



Image: Doug Kerr

# Yamhill County Transit Area Transit Development Plan

## Volume I

September 2018  
DRAFT FINAL



**Yamhill County  
Transit Area**

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# 1 INTRODUCTION

Yamhill County residents, employees, and visitors have at their fingertips an extensive transit network linking communities within the county and across the region. The Yamhill County Transit Area (YCTA) operates bus service in 10 cities across Yamhill County and connects riders to regional destinations including Grand Ronde, Hillsboro, Tigard, and Salem. YCTA carries 300,000 trips per year on a combination of fixed-route, intercity, and demand-response service.

Stakeholders and the public generally agree that YCTA routes do a good job of serving existing population and job centers and travel patterns. Yet there are several areas where the existing system falls short, including:

- **Frequency:** There are long gaps in service on some of the intercity routes connecting Yamhill County cities.
- **Reliability:** Some routes do not have enough time in their schedules to account for traffic congestion and frequent stops to pick up passengers, including service along OR 99W and local routes in McMinnville and Newberg. This results in buses that run significantly behind schedule or miss timed transfers.
- **Comfort:** A number of vehicles in YCTA's bus fleet are beyond the end of their useful life and need to be replaced.
- **Branding:** Buses and other transit infrastructure lack a consistent brand (or look) to identify them as part of YCTA service.
- **Legibility:** It is hard for people, especially potential new riders, to understand how the system works or where transit runs given the lack of marked bus stops in McMinnville and Newberg
- **Service diversity:** YCTA's intercity routes stop at a few places in smaller cities like Sheridan and Yamhill, but Yamhill County's smaller cities would benefit from more flexible and accessible transit services.

Ridership on most YCTA routes is reasonably strong relative to the amount of service provided, but these issues are keeping the system from attracting more riders and raising its profile within the community.

YCTA developed this Transit Development Plan (TDP) to provide strategic guidance over a 20-year planning period for a sustainable and innovative transit system to serve urban and rural areas in Yamhill County. The TDP will also serve as the basis for the transit element of local transportation system plans (TSPs) adopted by jurisdictions within the YCTA service area.

The overall desired outcome for the TDP is to provide a convenient system that offers seamless travel options for residents, employees, and out-of-area visitors. Other outcomes for the TDP are to:

- Meet needs expected from future regional growth and tourism
- Optimize and/or reorganize existing service
- Enhance physical transit infrastructure
- Provide revenue-neutral and increased funding scenarios
- Promote a full range of transportation options
- Identify transit-supportive land use policies and provide guidance for local jurisdictions



- Improve integration and coordination of urban and rural services, including with the Northwest Oregon Transit Alliance (NW Connector) and other YCTA partners
- Preserve function of state highways by expanding regional transit and reducing single-occupant vehicle travel

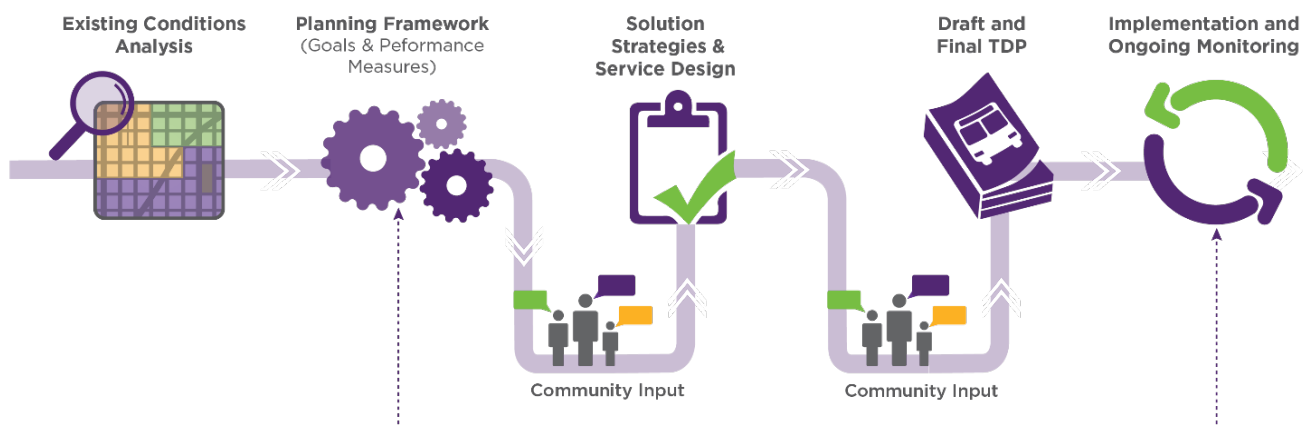
Creation of this TDP comes at an exciting time for public transportation in Oregon. The State Legislature enacted a statewide transportation funding package in 2017 (Statewide Transportation Improvement Fund, or STIF) that is expected provide YCTA with more than \$1.0 million in new annual revenues starting in 2020. While this new funding source is not sufficient to address all of the enhancements identified in the TDP planning process, the STIF will provide YCTA with an opportunity to address many of its most critical infrastructure and service needs. The TDP includes cost-neutral or low-cost changes that can happen in the next 1-2 years and short-, medium-, and long-term changes to make transit in Yamhill County more convenient, reliable, and connected.

## PLANNING PROCESS

Creating an implementable TDP required both technical analysis as well as continual input from the community and stakeholders. Figure 1-1 illustrates how the various phases of the project fit together. The process included:

- Assessing **existing conditions** related to usage of the current transit system, community demographics and travel patterns, and future transportation needs.
- Creating a **planning framework** with goals and objectives used to assess service strategies.
- Gathering **community input** at multiple points in the process, which provided insights into existing issues and feedback on service opportunities.
- **Developing service strategies** that meet the transportation needs identified through existing conditions analysis and community input. These strategies were refined and turned into a service plan covering all aspects of the system from routing and schedules to fleet, technology, system management, and fares.
- Distilling findings into a **TDP document**, reflecting the preferred vision for transit in Yamhill County and providing a phased approach for implementing the vision.
- Establishing a **performance monitoring program** based on peer analysis and industry standards to set performance measure benchmarks for YCTA to use in regularly assessing system and route-level progress.

Figure 1-1 TDP Process



## TDP OUTLINE

The TDP includes 11 chapters and seven appendices. Technical memorandums produced throughout the project include additional detail and are included in TDP Volume II for reference.

TDP Volume I Chapter	TDP Volume I Appendices	TDP Volume II
1. Introduction		
2. Yamhill County Characteristics and Trends		Section 2 - TM #2: Existing Conditions Section 3 - TM #3: Planning Framework
3. Existing Transit Service	Appendix A: Fleet Inventory Appendix B: Public Transportation Providers	Section 2 - TM #2: Existing Conditions
4. Community Input and Needs Assessment		Section 2 - TM #2: Existing Conditions
5. Transit Goals and Objectives		Section 1 - TM #1: Goals and Objectives
6. Service Plan	Appendix C: Bus Stop Design Guidelines Appendix D: Service Design Details	Section 4 - TM #4: Solution Strategies Section 5 - TM #5: Service Design
7. Capital Plan		Section 5 - TM #5: Service Design
8. Financial Plan	Appendix E: Public Transportation Funding Sources	Section 5 - TM #5: Service Design
9. Supporting Programs and Technology	Appendix F: Supporting Programs Details	Section 4 - TM #4: Solution Strategies
10. Supporting Public Transit with Local Land Use Policies	Appendix G: Detailed Land Use Policy Assessment and Sample Code Language	
11. Performance Standards		Section 2 - TM #2: Existing Conditions
		Section 6 – Advisory Committee Meeting Notes

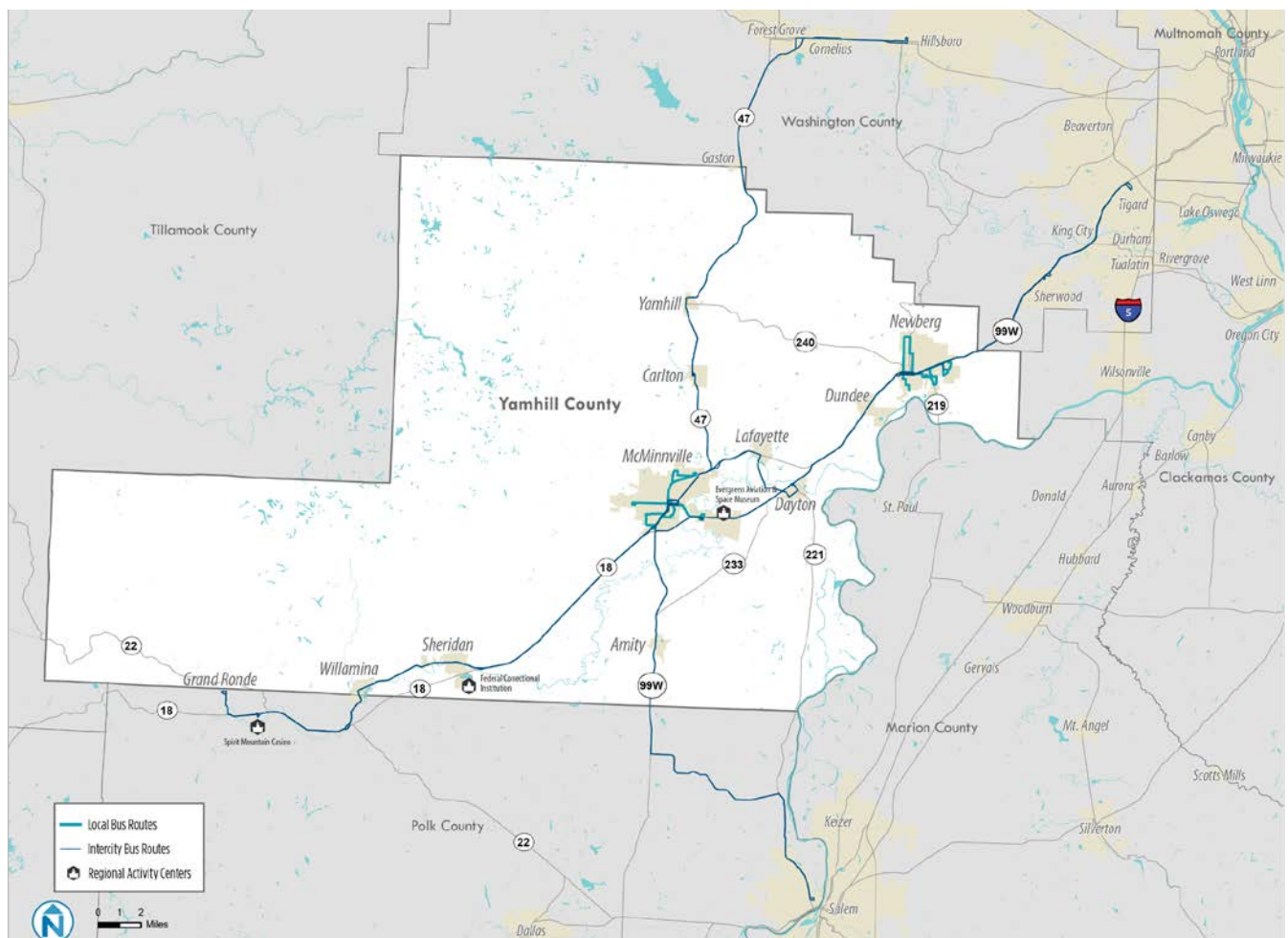
## 2 YAMHILL COUNTY CHARACTERISTICS AND TRENDS

### YAMHILL COUNTY OVERVIEW

Yamhill County is located in the Willamette Valley in northwestern Oregon. It is bordered by Tillamook County to the west, Washington County to the north, Clackamas and Marion Counties to the east, and Polk County to the south. Yamhill County's eastern border with Marion County is shaped by the Willamette River. McMinnville, the county seat, and Newberg are the largest cities in the county. There are eight additional incorporated cities, all in the eastern portion of the county. The Grand Ronde Community reservation is located in the southwestern part of the county, and the Siuslaw National Forest covers approximately 39 square miles in the far southwestern portion of Yamhill County.

The county measures 718 square miles, and is home to approximately 104,990 residents. The county has an average population density of 146 people per square mile.

Figure 2-1 Yamhill County Overview and Regional Context



## TRANSPORTATION SYSTEM OVERVIEW

### Roadways

Yamhill County's existing roadway network includes 117 miles of state highways and 210 miles of county roadways classified as minor collector or above. Outside of cities, the majority of highways in Yamhill County are two-lane roads, with additional through lanes at some locations along OR 99W and OR 18.

The main routes connecting Yamhill County communities and providing connections outside Yamhill County include:

- **OR 99W** connecting I-5 in Portland with Tualatin, Tigard, Sherwood, Newberg, McMinnville, and Corvallis. OR 99W serves as a business route through Newberg and McMinnville.
- **OR 18** connecting OR 99W near Dayton with McMinnville, Sheridan, Willamina, Grand Ronde, and US 101 north of Lincoln City. OR 18 serves as a bypass route south of McMinnville. A business loop serves Willamina and Sheridan. OR 18 overlaps with OR 22 between Valley Junction (east of Grand Ronde) and Willamina.
- **OR 22** connecting Salem, Grand Ronde, and US 101.
- **OR 47** connecting OR 99W in McMinnville with Carlton, Yamhill, Cove Orchard, Gaston, Forest Grove, and Hillsboro.

There is significant commute traffic between the incorporated areas of the County, including McMinnville and Newberg, and the Portland and Salem areas. The primary commute routes are OR 99W, OR 47, OR 221 (connecting Dayton and Salem), and OR 18. For recreational travel, OR 99W and OR 18 are one of the primary connections between the Portland metropolitan area and the Oregon coast.<sup>1</sup>

In general, non-seasonal congestion is not a problem on most state highways and county roads in Yamhill County. A few locations, however, do not meet ODOT's mobility targets reflecting the maximum congestion that should occur on county roads and state highways. These congested locations include:<sup>2</sup>

- OR 99W between Newberg and Dundee and between Dundee and OR 18, which affects YCTA Routes 44, 45x, and 46s (McMinnville – Tigard). Traffic conditions on OR 99W in Newberg in 2017 reflected construction activity for the nearly 4-mile Dundee Bypass, opened in late 2017. The bypass connects the eastern end of Newberg (Springbrook Road) and the western end of Dundee and is accessed via Springbrook Road between OR 99W and OR 219. Based on traffic data from the first half of 2018 after the bypass opened, it has reduced delay on OR 99W through Newberg.

Most intersections operate with acceptable levels of delay. Two exceptions applicable to YCTA are:<sup>3</sup>

- OR 18/OR 154 (Lafayette Highway), used by YCTA Route 44 between Lafayette and Dayton
- OR 99W/OR 47, used by YCTA Route 33 between McMinnville and Hillsboro

According to the 2015 Yamhill County Transportation System Plan (TSP), future traffic volumes on state highways are expected to increase approximately 1.9% per year, and by approximately 0.6% per year on county roads. The highest volumes of future traffic are expected to be on OR 99W and OR 18, and the highest growth rates are anticipated to be on OR 219 and OR 18. Portions of these roadways, which are used by YCTA intercity transit routes, are expected to exceed mobility targets.

<sup>1</sup> Yamhill County Transportation System Plan, 2015

<sup>2</sup> Yamhill County Transportation System Plan, 2015

<sup>3</sup> Yamhill County Transportation System Plan, 2015



## Transit Network

YCTA operates four intercity routes on set schedules and alignments connecting Yamhill County cities along OR 99W, OR 18, and OR 47 and providing connections to Tigard, Salem, Grand Ronde, and Hillsboro. Connections to other locations in the Portland region are available in Tigard and Hillsboro with a transfer to TriMet bus and rail services. YCTA routes run on weekdays only, with the exception of two routes serving the OR 18 and OR 99W corridors connecting Grand Ronde, McMinnville, Newberg, and Tigard, which also run on Saturdays. YCTA intercity routes make limited stops within cities. Local fixed-route service provides circulation within McMinnville and Newberg, along with demand-response service that provides shared rides with advance reservations during the same days and hours as local fixed-route service. There is limited local service in the smaller cities in Yamhill County. Chapter 3 provides additional detail on transit service.

## Bicycle Network

The majority of dedicated bicycle lanes in Yamhill County are located within McMinnville and Newberg.

McMinnville's bicycle network includes a combination of bike lanes and shoulder lanes. Shoulder lanes are available on many streets throughout the central business district and connect to bike lanes extending out of downtown on OR 99W, Lafayette Avenue, Riverside Drive, a section of Three Mile Lane's west end, OR 18, 2nd Street, Cypress Street, and Baker Creek Road. In addition, some shared use pathways connect north and south of 2nd Street on the west side of McMinnville.<sup>4</sup>

Newberg's bicycle network includes bike lanes on many city streets, including bike lanes along OR 99W through most of the city. Overall, bike lanes are concentrated near newer commercial and residential developments. In addition, there are several local and minor collector streets with bicycle route designations. These include signed shared roadways in the neighborhood just south of downtown, a bike boulevard (including pavement markings and/or bike route signage, and wayfinding signage) from Springbrook/Haworth to Ewing Young Park, and on Meridian to Joan Austin Elementary (using Crestview and Center).<sup>5</sup>

Nearly all bicycle facilities in rural areas of Yamhill County are either shoulder bikeways or shared roadways. OR 99W provides a paved shoulder lane for most of its route between Newberg and Sherwood.<sup>6</sup> On lower-speed roadways, bikes and cars share a travel lane. There are no shared-use paths in the rural areas of the county at this time.

### Significant Planned/Proposed Bicycle Facilities

The 17-mile Yamhelas Westsider Trail, which would link the cities of Gaston, Yamhill and Carlton, is a project in the Yamhill County TSP. The planned trail would run parallel to OR 47 from OR 99W to Gaston, and tie into the Banks-Vernonia trail, connecting to Forest Grove and Hagg Lake. There are potential connections to YCTA Route 33, which runs along OR 47 with stops in Gaston, Yamhill, and Carlton, or Route 44 in Lafayette.

Proposed Yamhelas Westsider Trail



Source: <http://yamhelaswestsidertrail.com>

<sup>4</sup> McMinnville Transportation System Plan, 2010

<sup>5</sup> Newberg Transportation System Plan, 2016

<sup>6</sup> Google Maps Bicycling, Yamhill County, OR. <https://goo.gl/maps/hUyu9DDpgvN2>

## MARKET ANALYSIS

### Current Population and Trends

Current and future population and employment trends in communities across Yamhill County indicate where the greatest transit demand is likely to be today and in the future. Figure 2-2 provides current population (2017) and growth forecasts through 2035 for cities in Yamhill County and the resulting population densities. A total of 108,144 people live in Yamhill County (2017), with the highest population density located along the OR 99W / OR 18 corridor. Yamhill County is forecasted to grow by approximately 27% by 2035—an increase of over 28,000 new residents. Just over three-quarters of the population lives within urban growth boundaries (UGBs) today and this share is projected to increase, with 87% of growth projected to occur within UGBs.

McMinnville and Newberg, the county's two most populous cities, contain 54% of the county population; each city is forecasted to gain more than 9,000 new residents over the 18-year period, nearly 70% of the total growth that is forecasted for the County. This represents an increase of 30% for McMinnville and 40% for Newberg. The population density in is expected to reach 6 persons per acre in McMinnville and 8 persons per acre in Newberg.

Among smaller cities, Lafayette, and Dundee are projected to grow by about 40% and Carlton is projected to grow by 35%. Lafayette has the highest average population density today, with over 7 persons per acre today, and is projected to increase to 10 people per acre by 2035.

Figure 2-2 Future Population Forecasts (within Urban Growth Boundaries), 2017-2035

Jurisdiction (UGBs)	Population, 2017	Population, 2035	Change in Population, 2017-2035	% Change, 2017-2035	Share of Growth, 2035	Density, 2017 (Pop/Acre)	Density, 2035 (Pop/Acre)
Yamhill County Service Area <sup>B,C</sup>	108,144	136,836	28,692	27%	100%	0.24	0.30
Within UGBs	82,976	107,955	24,979	30%	87%	4.6	6.0
McMinnville UGB	34,293	44,122	9,829	29%	34%	4.6	5.9
Newberg UGB <sup>A</sup>	24,296	34,021 <sup>A</sup>	9,725	40%	34%	5.4	7.6
Sheridan UGB <sup>B</sup>	6,340	6,893	553	9%	2%	4.0	4.4
Lafayette UGB	4,083	5,717	1,634	40%	6%	7.4	10.3
Dundee UGB	3,243	4,570	1,327	41%	5%	4.2	6.0
Dayton UGB	2,837	3,200	363	13%	1%	3.4	3.8
Carlton UGB	2,229	3,013	784	35%	3%	4.0	5.3
Willamina UGB <sup>C</sup>	2,125 <sup>B</sup>	2,321 <sup>B</sup>	196 <sup>B</sup>	9%	1%	2.9	3.2
Amity UGB	1,642	1,910	268	16%	1%	3.9	4.6
Yamhill UGB	1,077	1,338	261	24%	1%	3.6	4.5
Gaston UGB <sup>D</sup>	811 <sup>C</sup>	850 <sup>C</sup>	39 <sup>C</sup>	5%	0%	2.5	2.6
Outside UGBs	25,123	28,880	3,757	15%	13%	0.06	0.07

Notes: (A) The 2016 Newberg Comprehensive Plan population forecast data for 2015-2035 are higher than PSU Population Research Center (PRC) forecasts. City of Newberg planning staff communicated that the City intends to adjust its forecast consistent with the recent PRC projections. (B) Sheridan population includes the Federal Correctional Institution population of approximately 2,000. (C) The Willamina UGB includes residents in both Yamhill and Polk counties. City and "Service Area" population reflect the UGB. (D) The Gaston UGB includes residents in both Yamhill and Washington counties. City and "Service Area" population reflect the UGB.

Source: Portland State University Population Research Center (PRC), Coordinated Population Forecasts for Yamhill County, 2017. (TM #3, Figure 3-3)

## Current Demographics and Trends

Transportation is often a primary barrier cited by individuals who are unable to access employment, medical services, and educational opportunities (among other key public services). In relatively rural areas like Yamhill County, transit service often carries a large share of persons who are “transit-dependent.” Transit provides people who do not have access to a vehicle or are unable to drive with a crucial lifeline to jobs, services, family and friends, and medical providers.

Presidential Executive Order 12898, issued in 1994, directed federal agencies to “make achieving environmental justice part of (their) mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority and low-income populations.” The order builds on Title VI of the Civil Rights Act of 1964 which prohibits discrimination on the basis of race, color, or national origin.

There are three fundamental principles of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

While not specifically identified by Title VI or the Executive Order, the analysis presented in this section also considers persons age 65 and older, persons with disabilities, and persons with limited English proficiency. Understanding where these demographic groups are located helps YCTA identify where potential transit customers live and better serve population groups that have unique transportation needs.

Figure 2-3 summarizes transit-dependent populations by city. Several key takeaways include:

- The greatest densities of older adults (age 65 or older) are concentrated in and near McMinnville, Newberg, and Sheridan. Unincorporated areas, where it may be more difficult to access public transportation, have a high share of older adults – 21% of residents, compared to 15% countywide. Population forecasts indicate that the share of older adults in Yamhill County is projected to continue to increase, from approximately 15% of the population currently to 20% by 2035. This demographic trend creates additional demand for public transportation.
- Willamina has a high percentage of both low-income households and people with disabilities compared to the rest of the county. Some types of disabilities may prevent people from driving. Access to transportation is an important factor in allowing persons with disabilities to access services and live independently.
- McMinnville, Newberg, Dayton, and Willamina have the highest percentages of people with low incomes, defined here as earning an annual income less than the federal poverty level (\$12,060 in 2017 for an individual), which is the income-eligibility criteria for various social service programs in Oregon and around the country.
- Lafayette and Dayton have the highest percentage of people who report limited-English speaking proficiency, defined here as people who identify as speaking English “less than well.”
- Dayton, Sheridan, and Amity have the highest share of population that identifies as non-white. Understanding where different racial or ethnic groups are located in the County can help YCTA reach out to and involve different communities in its decision-making.

TDP Volume II, Section 2: TM #2, Chapter 2 provides additional detail on transit-dependent populations.

Figure 2-3 Demographic Information for Yamhill County Communities, 2015

Jurisdiction	Population [1]	Jurisdiction % of County Population	Older Adults [2]	Limited-English Speaking Population [3]	Race – Non-White Population [4]	Civilian Non-Institutionalized Population [5]	People With Disabilities [5]	Population for Whom Poverty Status is Determined [6]	Low-Income Population [6]	
									100% of poverty	200% of poverty
State of Oregon	3,939,233	-	15%	3%	15%	3,900,771	14%	3,862,756	16%	36%
Yamhill County	101,119	100%	15%	3%	12%	98,985	15%	95,796	17%	36%
Incorporated Communities	77,716	77%	13%	4%	14%	74,450	16%	71,490	19%	40%
McMinnville	33,185	33%	16%	5%	13%	32,869	17%	31,558	21%	43%
Newberg	22,566	22%	12%	3%	14%	22,462	12%	21,009	19%	36%
Sheridan	6,048	6%	10%	2%	20%	4,334	21%	4,322	19%	57%
Lafayette	3,824	4%	8%	7%	9%	3,824	13%	3,735	15%	41%
Dundee	3,184	3%	11%	1%	13%	3,184	15%	3,169	8%	28%
Dayton	2,539	3%	12%	7%	24%	2,539	15%	2,539	20%	39%
Willamina	1,811	2%	13%	1%	12%	1,811	23%	1,796	23%	43%
Carlton	1,869	2%	9%	1%	7%	1,869	13%	1,846	5%	30%
Amity	1,558	2%	13%	0%	18%	1,558	19%	1,516	17%	28%
Yamhill	1,132	1%	9%	0%	3%	1,132	14%	1,079	8%	19%
Unincorporated Areas	23,403	23%	21%	1%	6%	24,535	14%	24,306	8%	22%

Notes/Sources: ACS 2011-2015 estimate. [1] Table B01003. [2] Table B01001. Older adults as a percentage of the total population. [3] Table B16004. Population that speaks English less than "well." [4] Table B02001. Individuals identifying as any other race or combination of races other than "White alone," as a percentage of the total population. [5] Table B18101. Disability population as a percentage of the civilian noninstitutionalized population. Disability population in Sheridan is 29% less than the total, primarily due to the Federal Correctional Institution. [6] Table S1701. Percentage of the population for whom poverty status is determined, which excludes institutionalized people (e.g., prisons), people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old. Poverty population in Sheridan is 28% less than the total, primarily due to the Federal Correctional Institution.



## Current Economy and Trends

### Job Sectors

According to the Oregon Employment Department (OED), Yamhill County's top employment sectors include manufacturing; health care and social assistance; and education services, comprising over 40% of all jobs (Figure 2-4). The retail sector accounts for approximately 10% of jobs. Although not represented among the largest individual employers, wineries and wine-related tourism are major industries in the county. Agriculture – grouped with forestry, fishing, and hunting as an employment sector – is the fifth largest employment sector in the county (9.4% of jobs). Yamhill County has the most vineyards, planted acreage, harvested acreage, yield per harvest acre, and production of any county in the state (see map in TDP Volume II, Section 2: TM #2 Chapter 2). As of 2006, 227 vineyards were in operation in Yamhill County, representing approximately 30% of all Oregon vineyards.<sup>7</sup> A related sector, food services and accommodation, represents 8.8% of jobs.

Mismatches between transit service and employment include later evening shifts at large retailers and food service establishments that existing transit service does not run late enough to accommodate. And agricultural work sites are often located beyond easy access to transit stops on main highways.

Figure 2-4 Employment by Sector, 2016

Employment Sector	# Jobs	% of Total	Employment Sector	# Jobs	% of Total
Manufacturing	6,258	18.1%	Professional and technical services	774	2.2%
Health care and social assistance	5,065	14.7%	Transportation, warehousing & utilities	726	2.1%
Educational services	3,547	10.3%	Finance and insurance	696	2.0%
Retail trade	3,514	10.2%	Wholesale trade	688	2.0%
Agriculture, forestry, fishing & hunting	3,253	9.4%	Arts, entertainment, and recreation	568	1.6%
Accommodation and food services	3,036	8.8%	Real estate and rental and leasing	273	0.8%
Construction	1,789	5.2%	Information	251	0.7%
Public administration	1,495	4.3%	Management of companies and enterprises	144	0.4%
Other services, ex. public admin	1,416	4.1%	Mining	77	0.2%
			<b>Total for All Sectors</b>	<b>34,523</b>	<b>100%</b>

Source: Oregon Employment Department

<sup>7</sup> OED, Growing a Vintage: Oregon's Wine & Grape Industry, 2007. <https://tinyurl.com/yag273tg>

## Major Employers

Yamhill County's ten largest employers (listed in Figure 2-5) represent a range of industries, including medical services, higher education, manufacturing, and security facilities. All but one – the Federal Correctional Institution in Sheridan – operate in McMinnville or Newberg. The county's two largest employers by number of employees are in Newberg – A-dec and George Fox University. While major concentrations of employment in the county are generally located in proximity to transit, five of Yamhill County's top ten employers, including A-dec, do not have a transit stop within a half-mile of their location.

Figure 2-5 Top Ten Yamhill County Employers, 2012

Employer	Employment	City	Product	Transit Routes
A-dec	978	Newberg	Dental equipment	
George Fox University	560	Newberg	Private college	5
Cascade Steel Rolling Mill	431	McMinnville	Steel products	
Linfield College	430	McMinnville	Private college	2, 3, 11, 22, 24s, 45x
Willamette Valley Medical Center	420	McMinnville	Full service hospital	2
Federal Correctional Institute Sheridan	380	Sheridan	Security facility	
Evergreen Aviation Museum	361 [a]	McMinnville	Aviation museum	
Meggitt Polymers & Composites	283	McMinnville	Aerospace products	33, 44
Providence Newberg Medical Center	255	Newberg	Full service hospital	7, 44, 45x
Betty Lou's Inc.	180	McMinnville	Food Manufacturer and Co-packer	7

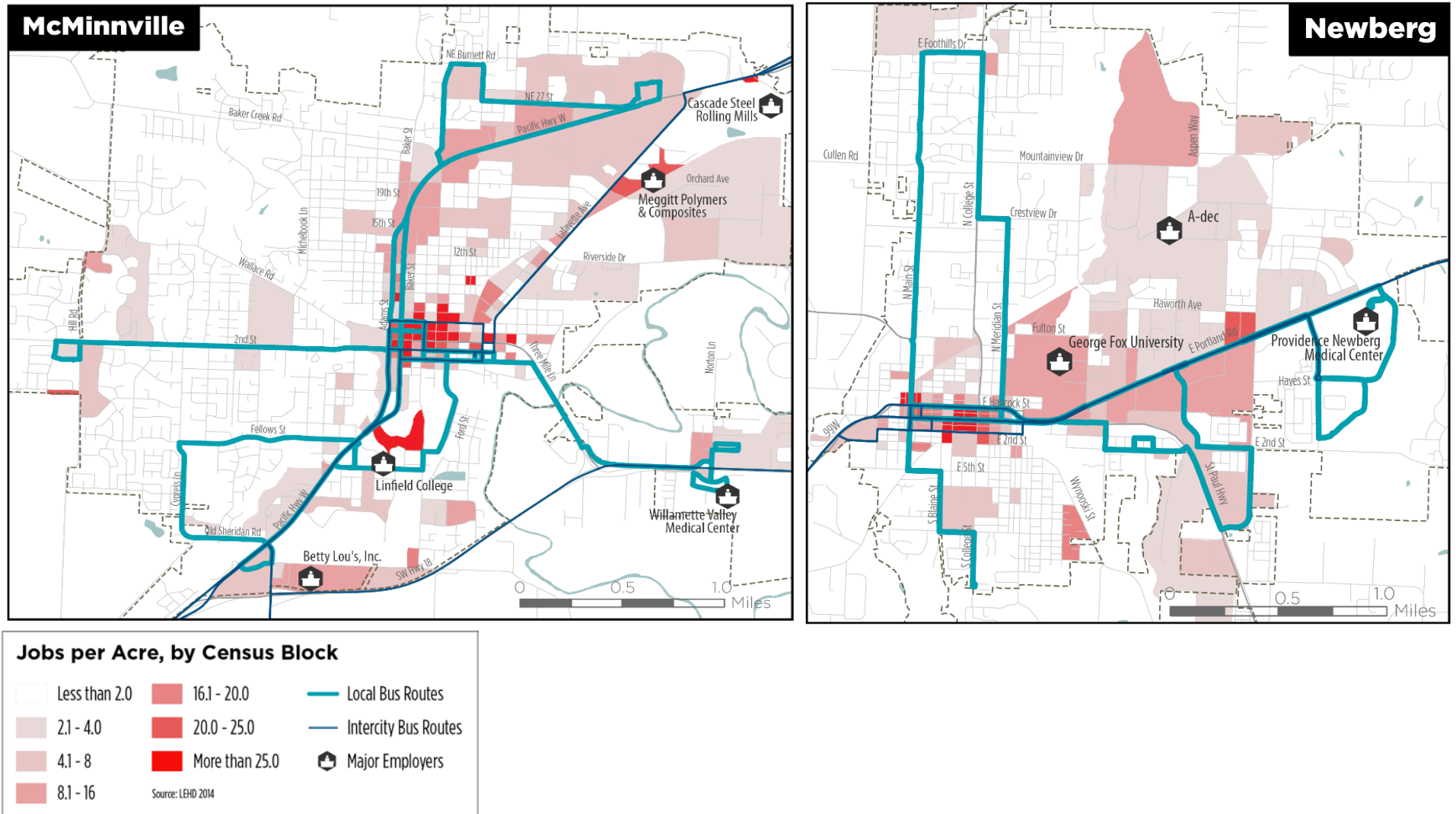
Note: [a] Total includes Evergreen International Airlines, which went out of business on December 31, 2013

Source: Grow Yamhill County Report, 2013

## Employment Density

Figure 2-6 illustrates employment density in McMinnville and Newberg, the county's two largest employment centers. Average employment density in the rest of the county is less than two jobs per acre. Businesses throughout both McMinnville and Newberg are generally located in and around the OR 99W and OR 18 corridors, or within the central business districts.

Figure 2-6 McMinnville and Newberg Employment Density, 2014



Source: TM #2, Fig 2-13 and 2-13

## Future Employment

Yamhill County employment is projected to increase from approximately 33,000 to nearly 43,000 jobs by 2035, an increase of 29%. Figure 3-4 lists existing and forecasted employment for cities in Yamhill County, and the resulting employment densities. Based on the high-level assumptions applied from the regional forecasts, over 6,000 new jobs would be added in McMinnville and Newberg between 2014 and 2035. Growth rates for the top three employment sectors in Yamhill County—accounting for 45% of all employment—are listed below along with major employers represented among these sectors.

- **Manufacturing: 9%.** Includes A-dec and Cascade Steel Rolling Mill.
- **Health Care and Social Assistance: 18%.** Includes Willamette Valley Medical Center and Providence Newberg Medical Center.
- **Educational Services: 15%.** Includes George Fox University and Linfield College.

Unincorporated areas account for over 20% of all jobs in the county. However, these areas have the lowest employment density and are among the most challenging to serve by transit. Agriculture, forestry, fishing and hunting is among the fastest growing employment sectors in the county, and accounts for most of the land use in unincorporated areas. Along with construction, this sector is forecasted to experience the highest percentage of total annual growth—19% between 2014 and 2024. Wineries and wine-related tourism are an important part of the agricultural sector in Yamhill County, contributing to job growth near Dundee, McMinnville, and Newberg, and rural communities north of OR-99W and east of OR-47. Employees in this sector may benefit from transportation services, though the job locations are often located off the major highways and may require alternative public transportation service models/types.

Figure 2-7 Future Employment Forecasts, 2014-2035

Jurisdiction	Area (Acres)	Jobs 2014	Jobs 2035	Change in Jobs, 2014-2035	% of County Jobs, 2035	Job Density, 2014 (Jobs/Acre)	Job Density, 2035 (Jobs/Acre)
Yamhill County <sup>A</sup>	459,671	33,073	42,707	9,634	100.0%	0.07	0.09
Incorporated Cities <sup>B</sup>	15,613	25,109	32,423	7,314	75.9%	1.61	2.08
McMinnville	6,745	13,927	17,984	4,057	42.1%	2.06	2.67
Newberg	3,724	7,920	10,227	2,307	23.9%	2.13	2.75
Sheridan	1,250	1,123	1,450	327	3.4%	0.90	1.16
Dundee	884	485	626	141	1.5%	0.55	0.71
Carlton	567	348	449	101	1.1%	0.61	0.79
Willamina	606	289	373	84	0.9%	0.48	0.62
Dayton	532	282	364	82	0.9%	0.53	0.68
Yamhill	346	272	351	79	0.8%	0.79	1.02
Amity	399	259	334	75	0.8%	0.65	0.84
Lafayette	559	204	263	59	0.6%	0.36	0.47
Unincorporated Areas	444,058	7,964	10,284	2,320	24.1%	0.02	0.02

Notes: For TDP analysis purposes. A. Yamhill County growth extrapolated to 2035 based on 2014-2024 sector growth rates from the Mid-Willamette Valley Region. B. Overall 2035 Yamhill County jobs allocated to cities based on the city's 2014 share of Yamhill County jobs.

Source: Oregon Employment Department, Mid-Valley 2014-2024 Employment Forecast.

For additional details see TDP Volume II, Section 3: TM #3 Chapter 3 and Appendix A. This appendix provides sector-by-sector growth forecasts from OED for the Mid-Willamette Valley region that were the basis for the TDP analysis.



## Commute Patterns

In addition to understanding where employment is concentrated, commute patterns were analyzed to understand how transit service can best connect employees' home and work locations (Figure 2-8). Findings from analysis of US Census Bureau Longitudinal Employer-Household Dynamics (LEHD) data for 2014 are:

- Nearly **41,000** Yamhill County residents are employed.
- Over **32,000** people work in Yamhill County.
- Nearly **18,000** people both live and work within the county (this represents 44% of Yamhill County residents who are employed and 55% of people who work in Yamhill County).
- The top panel of Figure 2-8 shows the top commute patterns among the nearly 23,000 (approximately 56%) employed residents who travel outside the county for work.
  - Over **12,000** Yamhill County residents (30% of employed residents) commute to locations around the Portland Metro area, including nearly **1,800** to Hillsboro.
  - Over **2,600** residents commute to the Salem area (6%); the largest share (over 760 in 2014 and over 800 in 2015) is from McMinnville.
- The bottom panel of Figure 2-8 shows the top commute patterns into Yamhill County.
  - Over **5,000** workers commute into Yamhill County from locations around the Portland Metro area (16% of all Yamhill County employees).
  - Over **1,600** workers commute from the Salem area; the largest share (over 530 in 2014 and over 600 in 2015) is to McMinnville.
- **McMinnville:** Over 5,000 (38%) of employed McMinnville residents live and work in the city. Nearly 7% of residents work in the city of Portland, with an additional 8% in other Portland metro area cities within the top 10 locations. Nearly 6% of residents work in Salem and 4% work in Newberg. The individual cities with the highest share of commuters to McMinnville are Salem, Portland, Newberg, and Sheridan.
- **Newberg:** Less than 2,000 (21%) of employed Newberg residents also work in Newberg. Compared to McMinnville, more residents work in the Portland Metro area (both as a percentage and in absolute numbers). Approximately 4% work in McMinnville. Approximately 4% of residents work in Salem, a smaller share and number than McMinnville, and 300 residents work in Wilsonville. The individual cities with the highest share of commuters to Newberg are McMinnville, Portland, Lafayette, Sherwood, Tigard, and Dundee.

Overall findings include:

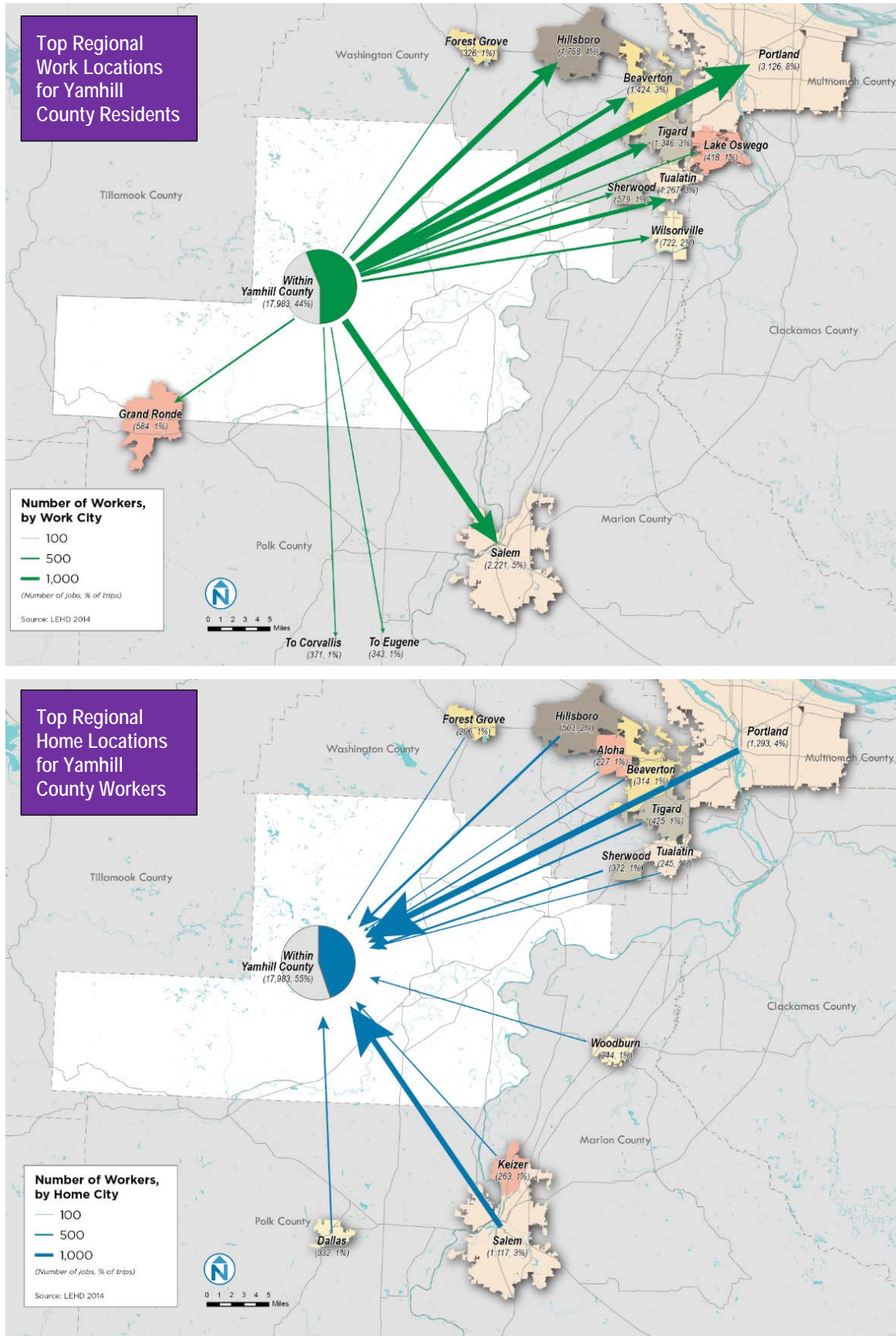
- People who live and work in Yamhill County are an only slightly larger market than the combined out-of-county commute and in-commute.
- Out-of-county work commutes are a larger market than in-commuting to Yamhill County, but the in-commute (about 40% of the out-of-county commute) is still a significant potential market.
- McMinnville is the strongest work commute market to/from Salem.

For additional details see TDP Volume II, Section 2: TM #2 Chapter 2 (Commute Patterns).

## Commute Mode Share

Approximately **1%** of Yamhill County residents primarily commute to work on transit, compared to 4% statewide, based on American Community Survey data for 2011-2015. More people carpool (13%) and walk (6%) than the statewide averages (10% and 4%, respectively). Approximately 7% of Newberg residents and 9% of McMinnville residents walk to work.

Figure 2-8 Top Regional Commute Flows from and to Yamhill County, 2014



## EXISTING AND PLANNED LAND USE

Land use and development in Oregon counties and cities is guided by their adopted Comprehensive Plans, which are implemented primarily by the local development code. Development code and zoning districts define characteristics such as allowed land uses and intensity of development. These districts include several types of residential zones (low-, medium-, and high-density), non-residential zones such as commercial or industrial, and mixed-use zones that allow both residential and non-residential uses to be combined on a site.

The map in Figure 2-9 illustrates existing zoning designations in Yamhill County. Nearly all of the county's industrial and commercial zones are located in incorporated cities; these areas, along with institutional and community facility zoned areas, account for many of the county's largest employers. Farm use, forestry, and agricultural zones comprise most of the county's unincorporated areas, and contain over 20% of jobs in Yamhill County. Southwest Yamhill County is also home to northern sections of the Siuslaw National Forest and Grand Ronde Community tribal lands.

### Summary of Existing Land Use by Corridor and City

Medium- to high-density residential areas and concentrations of commercial/industrial uses have the highest potential for transit and are generally located in incorporated areas. The following overview of land use within Yamhill County cities highlights such opportunities. These opportunities were identified through zoning codes and maps, information on proposed developments, and public/stakeholder input.

**McMinnville.** The majority of land area is zoned for residential use. High-density residential zones are mostly concentrated in the OR 99W corridor, central business district, and around the Linfield College campus; some exceptions are along Hill Road on the city's west side, in the northeast part of the city, and in the Three Mile Lane corridor. McMinnville's R-3 residential zoning district allows nearly 12 units per acre and the R-4 residential district allows for higher-density developments (over 20 units per acre), which could support transit service that is more frequent than today; however, current residential density in the city is relatively low, even in areas currently zoned for medium- or higher-density housing. Some areas of the city have moderate population density, comparable to parts of the city that have transit coverage, but are beyond ¼-mile access to existing transit routes. ½-mile

Commercial uses are concentrated in the OR 99W corridor, Lafayette Avenue corridor, and the downtown central business district. There are also several commercial parcels scattered along Three Mile Lane, and on the west side of the city along 2<sup>nd</sup> Street.

Industrial parcels are generally east of OR 99W, especially in the Lafayette Avenue, Three Mile Lane, and Booth Bend Road corridors. Land zoned for open space lines the South Yamhill River and Cozine Creek.

**Newberg.** Much of the land area is zoned for low- and medium-density residential use. Newberg's R-2 residential zoning district allows nearly nine units per acre and the R-3 residential district allows for higher density developments (over 20 units per acre), which could support transit service that is more frequent than today; however, current residential density in the city is relatively low, even in areas currently zoned for medium- or higher-density housing. Some areas in the northeast and southwest parts of the city have moderate residential density comparable to other parts of Newberg, but are not served by transit.

Commercial and central business district zoning is concentrated along the OR 99W corridor. Significant areas of institutional lands owned by George Fox University and Providence Health & Services are located in central and eastern Newberg, respectively. Land zoned for industrial uses is concentrated along the Portland & Western Railroad corridor.

### **OR 18 Corridor west of McMinnville:**

**Sheridan.** Most development is within a ¼- to ½-mile distance of OR 18 Business, with commercial and mixed-use residential zones (including those allowing multi-family housing) located in close proximity to the OR 18 Business route through the city. Most industrial zoned land is located on the west side of the city north of the highway, including the McFarland Cascade Mill. Yamhill County Head Start is also on the west side of the city south of the highway. Some parcels zoned for industrial or institutional uses are located on the east side of the city south of the Yamhill River, including Sheridan High School; Bridge Street is the only river crossing within the city. A Federal Correctional Institution is located south of OR 18.

**Willamina.** Most development is within a ¼- to ½-mile distance of OR 18 Business, with pockets of land zoned for multi-family residential uses located near the highway. An area of multi-family residential uses is located in the far southwest part of the city. The Boise-Cascade Mill is located just outside the eastern edge of the city and the Hampton Lumber Mill is just outside the western edge.

### **OR 18 / OR 99W Corridors between McMinnville and Newberg:**

**Dayton.** Residential uses are generally lower-density, but within approximately a ½-mile of the existing YCTA stops serving the city.

**Lafayette.** Commercial uses are located primarily along OR 99W, with most development primarily north of the highway, up to a ½ to ¾ mile distance from the highway, including medium-density residential in the far northeast part of the city. Lafayette has the highest population density among Yamhill County cities (7.3 and 10.3 persons per acre in 2017 and 2035 respectively). The highest densities are clustered north of OR-99W, while transit service runs through the far southwest part of the city.

**Dundee.** Land zoned for commercial and medium-density residential uses is located on either side of OR 99W, along the highway or within approximately ½-mile.

### **OR 47 Corridor:**

**Carlton.** Medium- to high-density residential zones are generally clustered around the center of the city, and most development is within a ½-mile distance of the city center.

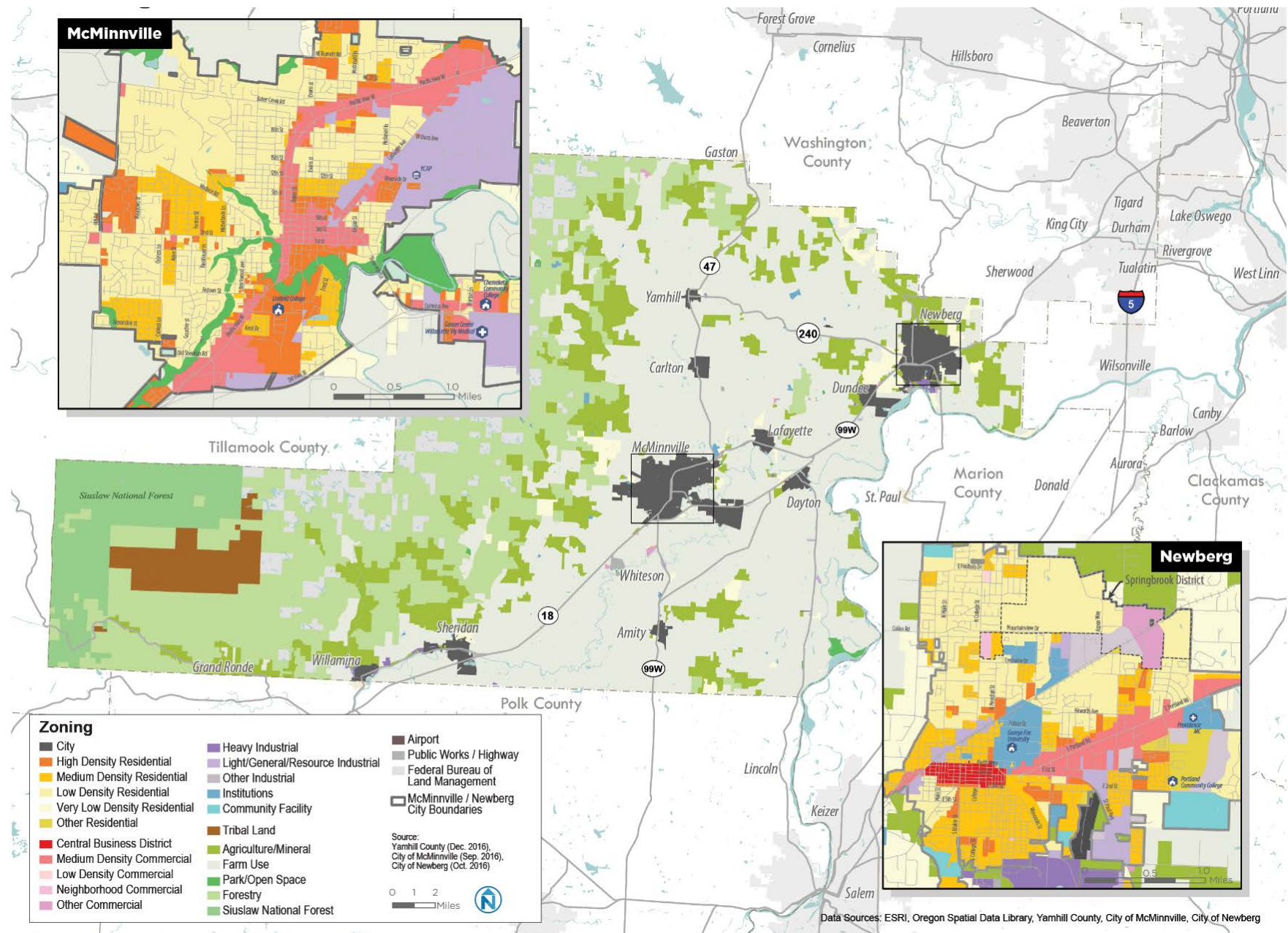
**Yamhill.** Most uses are within a ½ to ¾ mile distance from the OR 47, where YCTA service can currently be accessed. Multi-family residential zoning and a small mixed-use residential zone is located just east of OR 47's route through the city. A light industrial zone located on the far east side of the city, about a ¾ mile distance from the city center along OR 240 (Yamhill-Newberg Highway), appears to be largely undeveloped but includes Fruithill, a produce wholesaler.

### **OR 99W Corridor between McMinnville and Salem:**

**Amity.** Commercial and light industrial zones are along OR 99W, with adjacent medium-density residential zones on either side. The highest-density residential zoning is at the north end of the city.



Figure 2-9 Yamhill County Existing Land Use (Zoning)



Source: Local Zoning Codes. Reproduced from TM #3, Fig. 3-7

## Proposed Development and Future Potential Service Areas

Major planned developments and growth patterns could affect future travel patterns and demand for public transportation. Figure 2-10 illustrates areas within urban growth boundaries where future transit-supportive growth could occur. The information is based on input from the TDP Project Advisory Committee and other stakeholders, City planning documents, and media reports. Notable plans include the Northeast Gateway Plan (2012) and the Transit Feasibility Study (1997) in McMinnville and the Riverfront Master Plan (2002), Springbrook Master Plan (2008), and South Industrial Master Plan (2009) in Newberg.

Figure 2-11 illustrates existing transit service along with potential future service areas identified through the TDP analysis.

The planned developments and other growth areas include:

**In McMinnville**, areas west of Hill Road and in the Hill Road/Baker Creek Road areas in the west part of the city, including a major development with proposed workforce housing, and along Three Mile Lane and Norton Drive in the east part of the city.

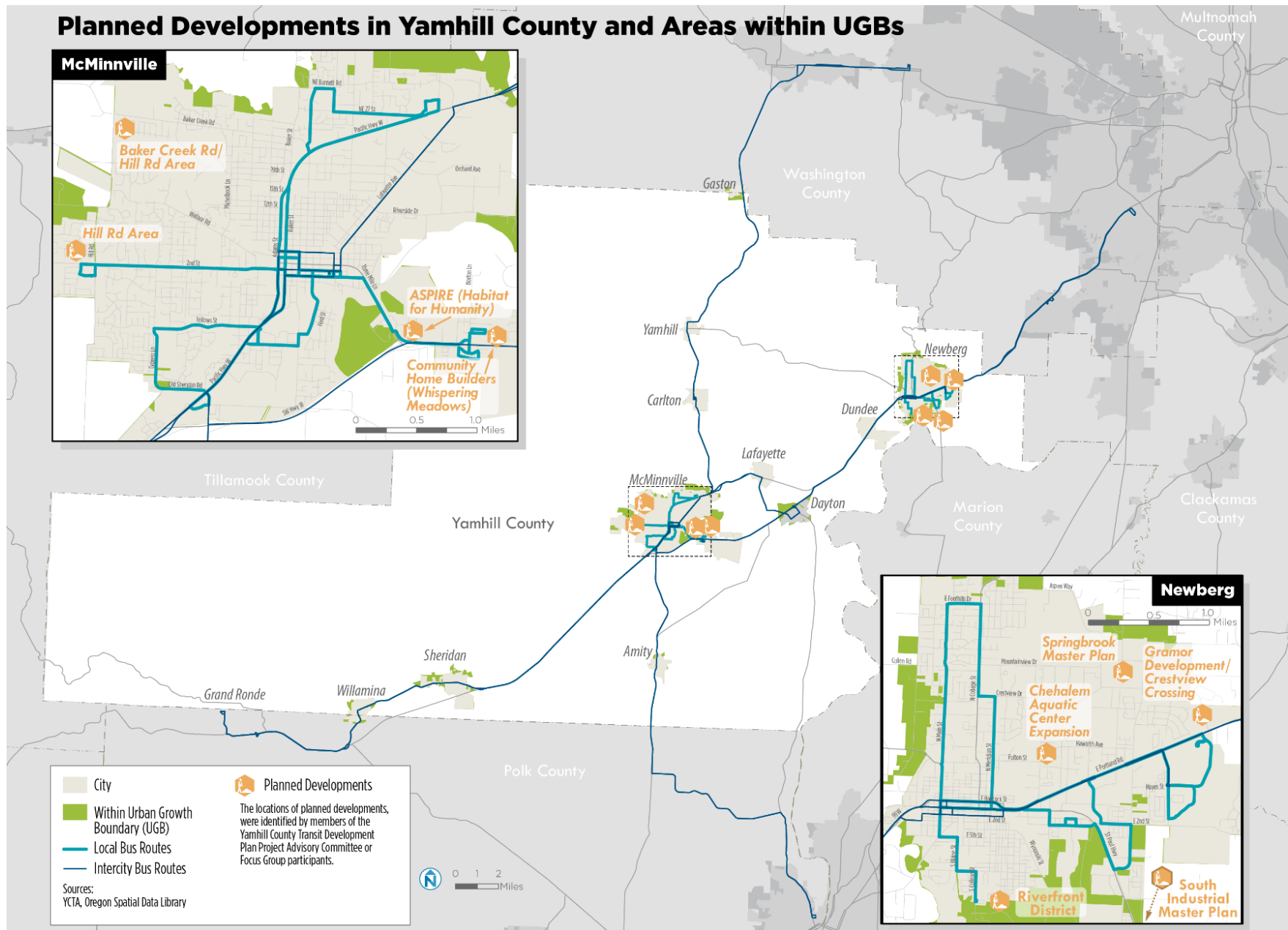
The McMinnville Transit Feasibility Study depicts growth areas both inside and outside the UGB at the time the study was developed (see TDP Volume II, Section 3: TM #3, Figure 3-10), and the city continues to use conceptual bus routes identified in the study as a guide for where transit will be available in the future. The growth areas outside the UGB – primarily to the northwest and southwest – reflect a proposed UGB expansion that was ultimately not approved by the State. Growth areas identified along Hill Road in the west and an area in the northern part of the city, both of which are within the UGB, correspond to developments and potential service areas identified in Figure 2-10 and Figure 2-11.

A Planned Development Overlay was adopted for the Three Mile Lane area in McMinnville in 1981 and was amended in 1994. The area is the subject of an ODOT Transportation Growth Management planning grant that has been awarded to the city; work on an area plan is due to begin in July 2018. As the grant application states, large property owners in the area are poised to make substantial investments. “Areas of interest” in the Three Mile Lane planning area represent a range of residential, employment, and commercial development opportunities.

**In Newberg**, future growth areas include the Gramor/Crestview Crossing development north of OR 99W, which is also associated with a planned extension of Crestview Drive, and the Springbrook Master Plan in the northeast part of the city. In the southwest part of the city, the Riverfront Master Plan area includes medium-density housing and mixed-use areas. Anecdotally, there is significant ongoing development permitting activity.

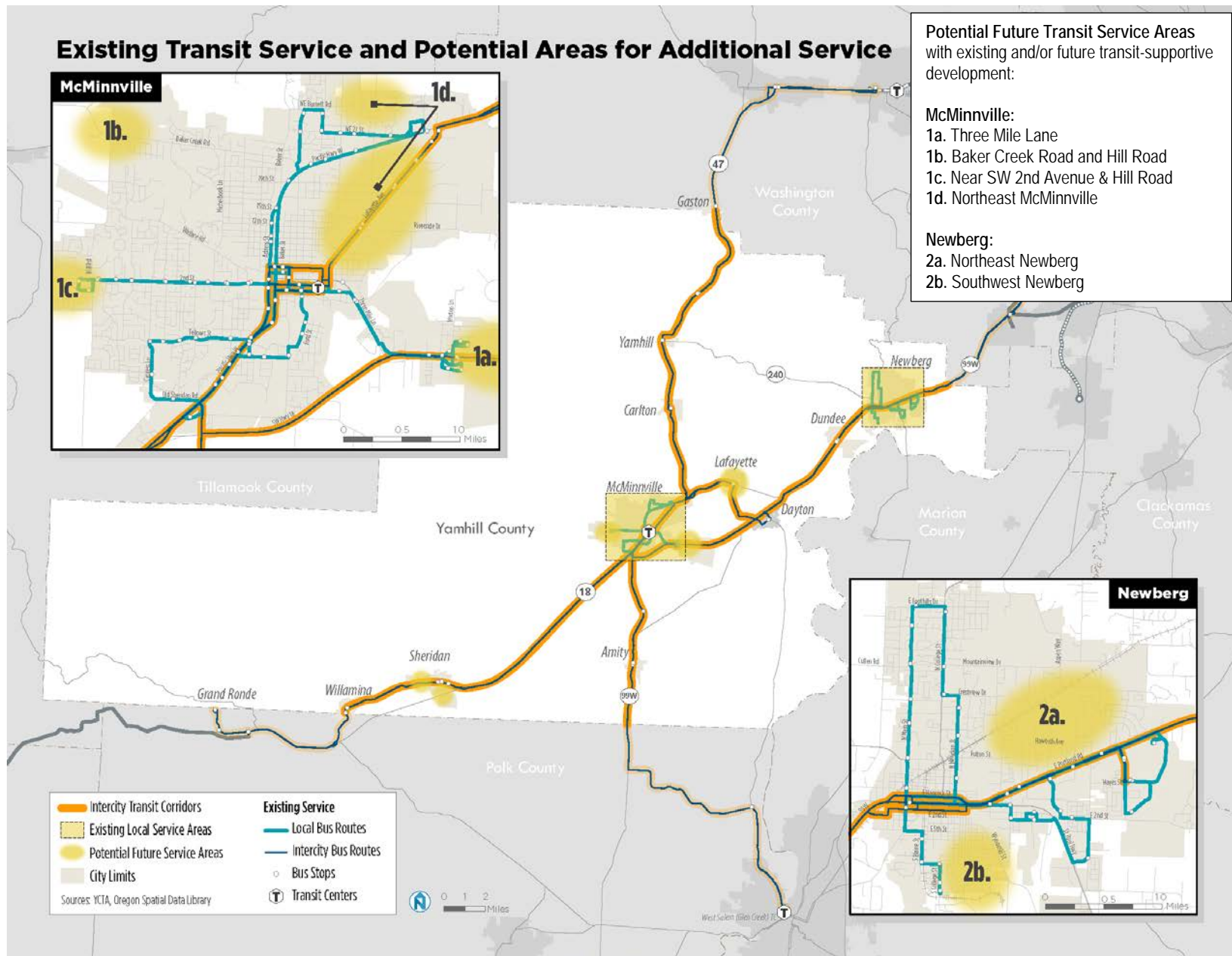


Figure 2-10 Planned Developments



Note: Green shaded areas are outside of city limits but within the UGB. Source: Reproduced from TM #3, Fig 3-8

Figure 2-11 Potential Future Transit Service Areas



Source: TM #3, Fig 3-12 (Minor Updates)

## 3 EXISTING TRANSIT SERVICE

### YCTA ORGANIZATIONAL STRUCTURE

Yamhill County Transit Area was established in March 2007 by the Yamhill County Board of Commissioners as a County Service District under Oregon Revised Statutes (ORS) 451: County Service Facilities.<sup>8</sup> A resolution from all Yamhill County cities approved establishment of the District and it is organized appropriately, based on YCTA's consultation with Yamhill County legal counsel and the Special Service District of Oregon.

In practice, YCTA currently is governed and managed by Yamhill County as an individual county department. However, YCTA will be taking steps to formalize its relationship with Yamhill County, including developing an intergovernmental agreement and separating budgets and audits. These steps will have financial implications that are reflected in the TDP financial plan.

The County Board of Commissioners acts as the YCTA Board of Directors and is responsible for all YCTA operations and management. The YCTA Board reviews and authorizes the YCTA budget process, executes contracts and intergovernmental agreements, and assigns staff and other resources to YCTA tasks or projects. The commissioners rotate duties as Board Chair and Vice Chair. The YCTA office is in McMinnville.

YCTA currently has two advisory groups:

- The **YCTA Advisory Committee** serves as the primary advisory body to the YCTA board on general public transportation-related issues affecting the county. The committee consists of 11 members – one for each of the ten incorporated cities in Yamhill County, and one for the Confederated Tribes of the Grand Ronde.
- The County Board of Commissioners established the **Special Transportation Fund Advisory Committee** (STFAC) in 2009. Its purpose is to advise the County in how to prioritize and allocate Oregon Special Transportation Fund (STF) resources, as required by state law.<sup>9</sup> The STFAC has nine members appointed by the Board and meets quarterly. The STFAC roster changes regularly, and must include at least five community members, representing four key constituencies defined in Oregon Administrative Rules.<sup>10</sup>

YCTA plans to restructure its advisory groups consistent with the requirements of the Statewide Transportation Improvement Fund (STIF). The STIF was established by Oregon House Bill 2017 (HB 2017) and the Oregon Transportation Commission approved the STIF administrative rules effective July 1, 2018. The STIF Advisory Committee for a transportation district or county must include a minimum of five members, including at least one person that is a member of or represents each of the following groups: (1) low-income individuals, (2) individuals age 65 or older or people with disabilities, and (3) public transportation service providers or non-profit entities which provide public transportation services.<sup>11</sup>

<sup>8</sup> Yamhill County Transit Area Advisory Committee By-Laws, 2003. <https://tinyurl.com/y77frdth>

<sup>9</sup> Special Transportation Fund Advisory Committee of Yamhill County Bylaws, 2009. <https://tinyurl.com/ycalsqgo>

<sup>10</sup> See OAR 732 Special Transportation Fund for the Elderly and Handicapped, Division 5 General Information (732-005).

<sup>11</sup> See OAR 732-040-0030: Advisory Committees. <https://tinyurl.com/y928h4ay>

## EXISTING YCTA SERVICES

### System Overview

YCTA offers the following types of service:

**Intercity routes** on four corridors; these routes operate on a set schedule and alignment, but focus on connecting cities and make limited stops within cities.

**Local fixed routes** that provide circulation within McMinnville and Newberg.

**Demand-response service** in Yamhill County provides shared rides without a set route or schedule and includes:

- **ADA Paratransit** *door-to-door* service in Newberg and McMinnville. ADA Paratransit is provided between origins and destinations located within  $\frac{3}{4}$  of a mile of local fixed route transit service (i.e., routes 2, 3, 5, and 7), as required under the federal Americans with Disabilities Act (ADA) of 1991. Service is limited to ADA-eligible customers—those who have a disability that prevents them from riding fixed-route service.
- **General Public Dial-a-Ride** *curb to curb* service within Yamhill County. Dial-a-ride primarily serves trips in McMinnville and Newberg due to limited capacity.

Figure 3-1 summarizes the characteristics of each type of service. Each type of service is described in more detail below.

Figure 3-1 Comparison of YCTA Service Types

Characteristics	Intercity Routes	Local Fixed-Route	ADA Paratransit	General Public Dial-A-Ride
YCTA Coverage	4 routes: 11, 22, 33, 44 24s and 46s are weekend variants of 22 and 44, respectively 45x is an express variant of 44	2 routes in McMinnville: 2, 3 2 routes in Newberg: 5, 7	$\frac{3}{4}$ mile distance around fixed-route service The origin and destination must both be within a $\frac{3}{4}$ mile distance of a fixed-route bus stop Limited eligibility	Generally serves trips in McMinnville and Newberg due to capacity limitations. Some trips extend to the greater McMinnville and Newberg areas
YCTA Service Hours	Varies by route	7:00/7:30 PM to 6:00/6:30 PM	Same days, hours, and times as fixed-route service	8 AM – 4:30 PM
Subscription Trips	N/A	N/A	Limited to 50% of available trips at a given time of day; may exceed the ceiling if there is excess capacity to provide additional trips (discretionary).	Allowed, no restriction
Access	Fixed stops	Fixed and flag stops	Door-to-door	Curb-to-curb

### Fixed-Route Service

**Local fixed routes** provide local circulation within Newberg and McMinnville city limits.

- Routes 2 and 3 serve McMinnville
- Routes 5 and 7 serve Newberg

All four local routes run on weekdays only. Along these routes, YCTA operates as a flag system. This means that YCTA has designated stop locations, but between stops riders may stand on the curb and flag

down the buses or request that the driver let them off at a particular point along the route. Drivers will stop if it is safe to do so.

**Intercity routes** serve longer-distance travel needs between Yamhill County cities, and connections outside of the county. Figure 3-2 provides a summary of each route's service area, service days, headways (or frequency), and span of service. Along these routes, YCTA has set stops; flag stops are not permitted on intercity routes, including within McMinnville and Newberg.

The intercity routes include:

- Route 11 connects McMinnville, Amity, and Salem
- Route 22 (weekday) and 24s (Saturday) connect McMinnville, Sheridan, Willamina, and Grand Ronde
- Route 33 connects McMinnville, Yamhill, Carlton, Gaston, and Hillsboro
- Route 44 (weekday), 45x (weekday express), and 46s (Saturday) connect McMinnville, Lafayette, Dayton, Dundee, Newberg, and Tigard

Since local routes 2, 3, 5, and 7 operate on weekdays only, routes 24s and 46s are the only options for local circulation within McMinnville and Newberg on Saturdays; within McMinnville, Route 46s operates a modified route along OR 99W instead of Lafayette Avenue on Saturdays.

Figure 3-2 Yamhill County Transit Area Route Summaries, Including Summer 2018 Immediate Changes

#	Route Name	Type	Headways or Departure Times	Span of Service
<b>Weekday Service</b>				
2	McMinnville East-West Express	Local	Every 60 minutes (east and west routes every 30 minutes)	7 AM- 6 PM
3	McMinnville City Loop	Local	Every 60 minutes (north and south routes every 30 minutes)	8 AM-6 PM
5	Newberg Foothills Drive	Local	Every 60 minutes (interlined with Route 7)	7:30 AM-6 PM
7	Newberg Providence	Local	Every 60 minutes (interlined with Route 5)	7 AM-6:30 PM
11	McMinnville to West Salem	Intercity	To Salem: 6:00, 7:30 AM; 12:00, 4:00, 5:30 PM To McMinnville: 6:00, 7:30 AM; 12:00, 4:00, 5:30 PM Approximate one-way travel time: 40 minutes	6 AM-7 PM
22	McMinnville to Grand Ronde	Intercity	To Grand Ronde: 6:25, 8:15; 10:40 AM; 12:30, 2:30, 4:45, 6:35 PM To McMinnville: 5:30, 7:20, 9:35, 11:35 AM; 1:25, 3:15, 5:40 PM Approximate one-way travel time: 48 minutes	5:30 AM-7:30 PM
33	McMinnville to Hillsboro	Intercity	To Hillsboro: 6:00, 10:30 AM; 12:30, 3:30, 5:30 PM To McMinnville: 7:00, 11:30 AM; 1:30, 4:30, 6:30 PM Approximate one-way travel time: 50 minutes	6:00 AM-7:30 PM
44	McMinnville to Tigard	Intercity	To Tigard: 5:10, 6:25, 7:25, 10:35 AM; 12:15, 1:15, 3:20, 5:40, 6:12 PM To McMinnville: 7:48, 8:48, 11:58 AM; 1:38, 2:38, 4:47, 6:16, 7:01, 7:39 PM Approximate one-way travel time: 1h 12m – 1h 34m	5 AM-9 PM
45x	McMinnville to Tigard	Intercity	One morning trip from Tigard to McMinnville and one afternoon trip from McMinnville to Tigard. Approx. one-way travel time: 1h	6:42 AM-7:50 AM 5:05 PM-6:06 PM
<b>Saturday Service</b>				
24s	McMinnville to Grand Ronde	Intercity	Approximately every 2 hours with a 1-hour midday gap	9:35 AM-4:50 PM
46s	McMinnville to Tigard	Intercity	Approximately every 3 hours	8 AM-7:30 PM



Figure 3-3 YCTA System Map, with McMinnville and Newberg Insets, 2018 Existing

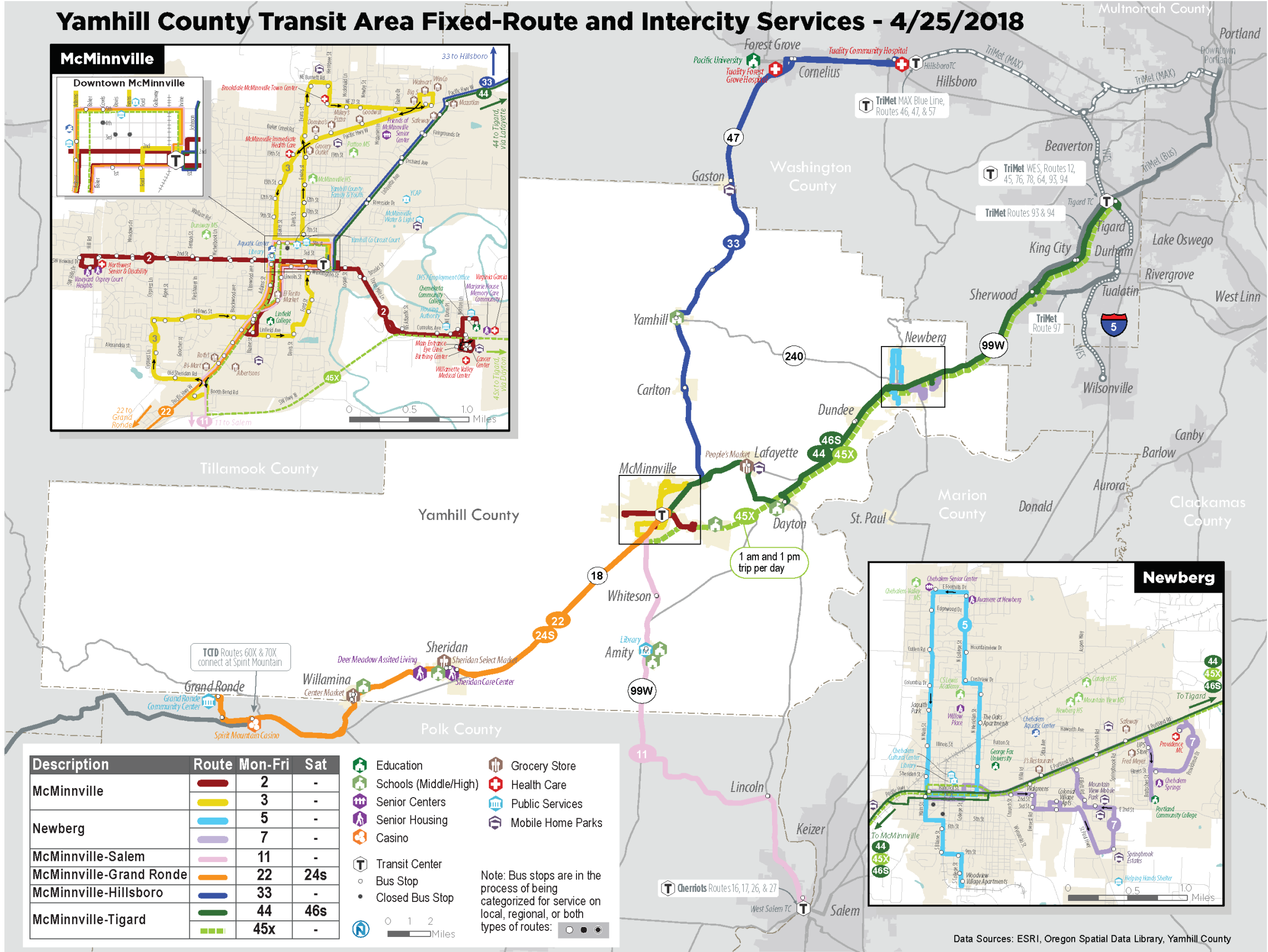
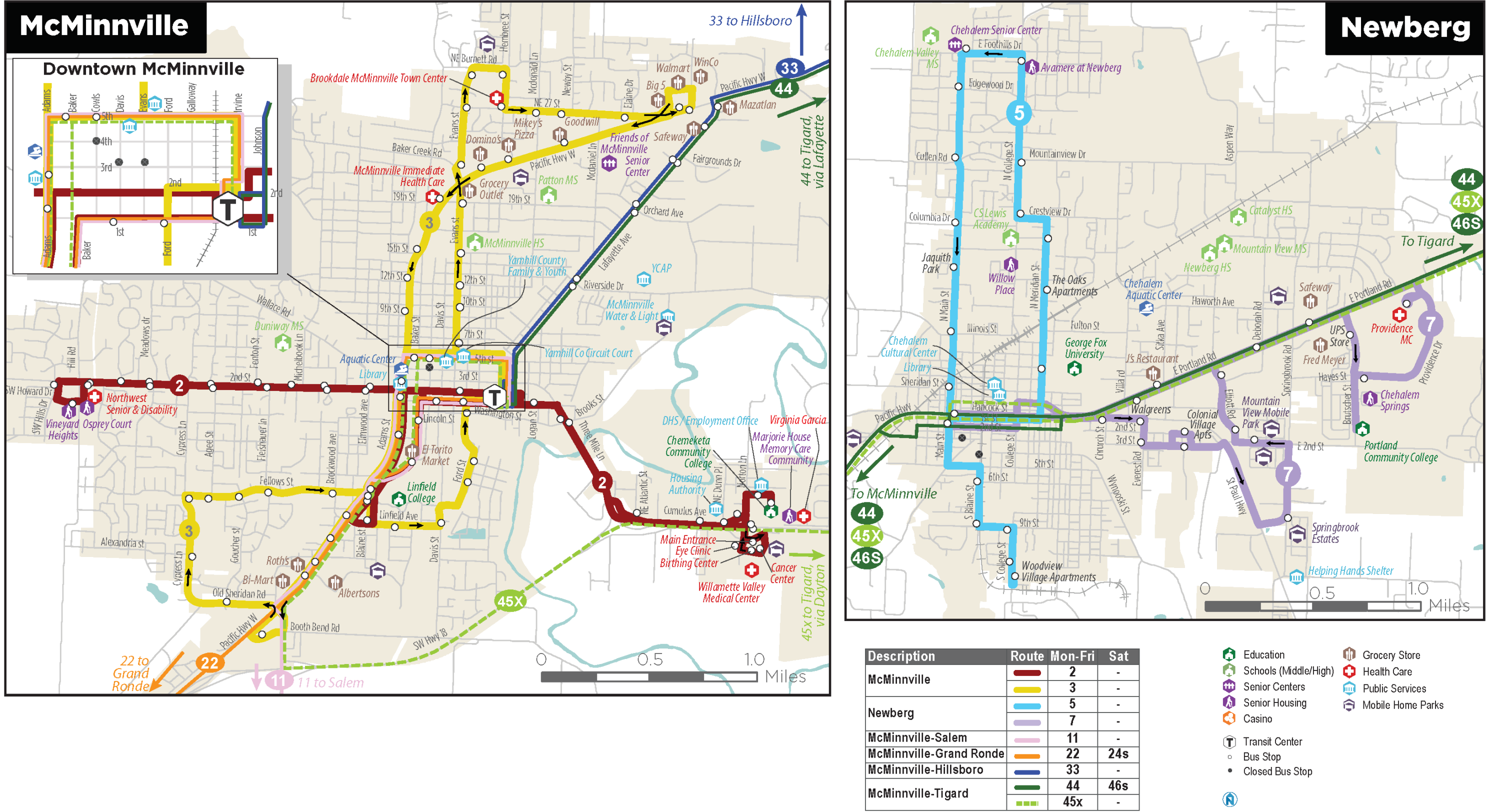




Figure 3-4 YCTA McMinnville and Newberg Local Service, 2018 Existing



## Demand-Responsive Service

Demand-response service in Yamhill County provides shared rides and includes both general public Dial-a-Ride and ADA paratransit. Three YCTA vehicles are dedicated to paratransit and Dial-a-Ride service, and six more are shared between these demand-response services and fixed-route service.

### ADA Paratransit Overview

YCTA ADA Paratransit is federally-required door-to-door service offered to people with physical or cognitive disabilities who are unable to access or use local fixed-route service. Passenger origins and destinations must be within a  $\frac{3}{4}$ -mile buffer of local fixed-route service in McMinnville and Newberg. YCTA paratransit service is offered during the same hours and days as fixed-route service: from 7 AM – 6 PM on weekdays in McMinnville, and 7 AM – 6:30 PM on weekdays in Newberg. YCTA paratransit riders are guaranteed a ride within a two-hour window of their requested trip time.

YCTA paratransit service is not available along Routes 11, 22, 24s, 33, 44, 45x, and 46s, which are intercity routes classified as commuter bus service, and are therefore exempt from the requirement to provide complementary ADA paratransit service.

Reservations for YCTA paratransit can be made between one and 14 days in advance. YCTA accepts paratransit reservations by phone on weekdays between 7:00 AM and 6:30 PM. Individuals calling to make a trip reservation outside these times can leave a message for a trip to be logged when staff are next on duty. Before a person can make a reservation for a paratransit trip, he/she must complete YCTA's ADA Paratransit Application, and be approved by YCTA's ADA Eligibility Committee, based on federal ADA requirements. Subscription paratransit trips are available for work and medical appointments only. YCTA is required to limit subscription trips to no more than 50% of available capacity at any given time of day per federal requirements. Fares for a one-way trip are \$2.50 (fares are not allowed to be more than double the cost of a comparable trip on fixed-route service).

### Dial-a-Ride Overview

General public Dial-a-Ride provides curb-to-curb service to the general public to and from locations in Yamhill County. There is no application process required to reserve a Dial-a-Ride trip. YCTA Dial-a-Ride operates on weekdays from 8 AM to 4:30 PM. All YCTA Dial-a-Ride vehicles are ADA accessible, and service animals are allowed. YCTA Dial-a-Ride trips must be scheduled at least 24 hours in advance. A reservation is contingent on capacity, and schedulers may suggest a different time to accommodate customer needs. Dial-a-Ride phone reservations are taken on weekdays between 6:30 AM and 6:30 PM. Trip reservation calls made outside these hours can be left as a voicemail, to be logged when staff are next on duty. Dial-a-Ride riders can make subscription reservations for recurring trips. YCTA allows an unrestricted number of subscription trips in the Dial-a-Ride system. Fares are \$1.75 each way and \$40.00 for a monthly pass.

## Major Activity Centers

Major transit trip generators are shown in Figure 3-3 and Figure 3-4 (above) relative to existing YCTA fixed routes and stops. Activity centers are clustered in and around McMinnville and Newberg, along the OR 99W / OR 18 corridor that runs through the eastern part of the county. Additional activity centers—including grocery stores, middle and high schools, senior housing communities, and libraries—are located near Sheridan, Lafayette, Amity, and Willamina. Spirit Mountain Casino is a notable major trip generator a mile south of the county border, in Grand Ronde.

Examples of activity centers that are not directly served by public transportation include:

- Sheridan: Deer Meadow Assisted Living—Route 22 goes past it but does not stop; large buses are not able to pull into the facility parking lot and there are not safe crossings or pull-outs.
- McMinnville:
  - Senior Center—service runs on OR 99W but does not directly serve the center.
  - Yamhill Community Action Partnership (YCAP) and McMinnville Water and Light—Intercity routes 33 and 44 run along Lafayette Avenue but do not serve the area east of Riverside Drive.
  - Virginia Garcia Memorial Health Center and Marjorie House Memory Care Community—Route 2 serves Chemeketa Community College less than 0.1 mile to the west, but there is no direct roadway access to allow a bus to travel between the two facilities
- Newberg: There is no service in the northeast part of the city, including to city schools, a large employer (Adec), and the Chehalem Aquatic Center.

In both McMinnville and Newberg, bus stops serve retail areas along OR 99W, but large parking lots often separate store entrances from the roadway and some stops lack nearby pedestrian crossings between stops in each direction.

## Fare Structure

Figure 3-5 lists YCTA's existing fares, which range from \$1.25 for a one-way ride on fixed-route service (both local and intercity routes) to \$1.75 on Dial-a-Ride and \$2.50 on ADA Paratransit. Day passes (both individually and as a set of 10) and monthly passes are available but there are currently no discounted fares available. Children six years of age or under can ride for free.

Fares can be purchased in the following ways:

- **During a trip:** Single One-Way fares and Single All-Day Passes can be purchased from drivers while boarding the vehicle with exact change only.
- **Prior to a trip:** Fares can be purchased in-person from the Yamhill County Board of Commissioners office with exact change only or at the McMinnville Transit Center with cash or check only. Riders can also print and fill in an order form from the YCTA website and send it to YCTA by mail with a check or money order.

Figure 3-5 YCTA Fares, 2018

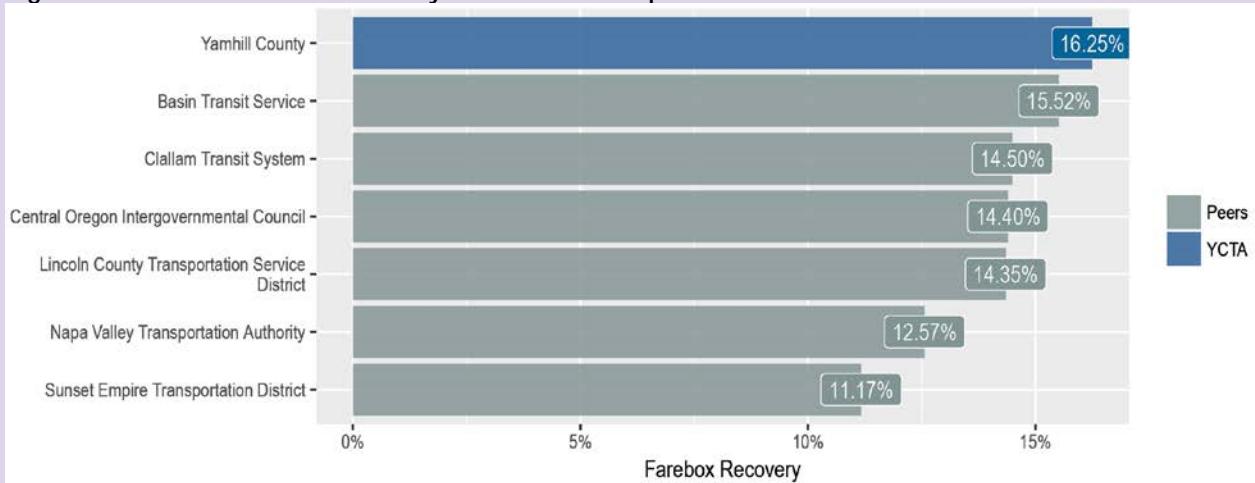
Fare	Fixed-Route	Dial-a-Ride	ADA Paratransit	Notes
Single One-Way Trip	\$1.25	\$1.75	\$2.50	
Single Day Pass	\$2.50			Twice cost of a one-way fare
Book of 10 Day-Passes	\$18.00			Savings of \$7 over 10 individual day passes
Unlimited Monthly Pass	\$35.00	\$40.00		Breaks even after 28 one-way fixed route trips, 14 day passes, 19 day passes when purchased in a book of 10, or 23 Dial-a-Ride trips

Fare policy recommendations are provided in Chapter 9: Supporting Programs and Technology

## Peer Comparison: Farebox Recovery

Figure 3-6 shows that YCTA's farebox recovery is slightly higher than a set of six peer agencies, with a rate of more than 16% in 2015 (shown in the chart) and 15% in 2016. A 10% farebox recovery is generally considered to be a minimum standard for transit agencies. The recovery ratio is a function of fare policies (i.e., the price of a ticket or pass), ridership, and total operating costs. YCTA's moderate ridership and low operating costs support a strong farebox recovery ratio.

Figure 3-6 YCTA Farebox Recovery Ratio – Peer Comparison



For peer review details see TDP Volume II, Section 2: TM #2, Chapter 3 and Appendix C

Source: National Transit Database 2015; US Census Bureau American Community Survey 5-year estimate.

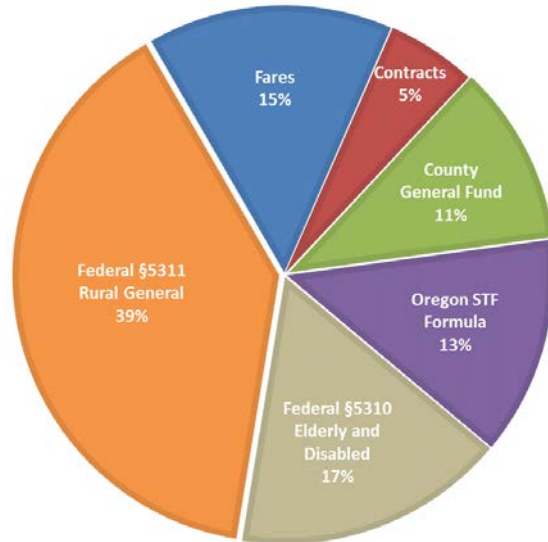
## Operating and Capital Costs

### Operating Costs

YCTA's operating budget of approximately \$2.1 million has remained fairly steady through 2017. YCTA's key expenditures are contracts for service delivery and fuel, totaling over 80% of the existing operating budget (70% and 12%, respectively). Approximately 70% of YCTA's operating revenue is from federal and state funds, while the remaining 30% is from local sources including fares. As shown in Figure 3-7, YCTA's annual operating revenue sources are comprised of:

- **Federal and State funds (70%)** provided by the Oregon Department of Transportation (ODOT), which manages Federal Transit Administration (FTA) and state public transportation funds available to rural and small urban public transportation providers, and providers of public transit for seniors and people with disabilities
- **Farebox revenue (15%)**
- **Local service contracts (5%)** with the Confederated Tribes of the Grand Ronde Community (supporting Route 22; \$56,000) and the cities of McMinnville and Newberg (supporting local service; approximately \$20,000 each annually in recent years)
- **Yamhill County General Fund (11%)**

Figure 3-7 Yamhill County Transit Area Operating Sources – FY 2012-2016 Average

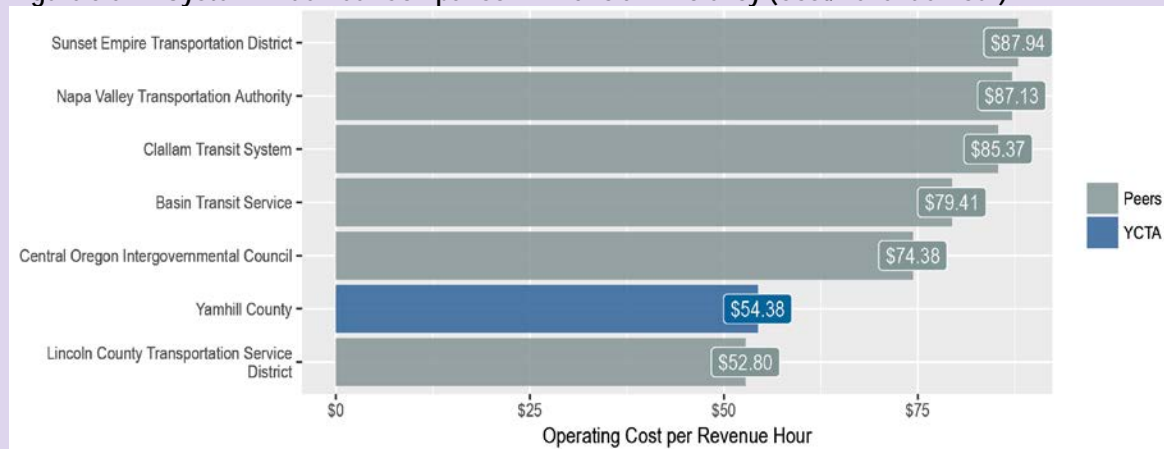


Sources: Yamhill County Transit Area, Oregon Department of Transportation, Federal Transit Administration

### Peer Comparison: Financial Efficiency

Financial efficiency reflects YCTA's cost to provide each "revenue hour," or each hour that a bus is on the road. YCTA's cost per revenue hour (\$54.38) is the second lowest among the peer group.

Figure 3-8 System-Wide Peer Comparison: Financial Efficiency (Cost/Revenue Hour)



For peer review details see TDP Volume II, Section 2: TM #2, Chapter 3 and Appendix C

Source: National Transit Database 2015; US Census Bureau American Community Survey 5-year estimate.



## Capital Costs

Capital budgets depend on relatively expensive one-time purchases, ranging from buses, shelters and bus stop amenities, and technology (e.g., radios and dispatch software) to major investments such as the McMinnville Transit Center. YCTA's capital needs have ranged from less than \$100,000 to over \$1 million in recent years. Grants are available to assist with capital needs and YCTA received three significant awards from discretionary funding programs in 2015 for the 2017-2018 fiscal year. The STF Discretionary program funded communications and scheduling technology as well as the local match for two vehicles funded through the FTA Section 5339 program. ODOT also awarded YCTA funding for four buses through the STIP Enhance program.

Additional detail on public transportation funding sources is provided in Chapter 8: Financial Plan.

More information on YCTA current and historical operating and capital costs can be found in TDP Volume II, Section 2: TM 2, Chapter 3 (see pages 3-3 to 3-6).

## Transit Vehicle Fleet

YCTA owns a bus fleet of approximately 35 vehicles serving demand-response and fixed-route services, including several new vehicles purchased in 2018, 6 vehicles that are in fair to poor condition, and 11 vehicles that are at the end of their useful life; Appendix A provides a complete fleet inventory. Figure 3-9 summarizes the vehicles, grouped by vehicle type and condition. Only 40% of the vehicles are in “Excellent” or “Good” condition, pointing to a need to replace vehicles that are in poor condition, and are expensive to maintain. First Transit, the current private contractor for YCTA operations and maintenance functions, provides maintenance for the YCTA fleet at its facility located east of Lafayette Avenue in McMinnville; capacity of this facility to clean, store, and maintain the YCTA fleet is limited.

The Yamhill County Fleet Department maintains small transit vehicles on behalf of non-profit transportation partners, including MV Advancements, Abacus (Yamhill County), and the Yamhill-Carlton Volunteer Program. The maintenance costs are valued at approximately \$5,000 to \$15,000 per year.

Figure 3-9 YCTA Existing Fleet Summary, July 2018

Vehicle Class	Vehicles in Daily Operation*	Vehicle Condition				Total Fleet
		Excellent or Good	Adequate	Fair, Marginal, or Poor	End-of-Life	
Medium-size (30-foot) Bus, Heavy-Duty	7	2	2	2	4	10
Large Cutaway, Medium-Duty	3	2	0	3	6	11
Small Cutaway, Light-Duty	5	10	0	0	0	10
Van	2	0	2	1	1	4
<b>Total</b>	<b>17</b>	<b>14</b>	<b>4</b>	<b>6</b>	<b>11</b>	<b>35</b>
<b>% of Total</b>	<b>-</b>	<b>40%</b>	<b>11%</b>	<b>17%</b>	<b>31%</b>	<b>100%</b>

Note: \* Not including spares. Based on limited fleet availability, YCTA may interchange the types of vehicles used on different services.



## YCTA RIDERSHIP AND SYSTEM PERFORMANCE

### System-wide Ridership and Performance

Figure 3-10 shows a five-year trend for YCTA performance. Highlights include:

- **Local fixed-route ridership increased by approximately 10% in both 2015 and 2016.** This followed service cuts between 2012 and 2013 that led to declines in ridership, after the transition from non-profit operation to service contracted by YCTA, due to a shortfall in operating funding. Local fixed-route service in McMinnville has the highest productivity (see sidebar on the next page for definition) due to the higher development densities and shorter distances over which the services operate.
- **Ridership is highest on intercity routes and increased 14% in 2016.** Service hours on intercity routes are approximately double the number of hours operated on local service from 2013 onward. Intercity routes carry passengers over a long distance, but with less trips per day or less hours than local routes, and productivity is slightly lower than local routes in McMinnville.
- **Dial-a-Ride ridership declined as well but it was steady in 2015 and 2016.** Dial-a-Ride has generally reached its maximum capacity based on fixed resources available. It carries around three rides per revenue hour, which is common for similar demand-response systems.

Figure 3-10 YCTA Ridership, Revenue Hours, and Productivity by Service Type, 2012-2016

Service Type		2012	2013	2014	2015	2016	2012-2016
<b>Ridership</b>							
Local Fixed-Route	#	183,437	117,096	83,771	90,848	100,139	-83,298
	% Change <sup>1</sup>	-	-36%	-28%	8%	10%	-45%
Intercity	#	155,522	213,213	169,812	155,057	177,216	21,694
	% Change <sup>1</sup>	-	37%	-20%	-9%	14%	14%
Dial-a-Ride	#	59,816	45,230	47,729	43,366	41,439	-18,377
	% Change <sup>1</sup>	-	-24%	6%	-9%	-4%	-31%
Total	#	398,775	375,539	301,312	289,271	318,794	-79,981
	% Change <sup>1</sup>	-	-6%	-20%	-4%	10%	-20%
<b>Revenue Hours</b>							
Local Fixed-Route	#	17,040	8,820	8,147	8,156	8,498	-8,542
	% Change <sup>1</sup>	-	-48%	-8%	0%	4%	-50%
Intercity	#	16,580	16,413	16,059	16,096	15,862	-718
	% Change <sup>1</sup>	-	-1%	-2%	0%	-1%	-4%
Dial-a-Ride	#	12,435	13,165	13,317	13,439	12,706	271
	% Change <sup>1</sup>	-	6%	1%	1%	-5%	2%
Total	#	46,055	38,398	37,523	37,691	37,066	-8,989
	% Change <sup>1</sup>	-	-17%	-2%	0%	-2%	-20%
<b>Productivity</b>							
Local Fixed-Route	#	10.8	13.3	10.3	11.1	11.8	1.0
Intercity	#	9.4	13	10.6	9.6	11.2	1.8
Dial-a-Ride	#	4.8	3.4	3.6	3.2	3.3	-1.5
Total	#	8.7	9.8	8	7.7	8.6	-0.1

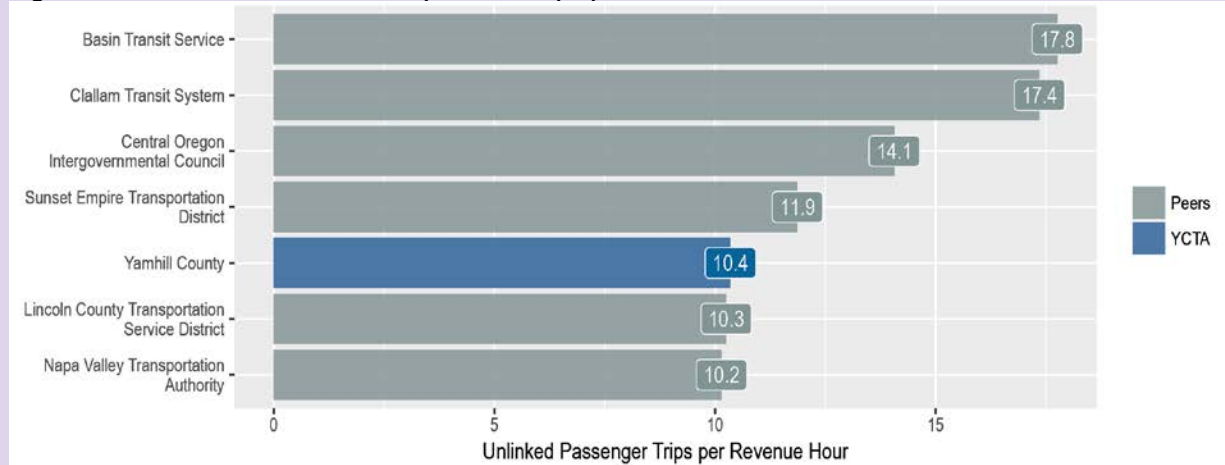
Note: % change is year-to-year, except for 2012-2016 which is % change between 2012 and 2016.

Source: 2012-2014 from National Transit Database. 2015 and 2016 from YCTA.

## Peer Comparison: Fixed-Route Service Effectiveness

Service effectiveness measures “productivity” in terms of the number of passenger trips served per vehicle revenue hour of service provided. YCTA provides moderately productive service relative to the amount of service it provides and exceeds ten trips per revenue hour, which is generally considered an acceptable level for a large area like Yamhill County.

Figure 3-11 Fixed-Route Peer Comparison: Trips per Revenue Hour, 2015



For peer review details see TDP Volume II, Section 2: TM #2, Chapter 3 and Appendix C

Source: National Transit Database 2015; US Census Bureau American Community Survey 5-year estimate.

## Fixed-Route Ridership and Performance

Figure 3-12 summarizes fixed route performance statistics and ridership by route, based on data collected for each trip over a three-week period from April 24 - May 10, 2017. Highlights include:

Detailed route profiles can be found in TDP Volume II, Section 2: TM #2, Chapter 2 and Appendix A

- There were 811 daily boardings on weekdays and 147 boardings on Saturdays.
- Most local ridership was in McMinnville. The highest intercity ridership was on Route 44/45x between McMinnville, Newberg, and Tigard.
- Route 3 in McMinnville had the lowest on-time performance among local routes; 41% of trips were late (five minutes or more behind schedule). This is in part due to high ridership demand and a large number of individual stops, including flag stops.
- Routes 5 and 7 in Newberg had very low productivity.
- Route 44/45x had the lowest on-time performance among intercity routes; nearly 50% of trips were late. This is in part due to heavy traffic congestion on the OR 99W corridor, due in part to the Dundee Bypass construction in 2017. On-time performance on YCTA's other local routes was also relatively low (64% to 71%) indicating that schedules need to be re-timed.

Figure 3-12 Route Summary Table based on Ridecheck, May 2017, Daily

Route		Boardings	Alightings	Service Hours	Productivity	On Time	Early	Late	Max Load	Max Load Stop
<b>Weekday</b>										
2	East-West Express	108	108	8.2	13.1	83%	17%	1%	8	NE Tanger Dr & NE Norton Ln (DHS)
3	City Loop	121	119	7.7	15.8	58%	1%	41%	9	Town Center / Dutch Bros.
5	Foothills Drive	8	5	4.6	1.7	82%	4%	14%	2	Nap's Thriftway (Newberg)
7	Providence	11	12	6	1.8	91%	6%	3%	2	Newberg (Radio Shack)
11	West Salem	56	53	6.6	8.5	64%	11%	25%	12	Amity Hwy 99 @ Chevron
22	Grand Ronde	124	104	11.1	8.8	67%	6%	27%	13	Spirit Mountain East Entrance
33	Hillsboro	85	61	8.5	10	71%	2%	28%	24	Carlton - N Pine St. Bus Shelter
44	Tigard	275	270	22.9	11.2	47%	6%	47%	25	Sherwood Shari's
45x	Tigard Express	22	22	2.2	10.2	44%	6%	50%	13	Sherwood Shari's
<b>Total / Average</b>		<b>810</b>	<b>754</b>	<b>77.8</b>	<b>9</b>	<b>67%</b>	<b>7%</b>	<b>26%</b>	<b>12</b>	
<b>Saturday</b>										
24s	Grand Ronde	41	34	6.3	6.5	76%	1%	23%	6	Spirit Mountain East Entrance
46s	Tigard	107	113	9.3	11.5	41%	3%	56%	17	Sherwood Shari's
<b>Total / Average</b>		<b>148</b>	<b>147</b>	<b>15.6</b>	<b>9</b>	<b>58%</b>	<b>2%</b>	<b>40%</b>	<b>11.5</b>	

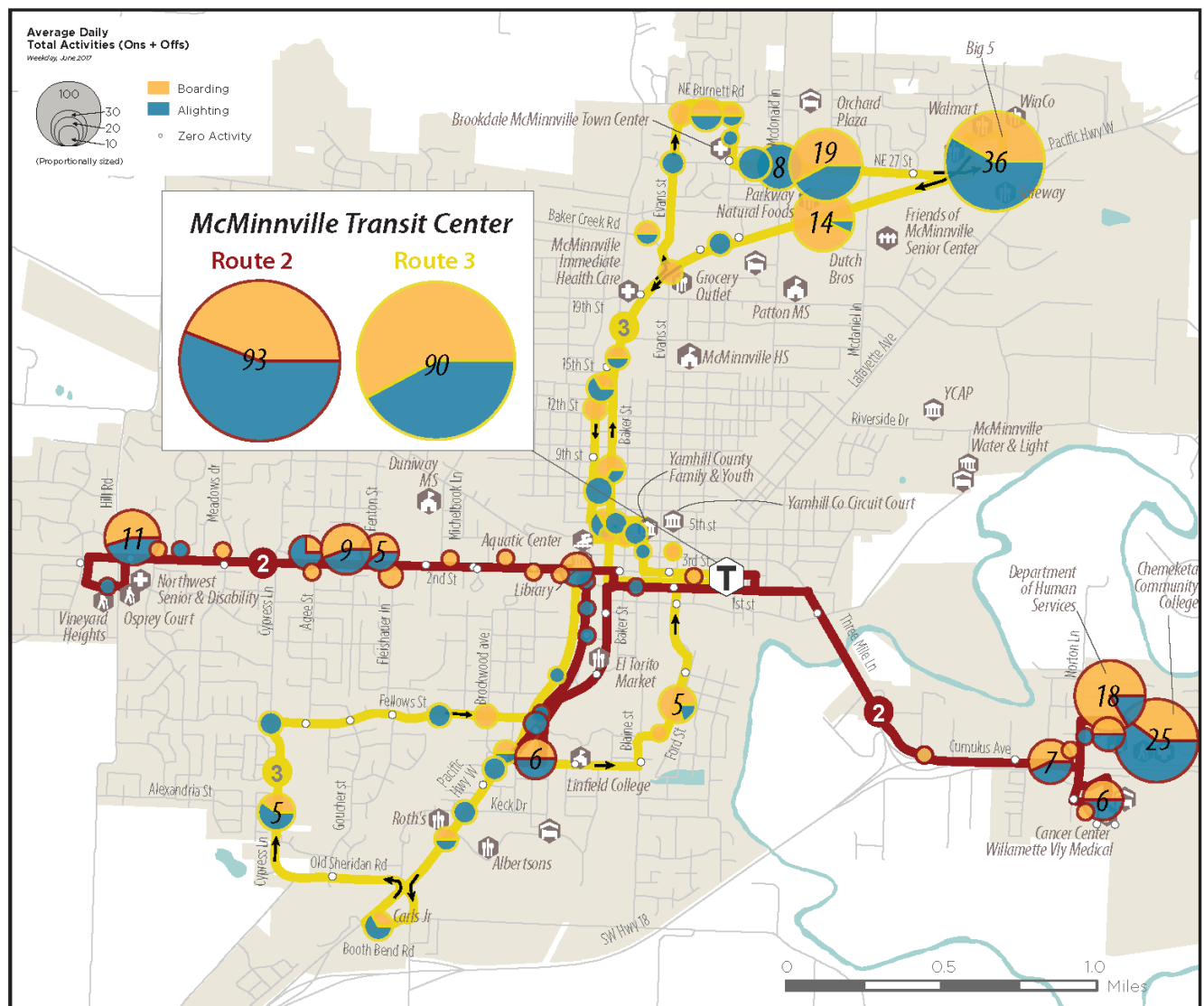
## McMinnville

Figure 3-13 shows daily ridership on the local bus routes serving McMinnville:

- Route 2 travels east-west through McMinnville between Chemeketa Community College (CCC), Willamette Valley Medical Center, and senior and social services.
- Route 3 travels north-south through McMinnville, serving destinations including WinCo, Walmart, and Safeway in the northeast and Walgreens, BiMart, Roth's, and Linfield College to the south.

Both routes have strong ridership, particularly the north portion of Route 3 and the east portion of Route 2. As noted above, on-time performance is a significant operational challenge on the north portion of Route 3.

Figure 3-13 McMinnville Routes Daily Ridership, Spring 2017



## Newberg

Figure 3-14 shows daily ridership on the local bus routes serving Newberg:

- Route 5 travels a loop around the northwest Newberg, serving George Fox University and several senior facilities, with a “there-and-back” line south of downtown connecting to Woodview Village Apartments.
- Route 7 travels east-west through Newberg, connecting Providence Medical Center, Portland Community College, and grocery stores to downtown Newberg. Bus stops along OR 99W may be 300 to 600 feet from the front door of retail stores, through parking lots that typically lack pedestrian accessways.

Ridership and productivity (ridership per service hour) was extremely low on local routes in Newberg during the survey period. George Fox University was no longer in session when the survey was conducted; however, a separate survey while George Fox was still in session (week of April 17) did not show ridership activity at the Route 5 stop serving the University.

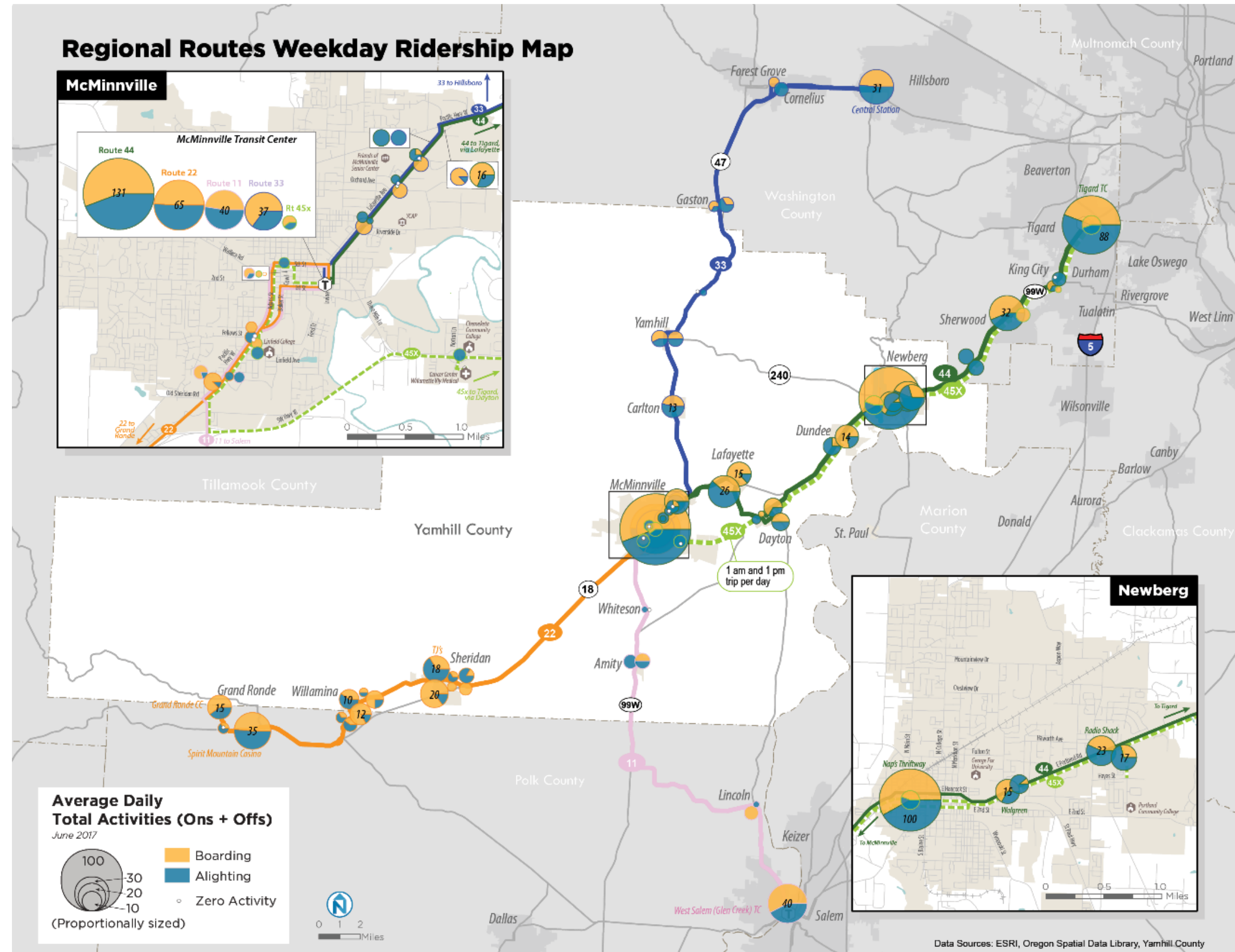
Figure 3-14 Newberg Routes Daily Ridership, Spring 2017





- **Route 11 (McMinnville-West Salem Transit Center):** Ridership to McMinnville Transit Center is highest in the morning, and ridership to West Salem Transit Center is highest in the afternoon. Most boarding activity occurs in McMinnville and West Salem.
- **Route 22 (McMinnville-Grand Ronde Community Center):** Ridership is relatively balanced in each direction; the Grand Ronde direction has both a morning and afternoon peak while the McMinnville direction is relatively steady across all trips in the morning and afternoon with a late afternoon peak. Boarding activity is also relatively balanced along the route.
- **Route 33 (McMinnville-Hillsboro Central Station):** Ridership for the route is relatively steady across all trips but is highest on the northbound 10:30 AM trip to Hillsboro Transit Center. Boarding activity is strongest in McMinnville and Hillsboro but also moderately strong in Yamhill and Carlton.
- **Route 44 (McMinnville-Tigard Transit Center):** Ridership is steady throughout the day, highest on the late morning trips in both directions and lowest on the early evening trips. Ridership is highest at McMinnville Transit Center, Nap's Thriftway in Newberg, and Tigard Transit Center, but is also relatively steady across the route including along Hwy 99 in Newberg.
- **Route 45x (McMinnville-Tigard Transit Center Express):** This route currently makes one trip to McMinnville in the morning and one trip to Tigard in the afternoon. Ridership activity is highest at Tigard TC, Nap's Thriftway, Linfield College, and Willamette Valley Medical Center in McMinnville.

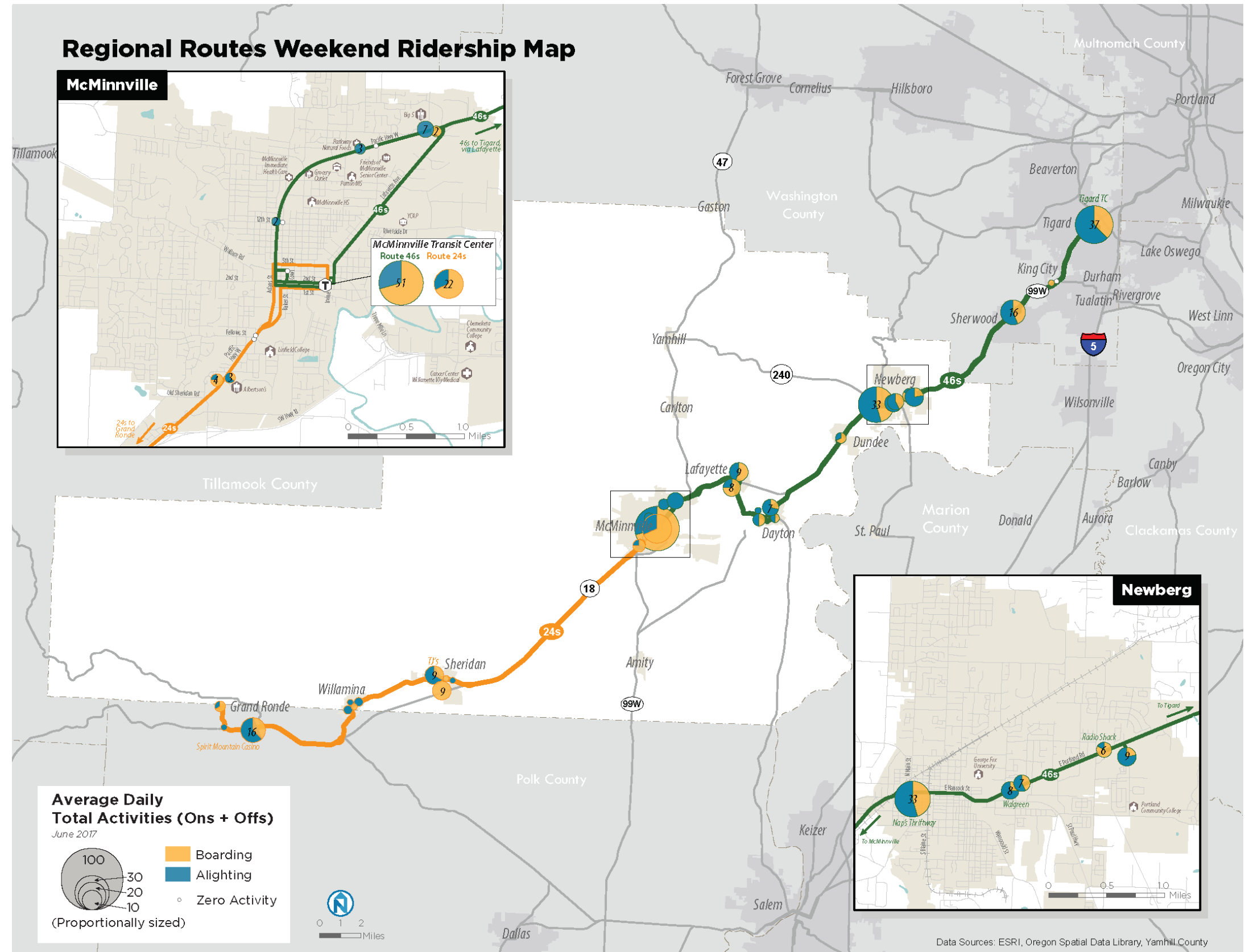
Figure 3-15 Regional Routes Weekday Ridership Map





- **Route 24s (McMinnville-Grand Ronde Community Center):** Ridership is relatively balanced across all four weekend trips (midday and late afternoon trips in the McMinnville direction have the highest ridership) and is also relatively balanced across stops.
- **Route 46s (McMinnville-Tigard Transit Center):** Ridership is relatively balanced across all four weekend trips (midday and late afternoon trips have the highest ridership) and is also relatively balanced across stops. Route 46s provides local service on Hwy 99 in McMinnville since the local fixed-routes do not operate on Saturdays.

Figure 3-16 Regional Routes Weekend Ridership Map



## Dial-A- Ride Ridership and Performance

YCTA’s demand-response service includes general public Dial-a-Ride and ADA paratransit (serving person who are unable to use fixed-route service due to a disability, within a  $\frac{3}{4}$  mile distance of fixed-route service in McMinnville and Newberg). Both types of trips are scheduled on the same vehicles. In 2016, demand-response service carried 31,264 riders in the McMinnville area and 10,701 in the Newburg area. On an average month in 2016, the demand-response services transported 3,497 boardings using 1,059 revenue hours—an average of 3.3 passengers per hour. Figure 3-18 shows demand-response travel patterns over a two-week period in April 2017.

Dial-A-Ride ridership and performance highlights include:

- Approximately 90% of the trips analyzed either started or ended in McMinnville (60%) or Newberg (30%), with some rides serving Amity and Dundee (see Figure 3-18). This is due in part to limited capacity and resources to provide broader coverage in the county.
- The vast majority of demand-responsive trips are general public Dial-A-Ride; during the analysis time period, only 18 of 1,848 demand-response trips were classified as ADA trips.
- Demand is spread generally across the day, with peaks occurring at 8 AM, 11 AM, and 1 PM. This pattern generally remains consistent on all days of the week, with slightly above average ridership on Monday, Wednesday, and Friday, which could indicate part-time work schedules or other regularly scheduled activities.
- Of the 1,417 trips in April 2017 with a recorded booking purpose, 80% were work trips. As shown in Figure 3-18, top destinations include employment locations such as A-dec and Meggit Silicone; other locations are residential care or supportive housing facilities facilitating work placement and training.

### Peer Comparison: Demand-Response Service Effectiveness

Service effectiveness measures the productivity of demand-response service, in terms of the number of passenger trips served per hour of service provided. YCTA demand-response trips per revenue hour rank in the middle of the selected peers, and within industry standards for demand-response service.

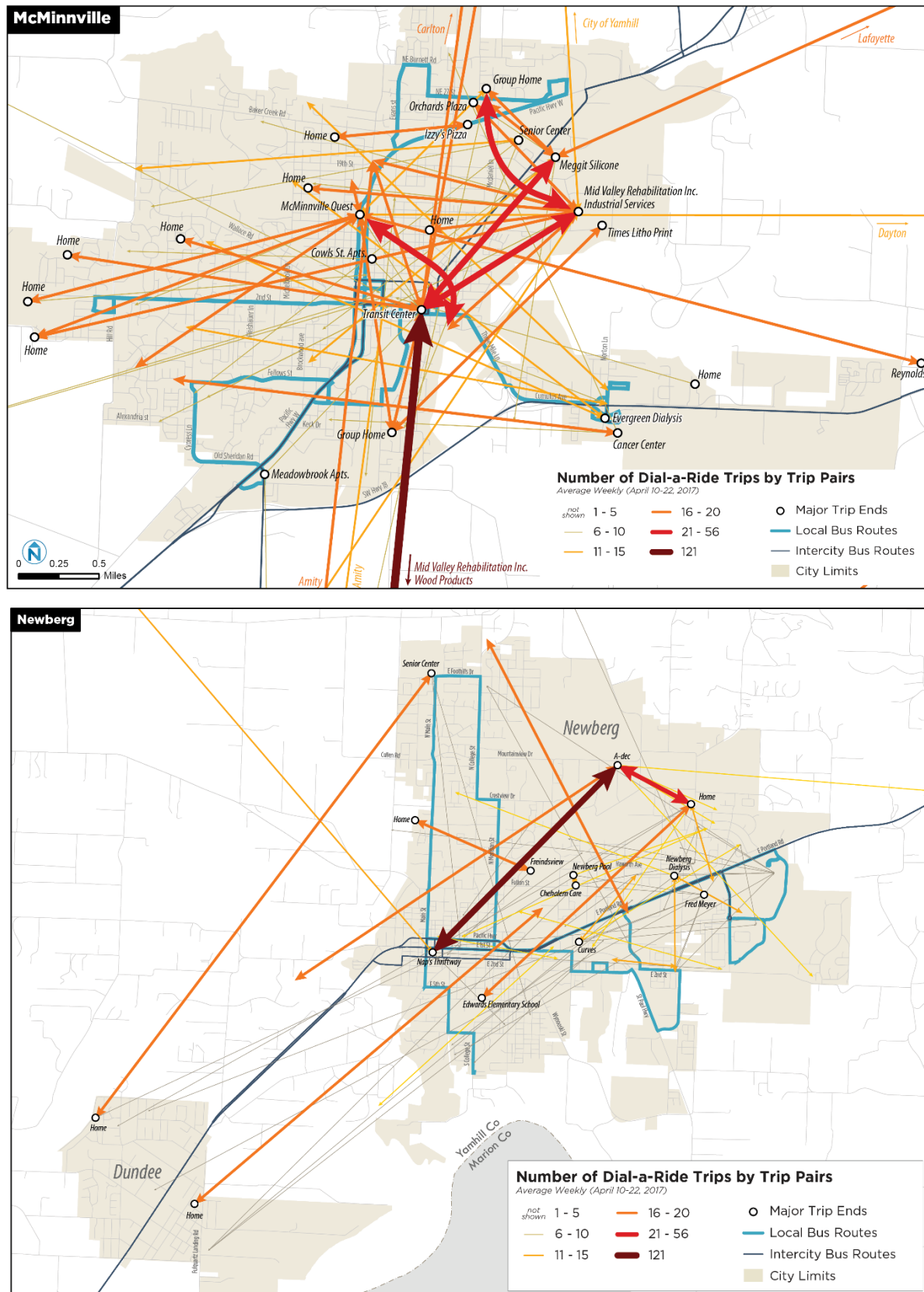
Figure 3-17 Demand Response Peer Comparison: Trips per Revenue Hour, 2016



For or peer review details see TDP Volume II, Section 2: TM #2, Chapter 3 and Appendix C

Source: National Transit Database 2015; US Census Bureau American Community Survey 5-year estimate.

Figure 3-18 Dial-A-Ride Origin Destination Patterns, McMinnville and Newberg



## OTHER TRANSPORTATION SERVICES

### Regional Transit Providers

YCTA's intercity routes connect passengers to neighboring transit systems outside the county. These neighboring systems include:

**Tri-County Metropolitan Transportation District of Oregon (TriMet)** operates transit service in the Portland metropolitan area, serving communities in Clackamas, Multnomah, and Washington counties. TriMet operates several modes of fixed-route service, including five light rail (MAX) lines, one commuter rail line (WES), and 79 bus lines. Service runs between 4:30 AM and 2:30 AM; however, WES runs during weekday commute hours only. TriMet also operates the Portland Streetcar. LIFT is TriMet's complementary ADA paratransit service, operating within a ¾-mile buffer of TriMet fixed routes. YCTA connects to TriMet in Hillsboro and Tigard. TriMet plans to build a MAX light rail extension to Tigard Transit Center, opening in 2025 or later.

Appendix B provides an inventory of other public transportation services. Additional detail on other transportation services can be found in TDP Volume II, Section 2: TM #2, Chapter 3 (see pages 3-41 to 3-47). See Chapter 9 for recommendations on improving regional coordination.



YCTA Route 33 at the Hillsboro Central MAX Station/Transit Center. There is no designated bay or signage for YCTA, but YCTA is working with the City of Hillsboro to install a stop pole and seat.

**Cherriots** provides public transit service in the Salem metropolitan area. Cherriots services run weekdays from approximately 6 AM to 9 PM. CherryLift is Cherriots' ADA paratransit service, available within a ¾-mile buffer of Cherriots fixed route service. Cherriots Regional service connects to communities in Marion and Polk Counties, including Woodburn and Dallas, as well as Wilsonville.

**Tillamook County Transportation District (TCTD)** operates a Coastal Connector route (60X) that links Lincoln City, Chinook Winds Casino, Rose Lodge, Grand Ronde, and downtown Salem seven days a week. TCTD also operates the Grand Ronde Express (70X) between Grand Ronde and downtown Salem on weekdays only. TCTD is one of five member agencies of the [Northwest Connector](#) (NW Connector). Member agencies' routes have a unified website and branding to improve connectivity between communities across northwestern Oregon.

**Ride Connection** is a non-profit organization made up of a network of agencies who partner together to serve older adults, people with disabilities, low-income individuals, and the general public. Ride Connection serves the three counties in the TriMet District (Clackamas, Multnomah, and Washington). Ride Connection's Community Connector deviated fixed-route services based in Hillsboro and Forest Grove connect with YCTA. The Forest Grove GroveLink service operates from 6 a.m. to 7 p.m. with peak service in the morning and evening commute times. It features two loops – an east and a west loop – as well as an employment service providing a dedicated route to TTM Technologies in eastern Forest Grove. The Washington County Community Bus operates a morning (approximately 7 AM to 9 AM) and evening (approximately 4:30 PM to 7 PM) commuter bus between Forest Grove, Hillsboro, Banks, and North Plains.

**South Metro Area Transit (SMART)** operates transit in Wilsonville. SMART adopted a transit master plan in 2017 that calls for SMART to realign its 2X commuter route between Wilsonville and Southwest Portland to serve Tigard TC, filling in gaps when TriMet WES service does not operate.



Figure 3-19 highlights the primary connection points between regional providers and YCTA service.

Figure 3-19 Summary of Regional Transit Connections

Community	Location	Provider	Routes
Tigard	Tigard Transit Center (8960 SW Commercial, Tigard); <a href="https://trimet.org/transitcenters/">https://trimet.org/transitcenters/</a>	TriMet	WES commuter rail(weekday peak only); Routes 12, 45, 64, 76, 78, 93
		YCTA	Routes 44, 45x (weekday); 46s (Saturday)
Hillsboro	Central MAX Station/Transit Center (333 SE Washington St); <a href="https://trimet.org/transitcenters/">https://trimet.org/transitcenters/</a>	TriMet	MAX Blue Line; Routes 46, 47, 48, 57
		Ride Connection	Washington County Community Bus (weekday only)
		YCTA	Route 33 (weekday only)
Forest Grove	Tualatin Valley Hwy and OR 47	TriMet	Route 57
		Ride Connection	GroveLink (weekday only)
		YCTA	Route 33 (weekday only)
West Salem	West Salem Transit Center (Glen Creek Rd NW & Cornucopia St NW); <a href="https://www.cherriots.org/en/baymaps">https://www.cherriots.org/en/baymaps</a>	Cherriots	Routes 16, 17, 26, 27 (all weekday only, although Saturday service is planned for some routes)
		YCTA	Route 11 (weekday only)
Grand Ronde	Spirit Mountain Casino or Grand Ronde Community Center	TCTD	Coastal Connector (60X) and Grand Ronde Express (70X, weekday only)
		YCTA	Route 22 (weekday); 24s (Saturday)

## Additional Transportation Services

### Human Services / Medical Transportation

Social service transportation providers in Yamhill County include a mix of schools, churches, nonprofits and human service agencies. Many of these providers operate a single van or passenger vehicle. As of 2016, nine social service agencies are actively involved or interested in providing transportation service in Yamhill County. Eight agencies are based in McMinnville, and two are based in Salem. See Appendix B for a description of the transportation services these agencies are involved with, and for whom they are available.

### Vanpool/Carpool

Cherriots Rideshare is a public ridesharing service operated in Marion, Polk, and Yamhill counties. It is a part of Cherriots' Trip Choice program, which connects commuters with carpool and vanpool partners through Drive Less Connect, a demand-management program operated by the State of Oregon.

### Volunteer Service

Yamhill-Carlton Volunteer Transit is a volunteer demand-response service, intended for first/last-mile trips connecting with YCTA fixed-route bus services. Volunteer drivers, operating a Yamhill-Carlton Volunteer Transit van, drive passengers between their trip origin in Carlton (often their home) and the nearest YCTA bus stop. Trips must be reserved at least 24 hours in advance, and the fare is \$2. The fare includes a YCTA fixed-route day pass. Yamhill County oversees this program and provides funding from the County General Fund. The program has one vehicle, which is owned by the County and maintained by the County maintenance shop.



## Airport Transportation

HUT Airport Shuttle operates a shuttle service to Portland International Airport seven days per week. The service is based in Albany, and has stop locations south and east of Yamhill County in Corvallis, Salem, and Woodburn. As an example of fares, a one-way adult rate for service from Corvallis to the airport is \$49.

## Taxi Service

According to Yamhill County's 2016 Coordinated Public Transit – Human Services Transportation Plan,<sup>12</sup> four taxicab companies operate in Yamhill County. These include Super Cab and Rick Shaw Taxi in McMinnville, Advanced Taxi Service in Newberg, and Yellow Cab in Beaverton.

## Ride-Hailing Services or Transportation Network Companies (e.g., Lyft and Uber)

Although Yamhill County is mostly outside of the official Lyft and Uber service areas, trips on these services can be scheduled for parts of Yamhill County. The ability to schedule a trip appears to be somewhat limited based on availability of drivers to serve the trip, particularly outside of the OR 99W and OR-18 corridors, such as a trip in the OR 47 corridor that originates outside of the service areas.

## Tourist-Oriented Services

Spirit Mountain Casino operates shuttle bus routes between the Portland and Salem Metro Areas and the casino.<sup>13</sup> One of the routes serves Newberg and leaves from BiMart at 590 Haworth Ave in Newberg every Monday and Wednesday at 9 AM and leaves the casino at 3:15 PM. The shuttle is free, but requires a free Coyote Club membership. The casino operates the service with five over-the-road coaches. There must be 10 passengers or more for the shuttle to operate.

Several private shuttle services specialize in wine tours throughout the Willamette Valley, including Yamhill County. These private shuttles range from standard transportation to and from regional wineries, to tours that include additional wine-related programming. A list of shuttle services is provided in Appendix B.

See Appendix B for an inventory of public transportation providers. Chapter 9 provides additional discussion of Ride-Hailing Services.

<sup>12</sup> Yamhill County Coordinated Public Transit – Human Services Transportation Plan, 11/2016. <https://tinyurl.com/y6vj2ang>

<sup>13</sup> <https://www.spiritmountain.com/shuttle>

## 4 COMMUNITY INPUT AND NEEDS ASSESSMENT

This chapter summarizes public input gathered in the Existing Conditions phase of the YCTA TDP study, and provides an overall assessment of transit needs based on both community input and the analysis of existing conditions.

### SUMMARY OF COMMUNITY INPUT

Input was gathered from current riders, the general public, and a variety of stakeholders. Each outreach element is listed in Figure 4-1. The first phase of TDP outreach in Spring/Summer 2017 focused on helping develop goals for YCTA and understanding current conditions and needs. This section summarizes the results; additional details can be found in the documents indicated in the table. Additional public outreach focused on solution strategies and service design was conducted in March 2018 and is summarized in Chapter 6.

Figure 4-1 Summary of TDP Community Input

Time Frame	Project Tasks	Outreach Tools	Detailed Results
Spring / Summer 2017	Goals	<ul style="list-style-type: none"> <li>Outreach events</li> </ul>	<ul style="list-style-type: none"> <li>Volume II, Section 1: TM #1</li> </ul>
	Existing Conditions	<ul style="list-style-type: none"> <li>On-board rider survey</li> </ul>	<ul style="list-style-type: none"> <li>Volume II, Section 2: TM #2, Chapter 4 and Appendix D</li> </ul>
		<ul style="list-style-type: none"> <li>Community survey</li> </ul>	<ul style="list-style-type: none"> <li>Volume II, Section 2: TM #2, Chapter 4 and Appendix E</li> </ul>
		<ul style="list-style-type: none"> <li>Stakeholder meetings and focus groups</li> </ul>	<ul style="list-style-type: none"> <li>Volume II, Section 2: TM #2, Chapter 4 and Appendix F</li> </ul>
		<ul style="list-style-type: none"> <li>Bus operator interviews</li> </ul>	<ul style="list-style-type: none"> <li>Volume II, Section 2: TM #2, Chapter 4 and Appendix G</li> </ul>
March 2018	Solution Strategies Service Design	<ul style="list-style-type: none"> <li>Outreach events</li> <li>Community survey</li> </ul>	<ul style="list-style-type: none"> <li>TDP Chapter 6 and Volume II, Section 4: TM #4, Chapter 6 and Appendix A</li> </ul>

## Rider (On-Board) Survey

YCTA conducted a survey of current riders on-board buses in April 2017, covering all trips on at least one weekday and weekend day. A total of 306 surveys was collected, including 10 in Spanish.

On-board survey highlights include:

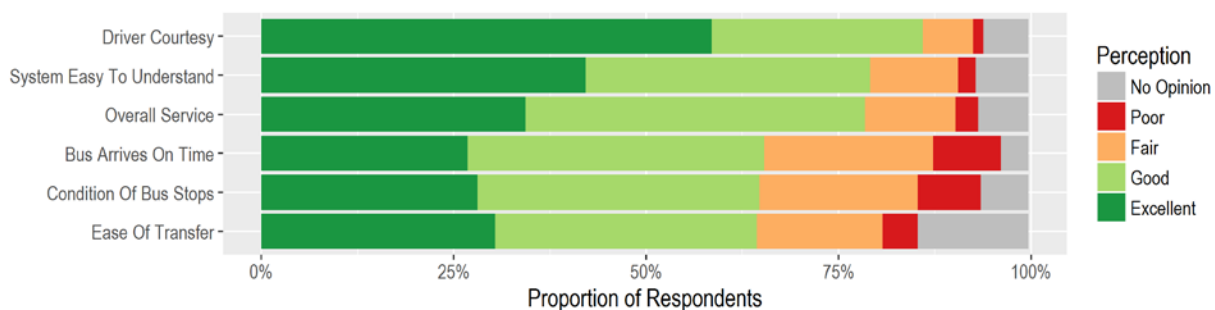
- **Age:** Mostly riders are between age 18 and 64. Approximately 4% of riders are 17 or under and 6% are 65 or over.
- **Labor Market Status:** Two-thirds of riders surveyed are employed—43% work full-time and 24% work part-time. Nearly 20% are students.
- **Income:** Over 70% of YCTA riders have a household income of less than \$30,000 annually, including 43% who earn less than \$15,000 per year.
- **Trip Purpose:** Most people (47%) used YCTA for travel to/from work, with other purposes evenly split between personal business, recreation/social, college/school, medical, and shopping. Linfield College and Chemeketa Community College were the most common school destinations.
- **Transfer Activity:** Approximately 29% of survey respondents connected to/from another YCTA route and/or another provider on at least one end of their transit trip.
- **Access to Transit:** More than 60% of respondents indicated they walk to and from the bus stop and the walk takes 10 minutes or less for most riders.
- **Frequency of use:** The vast majority of riders (81%) are frequent riders—who use YCTA service two or more days per week.
- **Transit Reliance:** Nearly a third of respondents indicated they would have been unable to make the trip if the bus services were not available.
- **Out-of-County Origins and Destinations:** Passengers traveling outside of Yamhill County using Route 33 (Forest Grove and Hillsboro) and Route 44 (Sherwood, Tualatin, and Tigard) connect to/from TriMet service for travel to locations in Beaverton, Hillsboro, Tigard, and around the Portland area. Route 11 passengers travel to/from other parts of the Salem area using Cherriots service (YCTA service ends at West Salem Transit Center).

## Customer Satisfaction

Over three-quarters of respondents rated their overall satisfaction with service as “good” or “excellent.”

- The vast majority of respondents (86%) rated driver courtesy as “good” or “excellent.”
- Most respondents (over three-quarters) indicated the system is easy to understand, although most respondents are frequent riders who are already familiar with the system.
- Satisfaction was lowest for on-time arrivals, the condition of bus stops, and ease of transfers.

Figure 4-2 Satisfaction with Transit Service



Q10: Please rate your perception of YCTA service (N=306)

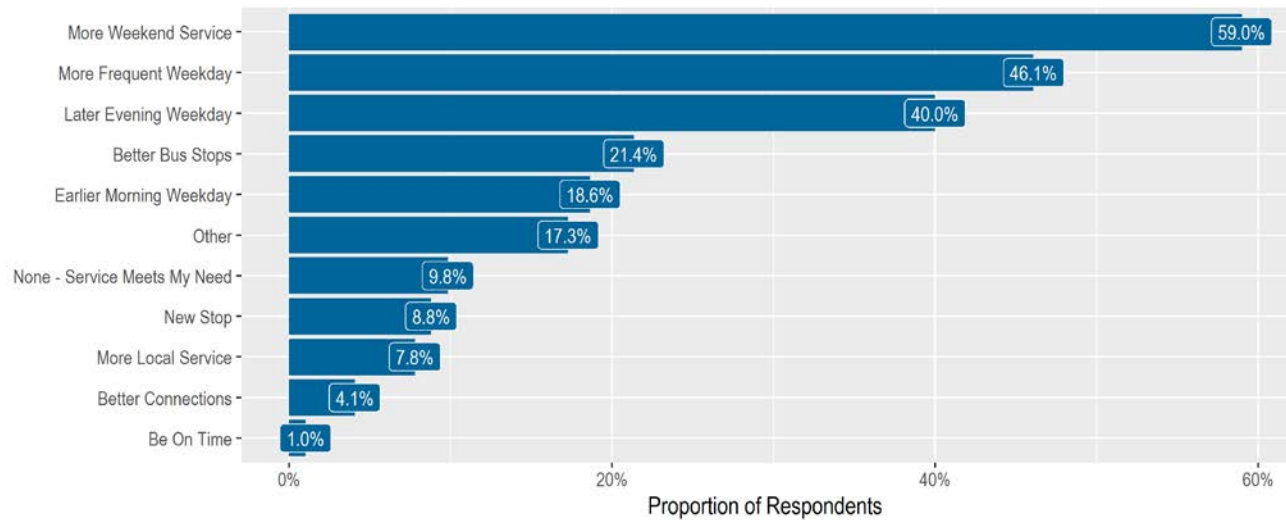
## Improvement Priorities

The top priorities among existing riders for improving service are:

- More service on weekends (nearly 60%)—also the single most important improvement (over 28%)
- Increased frequency on weekdays (46%)
- Later evening weekday service (40%). Most of these respondents service wanted service to run until 8 PM or 9 PM. (Respondents who identified earlier morning service as an improvement wanted service to start at 6 AM or earlier.)

Smaller shares of respondents identified better bus stops and earlier morning service within the “Top 3” improvements. Nearly 10% of passengers indicated that service as it operates today meets their needs.

Figure 4-3 Top Service Improvements Requested by Respondents



Q11: Please select up to THREE improvements that would help you choose to ride the bus more often (n=296)

For details on the On-Board Survey see TDP Volume II, Section 2: TM #2, Chapter 4 and Appendix D

## Community Survey

YCTA conducted a survey of the overall community to help understand travel patterns, opinions about transit, and likelihood of taking transit among the general public. The survey was available from late June 2017 through August 22, 2017. The survey was available online in English, and a paper version of the survey was available in both English and Spanish. A total of 405 surveys was collected—329 online and 76 hard-copy responses. Approximately a third of people who took the survey live in McMinnville, a third live in Newberg, and a quarter reside elsewhere in Yamhill County. The remaining responses came from people who live outside of Yamhill County.

Highlights from the Community Survey include:

- The top destinations people would like to access by transit include major retailers (Fred Meyer, Winco, Safeway, Walmart, Albertson's, etc.) and major institutions (George Fox University, Providence Newberg Medical Center, etc.). McMinnville and Newberg were identified as key destinations from other Yamhill County cities, as were regional connections to the Portland and Salem areas.
- Over 75% of people who took the survey have access to a vehicle and would be considered “choice” riders. Approximately 60% indicated that they and/or a member of their household used public transportation within the past year, most of whom (60%) were occasional riders.
- Among people who took the survey and did not use transit in the past year, nearly half simply prefer to drive. Reasons other people did not use transit include that it is not available near their home (41%), takes too long (37%) or does not run when (34%) or where (28%) they need it to go. A relatively small share (22%) felt uncomfortable riding transit or was concerned that it is unsafe. Approximately 71% of people who did not use transit still identified a moderate or high benefit to the community from public transit service.

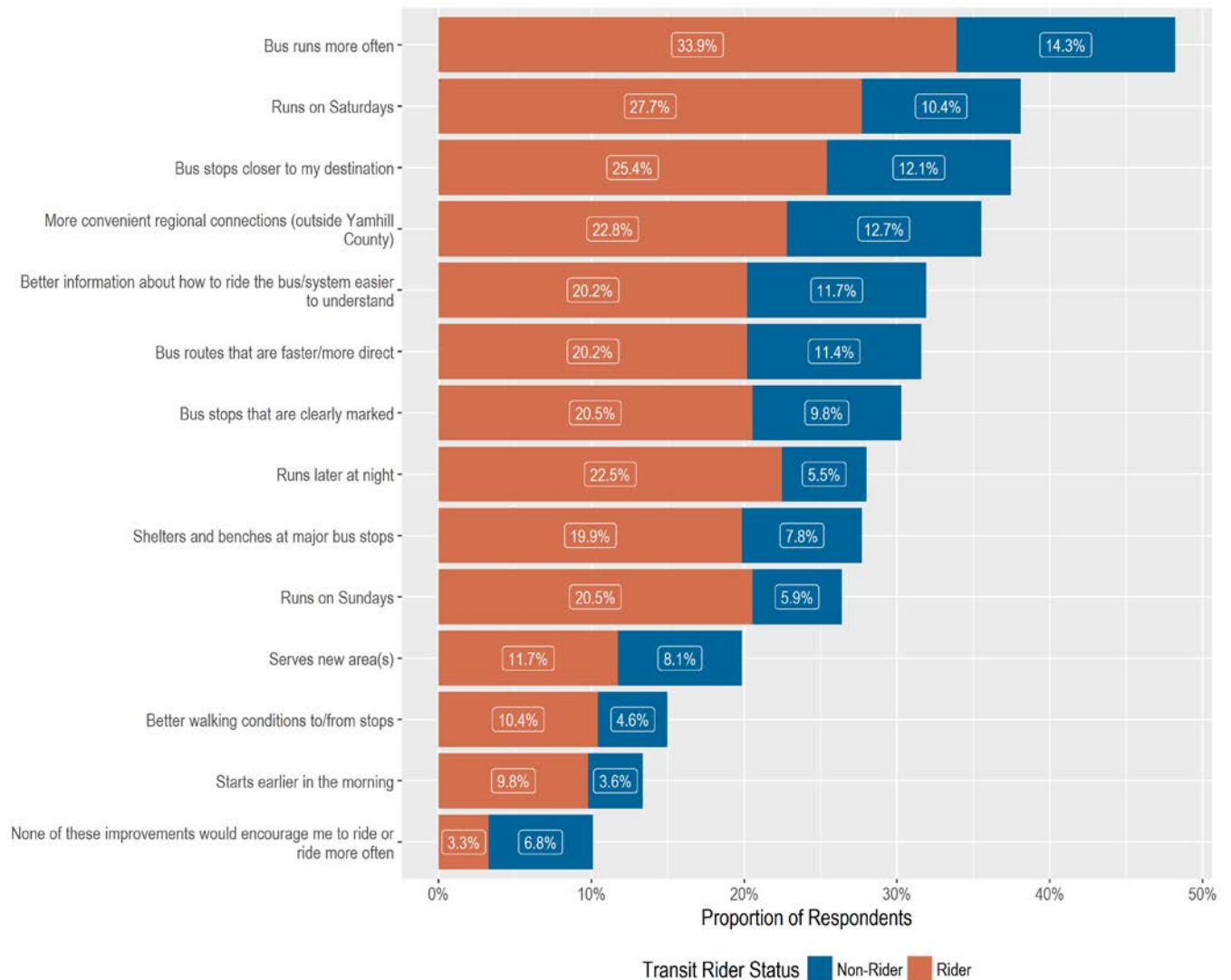
## Preferences for Transit Improvements

The top improvement that would encourage people to ride transit or to ride it more often is more frequent service. Figure 4-4 identifies a variety of other potential improvements. There did not appear to be a significant difference in priorities between people who had used public transportation in the past year and people who had not used transit.

Nearly 29% of respondents prioritized later evening hours. Several people commented that expanding the hours of service are an important factor in making transit work for people who don't get off work until 6 p.m. or 7 p.m., work later evening shifts, or attend college classes that run at night. Most of these respondents (70%) suggested that service end between 8:00 p.m. and 10:00 p.m. Of the 14% of respondents who said earlier service would encourage them to use the service, most wanted a start time before 6:00 a.m.



Figure 4-4 Support for Potential Improvements (up to 5 Priorities)



Q20 (Q8) What types of improvements to bus service would help you ride Yamhill County Transit or ride more often? Please rank your top five choices. (n=307)

## Relative Preferences for Potential Transit Funding Options

People were asked to identify their *relative* preference for different potential local options for funding public transportation improvements in Yamhill County. By a wide margin, people preferred a countywide product-specific tax (such as lodging, cigarettes, or alcohol)—77% of the top three ranked choices. A new vehicle fee and a business payroll tax were the next most favorably ranked local funding options—66% and 52% of the top three choices, respectively.

Q22 (Online Only): Today, the County General Fund makes up about 10% of the YCTA operating budget (about \$2 million annually). State and Federal funding may not keep pace with the cost of YCTA's current service levels. Please rank the following local funding options for public transportation improvements in order of preference. 1 is most preferred, 7 is least preferred. (n=202)

For details on the Community Survey see TDP Volume II, Section 2: TM #2, Chapter 4 and Appendix E. Figure 4-12 in TM #2 provides a chart showing support for various options.

## Focus Groups

The project team conducted a series of meetings to gather input from the public and stakeholders in a small group setting, including over 40 participants at four meetings facilitated as part of the TDP study process. Figure 4-5 summarizes the issues discussed, input and ideas from focus group participants, and key opportunities.

Figure 4-5 Focus Group Summary

Issue / Topic	Description/Comments	Opportunities
<b>Discussion of awareness and importance of transit in the community</b>		
Awareness of YCTA service	<ul style="list-style-type: none"> <li>People in the community are not aware of current service</li> </ul>	<ul style="list-style-type: none"> <li>Bus stop signs and shelters, travel training, and transit ambassadors could raise awareness</li> </ul>
Importance of transit in the community	<ul style="list-style-type: none"> <li>Transit is important for: Older and younger people who can't drive, Kids (major roadways and crossings are not safe), Environmental reasons</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate with the business community</li> </ul>
<b>How YCTA could better serve current and new markets</b>		
Agricultural Workers	<ul style="list-style-type: none"> <li>Agricultural work starts early in the morning (5:30 – 7:00 AM until mid-afternoon)</li> </ul>	<ul style="list-style-type: none"> <li>Vans could meet workers at points along the highway; consider vanpools through Cherriots</li> <li>Seasonal hours to accommodate agricultural work</li> </ul>
Special Events	<ul style="list-style-type: none"> <li>Transit could improve access and reduce congestion during special events</li> </ul>	<ul style="list-style-type: none"> <li>Events like Dayton Friday Nights, Newberg Old Fashioned Festival, local sporting events (weekends)</li> </ul>
Students	<ul style="list-style-type: none"> <li>George Fox University students primarily live on campus; small commute market but students who live on campus might use transit to get around</li> </ul>	<ul style="list-style-type: none"> <li>Partner with Linfield College around later evening service</li> </ul>
<b>Barriers to using existing services</b>		
Lack of signage and fixed stops	<ul style="list-style-type: none"> <li>Stops should have signs (or at minimum, some sort of painted marking), benches, and shelters</li> <li>Flag stops not ideal, but should be better advertised</li> </ul>	<ul style="list-style-type: none"> <li>Graphical communication of how to use flag stops</li> <li>Improve legibility of readerboards for visually-impaired, especially stops served by multiple routes</li> </ul>
Safety of stops and ability to access to destinations	<ul style="list-style-type: none"> <li>Major roadways and crossings are not safe for kids</li> <li>Safety of stops along OR 99W</li> <li>Difficult to navigate to front door of stores through parking lots</li> </ul>	<ul style="list-style-type: none"> <li>Provide "shopper shuttle" to improve access</li> <li>Work with Willamette Medical Center to Hospital to change from two-way to one-way operation</li> <li>Improve access to McMinnville Senior Center, Winco/Walmart, Roth's, Walgreen's, Safeway, etc.</li> </ul>
Dial-A-Ride/ ADA Paratransit	<ul style="list-style-type: none"> <li>Limited awareness of ADA service</li> <li>Dial-A-Ride is inconvenient – need to reserve in advance – but is appealing to some people –get picked up closer to home than fixed-route service</li> </ul>	<ul style="list-style-type: none"> <li>Participants are open to alternative service models, e.g., feeder service to fixed-routes, central connection points, point deviation, shopper shuttles, deviated fixed-routes, etc.</li> </ul>
Buses	<ul style="list-style-type: none"> <li>Need to upgrade vehicles and make them more passenger-friendly</li> </ul>	<ul style="list-style-type: none"> <li>YCTA is currently in the process of purchasing new vehicles</li> </ul>
Fares	<ul style="list-style-type: none"> <li>Generally perceived as reasonable, but pass costs are high for some populations and fares can be high for large families</li> <li>A modest increase in exchange for more service would be OK</li> </ul>	<ul style="list-style-type: none"> <li>Consider 12 and under, student, and low-income discounts, and bulk pass program</li> <li>Expand locations where passes can be purchased (e.g., Newberg)</li> </ul>

Issue / Topic	Description/Comments	Opportunities
Communications	<ul style="list-style-type: none"> <li>Use a variety of communication mechanisms (email, phone, etc.)</li> <li>Baker/Evans change not communicated well</li> <li>Challenging due to driver turnover</li> <li>Language barrier – drivers and dispatchers; people may not be awareness of the translation service that is available</li> <li>Send service alerts through Facebook and Twitter and post on website</li> </ul>	<ul style="list-style-type: none"> <li>Ensure policies allow/facilitate communications and coordination between drivers</li> <li>YCTA should communicate detour routes to riders (e.g., parades, construction)</li> <li>Worksource training grants are available and could help to increase diversity (and ability to speak multiple languages) among drivers</li> <li>Explore possible partnership with High School computer lab (around website/service alerts)</li> </ul>
Information	<ul style="list-style-type: none"> <li>Difficult to obtain printed materials in the past</li> <li>Website and online are both important</li> <li>An online trip planner would be useful – website and hone</li> </ul>	<ul style="list-style-type: none"> <li>Place printed materials at key locations in the community</li> <li>YCTA technology grant will help enhance capabilities</li> </ul>
Safety	<ul style="list-style-type: none"> <li>Perceived as safe by people who use the system – not considered a barrier. But new riders may not know that (related to awareness).</li> </ul>	<ul style="list-style-type: none"> <li>See items under “Awareness of YCTA Service”</li> </ul>
<b>Discussion of where routes run and provide service today; areas that should be served (including growth areas)</b>		
McMinnville	<ul style="list-style-type: none"> <li>No service beyond Hill Road in McMinnville (many apartments in growing area)</li> <li>Apartments near 27<sup>th</sup> &amp; Hembree near Goodwill (south of Hembree, north of 27<sup>th</sup>); Burnett Road</li> <li>Housing at Baker Creek &amp; Hill Road</li> <li>North American Plants (east of McMinnville)</li> </ul>	
Newberg	<ul style="list-style-type: none"> <li>Cultural Center/Library</li> <li>NE Newberg – High School, Aquatic Center, Springbrook north of Fred Meyer (lower-income housing)</li> <li>Could reduce service frequency in order to increase coverage (more routes that run less often)</li> </ul>	
Other Communities	<ul style="list-style-type: none"> <li>No service in Sheridan to Deer Meadows. Bus goes past but does not stop</li> </ul>	
Service between communities	<ul style="list-style-type: none"> <li>Yamhill-Newberg requires transferring in McMinnville.</li> <li>Newberg-McMinnville travel patterns are mostly for access to services</li> </ul>	
<b>How could YCTA attract more riders and what are the priorities?</b>		
Service Hours (“Span”)	<ul style="list-style-type: none"> <li>Earlier and later hours are needed for work and school, including arriving at work at 8 AM or 9 AM considering both intercity and local routes</li> </ul>	<ul style="list-style-type: none"> <li>Consider alternative models for late night service; partner with Linfield College</li> <li>Seasonal hours (e.g., agricultural workers)</li> </ul>
Days of Service	<ul style="list-style-type: none"> <li>Weekend service is seen as a priority, particularly Saturday but also to Church on Sundays.</li> </ul>	<ul style="list-style-type: none"> <li>Fares could be higher for Sunday service</li> </ul>
Frequency	<ul style="list-style-type: none"> <li>Mixed opinions on importance of convenience (short walk) and frequency/speed</li> </ul>	
Local vs. Regional Service	<ul style="list-style-type: none"> <li>Regional connections are useful, but local service is as or more important and needs improvement</li> </ul>	
Improve Transfers	<ul style="list-style-type: none"> <li>Need well-timed transfers between local and intercity services</li> </ul>	<ul style="list-style-type: none"> <li>Bring back connection from Route 44 to Oregon Mutual Insurance (OMI)</li> </ul>
<b>Other Discussion Items</b>		
Transit Center	<ul style="list-style-type: none"> <li>Restroom lock and cleanliness issues</li> </ul>	<ul style="list-style-type: none"> <li>Explore transit center in Newberg</li> </ul>
Coordination	<ul style="list-style-type: none"> <li>The many community organizations in the county can help raise awareness of transit</li> </ul>	<ul style="list-style-type: none"> <li>Various groups that YCTA should coordinate with (see TM #2)</li> </ul>

Issue / Topic	Description/Comments	Opportunities
Park-and-Ride	<ul style="list-style-type: none"> <li>Informal carpooling already occurs</li> </ul>	<ul style="list-style-type: none"> <li>Explore agreements with churches, etc., to support ride share, park-and-ride access</li> </ul>
Land Use / Street Infrastructure / Pedestrian Access	<ul style="list-style-type: none"> <li>Consider Newberg ADA/Pedestrian/Bike Route Improvement Plan</li> </ul>	<ul style="list-style-type: none"> <li>Cities should include the transit agency in development process and consider street infrastructure and the ability to accommodate transit related to new development applications</li> </ul>

Note: Condensed from TM #2, Figure 4-14 (See TDP Volume II, Section 2)

For details on the Focus Groups see TDP Volume II, Section 2: TM #2, Chapter 4 and Appendix F

## OPERATOR INPUT AND FIELD OBSERVATIONS

The consultant team met with bus operators and dispatchers either one-on-one or in small groups to obtain their input, and also rode most bus routes to observe how the system works and had additional informal conversations with drivers while riding the bus routes. Drivers generally communicated that they enjoy their job and appreciate that everyone works as a team to help out (e.g., Dial-A-Ride drivers pick up portions of Routes 3 and 7 when these routes get behind). They feel that they are doing their best but that the current design and timing of some routes is challenging, and the lack or quality of infrastructure reflects badly upon them.


For a detailed synthesis of operator input and the consultant team's field observations, see TDP Volume II, Section 2: TM #2, Chapter 4 (Figure 4-6) and Appendix G

## SUMMARY OF ISSUES AND OPPORTUNITIES

The table below lists key issues and opportunities identified from both community input and analysis during the TDP study Existing Conditions phase.

Figure 4-6 Issues and Opportunities

Topic Area	Issue	Opportunity
Transportation System	Congestion on OR 99 results in transit delays for Routes 44, 45x, and 46s.	The Newberg-Dundee Bypass was completed midway through TDP development; along with the end of construction detours, its completion appears to have alleviated transit delays on OR 99W.
Land Use	The bulk of land uses in the rural portions of the county are within a ½-mile of YCTA routes.	Better promotion of service, including fixed bus stops to identify the presence of transit and where to catch the bus, may help those who can walk to access existing routes.
	Newberg's residential uses are primarily low and medium density.	The land uses and development patterns in Newberg may be better served by a different type of service than the fixed-routes that are provided today.
	In general, transit routes travel through and between all of Yamhill County's population centers.	Route alignment is generally good, but changes to service times, frequencies, or better marketing are needed to get people onto buses.

Topic Area	Issue	Opportunity
Market Analysis	Unincorporated areas of the county make up 23% of the population but accounted for 43% of the population growth from 2010-2016.	Opportunities may be limited; unincorporated areas are typically low-density and difficult to serve with fixed-route transit.
	The population growth rates of Carlton, Lafayette, and Newberg were the highest in the county from 2010-2016.	These communities may need additional transit service. Service in Newberg, which has two routes today, may need to be modified to tap into the city's rider market.
	Willamina has high percentages of both low-income residents and people with disabilities.	Many members of this community may be unable to walk to the existing Route 22 McMinnville-Grand Ronde service.
Economy	Vineyards are a major player in the local economy. Locations are spread out throughout the county.	Multiple private companies offer visitor transportation, but there may be an opportunity for YCTA to help transport employees, especially along the OR 99W corridor.
	Four of the county's top 10 employers have no transit service available.	Potentially reroute services to attract employees and coordinate with Cherriots Trip Choice on employer outreach.
Existing Services	YCTA does not serve several major activity centers in McMinnville, including YCAP, Virginia Garcia clinic and senior housing between the clinic and Evergreen Aviation Museum. The Virginia Garcia clinic along Cumulus Avenue in eastern McMinnville is a frequent destination; however, the road linking the Chemeketa Community College campus and Virginia Garcia is only open for emergency vehicles.	Consider revising route alignments. Route 2 could serve Virginia Garcia if the emergency roadway were open for transit vehicles (the TDP identifies funding for an automated access gate). 
	Service was requested at Deer Meadow Assisted Living outside Sheridan. Route 22 McMinnville-Grand Ronde passes Deer Meadow, but does not stop. There is no safe place to pull over.	While it is not possible to serve Deer Meadow given lack of roadway pull-outs and the parking lot configuration, the TDP includes alternative service models that can address this need.
	Passengers are not aware of where it is safe for buses to stop or how to signal drivers, and become frustrated when buses pass them by.	Consider educating the public about the flag system and transition to set stops once bus stops have been marked/signed.
	Shopping areas and other destinations are challenging for older adults, people with disabilities, and others to access from stops along major roadways (OR 99W).	Explore alternative service models, such as shopper shuttles (and/or other types of shuttles), to provide near front-door access to retail store, senior centers, medical centers, and other locations.
System Performance	Newberg routes 5 and 7 have very low ridership and productivity.	Determine if route alignment changes are needed, or if a different type of service would better fit Newberg.
	On-time performance is generally poor. Route 44 McMinnville-Tigard, which has the highest ridership, is on time less than 50% of the time. On-time performance is poor for McMinnville Route 3; factors are frequent flag stops and the length of the route.	Retime routes with traffic and adjust schedules to show actual running times. Evaluate whether routes are too long for predicted run time. Evaluate use of additional and well-marked fixed stops to mitigate performance issues.



Topic Area	Issue	Opportunity
Regional Coordination	Numerous agencies connect with YCTA, giving passengers the ability to traverse a large area, but it can be challenging for potential new riders to plan a multi-agency trip.	Show regional connections on a system map. Coordinate with agencies to improve signage and information at transfer locations outside of Yamhill County, and identify other potential opportunities such as coordinating schedules or making fares easy to pay and more affordable.
	Certain major stops such as Big 5 do not have a shelter or sign.	YCTA has a contract to relocate and/or install shelters and benches. As part of the TDP, create standards for when to add shelters, such as based on ridership.
Transit Capital	Few bus stop signs exist across the system.	Install signs at scheduled and/or other high-ridership stops with information about schedule and route alignment.
	YCTA replaced radios in 2018 using a technology grant.	YCTA replaced radios in 2018 using a technology grant.
Technology)	Radios cut out in rural portions of the county.	Software is needed that allows dispatchers to efficiently group Dial-a-Ride trips and schedule same-day trips. This is also being addressed through YCTA's technology grant and should be in place sometime in 2018.
	Deficiencies in scheduling software capabilities inhibits system performance.	GTFS data will be updated at the conclusion of the TDP.
	YCTA's GTFS data is slightly different from the actual route alignments, making information online maps or trip planner information inaccurate.	
Information	Individual brochures show each route map and schedule. Some routing is not consistent with printed and online materials.	Create a system map. Update printed and online materials.
	Riders prioritized obtaining information on the YCTA website, followed by a mobile phone app and printed materials.	YCTA has a technology grant that can be used to improve its online capabilities. Using the YCTA website and mobile phones to communicate delays in real-time is a key priority.
	Lack of marketing for transit services.	Use new YCTA funds to ramp up communications and marketing efforts.
Improvement Priorities	Existing riders were least satisfied with on-time performance, condition of bus stops, and ease of transfers.	Refine schedules to more accurately reflect travel times and improve transfers, and install markings at fixed bus stops.
	Top improvement priorities identified by YCTA riders in the on-board survey were service on weekends, more frequent weekday service, and later evening service, followed by better stops and earlier morning service.  More frequent and weekend service were also top priorities in the community survey, although later service was a lower priority. Bus stops closer to respondents' destinations, better information, and faster/more direct service were higher priorities.	Priorities suggested by both riders and the community overall will inform the TDP analysis of solution strategies.

Note: Condensed from TM #2, Figure 5-1 (See TDP Volume II, Section 2)

## OVERALL NEEDS ASSESSMENT

Overall findings from the Existing Conditions phase of the TDP include that the YCTA route alignment is generally good and useful to customers who depend on it, but that potential improvements could include::

- Schedule adjustments are needed on a variety of routes, including better timing of local and intercity route connections and to help service run on-time given actual traffic conditions.
- Some local routes need to be redesigned, particularly Route 3 in McMinnville (serving the north part of the city) which is over capacity and runs behind schedule. Routes in Newberg have very low ridership, particularly Route 5, and also need to be redesigned.
- Most transit stops lack signage or markings, making it difficult for people to know where the bus stops. Marking stops and transitioning from flag to fixed stops will improve travel times and make people more aware of transit.
- High-quality and consistent branding of vehicles and online and printed information will also raise awareness of where transit runs in the community and help people understand the system.
- Small cities in the County are served only by intercity services that make limited stops. Major shopping destinations are set-back from highways in McMinnville and Newberg, making it challenging to reach storefronts through parking lots. There are opportunities for locally-focused shopper shuttles and flexible routes to improve access to destinations.

Figure 4-7 provides a qualitative assessment of priority for various potential enhancements, based on the input from riders, the general public, focus groups, and the project advisory committee.

Figure 4-7 Needs Assessment Summary

Potential Public Transportation Enhancement	Overall Assessment (Community Input and Existing Conditions Analysis)	Surveys		Focus Groups	Project Advisory Committee
		Riders	General Public		
More weekend service – Saturday	High	High	High	High	Intercity: Medium Local: High
More frequent weekday service	Medium-High (particularly intercity connections)	High	High	Medium	Intercity: High Local: Low
Later evening weekday service - until 8 PM	Medium-High	High	Medium	High	Medium
Better bus stops / shelters	Medium-High	Medium	Medium	High	Medium-High
Better information, easier to understand	Medium	N/A	Medium	High	Medium
Better regional connections	Low-High	Low	High	High	Low-High
New bus stops / closer to destination	Low-High	Low	High	High	Low-High
More weekend service – Sunday	Low-Medium	High	Medium	Low-Medium	Intercity: Medium Local: Low
Expand coverage (new areas)	Low- Medium	Low	Low	High	Low-High
Faster, more direct service	Low-Medium	N/A	Medium	Medium	Low-Medium
Later evening weekday service - until 10 PM	Low-Medium	High	Medium	Medium	Low-Medium
Earlier morning weekday service	Low-Medium	Medium	Low	Medium	Low-Medium

See TDP Volume II, Section 2: TM #2, Chapter 5 (Figure 5-2) for a quantitative assessment of existing service.

## 5 TRANSIT GOALS AND OBJECTIVES

The TDP goals and objectives reflect the public transportation priorities for the Yamhill County Transit Area. The goals are coordinated with goals and policies developed in other Yamhill County plans and by key partners such as jurisdictions within and affecting Yamhill County, the state of Oregon, and the Federal Transit Administration (FTA). The goals provide a framework to identify and prioritize Transit Development Plan strategies and policies to support the values and key issues in Yamhill County.

### DEFINITIONS

Goals and objectives are defined as follows:

- **Goals** establish Yamhill County’s overall policy direction and organizational philosophy. These are typically value statements.
- **Objectives** offer a means to meeting a goal. They are typically action-oriented strategy statements and should be understandable, specific, attainable, and measurable. Objectives can be met through a variety of actions. For example, an objective to reduce transit travel time can be achieved by eliminating route deviations, providing more direct service, traveling on higher-speed roads, investing in traffic congestion relief solutions, and/or giving transit priority at congested intersections.
- **Performance measures** quantify characteristics of existing transit operations. Some performance measures are used as **evaluation criteria** to select and prioritize strategies as part of the TDP planning framework. A measure is a basis for comparison – to a desired goal, to peer systems, or to past performance. The most useful measures for transit planning and operations are typically ratios of product provided (e.g., transit trips) to resources expended (e.g., “revenue” hours of bus driver time). Productivity (ridership per revenue hour), for example, is a nearly universal measure in the transit industry. A good set of performance measures should rely on readily available data, and focus on key aspects of operations.
- **Performance standards** are target values for specific performance measures. They set the expectations for acceptable levels of performance. Using the productivity example, a standard of 10 to 15 boardings per revenue hour may be the threshold at which routes performing below this standard merit attention. A single performance measure may have multiple standards based on the service type, operating period, or geographic zone being evaluated. When setting performance standards, YCTA needs to balance industry norms, its goals and objectives, and any requirements from funding or other sources. For example, farebox recovery standards may be set below those of peer systems if local policy-makers agree to higher subsidies to address affordability concerns. Alternatively, operating funding requirements may not allow lowering the farebox recovery standard.

## PLANNING CONTEXT

Public transportation goals and objectives can best serve the county when coordinated with and related to relevant planning documents from state, regional, and local organizations. The project team evaluated over 20 planning documents guiding transportation and land use decisions in Yamhill County. Figure 5-1 provides a brief assessment of the key issues or “takeaways” for public transportation that were identified from the plan review. One of the key local documents guiding the YCTA goals and objectives is the Yamhill County Transportation System Plan (TSP), updated in 2015.

Along with input from YCTA and Yamhill County staff and elected officials, the Project Advisory Committee (PAC), other stakeholders, and the public, this information provided the groundwork to understand key needs and opportunities for Yamhill County’s public transportation system. YCTA’s goals and objectives stem directly from—and are intended to reflect—this understanding.

For additional on the Plan Review, see TDP Volume II, TM #1 and TM #1 Appendix A

Figure 5-1 Transportation / Land Use Plans and Key Issues for the Yamhill County Transit Development Plan

Document	Key Issues and “Takeaways”
<b>STATEWIDE PLANS</b>	
Oregon Transportation Plan	<ul style="list-style-type: none"> <li>Overarching transportation policy plan guiding transportation investments statewide.</li> <li>Goal to ensure the transit system is <b>easy-to-use, reliable, cost-effective, and accessible</b>.</li> <li>Encourages governments to consider new facilities and connections that support an <b>efficient transportation system</b> and meet the needs of the growing community.</li> <li><b>Transit-supportive policies</b> include Mobility 1.1 (efficient multimodal system), Mobility 1.2 (multiple travel choices), Economic Vitality 3.2 (mobility options for work and recreation), Energy Supply 4.2 (alternative fuels), Creating Communities 4.3 (sidewalk networks and transit supportive development), and Coordination 7.1 (remove jurisdiction barriers).</li> </ul>
Oregon Public Transportation Plan	<ul style="list-style-type: none"> <li>State modal policy plan guiding investments and programs for public transportation.</li> <li>10 goals address <b>user experience, connectivity, livability, equity, health, safety and security, environment, land use, efficient investments, and coordination</b>.</li> <li>Currently being drafted, this Plan may identify public transportation <b>priorities, programs and performance measures</b> presenting opportunities for local agencies.</li> </ul>
Oregon Safety Action Plan	<ul style="list-style-type: none"> <li>Statewide plan providing policy direction across all modes.</li> <li>Encourages state and local agencies to develop a transit system that <b>prioritizes safety and limits roadway conflicts</b> to support Oregon’s long-term vision of zero deaths and life-changing injuries on the State system.</li> </ul>
Oregon Transportation Options Plan	<ul style="list-style-type: none"> <li>State modal policy plan guiding investments for transportation options (i.e., transportation demand management).</li> <li>Policies encouraging transit systems that support <b>multimodal connections</b>.</li> <li>Encourages local agencies, businesses, and educational institutions to offer <b>travel options programs that support transit use</b> (e.g., transit subsidies, Guaranteed Ride Home programs, etc.).</li> <li>Transit-supportive policies include Safety 1.1 (safe for all modes), Access 3.1 (access for all modes), and Economy 5.1 (household transportation spending)</li> </ul>
Oregon Bicycle and Pedestrian Plan	<ul style="list-style-type: none"> <li>State modal policy plan guiding investments for bicycle and pedestrian facilities and programs.</li> <li>Presents policies to <b>coordinate within and between state agencies and local jurisdictions</b> to ensure transit facility design integrates pedestrian and bicycle projects.</li> <li>Transit-supportive policies include Safety 1.1 (safe design), Accessibility 2.4 (multimodal connections), and Strategic Investment 8.2 (high need locations) and 8.4 (leverage funding).</li> </ul>



Document	Key Issues and “Takeaways”
<b>YAMHILL COUNTY PLANS</b>	
Yamhill County Transportation System Plan (TSP)	<ul style="list-style-type: none"> <li>▪ <b>Public transportation is an important part of the County’s long-term multimodal transportation goals</b> and strategies.</li> <li>▪ It is important to <b>coordinate public transportation</b> with local and countywide transportation initiatives and land use regulations.</li> <li>▪ <b>Public transportation infrastructure projects</b> should be included in the County TSP to ensure State law compliance.</li> </ul>
Yamhill County Comprehensive Land Use Plan	
YCTA Coordinated Human Services Transportation Plan	<ul style="list-style-type: none"> <li>▪ Transportation needs for customers <b>accessing human services</b> are wide ranging and best met by flexible, varied transportation solutions.</li> <li>▪ Human services and medical needs <b>extend beyond Yamhill County</b>, which stretch limited local resources if not carefully prioritized and managed.</li> </ul>
Yamhill County Agribusiness Economic Development Plan	<ul style="list-style-type: none"> <li>▪ Focuses on the County’s agriculture and tourism industries, to ensure the industry can thrive, operate profitably, grow, and contribute to community livability.</li> <li>▪ Plan stakeholders identified transportation – including public and private transit options – as a need to <b>support agri-tourism</b>.</li> <li>▪ Transit opportunities include <b>local bus systems, private transportation</b>, and central wine tasting “<b>hubs</b>” in local communities that would support shared mobility.</li> </ul>
YCTA Title VI and Limited English Proficiency Plan	<ul style="list-style-type: none"> <li>▪ <b>Federal Transit Administration (FTA) and Oregon Department of Transportation (ODOT) requirement</b> for public transportation providers to document the agency’s responsibility to <b>assess, minimize, and mitigate negative effects on specific demographic and socioeconomic populations</b>; also documents the County’s public notices barring discrimination and providing clear discrimination related complaint processes.</li> </ul>
<b>LOCAL JURISDICTION PLANS</b>	
Newberg Downtown Improvement Plan	<ul style="list-style-type: none"> <li>▪ Local community transportation system plans (and other local plans) detail specific roadway, sidewalk, and cycling improvements that can complement the public transportation system.</li> <li>▪ The Yamhill County TDP will present an opportunity to align <b>transit capital improvements</b> (e.g., bus stops) with prioritized local projects and investments.</li> <li>▪ Local land use plans describe policies and programs that encourage medium residential and employment density. The plans address land use policies and codes that direct developers to provide roadway, sidewalk, or transit facility improvements.</li> <li>▪ The Yamhill County TDP will present an opportunity to understand and inform communities interested in implementing <b>transit-supportive land use</b> regulations and decision-making processes.</li> </ul>
Newberg Comprehensive Plan	
Newberg TSP	
McMinnville Comprehensive Plan	
McMinnville TSP	
Amity TSP	
Carlton TSP	
Dayton TSP	
Dundee TSP	
Lafayette TSP	
Sheridan TSP	
Willamina TSP	
Yamhill (City) TSP	

## GOALS AND OBJECTIVES

Each goal for YCTA is presented individually, followed by objectives to support implementation of the goals. The goals and objectives were used to evaluate existing public transportation conditions and to develop and prioritize public transportation strategies presented in the Transit Development Plan.

Chapter 11 (Monitoring Implementation) provides performance measures that will allow YCTA to measure organizational progress and monitor implementation of the TDP against the goals and objectives.

### **Goal 1: Mobility – provide convenient, reliable public transportation serving a range of customer needs.**

Objective 1. Achieve high route productivity by serving key ridership markets

Objective 2. Serve key activity centers with convenient hours and days of service that meet the travel needs of workers and residents \*†

Objective 3. Provide direct and reliable service that supports reliable transfers to intra- and inter-county regional connections \*†

Objective 4. Identify areas that will support additional or improved transit services using data-driven and customer focused methods, and coordinate improvements to the coverage, reliability, and frequency of services \*

### **Goal 2: Accessibility – provide public transportation services that are equitable and address the needs of all users.**

Objective 1. Coordinate with local agencies to guide transit-supportive land use policies and practices

Objective 2. Provide access to public transportation services that meets applicable County, State and Americans with Disabilities Act (ADA) standards \*

Objective 3. Provide local connectivity within and between the various communities in the County \*

Objective 4. Provide a mix of public transportation services to meet the needs of different rider markets, such as fixed routes, deviated fixed routes, commuter routes, dial-a-ride, community shuttles and rideshare services

Objective 5. Distribute the benefits and impacts of services fairly and address the transportation needs and safety of all users, including the young, older adults, people with disabilities, and people of all races, ethnicities, and income levels\*

Objective 6. Coordinate with human services agencies serving adults, seniors, and people with disabilities and veterans to identify specific resources, training and needs for these markets †

Objective 7. Provide easy to understand, affordable fare policies, products and payment systems

### **Goal 3: Passenger experience – make public transportation a convenient, attractive and welcoming way to travel.**

Objective 1. Deliver transportation information to riders and the community at-large across multiple print, online, and mobile platforms †

Objective 2. Enhance marketing, education, and promotion efforts

Objective 3. Translate all printed and online materials into priority languages identified in the YCTA Limited English Proficiency plan (e.g. translate into Spanish and employ Spanish-speaking customer service staff)

Objective 4. Invest in technologies that enhance customer service, service reliability and access to information

Objective 5. Achieve high customer satisfaction by supporting employee training and outreach.

Objective 6. Provide system legibility by installing marked signs at bus stop locations

**Goal 4: Safety and security – ensure transit riders and drivers have safe and secure vehicles and facilities.**

Objective 1. Provide for high-quality driver and dispatcher training to ensure passenger and driver safety and security

Objective 2. Provide high-quality transit facilities by including bus stop shelters, seating and other amenities that support customer comfort and convenience.

Objective 3. Maintain vehicles in a state of good repair and replace in accordance with the Transit Asset Management Plan<sup>14</sup> to ensure a reliable, safe and attractive public transportation system

Objective 4. Coordinate with County and local emergency managers to support robust emergency response and resiliency to natural and human disasters

Objective 5. Coordinate with local jurisdictions and Oregon Department of Transportation (where relevant) to provide safe ways to cross streets at or near major bus stops

**Goal 5: Livability and economy – integrate public transit in the transportation system to support a prosperous, healthy community**

Objective 1. Enhance access to major activity centers (e.g., major residential, employment, industrial, and institutional locations) and emerging or underserved activity centers (e.g., agricultural employment) as resources warrant \*

Objective 2. Maintain and explore innovative partnerships with employers and institutions to serve rider markets and supplement public transportation funding

Objective 3. Support a multimodal transportation network by inviting access to transit via bicycling, walking

**Goal 6: Efficiency and financial accountability – manage the transit system in a fiscally responsible way to maximize return on investment.**

Objective 1. Advocate for increased funding and seek out new and innovative funding opportunities †

Objective 2. Improve system productivity and reliability to ensure efficient resource utilization

Objective 3. Coordinate with other transportation partners to ensure shared long range sustainability of public transportation services

Notes: \* Denotes objectives adapted from the Yamhill County Transportation System Plan. † Denotes objectives adapted from the 2017 YCTA Coordinated Public Transit Human Services Transportation Plan.

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<sup>14</sup> The Transit Asset Management Plan is a federally-required document in which YCTA inventories vehicles and other assets, estimates replacement timeframes, and specifies maintenance activities and schedules to ensure assets meet or exceed useful life expectations.

## 6 SERVICE PLAN

This chapter presents the long-term vision for transit in Yamhill County, including the types of services and how service will be structured. The vision was developed based on the analysis of current and future transit markets and existing YCTA services, community input and needs assessment, and the YCTA goals described in the previous chapters. It includes service design principles and a phased plan to help YCTA incrementally implement the long-term vision.

### LONG-TERM YCTA VISION

Figure 6-1 illustrates existing YCTA service and transit connections. Figure 6-2 describes the long-term vision for public transit in Yamhill County.

As described in Chapters 3 and 4, challenges for existing transit in Yamhill County include:

- **Local service runs on weekdays only** in McMinnville and Newberg.
- **Intercity services** to Hillsboro, Salem, and Tigard **have several long gaps in service** during the day.
- **Route 11 only runs to West Salem**, while most demand is for travel to downtown Salem.
- **Service within small cities** is limited, particularly for people or destinations that are not directly served by existing intercity routes and bus stops.
- **Bus stops are not marked** and **buses** lack consistent branding and some are unreliable.

Figure 6-1 Existing Transit Service

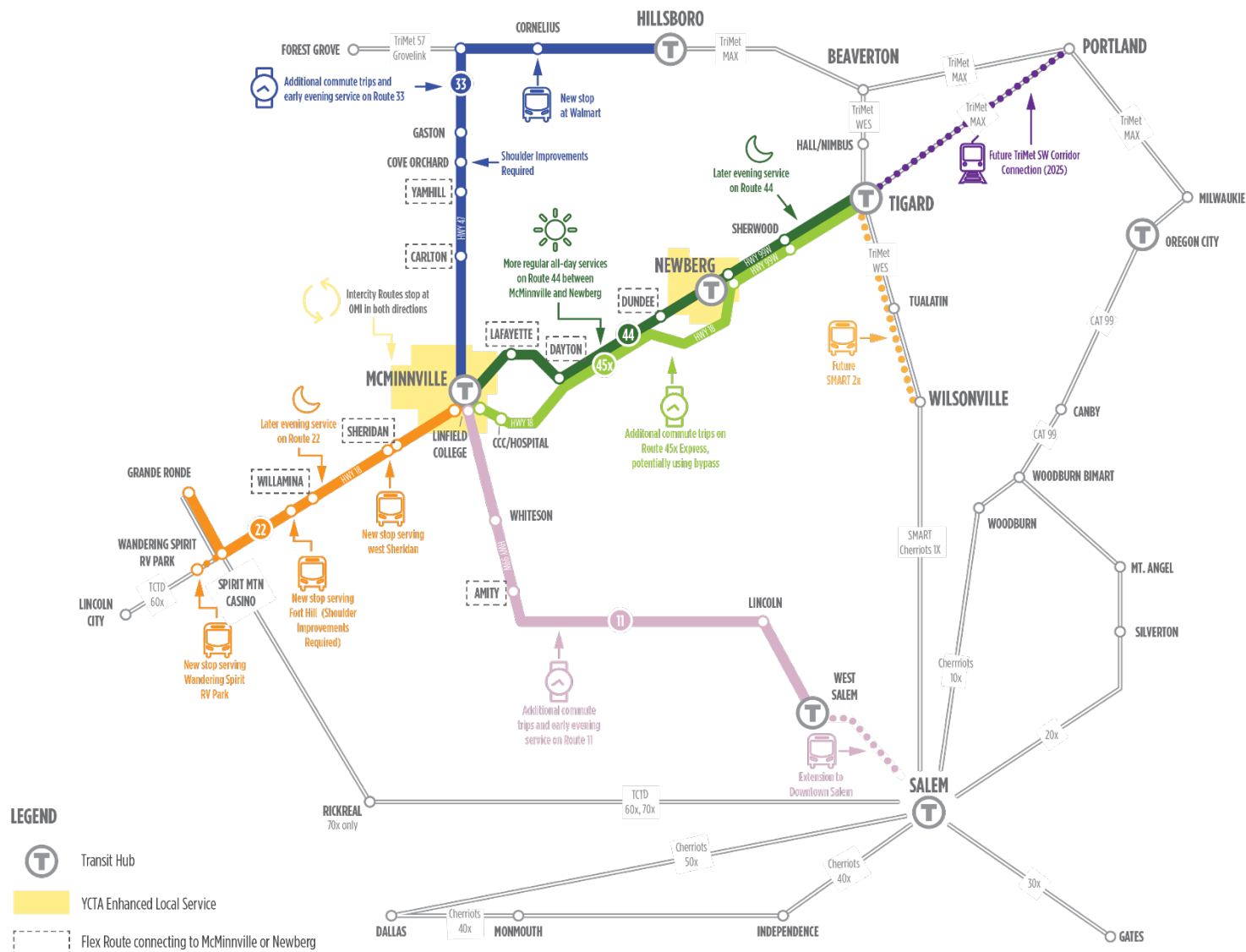




The long-term vision for transit in Yamhill County includes:

- **Enhanced local service** in McMinnville and Newberg, including on **Saturdays**.
- **Regular all-day service on OR 99W** (Route 44) connecting McMinnville, Lafayette, Dayton, Dundee, and Newberg, with some trips continuing to Sherwood and Tigard.
- **Express service** (Route 45x) between McMinnville (via Linfield College and hospital area), Newberg, and Tigard.
- **More morning and afternoon peak period and early evening service** on intercity routes.
- **Route 11 extended** to downtown Salem.
- **Flex-route service connecting small cities** to key destinations in McMinnville and/or Newberg.
- **Marked bus stops, more shelters, better customer information, and new buses** with a consistent look.
- **Sunday service** is a lower priority, but may be possible on some routes in the long-term.

Figure 6-2 Long-Term Transit Vision



## How we got to the Vision: Service Alternatives












Providing transit service requires evaluating how to allocate limited resources between local services, inter-community connections within Yamhill County, and regional linkages. YCTA's current resource allocation is roughly balanced between locally-focused and regionally-focused service. To understand whether this service model should change, the project team developed two long-range scenarios to contrast distinct approaches to allocating public transportation resources.

- **Scenario 1: Locally-focused.** YCTA prioritizes resources for local service and connections within Yamhill County, while either reducing slightly or maintaining at current levels the resources allocated to connections outside of Yamhill County.
- **Scenario 2: Regionally-focused.** YCTA enhances regional connections to be more attractive to commuters, with more modest improvements to local service and connections within Yamhill County.






























The project team then developed specific operational strategies for each scenario and screened each strategy against the YCTA goals and objectives (Chapter 5), providing a cost-benefit analysis with order-of-magnitude costs and an assessment of how each strategy helps YCTA achieve its goals. The Project Advisory Committee worked to prioritize strategies at its meeting on January 25, 2018, to help inform development of the TDP vision.

TDP Volume II, Section 4: TM #4 and the minutes for Project Advisory Committee meeting #3 summarize the results of the scenario analysis.

Figure 6-3 Selected Scenario Performance Evaluation Measures (Adapted from TM #1 and #3 Planning Framework Measures)

Goal	Objective (numbering refers to full Goals & Objectives framework)	Performance Measure	Existing	Scenario 1: Locally Focused	Scenario 2: Regionally Focused	TDP Vision	
						Mid-Term, 2027	Long-Term, 2028+
Service Hours			35,000	70,100	59,400	50,340	70,845
Estimated Operating Cost (not including capital costs, e.g., buses)			\$2.6 million	\$5.3 million	\$4.6 million	\$4.2 million	\$5.9 million
Estimated Number of Vehicles in Maximum Service			8 fixed-route buses 4 Dial-A-Ride buses	13 fixed-route buses 11 Dial-A-Ride buses or vans	13 fixed-route buses 7 Dial-A-Ride buses or vans	12 fixed-route buses 7 Dial-A-Ride buses/vans 3 flex-route buses	18 fixed-route buses 9 Dial-A-Ride buses/vans 5 flex-route buses
Goal #1: Mobility	2. Serve key activity centers with convenient hours and days of service that meet the travel needs of workers and residents	Service span: hours of service (qualitative)	Local: 7 AM - 7 PM  Intercity: 6 am-7 PM or 6 AM-9 PM (varies by route)	 Local: 6 AM - 9 PM	 Local: 7 AM - 7 PM	 Local: 7 AM - 7 PM	 Local: 6 AM - 9 PM
				 Intercity: 6 AM - 7 PM or 6 AM - 9 PM (varies)	 Intercity: 6 AM-9 PM	 Intercity: 7 AM-9 PM	 Intercity: 6 AM-9 PM
	3. Provide direct and reliable service that supports reliable transfers to intra- and inter-county regional connections	Schedule alignment with connecting providers	N/A	 More direct service but reduced midday connections	 Increased frequency and service to downtown Salem	 Maintain and enhance regional connections, including service to downtown Salem	

**Yamhill County Transit Development Plan | Volume I – DRAFT FINAL**

Goal	Objective (numbering refers to full Goals & Objectives framework)	Performance Measure	Existing	Scenario 1: Locally Focused	Scenario 2: Regionally Focused	TDP Vision	
						Mid-Term, 2027	Long-Term, 2028+
Goal 2: Accessibility	3. Provide local connectivity within and between Yamhill County communities	Revenue hours dedicated to connections between Yamhill County communities	16,900 (48%)	 19,600 (27%)	  30,400 (56%)	 20,200 40%	  24,900 35%
	4. Provide a mix of public transportation services to meet the needs of different rider markets	Service hours per capita Peer median of 0.73, range of 0.28 to 1.24	0.32 (Overall Yamhill County, 2017)	 0.65 (UGB Population Forecast, 2035)	 0.55 (UGB Population Forecast, 2035)	 0.44 (Population Forecast, 2023)	 0.57 (Population Forecast, 2028)
	5. Distribute the benefits and impacts of services fairly and address the transportation needs and safety of all users	low-income residents within ¼-mile of a transit stop (100% and 200% of poverty)	100%: 15,800 200%: 26,900	Not Evaluated	Not Evaluated	 100%: 17,500 200%: 29,700	  100%: 18,700 200%: 29,800
Goal 5: Livability and economy	1. Enhance access to major activity centers (e.g., major residential, employment, industrial, and institutional locations) and emerging or underserved activity centers (e.g., agricultural employment) as resources warrant	employees within ¼-mile of a transit stop	16,700	 19,400	  22,900	 22,300	  25,000
		residents within ¼-mile of a transit stop	35,000 (fixed-route)	  41,800 (fixed-route only) (not including flex-routes in small cities)	 39,950	 39,400 (fixed-route) (not including flex-routes in small cities)	  43,000 (fixed-route) (not including flex-routes in small cities)
Goal 6: Efficiency and financial accountability	1. Advocate for increased funding and seek out new and innovative funding opportunities	Transit operating funding per capita, relative to peers Peer median of \$59.19, range of \$19.52 to \$105.58	\$24.14 (Overall Yamhill County, 2017)	 \$39 (Overall Yamhill County Forecast, 2035)	 \$33 (Overall Yamhill County Forecast, 2035)	 \$33 (Population Forecast, 2023)	 \$48 (Population Forecast, 2028)

Notes: Population, jobs, and low-income access to transit calculated using Remix, LEHD 2014 and American Community Survey 2015 at the block group level, i.e., based on current levels not future projections.

## Summary of Community Input on Solutions Strategies

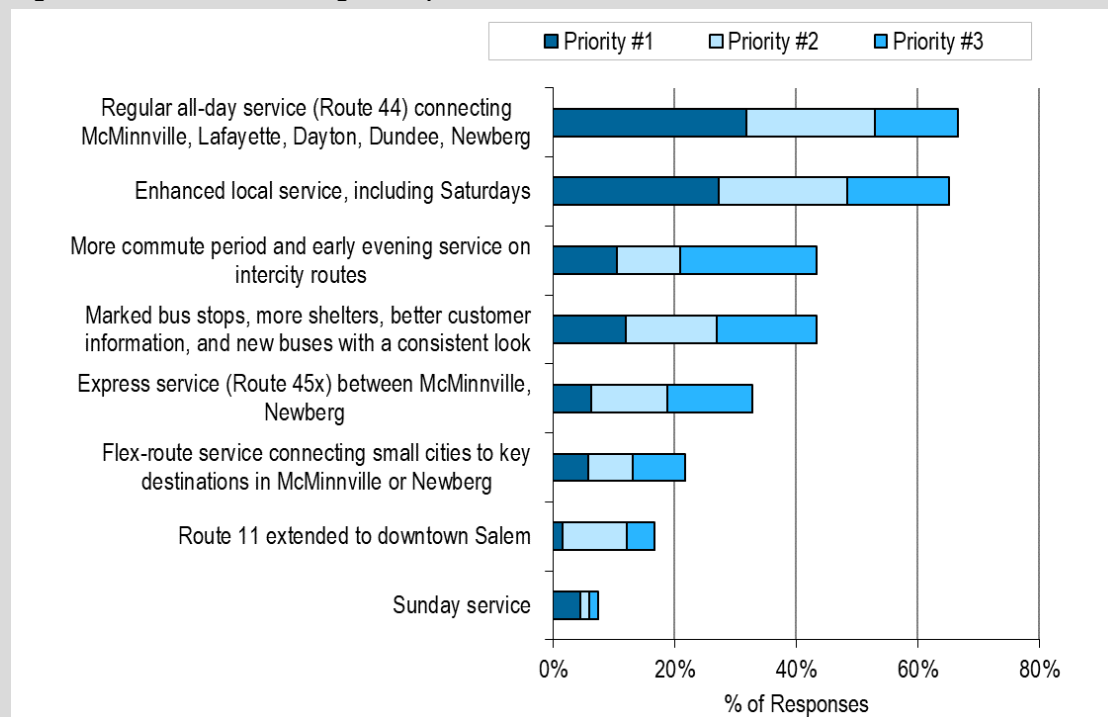
Input on proposed solutions was gathered from current riders and the general public to inform development of the vision and phasing plan. Four public events (Transit Center and Community Center in McMinnville; Nap's Thriftway and Chehalem Cultural Center in Newberg) and an online survey were conducted in March 2018, reaching or engaging approximately 125 people. This sidebar summarizes the results.

### Overall Priorities

The overall top service priorities among people who responded to the online survey are:

- **Enhanced local service in McMinnville and Newberg** including on Saturdays—top priority for **32%** and among top 3 priorities for **67%**.
- **Regular all-day service on OR 99W (Route 44)** connecting McMinnville, Lafayette, Dayton, Dundee, and Newberg—top priority for **25%** and among top 3 priorities for **65%**.
- **Improvements to bus stops, vehicles, and customer information**—among top 3 priorities for **43%**.
- **Add commute period and early evening service on intercity routes**—among top 3 priorities for **43%**.

Figure 6-4 Overall Ranking of Proposed Enhancements



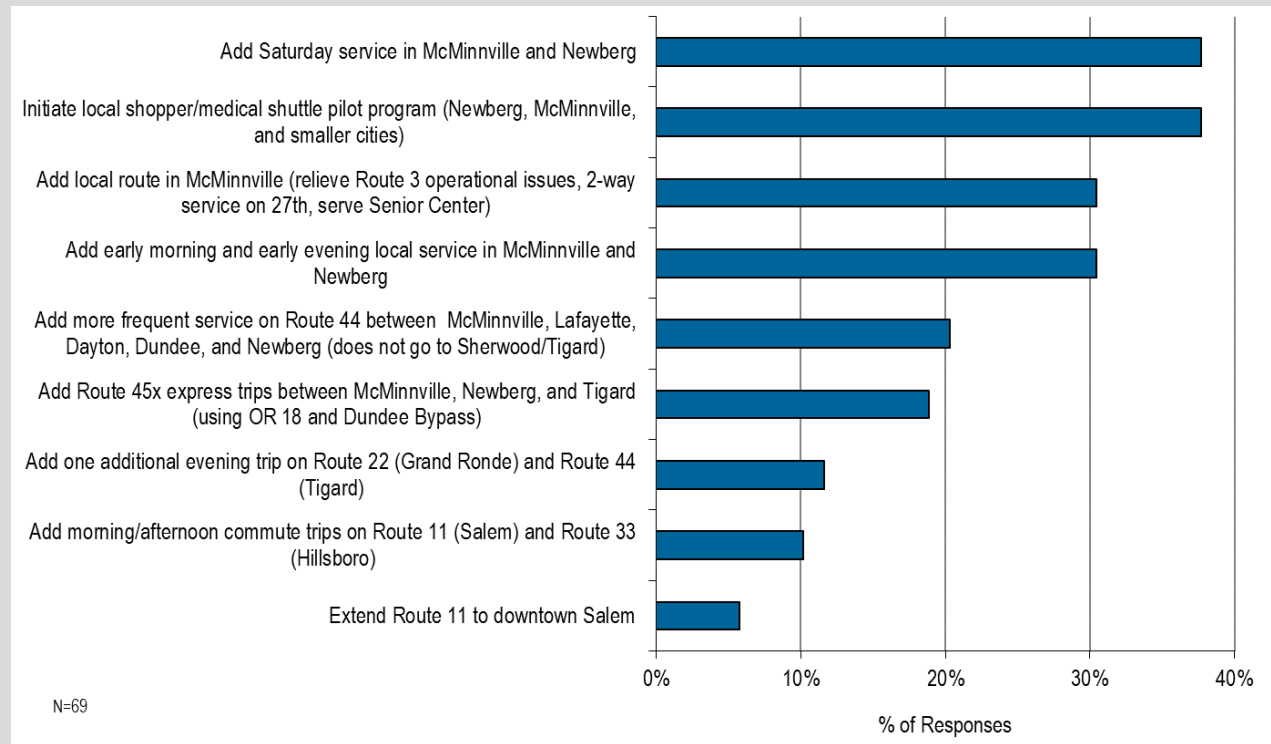
### Near-Term Priorities

The project team asked people responding to the online survey to prioritize the two most important improvements that could be implemented first (see Figure 6-5):

- The highest priorities (both 38%) were to **add Saturday service in McMinnville and Newberg**, and **initiate a local shopper/medical shuttle pilot program** (Newberg, McMinnville, and smaller cities).
- The next highest priorities (both 30%) were to **add a local route in McMinnville** and **run McMinnville and Newberg local bus routes earlier in the morning and in the early evening**.
- A third tier of near-term priorities (approximately 20% each) was to **provide more frequent service (Route 44) between McMinnville and Newberg** (including Lafayette, Dayton, and Dundee) and **more express service (Route 45x) between McMinnville, Newberg, and Tigard**.



Figure 6-5 Enhancements to Implement First



While most people supported the proposed improvements, several **key concerns** are:

- **Dundee residents are concerned about losing service** if Route 45x (express) uses the Dundee Bypass.
- **Some people were concerned about eliminating flag stops**, particularly if the distance between assigned stops is too long on some routes.
- **Bus ridership in Newberg may not increase** in response to service improvements

Additional outreach findings include:

- **Key schedule gaps** are on Route 44 (mid-morning and mid-afternoon) and Route 33 (mid-morning).
- **Timing of connections** is important between intercity routes and between intercity and local routes.
- **Later evening hours** aligned with class/shift times are important for students and workers.
- **Rural flex route service for small cities received the strongest support**, but there was also support for starting with shopper/medical shuttles (including in McMinnville and Newberg) to experiment with the service and conducting a community-driven process to design the service in each city.
- **Marking bus stops, adding shelters, improving customer information, and improving the appearance/cleanliness of vehicles is a high priority**—within top 3 for 43% of respondents.
- **Intercity routes need to have higher-capacity buses.** Smaller-capacity buses are acceptable for local routes, but **cutaways do not provide a comfortable ride.**
- **Bus schedules need to be clear and consistent**, both in print and online forms.
- **Communicating information** about delays and route changes/closures is essential.
- Programs that provide **travel training/education** would be valuable

For additional details on community input on proposed solutions see TDP Volume II, Section 4: TM #4 Chapter 6 and Section 5: TM #5 Chapter 3.

## IMPLEMENTING THE VISION

### YCTA Service Types

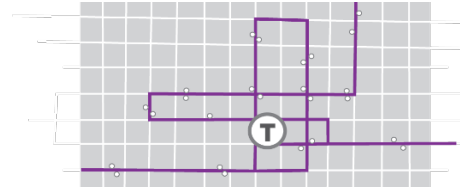
YCTA provides intercity (including express), local fixed-route, and demand-response service. The TDP includes two new service types—a shopper shuttle and rural flex routes. Some services are a hybrid of these service types. For example, Route 44 provides local connections in some parts of McMinnville and Newberg although it is primarily the intercity route serving OR 99W between the two cities.

**Intercity routes** operate along major arterials and state highways connecting Yamhill County cities. Intercity service includes Routes 11, 22, 33, and 44, and weekend Routes 24s and 46s. Intercity routes make limited stops in cities. **Express** intercity routes provide more direct service and/or limited stops. Route 45x provides a more direct connection between McMinnville-Newberg, including direct service to Willamette Medical Center and Linfield College. Route 44 provides connections to Dayton and Lafayette.



**Local routes** serve major destinations and run along both arterial and local streets. Local routes often act as feeders, bringing people to hubs where they can transfer to Intercity routes. Local service includes Routes 2 and 3 in McMinnville and Routes 5 and 7 in Newberg.

Fixed-Route



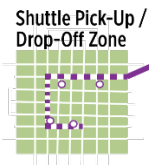
**Demand-response service** requires advance reservations. **Dial-a-Ride** for the general public provides curb-to-curb service within a geographically limited area (primarily McMinnville and Newberg).

**ADA Paratransit** provides door-to-door service for ADA-eligible customers (who have a disability that prevents them from riding fixed-route service) within a  $\frac{3}{4}$  mile distance of local fixed-route service in McMinnville and Newberg.

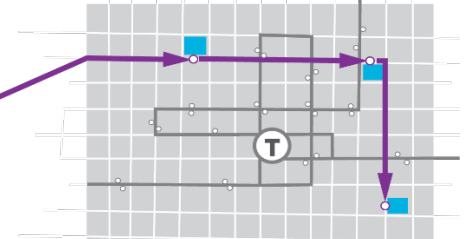


A **shopper/medical shuttle** provides door-to-door service between residential areas in McMinnville, Newberg, and small cities to selected major shopping and medical destinations in McMinnville or Newberg, on limited days and hours of service. Trips run at scheduled days and times, but advance reservations are required for door-to-door pickups and drop-offs.

Shuttle Service  
Shuttle Destination  
Fixed-Route



Urban Center



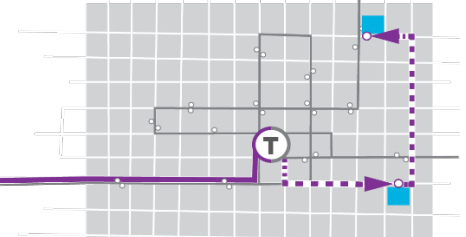
A **rural flex route** makes both scheduled stops and provides curb-to-curb service (with advance reservations) in small cities, directly serving transit centers and selected major shopping and medical destinations in McMinnville and Newberg.

Complementary ADA Paratransit is not required for a route deviation service like a flex route as long as deviations are provided to all riders (not just those with disabilities).

Flex Route  
Major Destination  
Fixed-Route



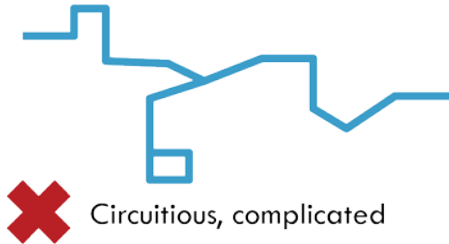
Urban Center



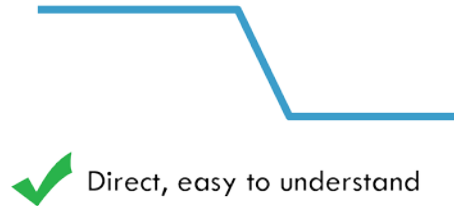
## Service Design Principles

Service design principles are broad transit service concepts that were used to develop the TDP, and provide guidance for YCTA to use in future service design decisions as it implements the Plan.

**Service should be simple and direct.** Routes that are direct are easier for customers to understand and remember. Direct routes are often shorter and more efficient for passengers and YCTA.



Circuitous, complicated

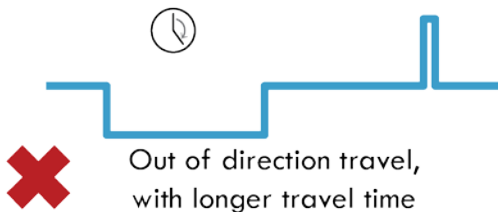


Direct, easy to understand

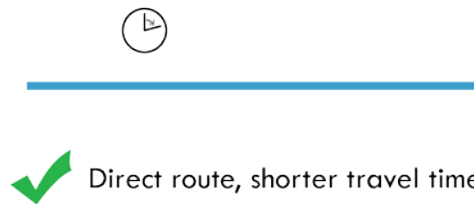
**Minimize route deviations.** Avoiding out-of-direction travel and keeping directional changes to a minimum make routes easier to understand and reduce overall travel time. Deviations off of the most direct route may be appropriate to avoid a bottleneck or to provide service to major shopping centers, employment sites, schools, etc. In these cases, the benefits of the deviation must be weighed against the inconvenience caused to passengers already on board. Rules of thumb for implementing route deviations include:

- The deviation will result in an increase in overall route productivity.
- The number of new passengers that would be served is equal to or greater than 25% of the number of passengers who would be inconvenienced by the additional travel time on any particular deviated trip.

In most cases, route deviations should be provided all day. Exceptions are during times when the sites that the route deviations serve have no activity—for example, schools and shopping centers.

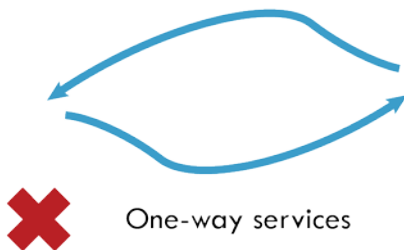


Out of direction travel,  
with longer travel time

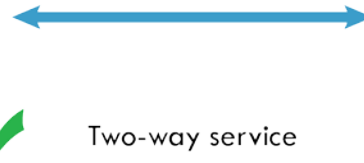


Direct route, shorter travel time

**Operate symmetrical routes.** Keeping routes on one roadway in both directions provides clear, consistent service and information. Exceptions can be made where such operation is not possible due to one-way streets or turn restrictions. In those cases, routes should be designed so that the opposite directions parallel each other as closely as possible. The coverage benefits of loop or circular routes should be balanced against route efficiency and productivity.

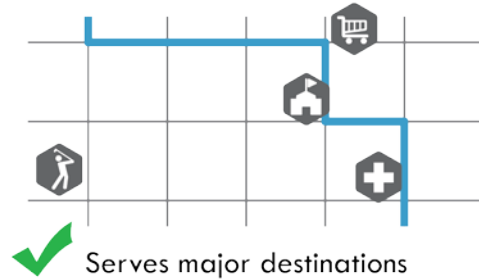


One-way services

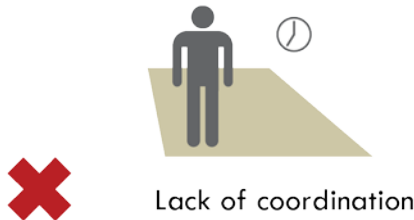


Two-way service

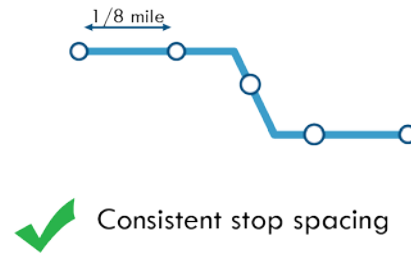
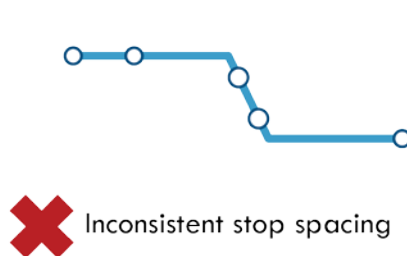
**Serve well-defined markets.** Match service to demand by serving destinations that typically rely upon transit. Activity centers may change over time; evaluate service periodically to ensure that routes continue to serve the highest demand areas.



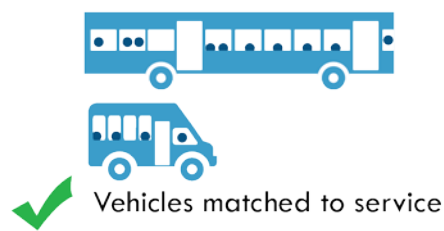
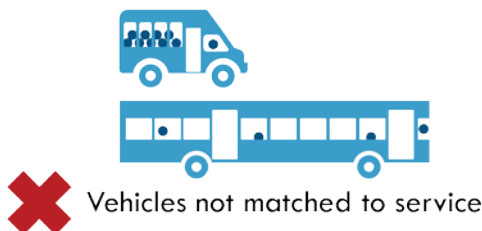
**Coordinate public transportation services.** Provide timed transfers between local and intercity routes. Where possible, connect with frequent services to reduce the need to coordinate schedules. Transfers should be within line-of-sight or have clear wayfinding signage.



**Space stops appropriately.** Stop spacing directly affects bus travel times, schedule reliability, and customer access. Closely spaced stops, or stops with inconsistent spacing, increase travel time and reduce predictability. On local routes,  $\frac{1}{8}$  to  $\frac{1}{4}$ -mile spacing is generally appropriate, while allowing for . Intercity routes should have longer spacing between stops (e.g.,  $\frac{1}{2}$ -mile or more) within cities, depending on land use context. Fewer stops encourage people



**Match vehicles to passenger demand and access needs.** The highest capacity vehicles are needed on intercity services, particularly between McMinnville, Newberg, and Tigard. In cities, vehicles need to balance high passenger demand on some routes with the needed to navigate tight turns and parking lots. Flex service and demand response vehicles are general the smallest and most flexible.



## Planning Time Frames

The TDP is structured into several phases to help YCTA incrementally implement the long-term transit vision. Implementation of the plan will be contingent on future funding levels—both sustaining existing funding sources and funding from new sources. The primary new funding source is the Statewide Transportation Improvement Fund, which will provide YCTA with new revenues starting in 2019. However, STIF revenues alone will not be sufficient to implement all desired system enhancements. Other potential local revenue sources are described in the TDP Financial Plan (see Chapter 8).

Figure 6-6 provides an overview of the planning time frames and assumed funding levels.

- The **Immediate** time frame assumes cost-neutral funding, while the remaining time frames assume increased revenues.
- The **Near-Term** and **Short-Term** enhancements can be implemented with the funding level anticipated to be available for YCTA, including new revenue from the Statewide Transportation Improvement Fund starting in 2019.
- YCTA lacks funding to implement all of the **Mid-Term** and **Long-Term** enhancements. A subcommittee of the YCTA Public Advisory Committee is developing a local funding plan to determine whether additional enhancements identified for these time frames are viable.
- The **Long-Term** time frames are not constrained to funding and include additional options that could be implemented in the future.

Figure 6-6 Planning Time Frames

Time Frame	Years*	Funding Level
Immediate	0 years: FY 2018 (Summer/Fall 2018)	Cost-Neutral/Near Cost Neutral operational changes that YCTA will implement prior to plan adoption
Near-Term	1 years: FY 2019 (2018-2019)	Low-cost changes assuming partial STIF funds available in FY 2019 (up to \$500,000 in new revenue)
Short-Term	2-3 years: FY 2020 to FY 2022 (2020 – 2022)	Phased expansion based on approximately \$1.1 M in STIF funds available starting in FY 2020. Assume incremental service expansion while prioritizing significant share of new resources to address capital needs (bus stops, fleet, etc.) in early stages of the plan.
Mid-Term	4-9 Years: FY 2023 to FY 2027 (2023 – 2027)	Continued service expansion is possible using STIF funding with many of YCTA's basic capital needs addressed, but additional local funding revenues would be needed to implement additional desired enhancements that are currently assumed in the long-term time frame.
Long-Term	10-20 Years: FY 2028 to FY 2037 (2028-2037)	Flexible service plan (not financially constrained)
Long-Term (Vision)	Beyond 20 Years	Additional service options

Note: \*2018 refers to FY 2018-2019, etc. STIF = Statewide Transportation Improvement Fund



## SERVICE PLAN OVERVIEW

This section provides the detailed YCTA service plan. To be eligible for STIF funds, YCTA will need to submit a STIF Plan. Consistent with recent ODOT guidance, individual strategies are grouped into a “Project.” A project can include several activities, referred to as “Tasks.” Tasks correspond to different project elements, such as operations (service) and buses (capital). For example, a project to provide flex-route service in small cities could include a “operations” task for each service area and a “buses” task to purchase vehicles. YCTA will need to submit measures such as cost, service hours, service miles, and estimated ridership for each task. The TDP will provide STIF Plan information for the near-term projects that can be submitted to ODOT as early as Fall 2018.

TDP Volume II, Section 4: TM #5 Chapter 6 summarizes community input on high-level solution strategies. Appendix D and TDP Volume II, Section 5: TM #5 Chapter 3 provide additional detail on service design.

## Existing/Immediate

This section identifies a number of cost-neutral service enhancements, focused on operational improvements to the Yamhill County transit system. YCTA plans to implement these changes over the first year of the plan, starting in Summer 2018 (see Figure 6-8). Highlights include:

- **McMinnville local service adjustments** (SI1 and SI2), including interlining routes to help Route 3 run on schedule and implementing a stop closer to the Winco/Walmart front doors (see Figure 3-4).
- **Schedule and minor route/stop adjustments on intercity routes** (SI4, SI5, SI6, and SI7), including stops at OMI for Route 33 (and potentially other routes).
- **Adding a stop on Route 22 at Wandering Spirit RV Park** west of OR 18 and Grand Ronde Road (SI5).
- **Converting on-call Route 44 and/or 45x stops at Providence Hospital in Newberg and Dayton RV park to regular stops** (SI7).

Figure 6-7 Stops near Winco/Walmart (Immediate or Near-Term/Short-Term)

- Stop in Winco parking lot on existing Route 3
- Existing sidewalk can be used
- Contingent on obtaining store approval
- Feasibility of right-turn from OR 99W into parking lot needs to be tested, given concrete median and channelized right-turn island
- Appendix D (and TDP Volume II, Section 5: TM #5 Chapter 3) includes an illustration of later phase routing that can also serve a stop closer to the Safeway front door

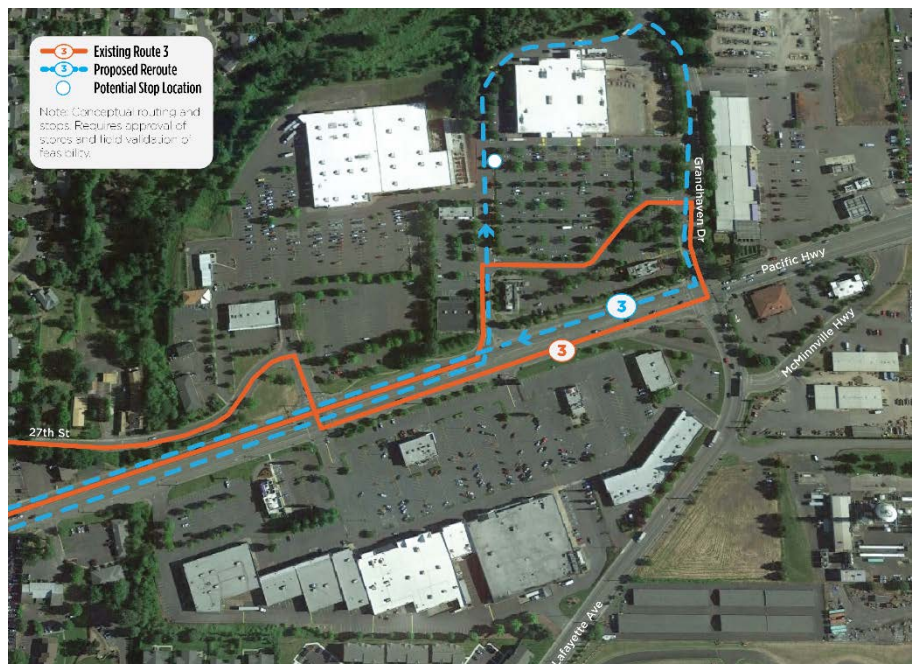


Figure 6-8 Immediate Time Cost-Neutral Service Adjustments

Project	Task	Project Name	Project/Task Description	Routes	Map/ Table
SI1	1	McMinnville Local Service Adjustments	Interline McMinnville local routes and adjust schedules, to help address capacity and schedule issues on Route 3: <ul style="list-style-type: none"> <li>One bus serves 2 East and 3 South</li> <li>One bus serves 2 West and 3 North</li> </ul>	2, 3	
SI1	2	McMinnville Local Service Adjustments	Stop and minor routing adjustments: <ul style="list-style-type: none"> <li>Revise Route 3 South routing at Booth Bend Rd</li> <li>Revise Route 2 East to use Dunn Pl; new Housing Authority bus stop</li> <li>Various other minor stop adjustments</li> </ul>	All	
SI2	1	McMinnville bus stops closer to store front doors	<ul style="list-style-type: none"> <li>Local buses serve stops for WinCo/Walmart near store front doors, subject to identifying suitable locations and reaching agreements with stores. (Safeway could be a later phase, contingent on Route 3 redesign)</li> </ul>	3	
SI3	1	Newberg Local Service Adjustments	<ul style="list-style-type: none"> <li>Schedule adjustments for Routes 5 and 7</li> </ul>	5, 7	
SI4	1	Salem Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Schedule adjustments for Route 11</li> </ul>	11	
SI4	2	Salem Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Add a Route 11 stop at OMI (5th &amp; Cows) in both directions</li> </ul>	11	
SI5	1	Grand Ronde Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Schedule adjustments for Route 22 including better timing with other intercity routes</li> </ul>	22/24s	
SI5	2	Grand Ronde Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Add a stop at OMI (5th &amp; Cows) in both directions</li> <li>Add a stop at Wandering Spirit RV Park (west of Grand Ronde Road)</li> <li>Add a stop at Oldsville Road</li> </ul>	22/24s	
SI6	1	Hillsboro Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Schedule adjustments for Route 33, including adjusting schedules of the current 10:30 AM and 12:30 PM trips from McMinnville to reduce the current 4h 30 min gap between the 6 AM and 10:30 AM trips.</li> <li>Add a stop at OMI (5th &amp; Cows) in both directions</li> </ul>	33	
SI7	1	Tigard Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Schedule adjustments for Routes 44 and 45x</li> </ul>	44/45x	
SI7	2	Tigard Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Modify southbound stop at Langer Pkwy in Sherwood to run in the opposite direction, saving several minutes of time in the southbound direction</li> </ul>	44/45x	
SI7	3	Tigard Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Convert on-call stop at Providence Hospital to a regular stop. Stops on OR 99W. YCTA will need to coordinate pedestrian access improvements with ODOT &amp; City of Newberg.</li> </ul>	44/45x	

Project	Task	Project Name	Project/Task Description	Routes	Map/ Table
SI7	4	Tigard Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Convert on-call stop at Dayton RV Park to a regular stop. Stops on OR-18. YCTA will need to coordinate shoulder improvements with ODOT.</li> </ul>	44	
SI7	5	Tigard Intercity Schedule, Stop, and Routing Adjustments	<ul style="list-style-type: none"> <li>Modify Route 45x to serve Linfield College stops on OR 99W at Fellows St</li> </ul>	45x	

## Near-Term

As described below and illustrated in Figure 6-18 (System), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg) where applicable, in the near-term (2019-2020) YCTA would:

- Implement local service changes in McMinnville** (Project SN1) as shown in Figure 6-19:
  - Renumber routes to make service easier to understand. Routes 2 and 3 each consist of two segments that take approximately 30 minutes to complete and serve the transit center twice. This change would provide a unique number for each portion of the route. See Figure 6-10 (table) and Figure 6-19 (map) for a description of the new route numbers.
  - Redesign Route 3 to improve reliability and capacity, including service to the Senior Center (along McDaniel) and two-way service on 27<sup>th</sup> Avenue and Evans Street. This would improve service to McMinnville High School and multifamily housing and apartments in northeast McMinnville. The routing incorporates a near-term change to serve the Winco/Walmart parking lot.
  - Extend Route 4 (existing Route 2 West) along 2<sup>nd</sup> Street west of Hill Road and south on Adams and Baker Streets to Booth Bend Road.
  - Extend service hours for Routes 2 and 4 (existing Route 2 West and East) to start at 7 AM (same as Routes 1 and 3).
- Implement local service changes in Newberg** (SN2) as shown in Figure 6-20. This cost-neutral change would add an additional bus to fixed-route service and provide four routes, each operating generally in each quadrant of the city. Each route would take approximately 30 minutes to complete and return to the downtown transit center. Particularly for Route 5 (northwest) and 6 (southwest) there may be time to accommodate deviation requests. This project would serve Northeast Newberg, including Newberg Schools, Head Start, and A-dec.
- Add trips on Route 44 between McMinnville and Newberg** (SN3 – Phase 1), to provide more frequent, consistent service between McMinnville, Lafayette, Dayton, Dundee, and Newberg. This project reduces waiting times and long schedule gaps on YCTA's highest-ridership route. Added trips would not continue to Sherwood/Tigard.
- Modify Route 44 to run along OR 99W in McMinnville** (SN4) as shown in Figure 6-19. This cost-neutral project improves legibility (ease-of-understanding), provides access to destinations along OR 99W and in downtown McMinnville, and allows Route 44 to serve the same route and stops on weekdays and Saturdays. This change would be concurrent with SN1, which would modify Route 3 North to provide service to most existing stops on Lafayette Avenue.
- Modify Route 33 to relocate the westbound Forest Grove stop and add eastbound and westbound stops at Walmart in Cornelius** (SN5).
- Implement a pilot shopper/medical shuttle** (SN6) serving Sheridan/Willamina/Amity, Carlton/Yamhill, Dayton/Lafayette, Newberg/Dundee, and McMinnville. This would incorporate a community-driven process to develop the specific initial and longer-term design for each set of cities, and evolve into more frequent local service in the cities/markets where it is well-utilized.

The service would utilize small vans, which would allow it to serve destinations that are inaccessible in a larger intercity bus, such as Deer Meadows Assisted Living in Sheridan. The service would incorporate on-demand technology to allow it to be used in a more real-time manner, as opposed to traditional demand-response service that requires advance reservations.

- **Mark and sign all bus stops and install amenities** (capital project). All bus stops would be marked or have signs installed, and shelters would be installed at high-demand stops. Over time YCTA would transition away from flag stops for its local routes, which will make service faster and help routes stay on schedule.

Maps are provided in Figure 6-18 (System Map with McMinnville and Newberg insets), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg). See Figure 6-21 for individual project details.

## Short-Term

As described below and illustrated in Figure 6-18 (System), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg) where applicable, in the short-term (2020-2022) YCTA would:

- **Extend Route 2 (East) in McMinnville to serve NE Cumulus Avenue** (SS1) including the Virginia Garcia Clinic and other housing; this project requires modifications to an access roadway connecting NE Cumulus Avenue to the Chemeketa Community College parking lot. The TDP provides a capital funding allowance for this improvement.
- **Extend local evening service hours in McMinnville and Newberg to 7 PM** (SS2 and SS3) for fixed-route and Dial-A-Ride service.
- **Transition away from flag stops on local fixed-routes in McMinnville and Newberg** (SS4), once all stops have been marked or signed. This will include outreach to ensure stops are located in the right places. Once implemented the change will help routes run on schedule.
- **Add trips on Route 44 between McMinnville and Newberg** (SS5 – Phase 2), filling remaining schedule gaps.
- **Extend Route 11 to the downtown Salem Transit Center** (SS6). Route 11 currently connects to Cherriots service at West Salem Transit Center. The route would likely be renamed to avoid confusion with Cherriots Route 11 and could continue to stop on Wallace Road near the West Salem Transit Center.
- **Add an additional early evening trip on Route 22 between McMinnville and Grand Ronde** (SS7), coordinated with shift times at the Spirit Mountain Casino and with TCTD Route 60X to Lincoln City.
- **Expand the Shopper Shuttle pilot projects to flex-route service in two geographic areas** (3 days per week, 10 hours per day) – SS8. Yamhill/Carlton and Sheridan/Willamina/Amity are recommended since they have the least existing service; the McMinnville-Newberg Connector (SN3 and SS5) will increase service to Dayton and Lafayette. An existing volunteer program serving Yamhill/Carlton could be transitioned to this service. Sheridan/Willamina have a high need and potential market size based on population and geography. YCTA should monitor existing intercity routes to see if there are changes in ridership that could allow some low-demand trips to be discontinued.

Maps are provided in Figure 6-18 (System Map with McMinnville and Newberg insets), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg); Figure 6-21 provides individual project details.

## Mid-Term

As described below and illustrated in Figure 6-18 (System), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg) where applicable, in the mid-term (2023-2027) YCTA would:

- **Implement local service on Saturdays in McMinnville (SM1).**

The mid-term also includes two contingencies for service in Newberg:

- **Modify service in Newberg coordinated with a potential new transit center** (on- or off-street) in downtown Newberg (could also be short-term, depending on timing).
- **Add Dial-A-Ride and ADA Paratransit capacity in Newberg**, if warranted based on demand, since one Dial-A-Ride vehicle is being shifted to fixed-route service in the near-term (SM2).

Maps are provided in Figure 6-18 (System Map with McMinnville and Newberg insets), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg), Figure 6-21 provides individual project details.

## Long-Term

The long-term time frame is not fiscally-constrained and includes additional options supported by TDP community input and analysis that YCTA could implement based on available resources.

As described below and illustrated in Figure 6-18 (System), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg) where applicable, in the long-term (2028-2037) YCTA would:

- **Enhance intercity service to be better meet work and school trip needs** by adding a later evening trip to Tigard and early evening trips to Salem and Hillsboro (SL1), and adding additional morning and afternoon trips to Salem and Hillsboro (SL2).
- **Add additional express trips between McMinnville, Newberg, and Tigard** in the morning and afternoon commute periods (SL3). Depending on future traffic conditions, YCTA can evaluate the tradeoffs of routing express trips using the Dundee Bypass. (Performance data can be obtained from ODOT.)
- **Expand Saturday service on intercity routes between McMinnville and Salem, and between McMinnville and Yamhill/Carlton (SL4).** Extending Saturday service between Yamhill and Hillsboro is not included in this project, but could be considered depending on demand and available funding (see SV2).
- **Expand small city flex-routes to three days per week in a third geographic area (Dayton/Lafayette is assumed) and expand the Sheridan/Willamina flex-route to operate five days per week (SL5).**
- **Expand shopper shuttles serving Dundee/Newberg and/or McMinnville to five day per week operation (SL6).**
- **Implement earlier (starting at 6 AM) and later (until 9 PM) local service hours in McMinnville and/or Newberg (SL7).**
- **Develop a pilot flex-route serving the area east of Lafayette Avenue in McMinnville (SL8),** including YCAP, McMinnville Power & Light, Dental Clinic, and employment areas, e.g., Cascade Steel, North American Plants, etc.). YCTA may be able secure grant funds for emerging mobility pilot projects or STIF discretionary funds to implement this service sooner.
- **Implement a new route serving the Hill Road and Baker Creek Road area in northwest McMinnville** (see Figure 6-19); this route would serve Lafayette Avenue and allow



modifications of Route 3 (SL9). The feasibility of this route is dependent on development density and activity centers along the route.

Maps are provided in Figure 6-18 (System Map with McMinnville and Newberg insets), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg), Figure 6-21 provides individual project details.

## Long-Term “Vision”

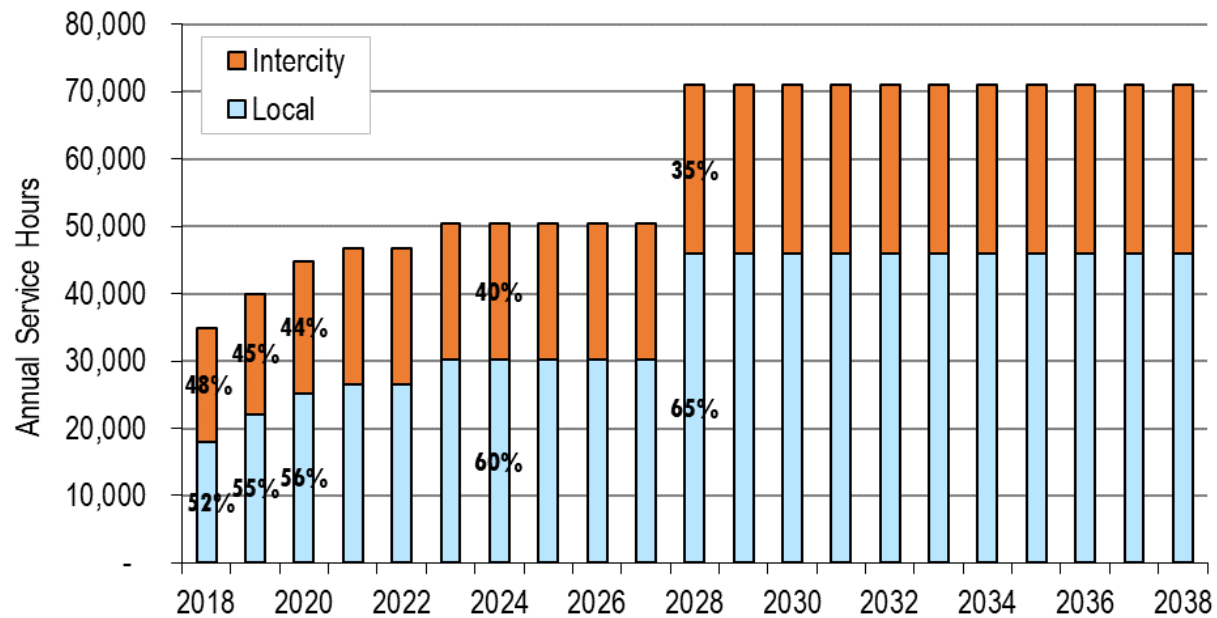
The Long-Term “Vision” time frame includes additional long-term enhancements that YCTA could implement based on the results of near-, short-, and mid-term enhancements (e.g., ridership), future land use conditions, and future funding levels. These potential projects include:

- **Increase peak period frequency to Salem and Hillsboro (SV1).** Current service runs as often as every 90 minutes (Salem) to two hours (Hillsboro) with a single bus serving each route. More frequent service during peak hours would require adding an additional bus during peak hours. This project would depend on ridership demand on existing service.
- **Expand Saturday service (SV2).** This project includes enhancing Saturday frequency on Route 44 between McMinnville and Tigard, extending Route 33 to Yamhill, increasing Saturday Dial-A-Ride capacity in McMinnville, and providing Saturday service in Newberg.
- **Implement Sunday service (SV3).** Based on TDP outreach, Sunday service is generally seen as a low to medium priority, but was identified as a “Medium” priority for YCTA’s Grand Ronde and Tigard routes by 66% of people who provided input on those service areas in an online survey in March 2018 (see TDP Volume II, Section 4: TM #4, Chapter 6). Routes 22 (24s) and 44 (46s) would therefore be the highest priorities for Sunday service, along with some level of local service. TDP focus group participants suggested that less frequent service and/or a higher fare would be acceptable on Sundays.
- **Expand local service (SV4).** Additional local frequency and/or Dial-A-Ride capacity could be added in McMinnville and Newberg, as warranted by YCTA service standards (e.g., productivity, passenger loading, etc.)

## Service Hours by Service Type

Figure 6-9 provides a breakdown of service hours by local and intercity service. Existing YCTA service is nearly evenly split between local and intercity services (the latter includes both connections between Yamhill County cities and out-of-county service). Based on input from the community and the Project Advisory Committee, the TDP prioritized enhancements to local service. The proposed plan increases the share of local service to 60% of service hours by the mid-term time frame, and to 65% in the long-term.

Figure 6-9 Existing and Planning Service Hours by Local and Intercity Service Type



## Route Number Changes

Figure 6-10 summarizes recommended changes to YCTA route numbering, to improve legibility of routes by separating different routes patterns into separate route numbers; this also allows YCTA to more easily interline local routes in order to maintain on-time performance or for other operational reasons. Shifting Newberg routes to the 10-19 range allows future expansion in McMinnville while keeping route numbers in the same range (1-9).

Figure 6-10 Existing and Recommended Route Numbering

Service Area	Existing Route Number		New Route Number	Notes
	Weekday	Weekend		
McMinnville	3 South	-	1	Split two parts of route into individual routes
	2 East	-	2	No change to route number
	3 North	-	3	No change to route number
	2 West	-	4	Split two parts of route into individual routes
	-	-	5-9	Reserved for future
Newberg	5	-	15	Split Route 5 into two individual routes; modify to avoid conflict with future McMinnville routes
		-	16	
	7	-	17	Change
	-	-	18	Change
	-	-	10-14,19	Reserved for future
McMinnville-Salem	11	-	80x	Change to avoid conflict with Cherriots Route 11 with extension to downtown Salem
McMinnville-Grand Ronde	22	24s	22	Same weekday and weekend route number
McMinnville-Hillsboro	-	-	33	No change
McMinnville-Newberg-Tigard	44	46s	44	Same weekday and weekend route number
	45x	-	45x	No change

## System Maps

**Immediate** time frame maps are provided in Figure 6-16 (System) and Figure 6-17 (McMinnville/Newberg), including changes that YCTA will implement starting in Summer 2018.

**Near-Term, Short-Term, and Mid-Term** changes that YCTA will implement starting in 2019 are shown in Figure 6-18 (System), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg). Where applicable these maps also indicate long-term changes.

## System Operating Plan

Figure 6-11 and Figure 6-12 summarize the TDP operating plan (hours of service or the number of trips) on YCTA routes on weekdays and Saturdays, respectively. Figure 6-14 provides a summary for small city flex-route services (including shopper/medical appointment shuttles in McMinnville and Newberg/Dundee).

Figure 6-14 (weekday) and Figure 6-15 (weekend) provide a detailed listing of the YCTA service span (hours of operation) and frequency for each route in each plan time frame.

Figure 6-11 Summary of Changes to Weekday Service Span or Number of Intercity Trips

Route	Existing	Near-Term to Mid-Term	Longer-Term
McMinnville Local Service	7 or 8 AM – 6 PM	7 AM – 7 PM	6 AM – 9 PM*
Newberg Local Service	7 AM – 6:30 PM	7 AM – 7 PM	6 AM – 9 PM
McMinnville-Salem	5	Extended to downtown Salem	+3 trips (AM / PM / early evening*)
McMinnville-Grand Ronde	7	+1 evening trip	No change
McMinnville-Hillsboro	5	No change	+3 trips (AM / PM / early evening*)
McMinnville-Tigard	9	No change	+1 late evening trip*
McMinnville-Newberg	-	+4 round trips	No change
McMinnville-Tigard Express	1 AM / 1 PM	No change	Up to 4 additional one-way trips*

Figure 6-12 Summary of Changes to Saturday Service Span or Number of Intercity Trips

Route	Existing	Near-Term to Mid-Term	Longer-Term
McMinnville Local Service	-	8 AM – 6 PM	8 AM – 6 PM
Newberg Local Service	-	-	8 AM – 6 PM
McMinnville-Salem	-	No change	4 trips
McMinnville-Grand Ronde	4	No change	No change
McMinnville-Hillsboro	-	No change	4 trips (initially to Yamhill-Carlton only)
McMinnville-Tigard	4	No change	No change

Figure 6-13 Summary of Small City Flex-Route Service Days and Hours

Near-Term	Short-Term	Mid-Term	Long-Term
1 to 3 days/wk, 4 hours/day	3 days/wk, 10 hours/day		5 days/wk, 10 hours/day
McMinnville			McMinnville (4 hrs)
Newberg-Dundee			Newberg-Dundee (4 hrs)
Yamhill / Carlton	Yamhill / Carlton		
Sheridan / Willamina / Amity	Sheridan / Willamina / Amity		Sheridan / Willamina / Amity (10 hrs)*
Dayton / Lafayette		Dayton / Lafayette*	

**Figure 6-14 Long-Term System Operating Plan – Weekday, Service Span and Frequency or # of Trips**

Service Area	Route	Description	Existing / Immediate		Near/Short/Mid-Term		Long-Term		Long-Term (Vision)	
			Service Span	Frequency	Service Span	Frequency	Service Span	Frequency	Service Span	Frequency
McMinnville	1	South	7 AM- 6 PM	60 min	7 AM – 7 PM	60 min	6 AM – 9 PM	60 min	6 AM – 9 PM	30-60 min
	2	West	8 AM-6 PM	60 min	7 AM – 7 PM	60 min	6 AM – 9 PM	60 min	6 AM – 9 PM	30-60 min
	3	North	7 AM- 6 PM	60 min	7 AM – 7 PM	30 min	6 AM – 9 PM	30 min	6 AM – 9 PM	30-60 min
	4	East	8 AM-6 PM	60 min	7 AM – 7 PM	60 min	6 AM – 9 PM	60 min	6 AM – 9 PM	30-60 min
	New	Lafayette Ave / Baker Creek Rd	N/A	N/A	N/A	N/A	6 AM – 9 PM	60 min	6 AM – 9 PM	60 min
	New	East of Lafayette Ave On-Demand	N/A	N/A	N/A	N/A	7 AM – 6 PM	Varies	7 AM – 6 PM	Varies
	DAR	Dial-A-Ride	7 AM-6 PM	N/A	7 AM – 7 PM	N/A	6 AM – 9 PM	N/A	6 AM – 9 PM	N/A
Newberg	5	Northwest	7 AM – 6:30 PM	60 min	7 AM – 7 PM	60 min	7 AM – 7 PM	60 min	6 AM – 9 PM	60 min
	6	Southwest	7 AM – 6:30 PM	60 min	7 AM – 7 PM	60 min	7 AM – 7 PM	60 min	6 AM – 9 PM	30-60 min
	7	Southeast	7 AM – 6:30 PM	60 min	7 AM – 7 PM	60 min	7 AM – 7 PM	60 min	6 AM – 9 PM	30-60 min
	8	Northeast	N/A	N/A	7 AM – 7 PM	60 min	7 AM – 7 PM	60 min	6 AM – 9 PM	30-60 min
	DAR	Dial-A-Ride	7 AM-6:30 PM	N/A	7 AM – 7 PM	N/A	6 AM – 9 PM	N/A	6 AM – 9 PM	N/A
Intercity	11	McMinnville-Salem	First Trip: 6 AM Last Trip: 5:30 PM	5 round trips	No Change	No Change	First Trip: 6 AM Last Trip: 7:30 PM	8 round trips	First Trip: 6 AM Last Trip: 7:30 PM	8 round trips
	22	McMinnville to Grand Ronde	First Trip: 5:30 AM Last Trip: 6:35 PM	7 round trips	First Trip: 5:30 AM Last Trip: 7:30 PM	8 round trips	First Trip: 5:30 AM Last Trip: 7:30 PM	8 round trips	First Trip: 5:30 AM Last Trip: 7:30 PM	8 round trips
	33	McMinnville to Hillsboro	First Trip: 6:00 AM Last Trip: 6:30 PM	5 round trips	No Change	No Change	First Trip: 6:00 AM Last Trip: 7:30 PM	7 round trips	First Trip: 6:00 AM Last Trip: 7:30 PM	7 round trips
	44	McMinnville to Tigard	First Trip: 5 AM Last Trip: 7:40 PM	9 round trips	No Change	No Change	First Trip: 5 AM Last Trip: 9 PM	10 round trips	First Trip: 5 AM Last Trip: 9 PM	10 round trips
	New	McMinnville to Newberg	N/A	N/A	8 AM – 5 PM	4 round trips	8 AM – 5 PM	4 round trips	8 AM – 5 PM	4 round trips
	45x	McMinnville to Tigard	First Trip: 6:42 AM Last Trip: 5:05 PM	2 one-way trips	No Change	No Change	No Change	No Change	Approx. 6 – 8 AM and 4 – 7 PM	Up to 6 one-way trips

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Service Area			Existing / Immediate		Near/Short/Mid-Term		Long-Term		Long-Term (Vision)	
	Route	Description	Service Span	Frequency	Service Span	Frequency	Service Span	Frequency	Service Span	Frequency
Shopper Shuttles and Small City Flex Routes	Sheridan / Willamina / Amity		N/A		Near-Term: 4 hours, 1-3 days/week Short-Term: 8 to 10 hours, 3 days/week		8 to 10 hours, 5 days/week		8 to 10 hours, 5 days/week	
	Yamhill/Carlton		N/A		Near-Term: 4 hours, 1-3 days/week Short-Term: 8 to 10 hours, 3 days/week		8 to 10 hours, 3 days/week		8 to 10 hours, 3 days/week	
	Dayton/Lafayette/Amity		N/A		Near-Term: 4 hours, 1 day/week		8 to 10 hours, 3 days/week		8 to 10 hours, 3 days/week	
	Dundee/Newberg		N/A		Near-Term: 4 hours, 1 day/week		4 hours, 5 days/week		4 hours, 5 days/week	
	McMinnville		N/A		Near-Term: 4 hours, 1 day/week		4 hours, 5 days/week		4 hours, 5 days/week	

**Figure 6-15 Long-Term System Operating Plan – Weekend, Service Span and Frequency or # of Trips**

Service Area			Existing / Immediate		Near/Short/Mid-Term		Long-Term		Long-Term (Vision)	
	Route(s)	Description	Saturday	Sunday	Saturday	Sunday	Saturday	Sunday	Saturday	Sunday
McMinnville	All	Fixed-Routes			60-120 min 8 AM – 6 PM	None	60-120 min 8 AM – 6 PM	None	60-120 min 8 AM – 6 PM	60-120 min 8 AM – 6 PM
	New	East of Lafayette Ave On-Demand	N/A	N/A	N/A	N/A	None	None	None	None
	DAR	Dial-A-Ride	None	None	8 AM – 6 PM		8 AM – 6 PM		8 AM – 6 PM	8 AM – 6 PM
Newberg	All	Fixed-Routes	None	None	None	None	None	None	60-120 min 8 AM – 6 PM	60-120 min 8 AM – 6 PM
	DAR	Dial-A-Ride	None	None	None	None	None	None	8 AM – 6 PM	8 AM – 6 PM
Intercity	11	McMinnville-Salem	None	None	None	None	4 round trips	None	4 round trips	4 round trips
	22 (24s)	McMinnville to Grand Ronde	4 trips, First: 9:00 AM, Last: 4:00 PM	None	No Change	None	No Change	None	No Change	4 round trips
	33	McMinnville to Hillsboro	None	None	None	None	4 trips to/from Yamhill/Carlton	None	4 trips to/from Hillsboro	4 round trips
	44 (46s)	McMinnville to Tigard	4 trips, First: 8:00 AM, Last: 6:18 PM	None	No Change	None	No Change	None	No Change	4 round trips
	New	McMinnville to Newberg	N/A	N/A	None	None	None	None	4 round trips	4 round trips



Figure 6-16 shows the YCTA system including planned cost-neutral changes that YCTA plans to implement starting in Summer 2018.

Figure 6-16 YCTA System Map, with McMinnville and Newberg Insets – Including Summer 2018 Immediate Changes

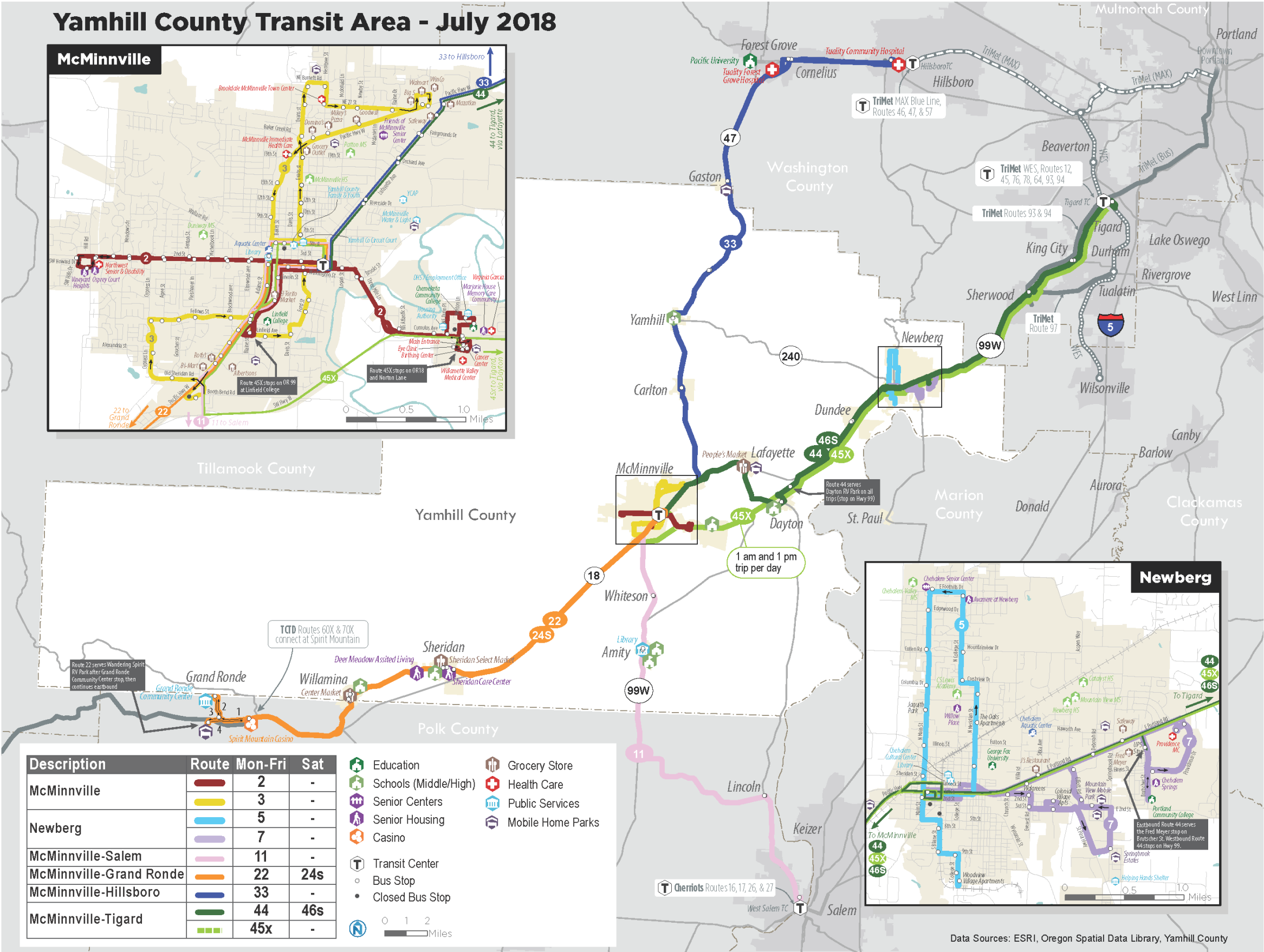


Figure 6-17 YCTA McMinnville and Newberg Local Service – Including Summer 2018 Immediate Changes

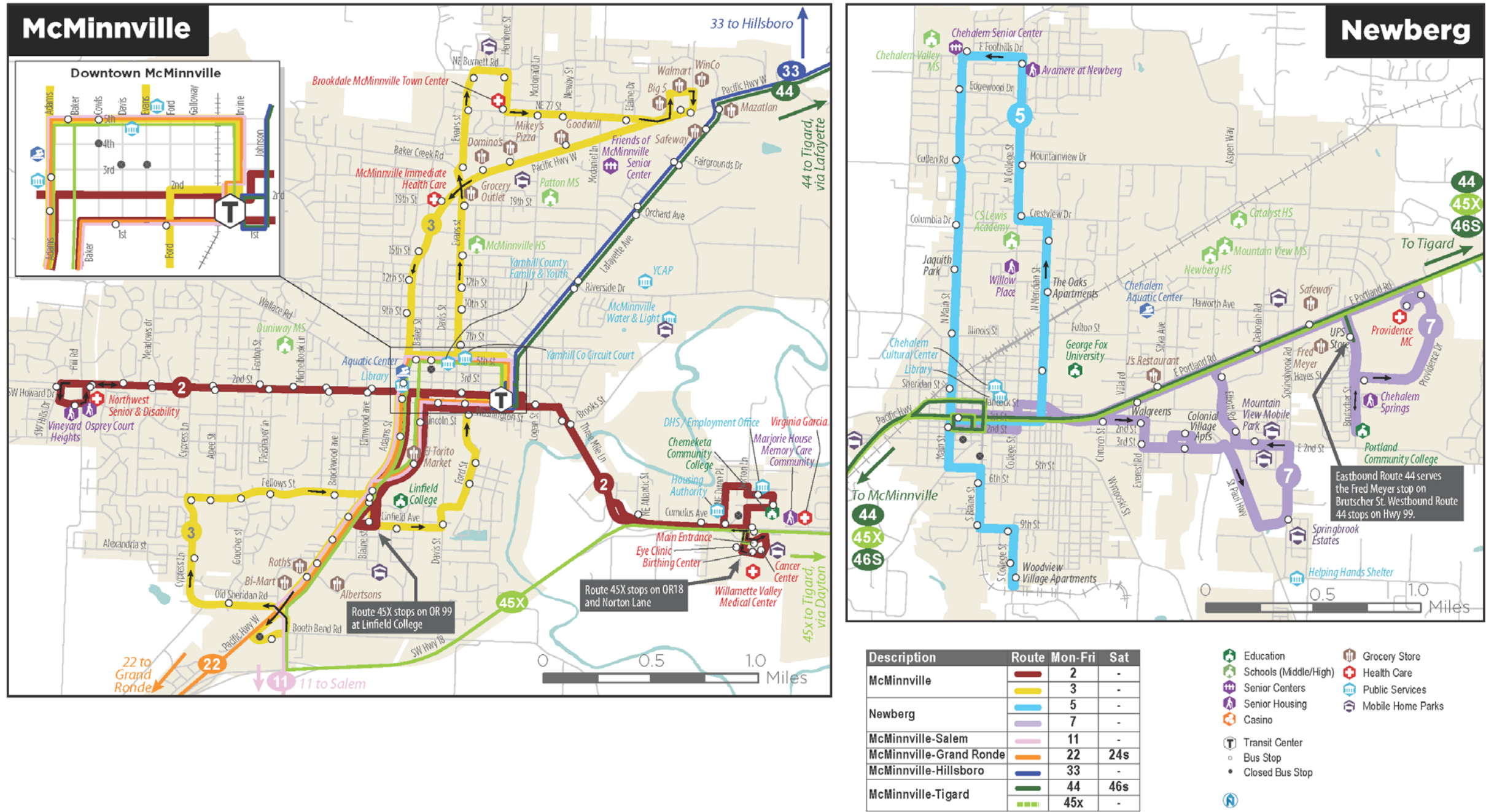




Figure 6-18 (System), Figure 6-19 (McMinnville), and Figure 6-20 (Newberg) illustrate routing changes in the near-term, short-term, and mid-term (and also note some longer-term enhancements).

Figure 6-18 (right) includes the following changes:

- Local route changes in McMinnville, including route number changes (see Figure 6-19 for a larger map)
- All intercity routes serve downtown McMinnville along 5<sup>th</sup> Street with a stop near OMI
- Route 11 is extended to downtown Salem
- Route 22 serves the Wandering Spirit RV Park in one direction
- Routes 33 and 44 run along OR 99W in McMinnville
- Local route changes in Newberg (see Figure 6-20 for a larger map)

Figure 6-18 System Map with Near-Term, Short-Term and Mid-Term Changes

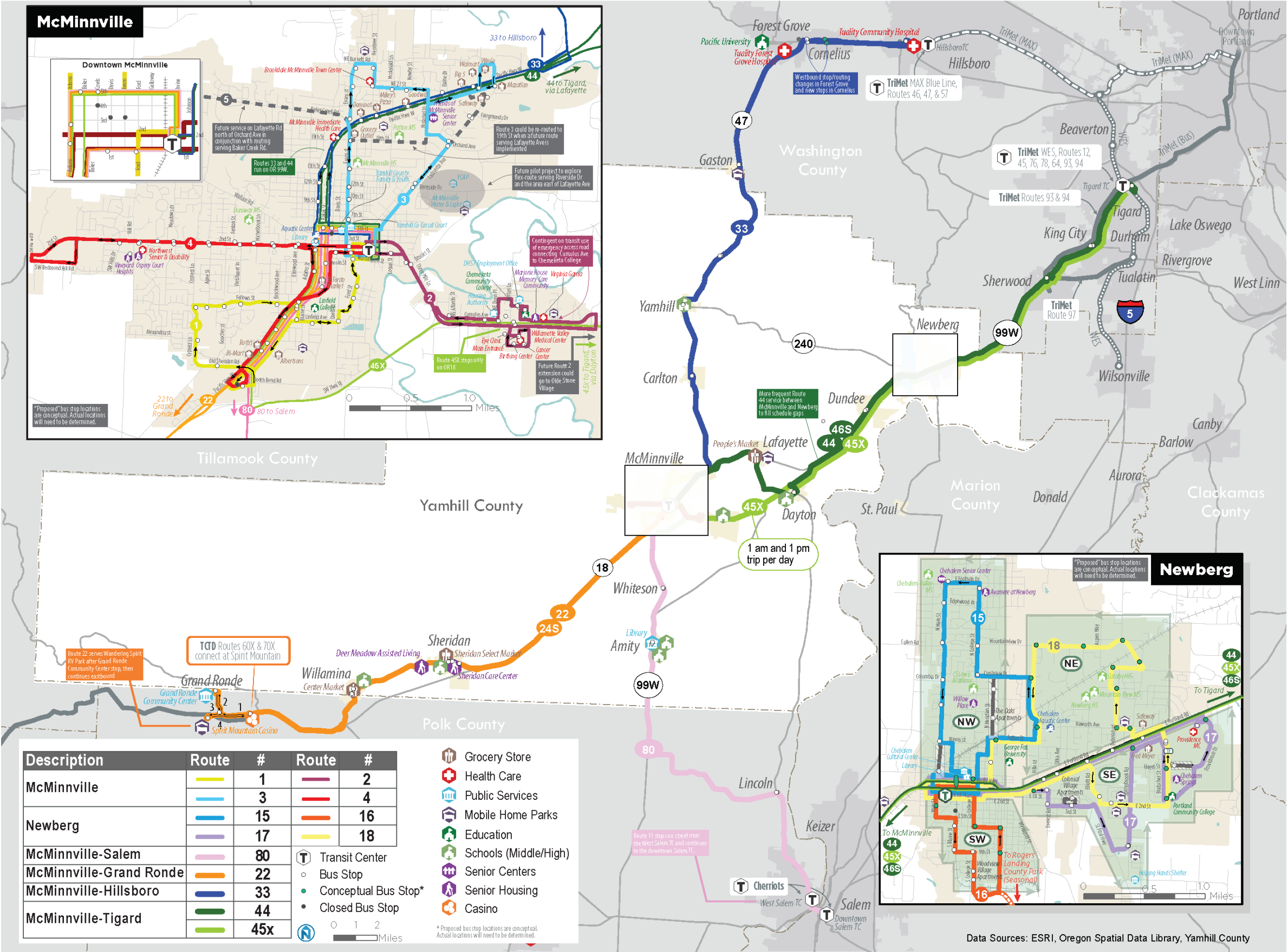


Figure 6-19 shows local route changes in McMinnville starting in the near-term.

Figure 6-19 McMinnville Map with Near-Term, Short-Term, and Mid-Term Changes

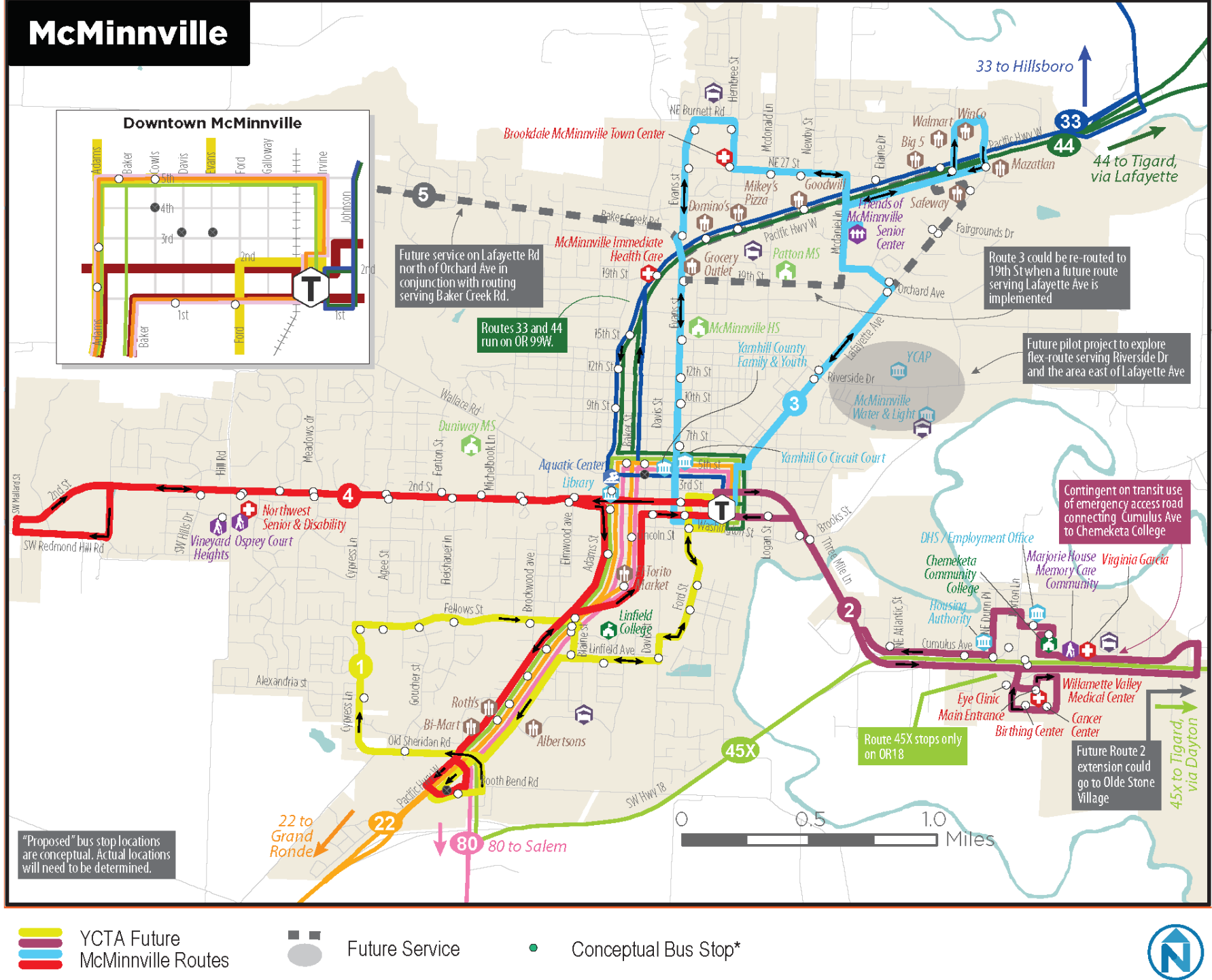
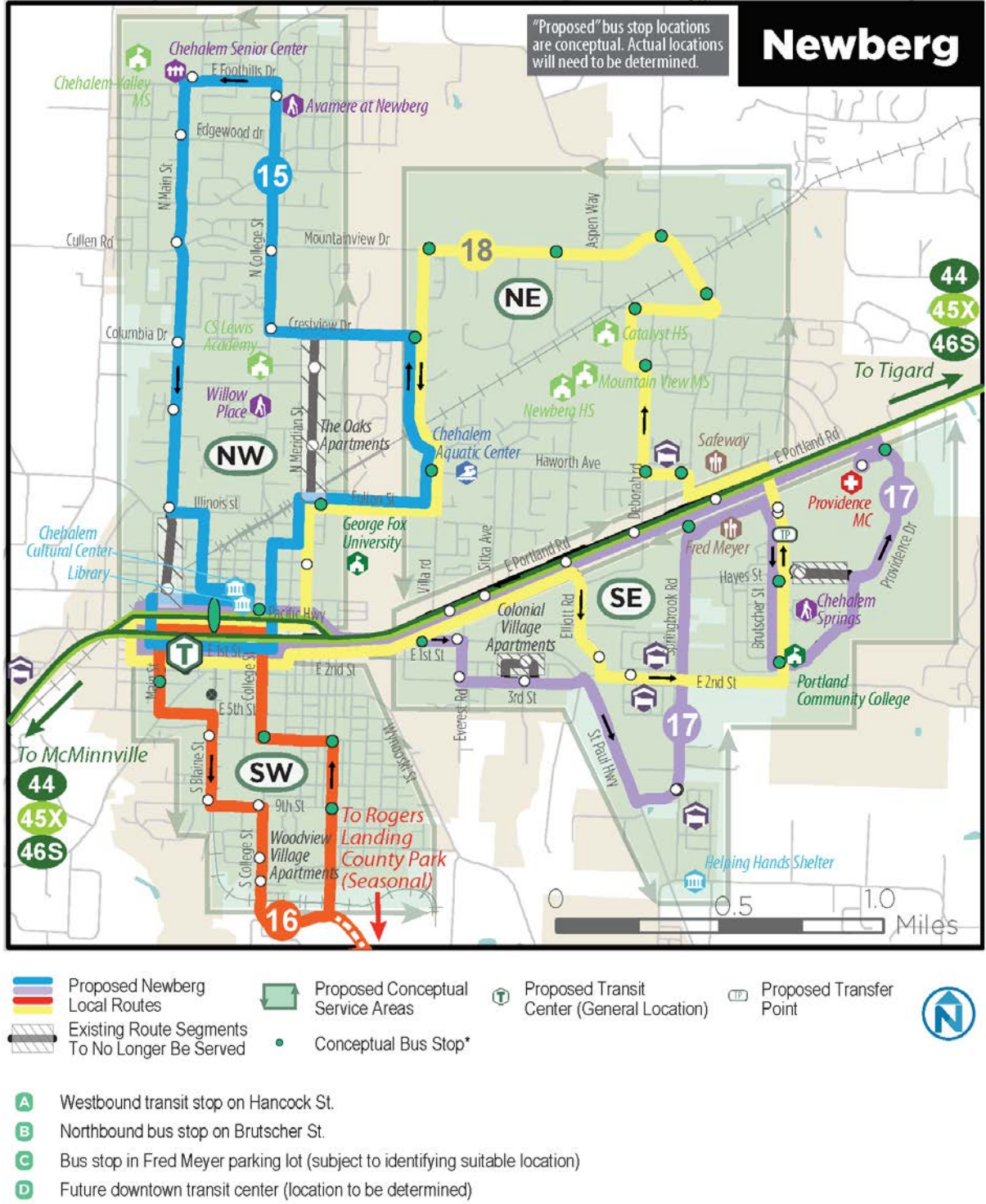


Figure 6-20 shows local route changes in Newberg starting in the near-term.

Figure 6-20 Newberg Map with Near-Term, Short-Term, and Mid-Term Changes





Individual Project and Task Details

Figure 6-21 provides details about each project and task, including descriptions, additional annual service hours and operating costs, and new capital requirements (in addition to the existing fleet).

Figure 6-21 Service Plan Implementation Details by Time Frame

Project ID	Task <sup>1</sup>	Priority Tier <sup>1</sup>	Project Name <sup>1</sup>	Service Area(s)	Service Type	Project/Task Description <sup>1</sup>	Map or Other Details	Additional Annual Hours <sup>1</sup>	Additional Annual Operating Cost <sup>1, 2</sup>	New Capital Requirements
Near-Term										
SN1	1	1	McMinnville Local Service Capacity, Coverage, and Service Hours	McMinnville	Fixed-Route	Renumber McMinnville local routes: <ul style="list-style-type: none"><li>▪ Renumber Route 3 South to Route 1</li><li>▪ No change to Route 2 East - remains Route 2</li><li>▪ No change to Route 3 North - remains Route 3</li><li>▪ Renumber Route 2 West to Route 4</li></ul>	See Figure 6-10 and Figure 6-19	-	-	-
SN1	2	2	McMinnville Local Service Capacity, Coverage, and Service Hours	McMinnville	Fixed-Route	Modify Route 1 (formerly Route 3 South) to provide bidirectional service on Ford St south of downtown. This would provide a faster connection between the Transit Center and Linfield College. Route 1 would no longer serve 2 <sup>nd</sup> St or Adams St, which would still be served by Route 4 (formerly Route 2 West).	Figure 6-19; see Appendix D for details	-	-	-
SN1	3	1	McMinnville Local Service Capacity, Coverage, and Service Hours	McMinnville	Fixed-Route	Modify Route 3 to provide more service to Winco/Walmart area, two-way service on Evans and 27 <sup>th</sup> St, and service on McDaniel Ln (Senior Center). Requires additional half bus.	Figure 6-19; see Appendix D for details	1,430	\$107,000	1 large cutaway
SN1	4	2	McMinnville Local Service Capacity, Coverage, and Service Hours	McMinnville	Fixed-Route	Modify Route 4 (current 2 West) to extend along 2 <sup>nd</sup> St west of Hill Rd, providing service for additional residents, and south to Booth Bend Rd to provide direct access to Roths, Bi-Mart, and Albertsons. Accomplished using the remaining half bus from the Route 3 modification.	Figure 6-19; see Appendix D for details	1,430	\$107,000	
SN1	5	2	McMinnville Local Service Capacity, Coverage, and Service Hours	McMinnville	Fixed-Route	1 additional hour for Route 2 and 4 (start at 7:00 AM)	N/A	260	\$20,000	-
SN2	1	1	Newberg Local Service Redesign	Newberg	Fixed-Route	<ul style="list-style-type: none"><li>▪ Four approximately 30-minute routes, each running every hour (2 buses; 1 bus converted from Dial-A-Ride).</li><li>▪ Routes operate counter-clockwise and generally serve each quadrant of Newberg.</li><li>▪ Shorter western routes interlined with longer eastern routes, e.g., NW-SE (5-7) and SW-NE (6-8).</li><li>▪ Renumber routes to 15, 16, 17, and 18; see Figure 6-10 (above)</li><li>▪ Coordinated transfers with intercity services in downtown (Route 44).</li><li>▪ Provide a westbound stop on Hancock St for all local and intercity routes. The eastbound stop at Nap's Thriftway only serves eastbound routes. (This could transition later to a downtown transit center)</li><li>▪ Consider stops near selected store front door for local routes, subject to identifying suitable locations and reaching agreements with stores. Locations TBD, e.g., Fred Meyer and Safeway.</li></ul>	Figure 6-20; see Appendix D for details	-	-	1 large cutaway
SN3	1	1	McMinnville-Newberg Connector	McMinnville-Tigard	Fixed-Route	Add trips on Route 44 to provide more frequent, consistent service between McMinnville and Newberg. Added trips would not continue to Sherwood/Tigard. Uses existing buses serving Routes 44/45x.	N/A	1,040	\$78,000	-
SN4	1	2	Route 44 serves OR 99W in McMinnville	McMinnville-Tigard	Fixed-Route	Route 44 runs on OR 99W instead of Lafayette Ave in McMinnville, and stops at OMI (5th & Cows) in both directions; assumes concurrent introduction of local service on Lafayette Ave in McMinnville.	Figure 6-19	-	-	-
SN5	1	2	Route 33 bus stop and routing changes	McMinnville-Hillsboro	Fixed-Route	<ul style="list-style-type: none"><li>▪ Relocate westbound Route 33 stop in Forest Grove. Eliminate westbound stop at McMenamins Grand Lodge (west of Hwy 47). Add new westbound stop at the TriMet bus stop 1/4 mile east of Hwy 47. Modify westbound routing to save travel time.</li><li>▪ Add eastbound and westbound stops at Walmart (4th Ave) in Cornelius.</li></ul>	Figure 6-18; see Appendix D for details	-	-	-
SN5	2	3	Route 33 bus stop and routing changes	McMinnville-Hillsboro	Fixed-Route	Coordinate with ODOT on shoulder and other improvements to enhance safety of the Cove Orchard stop. Partner with Gaston and Washington County to provide stop or park-and-ride amenities.	N/A	-	-	TBD

Project ID	Task <sup>1</sup>	Priority Tier <sup>1</sup>	Project Name <sup>1</sup>	Service Area(s)	Service Type	Project/Task Description <sup>1</sup>	Map or Other Details	Additional Annual Hours <sup>1</sup>	Additional Annual Operating Cost <sup>1, 2</sup>	New Capital Requirements
SN6	1	2	Shopper Shuttle	McMinnville, Newberg, Small Cities	Flex Route	Implement shopper shuttle pilot projects in McMinnville, Newberg / Dundee, Yamhill / Carlton, Amity / Sheridan / Willamina, and Dayton / Lafayette (4 hours per day, 1 day per service area; 5 days per week, with up to two additional days in Yamhill/Carlton and Sheridan/Willamina to support medical trip needs such as dialysis where patients may have three appointments per week. Total of 9 days.).	N/A	1,040	\$60,000 + \$48,000 (\$108,000 total)	1 van (+ 1 existing van)
Short-Term										
SS1	1	1	McMinnville Local Service East Extension	McMinnville	Fixed-Route	<ul style="list-style-type: none"><li>Redesign Route 2 (East) to serve NE Cumulus St (e.g., Virginia Garcia Clinic, Fircrest Senior Living, etc.). Contingent on capital improvement to access road/gate.</li><li>Coordinate with Evergreen Museum to explore possibility of a walking path from a bus stop located at the intersection of Cumulus Ave and NE Cumulus Ave (southwest of the museum).</li></ul>	Figure 6-19; see Appendix D for details Capital project	-	-	Modifications to access roadway and gate
SS2	1	1	Early Evening Service	McMinnville	Fixed-Route	Extend McMinnville local fixed-route service hours by one hour to 7 PM (last trips leave transit center at 6:00 or 6:30 PM). Assumes 3 fixed-route buses.	N/A	780	\$60,000	-
SS2	2	1	Early Evening Service	McMinnville	Demand-Response	Extend McMinnville demand-response service hours by one hour to 7 PM; assumes 2 Dial-a-Ride vehicles.	N/A	520	\$30,000	-
SS3	1	2	Early Evening Service	Newberg	Fixed-Route	Extend Newberg local fixed-route service hours by a half-hour to 7 PM (last trips leave transit center at 6:00 or 6:30 PM). Assumes 2 fixed-route buses.	N/A	260	\$20,000	-
SS3	2	2	Early Evening Service	Newberg	Demand-Response	Extend Newberg demand-response service hours by a half-hour to 7 PM; assumes 1 Dial-a-Ride vehicle.	N/A	130	\$8,000	-
SS4	1	2	Phase out flag stops	McMinnville/Newberg	Fixed-Route	After stops are marked or signed, transition away from flag stops in McMinnville and Newberg. This will help service run faster and stay on schedule.	N/A	-	-	Mark or sign all bus stops
SS5	1	1	McMinnville-Newberg Connector	McMinnville-Tigard	Fixed-Route	Phase 2 of near-term project to add trips on Route 44 to provide more frequent, consistent service between McMinnville and Newberg. Added trips would not continue to Sherwood/Tigard. Uses existing buses serving Routes 44/45x.	N/A	1,040	\$78,000	-
SS6	1	2	Extension to Downtown Salem	McMinnville-Salem	Fixed-Route	<ul style="list-style-type: none"><li>Extend Route 11 to Downtown Salem Transit Center. Route 11 would still stop along Wallace Rd in West Salem</li><li>In conjunction with this change, rename Route 11 (e.g., to 80X) to avoid confusion with Cherriots Route 11; see Figure 6-10</li></ul>	Figure 6-18	758	\$57,000	-
SS7	1	1	Additional Grand Ronde evening trip	McMinnville-Grand Ronde	Fixed-Route	Add an additional evening trip, timed to serve work shifts at the Spirit Mountain Casino and improve connections to/from TCTD 60X Coastal Connector route serving Lincoln City (at Spirit Mountain Casino or Grand Ronde Community Center). Timing should be determined in consultation with TCTD and Spirit Mountain. Improves regional coordination and job access.	N/A	503	\$38,000	-
SS8	1	1	Implement Local Flex Route	Yamhill/Carlton	Flex-Route	Expand shopper shuttle pilot to three days per week, 8 to 10 hour per day operation. Either Yamhill/Carlton or Sheridan/Willamina/Amity are recommended for the short-term. One area could be implemented in the first year of the short-term and the second could be implemented in the second or third year based on available resources in Year 1.	N/A	1,352	\$78,000	1 van
SS8	2	2	Implement Local Flex Route	Sheridan/Willamina	Flex-Route		N/A	1,352	\$78,000	1 van
Mid-Term										
SM1	1	1	McMinnville Saturday Service	McMinnville	Fixed-Route	Add local service on Saturdays. Assumes 2 fixed-route vehicles for 10 hours, e.g., 8 AM-6PM.	N/A	1,040	\$78,000	-
SM1	2	1	McMinnville Saturday Service	McMinnville	Demand-Response	Add local service on Saturdays. Assumes 1 Dial-a-Ride vehicle for 10 hours, e.g., 8 AM-6PM.	N/A	520	\$30,000	-
SM2	1	3	Newberg Dial-A-Ride Capacity	Newberg	Demand-Response	Contingency project to restore Newberg Dial-a-Ride to two vehicles, assuming that fixed-route ridership meets standards and additional paratransit capacity is required based on service standards.	N/A	2,080	\$121,000	-
Long-Term										
SL1	1	1	Additional intercity later evening service	McMinnville-Tigard	Fixed-Route	Add 1 additional evening trip	N/A	780	\$59,000	-
SL1	2	1	Additional intercity later evening service	McMinnville-Salem	Fixed-Route	Add 1 additional early evening trip	N/A	403	\$30,000	-



Project ID	Task <sup>1</sup>	Priority Tier <sup>1</sup>	Project Name <sup>1</sup>	Service Area(s)	Service Type	Project/Task Description <sup>1</sup>	Map or Other Details	Additional Annual Hours <sup>1</sup>	Additional Annual Operating Cost <sub>1, 2</sub>	New Capital Requirements
SL1	3	1	Additional intercity later evening service	McMinnville-Hillsboro	Fixed-Route	Add 1 additional early evening trip	N/A	520	\$39,000	-
SL2	1	1	Additional intercity morning and/or afternoon trips	McMinnville-Salem	Fixed-Route	Add 1 additional morning and 1 additional afternoon trip; no additional vehicles required	N/A	806	\$60,000	-
SL2	2	1	Additional intercity morning and/or afternoon trips	McMinnville-Hillsboro	Fixed-Route	Add 1 additional morning trip; no additional vehicles required	N/A	520	\$39,000	-
SL3	1	1	Additional express service	McMinnville-Tigard	Fixed-Route	<ul style="list-style-type: none"><li>Add up to four total express trips on Route 45x in morning and afternoon commute hours</li><li>Express could potentially using bypass if traffic conditions warrant it in the future. Using bypass means express trips would not serve Dundee and downtown Newberg. There would be a timed transfer with local service in eastern Newberg (e.g., Fred Meyer). Route 44 would continue to serve Dundee and downtown Newberg.</li><li>Express service provides direct access to Willamette Medical Center and other activity centers on the OR 18 Bypass, and reduces travel times between the County's largest population centers.</li></ul>	N/A	1,213	\$91,000	-
SL4	1	2	Saturday Service Expansion	McMinnville-Salem	Fixed-Route	Add Saturday service between McMinnville and downtown Salem. Assumes 4 round trips.	N/A	322	\$24,000	-
SL4	2	2	Saturday Service Expansion	McMinnville-Hillsboro	Fixed-Route	Add Saturday service between McMinnville and Yamhill/Carlton. Assumes 4 round trips. Phase 1 of Saturday service to Hillsboro.	N/A	159	\$12,000	-
SL5	1	1	Implement/Expand Local Flex Routes	Dayton/Lafayette	Flex-Route	Expand shopper shuttle pilot to three days per week, 10 hours per day operation in a third geographic area (Dayton/Lafayette assumed). Amity could be included in Dayton/Lafayette service area and/or Sheridan/Willamina service area.	N/A	1,352	\$78,000	1 van
SL5	2	1	Implement/Expand Local Flex Routes	Sheridan/Willamina	Flex-Route	Expand local flex-route to operate 5 days per week in Sheridan/Willamina.	N/A	1,040	\$60,000	
SL6	1	1	Expand Shopper Shuttle Days of Operation	Newberg/Dundee	Flex-Route	Expand shopper shuttle to a 5 day per week service. Assumes 4 hours per day.	N/A	832	\$48,000	0.5 van
SL6	2	2	Expand Shopper Shuttle Days of Operation	McMinnville	Flex-Route	Expand shopper shuttle to a 5 day per week flex-route service. Assumes 4 hours per day.	N/A	832	\$48,000	0.5 van
SL7	1	1	Early Morning and Later Evening Service	McMinnville	Fixed-Route	Start McMinnville local fixed-route service at 6 AM. Assumes 3 buses.	N/A	780	\$60,000	-
SL7	2	1	Early Morning and Later Evening Service	McMinnville	Demand-Response	Start McMinnville demand-response service hours at 6 AM. Assumes 1 Dial-a-Ride vehicle.	N/A	260	\$15,000	-
SL7	3	2	Early Morning and Later Evening Service	McMinnville	Fixed-Route	Extend McMinnville local fixed-route service hours to 9 PM (last trips leave transit center at 8:00 or 8:30 PM). Assumes 2 buses (reduced coverage or lower frequency than daytime operation).	N/A	1,040	\$78,000	-
SL7	4	2	Early Morning and Later Evening Service	McMinnville	Demand-Response	Extend McMinnville demand-response service hours to 9 PM; assumes 1 Dial-a-Ride vehicle.	N/A	520	\$30,000	-
SL7	5	1	Early Morning and Later Evening Service	Newberg	Fixed-Route	Start Newberg local fixed-route service at 6 AM. Assumes 2 buses.	N/A	520	\$40,000	-
SL7	6	1	Early Morning and Later Evening Service	Newberg	Demand-Response	Start Newberg demand-response service hours at 6 AM. Assumes 1 Dial-a-Ride vehicle.	N/A	260	\$15,000	-
SL7	7	2	Early Morning and Later Evening Service	Newberg	Fixed-Route	Extend Newberg local fixed-route service hours to 9 PM (last trips leave transit center at 8:00 or 8:30 PM). Assumes 2 buses.	N/A	1,040	\$78,000	-
SL7	8	2	Early Morning and Later Evening Service	Newberg	Demand-Response	Extend Newberg demand-response service hours to 9 PM; assumes 1 Dial-a-Ride vehicle.	N/A	520	\$30,000	-

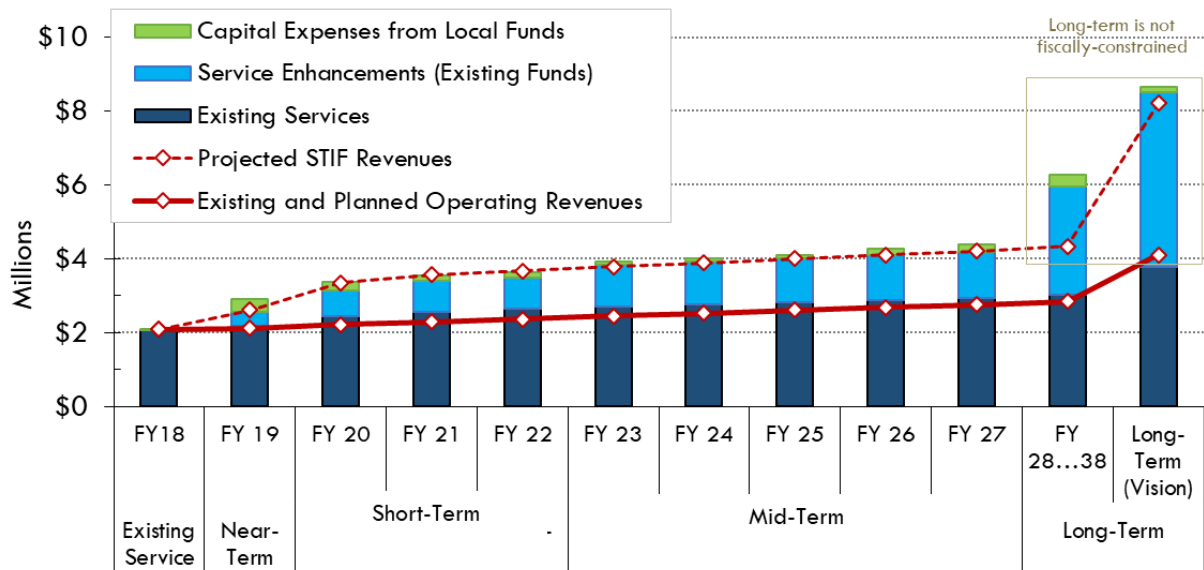
Project ID	Task <sup>1</sup>	Priority Tier <sup>1</sup>	Project Name <sup>1</sup>	Service Area(s)	Service Type	Project/Task Description <sup>1</sup>	Map or Other Details	Additional Annual Hours <sup>1</sup>	Additional Annual Operating Cost <sup>1, 2</sup>	New Capital Requirements
SL8	1	1	McMinnville Lafayette Ave On-Demand Flex-Route Pilot	McMinnville	Flex-Route	<ul style="list-style-type: none"><li>Develop a pilot flex-route serving the area east of Lafayette Ave (e.g., YCAP, McMinnville Power &amp; Light, Dental Clinic, Pet Stop Inn, etc.), with some fixed stops and on-demand dispatch software that enables ride requests within a 2-hour window or on a subscription basis.</li><li>Could be designed to serve employment areas at key shift times.</li><li>Cost assumes 7 AM – 6 PM operation, but could be implemented in two phases (peak hours and midday).</li><li>YCTA should seek grant funding for emerging mobility projects to provide funding for this service.</li></ul>	Figure 6-19	2,860	\$165,000	1 van
SL9	1	2	New Route or Extension Serving Hill Rd / Baker Creek Rd Area	McMinnville	Fixed-Route	<ul style="list-style-type: none"><li>Extend service to the Hill Rd and Baker Creek Rd area. Cost assumes a new route along Baker Creek Rd that would connect to the WinCo/Walmart/Safeway area via NE 27<sup>th</sup> St and to the transit center via Lafayette Ave.</li><li>This new route would also allow Route 3 to be modified to operate a shorter route, including service on 19<sup>th</sup> St. and improving access to McMinnville High School.</li></ul>	Figure 6-19	3,900	\$293,000	1 large cutaway
Long-Term (Vision)										
SV1	1	2	Increase peak period frequency to Salem and Hillsboro	McMinnville-Salem	Fixed-Route	Add trips on Route 11 during morning and afternoon commute hours; this would increase frequency. Requires an additional bus on the route.	N/A	806	\$60,000	1 medium bus
SV1	2	2	Increase peak period frequency to Salem and Hillsboro	McMinnville-Hillsboro	Fixed-Route	Add trips on Route 33 during morning and afternoon commute hours; this would increase frequency. Requires an additional bus on the route. Improve coordination with Grovelink employment area trips.	N/A	1,040	\$78,000	1 medium bus
SV2	1	1	Expand Saturday service	McMinnville-Newberg	Fixed-Route	Add frequency on Route 44 between McMinnville and Newberg on Saturdays	N/A	416	\$31,000	-
SV2	2	3	Expand Saturday service	McMinnville-Hillsboro	Fixed-Route	Extend Route 33 to Hillsboro on Saturdays. Hours/cost in addition to Phase 1 (SL4, McMinnville-Yamhill only).	N/A	257	\$19,000	-
SV2	3	3	Expand Saturday service	McMinnville	Demand-Response	Add a second Dial-A-Ride bus in McMinnville on Saturdays	N/A	520	\$30,000	-
SV2	4	1	Expand Saturday service	Newberg	Fixed-Route	Add local service on Saturdays. Assumes 2 fixed-route vehicles for 10 hours, e.g., 8 AM-6PM.	N/A	1,040	\$78,000	-
SV2	5	1	Expand Saturday service	Newberg	Demand-Response	Add local service on Saturdays. Assumes 1 Dial-a-Ride vehicle for 10 hours, e.g., 8 AM-6PM.	N/A	520	\$30,000	-
SV3	1	2	Implement Sunday Service	McMinnville-Tigard	Fixed-Route	Operate Route 44 on Sundays (McMinnville-Tigard). Assumes 4 round trips. This would be the highest priority for Sunday service on intercity routes.	N/A	624	\$47,000	-
SV3	2	3	Implement Sunday Service	McMinnville-Newberg	Fixed-Route	Add frequency on Route 44 between McMinnville and Newberg on Sundays	N/A	416	\$31,000	-
SV3	3	2	Implement Sunday Service	McMinnville-Grand Ronde	Fixed-Route	Operate Route 22 between McMinnville and Grand Ronde on Sundays. This would be the second highest priority for Sunday service on intercity routes.	N/A	624	\$47,000	-
SV3	4	2	Implement Sunday Service	McMinnville-Salem	Fixed-Route	Operate Route 11 on Sundays. Assumes 4 round trips.	N/A	322	\$24,000	-
SV3	5	3	Implement Sunday Service	McMinnville-Hillsboro	Fixed-Route	Operate Route 33 on Sundays. Assumes 4 round trips.	N/A	451	\$34,000	-
SV3	6	3	Implement Sunday Service	McMinnville	Fixed-Route	Add local service on Sundays. Assumes 2 fixed-route vehicles for 10 hours, e.g., 8 AM-6 PM.	N/A	1,040	\$78,000	-
SV3	7	3	Implement Sunday Service	McMinnville	Demand-Response	Add local service on Sundays. Assumes 1 Dial-a-Ride vehicle for 10 hours, e.g., 8 AM-6 PM.	N/A	520	\$30,000	-
SV3	8	3	Implement Sunday Service	Newberg	Fixed-Route	Add local service on Sundays. Assumes 2 fixed-route vehicles for 10 hours, e.g., 10 AM-6PM.	N/A	1,040	\$78,000	-
SV3	9	3	Implement Sunday Service	Newberg	Demand-Response	Add local service on Sundays. Assumes 1 Dial-a-Ride vehicle for 10 hours, e.g., 10 AM-6PM.	N/A	520	\$30,000	-
SV4	1	3	Local Service Expansion	McMinnville	Fixed-Route	Add one additional bus in McMinnville to provide additional frequency and capacity, if and where needed based on service standards, e.g., Routes 2 and 4 (existing 2 East and West). Assumes 12 service hours per day, but could also be implemented during peak hours only for multiple routes.	N/A	3,120	\$234,000	1 Large Cutaway
SV4	2	3	Local Service Expansion	Newberg	Fixed-Route	Add one additional bus in Newberg to provide additional frequency and capacity, if and where needed based on service standards. Assumes 12 service hours per day.	N/A	3,120	\$234,000	1 Large Cutaway
SV4	3	3	Local Service Expansion	Newberg	Demand Response	Add additional Dial-a-Ride capacity in Newberg, if needed based on service standards (assumes 1 additional van and 1 additional cutaway in service, each for 8 service hours per day)	N/A	4,160	\$241,000	1 Van, 1 Small Cutaway

Notes: [1] Priority tier is a TDP recommendation, which should be confirmed by the YCTA advisory committee for submission in YCTA’s STIF Plan. The STIF Plan requires that projects be ranked and allows projects to be submitted at 100% and 130% of projected funding, in order to help prioritize depending on actual funds available. [2] Costs in this table reflect an average cost per hour of \$75 for fixed-route, \$58 for Dial-a-Ride, and \$56 for flex-routes, which is the assumed cost for FY 2020. The TDP financial plan assumes costs that are escalated to the projected implementation year.

## Cost Overview

A summary of annual transit operating costs relative to anticipated funding levels is provided in Figure 6-22. The chart shows the costs of operating existing services and the estimated costs of enhancements. In the early near-term and short-term, a larger share of YCTA revenues is required for capital enhancements like marking bus stops and upgrading the bus fleet (see Chapter 7). Costs are described in more detail in the TDP financial plan (see Chapter 8).

Figure 6-22 Projected Annual Operating Costs, Existing Funding Sources



## Additional Funding Scenario

If additional resources are available, YCTA could implement projects that are currently not assumed until the long-term time frame, which is intended as a flexible service plan and is not financially-constrained.

- **Expand local flex-route service to a third service area, assumed to be Dayton and Lafayette (SL5) starting in the mid-term.**
- **In McMinnville and/or Newberg, provide earlier morning service (starting at 6 AM) in the short-term and later evening service (until 9 PM) in the mid-term (SL7).**
- **Add additional early evening trips on intercity routes (SL1) starting in the short-term.**
- **Add additional express trips between McMinnville and Newberg (SL3) starting in the short-term.**
- **Initiate a pilot of on-demand service east of Lafayette Avenue in McMinnville (SL8) starting in the mid-term. Initially, the pilot could run during peak hours, e.g., 7-10 AM and 3-6 PM, which would reduce its cost.**

Chapter 8: Financial Plan provides additional discussion of funding options.

## 7 CAPITAL PLAN

The capital elements of a transit system include vehicles, bus stop amenities (e.g., signs, seating, shelters, bike racks, etc.), and major capital facilities (transit centers and facilities to maintain and store buses). Buses are typically purchased on a rolling basis to replace old equipment and support expansion of operations, while major facilities require advance planning to secure land and funding. This chapter identifies investments and priorities for each plan time frame.

### Emerging Mobility Tools and Technologies

Emerging mobility tools and technologies can help YCTA enhance travel and accessibility for Yamhill County residents, employees, and visitors. The TDP addresses emerging mobility in several parts of the plan:

- **Autonomous vehicle (AV) technology** for shuttles or other vehicles – Chapter 7: Vehicles
- **Integration of shared mobility services** (cars, bikes, scooters, etc.) – Chapter 7: Facilities
- **Ride-hailing services** such as Uber and Lyft (also known as Transportation Network Companies or TNCs) – Chapter 9: Regional Coordination and Partnerships
- **On-demand dispatch technology** to enable transit vehicles to serve requests for pickups in near real-time; this is sometimes referred to as **microtransit**—a publicly or privately operated bus route/system using vans or small buses – Chapter 9: Advanced Public Transportation Technology

## VEHICLES

Figure 7-1 summarizes actions related to vehicles and the YCTA fleet. The following sections provide additional detail.

Figure 7-1 Summary of Vehicle-Related Capital Actions

Category	Action	Cost	Partners	Time Frame
Vehicle Replacement and Expansion	Replace end-of-life vehicles with low-floor vehicles branded for and matched to each service type, and maintain an adequate spare ratio.	\$3.7 M (through mid-term); see Figure 7-4 for details.	N/A	Near-term and ongoing
Vehicle Maintenance Facility	YCTA will need an expanded facility to support existing and future vehicle maintenance needs.	See Figure 7-6	Yamhill County, Cities of McMinnville and/or Newberg	Mid-term to long-term
Alternative Fuel Vehicle Options	Evaluate alternative fuel vehicle options, including lifecycle costs, and obtain grants to fund pilot projects.	Not determined – higher fleet and upfront costs and potentially lower fuel/maintenance costs	N/A	Short-term and ongoing
Autonomous Transit Vehicle Technology	YCTA can incorporate autonomous vehicle technology elements as they mature and conduct pilot or demonstration projects, including for first and last-mile access including for low-demand, low-density employment areas.	Unknown	TBD	Mid- to long-term

## Vehicle Types and Characteristics

As described in Chapter 3, YCTA's bus fleet is made up of a variety of vehicles that lack a consistent look (or brand), and are aging and increasingly unreliable. This section describes costs and strategies to provide comfortable, reliable vehicles that are matched to each YCTA service type and support expansion in each TDP time frame.





Figure 7-2 identifies the vehicle types and costs assumed in the plan. Different types of vehicles would be matched to each type of YCTA service based on access and capacity requirements, and uniquely branded. This will require having sufficient vehicles of each type and will limit the ability to interline vehicles across services, although operators could still switch vehicles. YCTA will need to balance the benefits of branding with having too many service types and limiting its flexibility.

YCTA is soliciting input on a distinctive image that would be included in a second phase of bus wraps. The image would evoke something of local significance for Yamhill County or each city, such as agriculture (vineyards, hazelnuts, lumber, etc.), universities, etc.

Vehicle amenities could include:

- **Low-floor** vehicles to make it faster and easier for passengers using wheelchairs and mobility devices to board and alight.
- Intercity routes could include **charging ports** to make services more attractive to commuters and others traveling long distances.
- Local routes could include **community-oriented features** that help riders feel a sense of ownership and be considerate of the bus and other passengers.

Figure 7-2 YCTA Vehicle Types

Category	Representative Image <sup>3</sup>	Typical YCTA Services	Typical Size / Capacity	Cost <sup>1</sup>	Assumed Model	Vehicle Class	Minimum Useful Life
Bus – Large <sup>2</sup>	Not planned until long-term	Intercity Routes (highest demand)	35-foot multiple doors 35-40+ pass.	\$450,000	Gillig 35' Low, Low-Floor	A	12 Years or 500,000 miles
Bus - Medium		Intercity and Local Routes	30-foot multiple doors 25-35 pass.	\$340,000	El Dorado EZ Rider II 30', Low-Floor	A	12 Years or 500,000 miles
Cutaway - Large		Intercity and Local Routes	16+ pass. 2 W/C	\$140,000	Aerotech, Low-Floor	C	7 Years or 350,000 miles
Cutaway - Small		Local Routes (lowest demand), Dial-A-Ride, Small City Flex Routes	12 pass. 2 W/C	\$85,000	Arboc Spirit of Independence Low-Floor	D	5 Years or 150,000 miles
Van		Small City Flex Routes, Dial-A-Ride	5 pass. 1-2 W/C	\$50,000	Accessible van	E	4 Years or 100,000 miles

Notes: [1] Costs in 2018 dollars, including add-on items. Based on recent YCTA procurements or the Oregon DOT State Price Agreement Vehicle Contract Crosswalk, June 2017. [2] "Bus – Large" vehicle type not assumed until later plan years (long-term). [3] Draft bus wrap images as of July 2018.



## Alternative Fuel Vehicles

Transit agencies in North America are increasingly adopting alternative fuel vehicles. As of 2015 approximately half of all transit buses in the U.S. were propelled by a fuel source other than traditional diesel fuel. There are a number of alternative fuel vehicle options on the market, including:

- Compressed natural gas (CNG).
- Hybrid diesel-electric (hybrid-electric).
- Electric vehicles (EV) (battery-electric). As of 2018, there are at least 13 models available deployed at more than 70 transit agencies in the United States<sup>16</sup>
- Hydrogen fuel cell.

Most alternative fuel vehicles have higher upfront capital costs than standard diesel-fuel buses, and there are other upfront costs related to installing or upgrading facilities for fueling and maintenance. The First Transit maintenance facility that currently maintains YCTA's fleet does not capacity for these facilities, which may limit near-term options to hybrid-electric vehicles. Options with lower upfront costs are to purchase refurbished battery-electric vehicles (cost of \$200,000 per vehicle currently) or leasing several buses as a pilot project. However, alternative fuel vehicles may be less costly over the life of the vehicle due to lower fuel and/or ongoing maintenance costs.

YCTA could evaluate implementation of alternative fuel vehicles, including pilot projects, considering upfront capital and life cycle operating and maintenance costs of vehicles and facilities.

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<sup>16</sup> TCRP Synthesis 130: Battery Electric Buses State of the Practice, 2018. <https://tinyurl.com/y7c8uqvz>

## Autonomous Transit Vehicles

Autonomous vehicles, or technology-assisted driving, is an evolving technology that can be grouped into five categories:

- Levels 1 to 3 (driver assistance to conditional automation) rely on a driver to pilot the vehicle with varying levels of automated functions.
- Levels 4 and 5 (high to full automation) allow driverless operations. Applications range from personal mobility (individual vehicle owners and users) to shared mobility (subscription-based and bundled transportation services).

Research and development activity around autonomous vehicle technology continues to progress, with pilot services in a number of cities across the United States and internationally. Once driverless vehicles are available for widespread consumer use, they are expected to steadily gain market share. However, the adoption timeline is uncertain given unknowns about the technology itself and the regulatory efforts that will shape it. Autonomous vehicle technology is likely to be adapted by vehicle manufacturers and transit agencies in stages. Likely implications for transit include:

- Lower levels of automation could improve safety and comfort, e.g., improved collision avoidance, smoother acceleration/deceleration, precision curb alignment, automated parking, etc.
- Full (Level 5) automation is likely a decade or more away,<sup>17</sup> but could lead to significant shifts in the way transit services operate by:
  - Shifting the role of the operator to focus on customer service and assisting passengers. Labor represents a major portion of transit operating costs, but the continued need for an attendant (especially in paratransit applications) would likely offset potential labor cost savings.
  - Making it more cost-effective to provide automated circulators or shuttles that can provide access to “line-haul” routes. Current automated shuttles typically operate with a low level of autonomy on pre-defined, fixed routes in controlled environments, minimizing operational challenges and enabling the vehicles to operate with minimal human intervention.
- Converging with ride-hailing and microtransit, some shuttle providers are exploring offering on-demand services where passengers would either press a button at stop locations to board the shuttle or hail a ride through their smartphone, and press a button to request to alight at the next stop.
- The need for maintenance and repair may increase as more, smaller vehicles run more frequently. Advanced training requirements are likely to grow as technology evolves and the transit fleet incorporates autonomous technology.

YCTA can incorporate autonomous vehicle technology into future pilot or demonstration projects.

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<sup>17</sup> FTA: Strategic Transit Automation Research Plan, January 2018. <https://tinyurl.com/ybkv9rxh>

## Fleet Plan

Figure 7-3 summarizes vehicle requirements by the type and number of vehicles required in each plan time frame. The plan assumes transitioning away from cutaways in favor of medium-size buses for local fixed-routes and heavy-duty buses for the intercity routes, particularly on routes with the highest demand. These buses have more seating capacity and features like multiple doors to help board/alight passenger efficiently.

See Appendix A for detailed vehicle type assumptions (Figure A-2) and a replacement schedule (Figure A-3).

### Maximum Vehicles in Service

The number of vehicles operated in maximum service (VOMS) that would be in service each day increases from 17 currently to 19 in the near-term and 22 in the short-term time frame. Figure 7-3 provides a summary. See Figure A-2 in Appendix A for detailed assumptions by route.

The five additional vehicles would be used to provide:

- **Near-Term:** An additional bus for McMinnville local service and a van to initiate the shopper shuttle and small city service pilots. One of the two existing Dial-A-Ride vehicles in Newberg is shifted to fixed-route service.
- **Short-Term:** Additional vehicles for small city services and a vehicle added back to Newberg Dial-A-Ride service (depending on demand).
- **Mid-Term:** An additional vehicle for small city services
- **Long-term:** This time frame provides a set of flexible options for future conditions and is not fiscally-constrained. YCTA could operate up to 30 vehicles if all options are implemented, including additional Dial-A-Ride capacity and additional routes or increased frequency in McMinnville and Newberg, and additional vehicles for small city services. It also assumes that the highest-demand services (Route 3 in McMinnville and Route 44 McMinnville-Tigard) would move to larger buses.

### Spare Vehicles

For systems with 50 or more vehicles, the Federal Transit Administration (FTA) recommends maintaining a ratio of approximately 20% spare vehicles to ensure that transit service is not impacted by planned or unplanned vehicle maintenance. There is no corresponding recommendation for a spare ratio for smaller systems like YCTA. In order to match vehicles to each service type, the plan assumes a relatively high spare ratio; YCTA can adjust this based on operational experience with the future vehicle fleet.

Figure 7-3 Capital Plan Summary – Maximum Number of Vehicles in Service by Type and Time Frame

TDP Time Frame	Existing Service	Near-Term	Short-Term	Mid-Term	Long-Term	
Vehicle Type	Year	2018	2019	2020-2022	2023-2027	2028-2038
Bus - Large		0	0	0	0	4
Bus - Medium		7	7	7	7	6
Cutaway - Large		3	5	5	5	7
Cutaway - Small		5	5	7	7	11
Van		2	2	3	3	4
Total Maximum Vehicles in Service		17	19	22	22	32
Total Vehicles with Spares		22	26	31	32	43
Overall Spare Ratio		29%	37%	41%	45%	34%

## Vehicle Capital Cost Summary

Figure 7-4 summarizes vehicle capital costs including replacing end-of-life vehicles in the early years of the plan, and ongoing vehicle replacements over the first 10 years of the plan (based on the typical useful life listed in Figure 7-2 above). Figure 7-5 illustrates costs over this time period.

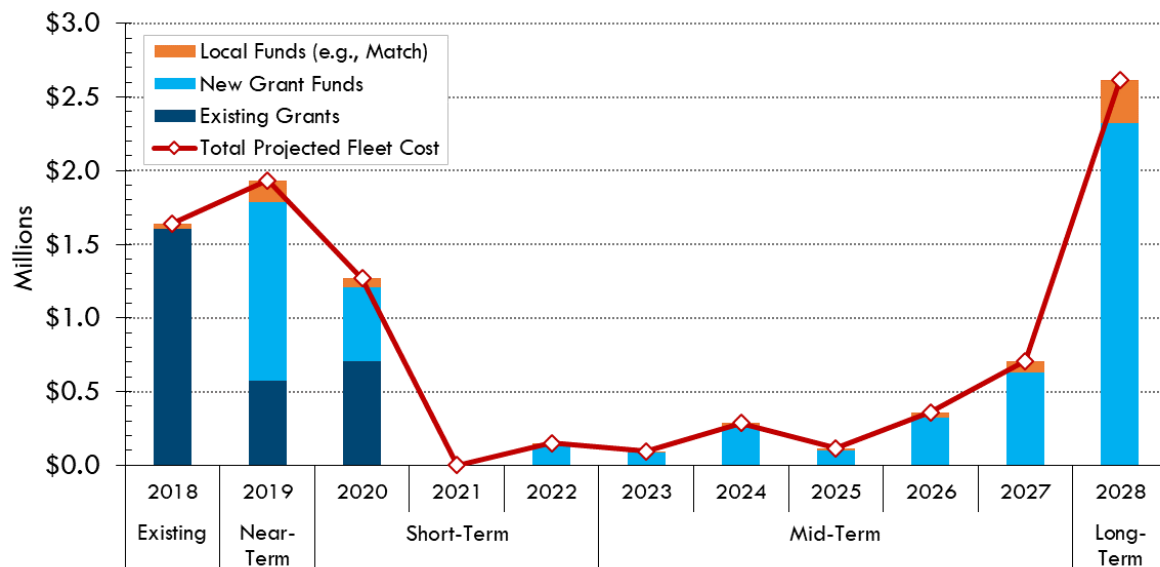
YCTA has existing grants to purchase new vehicles in 2018 and 2019, but will need to seek additional grant funding sources to replace end-of-life vehicles and support planned expansion. The plan assumes that YCTA will need to cover local matching costs, typically 10.27% to 20% depending on the grant, but also creates a capital reserve to cover the gap between grants and funding needs including replacing the new vehicles YCTA is currently acquiring in the long-term time frame. See Figure A-3 in Appendix A for a detailed fleet replacement schedule.

Figure 7-4 Capital Plan Summary – Vehicle Capital Costs by Type and Time Frame (Total and Assumed Local Costs)

TDP Time Frame	Existing	Near-Term	Short-Term	Mid-Term
Year	2018	2019	2020-2022	2023-2027
Bus - Large	\$0	\$0	\$0	\$0
Bus - Medium	\$1,360,000	\$1,020,000	\$1,044,000	\$0
Cutaway - Large	\$280,000	\$560,000	\$150,000	\$504,000
Cutaway - Small	\$0	\$255,000	\$174,000	\$882,000
Van	\$0	\$100,000	\$51,000	\$173,000
<b>Total Cost</b>	<b>\$1,640,000</b>	<b>\$1,935,000</b>	<b>\$1,419,000</b>	<b>\$1,559,000</b>
Existing Grants	\$1,603,346	\$571,770	\$707,072	\$0
Additional Local Funding Needed	\$36,654	\$1,363,230	\$711,928	\$1,559,000
# of Years in Time Frame	1	1	3	5
<b>Avg Total Cost per Year</b>	<b>\$36,654</b>	<b>\$1,935,000</b>	<b>\$473,000</b>	<b>\$311,800</b>
<b>Avg Local Cost per Year <sup>1</sup></b>	<b>\$36,654</b>	<b>\$213,000</b>	<b>\$53,000</b>	<b>\$35,000</b>

Notes: Based on bus unit costs in 2018 dollars, adjusted for inflation. [1] Local costs assume an average local share of approximately 11%.

Figure 7-5 Projected Fleet Capital Costs by Assumed Funding Source and Time Frame



## MAJOR FACILITIES

Figure 7-6 summarizes facility recommendations and costs. The following sections discuss each major type of facility.

Figure 7-6 Capital Facility Actions and Planning-Level Costs

Action/Improvement	Benefits	Estimated Cost*	Partners	Time Frame
Sign and Mark Bus Stops	Communicates where vehicles stop and the presence of transit in the community	\$100,000	Local Jurisdictions	Near-Term
Stop improvement program (benches, shelters, pads, and other amenities)	Provides comfortable, dignified places for passengers to catch the bus	\$25,000 - \$50,000 (annual)	Local Jurisdictions	Near-Term and Ongoing
Improvements at Chemeketa Community College – McMinnville. Gate access and roadway improvements.	Enables service to Virginia Garcia clinic and other housing east of Norton Lane.	\$15,000 - \$25,000	City of McMinnville, Chemeketa College	Short-Term
Newberg Downtown Transit Center (On-Street to Off-Street)	Provides visibility for transit and a restroom for drivers and passengers.	\$250,000 to \$1.0 M	City of Newberg	Short- to Long-Term
McMinnville Bus Maintenance & Storage Facility	Provides space for future expansion and flexibility for future service contracting.	\$5.0 - \$6.0 M	Yamhill County, McMinnville and/or Newberg	Mid- to Long-Term
Plan for expansion of McMinnville Transit Center	Provides space for future expansion	\$1.0 – 1.5 M	City of McMinnville, Yamhill County	Mid- to Long-Term
Park-and-rides	Identify park-and-ride locations through partnership agreements	-	To be determined (e.g., local churches)	Ongoing

\* Order-of-magnitude, planning-level costs, 2018 dollars

## Secondary Transit Hubs

Secondary transit hubs are major stops that have a higher level of amenities and passenger capacity to support convenient transfers between routes outside of the downtown transit centers. The plan recommends:

- **Plan for secondary transit hubs in McMinnville** by acquiring land/easements or securing use of public right-of-way as opportunities arise. Locations could include the northeast (vicinity of OR 99W and Lafayette Avenue), and/or west, east and south parts of McMinnville.
- **Establish a secondary transit hub in eastern Newberg** (in the vicinity of Fred Meyer) to support coordinated transfers between Routes 44/45x (including possible future re-routing of Route 45x to use the Dundee Bypass) and Newberg local routes. This would require an enhanced or protected pedestrian crossing.

Figure 7-7 Brutscher Street Shelter, Newberg



Brutscher Street adjacent to Fred Meyer in Newberg is a potential secondary transit hub location. Amenities could include higher capacity shelters and a protected pedestrian crossing.



- **Consider establishing a transit hub at Spirit Mountain Casino**, which is served by YCTA Route 22 as well as TCTD services. The Grand Ronde Tribe, which is completing its own transit plan in 2018, may be a potential funding partner.

## Transit Centers

Transit centers are the primary locations where bus routes converge and buses can layover between trips. The McMinnville Transit Center provides facilities for customers and operations staff (e.g., First Transit). Key actions include:

- **Plan for expansion of the downtown McMinnville transit center** by acquiring land as opportunities arise.
- **Establish a downtown transit center in Newberg** with coordinated schedules between Route 44 and local service. While it is appropriate for YCTA and Newberg to take initial steps to plan for a transit center now, the recommended mid-term implementation time frame is intended to allow existing routes to demonstrate increased ridership from proposed near-term service changes and modest stop improvements (including signage/markings at all stops), before making a significant capital investment. The City of Newberg has also proposed providing public right-of-way for an on-street transit center, which could be implemented at lower cost and in an earlier plan time frame.

## Park & Ride Lots

Park-and-ride lots are public parking lots that allow people to park their cars and access transit or ridesharing. There are currently no official park-and-ride lots in Yamhill County.<sup>18</sup> YCTA can secure park-and-ride locations through partnership agreements with institutions such as churches that do not utilize their available parking on weekdays. Transit riders would be allowed to park at certain times. Small context-appropriate park & ride lots and drop-off spaces for taxis and ride-hailing services (e.g., Lyft and Uber; see Chapter 9) could also be incorporated into future transit centers, if land is available.



Top: YCTA owns and maintains the McMinnville Transit Center, built in 2013 and funded through the Oregon Department of Transportation's ConnectOregon IV program supplemented with FTA, Yamhill County, and other ODOT funds.  
 2<sup>nd</sup> from Top: Tillamook Transit Center includes bus stops along Second Street near City Hall.  
 2<sup>nd</sup> from Bottom: Hawthorne Station in Bend includes bus stops along both sides of Hawthorne Ave.  
 Bottom: SETD took advantage of a vacant retail space to open a Transit Kiosk in Seaside.

<sup>18</sup> Oregon Department of Transportation. *Park & Ride Lots*. <https://www.tripcheck.com/Pages/RLPark-ride.asp>

## Maintenance Facilities

YCTA buses are maintained by First Transit under its contract with YCTA. The maintenance shop is located on Lafayette Avenue in McMinnville, but has limited capacity. Key actions include:

- **Identify and acquire or partner to secure a long-term location for maintaining and storing buses.** Having its own facilities will provide YCTA with future flexibility in contracting for service and incorporating fueling and maintenance facilities for alternative fuel buses.
- YCTA could also consider identifying locations where buses can be stored or maintained in other communities as needs and opportunities arise. This can avoid deadheading (when a bus travels without carrying passengers to reach the start of a route or return to the maintenance base, such as Route 22 currently does), but can create other operational or logistical challenges.

## BUS STOPS AND PASSENGER AMENITIES

### Bus Stop Amenity Standards

Bus stops are the basic type of transit facility and serve as the front door of the transit system. The presence of bus stops lets people know where buses run and their appearance and condition often define people's impressions of transit. A key near-term improvement is to sign and/or mark all YCTA bus stops; funds are identified starting in the first year of the plan. YCTA should also set aside funds for a program to make ongoing investments in bus stops. Figure 7-9 identifies existing bus stops and amenities, focused on stops outside of McMinnville, as well as current improvement plans.

Stop improvements, and improving pedestrian and bicycle access to bus stops is an area where local jurisdictions play an important role in making improvements and setting standards to ensure that appropriate facilities are built when land is developed or redeveloped (see Chapter 10).

Future facility policies and plans should accommodate ride-hailing services (e.g., drop-off zones for Lyft, Uber, Taxis, etc.), future shared mobility services (e.g., future bike or scooter charging stations), and other first last-mile services.





### Solar-Powered Lighting and Beacons

It can be challenging for bus operators to see passengers waiting at shelters, particularly on intercity routes and at night or in low-visibility conditions. YCTA can equip selected stops shelters with a solar-powered beacon that provides lighting at the stop and allow drivers to more easily see when passengers are waiting. Examples are shown at right. Costs range from approximately \$1,000 to \$1,400 for beacons and from \$1,500 - \$2,000 for shelter lighting.



Source: Urbansolar / PV-Stop

Figure 7-8 Bus Stop Amenity Standards and Unit Costs

Photo Example	Stop Amenity Category	Ridership and Land Use Context Guidelines	Required/Preferred Elements	Optional Elements	Unit Cost
 Wilsonville (Source: Simme Seat)	Minimal marking or pole	None	<ul style="list-style-type: none"> <li>YCTA route sign or other marking</li> </ul>	<ul style="list-style-type: none"> <li>Well-maintained pull-out location (e.g., highways)</li> </ul>	\$30 - \$150
	Basic with no or existing pad	Low = <10 Daily Boardings	<ul style="list-style-type: none"> <li>Meets ADA requirements</li> <li>Continuous pedestrian access</li> <li>Posted route and schedule information</li> </ul>	<ul style="list-style-type: none"> <li>Above plus lighting</li> </ul>	\$1,000
	Basic with pad and Simme Seat	Low = <10 Daily Boardings Moderate-use activity center	<ul style="list-style-type: none"> <li>Above plus Simme seat</li> <li>Pad</li> </ul>	<ul style="list-style-type: none"> <li>Above plus bicycle parking</li> </ul>	\$3,500
 Grand Ronde Community Center	Basic with pad and bench	Low = <10 Daily Boardings Moderate-use activity center	<ul style="list-style-type: none"> <li>Above with expanded pad and bench</li> </ul>	<ul style="list-style-type: none"> <li>Above plus bicycle parking</li> </ul>	\$4,500
 Peer example with pullout, shelter, and beacon (Island Transit, WA)	Stop with Shelter	Medium = 10-25 Daily Boardings High-use stops and activity centers, intercity stops, transfer points	<ul style="list-style-type: none"> <li>Above with shelter</li> </ul>	Above plus: <ul style="list-style-type: none"> <li>Enhanced information (system map)</li> <li>Solar-powered beacon light (intercity stop with limited visibility for bus drivers)</li> <li>Lighting</li> </ul>	\$12,500
 Peer Example (Bend)	Enhanced Stop	High = >25 Daily Boardings	<ul style="list-style-type: none"> <li>Above plus...</li> <li>Printed information</li> <li>Bicycle parking</li> <li>High-capacity shelter(s)</li> <li>Real-time information display</li> </ul>	Above plus: <ul style="list-style-type: none"> <li>Secure bicycle parking</li> <li>Trash can</li> <li>Placemaking / art</li> <li>Solar shelters and lighting</li> <li>Designated park and ride or drop-off spaces</li> </ul>	\$25,000 or more

Sources: Oregon DOT Transit in Small Cities, 2013; ODOT Transit Division price agreement; industry standards; and estimates for other recent plans. Costs adjusted for inflation to 2018 \$



## Stop Improvement Locations

Every transit trip involves waiting at the stop for a certain amount of time. Passenger amenities make waiting feel as safe and comfortable as possible, given limited resources. Standards based on ridership levels help YCTA prioritize requests and justify decisions about where to install amenities. General thresholds for high, medium, and lower ridership stops are included for each tier of bus stop, based on the Spring 2017 ridecheck (see Figure 7-8). YCTA already has some seats and shelters available to install once the TDP is adopted and routes and bus stop locations are finalized.



Bus shelter in Willamina

Figure 7-9 Potential Locations for Stop Improvements or Shelters

Location	Route(s)	Improvements	Partners
Tigard	44, 45x	<ul style="list-style-type: none"> <li>Shelter with schedule and system map (adjacent to Transit Center)</li> <li>Improved wayfinding</li> <li>Longer-term, coordinate with TriMet to secure a bay in a new, future Transit Center when the Southwest Corridor MAX line opens.</li> </ul>	<ul style="list-style-type: none"> <li>City of Tigard</li> <li>TriMet</li> </ul>
Hillsboro	33	<ul style="list-style-type: none"> <li>Stop sign with Simme Seat (adjacent to Transit Center); City of Hillsboro is working on intergovernmental agreement</li> <li>Schedule</li> <li>Improved wayfinding; TriMet added YCTA to TC map</li> <li>The City of Hillsboro is working to provide two-way access into Central Station as part of the Regional Enhanced Transit Corridor initiative, using the City-owned parking area where YCTA currently stops. Coordinate with the City of Hillsboro and TriMet to secure a bay in the expanded space available when this change occurs.</li> </ul>	<ul style="list-style-type: none"> <li>City of Hillsboro</li> <li>TriMet</li> </ul>
Salem	11	<ul style="list-style-type: none"> <li>Shelter with system map and schedule at West Salem Transit Center; Cherriots planned to install in Winter/Spring 2018</li> </ul>	<ul style="list-style-type: none"> <li>Cherriots</li> </ul>
Grand Ronde	22	<ul style="list-style-type: none"> <li>System map and schedule in Community Center; existing bench and nearby awnings</li> </ul>	<ul style="list-style-type: none"> <li>Grand Ronde Tribe</li> </ul>
Amity	11	<ul style="list-style-type: none"> <li>Shelters in both directions (current plans to install southbound)</li> </ul>	<ul style="list-style-type: none"> <li>City of Amity</li> </ul>
Dundee	44	<ul style="list-style-type: none"> <li>Have shelter in one direction; needed in other direction</li> </ul>	<ul style="list-style-type: none"> <li>City of Dundee</li> </ul>
Dayton	44	<ul style="list-style-type: none"> <li>Have shelter in one direction; plan to install Simme seat in the southbound direction</li> </ul>	<ul style="list-style-type: none"> <li>City of Dayton</li> </ul>
Lafayette	44	<ul style="list-style-type: none"> <li>Have shelter in one direction; shelter needed in the other direction</li> </ul>	<ul style="list-style-type: none"> <li>City of Lafayette</li> </ul>
Carlton	33	<ul style="list-style-type: none"> <li>Have shelter in one direction; shelter needed in the other direction</li> </ul>	<ul style="list-style-type: none"> <li>City of Carlton</li> </ul>
Yamhill	33	<ul style="list-style-type: none"> <li>Have shelter in one direction; shelter needed in the other direction</li> </ul>	<ul style="list-style-type: none"> <li>City of Yamhill</li> </ul>
Sheridan	22	<ul style="list-style-type: none"> <li>Multiple existing shelters; one is needed eastbound</li> </ul>	<ul style="list-style-type: none"> <li>City of Sheridan</li> </ul>
Willamina	22	<ul style="list-style-type: none"> <li>Have shelter in one direction; shelter needed in the other direction</li> </ul>	<ul style="list-style-type: none"> <li>City of Willamina</li> </ul>
McMinnville	Local/Intercity	<ul style="list-style-type: none"> <li>Marked stops, shelters (multiple locations)</li> </ul>	<ul style="list-style-type: none"> <li>City of McMinnville</li> </ul>
Newberg	Local/44/45x	<ul style="list-style-type: none"> <li>Marked stops, shelters (multiple locations)</li> </ul>	<ul style="list-style-type: none"> <li>City of Newberg</li> </ul>

## 8 FINANCIAL PLAN

This chapter provides funding and investment scenarios to guide YCTA services over the next 10 years and beyond. It describes:

- Transit operating cost assumptions
- Revenue trends and assumptions including federal and state funding programs, Yamhill County funds, local agency partners, and fares
- Potential additional revenue sources
- Financial scenarios for YCTA, including projected expenses based on the Service Plan (Chapter 6) and Capital Plan (Chapter 7)

### TRANSIT OPERATING COST ASSUMPTIONS

YCTA's average cost per service hour of \$55 in 2014 and \$59 in 2018 is assumed to be lower than will be sustainable in the future; for example, YCTA needs to pay a higher, more competitive wage to attract and retain drivers and has minimal administrative staffing that will need to increase in the future (see Service Delivery and Organizational Capacity in Chapter 9). YCTA will be issuing a new RFP for its service contract in 2019, which may have a higher cost than the current contract. In addition, YCTA will need to pay a larger cost of administrative functions provided through Yamhill County, such as legal counsel and human resources. YCTA projects that an average cost of \$70 to \$75 is an appropriate baseline cost; this is below the median of the peer operating cost range.

The TDP financial plan transitions to this cost by 2020. Thereafter, the TDP assumes annual inflation of 2.3% based on the US Bureau of Economic Analysis Consumer Price Index.

Figure 8-1 Transit Operating Cost Assumptions

Service Type	2018	2019	2020	2023	2028
	Existing	Near-Term	Short-Term	Mid-Term	Long-Term
Overall Average	\$59	\$63	\$70	\$78	\$84
Fixed-Route	\$65	\$67	\$75	\$82	\$90
Dial-A-Ride	\$42	\$50	\$58	\$71	\$77
Flex-Route / Shuttle	N/A	\$55	\$56	\$62	\$67



## EXISTING AND POTENTIAL FUNDING SOURCES AND TRENDS

YCTA's funding sources are described in more detail below.

### Formula Funds

YCTA's federal and state funding sources fall into two categories: formula-based or discretionary. Formula funds are allocated from ODOT every two years based on formulas developed by ODOT staff and approved by local stakeholders through the public transportation advisory committee. The formula programs are described below.

- **Oregon Special Transportation Fund (STF).** Formula funding for transportation services to older adults and persons with disabilities. ODOT allocates these funds to YCTA, and YCTA works with local transit providers and the STF Advisory Committee to distribute funds locally. STF funds can be counted as local match for federal funding, since STF is entirely locally generated.
- **FTA Section 5310 Enhanced Mobility for Seniors and People with Disabilities.** Formula funding for capital costs for serving older adults and persons with disabilities. Approximately 70% of the program consists of other federal funds that ODOT transfers into the program. ODOT allocates these funds to YCTA, and YCTA works with local stakeholders to allocate the funds locally. YCTA typically uses the funds for service delivery contracts in addition to traditional capital costs such as vehicles. The local match rate is 20%.
- **FTA Section 5311 Formula Grants for Other than Urbanized Areas.** Formula funding for operations and capital costs for rural transit services. YCTA typically uses these funds for its operating contract. The local match rate is 50% for operations (including contracts with third-party contractors) and 20% for capital.
- **State Transportation Improvement Fund (STIF).** The State Legislature passed a transportation funding package (House Bill 2017) that includes over \$100 million dollars annually for public transportation providers statewide, starting in fiscal year 2019. The funding is from a statewide employee payroll tax and can be used for operations, capital, planning, and other purposes. STIF funds can be used to match federal and other grant funding sources.

### Discretionary Funds

The FTA and ODOT offer discretionary funding programs (grants) on varying schedules. Discretionary transit funding programs typically fund capital investments such as vehicles, equipment, and bus stops. These funds may also support pilot projects, such as alternative fuel vehicles and new service models, and major capital projects (e.g., transit center construction or expansion). Some of these programs are specific to public transportation, while others fund transportation improvements statewide and have more limited project eligibility requirements. For example, the Connect Oregon IV program provided over \$1.1 million in funding for the McMinnville Transit Center in 2013-2014; however, the HB 2017 legislation limited the eligibility of transit project for future Connect Oregon funding solicitations.

- **ODOT Special Transportation Fund (STF) Discretionary.** This program funds transportation services for older adults and persons with disabilities. Solicitations identify specific prioritization criteria. There is no local match rate requirement. In 2017, the STF Discretionary program provided YCTA with \$456,000 in funding for communications and scheduling technology as well as the local match for two vehicles funded through the FTA Section 5339 program.

- **FTA Section 5339 Bus and Bus Facilities.** This program is used to replace, rehabilitate and purchase buses, equipment and bus-related facilities. Vehicle replacements must meet age and mile requirements. The local match rate is 20%.
- **Oregon State Transportation Improvement Program (STIP) –Enhance.** ODOT solicits every two to four years statewide for transportation projects that enhance, expand, or improve the transportation system. The program’s public transportation funding is typically limited to vehicles and equipment supporting services that improve the state transportation system. The local match rate is 20%. ODOT awarded YCTA \$942,000 for buses in the 2015-2018 STIP and \$707,000 for buses in the 2018-2021 STIP.
- **ODOT State Transportation Improvement Fund (STIF) Discretionary.** The STIF program allocates a total of 9% of available funds for two discretionary funding programs. The Discretionary Fund can be used for all types of projects except ongoing operations. The Intercommunity Discretionary Fund is for improving connections between communities and other key destinations, emphasizing statewide transit network connectivity. Eligible projects include capital (vehicles, facilities, equipment and technology), mobility management, planning, research and operations; however, ongoing operations projects are not guaranteed funding in future grant solicitations. The local match is generally 20% of the total cost, but may be reduced to 10% for projects that predominantly serve or provide access to rural communities (50,000 population or less and outside of urban areas).

## Local Funds

YCTA maintains intergovernmental agreements or contracts with local agencies to support public transportation to their areas. These funds are important to YCTA by supplementing local funds with flexible funding that can be used to match federal and state grants. The local funding agreements also direct resources to areas with high transit demand and provide a clear and sustainable service relationship. These contracts include:

- **Confederated Tribes of the Grand Ronde Community:** The city of Grand Ronde is located just outside Yamhill County in Polk County. Grand Ronde contracts with YCTA for about \$56,000 annually to support Route 22 (an increase from \$42,000 in previous years).
- **McMinnville and Newberg:** Yamhill County’s largest cities have provided local funds through intergovernmental agreements to support local fixed route operations in their cities. The City Councils decide annually how much to contribute—approximately \$20,000 each in recent years.

Figure 8-2 provides the estimated annual local contribution for Yamhill County and cities. The table compares these contributions to population and service hours attributed to each jurisdiction.

- Yamhill County provides 14% of total funding, which is \$2.68 annually per total person in the County and \$8.18 per service hour.
- McMinnville and Newberg contribute 1% of total funding, which is less than \$1 per person annually and approximately \$2 per local service hour in each city.
- Grand Ronde contributes 3% of total funding, which is \$33 per person and \$14 per service hour.

By comparison, the sidebar below (see Figure 8-3) shows that local jurisdictions in Central Oregon contribute between \$3 and \$13 per person annually.

Figure 8-2 Existing Local Transit Service Contribution per Person and Service Hour

Jurisdiction	Existing Contribution (2018 Budget)	% of Total <sup>1</sup>	Population (2017) <sup>2</sup>	Existing Annual Contribution per Person	Annual Service Hours <sup>3</sup>	Existing Annual Contribution per Service Hour
Yamhill County	\$284,758	14%	106,300	\$2.68	16,865	\$8.18
Amity			1,640		2,015	
Carlton			2,205		2,600	
Dayton			2,670		8,316	
Dundee			3,225		8,316	
Lafayette			4,095		8,316	
McMinnville	\$20,000	1%	33,665	\$0.59	10,400	\$1.92
Newberg	\$20,000	1%	23,480	\$0.85	7,540	\$2.65
Sheridan			6,185		3,935	
Willamina (Yamhill/Polk)			2,110		3,935	
Yamhill			1,075		2,600	
Unincorporated			26,820			
Grand Ronde	\$56,000	3%	1,661	\$33.71	3,935	\$14.23
Total	\$380,000	19%				

Notes/Sources: [1] Based on YCTA 2018 operating budget of approximately \$2,050,000. [2] Portland State University, Population Research Center (PRC). Grand Ronde population is for the Census Designated Place, 2010 US Census. [3] Based on the intercity route serving each small city, local fixed-route and Dial-A-Ride service hours for McMinnville and Newberg, and the total intercity service hours for Yamhill County.

### Peer Comparison: Cascades East Transit Local Funding

The table below shows that local jurisdictions contribute 28% of operating costs for Cascades East Transit, which serves Crook, Deschutes, and Jefferson Counties, including the cities of Bend, Culver, La Pine, Madras, Metolius, Prineville, and Redmond, along with the Confederated Tribes of Warm Springs. Local contributions range from \$3 to \$13 per person.

Figure 8-3 Peer Comparison: Cascades East Transit Local Transit Service Contribution per Person

Jurisdiction	Contribution	Population	Contribution / Person	% of Total
Deschutes County	\$515,313	170,740	\$3.02	6%
Jefferson County	\$103,000	22,445	\$4.59	1%
Crook County	\$203,122	21,085	\$9.63	2%
City of Bend	\$1,082,040	81,310	\$13.31	13%
Other Local Gov't	\$414,479	48,830	\$8.49	5%
<b>Total Local Gov't</b>	<b>\$2,317,954</b>	<b>214,270</b>	<b>\$10.82</b>	<b>28%</b>
Fares	\$653,337			8%
Social Services	\$58,392			1%
<b>Total CET</b>	<b>\$8,415,938</b>			

Source: COIC 2014-2015 Proposed Budget, <https://newcoic.files.wordpress.com/2012/08/14-15-updated-binder.pdf>

## Funding Trend Assumptions

YCTA can expect to receive formula funding revenues as long as it maintains compliance with FTA and ODOT rules, and meets planning and management requirements. YCTA will also continue to have access to capital funding programs that can offer large if infrequent infusion of funds for vehicles and equipment (such as the FTA 5339 Buses and Bus Facilities Grants Program and the discretionary component of the STIF program), although financing large capital facilities may be a challenge if Connect Oregon continues to limit eligibility for public transportation projects.

The TDP assumes that revenue and operating expense trends will continue and that there will be no major changes in local, state, and federal transit grant programs. Starting with the fiscal year 2018 budget, revenues and expenses were projected using the assumptions described below.

- **The State Transportation Improvement Fund (STIF) provides approximately \$500,000 in FY 2019, \$1.12 million annually starting in FY 2020, and \$1.27 million in FY 2021.** STIF funds are projected to increase by 2.3% annually. The STIF funding allocation is lower than a preliminary projection used in early TDP work—\$1.7 million in fiscal year 2021. Actual STIF revenues may be higher or lower than projected. While STIF resources are available to other public transportation providers in Yamhill County, the TDP assumes that YCTA will receive nearly all available funds.
- **Expenses, federal revenue, and state revenue increase at a 2.3% annual inflation rate.** The inflation rate is based on the US Bureau of Labor Statistics Consumer Price Index data between years 1996 and 2016, and is consistent with generally low inflation rates in recent years.
- **Fare revenues increase based on a fare increase of 25 cents in early years of the plan (after initial improvements are implemented) followed by an average fare increase of 5 cents per year.** The fare increase could be for intercity (particularly out-of-county services, which are lower than many other providers, as described in Chapter 9. YCTA can also introduce fare programs to mitigate the increase on low-income persons, youth, and seniors, etc. Increasing fare revenues assume ridership increases at half the rate of service hours. Fare revenue is assumed at 90% of the projection. These trends should maintain YCTA's farebox recovery ratio in the 10% to 15% range
- **Local service agreement revenues grow rapidly with increased coordination.** The County expects to grow operations contracts and agreements with local institutional partners, doubling today's revenues by the year 2025 (or a 13% annual growth rate). The growth rate is then assumed to be 5%.
- **Yamhill County General Fund revenues increase with inflation, then slow over the long term.** YCTA expects General Fund revenues to increase to \$250,000 by the year 2020 (13%), increase with inflation at 2.3% annually until 2025, then taper to 1.0% annual growth over the following 10 years.

## Potential for Additional Revenue Sources

As described in Chapter 6, to continue to expand services, by the mid-term time frame YCTA may need to generate additional local revenues in addition to the recently enacted STIF funding source. Appendix E provides a detailed summary of existing and potential funding sources that could be used to fund public transportation service and capital needs, including federal programs, state funds, local option taxes, and local partnerships. These sources are used by peer agencies in Oregon and around the U.S. Where possible, the summary table includes an order-of-magnitude estimate of revenues that could be generated from various local funding options, as well as an assessment of feasibility and applicability for YCTA. Figure 8-4 below identifies several examples. Respondents to a community survey conducted at outset of

the TDP identified a product-specific tax, such as on lodging, as their preference for a potential transit funding source among a range of potential options.

Figure 8-4 Examples of Potential Revenue Sources

Funding Sources	Example Level	High-Level Revenue Estimate
Product-specific tax (lodging, etc.)	9% (Ashland) Existing state lodging tax of 1%	Not estimated
Motor vehicle registration fee	Per \$8 annual	\$400,000
Payroll tax	1/10 of a percent	\$400,000
Utility fee	\$1-\$1.50 per 34,000 households	\$400-600k
Local option property tax	5 cents per \$1,000	\$400,000 (subject to compression)
Gasoline tax	1 cent	\$400,000 (declining based on fuel efficiency and alternative-fuel vehicles)

### Corvallis Transit Operation (Utility) Fee

The Transit Operation Fee (TOF) is a monthly charge to City of Corvallis utility customers to generate revenue for the exclusive purpose of funding Corvallis Transit System (CTS) operations. This revenue source was established in 2010 to replace property tax funds that previously supported transit operations and transit fare revenues.

Single-family residential customers are charged \$2.75 per month and multi-family residential customers are charged \$1.90 per housing unit per month. Fees for commercial and industrial customers are based on the type of business. The fee is indexed to gasoline prices. The City Council can decide to increase the fee to fund new or expanded public transportation services.

The fee has been a stable source for about one-third of the CTS budget with annual revenue of approximately \$1.2 million in FY 2013–14 and FY 2014–15. This approach provides significantly more revenue than the property tax revenue, which previously provided about \$400,000 in annual revenues.

Source: City of Corvallis. Transportation Operations Fee. January 2016. <https://tinyurl.com/y6wlvtn>

Appendix E summarizes potential funding options that could be used to support public transportation in Yamhill County. There is additional discussion of potential funding options in TDP Volume II, Section 3: TM #3.



## RECOMMENDED FINANCIAL SCENARIOS

This section provides two TDP funding scenarios:

- **Current Trends with STIF.** This scenario identifies the enhancements that can be implemented in the Near-Term, Short-Term, and Mid-Term, constrained to anticipated funding including new revenues from the STIF.
- **Additional Funding.** This scenario identifies additional enhancements, currently identified in the Long-Term time frame, that could be implemented with additional local funding.

Key assumptions include:

- **Existing.** Based on an average operating cost of \$59 per service hour.
- **Near-Term to Short-Term.** Assumes a phased increase to an average cost of \$70 per service hour by 2020. In the near-time, with only a partial STIF revenue allocation, a relatively large share of new funding from the STIF is assumed to go towards stop improvements (signs/markings) and new buses, leaving a shortfall in the near-term time period.
- **Mid-Term.** There is small shortfall; additional projected STIF funding would not cover all programmed improvements.
- **Long-Term.** The long-term time frame is not fiscally-constrained, but is intended to provide a flexible service plan that YCTA can adapt based on actual conditions. Improvements in this category could be implemented sooner if additional funding sources can be identified.
- **Long-Term (Vision).** Includes additional service options that YCTA could implement based on future needs and conditions.

## Current Trends with STIF Funding Scenario

### Operating Cost Summary by Time Frame

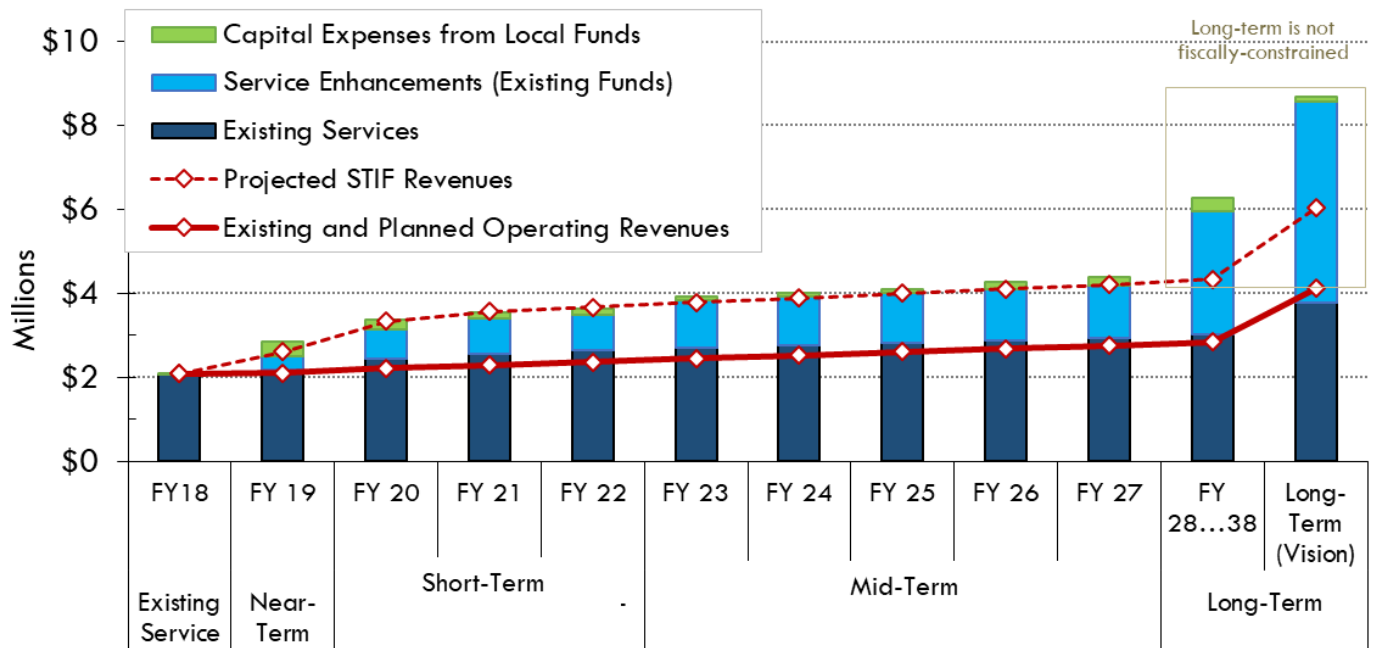
Figure 8-5 summarizes plan operating costs by time period. Some of YCTA's available local operating funds are programmed for capital improvements identified in Chapter 7, such as local match for buses, and are subtracted from the amount available for operations. Although there are relatively small deficits in the near-term, short-term, and long-term, STIF revenues in excess of projections or additional local funds may be able to support the identified level of enhancements.

Figure 8-5 Incremental Plan Operating Costs, Based on First Year of Each Time Period

Time Period	Fiscal Years	Annual Operating Revenues	Annual Operating Costs of Existing Services	New Annual Operating Costs in Time Period	Cumulative New Annual Operating Costs	YCTA Funds used for Capital Elements	Total Annual Operating Cost	Operating Funds Remaining
Existing	2018	\$2,083,000	\$2,050,000	\$0	\$0	\$0	\$2,050,000	-\$3,000
Near-Term	2018-2019	\$2,604,000	\$2,167,000	\$381,000	\$381,000	\$352,000	\$2,900,000	-\$295,000
Short-Term	2019-2022	\$3,341,000	\$2,451,000	\$317,000	\$698,000	\$221,000	\$3,370,000	-\$28,000
Mid-Term	2023-2027	\$3,778,000	\$2,690,000	\$438,000	\$1,136,000	\$86,000	\$3,912,000	-\$134,000
Long-Term	2028-2038	\$4,333,000	\$3,013,000	\$1,805,000	\$2,941,000	\$314,000	\$6,268,000	-\$1,934,000
Long-Term (Vision)	N/A	\$6,025,000	\$3,783,000	\$1,795,000	\$4,736,000	\$126,000	\$8,645,000	-\$2,619,000

Figure 8-6 illustrates operating costs in each plan year for existing services and enhancements, relative to revenues from existing sources and project revenues from the STIF.

Figure 8-6 Projected Annual Operating Costs, Existing Funding Sources



For comparison, Figure 8-7 and Figure 8-8 show that service hours and operating spending per capita over the life of the plan are within the ranges of YCTA's peer agencies (identified in Chapter 3). Service hours per capita increase significantly, though they remain below the peer median. YCTA's operating spending would be lower than the peer median until the long-term time horizon—including all of the Long-Term (Vision) enhancements.

Figure 8-7 Service Hours per Capita (adjusted for population growth)

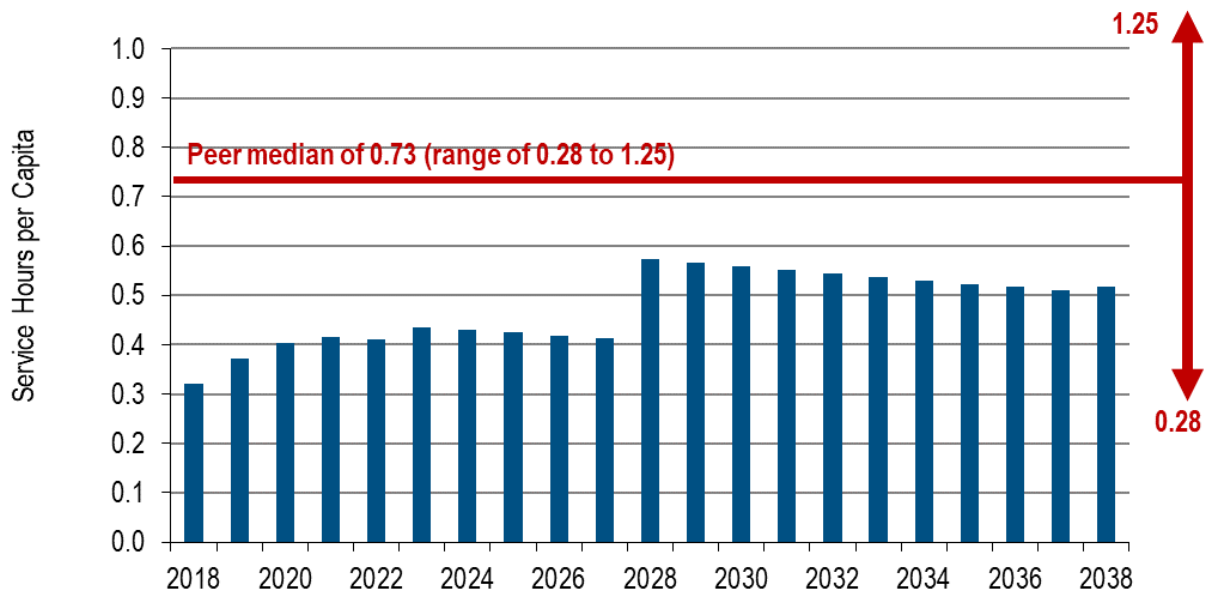
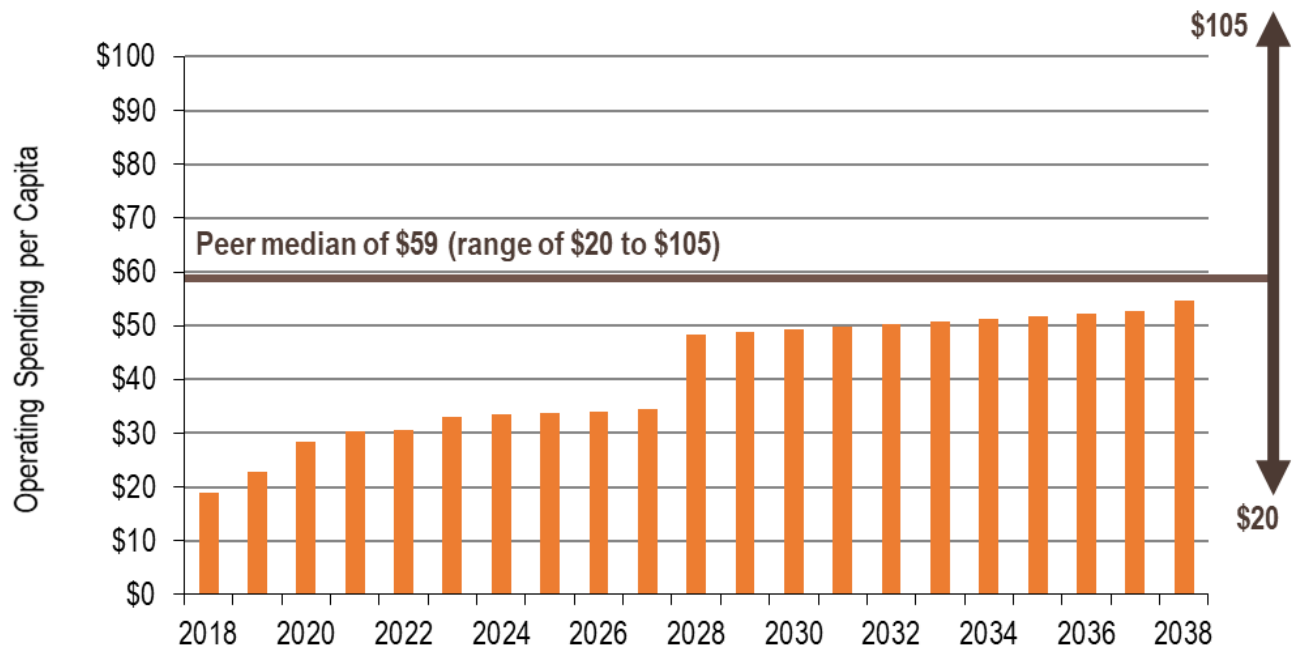


Figure 8-8 Operating Cost per Capita (adjusted for population growth)



## Additional Funding Scenario

A sub-group of the YCTA Advisory Committee has been discussing options for additional local funding.

If YCTA is able to identify additional local funds, or if the STIF generates more revenue than is projected, YCTA could implement additional long-term enhancements sooner. The dashed orange line in Figure 8-10 illustrates a scenario where YCTA has additional operating revenues to fund particular enhancements. The orange bars represent the cost of implementing these projects in the short-term or mid-term (they are currently all assumed in the long-term). Figure 8-9 describes a conceptual scenario where local jurisdictions agree to contribute to YCTA services on a per-capita basis (or other formula, such as number of service hours or assessed property values). Since local jurisdictions may have limited general funds to contribute to transit, this may require identifying a new local revenue source. Based on initial discussion of the YCTA Advisory Committee Funding Sub-Committee, such a source would ideally be linked to transit or transportation and could be pursued in the later short-term to early mid-term time frame, once YCTA has implemented short-term enhancements that elevate the image of transit and increase awareness of transit in the county.

See Figure 8-2 and Figure 8-3 earlier in this chapter for existing local contributions in Yamhill County, and a comparison of local contributions elsewhere.

Figure 8-9 Conceptual Revenue Scenario by Jurisdiction (for Illustrative Purposes)

Service Area Type	Annual Local Funding per Person (Conceptual for Illustrative Purposes)	Notes
Large City (e.g., McMinnville)	\$12	
Medium City (e.g., Newberg)	\$8	Based on ratio of medium to large city population
Small City	\$5	
County	\$4	

Figure 8-10 Projected Annual Operating Costs, with Potential Additional Funding Sources

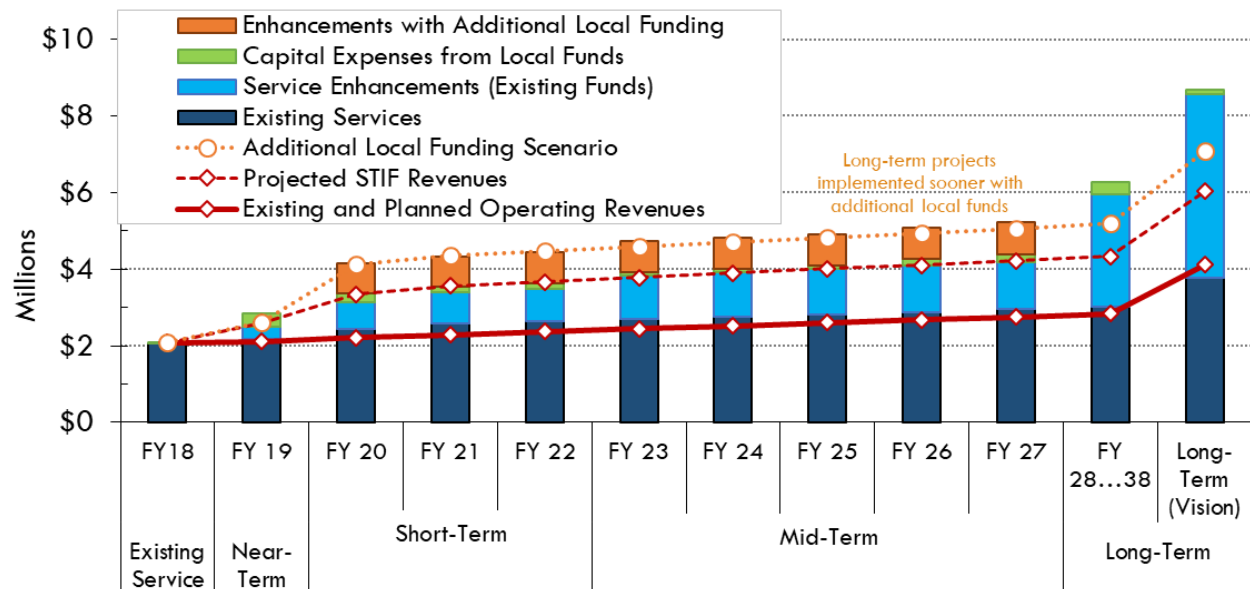
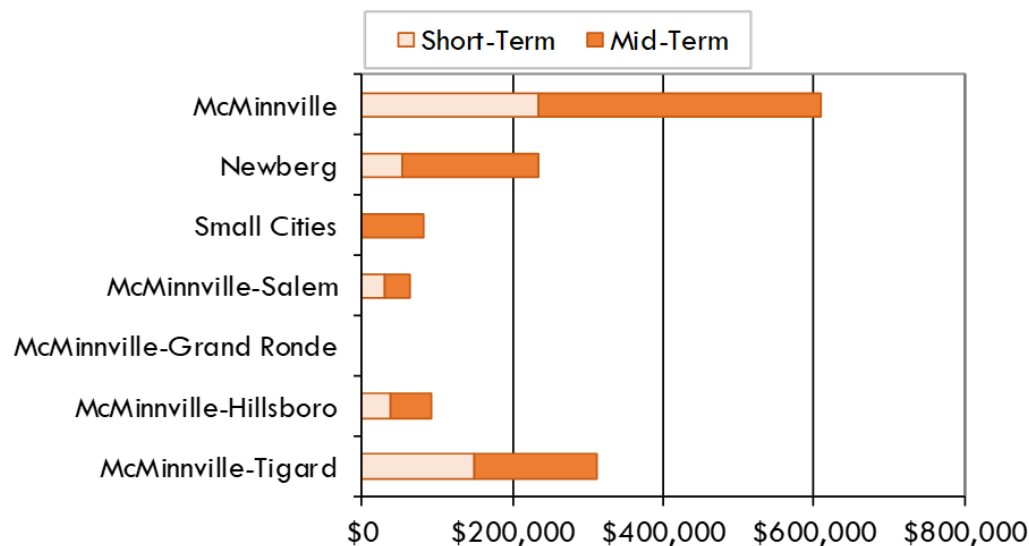


Figure 8-11 provides a breakdown of the potential enhancement costs by service area.

Figure 8-11 Potential Funding Scenario Costs by Service Area



## 9 SUPPORTING PROGRAMS, TECHNOLOGY, AND PARTNERSHIPS

Transit-supportive programs leverage investments in YCTA transit service and capital facilities. This chapter addresses improvements that can be made to enhance existing services through programs, advanced public transportation technology, and partnerships.

Figure 9-1 summarizes TDP recommendations for YCTA programmatic actions; the following sections discuss these actions in more detail.

Figure 9-1 Summary of YCTA Programmatic Actions

Category	Action	Cost	Partners	Time Frame
System Access (Pedestrian and Bicycle)	Develop a Safe Routes to Transit program to prioritize and fund (with partners) safe and comfortable access routes to transit stops.	Staff Time <sup>1</sup> and variable capital costs	Local Jurisdictions	Short-term and ongoing
System Access (Park-and-Ride)	Identify cost-effective park-and-ride locations through partnerships with churches and other institutions.	Staff Time <sup>1</sup>	Churches and other institutions	Short-term and ongoing
TDM	Coordinate with Cherriots to promote Emergency Ride Home, Ride Sharing, and Vanpool Programs.	Staff Time <sup>1</sup>	Cherriots	Near-term and ongoing
TDM	Coordinate with major employers to provide transit and supporting program information and understand employee needs.	Staff Time <sup>1</sup>	Cherriots, Spirit Mountain Casino, agricultural and other employers	Near-term and ongoing
TDM, Fare Policies and Programs	Develop employer and other transit group pass programs.	Staff Time <sup>1</sup> , Electronic Fare System	-	Short-term and ongoing
TDM	Provide staff time to support TDM and other programs; Cherriots has some budgetary funds that be used for a shared, part-time resource.	Staff Time <sup>1</sup>	Cherriots	Short-term and ongoing
Fare Policies and Programs	Explore electronic fare payment technology, to enable group and low-income/honored citizen passes, integration with adjacent agencies, and increase customer convenience. Mobile payment could be an initial option with minimal upfront investment, with a more full-featured system as a later phase.	Capital costs ranging from none to \$50,000 to \$75,000	-	Near-term or short-term
Customer Information	Update route brochures and other printed and online information, including in Spanish.	Staff Time <sup>1</sup> Graphic Design	-	Immediate and ongoing



Category	Action	Cost	Partners	Time Frame
Customer Information	Identify key locations to make printed transit information available and periodically refresh available materials. Various suggestions provided in TDP focus group notes, including Housing Office, Colleges, Libraries, etc.	Staff Time <sup>1</sup> Printing Costs	Human and Social Service Providers and other institutions	Near-term and ongoing
Education, Promotion, and Travel Training	Develop programs to make information on transit and other transportation options more widely available, and facilitate better understanding of how to use the transit system. Suggestions from TDP focus groups are included in TDP Volume II, Section 2: TM #2.	Staff Time <sup>1</sup>	Human and Social Service Providers, Chambers of Commerce, and other institutions	Near-term and ongoing
Advanced Public Transportation Technology	Implement technology to support real-time information and system alerts	Capital costs to be determined	ODOT	Near-term
Regional Transit Coordination	Coordinate with transit providers and/or local jurisdictions to improve amenities, wayfinding, and stop facilities (see Figure 9-9 for specific opportunities)	Cost-neutral to low-cost	TriMet, Cherriots, TCTD, SMART, RideConnection, and local jurisdictions	Near-term and ongoing
Regional Transit Coordination	Explore feasibility and potential benefits of joining the <a href="#">Northwest Connector</a> (nwconnector) alliance of transit agencies.	Staff Time <sup>1</sup> , annual NWOTA contribution (TBD)	NW Oregon Transit Alliance (NWOTA), ODOT	Later short-term to mid-term and ongoing Feasibility can be explored in near-term or short-term
Service Delivery and Organizational Capacity	Increase YCTA staffing to improve contract oversight and ability to perform other transit agency functions (including above actions)	Staff Time <sup>1</sup> (from existing 2.5 FTE to 6.0 FTE)	Yamhill County	Near-term and ongoing

Notes: [1] Included in overall recommended increase in YCTA staff (see Service Delivery and Organizational Capacity)

## SYSTEM ACCESS

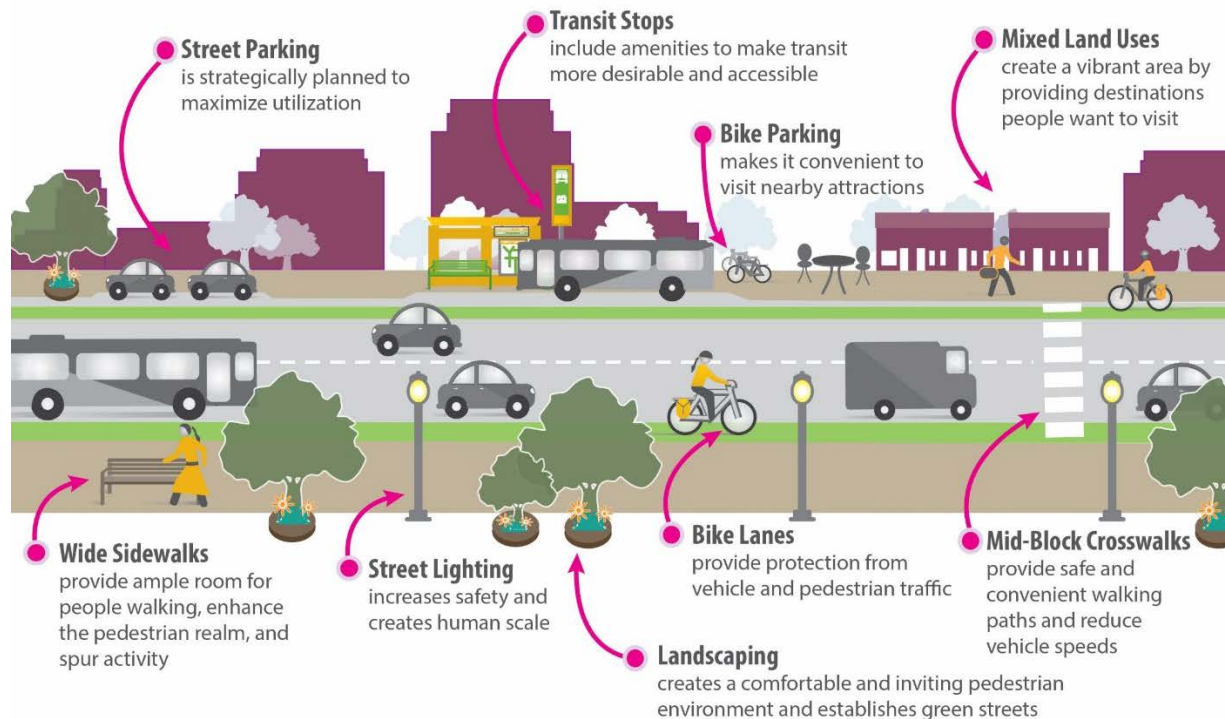
**Access to transit** refers to the various ways transit riders get to/from a transit stop and their trip origin and destination. This section identifies programmatic actions for YCTA to enhance the ability for potential riders to access its service, in collaboration with local jurisdictions and other partners. Appendix C (Bus Stop Design Guidelines) provides additional guidance and resources.

**Safe and accessible pedestrian facilities** allow people to access transit stops and key destinations—every transit rider is a pedestrian at some point in their trip. The pedestrian network includes sidewalks that are sufficiently wide and well-lit, with curb ramps that provide a transition between sidewalks and the street; well-marked, convenient, and adequately spaced street crossings; and wayfinding that helps direct passengers to transit and destinations. Street trees, landscaping, and a mix of uses create comfortable, attractive streets where people want to walk.

**Designing for Disability** (also known as inclusive design) refers to designing streets and transit facilities for use by all people regardless of ability. This means ensuring that sidewalks are not impeded by bus stops, utility poles, or other elements; reducing driveway cross-slopes; providing tactile treatments on curb ramps, stop platforms, and other conflict points; and providing information in audio, visual, and tactile formats, considering cultural and language differences as well as people with restricted mobility, visual, and/or audible ability (e.g., signage, audible stop announcements, real-time information, etc.).

**Safe and convenient bicycle access routes** to transit stops and both short-term and secure, long-term **bicycle parking** expand the distance people can travel to access transit.

Figure 9-2 Best Practices for Transit-Supportive Street Design



Source: Nelson\Nygaard

**Park-and-ride facilities** provide all-day parking for transit riders who need to travel by car for a portion of their trip. The TDP does not identify specific locations, but recommends incorporating context-appropriate parking into new YCTA transit center facilities (see Chapter 7) and identifying park-and-ride locations through partnerships with churches and other institutions whose parking is not fully utilized during times of peak transit demand.

## TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is a general term for strategies that increase overall transportation system efficiency by encouraging people to shift from single-occupant vehicle (SOV) trips to non-SOV modes, or by shifting auto trips out of peak periods. These strategies are often very cost-effective.

**Emergency ride home, ride sharing (carpool), and vanpool programs** are available to Yamhill County employees and/or residents through the Cherriots' [Trip Choice](#) program:

- The **Emergency Ride Home Program** is available to all employees who live in Yamhill County and use any option other than driving alone to work (e.g., carpool, vanpool, transit). The program provides participants with a voucher for a free ride home in the event of an emergency.
- **Carpools and vanpools** serving destinations not directly connected by YCTA service can be facilitated through [Drive Less Connect](#), Oregon's online ride-matching tool. [Valley Vanpool](#) lists existing vanpools serving Yamhill County, provided by Enterprise. Current vanpools serve Sheridan (Federal Correctional Institution) from Salem and Sherwood. Cherriots can subsidize 50% of the vanpool lease cost for vanpools serving the Salem area, although McMinnville-Salem is not viable (distance is too short).

**Coordinate schedules with major employers.** Ensuring that large organizations have access to information about YCTA service and supporting programs can help them best meet their employee needs and increase ridership. Cherriots' [Employer Services](#) program works with Yamhill County employers. As noted in Figure 9-1, Cherriots may be able to provide partial funding for a staff resource.

## FARE POLICIES AND PROGRAMS

This section provides recommendations for YCTA fare policies. The existing fare structure is covered in Chapter 3, and the sidebar below (see Figure 9-4) provides a comparison of YCTA fares to several peer agencies. Key findings include:

- YCTA local fares (\$1.25) are in the middle of the peer range. Some providers have lower fares (\$1.00) while others are slightly higher (\$1.50 to \$1.60). Based on TDP outreach, YCTA fares are generally perceived as affordable.
- YCTA currently does not offer any discounted fares for seniors, person with disabilities, veterans, or youth. Based on TDP outreach, fares can be expensive for families (due to lack of a youth fare) and there was general support for making fares more affordable for families, veterans, seniors, and low-income people.
- Other providers charge more than YCTA for longer-distance trips, particularly outside of their service area.

TDP fare policy and program recommendations include:

**Sell fares in-person at additional locations.** YCTA currently sells fares on buses, via mail, and in-person at two locations in McMinnville. There is no location to purchase passes in Newberg; YCTA and the City of Newberg could explore future opportunities, such as with a potential future transit center in Newberg or in partnership with a local retailer(s). An electronic fare system (see below) could provide additional flexibility for purchasing passes and other fares outside of McMinnville.

**Raise fares in the future.** Once YCTA has installed signage at all bus stops, upgraded its vehicle fleet, and addressed key operational and on-time performance issues through changes to route design, service levels, and schedules (by the end of the near-term or early short-term time frame), it could consider increasing the adult one-way fare by up to 25 cents or increasing fares on its longer-distance, intercity

services (particularly for trips outside of Yamhill County). YCTA could also consider increasing its average fares by an average of 5 cents per year going forward. This will allow it to keep up with increasing costs (due to inflation) and maintain the share of costs that is covered through fares.

**Implement reduced fares and passes for honored citizens (seniors and veterans), students/youth, and low-income persons.** Offering discounted fares will mitigate the impact of increasing the regular fare. Providing discounted fares could improve access to transit for these groups of people, who are more likely to depend on transit for their mobility needs. Improving affordability for low-income persons and students is also a STIF goal.

**Develop fare pass programs.** Fare pass programs can improve access to transit by making it more convenient and affordable. Programs are typically available to employees, students, and people with low incomes. Major employers, institutions, and social/human service providers may be interested in group pass programs. George Fox University and Linfield College may be interested in a student pass program. A fare pass program for low-income individuals could improve access to transit for the 16% of Yamhill County residents that have an annual income below the federal poverty level (FPL) of \$12,060.<sup>19,20</sup> An electronic fare system may make it easier for YCTA to implement and administer pass programs.

**Explore fare reciprocity between connecting providers.** Fare reciprocity between transit agencies can simplify rider connections between transit systems and improve the user experience. Some of the transit agencies that are part of the Northwest Oregon Transit Alliance (NWOTA) offer fare reciprocity. Sunset Empire Transit District (SETD) and Columbia County Rider offer fare reciprocity where their services connect. SETD and Tillamook County Transportation District (TCTD) honor each other's monthly passes. YCTA could explore fare reciprocity agreements with other connecting agencies, such as Cherriots. Electronic fare systems may make these types of arrangements more feasible.

**Explore electronic fare media and mobile ticketing.** Electronic fare media and mobile ticketing provide transit riders with more convenient and flexible options to pay for their ride while on the go, and also enable easier administration of fare pass programs, discounted fares, and fare reciprocity agreements, and potentially reduce YCTA costs for processing cash fares. Electronic fare media options can be categorized into RFID Smart Cards and Mobile Ticketing options.

TriMet implemented the Hop Fastpass electronic fare media system in 2017, which includes physical card readers at transit stations and on vehicles as well as mobile ticketing options. ODOT studied the cost of expanding the Hop Fastpass system to smaller providers; the study estimated extremely high capital and ongoing operating costs that would be prohibitive for small to medium-sized agencies (see Figure 9-3). ODOT also evaluated a similar alternative solution called Touchpass (Delerrok). A preliminary cost estimate for the TDP indicates implementation costs could range from \$50,000 to \$75,000 (high-end assuming one-time system integration costs, which may or may not be required) with ongoing costs of \$16,000 to \$23,000. On an annualized basis, operating and capital costs range from \$25,000 to \$34,000 per year (average of 11 cents per passenger including the high-end of the capital cost estimate—between 6 to 8% of the average fare).

A mobile ticketing option (no physical card) would provide similar capabilities but would require customers to have a mobile phone; based on an estimate for one vendor (Hopthru), there are no upfront costs. Annual transaction costs would range from approximately \$17,000 to \$29,000 over the first five

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<sup>19</sup> ACS 2011-2015 estimate. Table B17021. Percentage of the population for whom poverty status is determined, which excludes institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old.

<sup>20</sup> The United States Department of Health and Human Services (HHS) issues an income measure known as the Federal Poverty Level (FPL) each year; government agencies use the FPL to assess eligibility for a variety of programs and benefits. <https://www.healthcare.gov/glossary/federal-poverty-level-fpl/>

years (average cost of 15 to 18 cents per transaction assuming adoption by 40 to 50% of passengers—between 12 to 13% of the average fare). Figure 9-3 provides a summary of some electronic fare media options that are used in the Pacific Northwest, including a preliminary cost analysis of smart card/mobile payment system costs (e.g., Delerrok Touchpass) and mobile ticketing costs (e.g., Hopthru). Additional details are provided in Appendix F.

A mobile payment system could be an initial option with minimal upfront investment and risk for YCTA, with a more full-featured system as a later phase.

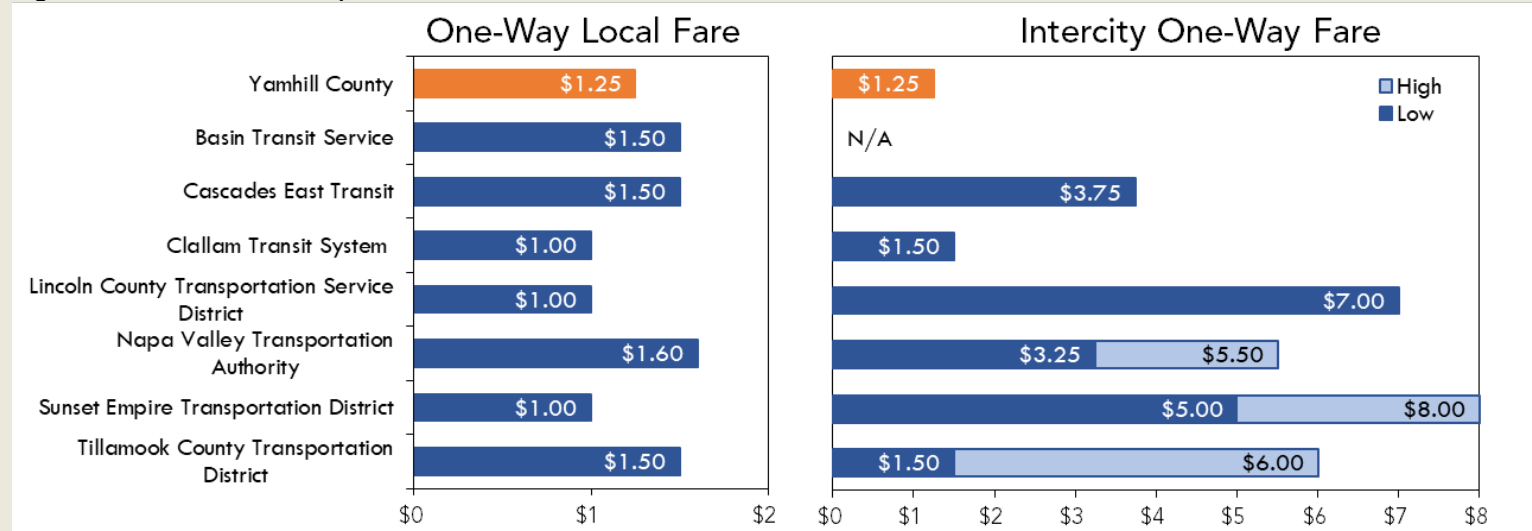
Figure 9-3 Electronic Fare Media Options

Format	Name	Currently Used By	Preliminary Cost Estimates for YCTA <sup>1</sup>	Other Potential Vendors
Physical card, mobile application, or pre-printed one-time use paper tokens	<a href="#">Hop Fastpass</a>	<ul style="list-style-type: none"> <li>TriMet (Portland, OR)</li> <li>Portland Streetcar (Portland, OR)</li> <li>C-Tran (Vancouver, WA and Portland, OR)</li> </ul>	<ul style="list-style-type: none"> <li><b>Implementation:</b> \$450,000 to \$660,000 <sup>1</sup></li> <li><b>Annual operating costs:</b> Over \$100,000 <sup>1</sup></li> </ul>	N/A
	<a href="#">Touchpass (Delerrok)</a>	<ul style="list-style-type: none"> <li>Rouge Valley Transit District (Medford, OR)</li> <li>Cascades East Transit (Bend, OR)</li> </ul>	<ul style="list-style-type: none"> <li><b>Implementation:</b> \$50,000 to \$75,000 (high-end includes a \$25,000 contingency for one-time integration costs, if required) <sup>2,3</sup></li> <li><b>Annual operating costs:</b> \$16,000 - \$23,000 <sup>2,3</sup></li> <li><b>Annualized operating and capital cost:</b> \$25,000 - \$34,000 <sup>2</sup></li> </ul>	-
Mobile application	<a href="#">Hopthru</a>	<ul style="list-style-type: none"> <li>CAT (Hood River, OR)</li> <li>Pierce Transit (Tacoma, WA)</li> <li>Seattle Monorail (Seattle, WA)</li> <li>Sonoma County Transit (Sonoma, CA)</li> <li>Vine Transit (Napa, CA)</li> </ul>	<ul style="list-style-type: none"> <li><b>Implementation:</b> None</li> <li><b>Annual transaction costs:</b> \$17,000 – \$32,000 (years 5) <sup>4</sup></li> </ul>	Moovel Masabi

[1] Cost estimates for Hop Fastpass provided by: ODOT and CH2M, “eFare – Hop Program, ODOT Regions 1 and 2 Gap Analysis – Hop Fastpass Feasibility”, August 31, 2017. [2] TDP analysis in consultation with Delerrok. Annualized capital cost-estimate assumed a five-year equipment lifetime based on the warranty period. [3] The ODOT/CH2M analysis (see note #1) identified Touchpass implementation costs of \$270,000 to \$760,000 and annual operating costs: \$36,000 to \$42,000. Based on discussions with Delerrok, the TDP analysis is a more appropriate preliminary estimate for YCTA. [4] TDP analysis, in consultation with Hopthru.

## Peer Comparison: Fares

Figure 9-4 Peer Fare Comparison



Agency	Local Fixed-Route			Discounted Fare		Intercity Service			ADA / Dial-A-Ride	
	Single Ride	Day Pass	Monthly	Single Ride	Monthly	Single Ride	Day Pass	Monthly	Single Ride	Monthly
Yamhill County (YCTA) <sup>1</sup>	\$1.25	\$2.50	\$35	-	-	\$1.25	\$2.50	\$35.00	\$1.75	\$40
Basin Transit Service <sup>2</sup>	\$1.50	\$3.00	\$54	\$0.75	\$27	-	-	-	\$3.00	-
Cascades East Transit (CET) <sup>3</sup>	\$1.50	\$2.50	\$30	\$0.75	\$15	\$3.75	\$6.25	\$100	\$2.50	-
Clallam Transit System <sup>4</sup>	\$1.00	\$3.00	\$36	\$0.50	\$18	\$1.50	\$3.00	\$54.00	\$2.00	-
Lincoln County Transp. Service District <sup>5</sup>	\$1.00	-	-	-	-	\$7.00	-	-	\$1.00	-
Napa Valley Transp. Authority <sup>6</sup>	\$1.60	\$6.50	\$53.00	\$0.80	\$14	\$3.25 - \$5.50	\$6.50	\$65 - \$120	\$3.20 - \$6.40	-
Sunset Empire Transp. District (SETD) <sup>7</sup>	\$1.00	\$3.00	\$30	\$1.00	\$20	\$5.00 - \$8.00	-	-	\$2.00	-
Tillamook County Transp. District (TCTD) <sup>8</sup>	\$1.50	\$1.50	\$40	-	\$30	\$1.50 - \$6.00	-	-	\$3.00	-

Notes: [1] YCTA, see Chapter 3. [2] Basin Transit, <http://www.basintransit.com/routesrates.shtml>. [3] CET, <http://cascadeseasttransit.com/fares>. Multi-zone system for intercity fares. [4] Clallam Transit, <http://www.clallamtransit.com/Fares-Passes>. \$3.75 per mile for Dial-A-Ride trips beyond a ¾-mile distance from fixed-route service. [5] Lincoln County, \$1 per zone for intercity routes, with 9 zones. <http://www.co.lincoln.or.us/transit/page/fare-schedule>. [6] Napa Valley, <http://www.ridethevine.com/fares-passes>. [7] SETD, <http://www.nworegontransit.org/wp-content/uploads/2018/06/Fare-Policy-Outreach.pdf>. SETD revised fares on 7/1/2018, lowering local day passes from \$5.00 to \$3.00 and monthly passes from \$45 to \$30. General public Dial-A-Ride one-way fare is \$8.00 for 0-10 miles and \$12.00 for 11-20 miles. [8] TCTD, <https://www.nworegontransit.org/passes-tctd/>. TCTD charges \$15 for a one-way trip to Portland, and \$20 for a round trip.



## CUSTOMER INFORMATION, MARKETING, AND BRANDING

Transit information makes using the transit system more intuitive, particularly for infrequent riders. The following strategies will help existing riders and bus operators navigate the system, and make transit more accessible to a broader audience. YCTA has enhanced its branding and information in 2018 using ODOT grant funds for information technology, communications and marketing services; as of August 2018, these enhancements are in the process of being rolled out.

### System Branding

YCTA bus stop signs, vehicles, and customer information should all have a consistent YCTA logo and branding that builds an awareness of local and regional transit service. YCTA developed a new logo in 2018 (right) along with a bus branding scheme. Action items include:

- Mark or sign all bus stops (near-term action). Develop YCTA stickers (preferably service-specific) for placement on TriMet bus stops (see Appendix F for specifications and coordination information).
- Include the NW Connector logo at all stops shared with NW Connector routes (e.g., Spirit Mountain Casino and Grand Ronde Community Center).
- Wrap all buses with the new YCTA branding (see Figure 9-5 for the service-specific branding developed by YCTA).

Insert New YCTA  
Logo

Figure 9-5 YCTA Vehicle Branding (Draft)



## Website

An increasing number of people obtain transit information online—including over 50% of YCTA riders (see TDP Volume II, Section 2: TM #2, Chapter 4, Figure 4-8). TDP outreach, including to members of the Latino community, indicated that many people who do not have computers are able to access information via a smartphone. YCTA has been enhancing its website, which already includes links to route and system maps, route schedule brochures, announcements, rider alerts, and information on Dial-A-Ride and ADA Paratransit service. The following enhancements are recommended:

- Integrate real-time bus arrival and status information into the website (see Technology section below).
- Update online mapping to ensure that online trip planners provide accurate information.
- The website includes a translation capability, but other materials need to be translated into Spanish (or other common languages as identified in the YCTA's outreach plans).

## System & Route Maps

YCTA has a system map on its website and plans to post system maps at major transit stops and shelters. The current route map and schedule brochures are color-coded and include some major activity centers, but need to be updated. The TDP recommends that YCTA update and enhance its route brochures including:

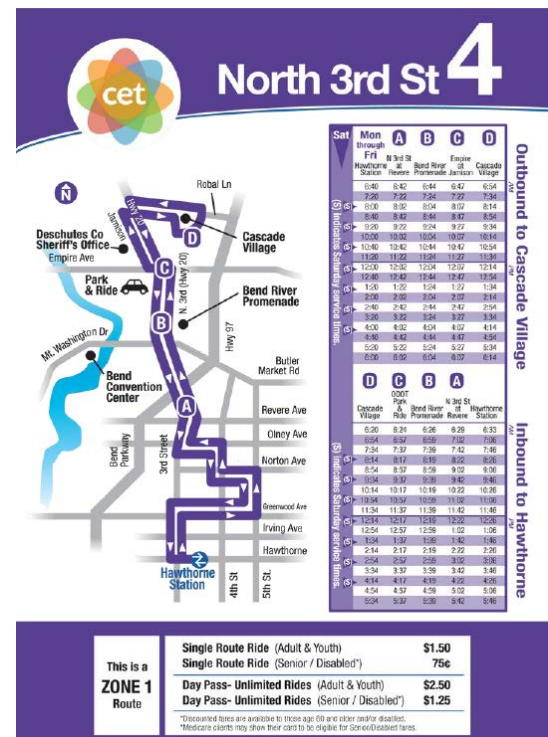
- Show the direction of the bus on route maps and include additional activity centers and the local street network so riders can more easily find stops. This is particularly helpful when routes loop and cross multiple times.
- Add stop numbers or letters for major timepoints to route maps and schedules to allow riders to easily find these stops on the map.
- Reduce the number of stops on schedules. Currently the schedules have too many stops listed in some cases; this is true for both local and intercity routes. In many cases, it should be sufficient to just list major timepoints.
- Ensure that brochures are translated into Spanish, at a minimum.

## Wayfinding

In places where there is not line-of-sight visibility between bus stops in each direction, wayfinding signage with directional arrows or a map helps passengers navigate to the appropriate stop. Locations where wayfinding signage should be considered include where:

- Routes operate on a couplet (or pair of one-way streets), such as OR 99W in McMinnville (Adams and Baker Streets) and downtown Newberg (Hancock and 1<sup>st</sup> Streets)
- YCTA stops are located adjacent to a transit center, such as at Tigard Transit Center

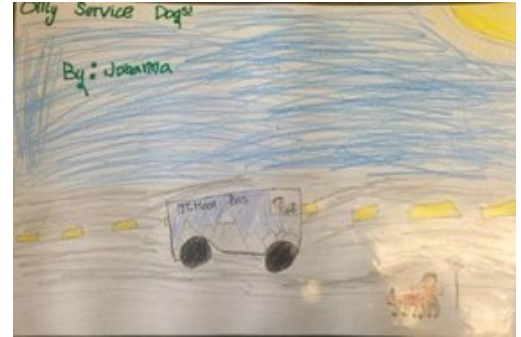
Figure 9-6 Route Map and Schedule Example



## EDUCATION, PROMOTION, AND TRAVEL TRAINING

**Outreach and education programs** improve awareness of existing services and programs, and promote understanding of how to use the transit system. A lack of knowledge and understanding are often the greatest barriers to transit use. Potential programs that YCTA could develop to promote awareness of transit include:

- Public information campaigns to provide information, education, and resources on transit and other transportation option for residents, employees, and visitors
- Bring a friend/rider rewards program.
- Customer appreciation events. In 2018, YCTA held its first annual customer appreciation day (to be held each year on the first Monday in August). This even honored the memory of Mark Schiffmacher, a transit advocate who served on YCTA's Special Transportation Committee.



Sandy 2<sup>nd</sup> and 3<sup>rd</sup> graders helped Sandy Transit illustrate etiquette rules as part of an public information campaign.

Source: <https://tinyurl.com/ydewzv3s>

## ADVANCED PUBLIC TRANSPORTATION SYSTEM TECHNOLOGIES

YCTA secured a technology grant that it began to implement in 2018 to upgrade its technology infrastructure to increase access, convenience, and efficiency. The TDP budgets additional funds (near- and short-term) to continue investing in technology initiatives.

Key public transportation technologies include:

- Two-way radios for driver communications, upgraded in 2018.
- Vehicle information system with automatic vehicle location (AVL) reporting through a global positioning system (GPS), automatic passenger counters (APCs), and automatic bus stop announcements on the bus.
- Real-time bus arrival information and system alerts, enabled by the AVL system, let people know when the bus will arrive, which is particularly important given congestion along OR 99W that can delay service. YCTA currently provides alerts using Facebook and the YCTA website, but could improve and expand its capability to “push” alerts to riders for specific routes.
- On-demand dispatching software to facilitate dynamic on-demand services and help formalize YCTA's volunteer driver program (currently only in Yamhill/Carlton).
- Security cameras.
- Electronic fare collection (see Fare Policies and Programs).

Figure 9-7 summarizes the status of YCTA technology initiatives.

Sunset Empire Transportation District

Hey!

Where's my bus?

Just use your phone!


Transit App

Real-Time Bus Location

Download to smart phone  
from Google Play or Apple  
store.

Real-Time Bus Info.

CALL OR TEXT  
971-701-2224

Enter the STOP CODE of your  
location for an instant report.  
Stop codes posted in bus shel-  
ters or on our website at [ridethe-  
bus.org](http://ridethebus.org) on route schedules next  
to name of stop.

THIS IS SO EASY!



SETD (Clatsop County) and TCTD (Tillamook County) recently launched real-time information access

Figure 9-7 Summary of YCTA Existing, Planned, and Future Technology Initiatives

Category	Existing	YCTA Initiatives/Funding	Notes	Potential Vendors (Partial List)	Implementation Time Frame
Radios		<ul style="list-style-type: none"> <li>Technology Grant</li> </ul>		Silky	Installed Winter 2018
Website/Customer Information		<ul style="list-style-type: none"> <li>Technology Grant</li> </ul>			Implementation in progress in 2018
Paratransit Dispatch	First Transit Proprietary	<ul style="list-style-type: none"> <li>Technology Grant</li> </ul>	Vendor selected	<a href="#">CTS</a>	Implementation starting Summer 2018
AVL, Real-Time Information, Audible Announcements	None	<ul style="list-style-type: none"> <li>Technology Grant</li> </ul>	About \$120-\$150k available in technology grant funds	<a href="#">Connectionz</a> <a href="#">ETA</a> <a href="#">TransitApp</a> <a href="#">Trillium/Swiftly</a> (partnership)	Hanover LED Destination Signs are on new buses Mobile Data Terminals (MDTs) are on order RFP to be issued for real-time information in late Summer 2018
On-Demand/Flex Services/Volunteers	None		\$50-\$60k to pilot TAP Ride for Yamhill/Carlton volunteer program	Doublemap / TapRide	
Electronic Fares (e-fares)	None			Touchpass, Hopthru, Moovel, Masabi	
Camera System	DriveCam LYTX		Would like to replace		

## REGIONAL COORDINATION AND PARTNERSHIPS

### Regional Transit Providers

Travel data shows that Yamhill County residents travel beyond county borders for work, shopping, and other trips. Improving YCTA connections to transit providers in Marion, Polk, Washington, and Clackamas Counties services adds regional mobility for Yamhill County workers, residents, and visitors, often without requiring a wealth of additional YCTA resources. These connections include:

- **TriMet** bus routes in Tigard and Sherwood (e.g., Routes 12 and 93) and WES commuter rail, and MAX light rail and Route 57 in Hillsboro.
- **Cherriots** routes in west Salem (e.g., Route 17), and additional local routes, **Cherriots Regional** routes, and Greyhound/Amtrak service in downtown Salem.
- **Tillamook County Transportation District (TCTD)** Coastal Connector and Grand Ronde Express routes. TCTD is a member of the Northwest Connector (see map and description on the next page), which includes four other transit agencies in Northwest Oregon.

Typically, coordination efforts entail shifting schedules slightly to improve transfers and enhancing wayfinding, amenities, and customer information. Overarching coordination recommendations include:

**Align schedules and service changes.** YCTA can coordinate schedules with the primary routes at major regional transit hubs, in terms of both service span and specific arrival and departure times. Since





Figure 9-9 identifies specific opportunities for each YCTA intercity route or travel market.

Figure 9-9 Summary of Coordination Opportunities

Provider or Partner	Category	Specific Opportunities and Actions	Additional Partners
Cherriots	Schedules/General Service Changes	<ul style="list-style-type: none"> <li>Align YCTA Route 11 schedules with Cherriots Route 17 service in West Salem (frequent service route).</li> <li>After extending service to downtown Salem, consider serving intercity rail and bus connections (Amtrak and Greyhound), possibly only at specific times where connections are available.</li> <li>Cherriots is supportive of YCTA coming into downtown Salem and also stopping on-street in West Salem near the West Salem transit center.</li> <li>Rename YCTA Route 11 to avoid confusion with Cherriots Route 11, e.g., to 80x.</li> <li>Coordinate with Cherriots to ensure online and printed materials reflect upcoming and future service changes.</li> </ul>	
	Facilities/Infrastructure	<ul style="list-style-type: none"> <li>Cherriots is planning to install a shelter for the bay currently utilized by YCTA in West Salem in 2018, including a schedule/map.</li> </ul>	
	Transit Information and Wayfinding	<ul style="list-style-type: none"> <li>YCTA could be integrated in electronic displays and provide printed schedules for placement at the downtown transit center.</li> </ul>	
	E-Fares/Fare Reciprocity	<ul style="list-style-type: none"> <li>YCTA and Cherriots can explore coordination of fare reciprocity and other opportunities, likely in conjunction with electronic fare technology.</li> </ul>	
	Programs	<ul style="list-style-type: none"> <li>Share information on Yamhill County employers/contacts with Cherriots, identify Yamhill County staff who could assist in outreach with guidance from Cherriots, explore the potential for Cherriots to contribute to a part-time staff person in the future, identify potential locations where information on commute options/emergency ride home program could be placed in Yamhill County.</li> </ul>	Spirit Mountain Casino
Grand Ronde Tribe	Schedules/General Service Changes	<ul style="list-style-type: none"> <li>Identify opportunities to align Route 22 schedule with needs of Grand Ronde residents.</li> <li>Work with Grand Ronde Casino to better coordinate Route 22 schedules with Casino work shifts, particularly in the later evening.</li> <li>See also Coastal Connector and the Grand Ronde Express</li> </ul>	TCTD
	Transit Information and Wayfinding	<ul style="list-style-type: none"> <li>Improve and maintain transit information at the Grand Ronde Community Center and Casino stops.</li> <li>Consider developing a transit hub at the Spirit Mountain Casino.</li> </ul>	TCTD
SMART	Schedules/General Service Changes	<ul style="list-style-type: none"> <li>Connections to Wilsonville can currently be made using WES (in Tigard) or the 1X service co-operated by SMART and Cherriots (in Salem), during commute hours only. This should be included in YCTA's regional transit information.</li> <li>In the future SMART plans to operate its 2X service between Wilsonville, Tualatin, and Tigard TC, which would provide a single-transfer connection between Yamhill County and Wilsonville outside of peak commute hours.</li> </ul>	



Provider or Partner	Category	Specific Opportunities and Actions	Additional Partners
	E-Fares/Fare Reciprocity	<ul style="list-style-type: none"> <li>No immediate opportunities, but possible future coordination in shared e-fare system initiatives.</li> </ul>	
Tillamook County Transportation District (TCTD)	Schedules/General Service Changes	<ul style="list-style-type: none"> <li>Coordinate schedules with Coastal Connector (60X Lincoln City – Salem) and Grand Ronde Express (70X Grand Ronde - Salem) routes in Grand Ronde or at Spirit Mountain Casino, and ensure these connections are reflected in printed and online materials.</li> </ul>	Grand Ronde Tribe Spirit Mountain Casino
	Transit Information and Wayfinding	<ul style="list-style-type: none"> <li>Update printed and online materials to reflect new 60X and 70X services.</li> </ul>	
	Other	<ul style="list-style-type: none"> <li>Possible future coordination on long-distance non-emergency medical trips.</li> </ul>	
TriMet	Facilities/Infrastructure	<ul style="list-style-type: none"> <li>TriMet can include YCTA route stickers at shared stops, e.g., OR 99W in Sherwood/Tigard and TV Hwy in Forest Grove (see Appendix F).</li> <li>Explore integrating YCTA into a future Tigard Transit Center when Southwest Corridor service (MAX line to Portland) opens.</li> </ul>	
		<ul style="list-style-type: none"> <li>Explore integrating YCTA into Hillsboro Central Station; Central Station is currently at capacity but TriMet could incorporate YCTA when considering future needs.</li> <li>The City of Hillsboro is also working to provide two-way access into Central Station as part of the Regional Enhanced Transit Corridor initiative, using the City-owned parking area where YCTA currently stops. Coordinate with the City of Hillsboro and TriMet to secure a bay in the expanded space available when this change occurs.</li> </ul>	City of Hillsboro
	Schedules/General Service Changes	<ul style="list-style-type: none"> <li>Expanded evening service is a priority for the City of Gaston. Coordinate with Gaston and Washington County for possible funding support of Route 33 enhancements.</li> </ul>	Washington County City of Gaston
	Transit Information and Wayfinding	<ul style="list-style-type: none"> <li>Coordinate on improving wayfinding to YCTA service in Tigard (adjacent to Tigard TC) and work to add a shelter at the YCTA stop in Tigard.</li> </ul>	City of Tigard

## Emerging Mobility Services

This section identifies strategies that YCTA can use to integrate emerging mobility services with the transit system and develop strategic partnerships with service providers. These services provide opportunities to incorporate cost-effective and innovative approaches to meeting transportation needs.

- **Ride-hailing services** are point-to-point transportation services that are most often scheduled and paid for using an online application or platform, such as smart phone apps (but are similar to traditional taxis in some respects). On-demand service providers including Lyft and Uber (also known as transportation network companies or TNCs) are starting to become available outside of major urban areas, including in Yamhill County. These providers also offer shared ride services that match passengers requesting trips along similar routes (e.g., UberPool and LyftLine).
- **Car sharing services** are typically programs that allow members to reserve and drive a vehicle themselves, and pay on an hourly or daily basis; as of 2018, these services are not currently available in Yamhill County. The vehicles are located in accessible locations and keyless entry is provided with a smart card or smart phone app. Early station-based car sharing programs (e.g.,

Zipcar) required the car be returned to the same location. More recent programs (e.g., Car2Go and ReachNow) allow a vehicle to be returned to any location within the service area, facilitating one-way trip use along with public transportation. Transit agency partnerships include offering parking spaces for car sharing vehicles in or adjacent to transit facilities.

- **Bike and scooter sharing** serves short-distance point-to-point trips. Initial bike share systems required that bikes be picked up and returned at any of the dock stations in the service area. Recent trends are for dockless bike share (e.g., Jump and [Lime](#)) as well as scooters (e.g., [Bird](#), [Skip](#), and others), allows people to pick-up and drop-off bikes anywhere in the service area. People use a smart phone app to find, unlock, and ride the bikes. Bike share complements transit by enabling passengers to complete the first or last mile of a transit trip beyond a convenient walk from transit.

YCTA (and/or local jurisdictions) can take the following actions to coordinate with these services and ensure they are implemented consistent with YCTA and other local goals:

- **Develop pilot programs and/or partnerships with private or non-profit transportation providers**, including ride-hailing companies and taxis, to fill in spatial and temporal gaps in transit service, such as later evenings or transit access in small cities. Potential markets include first-last mile connections generally, shift workers, and college students with late evening classes. YCTA would need to conduct a competitive procurement process (e.g., RFP) to solicit vendors. An initial RFQ/RFI (Request for Qualifications/Information) process could be used to gauge interest and have a more collaborative discussion around accessibility, mobile device and payment alternatives, and other considerations described below. A formal agreement would need to address any potential YCTA liability.
- **Develop policies around the use of any YCTA subsidies for trips on private providers, such as:**
  - Encourage providing shared rides where feasible.
  - Use “geo-fencing” and electronic fare payment media to ensure that subsidized trips are limited to transit trips (such as to/from a YCTA transit center, secondary transit hub, or intercity bus stop).
  - Determining the subsidy mechanism, which could be on a percentage of trip cost up to a maximum amount and/or there could be a flat subsidy with a maximum overall credit per month with a cap per trip. Lyft has a \$4 minimum; the fare structure is \$.45 base charge, \$.95 per mile and \$.11 per minute. Consider whether some types of subsidies should be means-tested, e.g., limited based on income.
  - Encourage availability of accessible vehicles and ensure an equivalent service for people with disabilities; the FTA issued a “Dear Colleague” letter in 2016 that made it clear that ADA requirements must be met regardless of receiving federal assistance. This means that TNCs must either offer wheelchair accessible trips when in contract with an agency, or provide an equivalent service through a third-party.
  - Provide an alternative to reserving trips using a smart phone app; this will require working out [implementation of restrictions on subsidies](#).
  - Provide a method of booking and payment that does not require a cell phone or credit card; the FTA issued a [“Dear Colleague” letter](#) in 2016 stating that projects that use federal assistance must meet Federal requirements, such as Title VI. A YCTA fare payment card may be a possible approach.
  - Ensure that mobile device applications support multiple languages.

- **Integrate microtransit-type technology to increase the convenience and effectiveness of YCTA services.** A proposed flex-route serving the low-density, primarily employment and light-industrial areas east of Lafayette Avenue in McMinnville is an example of a service that would benefit from dynamic vehicle routing based on rider requests.
- **Include space for emerging mobility service providers** when designing new or expanded transit centers or secondary transit hubs (see Chapter 7). Design elements include pick-up and drop-off areas, mobility device parking and electric charging stations, and trip planning kiosks.
- **Develop policies to manage shared mobility providers' use of the public right-of-way, including streets and sidewalks.**

The National Associate of City Transportation Officials (NACTO) has developed guidelines to help cities manage shared mobility devices including dockless bikes and scooters. NACTO plans to update the guidelines based on experience in this rapidly evolving landscape.  
<https://nacto.org/home/shared-active-transportation-guidelines/>

## Partnerships

Local and regional partnerships will be critical to implementing the TDP, and include:

- **Cities in Yamhill County, and adjacent counties and cities** served by YCTA intercity routes, to facilitate permitting, installation, and maintenance of stops and amenities (e.g., shelters), and possibly to contribute funding to help expand service in their community.
- **Confederated Tribes of the Grand Ronde** to enhance service the McMinnville-Grand Ronde corridor, and partner to facilitate implementation of the Grand Ronde Transit Plan (expected completion in 2018).
- **Educational institutions and major employers** including Linfield College, George Fox University, and Chemeketa Community College, Willamette Valley Medical Center, Providence Newberg Medical Center, Grand Ronde Casino and others, around opportunities to promote transit and other travel options, coordinate schedules with work shifts, and develop group pass programs.
- **Northwest Oregon Connector Alliance (NWOTA)** to improve integration between YCTA and other transit providers in northwest Oregon.
- **Travel Oregon**, to help promote transit as an option for visitors.
- **Human and Social Service Agencies** to provide transit information and develop convenient and affordable fare payment options for their clients.
- **Chambers of Commerce** to support employee and customer access to local businesses, special events, and leverage transit for economic development.
- **Churches** to designate park-and-rides to facilitate transit access and support informal carpooling.
- **Emerging mobility service providers** to accommodate these services at transit facilities, cost-effectively meet demand at low-demand times, and increase access to transit.

## SERVICE DELIVERY AND ORGANIZATIONAL CAPACITY

### Service Delivery Approach

YCTA contracts with a third-party transit provider (currently First Transit) to operate service in the county. YCTA is planning to conduct a formalized procurement process (e.g., Request for Proposals) to solicit bids to operate and maintain the system, by June 30, 2019. Such a process allows the agency to confirm that it is receiving the best value from a customer perspective, and should recognize that the lowest bid is not always the best at meeting an agency's goals.

### Roles, Responsibilities, and Staffing

Contracting for service delivery still requires significant YCTA administrative staff time and resources to oversee the contractor and perform other transit functions that are not be part of the contract. Figure 9-10 summarizes typical transit functions by category, identifies who is responsible—service contractor staff, YCTA staff, or other Yamhill County staff—and provides the current and projected staffing level. The TDP Financial Plan (Chapter 8) assumes an average cost per service hour consistent with these staffing levels. Additional staffing will help YCTA improve oversight for its transit operations and maintenance contract(s) to ensure accurate reporting, communication, and corrective actions to deliver high quality service and facilities. Adequate staffing is also necessary to accomplish the transit-supportive programs identified in the TDP.

Figure 9-10 Transit Agency Functions and Estimated FTE

Category	Typical Functions	Who Performs?	Typical Positions / Roles	Current / Projected Staffing		
				Existing	Near-Term	Short- to Mid-Term
Vehicle operations	Transportation administration and support, safety and training, resolve customer complaints, ADA eligibility	Service Contractor	<ul style="list-style-type: none"> <li>Operations Manager</li> <li>Safety/Training</li> <li>Field Supervisors</li> </ul>	3 FTE	4 FTE	6 FTE
	Route planning and service design; technology operations (website, real-time information, automated passenger counting and vehicle location systems)		<ul style="list-style-type: none"> <li>Transit Planner<sup>3</sup></li> <li>Operations Specialist</li> </ul>	-	1 FTE	1 FTE
	Vehicle operations, monitoring, dispatch, scheduling, etc. Fare collection		<ul style="list-style-type: none"> <li>Operators</li> <li>Scheduler/Dispatcher</li> </ul>	24 FT / 4 PT 3 FTE	26 FT / 6 PT 4 FTE	26-28 FT, 6-8 PT 4 FTE
Vehicle maintenance	Administration, record-keeping, work procedures, training Inspection and maintenance Servicing (cleaning, fueling, etc.) vehicles		<ul style="list-style-type: none"> <li>Maintenance Supervisor</li> <li>Mechanics</li> <li>Bus Washer</li> </ul>	3.0 FTE	3.5 FTE	3.5 – 5.0 FTE
Non-vehicle maintenance	Administration, maintenance, repair of facilities and operational equipment	YCTA	<ul style="list-style-type: none"> <li>Bus, Bus Facilities, Shelter Cleaning Tech</li> </ul>	1.0 FTE	1.0 FTE	1.0 FTE
General administration	Strategic Planning Customer Relations/Outreach Advisory Committee Support Board Support Marketing/Promotion/Customer Information Service and Capital Planning Regulatory Compliance, including ADA Procurement Contract Procurement/Oversight Finance/Budgeting/Accounting <sup>1</sup> Grants Administration <sup>1</sup> Human Resources Oversight <sup>1</sup>		<ul style="list-style-type: none"> <li>Transit Manager</li> <li>Administrative Assistant</li> <li>Program Coordinator<sup>2</sup></li> <li>Grants<sup>1, 2</sup></li> <li>Service Planning<sup>2,3</sup></li> <li>Intern<sup>2</sup></li> </ul>	1.5 FTE	2.5 FTE	2.5 to 5.0 FTE
	Grant Support Finance/Accounting Support Human Resources Support Legal Services	Yamhill County	Grant Specialist Accountant HR Specialist Legal Counsel	Varies	Varies	Varies

Notes: FTE: Full-time Employee Equivalent. [1] Yamhill County staff can provide support in these areas. [2] Position does not exist today.

[3] Planning function could be wholly or in part performed by the YCTA service contractor and/or by a YCTA staff position.

Source: Adapted from National Transit Database (NTD), Uniform System of Accounts (USOA), and YCTA Staffing Projections.

## YCTA Board Oversight Structure

The YCTA Transit Manager is responsible for day-to-day operations. The Yamhill County Board of Commissioners, which serves as the YCTA Board, has a Transit Liaison who attends YCTA Advisory Committee meetings, provides regular oversight of YCTA performance, and assists the Transit Manager with other issues as required. The YCTA Board reviews YCTA performance at regular meetings and makes major policy decisions, including approving the annual transit budget. Figure 9-11 provides an overview of typical roles and responsibilities.

Figure 9-11 Transit Manager and Oversight Board Roles and Responsibilities

Area	Transit Manager	Board Transit Liaison	YCTA Board
<b>Executive</b>	<ul style="list-style-type: none"> <li>Runs all day-to-day operations</li> <li>Informs Board to help shape policy and mission</li> </ul>	<ul style="list-style-type: none"> <li>Makes hiring and governance recommendations to full board</li> <li>When requested, offers input to assist the Transit Manager in day-to-day decisions</li> </ul>	<ul style="list-style-type: none"> <li>Makes major governance and policy decisions with input from Transit Manager</li> </ul>
<b>Finance/Audit</b>	<ul style="list-style-type: none"> <li>Manages day-to-day finances</li> <li>Proposes budget</li> <li>Reports spending against budget</li> </ul>	<ul style="list-style-type: none"> <li>Reviews budget in detail</li> <li>Oversees audit and aids Transit Manager in ensuring appropriate financial controls are in place</li> </ul>	<ul style="list-style-type: none"> <li>Discusses and approves budget</li> <li>Reviews financial and other performance indicators (at each meeting)</li> </ul>
<b>Public Relations</b>	<ul style="list-style-type: none"> <li>Manages day-to-day public relations activities</li> <li>Plans for ongoing public relations activities and requests assistance on specific tasks from the Board Transit Liaison</li> </ul>	<ul style="list-style-type: none"> <li>Helps Transit Manager plan for public relations needs and carries out specific requests for assistance</li> </ul>	<ul style="list-style-type: none"> <li>Approves and supports public relations activities as required</li> </ul>
<b>Personnel/Human Resources</b>	<ul style="list-style-type: none"> <li>Manages everyday personnel activities and makes staff hiring/firing decisions</li> <li>Suggests personnel policies and procedures</li> </ul>	<ul style="list-style-type: none"> <li>Ensures appropriate personnel policies and procedures are in place</li> </ul>	<ul style="list-style-type: none"> <li>Approves personnel policies and procedures as required</li> </ul>

Source: Adapted from Transportation Research Board, TCRP Report 85, Public Transit Board Governance Guidebook, 2002, Figure 8



# 10 SUPPORTING PUBLIC TRANSIT WITH LOCAL LAND USE POLICIES

Coordinated land use and development policies can strengthen YCTA's voice in local land use changes, as well as the maintenance of bus stops and the space around them. Providing input on local zoning and development reviews, and coordinating with local business alliances can be effective in encouraging transit-supportive land uses and drawing businesses to active transit corridors. This chapter addresses transit-supportive land use policies and development code language. It identifies policy and development code elements related to transit-supportive land use and provides "model" or recommended code language that is consistent with TDP recommendations and is suitable for adoption by local jurisdictions with some modifications. Based on this model language, the project team evaluated existing comprehensive plans and development codes of jurisdictions in the YCTA service area in order to gauge what changes may be needed in order to most effectively implement the TDP.

## TRANSIT-SUPPORTIVE POLICY AND CODE LANGUAGE

The vision, strategies, and solutions developed during the TDP process are implemented in a number of ways, including through local land use policies, procedures, and development requirements. Given that the local jurisdictions within the YCTA service area have land use planning and development authority, the TDP should recommend local land use policy and procedures that support transit and are consistent with the recommendations from this planning process.

Comprehensive plan policies provide long-range land use and transportation planning direction. Specific policies are recommended to provide consistency with the TDP as well as a solid foundation for transit-supportive land use and transportation implementation going forward.

Development requirements support the implementation of transit-supportive improvements in several ways, including locally adopted provisions required by the Oregon Transportation Planning Rule (TPR) for communities with existing or planned transit service.<sup>21</sup> Adopting transit-supportive development requirements may entail replacing or otherwise modifying existing local development requirements, adding to existing requirements, or some combination thereof.

## Recommended Comprehensive Plan Policies

The recommended policies below draw from a number of references and resources and reflect the TDP project scope, TDP recommendations, and TPR requirements. Model policies also provide a basis for recommended development code amendments, discussed in the next sub-section. Recommended policy language addresses the following overarching topic areas:

- Planning for transit-dependent populations
- Establishing the YCTA TDP as a guidance document
- Coordinating with YCTA
- Implementing transit-supportive improvements

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<sup>21</sup> Oregon Administrative Rules (OAR) 660-012-0045(4)

The full suite of recommended policies is not necessarily appropriate in the smallest communities in the YCTA service area, where transit service may be limited and it is sufficient to more broadly address the topic areas represented by the recommended policies. All policies can be modified to fit local plan format and better reflect specific local conditions and interests.

Figure 10-1 Recommended Comprehensive Plan Policies

Planning for Transit-Dependent Populations	
1.	The [City/County] will facilitate transit service for its community members, with special attention to the needs of members who may be classified as “transit dependent” due to factors such as age, income, and/or disabilities.
Establishing the YCTA TDP as a Guidance Document	
2.	The Yamhill County Transit Area Transit Development Plan provides the policy and implementation direction for [City/County] transit planning, which includes route development, financing, and physical improvements necessary to maintain and improve public transit service for [City/County] residents, businesses, and visitors.
3.	Transit improvements within the [city/county] shall be guided by the findings and recommendations of the Yamhill County Transit Area Transit Development Plan.
4.	The [City/County] will seek to implement, through capital improvement projects and private development requirements, improvements that encourage increased transit use and are consistent with and supportive of the Yamhill County Transit Area Transit Development Plan recommendations.
5.	The [City/County] will support higher-density and mixed-use land use around transit stops and in transit corridors to make transit service more feasible and effective.
6.	In lower-density areas, the [City/County] will support park-and-ride/rideshare facilities, demand-responsive and flexible transit services, and other facilities and services that are appropriate where it is less feasible to serve the area with fixed-route transit.
Coordinating with YCTA	
7.	The [City/County] will invite transit service providers to participate in long-range and comprehensive land use planning projects in order to optimally coordinate land use and transit service.
8.	The [City/County] will invite transit service providers to participate in the review of land use applications that may have implications for transit service or impacts to transit facilities.
9.	In planning for and implementing capital projects, the [City/County] will coordinate with Yamhill County Transit Area, Oregon Department of Transportation (ODOT), and other road authorities if applicable to preserve or improve existing and planned transit stop amenities and connections (e.g., sidewalks).
10.	The [City/County] will work with Yamhill County Transit Area to site and implement needed transit stops and park-and-ride lots within the [city/county] in support of the district-wide public transit system, with an emphasis on sites that are safe and convenient for riders.
11.	The [City/County] will participate in Yamhill County Transit Area’s efforts to promote and implement rideshare and other transportation demand management programs for reducing motor vehicle travel demand on State highways.
Implementing Transit-Supportive Improvements	
12.	The [City/County] will prioritize the improvement of pedestrian and bicycle network gaps and substandard facilities along and adjacent to transit corridors in its long-range transportation planning and capital improvement programming.
13.	The [City/County] will support improvements such as pedestrian and bicycle connections, shelters, easements for shelters and/or landing pads, and lighting to complement transit service and encourage increased transit use. Transit stop improvements shall be coordinated with the transit service provider.
14.	The [City/County] will work to improve safety for transit riders through the local planning and development review process, helping to ensure safe locations of transit stops and safe connections to transit stops, including roadway crossings.
15.	The [City/County] will prioritize improvements to the [City’s/County’s] pedestrian environment that increase safe and attractive access to transit, including lighting, landscaping, public art, marked and protected crossings, and curb ramps.
16.	The [City/County] will establish and implement development requirements that provide preferential parking for ridesharing and allow parking areas to be used for park-and-ride, rideshare, and transit-related facilities.

## Summary of Local Policy Assessment

Existing transportation policies (Comprehensive Plans and Transportation System Plans or TSPs) were reviewed for consistency with recommended policies. Key findings are provided below; Appendix G provides the overall assessment (Figure G-1).

Overall, the evaluation found that all the jurisdictions should adopt more specific transit-supportive policies into their comprehensive plan policies, particularly related to establishing transit plans as guiding documents and instituting planning and permitting coordination between local jurisdictions and transit agencies. The following is an overview of evaluation findings by policy category and by jurisdiction size:

- **Planning for transit-dependent populations.** This policy area showed the most consistency between existing and recommended policy. Many jurisdictions make supportive policy statements about low-income, disabled, and senior populations in their communities, although not always explicitly in relation to transit service.
- **Establishing the YCTA TDP as a guidance document.** Existing policies were partially to minimally consistent in this category; typically, while policy may commit to improving and promoting transit, transit plans are not identified as a basis for these actions.
- **Coordinating with YCTA.** The highest levels of inconsistency were found in this category, where coordination with transit service providers is generally not addressed, whether for land use planning and development, transit-supportive improvements, or transit-supportive programs.
- **Implementing transit-supportive improvements.** Jurisdictions varied widely (from minimally to mostly consistent) in how their policies committed to transit-supportive requirements, including transit stop improvements, safe crossings, pedestrian environment improvements, prioritization of improved pedestrian and bicycle connections to transit, park-and-ride facilities, and TDM/ridesharing programs.
  - McMinnville provides the strongest transit-supportive policy basis of the larger jurisdictions. However, as discussed in the development code review (see Appendix G), its development code does not appear to have been updated recently and it does not robustly reflect these policies.
  - Of the smaller jurisdictions, Carlton's and Willamina's policies are among the most consistently transit-supportive. Their policies commit to serve the transportation-disadvantaged, ensure transportation improvements are consistent with transportation plans, coordinate with transit service providers in addressing transit service needs, and implement transit-supportive improvements.

Local policies, even those found to be largely consistent with recommended policies, should be strengthened using recommended transit-supportive language when amendment opportunities arise (e.g., a TSP update). These opportunities are further discussed in the Best Practices section below.

See Appendix G for detailed policy language recommendations and the assessment of local policies (Figure G-1).

## Recommended Development Code Language

This section identifies areas of the development code that relate to transit (see Figure 10-2); Appendix G provides sample code language that reflects the TDP objectives and the recommendations, is supported by the Comprehensive Plan policies recommended above, and is consistent with the TPR. The recommended development code language is intended to be a reference for code updates in all of the jurisdictions in the YCTA service area.

Figure 10-2 Recommended Development Code Language

<b>Coordination with Transit Agencies</b>
1. Pre-Application Conference
2. Application Review
3. Hearing Notice
<b>Access to Transit and Transit-Supportive Improvements</b>
<b>Site Access</b>
4. Access between the Site and the Street
5. Access to the Transit Stop and Supportive Improvements
<b>Area Access</b>
6. Off-Site Access to Transit Stops
<b>Other Transit-Related Development Requirements</b>
<b>Vehicle Parking</b>
7. Transit-Related Uses/Facilities in Parking Areas
8. Carpool/Vanpool Parking
9. Maximum Parking Requirements
10. Reduced Parking Requirements
11. Parking Area Landscaping
<b>Bicycle Parking</b>
12. Minimum Bicycle Parking Requirements
<b>Urban Form</b>
13. Maximum Building Setbacks

See Appendix G for detailed recommended development code language.

## Summary of Local Development Code Assessment

An evaluation of existing development code language in YCTA service area jurisdictions revealed the need for strengthened language related to transit. This section provides key findings; Appendix G (Figure G-2) provides the detailed evaluation.

As established in Technical Memo #3 (Planning Framework) and summarized in TDP Chapter 2, the largest amount of development is expected to occur in Newberg and McMinnville. These two cities are a focus of service improvements proposed in the TDP; consequently, the evaluation of existing development code also focused on these cities. The evaluation, provided in Appendix G (Figure G-2), shows varying levels of consistency between recommended transit-supportive development code language and existing Newberg and McMinnville development code language. Even though McMinnville is the larger of the two jurisdictions, it appears that Newberg's development code has been updated more recently and has sets of transit-specific development requirements that McMinnville's does not. However, both of the cities can improve the transit orientation of their communities by adopting recommended development code language into code sections found to be less than consistent, either as new code sections or as modifications to existing code sections.

The evaluation indicates several opportunities for McMinnville and Newberg to improve existing development code provisions, particularly regarding application review coordination and requirements for transit stop improvements and other transit-related improvements. The following is an overview of evaluation findings by development code category:

- **Coordination with transit agencies.** Newberg and McMinnville may have a practice of consulting with YCTA about land use applications, but this practice is not formalized in their development codes. In addition, code requirements that address coordination and notification do not clearly differentiate notice of application review from notice of public hearing, which are potentially two separate opportunities in which to engage transit agencies.
- **Access to transit and supportive improvements.** While both Newberg and McMinnville require pedestrian access from development sites to the street, only Newberg has requirements specific to transit access and transit stop improvements. McMinnville more strongly supports off-site access to transit in terms of smaller required block sizes and clearer language about pedestrian and bicycle access ways.
- **Other transit-supportive requirements:**
  - **Vehicle parking.** Only Newberg has code provisions allowing transit-related uses in parking areas and requiring preferential parking for carpools and vanpools. Neither jurisdiction establishes maximum off-street parking requirements. However, the cities have adopted other effective forms of parking management (e.g., no parking requirements and large reductions in requirements in the densest parts of the cities).<sup>22</sup> Both cities require some level of parking lot landscaping; these requirements could be enhanced to provide even better pedestrian environments.
  - **Bicycle parking.** Existing development code requirements in Newberg address bicycle parking for transit transfer stations, but not regular transit stops. McMinnville’s code requires bicycle parking for uses only in commercial zones and does not address transit uses in any zone.
  - **Urban form.** Newberg requires minimum setbacks and relatively large maximum setbacks in commercial zones; McMinnville establishes maximum setbacks in the central commercial zone only in downtown. Both cities should review existing setback requirements and consider setbacks for development on OR 99W that will enhance the pedestrian environment and promote transit.

Incorporating more transit-supportive language into each city’s development code could be dovetailed with a legislative amendment process such as a TSP update. This is discussed in more detail in the Best Practices section.

See Appendix G for detailed development code language recommendations and the assessment of local development codes (Figure G-2).

<sup>22</sup> While existing development code language in Newberg and Dundee does not include maximum off-street parking requirements, there are cases where the cities do not require off-street parking, which is an even more robust measure for managing parking and encouraging transit, or they allow drastically reduced parking requirements. (See the evaluation summarized in Figure G-2 for more details.) It is recognized that these parking strategies are most appropriate and effective in the densest, most urbanized parts of the YCTA service area.

## BEST PRACTICES FOR TRANSIT-SUPPORTIVE LAND USE

Best practices to strengthen the connection between transit and land use generally fall into two arenas: increased collaboration between transit agencies and local jurisdictions during long-range transit and land use planning and transit agency participation in land use (development) permitting.

### Long-Range Planning

Both transit agencies and local jurisdictions engage in long-range planning processes, and transit and land use can become more integrated through coordination between agencies during their respective long-range planning activities. Transit agencies can engage a variety of local jurisdiction staff, in addition to other community stakeholders, in their long-range planning processes. Local jurisdiction staff can include departments such as planning and community development, public works and engineering, and business and finance. In some unique cases, cities and counties have staff dedicated to transit services and coordination. Cities and counties conduct multiple long-range, comprehensive planning processes that can have a bearing on transit. Including transit agencies on advisory committees is particularly important for the development of concept or area plans and TSPs. Concept and area plans are prepared for new urban growth areas. TSPs, pursuant to the TPR, must include a transit element. Therefore, both of these planning processes present prime opportunities to create more transit-oriented land use and transportation plans.

### Transit-Supportive Policy and Code

Long-range transit and land use planning processes should involve the development and adoption of transit-supportive policy and code language. These plans are typically adopted through a legislative process that involves public hearings, which is also the level of review needed for changes to city and county comprehensive plan policies and development code language.

While the TDP policy and code language constitutes a strong base of model language to draw from, the language is built on best practices to-date. Model language should continue to be strengthened, and one example of this is related to development code thresholds for requiring developers to make or plan for transit stop improvements. Conversations with transit and transportation planners have suggested that the threshold be not just sites that are adjacent to existing or planned transit stops (and more particularly stops with frequent service), but sites where a minimum number of employees are projected. Additionally, the thresholds could include comprehensive plan and zoning changes that increase density.

As found in the reviews of policy and development code consistency (previous section), all jurisdictions in the YCTA service area could benefit from integrating recommended transit-supportive policy language and development requirements into their comprehensive plan policies and development codes. A TSP update process provides a natural opportunity to address implementation measures, including new transit-supportive policies and code. However, if a jurisdiction has been through a TSP update process in the last few years, another update is not likely in the near term. For these jurisdictions, adoption of recommended policy and code language could potentially be folded in with other legislative amendment procedures (e.g., other comprehensive plan and development code updates).



## Development Permitting

Development permitting presents numerous opportunities for collaboration between transit agencies and local jurisdictions. As indicated in the recommended transit-supportive development requirements, there are multiple points in the development permitting process during which transit service providers could participate—at the pre-application stage where the development proposal is first vetted with the local jurisdiction; after the development proposal is submitted and the jurisdiction’s review of the proposal begins; and shortly before and during the public hearing and permitting decision stage, when the local jurisdiction’s staff report is being completed and testimony regarding the proposal is collected.

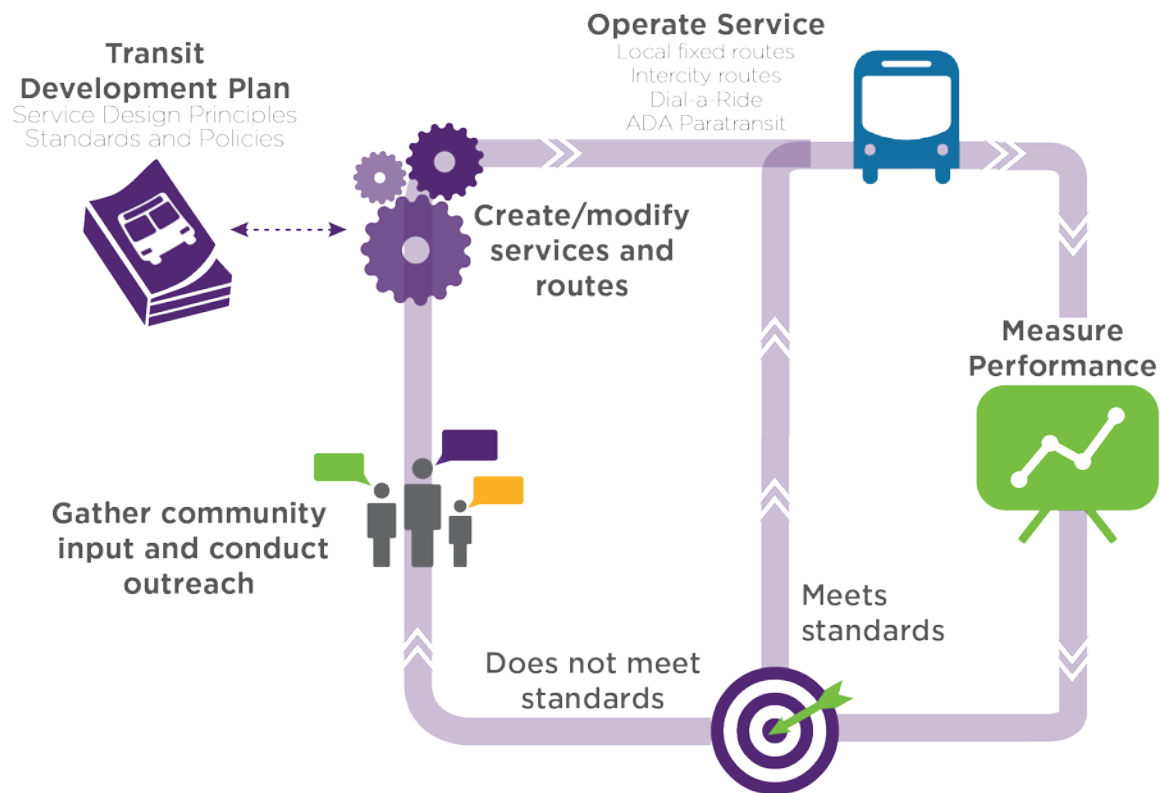
Involvement at these points in the process can translate into needed transit improvements being identified early and, thus, included in the development proposal and/or transit improvements being required as a condition of development approval.

In some transit districts, local jurisdiction planning staff already have a practice of informing transit service providers about development applications, or transit service providers routinely inquire about new development applications, whether through informal contact with planning staff or through relationships with developers. In this way, transit service providers can be involved in the development process and advocate for transit improvements that are generally or specifically called for in a transit plan. In some cases, notice and involvement is required by the development code and in some cases, it is not. Similarly, in some instances, transit-supportive improvements are required in code (e.g., transit stop access and improvements) and the transit agencies ensure that the requirement is fulfilled consistent with their own transit planning. When the improvements are not required in code, it is still possible that they will be implemented if planning staff or the transit service provider are present at key points in the development review process to identify improvements called for in the agency’s transit plan. These cases underline that, while transit-supportive coordination and improvements may occur without codification, their implementation will be stronger and more consistent if codified.

# 11 MONITORING IMPLEMENTATION OF THE TDP

System goals, objectives, performance measures, public input, and actual operation of service are all part of an ongoing process to continually evaluate and improve service (see Figure 11-1). YCTA will need to determine an appropriate but level and frequency of service evaluation that is meaningful without being burdensome to staff. This section incorporates the existing conditions analysis, peer evaluation, and industry standards into performance measures and standards that YCTA can use to regularly assess system and route-level performance and progress towards TDP implementation.

Figure 11-1 Process for Ongoing Monitoring



More information on benchmarks including a peer review of YCTA performance compared to comparable providers can be found in Chapter 3 of the TDP and TDP Volume II, Section 2: TM #2, Chapters 3 and 5 and Appendix C.

## SERVICE STANDARDS

Performance measures and standards are defined as follows:

- **Performance measures quantify transit operating characteristics and provide a basis for comparison** – to a desired goal, to peer systems, or to past performance. The most useful measures are typically ratios of product provided (e.g., transit trips) to resources expended (e.g., “revenue” hours of bus driver time). Productivity (ridership per revenue hour), for example, is a nearly universal measure in the transit industry. A good set of performance measures should rely on readily available data and focus on key aspects of operations.
- **Performance standards (also known as targets or benchmarks) are quantifiable values for specific performance measures.** They set the expectations for acceptable levels of performance. Using the productivity example, routes performing below a standard of 10 to 15 boardings per revenue hour may merit attention. A single performance measure may have multiple standards based on the service type, operating period, or geographic zone being evaluated. YCTA performance standards need to balance industry norms, YCTA’s own goals and objectives, and any requirements from funding or other sources. For example, farebox recovery standards may be set below those of peer systems if local policy-makers agree to higher subsidies to address affordability concerns. Alternatively, YCTA needs to balance affordability with the requirement to generate revenue to cover its operating costs.

The tables below display performance measures for several categories of performance measures, including a brief definition, where to collect the data, how YCTA currently performs on the measures, comparisons to peers (where applicable), and guidance on metrics for each service type. In some cases benchmarks are the same for each service type, while in other cases the performance measure is the same but the metrics are different.

## Service Design Standards

The design standards in Figure 11-2 help ensure service that is convenient and well-matched to passenger needs. A route's hours of operation and frequency, along with other service level characteristics, play a major role in attracting riders. Passengers value convenience and reliability. Service every three hours or service that ends at 6 PM does not provide a convenient option. Service hours and frequencies have a major impact on cost; however, too little investment in service levels or service in areas with insufficient density of people or jobs results in empty buses.

Figure 11-2 Service Design Standards

Performance Measure	Goal and/or Objective	Definition	Data Source	Existing	Performance Standards <sup>1</sup>			
					Intercity Fixed-Route	Local Fixed-Route	Flex Route / Shuttle	DAR or ADA Paratransit
Service area land use density	1.4, 2.1	Concentration of people and jobs in area served; higher densities support higher levels of transit.	Census <sup>5,6</sup>	Routes serve population centers with overall density of 2-8 people and up to 2 jobs per acre	Serves major corridors and urban clusters; 8-12 people or jobs per acre within ¼-mile of stops	6-8 people or jobs per acre within ¼-mile of route (stops)	4+ people or jobs per acre within ¼-mile of route (stops)	>0.5 people or jobs per acre
Minimum span of service – Weekday	1.2	Service start and end times	Service schedules	Local: 7 AM - 7 PM Intercity: 6 AM-7 PM or 6 AM-9 PM (varies by route)	6 AM - 8 PM or 8 AM - 10 PM	6 AM - 8 PM	8 AM – 5 PM	Same as local fixed route
Minimum span of service – Weekend	1.2	Service start and end times	Service schedules	Local: None Intercity: 8 AM – 7 PM (46s) 9:30 AM – 4 PM (24s)	8 AM - 6 PM	8 AM - 6 PM	8 AM – 5 PM	Same as local fixed route
Service frequencies – Weekday <sup>2</sup>	1.3, 1.4	How often a bus arrives in each direction	Service schedules	Local: 60 min Intercity: 60 min – 4.5 hours (varies by route)	60-120 minutes	60-120 minutes	Varies	Same as local fixed route
Service frequencies – Weekend <sup>2</sup>	1.3, 1.4	How often a bus arrives in each direction	Service schedules	Local: None Intercity: 2h 50m (varies)	60-120 minutes	60-120 minutes		Same as local fixed route
Vehicle loading <sup>2</sup>	-	What percent of seated capacity is utilized (having a seat is more important on longer intercity routes)	Ridecheck (in future, APC data)	Local: Generally <100% Intercity: 12-25 (some trips may exceed 100%)	100%	120%	100%	100%

Performance Measure	Goal and/or Objective	Definition	Data Source	Existing	Performance Standards <sup>1</sup>			
					Intercity Fixed-Route	Local Fixed-Route	Flex Route / Shuttle	DAR or ADA Paratransit
Vehicle type (see Chapter 7)	2.2	Match vehicle to service type and route context	N/A	Varies	Large cutaway or 30-foot bus	Large cutaway or 30-foot bus	Small cutaway	Van or small cutaway
Stop spacing	-	Close stops provide more access (shorter walking distance) but increase travel times; a balance is needed	YCTA Stop Inventory; GTFS and GIS Data	Not tracked	> ½ - 1 mile within communities	> ⅛ mile	Varies based context	N/A
Travel time ratio (bus to auto)	1.3	Ratio of bus to auto travel time for a particular route or trip; if the bus travel time far outweighs driving time, those with a choice are likely to drive	Schedules and Google maps	N/A	1.3	1.5-2.5	1.5 - 3	2-3

Note: These metrics can be applied when designing or redesigning services, with the exception of passenger loading which can be evaluated monthly or quarterly once passenger counts are automated.

## Cost Efficiency and Cost Effectiveness Standards

Cost efficiency and cost-effectiveness standards evaluate YCTA's level of output (service hours and miles) against the cost to operate service.

Figure 11-3 Cost Efficiency and Cost Effectiveness Standards

Performance Measure	Goal and/or Objective	Definition	Data Source	Existing YCTA Performance	Existing Performance Compared to Peers (2015 NTD)	Performance Standards <sup>1</sup>			
						Intercity Fixed-Route	Local Fixed-Route	Flex Route / Shuttle	DAR, ADA Paratransit
Operating cost per revenue hour	6.2	Cost of providing service, divided by the number of hours each bus is in service	NTD <sup>7</sup> , YCTA Reporting <sup>8</sup>	\$55 Fixed-Route: \$65 Dial-A-Ride: \$42	68% of peer median (\$79)	\$75 (2018, adjusted for inflation)	\$65 (2018, adjusted for inflation)	\$65 (2018, adjusted for inflation)	
Operating cost per trip	6.2	Cost of providing service, divided by the number of passenger trips provided	NTD <sup>7</sup> , YCTA Reporting <sup>8</sup>	\$6.85 Fixed-Route: \$6 Dial-A-Ride: \$10	94% of peer median (\$7.27)	\$5-7 (2018, adjusted for inflation)	\$7-10 (2018, adjusted for inflation)	\$10-25 (2018, adjusted for inflation)	

Note: These metrics can be tracked annually, with peer comparisons updated at least every 5 years.

## Service Efficiency Standards

Transit services utilize public dollars and are responsible to operate in an efficient manner; service efficiency standards measure efficient use of resources.

Figure 11-4 Service Efficiency Standards

Performance Measure	Goal and/or Objective	Definition	Data Source	Existing YCTA Performance	Existing Performance Compared to Peers (2015 NTD)	Performance Standards <sup>1</sup>			
						Intercity Fixed-Route	Local Fixed-Route	Flex Route / Shuttle	DAR or ADA Paratransit
Passengers per revenue hour	1.1	Average number of passengers a bus carries for each hour it is in service	NTD <sup>7</sup> , YCTA Reporting <sup>8</sup>	7.9 Intercity and Local Fixed Route: 11.8 Dial-A-Ride: 3.2	79% of peer median (10.1)	8-12	8-16	4-10	2-4
Passengers per revenue mile	1.1	Average number of passengers a bus carries for each mile it travels	NTD <sup>7</sup> , YCTA Reporting <sup>8</sup>	0.4 Intercity: 0.4 Local: 0.9 Dial-A-Ride: 0.3	83% of peer median (0.5)	0.3 - 0.5	1	0.4 – 0.8	0.3
Farebox recovery ratio	2.7, 6.1	Percent of operating expenses covered by passenger fares	NTD <sup>7</sup> , YCTA Reporting <sup>8</sup>	15% (System-Wide)	107% of peer median (11%)	10-15%			

Note: These metrics can be tracked monthly or quarterly, with peer comparisons updated at least every 5 years.



## Passenger Comfort/Safety Standards

This set of benchmarks tracks customer satisfaction.

Figure 11-5 Passenger Comfort and Safety Standards

Performance Measure	Goal and/or Objective	Definition	Data Source	Existing YCTA Performance	Performance Standards <sup>1</sup>			
					Intercity Fixed-Route	Local Fixed-Route	Flex Route / Shuttle	DAR or ADA Paratransit
On-time performance	6.2	How often a vehicle leaves early or late. Typically no more than 1 minute early or 5 minutes late counts as "on time."	Ridecheck, YCTA Reporting	Local: 58-83% Intercity: 44-71% Dial-A-Ride: XX%	80-95%	85-95%	85%	90-95%
Customer information	3.1, 3.3	Online and printed materials (e.g., website, brochures, mobile apps etc.) translated into other languages as determined in YCTA Title VI and LEP plan, or translation available through a spoken or electronic translation service.	Review of YCTA Online and Printed Materials and Applications	Spoken language translation available	100%			
Passenger complaints	3.5	Number of customer complaints received (indicator of customer satisfaction)	YCTA Reporting	XX driver or system complaints per 100,000 boardings	No more than 25 legitimate complaints per 100,000 boardings			
Safety	4.1	Bus accidents disrupt service and indicate operator training needs or street design problems	YCTA Reporting	XX Safety Issues or Incident Reports per 100,000 revenue miles	No more than: 1 preventable accident per 100,000 miles; 2 accidents per 100,000 revenue miles; 2 major accidents per 1,000,000 revenue miles			
Road calls / maintenance	4.3	Number of times a vehicle must be taken out of service.	YCTA Reporting	XX road calls per 100,000 revenue miles	No more than 10 per 100,000 revenue miles.			
No show / late cancellation rate	-	Percent of scheduled trips where the passenger is a no-show or failed to provide adequate notice to cancel a trip (indicates unproductive vehicle time)	YCTA Reporting	XX% for ADA, DAR	N/A		> 5%	> 5%
Trip denials	2.2	ADA trips where YCTA was unable to provide a request ride within 1 hour of the time requested by the passenger (no ADA trips should be denied)	YCTA Reporting	XX% for ADA	N/A			No patterns of denied service allowed per ADA

Note: These metrics can be tracked monthly or quarterly.

## Other Measures: Transit Access and Service Provided/Consumed

This set of measures tracks access to transit (share of population and jobs that live within ¼-mile of a bus stop) and the amount of service provided (service hours) and consumed (ridership) relative to Yamhill County's population within urban growth boundaries (UGBs).

Figure 11-6 Transit Access and Utilization Measures

Performance Measure	Goal and/or Objective	Definition	Data Source	Existing YCTA Performance	Existing Performance Compared to Peers (2015 NTD)	Performance Standards <sup>1</sup>			
						Intercity Fixed-Route	Local Fixed-Route	Flex-Route / Shuttle	DAR or ADA Paratransit
Service hours per capita	2.4	Annual service hours divided by population with UGBs (how much service is provided)	Census, PSU, and/or NTD <sup>7,8,9</sup>	0.42 (based on UGB population)	58% of peer median (0.73) Range: 0.28 to 1.24	Increasing trend and comparison to peer median			
Ridership per capita	2.4	Annual riders divided by population within UGBs (how much service is used)	Census, PSU, and/or NTD <sup>7,8,9</sup>	2.9	30% of peer median (9.9) Range: 2.9 to 16.8	Increasing trend and comparison to peer median			
Service Availability <sup>2,3</sup>	2.5, 5.1	What percent of the population lives within a ¼- and ½ mile of a transit stop	Census <sup>4,5</sup>	70% of employees within ¼-mile of a transit stop (2014 US Census LEHD) 60% of residents in cities within ¼-mile of a transit stop (2010 US Census) Approximately 60% low-income population (200% of federal poverty level) within ¼-mile of a transit stop.	N/A	Increasing trend as TDP is implemented. A standard of 75% of employees, 70% of residents, and 70% of low-income population is recommended within ¼-mile access and 90% or more within ½-mile access. (FTA does not require a certain standard, but does require tracking progress. Standards can be defined locally.)			N/A
Transit mode share	-	The percent of trips taken via transit shows transit's role in achieving Transportation Planning Rule goals of reducing VMT	American Community Survey ACS 5-Year Estimates (Table S0801) <sup>5</sup>	Yamhill County: 1% Incorporated Communities: 1% (2011-2015 average)	Statewide average: 4%	Increasing trend and comparison to peers			

Notes for Figure 11-2 to Figure 11-6:

<sup>1</sup> Standards are preliminary thresholds of acceptable performance based on peer systems and industry norms.

<sup>2</sup> Represents a Title VI required measure (system-wide service standard per FTA Circular 4702.1B). FTA does not prescribe the benchmark itself, but the tracking of such metrics.

<sup>3</sup> Measure for STIF program

<sup>4</sup> US Census, 2010 (updated every decade); this data has finer geographic units than American Community Survey data, which is a sample of the population and has large boundaries in parts of the YCTA service area.)

<sup>5</sup> American Community Survey, 2011-2015 5-Year Estimate (rolling 5-Year estimates on an annual basis).

<sup>6</sup> US Census Bureau, Longitudinal Household Employer Dynamics (LEHD), 2014 (updated annually)

<sup>7</sup> National Transit Database (NTD), 2015

<sup>8</sup> YCTA Reporting, 2016

<sup>9</sup> PSU Population Research Center (PRC), 2017

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# APPENDICES

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