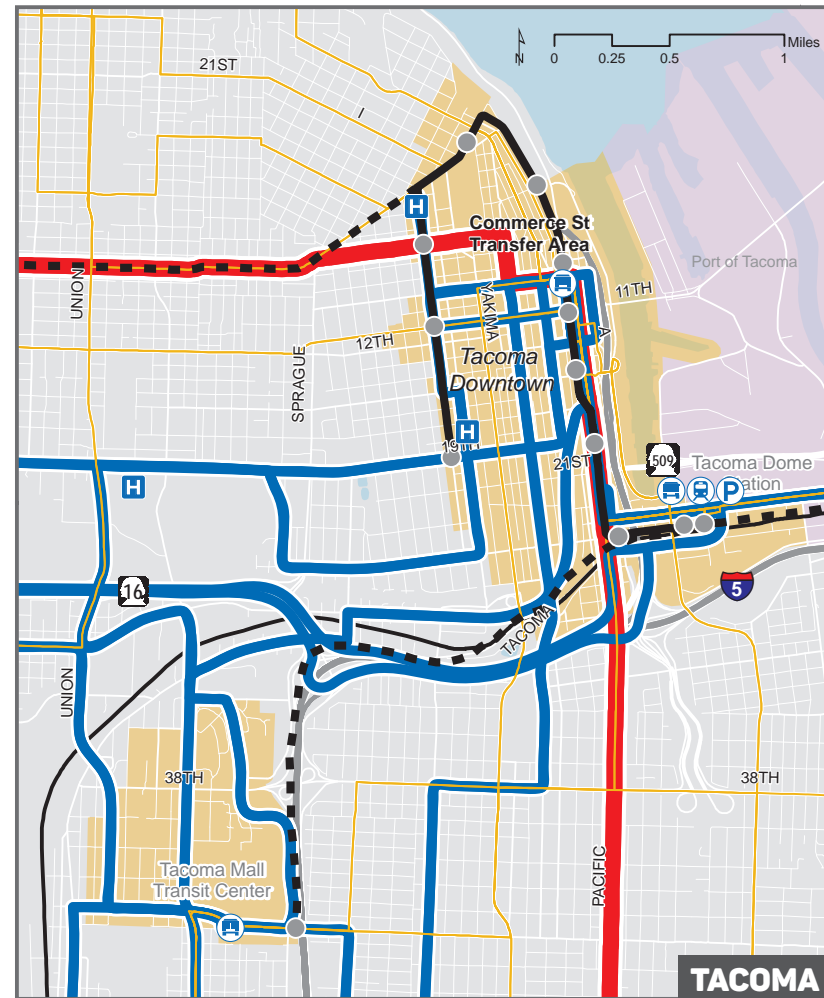


0% service hour growth
\$0 additional investment needed
450K service hours
15M boardings

In 2015, 12,000 service hours were added, bringing operating levels up to 454,000 service hours. Minimal additional growth in service hours is budgeted from 2016 thru 2020, but beginning in 2027 the rate of assumed sales tax growth will increase, making the scenario sustainable through 2040. This scenario assumes a continuous six-year cycle of capital expenditures with employee growth remaining relatively flat each year. The current Pierce Transit fleet consists of 140 40-foot CNG vehicles that each cost \$550,000 in 2015 dollars. Per FTA guidelines, Pierce Transit maintains a 20 percent spare ratio, which refers to the number of spare vehicles that can be put into service while others are being maintained. In 2016, the Agency will update its Base Master Plan, which evaluates the need for bus facilities and maintenance capacity. Under this scenario, additional capital costs of \$6-\$17 million will be incurred to increase the fleet size to 150-170 vehicles. This cost excludes replacement of current rolling stock, which is already programmed. Assumptions in this scenario follow a fiscally-constrained model.

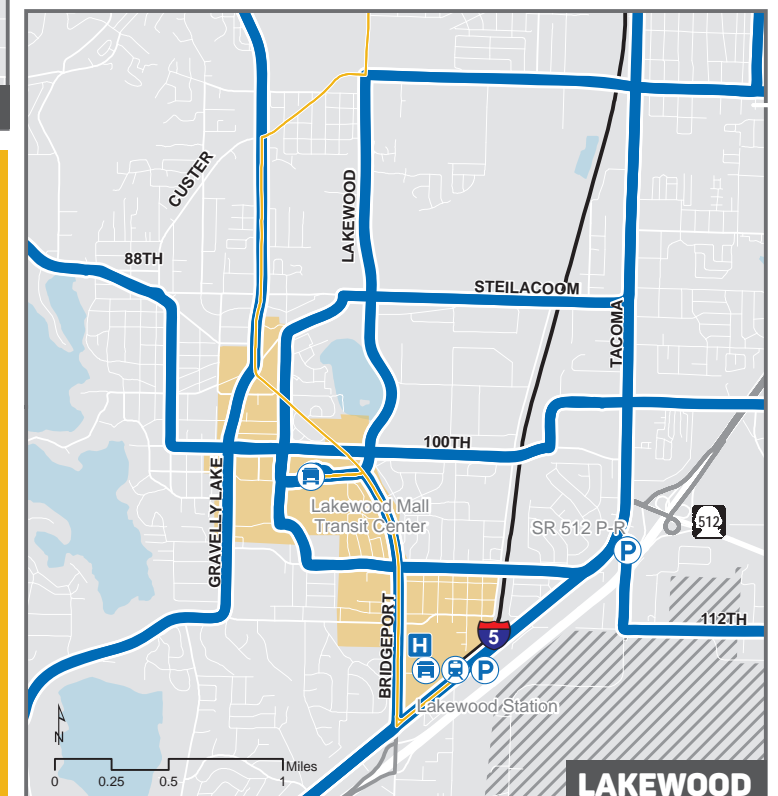
Annual boardings will rise to 15 million. A commonly used metric to assess service productivity is passengers per revenue hour, or the ratio of how much service is consumed versus how much service is provided. Under this scenario, passengers per revenue hour will rise from 24 today to 33. The network would consist of 37 peak-hour routes (6-9 am and 3-6 pm) and 33 off-peak routes. On a typical day, Pierce Transit in 2040 under the Baseline scenario would carry 55,000 riders, with the highest ridership aboard Routes 1: 6th Ave-Pacific Ave, 2: S 19th St-Bridgeport Way, 3: Lakewood-Tacoma, 4: Lakewood-South Hill, and 402: Meridian.

Approximately 41,000 annual service hours are allocated to early weekday mornings and weekday nights and 67,000 are allocated to weekends.



WHAT IS A SERVICE HOUR?

A service hour is one hour that an individual transit vehicle is on the road. For a transit system, service hours measure the number of transit vehicle hours that are provided across all routes in the system. Service hours are related to the frequency of service on each route. A single bus serving a route that takes one hour to complete counts as one service hour. Four buses will be needed to serve that route if buses arrive every 15 minutes. Four service hours would be needed to provide each hour of service, or 48 service hours if service is provided for 12 hours per day.



SCENARIO 1

2040 PIERCE TRANSIT ROUTES

AM Peak Period Frequency (Minutes)

- ▬ 0 - 15
- ▬ 16 - 30
- ▬ 31 - 60
- Enhanced Bus/HCT/BRT

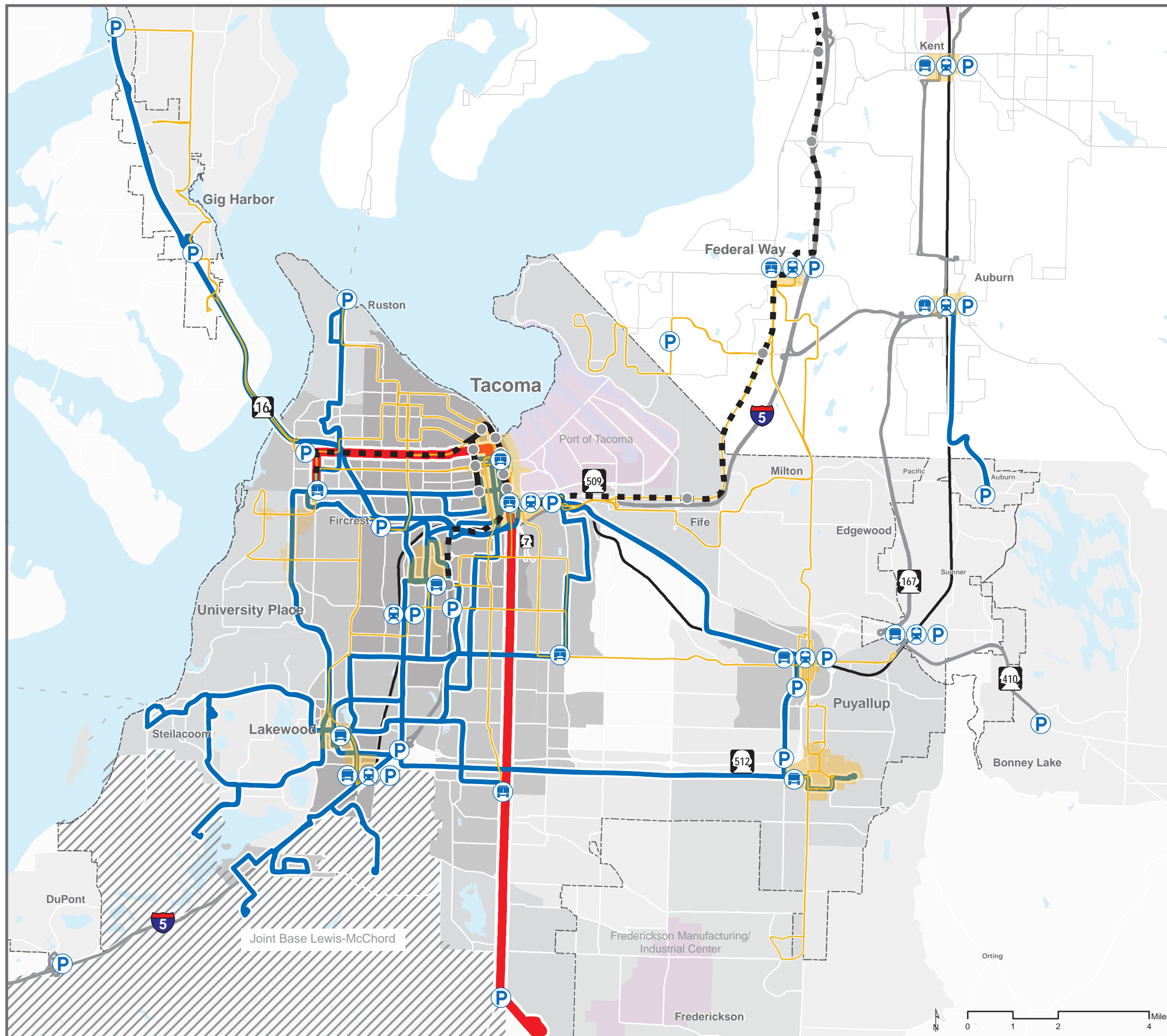
2040 POPULATION & EMPLOYMENT DENSITY

(Residents + Jobs) / Square Mile

- 2,000 or Fewer
- 2,001 to 4,000
- 4,001 to 6,000
- 6,001 to 8,000
- More than 8,000

- Existing/Proposed Sound Transit Light Rail Station
- ▬ Sound Transit Light Rail
- ▬ Sound Transit Commuter Rail
- ▬ Proposed Sound Transit Light Rail
- ▬ Sound Transit Bus
- ▬ King County Metro Bus
- Public Transportation Benefit Area Boundary
- Urban Center
- Manufacturing / Industrial Center
- H Hospital

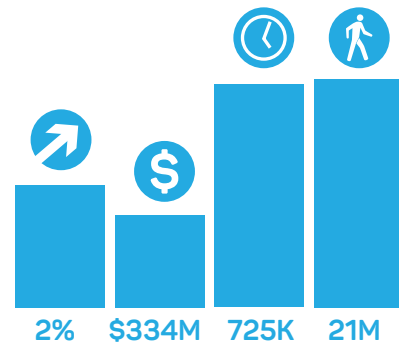
Sources: Pierce Transit, Sound Transit, King County Metro, Puget Sound Regional Council, Pierce County





SCENARIO 2

INCREMENTAL GROWTH

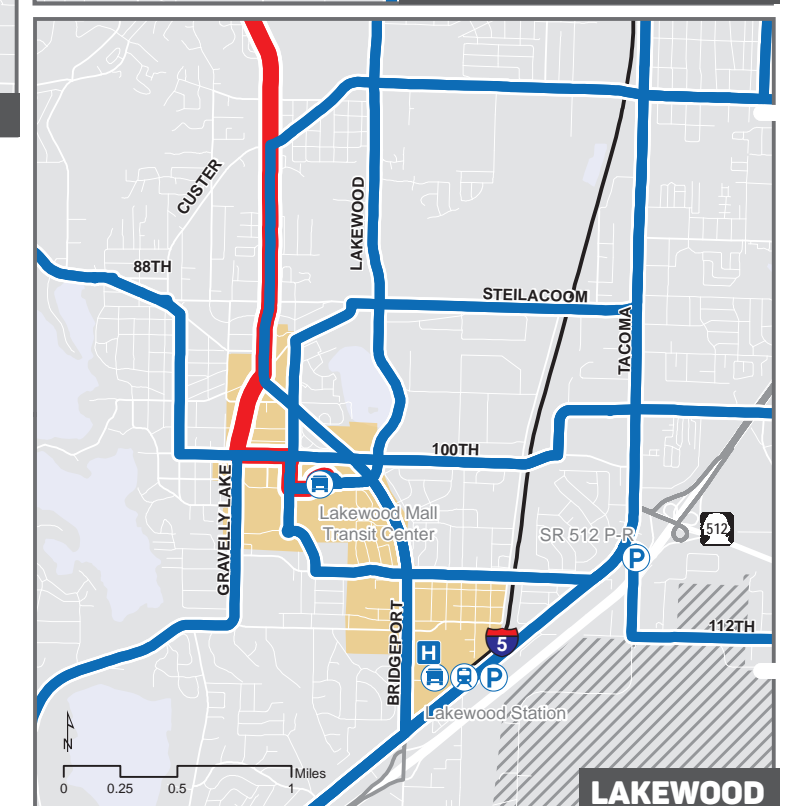
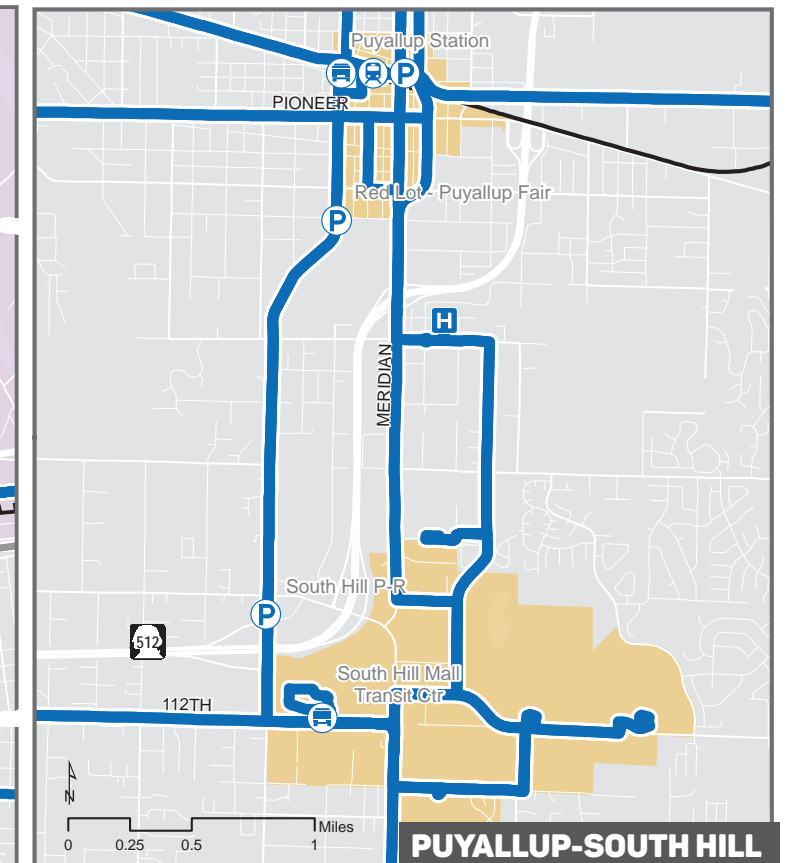
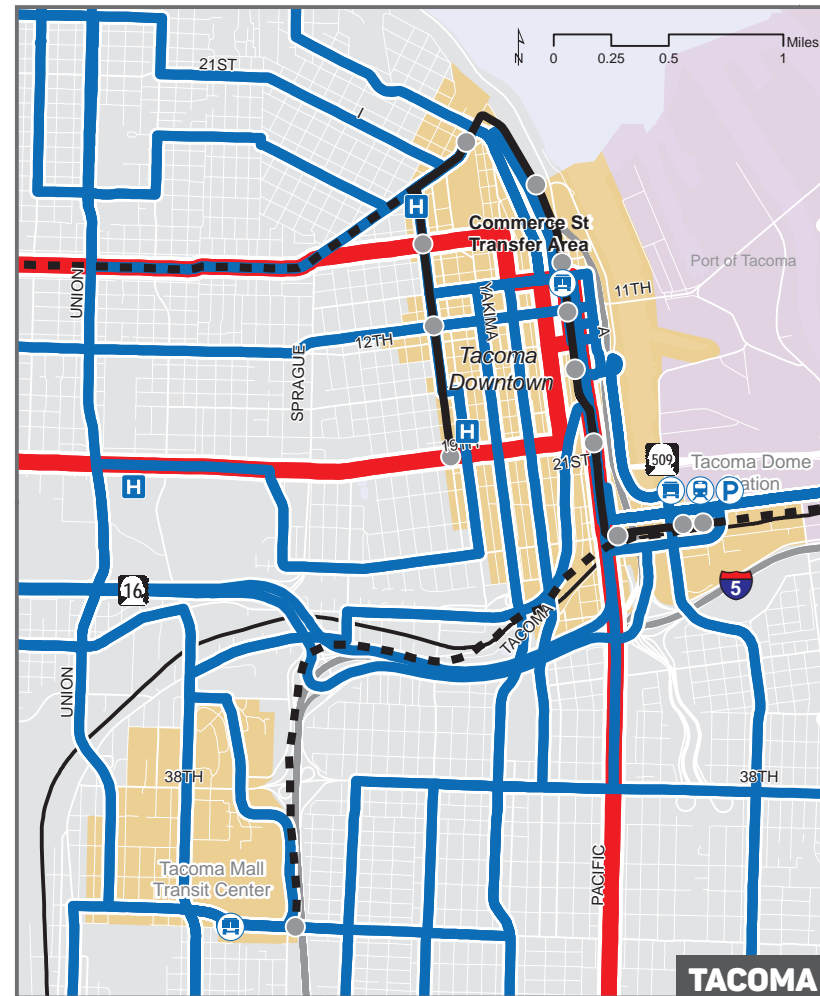


2% service hour growth
\$334M additional investment needed
725K service hours
21M boardings

This scenario identifies six-year Transportation Improvement Plan capital project candidates and agency priorities (2015-2020) plus 10-year/Mid-Term Implementation Strategies (2020-2030). Fiscally constrained to grow at 2.0 percent annually, the agency would reach approximately 485,000 service hours by 2020, 595,000 service hours by 2030, and 725,000 service hours by 2040. The financial plan is unsustainable from 2019 through 2040 and would need additional operating funding of \$334+ million. To factor in future replacement of new purchases, additional capital costs of \$41-52 million will be incurred to replace the 215-235 new vehicles needed to operate at Incremental Growth frequencies. With growth in service, Pierce Transit as an agency would also grow approximately 35 percent from 2016-2040. An additional 170 full-time employees working as bus operators would be needed. This scenario matches service levels prescribed in PSRC's Transportation 2040. The MPO's long-range planning assumptions in this scenario follow a fiscally-constrained model.

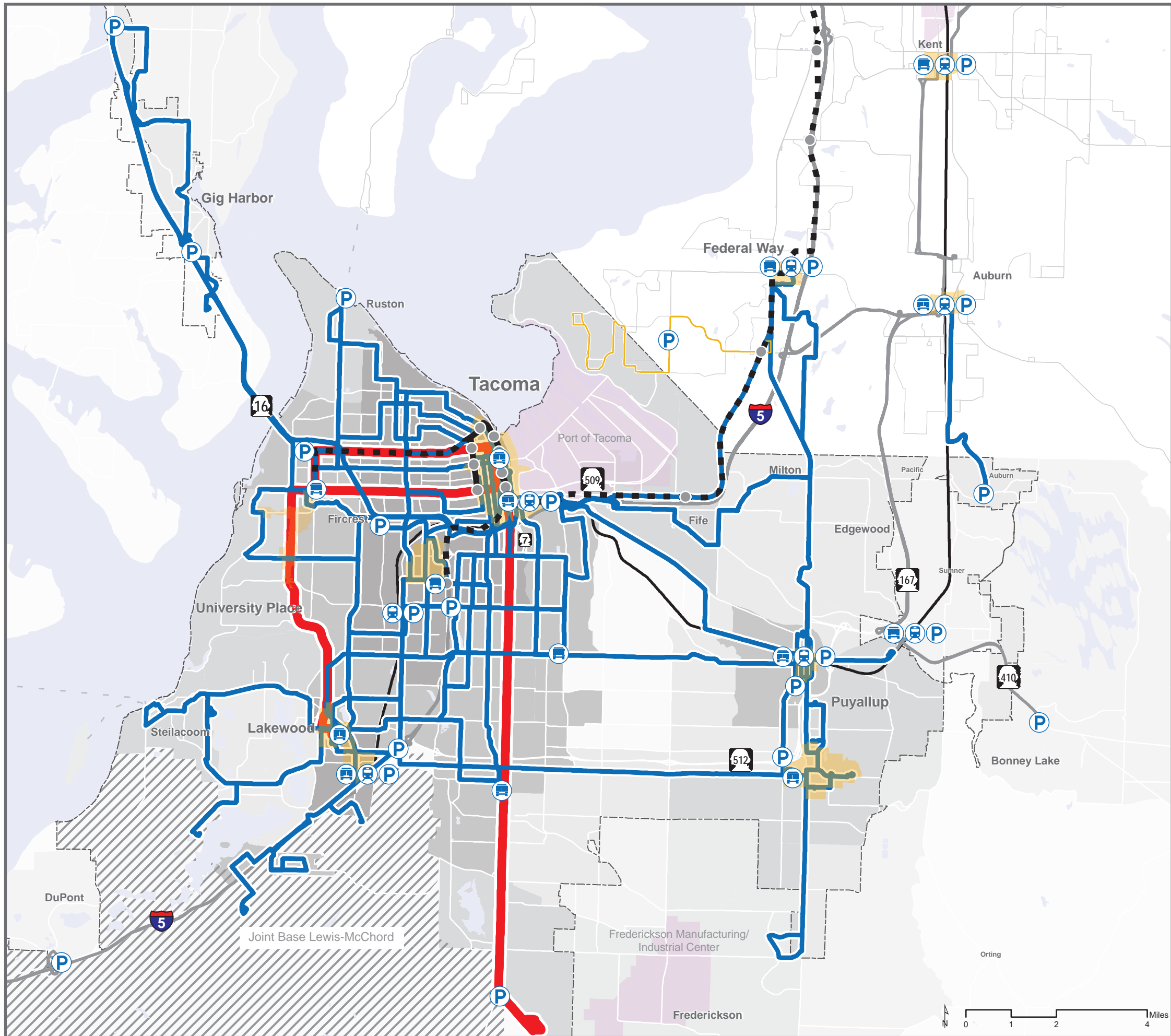
Annual boardings will rise to 21 million and passengers per revenue hour will increase from 24 today to 29. This scenario uses the same route structure as the Baseline scenario, but adds 56 percent more service hours by increasing frequency. On a typical day, Pierce Transit would carry 70,000 riders under the Incremental Growth scenario. Routes 1: 6th Ave-Pacific Ave, 2: S 19th St-Bridgeport Way, 3: Lakewood-Tacoma, 4: Lakewood-South Hill, 53: University Place, 400: Puyallup-Downtown Tacoma, 402: Meridian, 500: Federal Way, and 501: Milton-Federal Way.

Approximately 100,000 annual service hours are allocated to early weekday mornings and weekday nights and 80,000 service hours service hours are allocated to weekends.



Please note that all routes in Growth Scenarios 2, 3, 4A, and 4B depicting service within Pierce County but beyond the current Public Transportation Benefit Area (PTBA) boundaries are conceptual, hypothetical, and illustrative only. If fixed-route service were to be extended to Bonney Lake, Buckley, DuPont, Frederickson, Orting, or Sumner in the future, it would most likely be contracted, implemented through a public-private partnership, or introduced as a demonstration project (i.e., transit service operating in a pilot phase, generally lasting 1-3 years, designed to test the feasibility of the potential mode for eventual operationalization).

Jurisdictions may opt back into the PTBA through an election, although inclusion does not guarantee a minimum level of service or Fixed-Route Service Type, as defined in Appendix A. Please see Appendix D for more information on the PTBA Boundary Process, including annexation.



SCENARIO 2

2040 PIERCE TRANSIT ROUTES

AM Peak Period Frequency (Minutes)

- ▬ 0 - 15
- ▬ 16 - 30
- ▬ 31 - 60
- ▬ Enhanced Bus/HCT/BRT

2040 POPULATION & EMPLOYMENT DENSITY

(Residents + Jobs) / Square Mile

- 2,000 or Fewer
- 2,001 to 4,000
- 4,001 to 6,000
- 6,001 to 8,000
- More than 8,000

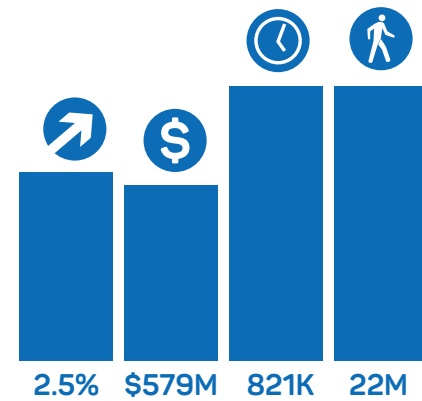
- Existing/Proposed Sound Transit Light Rail Station
- ▬ Sound Transit Light Rail
- ▬ Sound Transit Commuter Rail
- ▬ Proposed Sound Transit Light Rail
- ▬ Sound Transit Bus
- ▬ King County Metro Bus
- Public Transportation Benefit Area Boundary
- Urban Center
- Manufacturing / Industrial Center
- H Hospital

Sources: Pierce Transit, Sound Transit, King County Metro, Puget Sound Regional Council, Pierce County



SCENARIO 3

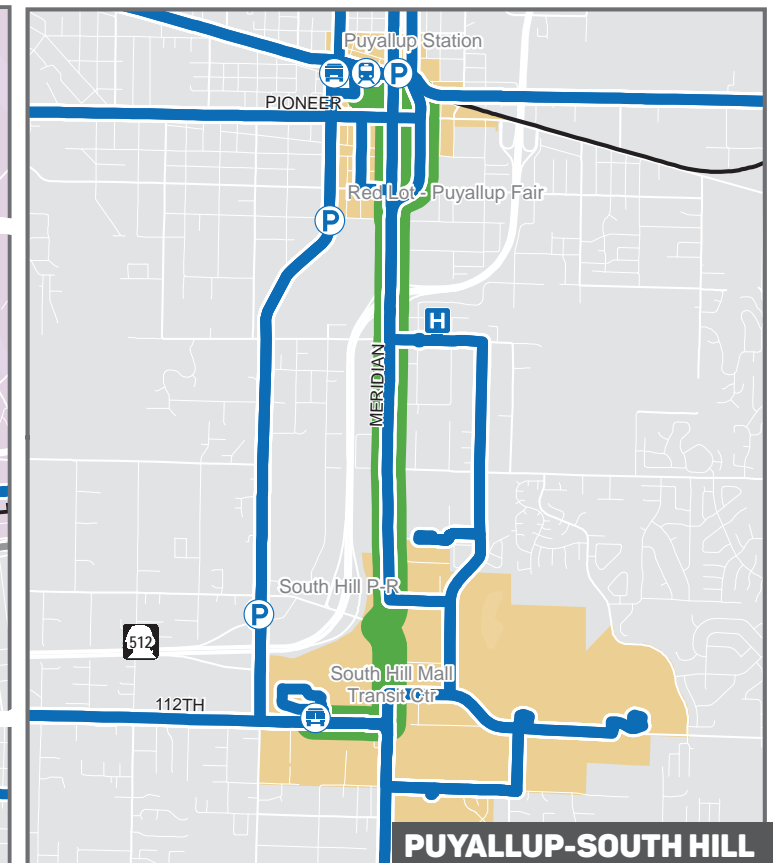
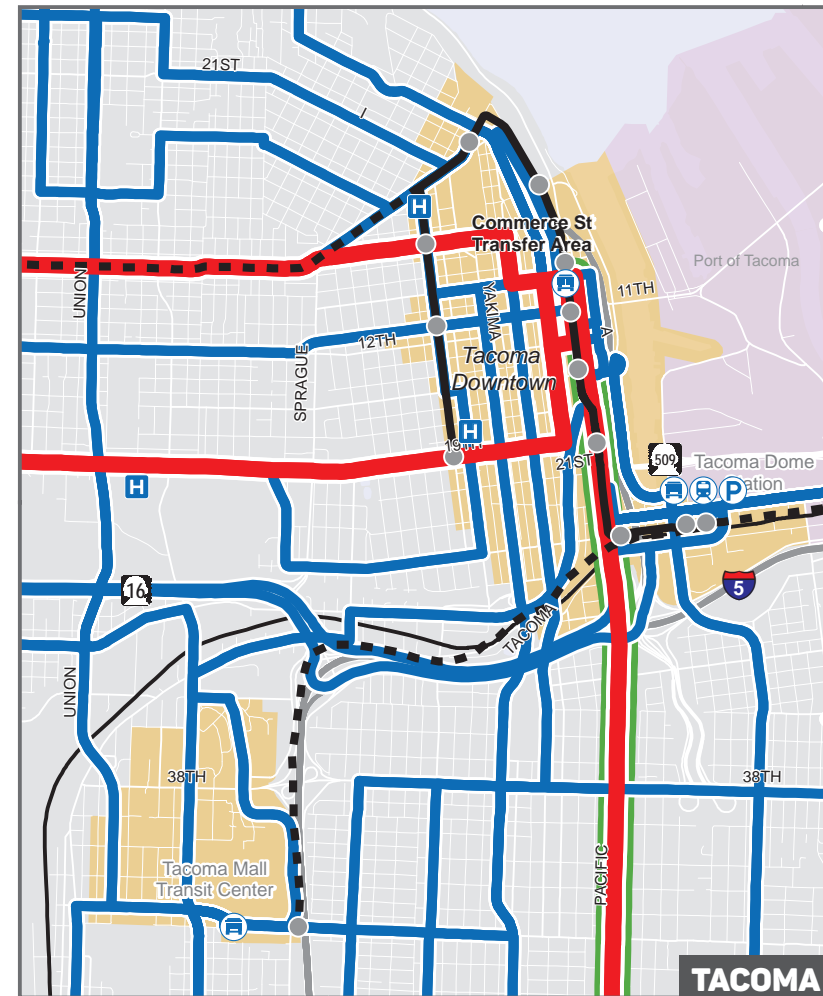
RAPID GROWTH



2.5% service hour growth
\$579M additional investment needed
821K service hours
22M boardings

This scenario maintains and upgrades current assets and increases service hours by 2.5 percent per year with a target of providing 640,000 annual service hours by 2030. The financial plan is unsustainable from 2019 through 2040, and would need additional operating funding of more than \$579 million to sustain this level of growth in service. Similar to the Incremental Growth scenario, this cost includes routine capital expenses but does not include the added capital expense for eventual expansion bus replacement and passenger facilities. To factor in future replacement of new purchases, additional capital costs of \$55-66 million will be incurred to replace the 240-260 new vehicles needed to operate at Rapid Growth frequencies. Agency growth would total approximately 45 percent from 2016-2040. Operator needs would increase by approximately 222 full-time equivalents (FTEs) or 48 percent. Assumptions in this scenario follow an unconstrained fiscal model.

Annual boardings will rise to 21.8 million and passengers per revenue hour will increase from 24 today to 27. This ridership forecast is very similar to the boardings under the Incremental Growth scenario of 21 million. The ridership similarity occurs because the components of the Rapid Growth scenario primarily consist of increased frequency on many existing routes. While frequency of service matters greatly to passengers when making the decision to take transit, frequency does not necessarily make a large impact on travel demand model outputs, which show much greater changes when new routes are added or when a certain community shows a large increase in jobs or population. For example, changing route 16: Downtown Tacoma-Tacoma Community College from running every 60 minutes to every 30 minutes under Incremental Growth nearly tripled



ridership; the further increase of providing service every 20 minutes under Rapid Growth yielded a smaller bump in ridership.

The Rapid Growth scenario includes 76 percent more service hours than the Baseline scenario. On a typical day, 74,000 riders would board Pierce Transit in 2040. Routes 1: 6th Ave-Pacific Ave, 2: S 19th St-Bridgeport Way, 3: Lakewood-Tacoma, 4: Lakewood-South Hill, 53: University Place, 400: Puyallup-Downtown Tacoma, 402: Meridian, and 500: Federal Way show the greatest ridership potential.

Approximately 127,000 annual service hours are allocated to early weekday mornings and weekday nights and 94,000 are allocated to weekends.



SCENARIO 3

2040 PIERCE TRANSIT ROUTES

AM Peak Period Frequency (Minutes)

- ▬ 0 - 15
- ▬ 16 - 30
- ▬ 31 - 60
- ▬ Enhanced Bus/HCT/BRT

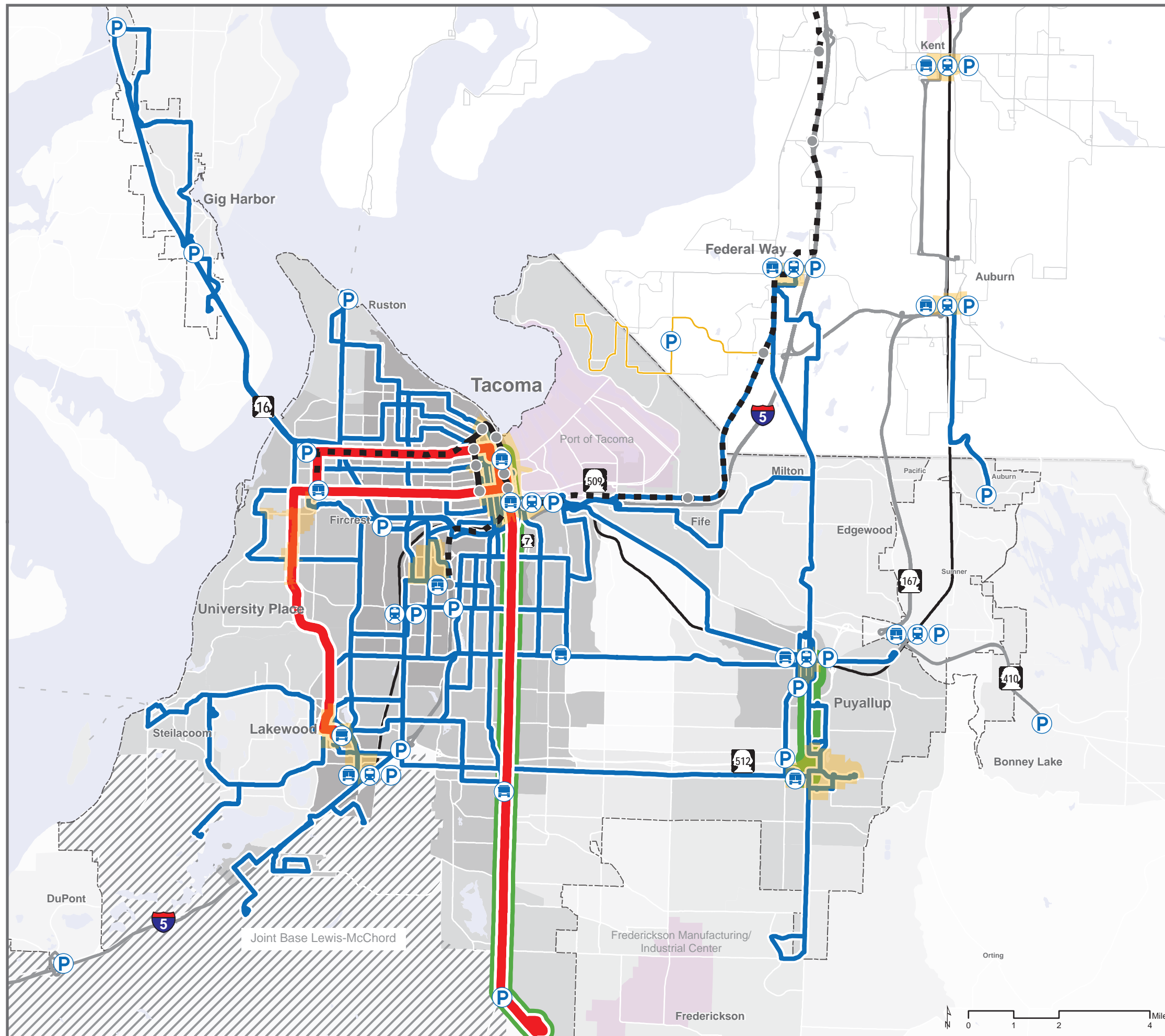
2040 POPULATION & EMPLOYMENT DENSITY

(Residents + Jobs) / Square Mile

- 2,000 or Fewer
- 2,001 to 4,000
- 4,001 to 6,000
- 6,001 to 8,000
- More than 8,000

- Existing/Proposed Sound Transit Light Rail Station
- ▬ Sound Transit Light Rail
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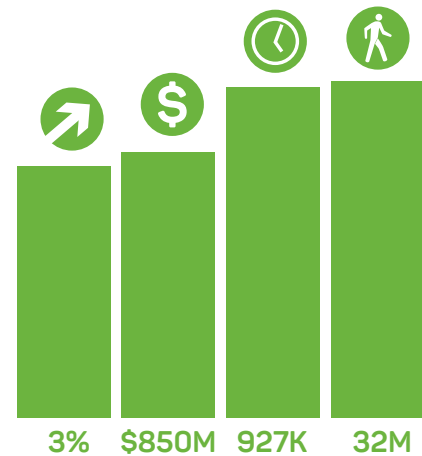
Sources: Pierce Transit, Sound Transit, King County Metro, Puget Sound Regional Council, Pierce County





SCENARIO 4A

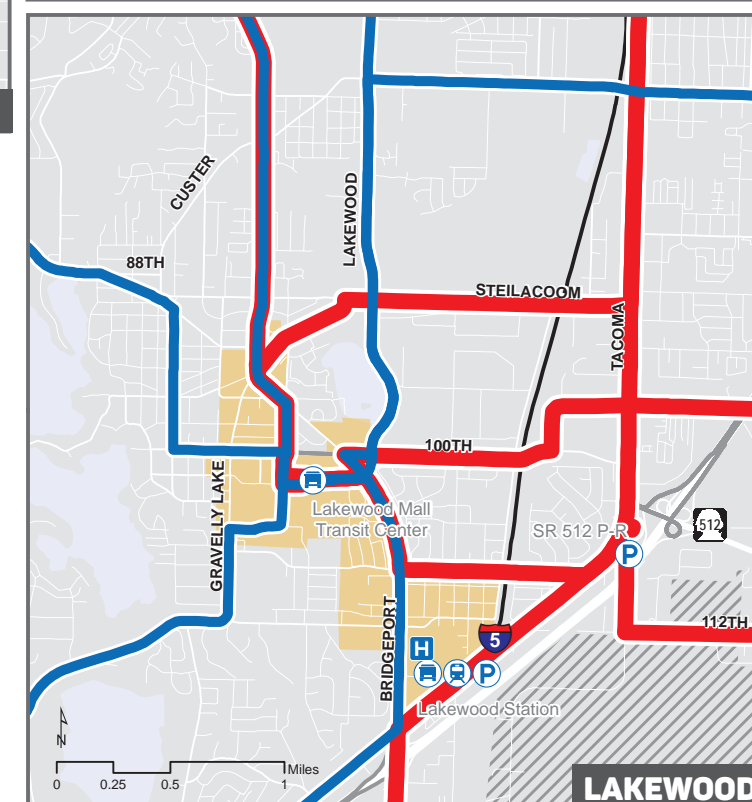
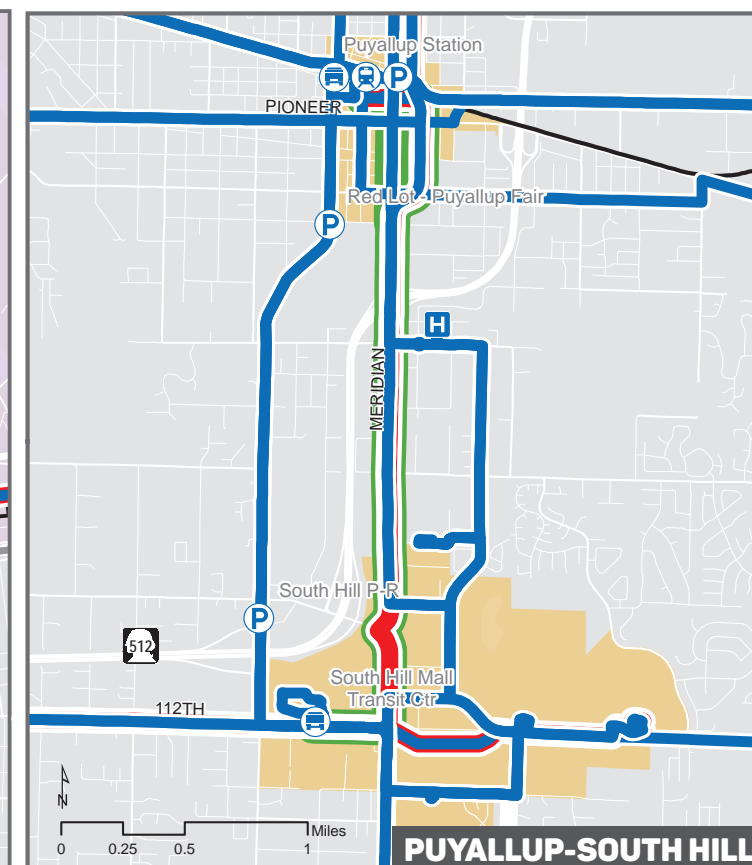
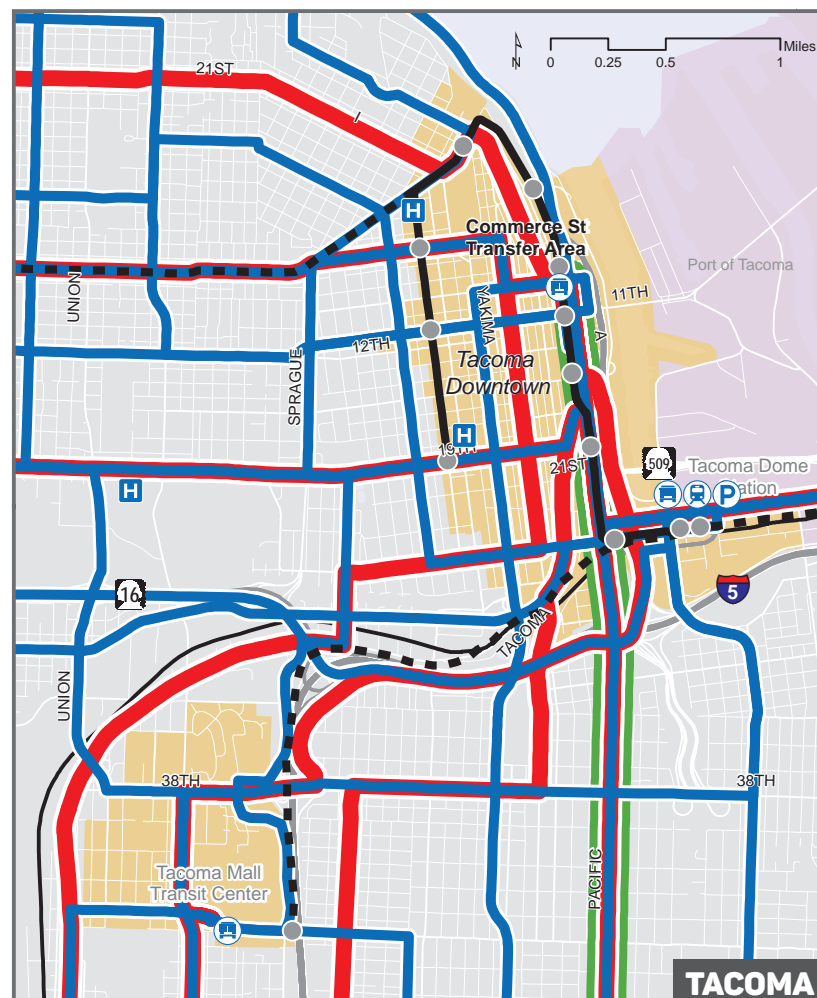
ASPIRATIONAL GROWTH



3% service hour growth
\$850M additional investment needed
927K service hours
32M boardings

This scenario envisions 3 percent annual growth in transit service hours, expanded or new routes, and unlimited or non-constrained funding availability. It achieves long-term agency priorities in years 11 through 25 (Horizon Years 2025-2040). Also known as “The Vision,” this scenario expands to approximately 900,000+ annual service hours by 2040. The plan would need additional operating funding of approximately \$850 million to be sustainable at this level of growth in service. Agency employee growth would total 57 percent from 2016-2040. Operator needs would increase by 288 full-time equivalents (FTEs) or 62 percent. To factor in future replacement of new purchases, additional capital costs of \$69-80 million would be incurred to replace the 265-285 new vehicles needed to operate at Aspirational Growth frequencies and to operate new routes. Pierce Transit currently collects 6/10 of each penny of sales tax generated within the PTBA. Washington State allows transit agencies to collect up to 9/10 per penny. An increase in sales tax collection from 6/10 to 9/10 (although first requiring a public vote) would make the financial plan sustainable through 2040.

The Aspirational Growth scenario projected ridership more than doubles compared to the Baseline scenario, up to 31.8 million annual boardings. This scenario also yields the highest productivity, with passengers per revenue hour predicted to rise from 24 today to 34. The Aspirational Growth scenario includes new limited-stop and high capacity routes serving the current Route 1: 6th Ave-Pacific Ave and Route 2: S 19th St-Bridgeport Way corridors. Limited-stop service means that buses serve major stops along a route with longer distances between stops, and is paired with local service



that stops every few blocks. This style of service can greatly reduce travel times – a key consideration of whether people take transit. The limited-stop routes under Aspirational Growth will carry the most passengers per service hour of any route in any scenario - 80 passengers per hour on Route 1 Limited and 105 per hour on Route 2 Limited.





The Aspirational Growth scenario adds 98 percent more service hours than the Baseline scenario. This system includes new routes and increased frequency, and will carry 107,000 passengers per day. The added limited-stop service facilitates much higher ridership flows from Puyallup and South Hill.

Approximately 136,000 annual service hours are allocated to early weekday mornings and weekday nights and 135,000 are allocated to weekends.

SCENARIO 4A






2040 PIERCE TRANSIT ROUTES











AM Peak Period Frequency (Minutes)

-  0 - 15
-  16 - 30
-  31 - 60
-  Enhanced Bus/HCT/BRT

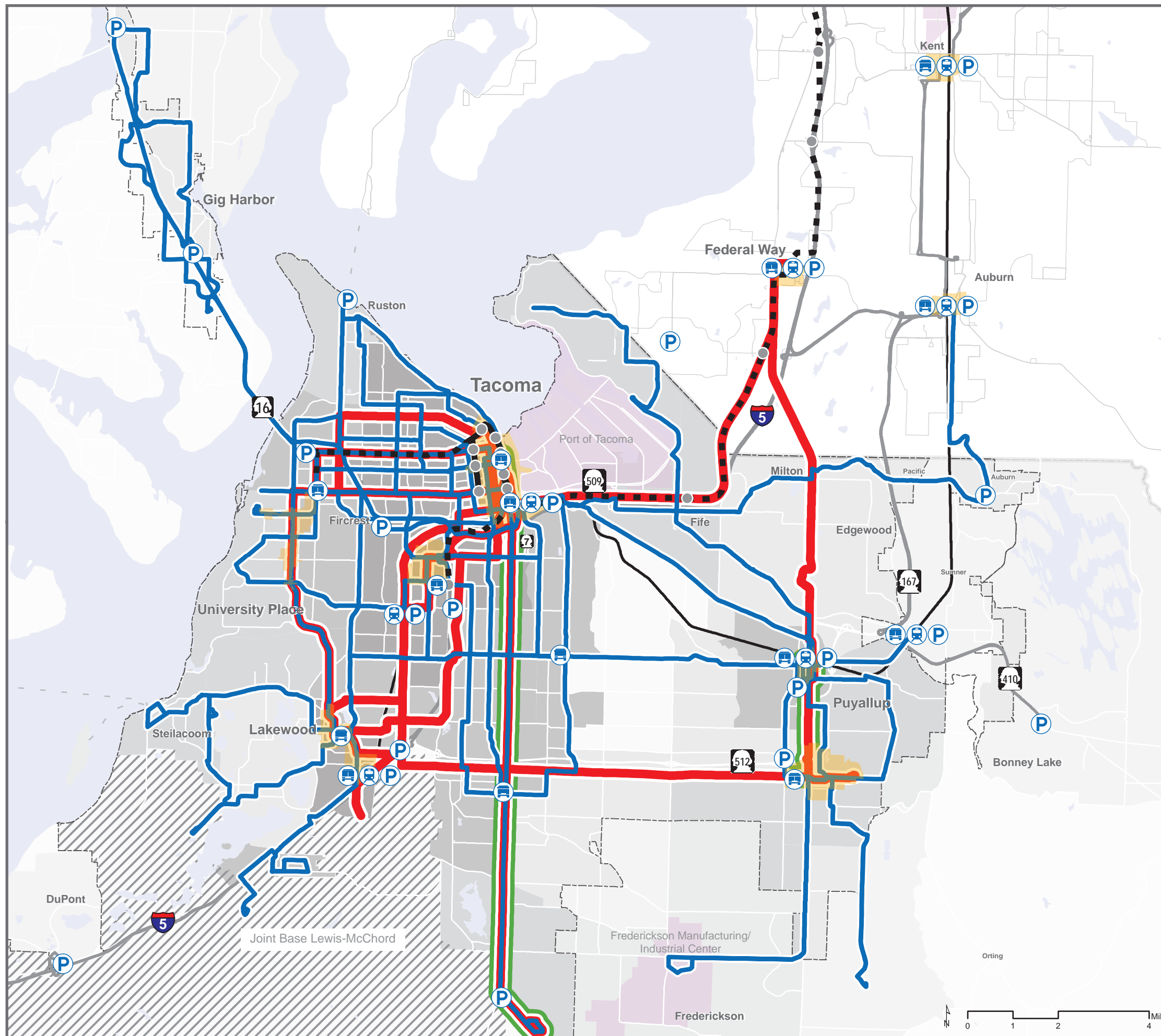
2040 POPULATION & EMPLOYMENT DENSITY

(Residents + Jobs) / Square Mile

-  2,000 or Fewer
-  2,001 to 4,000
-  4,001 to 6,000
-  6,001 to 8,000
-  More than 8,000

-  Existing/Proposed Sound Transit Light Rail Station
-  Sound Transit Light Rail
-  Sound Transit Commuter Rail
-  Proposed Sound Transit Light Rail
-  Sound Transit Bus
-  King County Metro Bus
-  Public Transportation Benefit Area Boundary
-  Urban Center
-  Manufacturing / Industrial Center
-  Hospital

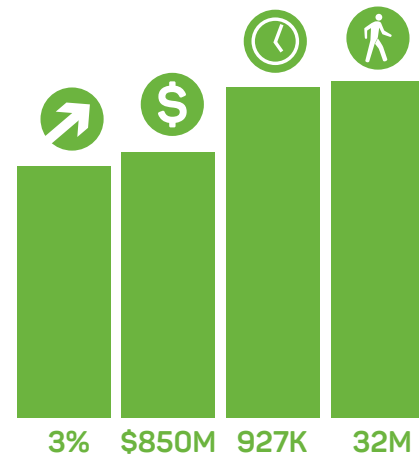
Sources: Pierce Transit, Sound Transit, King County Metro, Puget Sound Regional Council, Pierce County





SCENARIO 4B

ASPIRATIONAL GROWTH



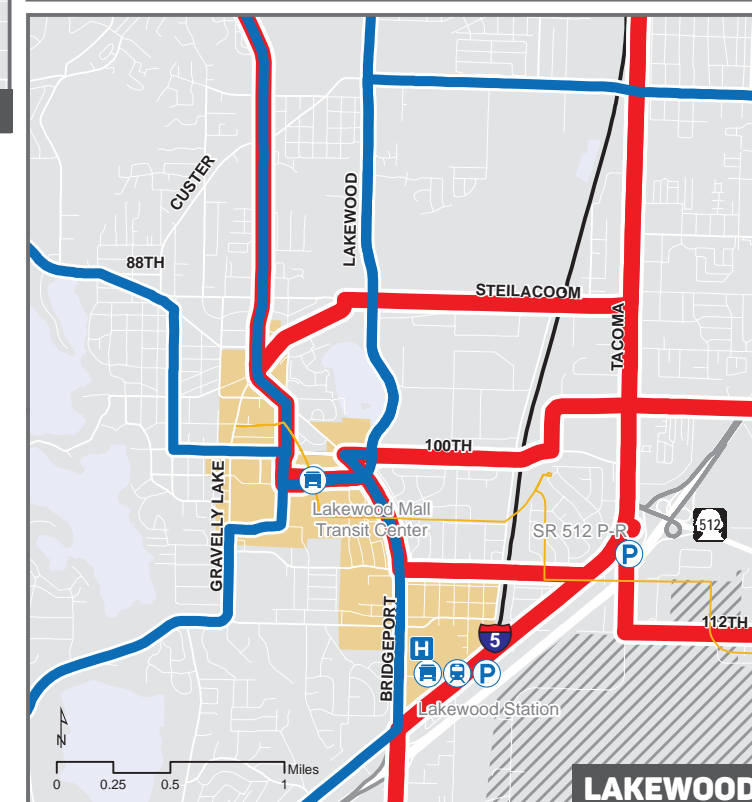
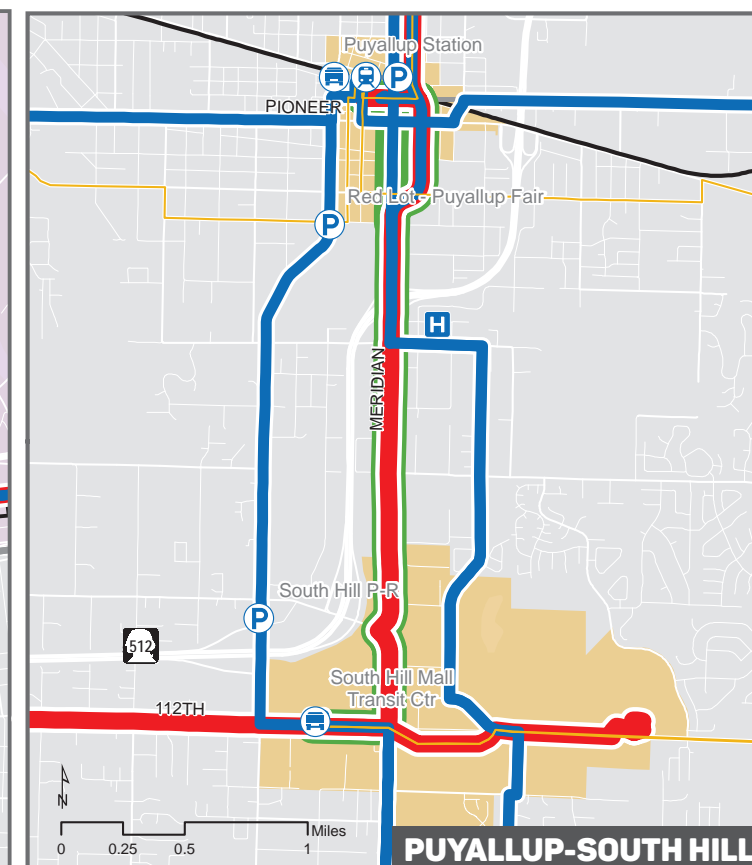
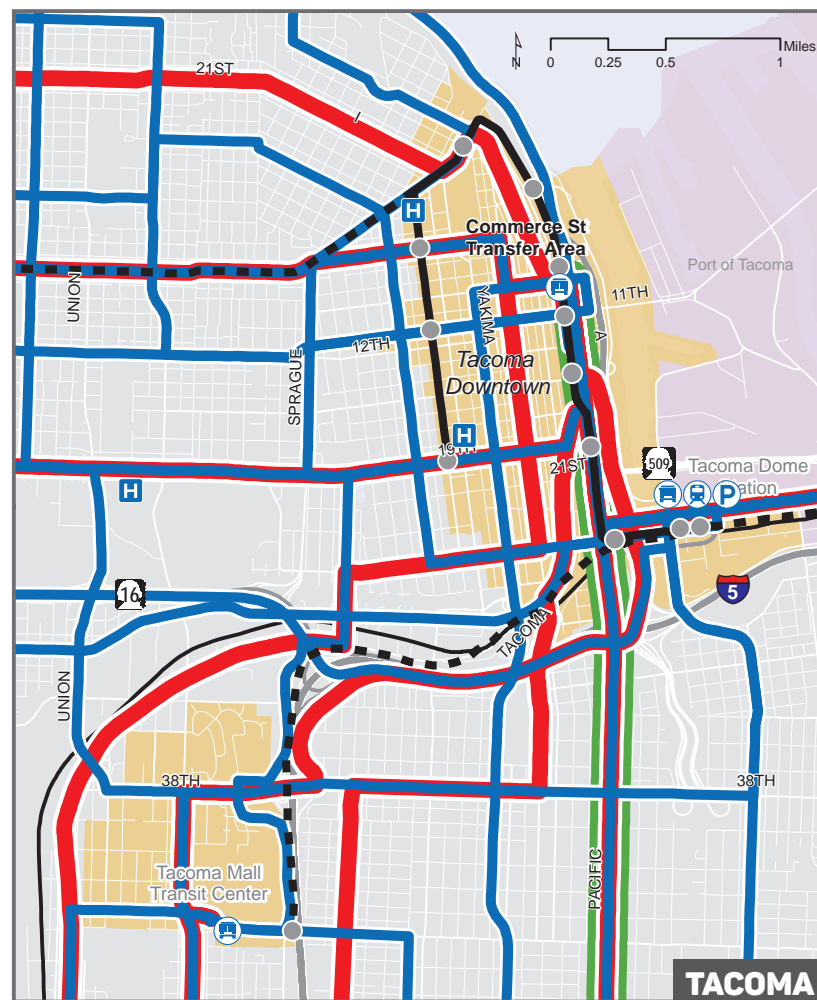
3% service hour growth
\$850M additional investment needed
927K service hours
32M boardings

Scenario 4B includes the same base of services as 4A; the main difference is that 4B seeks to expand the existing PTBA boundaries to reach new and emerging markets throughout the county. This scenario includes peak period service from major transit centers to population and employment centers such as the Federickson Manufacturing Industrial Center (MIC), Orting, Bonney Lake, and Canyon Road*. Some of these services rely upon roadway projects that are planned and unfunded, such as the S 176th Street Extension, Canyon Road Extension, and SR 162 to Cascadia Boulevard Extension. Therefore, this scenario is presented as an offshoot or alternative vision of Scenario 4A.

The number of service hours remains the same as Scenario 4A; the provision of additional service would be traded with less off-peak service within the PTBA. Since Scenario 4B adds peak service, capital costs of vehicle replacement increase compared to 4A to \$74-84 million for 275-295 vehicles. This also produces consequences to operating costs, as Pierce Transit would need to have more operators during peak hours.

Appendix D provides additional details on the annexation process and what would be required to expand the PTBA. As the scenarios show, ridership increases as service provision increases. With more transit available, a tipping point is reached at which a person also makes lifestyle changes, such as choosing a different place to live or deciding to live with zero or only one car per household. This results in an exponential increase in ridership from Scenario 1 to Scenarios 4A and 4B.

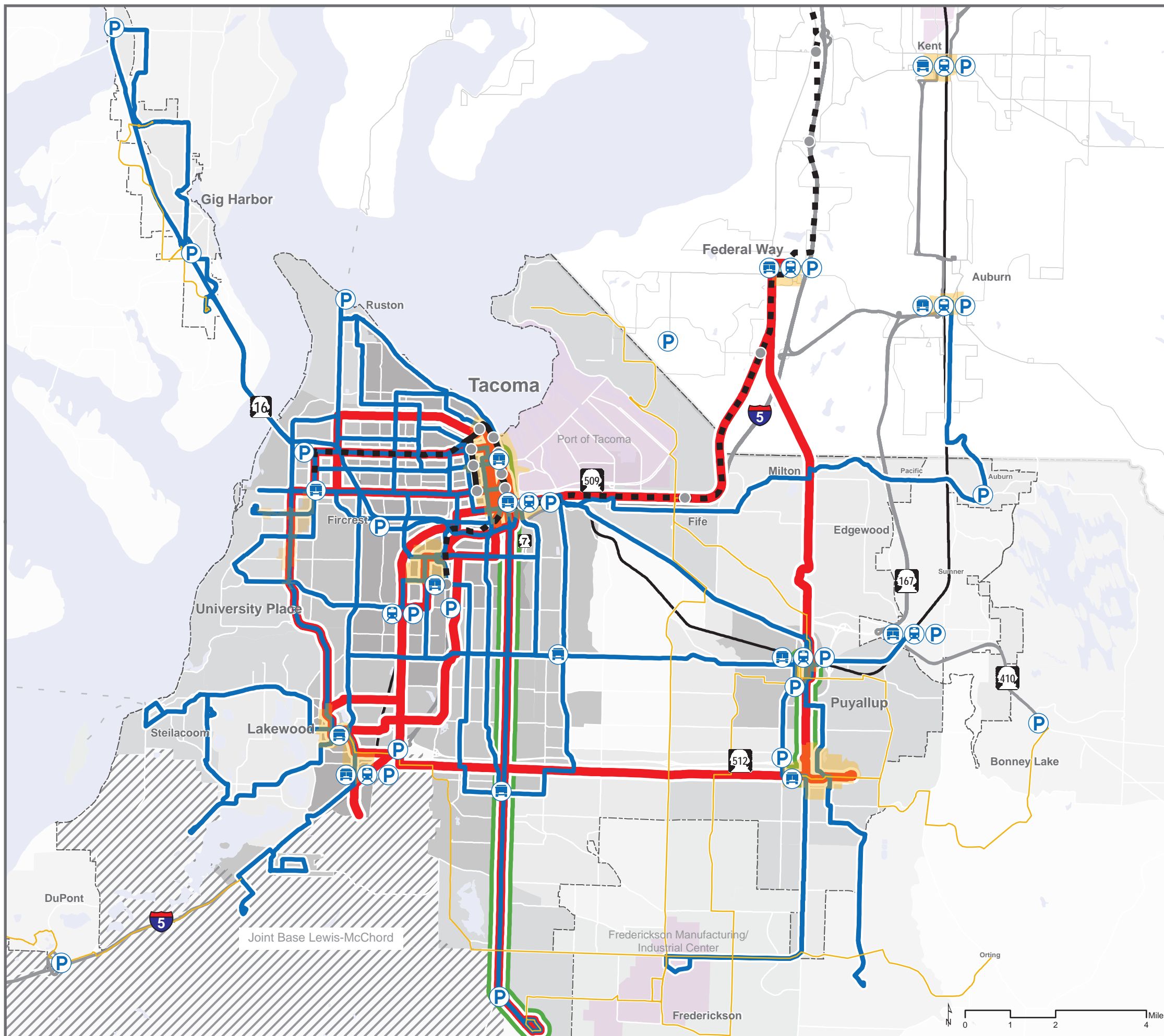
Approximately 135,000 annual service hours are allocated to early weekday mornings and weekday nights and 127,000 are allocated to weekends.



Please note that all routes in Growth Scenarios 2, 3, 4A, and 4B depicting service within Pierce County but beyond the current PTBA boundaries are conceptual, hypothetical, and illustrative only. If fixed route service were to be extended to Bonney Lake, Buckley, DuPont, Frederickson, Orting, or Sumner in the future, it would most likely be contracted, implemented through a public-private partnership, or introduced as a demonstration project (i.e., transit service operating in a pilot phase, generally lasting 1-3 years, designed to test the feasibility of the potential mode for eventual operationalization).

Jurisdictions may opt back into the PTBA through an election, although inclusion does not guarantee a minimum level of service or Fixed Route Service Type, as defined in Appendix A. Please see Appendix D for more information on the PTBA Boundary Process, including annexation.

*It also recognizes proposed highway, or roadway improvement projects, such as the Canyon Road Extension and new SR 167 freeway connection to I-5.



SCENARIO 4B

2040 PIERCE TRANSIT ROUTES

AM Peak Period Frequency (Minutes)

- ▬ 0 - 15
- ▬ 16 - 30
- ▬ 31 - 60
- ▬ Enhanced Bus/HCT/BRT

2040 POPULATION & EMPLOYMENT DENSITY

(Residents + Jobs) / Square Mile

- 2,000 or Fewer
- 2,001 to 4,000
- 4,001 to 6,000
- 6,001 to 8,000
- More than 8,000

- Existing/Proposed Sound Transit Light Rail Station
- ▬ Sound Transit Light Rail
- ▬ Sound Transit Commuter Rail
- ▬ Proposed Sound Transit Light Rail
- ▬ Sound Transit Bus
- ▬ King County Metro Bus
- Public Transportation Benefit Area Boundary
- Urban Center
- Manufacturing / Industrial Center
- H Hospital

Sources: Pierce Transit, Sound Transit, King County Metro, Puget Sound Regional Council, Pierce County

EVALUATING THE OPTIONS FOR FUNDING THE EXPANSION

Current resources will continue to support the same level of transit service that is provided today. Yet given the projected increase in population, the need to move people in efficient and sustainable ways, and the increasing demand for transit in the Puget Sound Region, expanding Pierce Transit services provides a viable solution for mobility and access. Pierce Transit's financial plan plays a role in determining the outlook for transit services over the long-range planning period. The financial plan provides an estimate of the Agency's future capital and service capabilities, based on two major drivers:

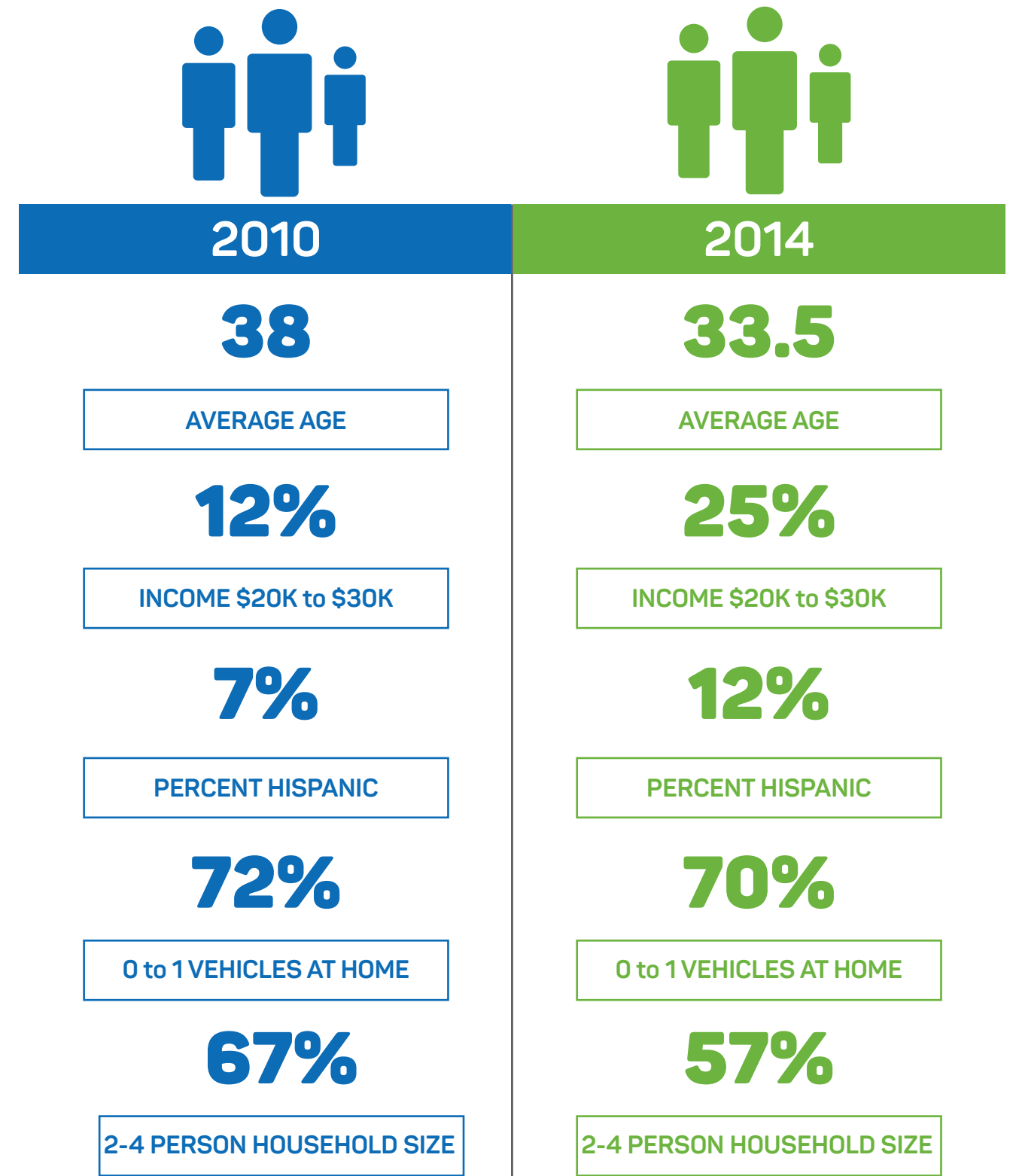
- **Revenue** - Retail sales tax, the major source of transit funding, is a volatile source. Pierce Transit recognizes that its heavy reliance on sales tax revenues makes it more susceptible to economic fluctuations than most government agencies. A slight change – either an increase or decrease – could result in major changes in service levels.
- **Expenditures** - Wages and benefits account for approximately 70 percent of operating expenditures.

To achieve any of the proposed growth scenarios, Pierce Transit must seek new partnerships and resources while continuously striving for service cost-effectiveness.

WHO ARE PIERCE TRANSIT'S CUSTOMERS?

The service scenarios support existing ridership patterns while attracting new riders. A snapshot of who rides Pierce Transit provides insights into who in the community currently benefits from public transportation. Comparing customer surveys in 2010 and 2014 shows that Pierce Transit customers have become slightly younger and more diverse in terms of the Hispanic population. While only a third of riders have a driver's license, more than half of respondents have either one or two vehicles available at home – meaning Pierce Transit serves both those without alternative transportation options as well as those who choose not to drive.

PIERCE TRANSIT'S CHANGING RIDERSHIP CHARACTERISTICS



MEASURING TRANSIT PERFORMANCE




As mandated by federal law, transit agencies must adopt a system of performance measures to ensure that programs reach desired outcomes. As fixed-route service hours grow and new routes are implemented, Pierce Transit must be able to easily but accurately demonstrate that its actions are producing results – that routes meet productivity targets and resources are being used effectively and efficiently.

The purpose of creating and adopting performance measures is further defined by the USDOT below.²

- To clarify or define goals
- To monitor or track performance over time
- As a reference for target setting
- As a basis for supporting policy and investment decisions by comparing alternative options
- To assess the effectiveness of policies and strategies

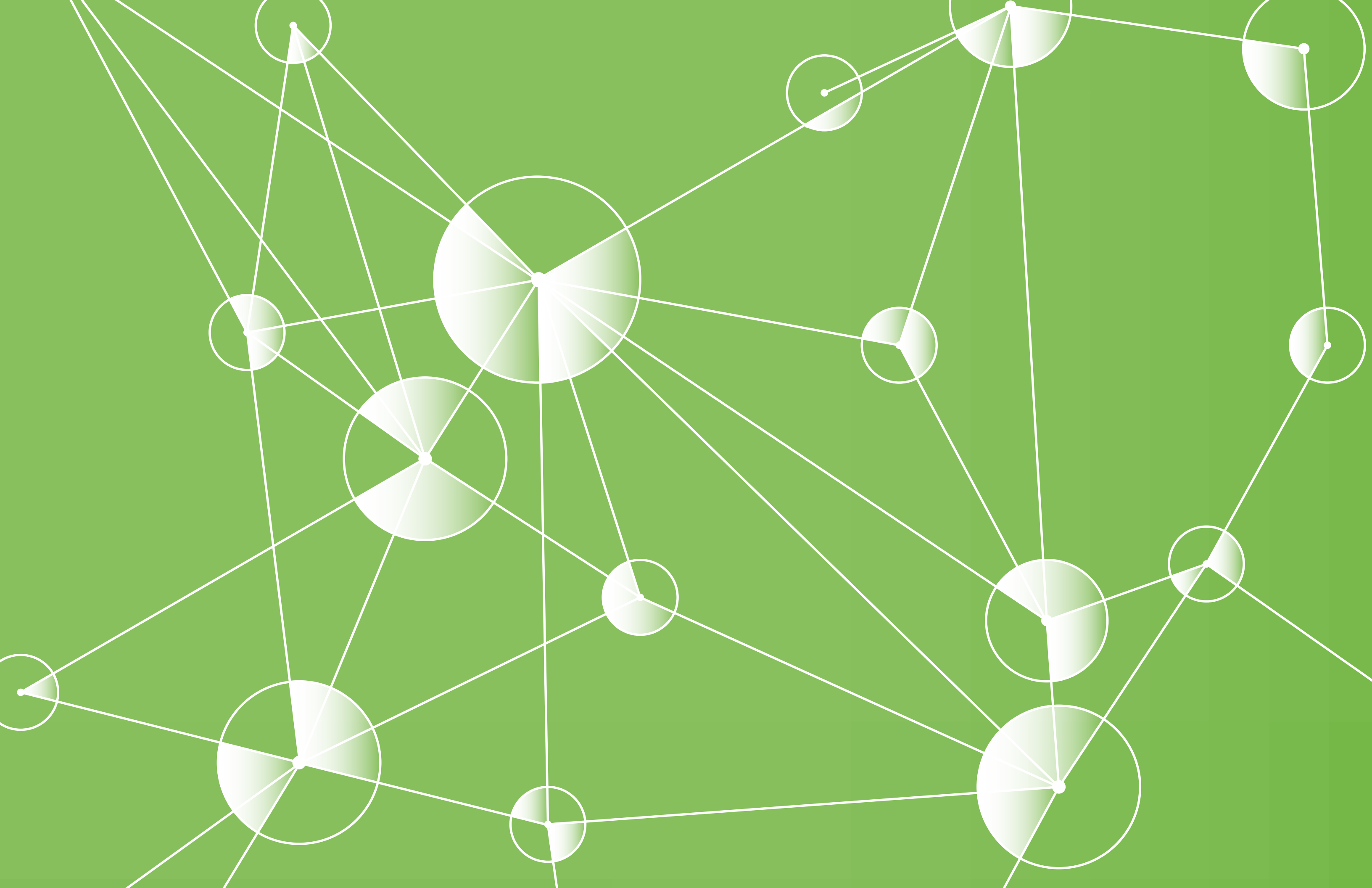
Pierce Transit has reevaluated and updated its System Performance Measures & Service Guidelines to more closely match national best practices for transit agencies. In selecting new performance measures, the agency applied the following criteria:

- Does it represent a key concern of the agency? (e.g., is it listed in the 2015-2020 Strategic Plan or annual Transit Development Plan?)
- Is the measure clear?
- Are data readily available for calculating the measure?
- Can it be forecasted?
- Does it measure something the agency and its investments can influence?
- Is the measure meaningful for the types of services offered or geography covered?
- Is it measuring what matters to the public?

	CATEGORY	#	MEASURE
SERVICES 	SERVICE SUPPLIED	1	Annual service hours
	SERVICE SUPPLIED	2	Annual vehicle revenue hours
	SERVICE SUPPLIED	3	Annual service miles
	SERVICE SUPPLIED	4	Annual vehicle revenue miles
	SERVICE SUPPLIED	5	Percentage of time points departing on time
	SERVICE CONSUMED	6	Annual unlinked passenger trips (boardings)
	SERVICE CONSUMED	7	Missed vehicle trips
	SERVICE CONSUMED	8	Boardings per capita
	SERVICE CONSUMED	9	Peak load factor (also measured as average passenger load)
	SERVICE EFFECTIVENESS	10	Unlinked passenger trips per vehicle revenue hour
	SERVICE EFFECTIVENESS	11	Unlinked passenger trips per vehicle revenue mile
	SERVICE EFFECTIVENESS	12	Operating expense per unlinked passenger trip (cost per passenger)
	SERVICE EFFICIENCY	13	Operating expense per vehicle revenue hour
	SERVICE EFFICIENCY	14	Operating expense per vehicle revenue mile
FINANCES 	FINANCE	15	Annual operating expenses
	FINANCE	16	Annual capital expenses
	FINANCE	17	Annual farebox revenues
PEOPLE AND PASSENGERS 	COST EFFECTIVENESS	18	Farebox recovery ratio
	HUMAN CAPITAL	19	Employee engagement rate
	HUMAN CAPITAL	20	Voluntary employee turnover ratio (percent to total turnover)
	SAFETY	21	Number of preventable accidents per 100,000 service miles
	SAFETY	22	New or reopened on-the-job injury claims filed
	PASSENGER AMENITIES	23	Percentage of benches and shelters in urban versus suburban areas
	PASSENGER AMENITIES	24	Transit accessible park-and-ride spaces provided
	PASSENGER AMENITIES	25	Transit accessible park-and-ride utilization
	CUSTOMER SATISFACTION	26	Number of complaints
	CUSTOMER SATISFACTION	27	Number of compliments
CUSTOMER SATISFACTION	28	Overall satisfaction index (percentage)	
CUSTOMER SATISFACTION	29	Perception of personal safety and security at stations, shelters, and stops	
CUSTOMER SATISFACTION	30	Perception of personal safety and security on board vehicles	

BOLD = Reported in annual NTD transit agency profiles (Pierce Transit ID 0003)

² Performance Based Planning and Programming Guidebook, U.S. Department of Transportation – Federal Highway Administration Report #FHWA-HEP-13-041 (September 2013)

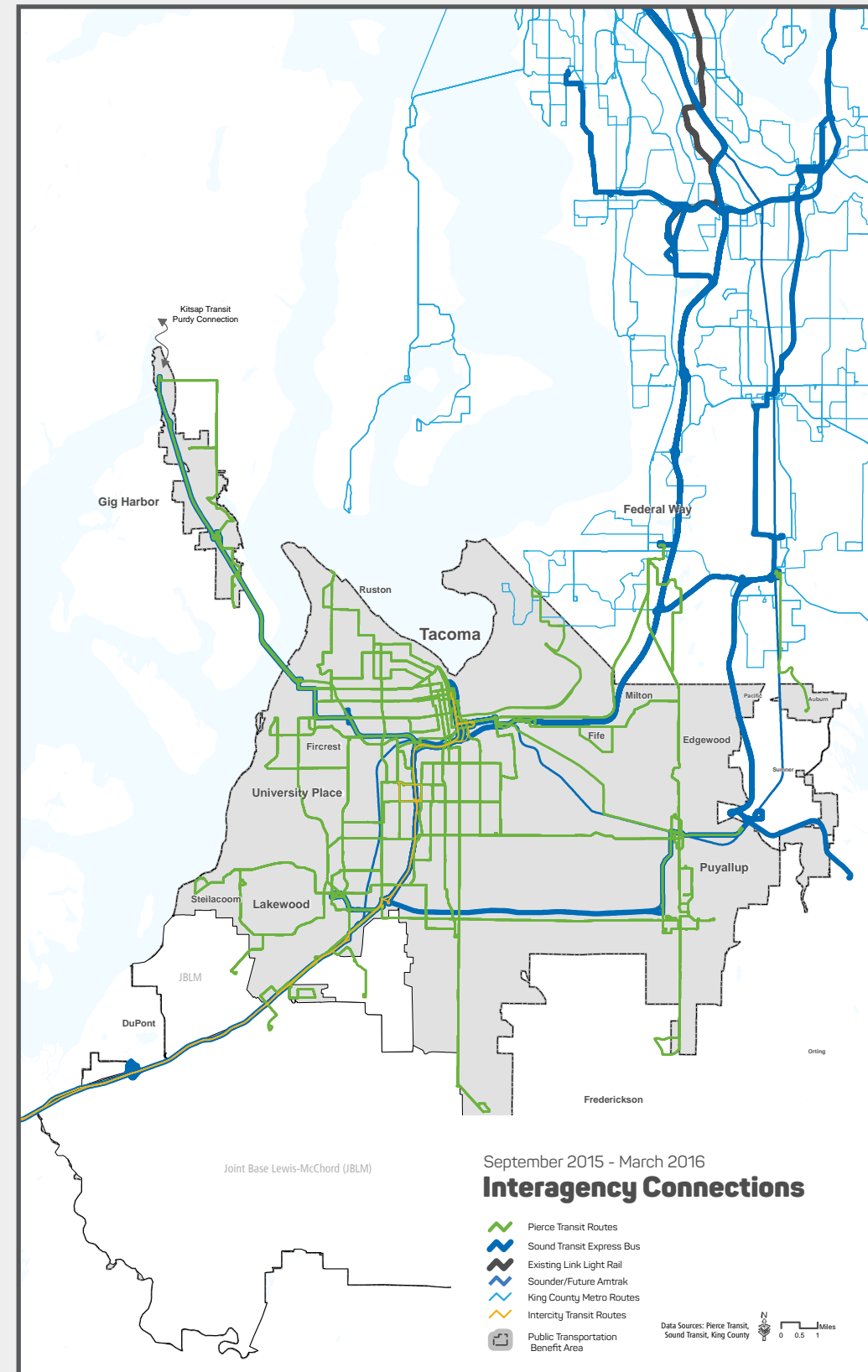




A COORDINATED SYSTEM

Schedules are coordinated to meet passenger needs – matching when and where they need to travel.

In the same way, regional planning is coordinated with the partners and municipalities within the benefit area. Given the need to provide transit with limited resources, coordination with partners ensures that Pierce Transit can maximize resource efficiency and effectiveness. Pierce Transit strives to provide seamless transitions between systems within its family of services, while coordinating service types with land use patterns. The network of fixed routes running on set schedules, express services, vanpools, trolleys, and door-to-door service for those with disabilities provides a menu of options and alternative modes of transportation to get around the county.



INTERAGENCY & TRANSIT SYSTEMS COORDINATION

Pierce Transit works with the public, government agencies, other transit providers, and the state and federal government to create high-quality service. A snapshot of its partners includes:

- 1) The 13 municipalities within the Public Transportation Benefit Area (PTBA) plus unincorporated Pierce County
 - Demonstrates that Destination 2040 complements the transportation components of their adopted long-range plans
- 2) Joint Base Lewis-McChord (JBLM)
 - Pierce Transit participates in the South Sound Military & Communities Partnership, coordinating services
- 3) Regional planning agencies (PSRC)
 - Pierce Transit seeks to achieve the regional vision set forth in PSRC's long-range plan, Transportation 2040
- 4) Public transit providers (King County Metro, Sound Transit, etc.)
 - Destination 2040 dovetails with Sound Transit's 2040 Regional Long Range Plan and proposed build-out under ST3
 - Connections to Sound Transit express buses, Sounder commuter trains, King County Metro, Intercity Transit, plus the state (WSDOT) and Pierce County ferry systems are evaluated continually
- 5) Federal Government (FTA)
 - The agency fully complies with federal regulations and adopts performance-based planning
- 6) State government (Washington State Department of Transportation)
 - Pierce Transit's projects align with any future state or federal highway corridor expansion projects
 - Agency plan aligns with the State Legislature's Growth Management Acts (1990 and 1991)



- 7) Community organizations (Pierce County Coordinated Transportation Coalition)
 - Pierce Transit engages special needs populations and community stakeholders
- 8) Private transit providers (Greyhound, Amtrak)
 - The agency fosters connections at hubs such as Tacoma Dome Station and the Amtrak Station

THE PUGET SOUND TRANSIT NETWORK

Pierce Transit's service area is part of the larger Puget Sound region (aka the South Sound). People travel between King, Thurston, Pierce, and Kitsap Counties, often relying upon transit service to reach destinations. Pierce Transit's regional transit agency partners also have ambitious plans to grow and change to meet demands.

Sound Transit Express Bus

Ten Sound Transit express routes connect to Federal Way, Auburn, Bonney Lake, DuPont, Lakewood, downtown Tacoma, and points beyond. While Pierce Transit is not responsible for the design or funding of this regional service, it is under contract to operate 13 of Sound Transit's 26 total routes. These express routes serve either transit centers or park-and-ride lots at multiple Pierce County locations (e.g., Lakewood, Puyallup, Sumner, Tacoma Community College, South Hill, SR 512, and DuPont.) Three of the future service scenarios all depict local bus connections to these regional routes, particularly in Downtown Tacoma and at Tacoma Dome Station, which is the primary regional transit hub and gateway to the South Sound.

Intercity Transit

Intercity Transit provides express bus service to and from Pierce County out of Thurston County. Intercity operates the 603, 605, and 612 express routes providing service between Downtown Tacoma, Tacoma Dome Station, SR 512, Olympia, and the Route 620 providing access to the Tacoma Mall, SR 512 Park-and-Ride, Lacey, and Olympia.

Kitsap Transit

Kitsap Transit continues to serve the Purdy park-and-ride with one route originating in Port Orchard at the Ferry Dock. The four future scenarios maintain connections to Kitsap Transit at the Purdy park-and-ride with existing local service (Route 100) and express service (Route 102).

King County Metro Transit

King County Metro (KCM) provides bus service throughout King County with connections to Pierce Transit service at the Auburn Sounder Station (Route 497), and Federal Way Transit Center (Routes 500 and 501). The four future scenarios demonstrate ongoing or planned connections with KCM's routes.

Sound Transit Link Light Rail Connections

The 1.6-mile Tacoma Link light rail line currently serves six stations between the Theater District and Tacoma Dome Station. Trains run approximately every 12 minutes during the day and the majority of the service operates within exclusive rights-of-way. One million annual boardings are

forecasted from 2015 through 2019.

Voters approved Sound Transit 2 in 2008, which included funding for a partnership to explore options for expanding Tacoma Link. The next phase will identify and study alternative travel corridors for expanding the Tacoma Link system and produce a project financing plan that identifies committed and potential funding sources.

Sounder Commuter Rail Connections

Sound Transit is planning to add three new weekday round trips to the South Line (Seattle to Tacoma/Lakewood) between 2016 and 2017, per an agreement reached between Sound Transit and the BNSF Railway in 2010. Capital projects are in the planning stages to double track the South Line segment between the L Street Yard and Tacoma Dome Station (the Tacoma Trestle replacement project), and the segment between the 66th Street bridge in Tacoma and Bridgeport Way in Lakewood. These improvements are scheduled for completion in 2017, in time for the final new round trip. Sounder South Line commuter rail revenue hours are forecasted to increase by 18.6 percent (1,319) from 2015 through 2019. Annual boardings system-wide are expected to increase by 13.3 percent (400,000) within that same five-year time period.

“TURN PROBLEMS INTO POSSIBILITIES AND CHALLENGES INTO CHANCES.”

– Mary-Frances Winters, President and CEO of the Winters Group, an organizational development and diversity consulting firm

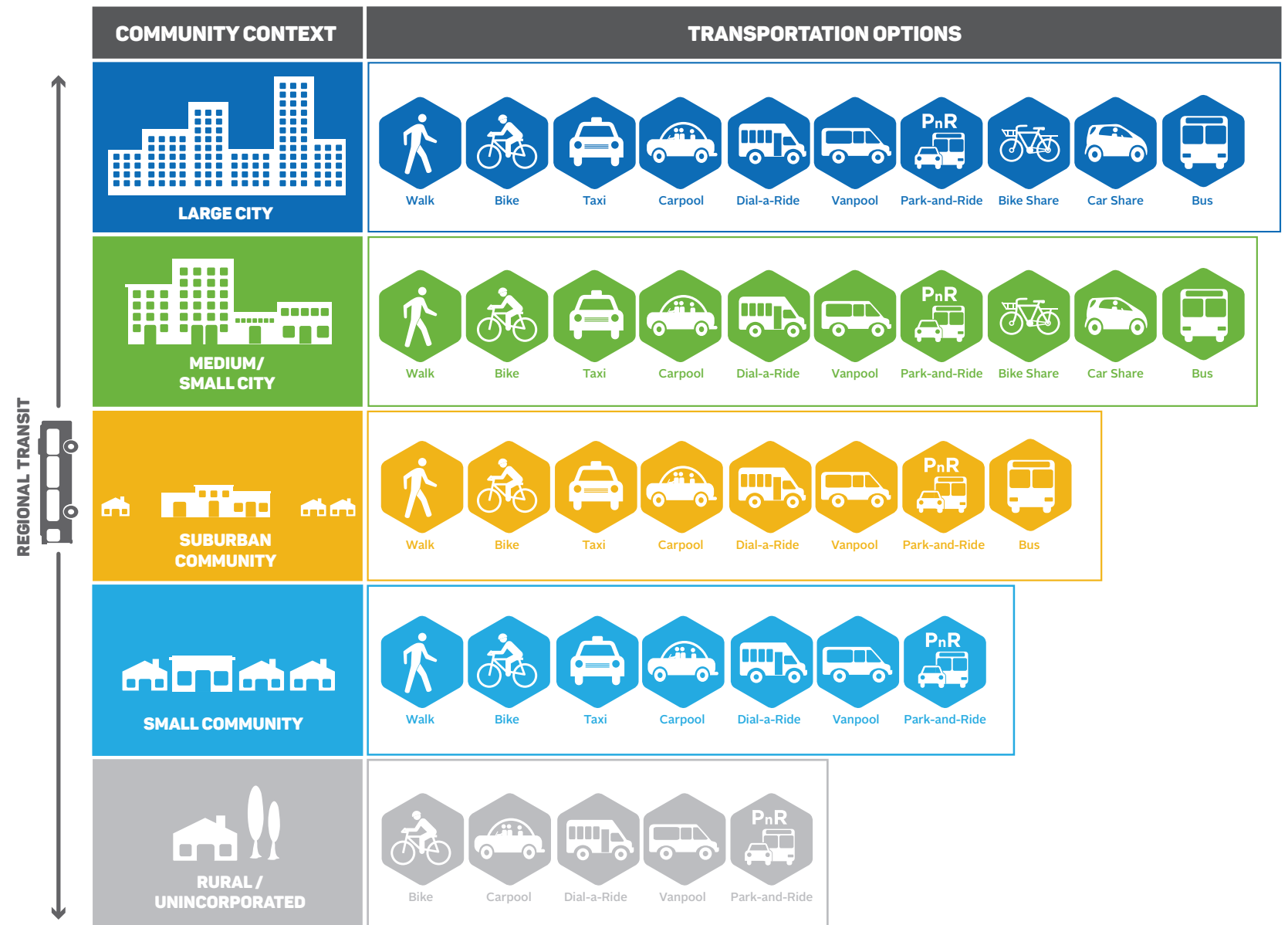
In addition, Sounder commuter rail access will be improved by 2018 for stations in Tukwila, Auburn, Sumner and Puyallup. Station access improvements for Tacoma, South Tacoma and Lakewood are scheduled to be completed by 2023.

A new Route 580 was implemented in mid-2015, which connects the Lakewood station to the Puyallup station via SR 512. This new crosstown route provides fast commuter service connecting Lakewood Station, the SR 512 Park-and-Ride, South Hill Park-and-Ride, the Fairgrounds Red Lot, and Puyallup Station.

Other Sound Transit capital projects in the works for Pierce County include:

- Replacing the wooden single-track railroad trestle east of Freighthouse Square in Tacoma with a modern, double-track bridge. The new bridge will increase passenger and rail capacity along the corridor and improve reliability for Sounder and Amtrak passenger service.
- The existing rail yard site in Lakewood is being expanded to store the seven train sets needed for additional Sounder train service beginning late 2016. Proposed improvements include construction of a third layover/storage track; upgrades to train crew accommodations; addition of 45 employee parking spaces; updates to existing yard roadways, the site lighting security system, and drainage facilities.
- Sumner Sounder station access improvements for pedestrians, bicyclists, and motor vehicles (traffic circulation). A 400-stall parking garage is also proposed for the site.
- Puyallup Sounder station access improvements for pedestrians (including two pedestrian bridges), bicyclists, and motor vehicles (traffic circulation). A 420-space parking garage is proposed at the Eagles site, along with 180 additional offsite surface parking spaces to the northwest plus 100 additional leased spaces to the south.

TRANSPORTATION CHOICES VARY BY COMMUNITY SIZE



SERVICE INNOVATIONS

Pierce Transit's Business Partnerships and Service Innovation Planners are charged with delivering business strategies that respond to the communities' unique transportation needs. They oversee data analytics and market research associated with potential new service demonstration projects. In the coming years Pierce Transit will have to continue to adapt and respond to the changing transportation landscape.

COMMUNITY USE VANS

Fixed-route service is most successful and efficient in dense urban areas where ridership, farebox recovery, and passenger per hour metrics are high. In rural areas, a different model of service may work better to keep costs low but still provide much needed service to customers. A menu of options can be developed that best meet customers' needs. One such model of service is community use vans. Some organizations have drivers but lack the vehicle and maintenance resources to transport their people. Pierce Transit could assign a vehicle and partner to fund the operating costs. Other organizations have neither drivers nor maintenance. For these groups, Pierce Transit could provide all operating and capital elements. This customized service would meet needs with less costly solutions than providing fixed-route buses or smaller 25-foot vehicles used for hybrid services.

HIGH CAPACITY TRANSIT (HCT)

Pierce Transit will continue to explore HCT options. HCT is generally defined as enhanced bus service that operates on dedicated bus lanes or other transit ways to combine the flexibility of buses with the efficiency of rail. HCT provides greater service reliability and increased customer convenience. Using FTA's Small Starts criteria, characteristics of HCT would include transit stations, signal priority/preemption, low floor/level boarding vehicles that are often Euro style articulated coaches with doors on both sides for ease of boarding, special branding of the service, frequent service that is 10 minutes peak/15 minutes off peak, and service offered at least 14 hours per day. Key corridors for consideration are the Route 1, Pacific Avenue and 6th Avenue corridors, and Route 2 Bridgeport Way. Historically, the City of Puyallup expressed interest in a corridor that included Meridian/SR 161, however, this may be a corridor to test initially with express or custom bus commuter service to build ridership before a HCT service would be considered. Pierce County may want to explore corridors of interest such as Canyon Road or 176th Street in unincorporated Pierce County. Both areas are currently outside the PTBA, but the County has identified them for significant future growth.

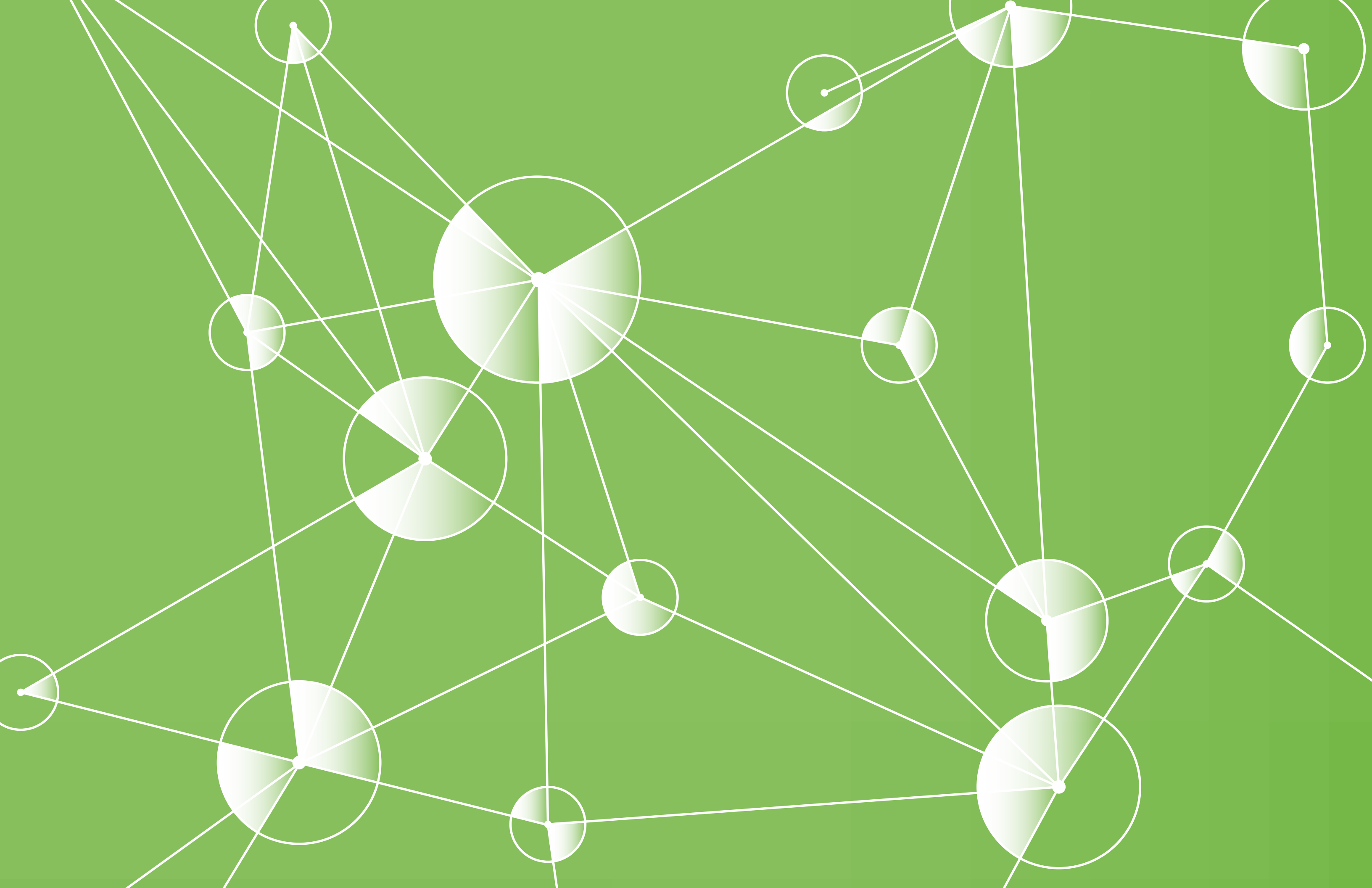
3P (PRIVATE AND PUBLIC PARTNERSHIPS)

Pierce Transit will continue to develop partnerships with businesses, non-profits and government agencies. The Business Partnerships and Service Innovation Planners will help develop transportation solutions with all of these entities. An example of this type of partnership was the Custom Bus which enabled the Western Institutional Review Board (a large research company) to move from Olympia to Puyallup. They developed a fixed route for employees and other riders to use, which was one of the factors that enabled WIRB to relocate to Pierce County. Pierce Transit sees more of these opportunities in the future, working directly with business and governments to create a tailored solution with shared costs. Other opportunities exist in both short-term projects, such as requests for community transit services for events , or long-term service solutions that address areas with high employment densities as in our Regionally Designated Growth Centers and Manufacturing Industrial Centers. They will also partner with cities or towns which are not currently in the PTBA for potential new services to their communities via full funding partnerships or contracted service.

ZONAL SERVICE IN RURAL COUNTY AREAS

In rural areas where population densities are low, fixed-route service is only part of the solution. Other areas the Business Partnerships and Service Innovation Planners can develop include establishing zonal or hybrid on-demand style service, so they only use vehicles and resources when needed. They then establish pre-arranged bus stops where customers can make reservations. The agency foresees an Uber-like app where they are as responsive as the private sector when that type of transportation network company service is not available. The agency must adapt to customers' needs without replicating private sector service and while utilizing limited resources wisely.







LOOKING TOWARD 2040

Together Pierce County and Pierce Transit have a long but surmountable task ahead of them with the goal of implementing either of the two Aspirational Growth scenarios (4A or 4B) by 2040, as well as reaching a more balanced public transportation and land use nexus.

Together, partners need to define what success looks like – likely increased ridership, more compact urban infill development or redevelopment, and seamless regional connections – but what else marks progress? The Agency must define who the transit system is for, both transit-dependent and “choice” riders, and what it serves (i.e., the heaviest-traveled roadway corridors in need of traffic relief). Pierce Transit has suffered setbacks in the past, such as the two failed taxing amendments in 2011 and 2012. But by learning from the past and continuously restoring or expanding service at current funding levels of 6/10ths of 1 percent sales tax (Washington State law allows up to 9/10ths of 1 percent), Pierce Transit will undoubtedly position itself to succeed in asking the public for the remaining 3/10ths, in order to realize its long-range vision of frequent and reliable services that are locally focused but regionally connected.



Image use pending: Patrick Choi

Opportunities to raise the profile of transit are numerous. Pierce County and especially the City of Tacoma desire transit-friendly developments and street design. Continuing unrest in the Middle East plus the threat of climate change make transit investments that serve compact mixed-use communities more logical and sustainable than roadway investments. Subsequently, a large customer base of Millennials (those born between 1982-2004) and older adults is a ripe market for transit usage as they choose urban over suburban lifestyles.

Pierce Transit is fortunate to be implementing its transit expansion plan at this time, for five principal reasons:

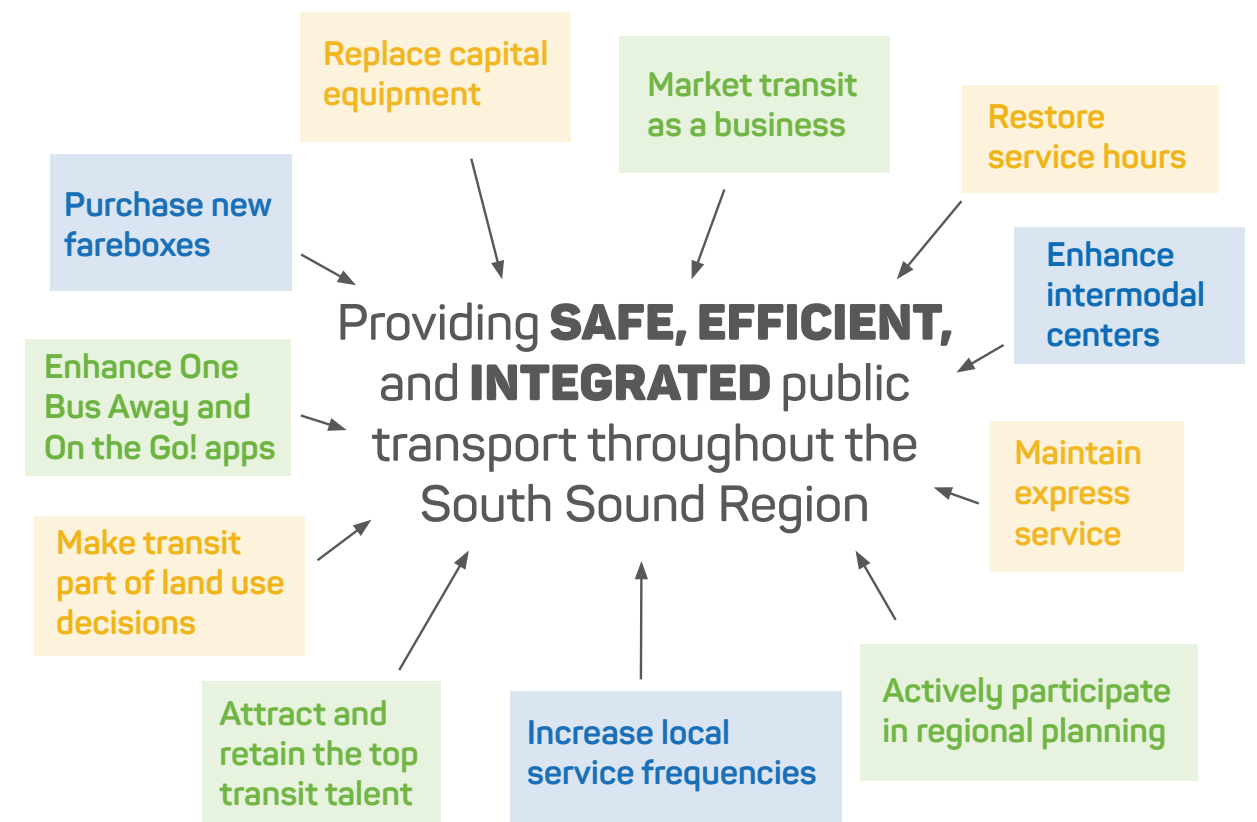
- The Agency already has a comprehensive and far reaching fixed-route transit system in place that will serve as the backbone of the proposed system;
- Cities such as Tacoma and Puyallup have recognized in their comprehensive transportation master plans that an automobile-dominated land use pattern is not only unsustainable but no longer desirable;
- The Agency can take what has successfully been done in the past and pick and choose from many “best practices” already time-tested in other West Coast cities with regard to transit alternatives and transit-oriented development. Pierce Transit will use Destination 2040 to further integrate our system within the urban fabric of the Pierce County of tomorrow;
- Longer and longer commute times due to unpredictable traffic congestion are

forcing Pierce County citizens to rethink transit and forgo the suburban “drive everywhere” lifestyle choice; and

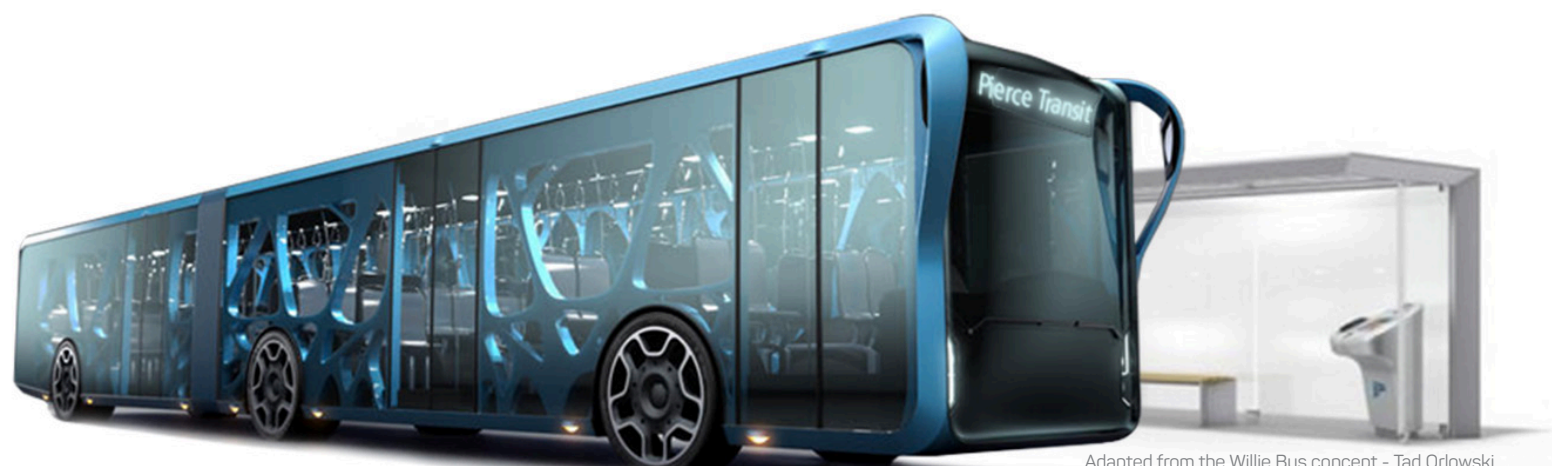
- The city of Tacoma lies in a geographically constrained area where building up and inward instead of outward makes more sense in the long-term. As Mark Hinshaw (Principal at Walker Macy, a local architecture, urban planning, and design firm) notes in the January 2015 edition of Planning magazine, “Tacoma is terrific. It’s our Brooklyn. I need say no more.”

In terms of positioning the Agency for long-term success, key issues the Agency must tackle include:

- How does the Agency continue learning from the past while optimistically, but realistically, planning for the future?
- What legacy does the Agency as it exists today want to hand down to the Pierce Transit of the future?
- How does Pierce Transit attract the next generation public transportation workforce once the current one ages out?
- A noted goal in a previous Pierce Transit planning document: “Design a financially sustainable system that the public values and uses.” But what will a sustainable regional transit system look like in 2040?
- Regarding a commitment to good stewardship, what internal measures and practices can Pierce Transit take to further protect the natural environment and curtail climate change?



The Tacoma Mall Neighborhood Subarea Plan will integrate land use and transportation to provide high-quality transit access via multiple points within the site

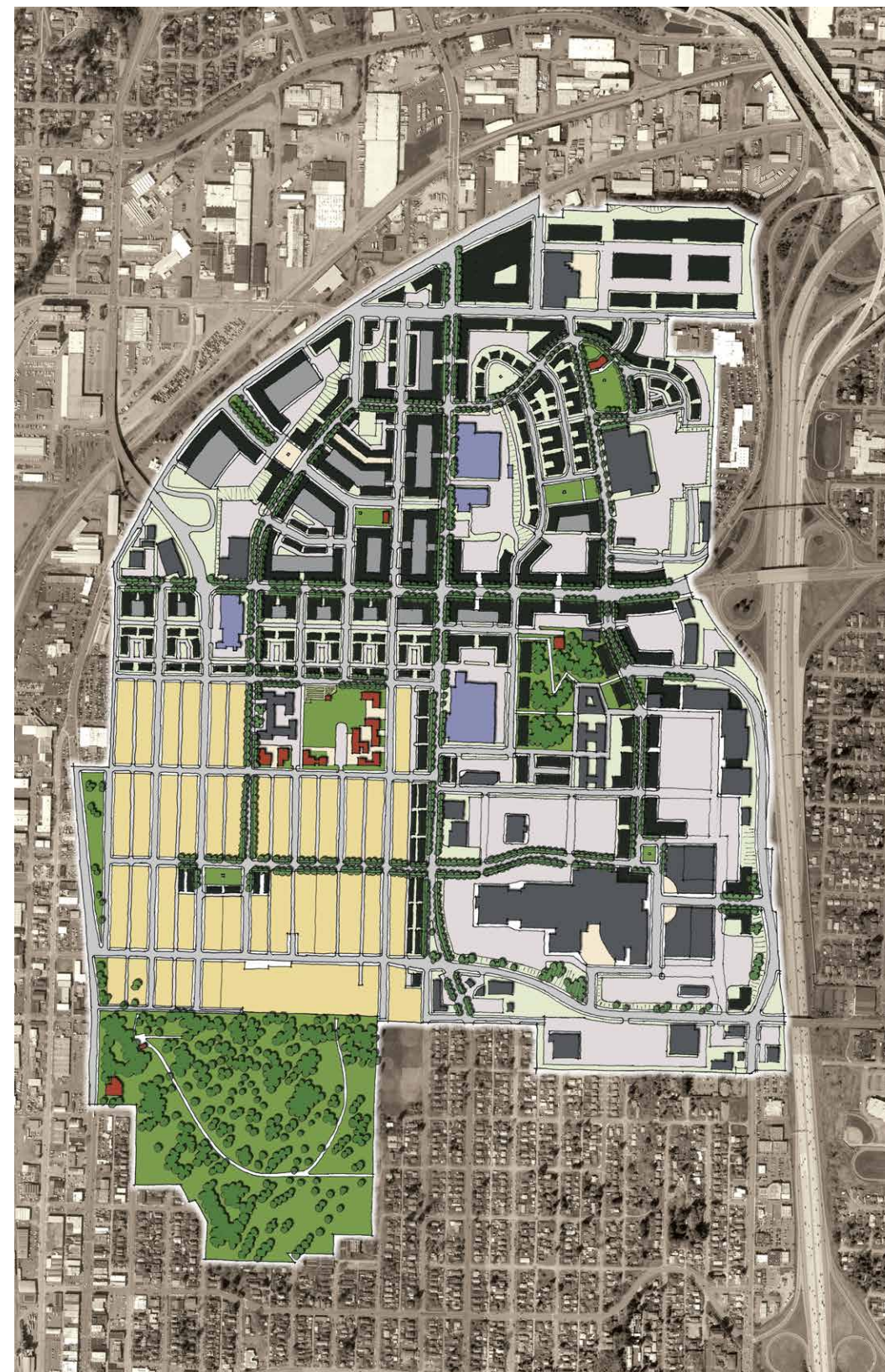


Adapted from the Willie Bus concept - Tad Orlowski

IN THE FUTURE, TRANSIT WILL LOOK AND FEEL DIFFERENT

Pierce Transit has a vision. The system is already carrying 10.3 million annual riders, and has climbed up and out of a trying time during the recession. Now is the time to deliver the next generation of services. The growth in the region, development in downtown Tacoma, and the determination of communities throughout the county to create sustainable transportation solutions marks a perfect time to revamp public transit's image. More service frequencies

and a greater span help existing riders but also attract new riders. Embracing technology such as electronic fareboxes and real-time arrival information enhance reliability and efficiency. Pierce Transit embraces an outcome-based approach to its operations. What ultimately matters is not the individual services Pierce Transit has in place, but how each of those elements works together to achieve our transit vision.



DESTINATION

2040



Pierce Transit • Long Range Plan

