

CHAPTER

7

Transit Plan

This chapter summarizes existing and future transit needs in the City of West Linn. The following sections outline the criteria used to evaluate needs, strategies for implementing a transit plan, and the City of West Linn transit plan. The method used to develop the transit plan combined TriMet, city staff and other agencies input.

Background

TriMet is the regional transit provider for the Portland area and operates the fixed route transit service in West Linn, which is located near the southern edge of TriMet's service area. West Linn is near the end point of the regional service system, with only two routes serving the city:

- Route 35- Macadam Avenue, from Portland City Center to Oregon City Transit Center
- Route 154- Willamette Falls Drive to Oregon City Transit Center

Route 35 operates between downtown Portland and the Oregon City Transit Center, and includes 18 stops along Highway 43 within the city limits of West Linn. There is one park-and-ride lot, located at the Emanuel United Presbyterian Church near the Cedar Oak Drive intersection with Highway 43 (refer to Figure 7-1). In addition to commutes into downtown Portland, this route can be used for connections to other routes via Transit Centers in Lake Oswego and in Oregon City.

Route 154 operates from the Oregon City Transit Center along Willamette Falls Drive, and returns via a loop along 10th Street, Blankenship Road, and Ostman Road. The route includes 18 stops, with connections possible from the Oregon City Transit Center. No park and ride lots are provided along the remainder of the route.

On weekdays, bus services for Route 35 operate between approximately 5 a.m. and midnight, with about 30 minutes between buses during commute hours. Off-peak hours have 45 to 60 minutes between successive buses. Route 154 operates between approximately 6 a.m. to 6 p.m., with about 30 minutes between buses during afternoon commute hours, and 60 minute headways during other periods.



Transportation System Plan

FIGURE 7-1

EXISTING/PROPOSED TRANSIT FACILITIES

LEGEND

- Bus Route w/ Route No. < 30 Min. Headway
- Bus Route w/ Route No. > 30 Min. Headway

Transit Facilities

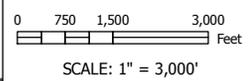
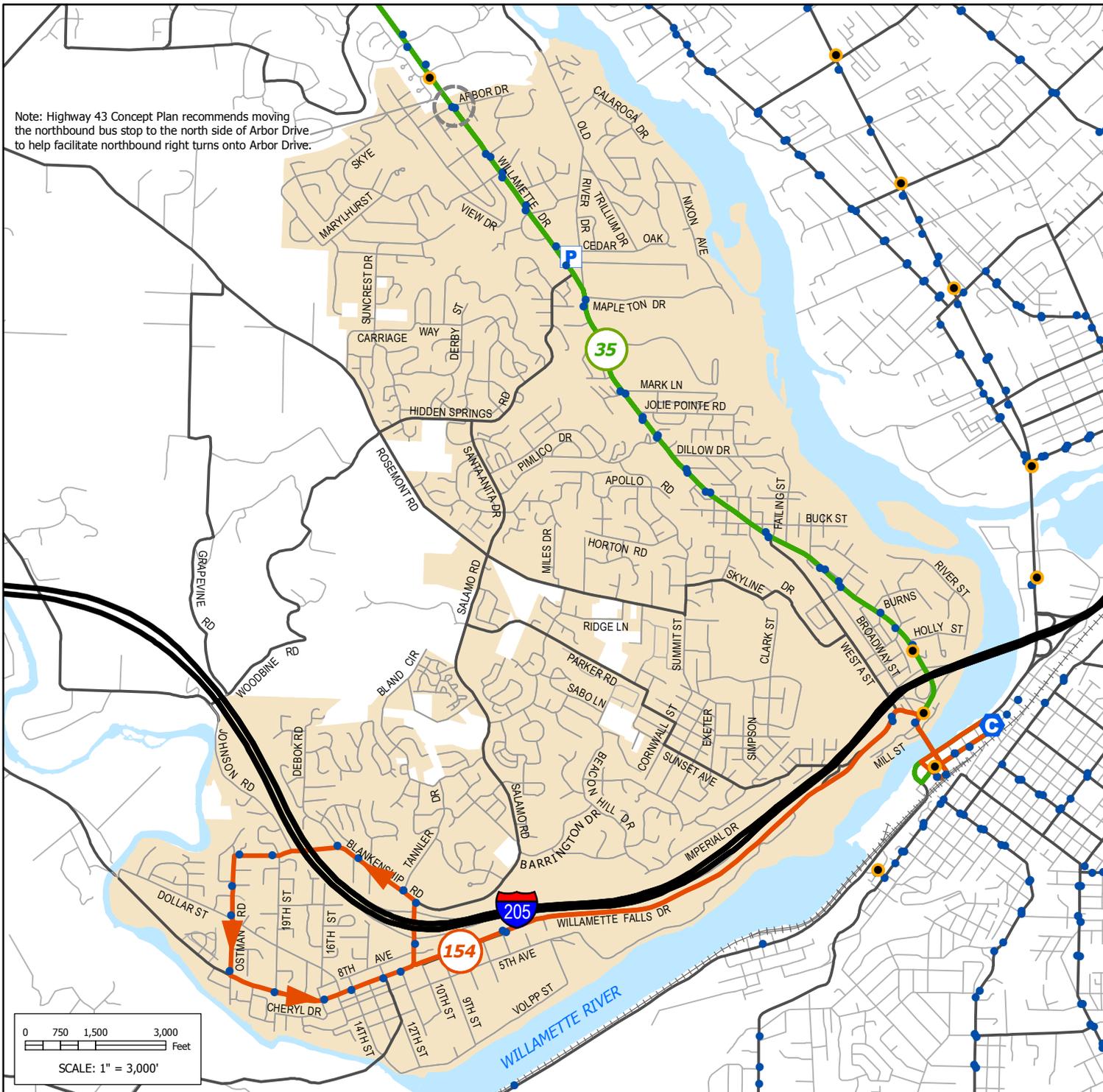
- Stop
- Shelter
- Transit Center
- Park and Ride

- Freeway
- Major Roads
- Streets
- Railroad
- Water
- City Limits

Note: bus routes outside West Linn not shown



Note: Highway 43 Concept Plan recommends moving the northbound bus stop to the north side of Arbor Drive to help facilitate northbound right turns onto Arbor Drive.



The two bus routes that operate within the city combine to provide service within one-half mile of many of the city's residents. All residents to the east of Highway 43 lie within the one-half mile range, as do the residents of the Willamette neighborhood. Neighborhoods farther to the west of Highway 43, Skyline Ridge, Marylhurst, Hidden Springs, Rosemont Summit, and Sunset are not served by fixed route transit. Additionally, no direct connections exist to Tualatin and Wilsonville, which are neighboring suburban cities with significant employment areas.

Many bus riders on existing bus lines are West Linn residents commuting to employment in downtown Portland and adjacent areas. Commuters use this bus route not only out of personal preference (avoiding frustrating automobile traffic in their vehicles, socializing with other passengers, time spent on other activities during the commute rather than driving a motor vehicle) but also for economic reasons. For most bus commuters the cost of public transit is less than the cost to park a private vehicle in the Portland central city area. Bus fares range from \$1.75 to \$2.05 for each trip, depending on the length of the trip. Round trip fares into downtown Portland would be \$4.10, which is far below the price to drive and park a private automobile in the Central City area.

The TriMet Spring 2007 Bus Ridership survey reported approximately 480 boardings and alightings (i.e., patrons getting onto or exiting the bus) for Route 35 within the city limits, and 180 boardings/alightings for Route 154 on a typical weekday. This probably represents somewhere between 240 to 300 bus patrons for Route 35 and 90 to 120 patrons for Route 154, depending on how many of these were one-way versus two-way trips. Outside of the city, Route 35 had an additional 3,600 on / off actions during the service day. By comparison, the TriMet system typically has 420,000 on / off actions on the buses, and another 210,000 on the light rail lines, according to the same 2007 Ridership Survey.

Transportation Disadvantaged

Many people have trouble using public transportation for reasons ranging from emotional and physical disabilities to financial difficulties. This group, referred to as the transportation disadvantaged, is a significant and growing segment of the U.S. population (Gray, Hoel, 1992) The largest group of the transportation disadvantaged consists of those over 65 and those with a physical or mental disability. Because these groups do not share the same travel patterns and because their travel needs are diverse, providing them with transit service is a challenge. However, it is critical that steps be taken to meet these needs, as this group frequently has few alternatives to transit service.

Federal law also mandates assistance for those with special needs. The Americans with Disabilities Act of 1990 requires transit agencies to make their services fully accessible to disabled persons and to provide para-transit services for those unable to use accessible transit.

The 2000 census indicates that 7.8 percent of West Linn's population, or 1,900 persons, are over the age of 65. Also, 3.9 percent, or 940 persons, are below the poverty level. While more recent census estimates do not contain this level of detailed information, it can be assumed that the numbers of transportation disadvantages persons has risen along with the overall city

population. These individuals, and youths below the legal driving age and/or without access to a motor vehicle, represent some of the West Linn population that is considered transportation disadvantaged.

Special transit services are available to residents of West Linn through the Pioneer Community Center Transportation Program, TriMet Lift and Shuttle Services, Loaves and Fishes, and the Transportation Reaching People (TRP) Volunteer Program.

The Pioneer Community Center Program is part of the Clackamas County Transportation Consortium, which is dedicated to providing coordinated transportation services to seniors and ADA-eligible people. The program, which is funded by the county and the City of West Linn, operates one van. The van is lift-equipped and operates Monday through Friday, from 9 AM to 3:30 PM. Clients can call on the same day that a ride is needed. The users of this transportation system are primarily seniors who have difficulty driving or taking fixed route buses.

TriMet, the primary public transportation provider in the region, provides door-to-door service to registered customers who are certified as unable to use TriMet's regular service because of a physical or mental disability. The service operates with lift-equipped mini-buses and vans from 4:30 AM to 2:30 AM, seven days a week. Services are provided within a three-quarter mile radius of regular TriMet fixed routes. The fare for this service is currently \$1.70 per one-way ride; a book of ten tickets costs \$17.00, and a LIFT Monthly Pass is \$48.00.

Another special transit service available for West Linn residents is the Transportation Reaching People program. In this program, community volunteers use their own vehicles to provide rides for medical, business, and social service appointments, as well as for recreational trips for older citizens, disabled individuals, or those in rural areas without access to other means of transportation.

Needs

1. Routes 35 and 154 provide only a basic level of transit services for the community. The locations of these routes are convenient for roughly the eastern half and far southern portion of the community, but are too far away for convenient walking access for the majority of the city, which lies far beyond the typical one-half mile walking distance from a transit stop. This limited service excludes the Tanner Basin and neighborhoods along Rosemont Road.
2. There is no inter-city transit access to other nearby communities that have significant employment centers, such as Tualatin and Wilsonville. For example, the TriMet routing system requires two transfers to get to Tualatin, taking about 90 minutes. More efficient services are needed to these major employment centers, and major transit centers, such as the new Commuter Rail services from Wilsonville to downtown Beaverton.

3. Many West Linn residents feel the City is not well served by public transit. With only one major trunk line and the access provided along Willamette Falls Drive, residents perceive that they are not able to easily move within or out of the City on public transit. Provision of service is hampered by topography and a lack of east-west routes.
4. Another issue of concern is amenities, such as bus benches and bus shelters. These amenities enhance a transit system and make a system more user-friendly. As bus transit has in the past suffered from image problems, steps that can make this mode as comfortable and accommodating as possible may help encourage ridership. TriMet generally limits placement of bus shelters to locations with 35 or more weekday boardings. Due to low ridership levels, the City may need to directly fund these amenities.

The Transit Investment Plan, created to direct regional transit growth in the TriMet service area and provide a framework for how transit investments are made, provides a list of priorities for regional transit service¹ planning methods. These priorities are, in order:

1. Maintain the quality of the existing system
2. Grow the high capacity transit system
3. Expand the Frequent Service system
4. Improve local service

Priorities were established to direct investment for expansion of service and provision of amenities. According to the hierarchy, local service expansion routes in West Linn receive the lowest priority for regional transit funds. However, local transit needs could be met through alternatives to fixed route expansion such as local shuttle services and/or vanpools or the phasing of local service capital projects within the West Linn service area in partnership with TriMet.

Transportation Disadvantaged

No specific problems with transportation services for disadvantaged West Linn residents have been identified. As the population continues to age, the needs of the elderly and disabled are expected to increase.

The City of West Linn should continue to support the Clackamas County Transportation Consortium services to the elderly and ADA-eligible residents, and other services currently being provided. Also, because needs are expected to increase, West Linn should work with existing providers to assess the needs and develop ways to best meet them.

Some inexpensive ways in which the city of West Linn can assist in promoting the services currently offered to the elderly and disabled are to post notices on their public bulletin boards, and to use meetings with the public to make notices and fliers available.

¹ *Transit Investment Plan* TriMet, 2003.

Criteria

The City's Comprehensive Plan contains transportation goals and policies that guide transportation system development in West Linn. The Transit policies cover the full range of transit related issues. Several of the policies were identified as useful for addressing transit needs in the Transportation System Plan, and are listed below.

TRANSIT-RELATED GOALS

1. Provide a transportation system for the City of West Linn that:
 - a. Provides for maximum mobility while encouraging modes of transportation other than the automobile.
 - b. Provides for connectivity within and between neighborhoods and community centers, using new and existing transportation services that are consistent with Metro's street and walkway spacing standards.
 - c. Is convenient, safe, and efficient.
2. Provide a cost-effective balanced transportation system, incorporating all modes of transportation (including motor vehicle, bicycle, pedestrian, transit, and other modes).
3. Develop transportation facilities that are accessible to all members of the community and minimize out-of-direction travel.

Transit Policies

1. Coordinate with TriMet to encourage the provision of transit **amenities** such as bus shelters to increase potential ridership.
2. Promote a cohesive transit network **connecting** the four commercial centers in Willamette, Bolton, Robinwood, and Tanner Basin.
3. Encourage provision of **regional** transit service between West Linn and other suburban communities in the Portland Metropolitan Area.
4. Encourage the development of modes of mass transit for those residents of the City who must **commute** to jobs outside the City limits.
5. Improve **pedestrian and bicyclist** accessibility along major transit routes and to transit stations.
6. Support a public transit system that is **accessible** to the largest number of people by:
 - a. Locating transit-oriented development around transit stations, along major transit routes, and in the designated Town Center area.
 - b. Supporting more intense and mixed-use zoning designations in areas around transit stations, along major transit routes, in the designated Town Center, Corridor (Highway 43) and along designated Main Street areas identified in the Metro 2040 Growth Concept Plan, through provisions in the Comprehensive Plan and Zoning Ordinance. The City will seek higher concentrations of employment opportunities, residential development and commercial uses in these areas. The City will ensure that

- development is built consistently with the density allowed by zoning, while protecting the livability of existing neighborhoods.
- c. Encouraging provision of housing for the elderly and moderate income families to be located in close proximity to public transit facilities and services, and interconnected transportation facilities such as walkways and bikeways.
 - d. Coordinating with TriMet to ensure that pedestrians and disabled people are accommodated as needed at transit locations and with transit services.
 - e. Coordinating with TriMet to ensure that transit opportunities are provided to employees at major employment and community centers.
 - f. Ensuring that transit-oriented public facilities are located along the Primary Transit Network as defined in the Regional Transportation Plan.

Strategies

TriMet is responsible for any changes in routes through their annual transit service plan process. In order for the City to have its transit needs assessed, the City can provide input to TriMet through this process.

Several strategies were developed for the implementation of future transit facilities in West Linn. These strategies were developed to provide the City with priorities in providing guidance to TriMet since it is likely that available funding will be insufficient to address all of the projects identified in the Transit Master Plan. These priorities are not necessarily in order.

Strategy 1 - "Provide Express Routes to Regional Employment Centers"

This strategy is aimed at providing service directly from West Linn transit centers to regional employment centers such as Portland, Washington Square, the Sunset Corridor, the City of Tualatin and the City of Wilsonville. This might include a few local stops followed by express service to a central transit shelter or implementing a vanpool system for employees in these areas.

Strategy 2 – "Provide Bus Shelters/Improved User Amenities"

This strategy focuses on installation of bus shelters and other user amenities along bus routes in West Linn. The need for bus shelters at bus stops, as well as other user amenities, should be evaluated in conjunction with any new commercial or residential development adjacent to a transit street. Typical daily boarding thresholds of 35 patrons or more could be used to support installation of a covered bus shelter and bench.

Strategy 3 - "Provide Additional Park & Ride Lots"

This strategy provides park & ride lots at locations where concentrated transit demand exists or where it is desirable for TriMet to stop.

Strategy 4 - "Provide Access to Activity & Service Centers"

This strategy focuses on providing transit access to destinations such as community centers, hospitals, schools, churches, etc.

Table 7-1 summarizes these strategies in terms of meeting the transportation goals and policies of West Linn. The policies that appear in the table are from the City's Comprehensive Plan and are described in the preceding section.

Table 7-1: Transit Facility Strategies Comparisons

Strategy	Policies					
	1 Amenities	2 Connect	3 Regional	4 Commute	5 Ped/Bike	6 Accessible
1. Provide Express Routes to Regional Employment Centers		●	●	●		○
2. Provide Bus Shelters/Improved User Amenities	●				●	●
3. Provide Additional Park & Ride Lots	●		●	●	○	●
4. Provide Access to Activity & Service Centers		●				●
<ul style="list-style-type: none"> ● Fully meets criteria ● Mostly meets criteria ○ Partially meets criteria Does not meet criteria 						

Transit Plan

Transit enhancements within the TriMet service area are ultimately decided based on regional transit goals. As such, West Linn has little control over dictating the expansion of local service or decreasing headways. These decisions can be influenced however, if the proper densities are achieved along the transit routes, a decision over which the City has more control. Another tactic for increasing transit service to the City of West Linn is through inter-governmental agreements and funding strategies between the City of West Linn and TriMet in order to leverage transit dollars for local projects, providing better connections to transit facilities and supplying amenities at transit locations. Transit projects are summarized in Table 7-2. Transit projects were determined based on strategies listed above and project feasibility.

Table 7-2: Potential Transit Projects

Rank	Project	Agency Responsible	Description
1	Provide Transit Amenities at Major Transit Stops	West Linn/TriMet	Provide shelters, information kiosks, etc along key transit routes in West Linn with land use development. Expand park and ride lots where demand exceeds existing capacity.
2	Improve Pedestrian Connections to Transit Facilities	West Linn/TriMet	Construct sidewalks, crosswalks, etc. adjacent to transit routes and facilities (i.e. park-and-ride lots, bus stops, etc.). Within one-quarter mile of bus stops, focus on enhancing pedestrian access. Give priority to improvements within the designated overlay district downtown.
3	Increase Density Adjacent to Transit	West Linn	Direct growth to increase the density of houses within transit lines in the City of West Linn in an effort to support regional transit service goals.
4	Decrease Headways	TriMet	Provide more frequent transit service during peak commute periods.
5	Provide More Local Service	West Linn/TriMet	Provide services along Rosemont Rd and/or Salamo Rd. Expand fixed-route services, as development requires. Time additional transit service to coordinate with major road extensions or street improvements.

Providing additional transit amenities at existing transit stops can improve and increase ridership. TriMet generally limits placement of bus shelters to locations with 35 or more weekday boardings. Due to low ridership levels, the City may need to directly fund these amenities². A variety of shelter layout options exist to meet the specific needs and constraints of the location³, though shelters need to meet local jurisdiction standards for structural integrity and wind load. By constructing 3-5 bus shelters (at a cost of approximately \$10,000 each), transit use will become a more attractive option.

Currently, there is just one park and ride facility⁴ located in the City of West Linn, providing the opportunity for residents to be connected via transit to the larger Portland region. Additional park and ride lots would increase transit accessibility for those individuals that do not live within walking distance of transit stops. Church sites in particular may allow midweek parking opportunities if shared usage agreements are feasible. Potential new locations could include the Bolton shopping center, West Linn Public Library, Willamette

² A similar city-funded effort has occurred in Lake Oswego. A TriMet crew would need to be hired to perform the work in order to meet union rules.

³ Bus Stop Guidelines 2002, TriMet, October 2002.

⁴ TriMet currently utilizes the parking lot of Emmanuel Presbyterian Church and has recently renewed the agreement at that location.

Christian Church, or along Blankenship Road. Due to low demand at the existing park and ride lot, TriMet is currently not considering specific additional park and ride locations at this time, but can assist in user agreements with potential site owners as the need arises⁵.

Improving pedestrian connections to transit facilities is an important step in increasing accessibility of the existing transit facilities. Additional sidewalks and pedestrian refuge islands adjacent to Highway 43 will improve safety for not only potential transit riders but all pedestrians. Improvements described in the Highway 43 Concept Plan provide these crossing safety projects at key locations.

Implementation of a local circulator bus could be a joint City / TriMet effort and would increase transit coverage in West Linn. A potential route could include Salamo Road to Rosemont Road, down to Bolton shopping center and then returning along Willamette Falls Drive. Such a route would provide service to local destinations, as well as regional connections via Route 35 or 154. Previous service of Route 154 included service along Salamo Road and Rosemont Road (Figure 7-2) but was changed due to low ridership.

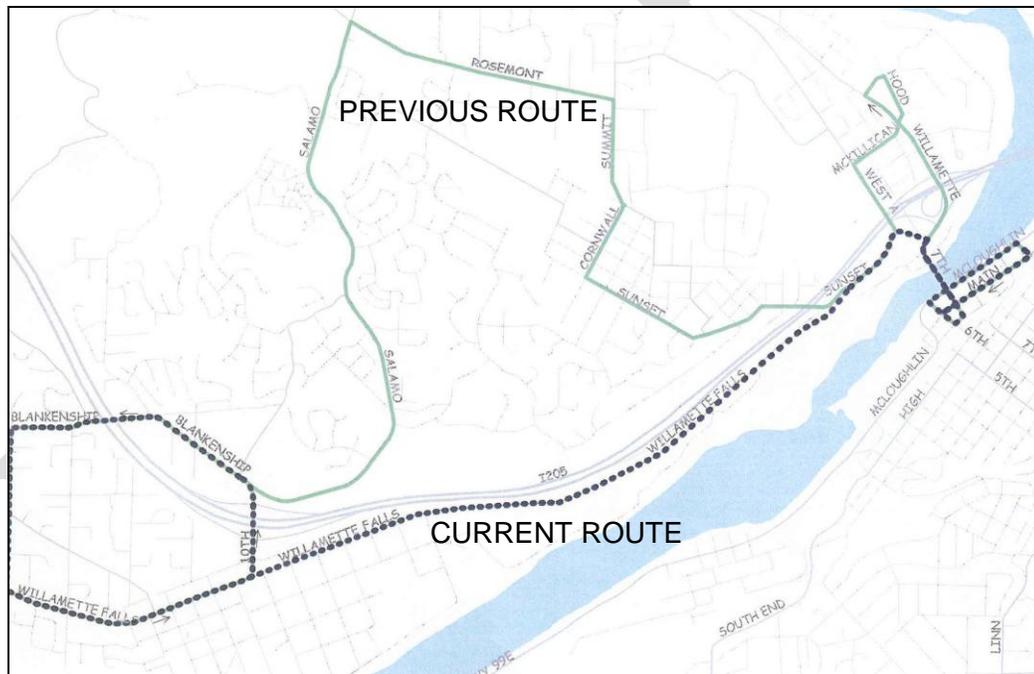


Figure 7-2: TriMet Route 154 – Previous and Current Service Routes⁶

In fall 2008, Westside Express Service (WES) will begin as commuter rail service in Washington County. The north-south route from Beaverton to Wilsonville will take approximately 30 minutes and will run on 30 minute headways during weekday commute periods. The route will link Beaverton, Tigard, Tualatin and Wilsonville directly and will

⁵ Contact Young Park, Manager of Capitol Projects, TriMet.

⁶ <http://www.ci.west-linn.or.us/Community/bus/Bus154route.htm> June 2008.

provide connections to additional transit service and lines.

The future WES service provides the opportunity to further connect West Linn riders with the surrounding Metro area. Current transit service from West Linn⁷ to the Beaverton Transit Center requires approximately 90 minutes of travel. Future bus lines linking West Linn directly to Tualatin or other transit centers along the WES route would decrease travel time to Washington County locations.

The Metro Council has approved several options for further study to connect Lake Oswego to downtown Portland. The options include enhanced bus and streetcar extension alternatives. Either alternative may provide the potential for future connections to transit service in West Linn.

One aspect considered when assessing the potential for new bus service is the density of housing and employment. A land use density analysis was conducted to identify areas of the City that could be likely to support transit service. The minimum land use density⁸ required to support a fixed route transit bus service with 1-hour schedule between arrivals is about four (4) housing units per acre or three (3) employees per acre. Figure 7-3 shows those areas in West Linn that meet this transit supportive density threshold with both the base year 2005 and future year 2030 land use cases.

Two areas that meet the base year 2005 density levels are located adjacent to I-205 near Highway 43 (served by Route 43) and in the Willamette neighborhood loop currently served by Route 154. The third area that meets transit supportive density levels is along Salamo Road south of Rosemont Road, a location that is currently not served by transit. Additional areas that are projected to meet future density thresholds include a northern portion of the Willamette neighborhood and along Hidden Springs Road and the northern portion of Highway 43. Areas that meet the density thresholds in Figure 7-3 should be considered for future transit routes. However, service to the Hidden Springs area would be difficult due to the grade of roadways, and a central route serving the additional areas shown in Figure 7-3 would likely resemble the prior Route 154 (Figure 7-2).

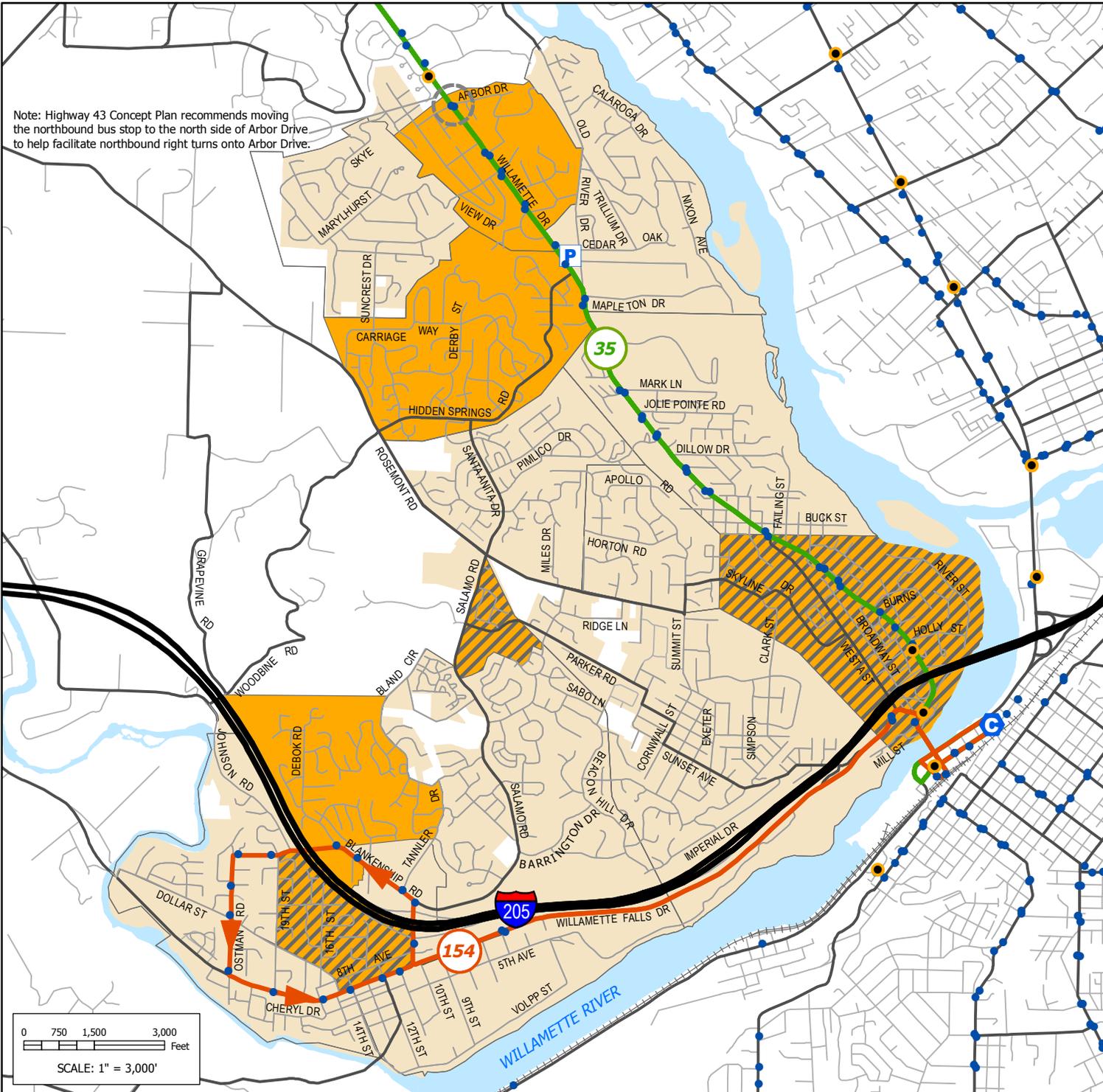
To better understand the potential demand for transit, the City of West Linn should conduct a survey of its residents to assess location, frequency, and willingness to pay for additional transit services and coverage in the City. Such a survey is beyond the scope of the TSP efforts but could be included in a comprehensive transit plan for the City that sets the foundation for additional transit routes.

⁷ Measured from 10th Street/Willamette Falls Drive, using TriMet's Trip Planner online service.
<http://trimet.org/>

⁸ Thresholds for minimum land use density to support fixed-route transit service are based on definitions in the 2000 *Highway Capacity Manual*, Chapter 27 for Transit service analysis methodologies.

FIGURE 7-3

POTENTIAL TRANSIT SUPPORTIVE* AREAS



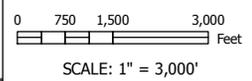
LEGEND

- 2005 Transit Supportive Area
- 2030 Transit Supportive Area
- Bus Route w/ Route No. < 30 Min. Headway
- Bus Route w/ Route No. > 30 Min. Headway

Transit Facilities

- Stop
- Shelter
- Transit Center
- Park and Ride
- Freeway
- Major Roads
- Streets
- Railroad
- Water
- City Limits

Note bus routes outside West Linn not shown.
 *Potential transit supportive areas based based on quantitative housing and employment density data and do not necessarily reflect the views of residents



Complementing Land Use Actions

There are three determining factors that play a role in the provision of a successful transit system: net housing density, transit level of service (frequencies) and proximity to station locations. The City of West Linn has the ability to control the net housing densities located around current and potential transit stops and the proximity of development to these stops. While TriMet makes decisions regarding the third factor, transit level of service, the focus of development and land use decisions within proximity of transit locations will greatly effect the service decisions made by TriMet.

In order to provide a density high enough to support frequent service scheduled for Route 35 within ten (10) years, housing density along the current transit corridor should be increased. Guiding development within the City of West Linn to this corridor would help support the regional transit goal of providing an efficient and effective transit system, as well as reducing reliance on automobile for inter-jurisdictional work trips made by individuals living or working in this corridor.

In order to promote higher density developments, the City should consider the following requirements in the City of West Linn Development Code that provides approval criteria related to public transit:

- (a) Provisions within the plan shall be included for providing for transit if the development proposal is adjacent⁹ to existing or proposed transit route;
- (b) The requirements for transit facilities shall be based on:
 - The location of other transit facilities in the area; and
 - The size and type of the proposal.
- (c) The following facilities may be required after City and TriMet review:
 - Bus stop shelters;
 - Turnouts for buses; and
 - Connecting paths to the shelters.

Transit Action Plan

The transit action plan list was created to identify transit projects that are reasonably expected to be funded by the year 2030. Transit action plan projects are listed in Table 7-3, and are a refined list of the general projects listed in Table 7-2. Further refinement of the projects (including specific locations for transit shelters and potential local transit routes) will be developed through the Transit Expansion Study, which includes a survey of residents. Costs are included to serve as a placeholder for these projects.

⁹ The code provision should define adjacent as having a bus stop within 500 feet of the property.

Table 7-3: Transit Action Plan

Priority	Project	Agency Responsible	Description	Cost (\$1,000s)
High	Transit Expansion Study and Survey	West Linn	Explore the feasibility of local fixed-route transit service including surveys of residents and potential users.	\$75
High	Provide Transit Amenities at Major Transit Stops	West Linn/TriMet	Provide shelters, information kiosks, etc along key transit routes in West Linn with land use development. Specific locations (5) to be determined through transit study and survey.	\$50
High	Improve Pedestrian Connections to Transit Facilities	West Linn/TriMet	Construct sidewalks, crosswalks, etc. adjacent to transit routes and facilities.	\$0*
Med	Decrease Headways	TriMet	Provide more frequent transit service during peak commute periods.	-
Med/ Low	Provide More Local Service	West Linn/TriMet	Expand coverage by providing local service to connect to existing transit lines. Specific locations to be determined through transit study and survey. This project is a placeholder for funds pending the outcome of the study.	\$TBD/yr
Transit Project Total (for 23 years)				\$TBD

NOTE: * Specific projects and costs included in Pedestrian Plan of this TSP