2040 TSP Appendix

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2040 TSP Appendix

Goals

Memorandum

Date: 2/9/2024

To: Tualatin project management team

From: Jai Daniels, Briana Calhoun, Kara Hall, and Kendra Breiland, Fehr & Peers

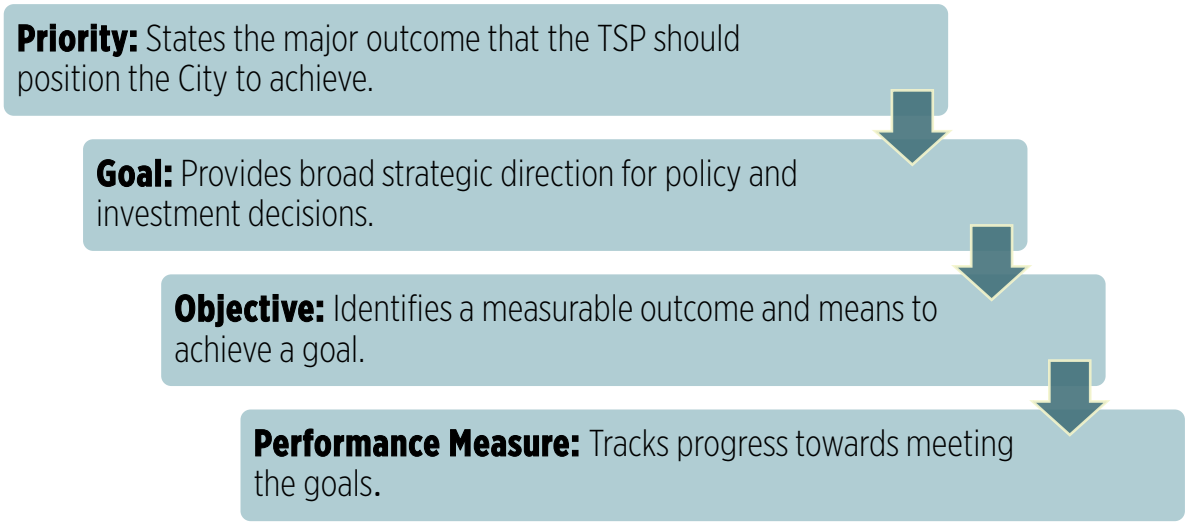
Subject: Transportation System Plan Goals

Why are we updating the Transportation System Plan?

A transportation system plan (TSP) brings together community members, City staff, and the City Council to establish a shared understanding of how the transportation system operates today, identifies needed improvements, and creates a vision for enhancing community mobility. This plan will build a shared vision for transportation in Tualatin that has community and City Council support. The plan will give the City tools for coordination with regional agencies, can be leveraged for external funding, and is rooted in a realistic understanding of what can be implemented and funded over the next twenty years.

The following five priority statements and goals were created from the feedback we heard during two project workshops with City staff and refined through staff comments, and a priorities discussion with Tualatin's City Council. After conducting outreach with the public to hear their top priorities for transportation and input from the Community Advisory Committee and City Council, these goals were further refined and finalized. The bullet points under each goal are draft objectives that would support the goal. Figure 1 describes the difference between the priority statements, goals, and objectives shown below.

Figure 1. Goal Elements



Advance Our Land Use Vision

Create a transportation system that enhances Tualatin's growing economy and future land use vision.

- Proactively plan the transportation system to support the needs of future community members and businesses.
- Advance the City's vision for the urban renewal areas, knowing that transportation can lay the groundwork for future land use and development changes.
- Connect jobs, housing, and services, especially for low-income residents and workers, through a range of safe, reliable, and connected transportation options
- Thoughtfully plan for freight access and circulation, in collaboration with partner agencies and the business community, to minimize safety concerns and support local business needs.
- Advocate for regional investments that catalyze smart growth in Tualatin

Provide a High Quality of Life

Safely and efficiently move people and goods to provide a high quality of life for people who live, work, learn, and play in Tualatin.

- Address vehicular bottlenecks on the highest use corridors.
- Create a connected street grid that provides alternative routes during traffic congestion or unexpected events.
- Address safety concerns for all modes of travel, and reduce the number of people injured or killed while using the transportation system.

- Reduce the effects of vehicular travel on neighborhood livability, walkability, and safety.
- Work with County, Regional, State, and National partners to maintain and improve the efficiency and safety of roadway connections to and from Tualatin.
- Work with partner agencies to manage traffic diverting off regional throughways onto Tualatin streets.
- Build, improve upon, and maintain safe access to schools and parks.
- Improve street lighting on key corridors to increase safety and comfort for travelers at night.

Expand Opportunities for Safe Multi-Modal Transportation

Expand travel options for users of all ages, abilities, and backgrounds by improving options for walking, rolling, cycling, and accessing transit.

- Align the Transportation System Plan with the Park and Recreation Master Plan to ensure that trails and parks are a part of the planned all ages and abilities transportation network.
- Expand the city's greenway system as Tualatin grows.
- Work with transit providers to advocate for expanded local and commuter transit service so that Tualatin residents, employees, and visitors can get where they want to go when they need it using transit.
- Enhance existing transit service and reliability in Tualatin and increase transit amenities in the City's right-of-way.
- Build a connected network of low-stress bicycle facilities that connect people to local destinations and the larger regional bike network.
- Fill sidewalk and bicycle facility gaps to establish a well-connected network that all community members feel safe using and that connects to schools, parks, trails, stores, and other key destinations.

Advance Climate and Health Goals

Reduce greenhouse gas emissions from the transportation system and support the City's climate and health goals.

- Support vehicle electrification.
- Increase the share of trips made without a car.
- Support transportation choices, such as walking and biking, that can increase physical activity and improve public health.
- Align the Transportation System Plan with the Climate Action Plan to ensure that both plans complement each other in achieving the City's goal of net zero emissions by 2050.

- Reduce emissions in areas that are disproportionately affected by pollution and historically underserved.
- Provide equitable modal choices that promote community health, especially for those that have historically lacked access to a variety of transportation options.
- Support transportation demand management strategies that reduce single-occupancy-vehicle use.

Invest Wisely

Maximize transportation funding by effectively maintaining the transportation assets we have, finding creative maintenance solutions that can help improve the transportation system, and leveraging outside funding opportunities.

- Identify high-impact transportation solutions, prioritizing those projects that are low-cost or require less maintenance over time.
- Invest in transportation demand management and systems management solutions to more efficiently use the transportation network that we have.
- Coordinate investments with regional agencies to promote strong regional transportation connectivity that helps people travel seamlessly from Tualatin to neighboring communities.
- Position the City for grant funding.
- Coordinate with regional and state agencies to fund improvements to roadways located in Tualatin but not owned by the City.

2040 TSP Appendix

Plans and Policy Review

Memorandum

Date: August 18, 2023

To: City of Tualatin Project Management Team

From: Briana Calhoun and Jai Daniels, Fehr & Peers

Subject: Tualatin TSP Update: Task 2.2 Plan and Policy Review

As one of the early steps supporting development of the Goals and Objectives for Tualatin's Transportation System Plan (TSP) update, this memorandum documents the review of existing local, regional, and state plans whose regulations and policies may affect transportation planning in Tualatin. Before finalizing new Goals and Objectives for Tualatin's TSP, which serves as a long-range plan to guide transportation policies and investments at the local, regional, and state levels, it is important to understand existing goals and polices and where there may be conflict between existing plans that set policy at any jurisdictional level.

The plans included in this review and their relevance to the TSP are presented in **Table 1** below. This is followed by a detailed description of each document, its relevance to the TSP update, and any goals and policies that are related to transportation.

Table 1: Plan and Policy Review and Issues Summary

Planning Document	Relationship
State Plans	
Statewide Planning Goals	TSPs must be consistent with the Statewide Planning Goals, particularly Goal 12: Transportation, which sets requirements for multi-modal plans.
Transportation Planning Rule (TPR), OAR 660-012	The TPR implements Statewide Planning Goal 12. The purpose of the TPR is to provide and encourage a safe, convenient, and economical transportation system. The Rule also implements provisions of other Statewide Planning Goals in order to plan and develop transportation facilities and services in close coordination with urban and rural development. The TPR directs TSPs to integrate comprehensive land use planning with transportation needs and to promote multi-modal systems that make it more convenient for people to walk, bicycle, use transit and drive less.
ODOT TSP Guidelines	The TSP Guidelines serve as a reference to ensure that required plan elements and methodology are employed in the development of the local TSP.
Oregon Transportation Plan (OTP)	The OTP's policies and strategies will guide the TSP, specifically in the areas of safety, equity, greenhouse gas emissions, sustainable and reliable transportation funding, and maintenance of the existing system and completion of critical connections.

Planning Document	Relationship
Statewide Transportation Improvement Program (STIP)	An expected outcome of this planning process is proposed recommendations that may eventually amend the STIP to include projects from the TSP.
Oregon Highway Plan (OHP)	The OHP will guide the TSP's management of the State highways within Tualatin's jurisdiction.
Oregon Bicycle and Pedestrian Plan (OBPP)	Tualatin's TSP should be consistent with the goals and guidelines for bicycle and pedestrian systems as described in the OBPP.
Oregon Public Transportation Plan (OPTP)	Tualatin's TSP should be consistent with the goals and guidelines for public transportation systems as described in the OPTP.
Oregon Freight Plan (OFP)	Tualatin's TSP should be consistent with the goals and guidelines for freight systems as described in the OFP.
Oregon State Rail Plan (OSRP)	Tualatin's TSP should be consistent with the goals and guidelines for rail systems as described in the OSRP.
Oregon Transportation Safety Action Plan (TSAP)	The TSAP will help the development of safety priorities for the Tualatin TSP in order to contribute to Oregon's vision of zero deaths and life-changing injuries by 2035.
Oregon Resilience Plan	The Oregon Resilience Plan provides guidance and priorities to maintain the seismic integrity of Oregon's multi-modal transportation system. Policies and standards adopted by Tualatin should consider additional guidance, concepts, and strategies for design related to facility resiliency in the event of seismic activity.

Planning Document	Relationship
Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction, and Greenhouse Gas Emissions Reduction Toolkit (STS)	The TSP should consider strategies identified in the STS and the Greenhouse Gas Emissions Reduction Toolkit to reflect Tualatin's commitment to reducing GHG emissions.
ODOT Highway Design Manual	The Highway Design Manual will guide the construction or major reconstruction of any State highways included within the TSP.
Regional Plans	
Washington County Transportation System Plan	Tualatin's TSP should be consistent with the policies, programs, and projects in the Washington County TSP. Any facilities in Tualatin that are owned or maintained by Washington County should meet Washington County standards.
Clackamas County Transportation System Plan	Tualatin's TSP should be consistent with the policies, programs, and projects in the Clackamas County TSP. Any facilities in Tualatin that are owned or maintained by Clackamas County should meet Clackamas County standards.
Metro 2040 Growth Concept	The Tualatin TSP should promote a balanced transportation system to move people and goods. The 2040 Design Types from the Growth Concept are the basis for regional land use and transportation policies and implementation. As an example, mobility targets – adopted both by Metro and the Oregon Transportation Commission – hinge on 2040 Design Type, as further discussed in the Oregon Highway Plan and Regional Transportation Plan reviews in this report.
Regional Transportation Plan (RTP)	Tualatin's TSP should be consistent with system classifications, performance targets, and projects for each transportation mode outlined in the RTP.

Planning Document	Relationship
Regional Transportation Functional Plan	This plan implements the RTP. Tualatin's TSP should be consistent with the performance measures and inventories required in the Regional Transportation Functional Plan.
Regional Active Transportation Plan (ATP)	Similar to the RTP, ensure consistency of the active transportation modal maps in the updated TSP with the classifications in the ATP network maps.
Regional Trails System Plan	The map includes existing trails and proposed trails in the Tualatin area, including the Ice Age Tonquin Trail and the Tualatin River Trail (also known as the Tualatin River Greenway) that should be included in TSP project development.
Tri-County Public Transportation Improvement Plan (PTIP) (FY2021-FY2023)	The PTIP assesses public transportation needs across the region and identifies proposed service and capital improvements. Its goals are based on goals from other plans, including but not limited to, the Oregon Public Transportation Plan, the Washington County TSP, and the TriMet Coordinated Transportation Plan.
Metro Climate Smart Strategy	The TSP update should consider policy areas and actions from the Climate Smart Strategy toolbox for integration into the updated TSP's policies, transportation design standards, programs, and project selection.
Local Plans	
Tualatin Transportation System Plan	Tualatin's current TSP should serve as a starting point for the TSP update. The TSP should meet the Transportation Planning Rule requirements and should be updated to reflect changing community and council priorities for the transportation system.

Planning Document	Relationship
Tualatin Comprehensive Plan 2040	The TSP is the transportation component of the Comprehensive Plan. The Comprehensive Plan will need to be updated to reflect the transportation goals and policies in Tualatin's TSP. The TSP should also not be in conflict with the goals in other sections of the Comprehensive Plan. New goals developed as part of the TSP process should not conflict with existing goals in the Comprehensive Plan.
Tualatin Parks & Recreation Master Plan	The TSP should consider any facilities and plan recommendations outlined in the Parks & Recreation Master Plan and how people will need to access those facilities, as well as any pedestrian or bicycle facilities that are recommended in the Plan. The TSP should not conflict with any of the policies in the Master Plan.
City of Tualatin Capital Improvement Plan (CIP)	The CIP is a source for planned projects and infrastructure and facility needs. Future CIPs are anticipated to include projects drawn from the TSP.
Tualatin, OR Development Code	All streets must be designed and constructed according to the City's preferred standard. The TSP may recommend changes to Street Standards and other aspects of the Tualatin Development Code.
The Core Opportunity Reinvestment Area Plan	This plan outlines a land use and transportation vision for downtown Tualatin. The TSP should be consistent with the specialized planning effort in this area and any proposed transportation facilities and goals, which may be incorporated into the TSP.

Planning Document	Relationship
Southwest and Basalt Creek Development Area Plan	This plan outlines a land use and transportation vision for the Southwest and Basalt Creek subareas in Tualatin. The TSP should be consistent with the specialized planning effort in these areas and any proposed transportation facilities, which may be incorporated into the TSP.
Central Urban Renewal Plan	The plan may outline urban renewal projects that may require construction of transportation facilities.
Climate Action Plan	Tualatin's TSP should be consistent with the transportation-related policies and recommendations in the Climate Action Plan.

Statewide Plans

Statewide Planning Goals

The foundation of Oregon's statewide land use planning program is a set of 19 Statewide Planning Goals. The goals express the state's policies on land use and other related topics, such as citizen involvement, housing, and natural resources. Oregon's statewide goals are achieved through local comprehensive planning, including the development and implementation of TSPs.

All of the Statewide Planning Goals have an influence on transportation planning, either directly or indirectly. However, only certain Goals directly apply to transportation planning at a local level.

Project Relevance

TSPs must be consistent with the Statewide Planning Goals, particularly Goal 12: Transportation, which sets requirements for multi-modal plans, including TSPs.

Key Goals and Policy Areas

The Goals listed in **Table 2** are most relevant to the Tualatin TSP process.

Table 2: Statewide Planning Goals

Statewide Planning Goal	Relevancy to the TSP Process
Goal 1: Citizen Involvement	Establishes citizen involvement as the primary goal of the land use planning process in Oregon.
Goal 2: Land Use Planning	Establishes a process and policy framework for all decisions and actions related to uses of land; ensures that such decisions and actions are premised on an adequate factual base. Existing and future transportation needs will be based on inventories of existing conditions, including existing and planned land uses, as well as improving efficient multi-modal connections to housing, public services, employment areas, and recreational opportunities.
Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces	Existing natural resources and environmental features influence the siting, construction, and cost of transportation improvements. The TSP will provide inventories of these resources and illustrate and describe areas within the cities that may pose barriers to providing transportation access or improvements.

Statewide Planning Goal	Relevancy to the TSP Process
Goal 7: Natural Hazards	The risk of natural hazards affects site selection and alignment decisions and facility design standards. Transportation improvement projects in the city should avoid natural hazard areas, such as floodplains, to the extent feasible.
Goal 9: Economic Development	Addresses the need for a variety of economic opportunities in support of the health, welfare, and prosperity of Oregon's citizens. The TSP process should be coordinated with current and planned economic development activities.
Goal 10: Housing	Cities are required to anticipate ongoing needs for housing, and to provide adequate infrastructure to serve residential uses. Transportation facilities and project prioritization will be based, in part, on the demands generated by current and projected housing needs.
Goal 11: Public Facilities and Services	Local governments are required to provide adequate public facilities, including transportation facilities, in a timely and efficient manner. The TSP project update project will coordinate with or consider the provision of other public facilities consistent with adopted plans.
Goal 12: Transportation	Requires multi-modal transportation plans that: • Are based on factual inventories, • Minimize adverse social, environmental, economic, and energy impacts, • Meet the needs of the transportation disadvantaged, • Facilitate the flow of goods and services, and • Are consistent with related local and regional plans. Goal 12 is implemented through the Transportation Planning Rule (OAR 660, Division 12).
Goal 13: Energy Conservation	Land uses must be managed and controlled to maximize the conservation of all forms of energy based upon sound economic principles. In transportation planning, this includes consideration of travel distances and mode share.
Goal 14: Urbanization	Requires land within the Urban Growth Boundary to "provide an orderly and efficient transition from rural to urban land use." Findings of feasibility regarding providing adequate transportation and other public facilities is required for expansion of UGB's.

Transportation Planning Rule, OAR 660-012

The TPR implements Goal 12 of the Statewide Planning Goals and requires the State to prepare a TSP (the OTP and mode and topic plans); Metropolitan Planning Organizations (MPO) to prepare a Regional Transportation Plan (RTP) consistent with the state best practices; and counties and cities to prepare local TSPs that are consistent with the OTP and RTP.

Goal 12 states that "[a] transportation plan shall (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian; (2) be based upon an inventory of local, regional and state transportation needs; (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes; (4) avoid principal reliance upon any one mode of transportation; (5) minimize adverse social, economic and environmental impacts and costs; (6) conserve energy; (7) meet the needs of the transportation disadvantaged by improving transportation services; (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and (9) conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility" (OAR 660-015-0000(12).

Rules to implement the Climate-Friendly and Equitable Communities (CFEC) program were adopted in July 2022. The CFEC program sets forth requirements to reduce climate pollution for regions with populations over 50,000 people and made significant updates to the TPR which affects the analysis for the TSP. The Land Conservation and Development Commission adopted temporary rules amending the program in April 2023 and concluded this in November 2023.

Project Relevance

The TPR implements Statewide Planning Goal 12. The purpose of the TPR is to provide and encourage a safe, convenient, and economical transportation system. The Rule also implements provisions of other Statewide Planning Goals in order to plan and develop transportation facilities and services in close coordination with urban and rural development. The TPR directs TSPs to integrate comprehensive land use planning with transportation needs and to promote multi-modal systems that make it more convenient for people to walk, bicycle, use transit and drive less.

Key Goals and Policy Areas

As previously mentioned, Goal 12 outlines requirements for transportation plans:

- Are based on factual inventories,
- Minimize adverse social, environmental, economic, and energy impacts,
- Meet the needs of the transportation disadvantaged,
- Facilitate the flow of goods and services, and
- Are consistent with related local and regional plans.

ODOT TSP Guidelines

The TSP Guidelines are intended to assist local jurisdictions in the preparation and update of city and county TSPs. The guidelines help jurisdictions develop plans that meet local needs and comply with state regulation and policy direction, including applicable elements of the TPR, as well as the OTP and associated mode and topic plans. The TSP Guidelines answer the "What, Why and When" questions surrounding TSP projects and provide detailed direction on scoping, developing, and administering TSPs. The planning guidance is best accessed via a web-based platform[1] and includes helpful information and examples for both citizens and practitioners.

Project Relevance

The TSP Guidelines serve as a reference to ensure that required plan elements and methodology are employed in the development of the local TSP.

Oregon Transportation Plan (2006, updated 2023)

The OTP (2023) is a comprehensive plan that addresses future state transportation needs through 2050. The primary function of the plan is to establish goals, policies, strategies, and initiatives that are translated into a series of modal and topic plans. Broadly, the OTP emphasizes maintenance and optimization of existing assets before considering larger and costlier additions to the system.

The OTP's vision is:

- Oregon's transportation system supports all Oregonians by connecting people and goods to places in the most climate-friendly, equitable, and safe way.

The vision emphasizes that transportation decisions be made through the lenses of climate, equity, and safety.

The OTP identifies the need to focus dollars on eliminating fatalities and serious injuries, maintaining lifeline routes and key corridors, sustaining transit service, and adding critical connections for biking, walking, and rolling.

[1] https://www.oregon.gov/odot/planning/tsp-guidelines/pages/default.aspx

Lastly, the OTP outlines implementation and investment strategies that can be used across different regions.

Project Relevance

The OTP's policies and strategies will guide the TSP, specifically in the areas of safety, equity, greenhouse gas emissions, sustainable and reliable transportation funding, and maintenance of the existing system and completion of critical connections.

Key Goals and Policy Areas

The following goals are relevant to the TSP process:

1. **Economic and Community Vitality:** Improve prosperity, opportunity, and livability for all people who live, work, and recreate in Oregon.
2. **Social Equity:** Improve access to safe and affordable transportation for all, recognizing the unmet mobility needs of people who have been systemically excluded and underserved. Create an equitable and transparent engagement and communications decision-making structure that builds public trust.
3. **Mobility:** Create a resilient multimodal transportation system that enables the diverse range of community members and businesses with different needs to get where they need to go safely, reliably, and affordably, and with minimal environmental impact.
4. **Stewardship of Public Resources:** Guided by open, data-driven decision-making processes, secure sufficient and reliable revenue for transportation funding and invest public resources to achieve a resilient and sustainable multimodal transportation system.
5. **Safety:** Enable safe travel for all people, regardless of their age, ability, race, income, or mode of transportation.
6. **Sustainability and Climate Action:** Minimize transportation's negative role in climate change by reducing GHG emissions for all sectors of transportation, while also reducing air toxics, noise and light pollution, water toxics, and habitat loss.

Statewide Transportation Improvement Program

Each state is required under 49 U.S.C. 5304(g) to develop a STIP covering a period of at least four years. The STIP is a staged, multi-year, statewide intermodal program of transportation projects, consistent with the statewide transportation plan and planning processes as well as metropolitan plans, transportation improvement programs (TIPs), and planning processes. The STIP must be developed in cooperation with the MPOs, public transit providers, and any Regional Transportation Planning Organizations (RTPO) in the state, and must be compatible with the TIPs for the state's metropolitan areas.

Project Relevance

An expected outcome of this planning process is proposed recommendations that may eventually amend the STIP to include projects from the TSP.

Oregon Highway Plan (1999, last amended 2018)

The OHP is a modal plan of the OTP that guides Oregon Department of Transportation's (ODOT's) Highway Division in planning, operations, and financing. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail, and air systems. The policies included below are relevant to the TSP update process.

Project Relevance

The OHP will guide the TSP's management of the State highways within Tualatin's jurisdiction.

Key Goals and Policy Areas

The following goals are relevant to the TSP:

1. **System Definition:** To maintain and improve the safe and efficient movement of people and goods, and contribute to the health of Oregon's local, regional, and statewide economies and livability of its communities.
2. **System Management:** To work with local jurisdictions and federal agencies to create an increasingly seamless transportation system with respect to the development, operation, and maintenance of the highway and road system that: safeguards the state highway system by maintaining functionality and integrity; ensures that local mobility and accessibility needs are met; and enhances system efficiency and safety.
3. **Access Management:** To employ access management strategies to ensure safe and efficient highways consistent with their determined function, ensure the statewide movement of goods and services, enhance community livability and support planned development patterns, while recognizing the needs of motor vehicles, transit, pedestrians and bicyclists.

4. **Travel Alternatives:** To optimize the overall efficiency and utility of the state highway system through the use of alternative modes and travel demand management strategies.
5. **Environmental and Scenic Resources:** To protect and enhance the natural and built environment throughout the process of constructing, operating, and maintaining the state highway system.
6. **Tolling and Congestion Pricing**

Oregon Bicycle and Pedestrian Plan (2016)

The OBPP is a modal plan that provides policies and implementation strategies intended to move the state toward the following vision: "In Oregon, people of all ages, incomes, and abilities can access destinations in urban and rural areas on comfortable, safe, well-connected biking and walking routes. People can enjoy Oregon's scenic beauty by walking and biking on a transportation system that respects the needs of its users and their sense of safety. Bicycle and pedestrian networks are recognized as integral, interconnected elements of the Oregon transportation system that contribute to our diverse and vibrant communities and the health and quality of life enjoyed by Oregonians."

Project Relevance

Tualatin's TSP should be consistent with the goals and guidelines for bicycle and pedestrian systems as described in the OBPP.

Key Goals and Policy Areas

The OBPP has nine goals that are relevant to the TSP:

1. **Safety:** Eliminate pedestrian and bicyclist fatalities and serious injuries and improve the overall sense of safety of those who bike or walk.
2. **Accessibility and Connectivity:** Provide a complete bicycling and pedestrian network that reliably and easily connects to destinations and other transportation modes.
3. **Mobility and Efficiency:** Improve the mobility and efficiency of the entire transportation system by providing high quality walking and biking options for trips of short and moderate distances. Support the ability of people who bike, walk or use mobility devices to move easily on the system.
4. **Community and Economic Vitality:** Enhance community and economic vitality through walking and biking networks that improve people's ability to access jobs, businesses, and other destinations, and to attract visitors and tourists, new residents, and new business to the state, opening new opportunities for Oregonians.
5. **Equity:** Provide opportunities and choices for people of all ages, abilities, races, ethnicities, and incomes in urban, suburban, and rural areas across the state to bike or walk to reach their destinations and to access transportation options, assuring

transportation disadvantaged communities are served and included in decision making.
6. **Health**: Provide Oregonians opportunities to become more active and healthy by walking and biking to meet their daily needs.
7. **Sustainability:** Help to meet federal, state, and local sustainability and environmental goals by providing zero emission transportation options like walking and biking.
8. **Strategic Investment:** Recognize Oregon's strategic investments in walking and biking as crucial components of the transportation system that provide essential options for travel, and can help reduce system costs, and achieve other important benefits.
9. **Coordination, Cooperation, and Collaboration:** Work actively and collaboratively with federal, state, regional, local, and private partners to provide consistent and seamless walking and biking networks that are integral to the transportation system.

Oregon Public Transportation Plan (2018)

The OPTP is a modal plan that provides a statewide vision for the public transportation system and a policy foundation to assist state, regional, and local transportation agencies in making decisions. Its vision is to establish public transportation as an integral, interconnected component of Oregon's transportation system that makes Oregon's diverse cities, towns, and communities work. This plan considers the benefits of a well-connected, efficient public transportation system and offers a framework to help cities, counties, transit providers, tribes, and the state make smart investment choices.

Project Relevance

Tualatin's TSP should be consistent with the goals and guidelines for public transportation systems as described in the OPTP.

Key Goals and Policy Areas

The OPTP has ten goals that are relevant to the TSP:

1. **Mobility – Public Transportation User Experience:** People of all ages, abilities, and income levels move reliably and conveniently between destinations using an affordable, well-coordinated public transportation system. People in Oregon routinely use public transportation to meet their daily needs.
2. **Accessibility and Connectivity – Getting from Here to There**: Riders experience user-friendly and convenient public transportation connections to and between services and travel modes in urban, suburban, rural, regional, and interstate areas.
3. **Community Livability and Economic Vitality:** Public transportation promotes community livability and economic vitality by efficiently and effectively moving

people of all ages to and from homes, jobs, businesses, schools and colleges, and other destinations in urban, suburban, and rural areas.

4. **Equity**: Public transportation provides affordable, safe, efficient, and equitable transportation to jobs, services, and key destinations, improving quality of life for all Oregonians.
5. **Health**: Public transportation provides affordable, safe, efficient, and equitable transportation to jobs, services, and key destinations, improving quality of life for all Oregonians.
6. **Safety and Security**: Public transportation trips are safe; riders feel safe and secure during their travel. Public transportation contributes to the resilience of Oregon communities.
7. **Environmental Sustainability**: Public transportation contributes to a healthy environment and climate by moving more people with efficient, low-emission vehicles, reducing greenhouse gases and other pollutants.
8. **Land Use**: Public transportation is a tool that supports Oregon's state and local land use goals and policies. Agencies collaborate to ensure public transportation helps shape great Oregon communities providing efficient and effective travel options in urban, suburban, and rural areas.
9. **Funding and Strategic Investment**: Strategic investment in public transportation supports the overall transportation system, the economy, and Oregonians' quality of life. Sustainable and reliable funding enables public transportation services and infrastructure to meet public needs.
10. **Communication, Collaboration, and Coordination**: Public and private transportation providers and all levels of government within the state and across state boundaries work collaboratively and foster partnerships that make public transportation seamless regardless of jurisdiction.

Oregon Freight Plan (2023)

The OFP is a topic plan that implements the state's goals and policies related to the movement of goods and commodities through the identification of issues and strategies. The plan's purpose is "to improve freight connections to local, Native American, state, regional, national and global markets in order to increase trade related jobs and income for workers and businesses." The objectives of the plan include prioritizing and facilitating investments in freight facilities (including rail, marine, highway, air, and pipeline infrastructure) and adopting strategies to maintain and improve the freight transportation system. The OFP defers to the OTP for broad and more conventional policy statements regarding freight (p. 2 and p. 21).

Project Relevance

Tualatin's TSP should be consistent with the goals and guidelines for freight systems as described in the OFP.

Key Goals and Policy Areas

The 2023 OTP identifies six goals that the OFP will implement:

1. **Economic and Community Vitality:** Improve prosperity, opportunity, and livability for all people who live, work, and recreate in Oregon.
2. **Social Equity:** Improve access to safe and affordable transportation for all, recognizing the unmet mobility needs of people who have been systemically excluded and underserved. Create an equitable and transparent engagement and communications decision-making structure that builds public trust.
3. **Mobility:** Create a resilient multimodal transportation system that enables the diverse range of community members and businesses with different needs to get where they need to go safely, reliably, and affordably, and with minimal environmental impact.
4. **Stewardship of Public Resources:** Guided by open, data-driven decision-making processes, secure sufficient and reliable revenue for transportation funding and invest public resources to achieve a resilient and sustainable multimodal transportation system.
5. **Safety:** Enable safe travel for all people, regardless of their age, ability, race, income, or mode of transportation.
6. **Sustainability and Climate Action:** Minimize transportation's negative role in climate change by reducing GHG emissions for all sectors of transportation, while also reducing air toxics, noise and light pollution, water toxics, and habitat loss.

Oregon State Rail Plan (2014)

The OSRP is a modal plan that creates a policy foundation supporting state decision-making for freight and passenger rail investments, strategies, and programs. The plan demonstrates rail's importance to the State, while acknowledging that it is predominantly privately-owned.

Its goals, policies, and strategies are based on the vision that "Oregon will have a safe, efficient, and commercially viable rail system that serves its businesses, travelers and communities through private resources leveraged as needed, by strategic public investments."

The plan categorizes rail as Class I or Non-Class I and accordingly identifies needs related to rail elements including track, signals, weight, clearance, speed, and bridges and tunnels.

Project Relevance

Tualatin's TSP should be consistent with the goals and guidelines for rail systems as described in the OSRP.

Key Goals and Policy Areas

The OSRP has seven goals that are relevant to the TSP:

1. **Partnership, Collaboration and Communication:** Partner, collaborate and communicate with rail system operators and other stakeholders to maximize benefits, align interests, remove barriers, and bring innovative solutions to the rail system; and foster public understanding of rail's importance.
2. **Connected System:** Promote, preserve, and enhance an efficient rail system that is accessible and integrated with Oregon's overall multimodal transportation system.
3. **System Investments and Preservation:** Enhance transportation system reliability, capacity, frequency, and travel times through investments that preserve and improve freight and passenger rail assets and infrastructure.
4. **Funding, Finance, and Investment Principles:** Establish funding that meets the critical needs of the rail system in Oregon and achieves the objectives of this State Rail Plan.
5. **System Safety:** Plan, construct, operate, maintain, and coordinate the rail system in Oregon with safety and security for all users and communities as a top priority.
6. **Preserving and Enhancing Quality of Life:** Increase use and investment in freight and passenger rail systems to conserve and improve Oregon's environment and community cohesion.
7. **Economic Development:** Increase opportunity and investment in freight and passenger rail assets to grow Oregon's economy.

Oregon Transportation Safety Action Plan (2021)

The TSAP is a plan that shows a set of actions that Oregonians have identified as steps to a safer travel environment. The document also serves as the State of Oregon's Strategic Highway Safety Plan, a document required by federal law. The TSAP is a statewide plan that is implemented by multiple state, local, and regional agencies in addition to ODOT. It is a multi-purpose plan that includes both a 20- year policy plan and a 5-year, federally compliant, Strategic Highway Safety Plan. It envisions no deaths or life-changing injuries on Oregon's transportation system by 2035. The long-term goals of the TSAP are to foster a safety culture, develop infrastructure for safety, support healthy communities, leverage technology, and coordinate agencies and stakeholders to work together, and guide strategic safety investments.

The plan bases its 5-year strategic plan on four broad emphasis areas that were identified in the planning process for improving safety: risky behaviors, such as impaired driving, distracted driving, unbelted driving, and speeding; infrastructure such as intersection improvements; protections for vulnerable users, such as pedestrians, bicyclists, and older

road users; and improved systems, including data collection, training, enforcement, licensing, and emergency response.

The TSAP identifies long-term goals, policies, strategies, and short-term actions to improve transportation safety.

Project Relevance

The TSAP will help the development of safety priorities for the Tualatin TSP in order to contribute to Oregon's goals towards reducing deaths and life-changing injuries related to the transportation system.

Key Goals and Policy Areas

1. **Improving Safety Culture:** Transform public attitudes to recognize that all transportation system users have responsibility for other people's safety in addition to their own safety while using the transportation system. Transform organizational transportation safety culture among employees and agency partners (e.g., state agencies, regional planning entities, local agencies (Tribes, counties, cities), other safety stakeholders, employers, and the general public) to integrate safety considerations into all responsibilities.
2. **Improving Infrastructure:** Develop and improve infrastructure to eliminate fatalities and serious injuries for users of all modes.
3. **Facilitating Healthy and Livable Communities:** Plan, design, and implement safe systems; support equitable enforcement and emergency medical services to improve the safety and livability of communities, including health outcomes.
4. **Using Best Available Technologies:** Plan, prepare for, and implement technologies (existing and new) that improve transportation safety for all users, including pilot testing innovative technologies as appropriate.
5. **Communicating and Collaborating:** Create and support a collaborative environment for transportation system providers and public and private stakeholders to work together to eliminate fatalities and serious injuries.
6. **Investing Strategically:** Target safety funding for effective education, enforcement, engineering, and emergency medical services priorities.

Oregon Resilience Plan (2013)

The Oregon Resilience Plan provides policy guidance and recommendations to mitigate risks, accommodate emergency response and recovery, and support the resilience of government and business before, during, and after a Cascadia earthquake and tsunami. The plan includes an assessment of the seismic integrity of Oregon's multimodal transportation system, including bridges and highways, rail, airports, water ports, and public transit systems.

The plan classifies highway lifeline routes as Tier 1, 2, and 3. Tier 1 Routes are those that allow access to all vulnerable regions, major population centers, and areas considered vital for rescue and recovery operations, which is considered to provide the greatest benefits for short-term rescue and longer-term economic recovery. Tier 2 is a larger network that provides access to most urban areas and restores major commercial operations. Tier 3 is a more complete transportation network. Targets for recovery in all mode categories fall into three levels: minimal, operational, and functional.

Project Relevance

The Oregon Resilience Plan provides guidance and priorities to maintain the seismic integrity of Oregon's multi-modal transportation system. Policies and standards adopted by Tualatin should consider additional guidance, concepts, and strategies for design related to facility resiliency in the event of seismic activity.

Key Goals and Policy Areas

The following goals from the Oregon Resilience Plan are relevant to the TSP:

- Facilitate immediate emergency response, including permitting personnel to access critical areas and allowing the delivery of supplies
- Restore general mobility within specified time periods for various areas of the state.

Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction, and Greenhouse Gas Emissions Reduction Toolkit

The STS, is a state-level scenario planning effort that examines all aspects of the transportation system, including the movement of people and goods, and identifies a combination of strategies to reduce greenhouse gas, or GHG, emissions in order to achieve a future with 60% percent fewer GHG emissions (total emissions) than 1990. The STS identifies a variety of effective GHG emissions reduction strategies in transportation systems, vehicle and fuel technologies, and urban land use patterns.

The document is not directive or regulatory. The STS changes regional and local planning work by providing an additional lens and new or enhanced strategies to consider.

The Greenhouse Gas, or GHG, Emissions Reduction Toolkit is a collection of strategy reports and case studies designed to help local jurisdictions identify and explore the kinds of actions and programs they can undertake to reduce vehicle emissions. Additionally, they are designed to meet other community goals, such as spur economic development, increase biking and walking, support downtowns, create healthy livable communities and more.

Project Relevance

The TSP should consider strategies identified in the STS and the Greenhouse Gas Emissions Reduction Toolkit to reflect Tualatin's commitment to reducing GHG emissions.

Key Goals and Policy Areas

The STS seeks to reduce transportation related GHG emissions while also improving the efficiency and effectiveness with which people and goods are moved.

ODOT Highway Design Manual (2023)

The Highway Design Manual provides standards and guidance for the design of all projects, including major construction and reconstruction projects.

Project Relevance

The Highway Design Manual will guide the construction or major reconstruction of any State highway projects included within the TSP.

Regional Plans

Washington County TSP (2019)

The Washington County TSP establishes the policies, projects and programs necessary to achieve Washington County's transportation goals.

The Washington County TSP describes the land use patterns, population and employment trends, travel demand, and existing mode share before discussing the general transportation principles and policies for Washington County. The TSP also discusses transportation modal elements, including freight and active transportation, and the goals, objectives, and strategies for each element related to mobility, accessibility, connectivity, and active transportation. It also discusses funding and implementation.

Project Relevance

Tualatin's TSP should be consistent with the policies, programs, and projects in the Washington County TSP. Any facilities in Tualatin that are owned or maintained by Washington County should meet Washington County standards.

Key Goals and Policy Areas

The Washington County TSP has four goals relevant to the Tualatin TSP:

1. **Safety:** Provide a safe transportation system for all users.
2. **Economic Vitality:** Provide a reliable transportation system that enhances the economic health of Washington County.
3. **Livability:** Preserve and enhance Washington County's quality of life for all residents, workers and visitors.
4. **Natural Environment:** Create and maintain a transportation system that first avoids, then minimizes, then mitigates impacts to the natural environment.

Clackamas County TSP (2013-2033)

The Clackamas County TSP (2013-2033) guides transportation related decisions and identifies the transportation needs and priorities in unincorporated Clackamas County from 2013 to 2033.

The Clackamas County TSP presents policies by major topic or transportation mode, including:

- Land Use and Transportation
- Active Transportation
- Roadways
- Transit
- Freight
- Rail
- Air
- Pipeline and Water Transportation
- Finance and Funding.

The TSP also relates to the 20-year and five-year capital improvement plans as well as identifies Special Transportation Plans that are adopted by reference as refinements of the TSP and plans or studies that need to be completed in the future to support the TSP. It also discusses funding and implementation.

Project Relevance

Tualatin's TSP should be consistent with the policies, programs, and projects in the Clackamas County TSP. Any facilities in Tualatin that are owned or maintained by Clackamas County should meet Clackamas County standards.

Key Goals and Policy Areas

The Clackamas County TSP has six key goals relevant to the Tualatin TSP:

1. Provide a transportation system that optimizes benefits to the environment, the economy and the community.
2. Plan the transportation system to create a prosperous and adaptable economy and further the economic well-being of businesses and residents of the County.
3. Tailor transportation solutions to suit the diversity of local communities.
4. Promote a transportation system that maintains or improves our safety, health, and security.
5. Provide an equitable transportation system.
6. Promote a fiscally responsible approach to protect and improve the existing transportation system and implement a cost-effective system to meet future needs.

Metro 2040 Growth Concept (1995)

The Metro 2040 Growth Concept is a long-range plan adopted in 1995 that encourages sustainable growth through housing, land use, open space protection, and transportation. The plan reflects input from thousands of Oregonians.

Project Relevance

The Tualatin TSP should promote a balanced transportation system to move people and goods. The 2040 Design Types from the Growth Concept are the basis for regional land use and transportation policies and implementation. As an example, mobility targets – adopted both by Metro and the Oregon Transportation Commission – hinge on 2040 Design Type, as further discussed in the Oregon Highway Plan and Regional Transportation Plan reviews in this report.

Regional Transportation Plan (2023)

The RTP is updated every five years with input from community members, business and community leaders, and governments. It guides investments for all forms of travel and the movement of goods and services throughout greater Portland. It identifies urgent and long-term transportation needs, investments to meet those needs, and the funds the region expects to have available over the next 20 years.

The RTP coordinates long-range transportation planning in the Portland metropolitan area. It is required by the State of Oregon and the Federal Government.

The vision of the RTP is: Everyone in the greater Portland region will have safe, reliable, affordable, efficient, and climate-friendly travel options that allow people to drive less and support equitable, resilient, healthy and economically vibrant communities and region.

Project Relevance

Tualatin's TSP should be consistent with system classifications, strategies, and projects for each transportation mode outlined in the RTP.

Key Goals and Policy Areas

The Regional Transportation Plan has five goals relevant to the Tualatin TSP:

1. Mobility Options: People and businesses can reach the jobs, goods, services and opportunities they need by well-connected, low-carbon travel options that are safe, affordable, convenient, reliable, efficient, accessible, and welcoming.
2. Safe System: Traffic deaths and serious crashes are eliminated and all people are safe and secure when traveling in the region.
3. Equitable Transportation: Transportation system disparities experienced by Black, Indigenous and people of color and people with low incomes, are eliminated. The disproportionate barriers people of color, people who speak limited English, people

with low incomes, people with disabilities, older adults, youth and other marginalized communities face in meeting their travel needs are removed.

4. Thriving Economy: Centers, ports, industrial areas, employment areas, and other regional destinations are accessible through a variety of multimodal connections that help people, communities, and businesses thrive and prosper.
5. Climate Action and Resilience: People, communities and ecosystems are protected, healthier and more resilient and carbon emissions and other pollution are substantially reduced as more people travel by transit, walking and bicycling and people travel shorter distances to get where they need to go.

Regional Transportation Functional Plan

The Regional Transportation Functional Plan establishes an outcomes-based framework that is performance-driven and includes policies, objectives, and actions that direct future planning and investment decisions to consider economic, equity, and environmental objectives. More specifically, the Plan is a part of Metro code and contains policies and guidelines to help local jurisdictions implement the policies in the Regional Transportation Plan and its modal plans.

Project Relevance

This plan implements the RTP. Tualatin's TSP should be consistent with the requirements of the Regional Transportation Functional Plan.

Regional Active Transportation Plan

The Regional ATP is a modal plan of the RTP.

The plan establishes 10 guiding principles that shape the recommended bicycle and pedestrian networks, the design guidance, and the recommended Metro policies and implementing actions in the plan.

Its vision is stated as follows:

In 2040, people across the region have been meaningfully involved to create a transportation system that meets their needs. Convenient and safe access to active transportation has helped create and maintain vibrant communities in the region. Connected and safe pedestrian, bicycle and transit networks provide transportation choices throughout the region. People of all ages, abilities, income levels and backgrounds can walk and bike easily and safely for many of their daily needs and the walking and bicycling environment is welcoming to them. A majority of the short trips in the region are made by bicycling and walking. Children enjoy

independence walking and biking to school and seniors can age in place and can get around easily without a car. Active transportation contributes significantly to the region's economic prosperity. Household transportation costs are lowered, roadways are less congested and freight experiences less delay. People enjoy clean air and water and are healthier and happier because they incorporate physical activity into their daily routines.

Project Relevance

Similar to the RTP, ensure consistency of the active transportation modal maps in the updated TSP with the classifications in the ATP network maps.

Key Goals and Policy Areas

The regional ATP has six desired outcomes:

1. People live, work and play in vibrant communities where their everyday needs are easily accessible.
2. Current and future residents benefit from the region's sustained economic competitiveness and prosperity.
3. People have safe and reliable transportation choices that enhance their quality of life.
4. The region is a leader on climate change, on minimizing contributions to global warming.
5. Current and future generations enjoy clean air, clean water and healthy ecosystems.
6. Equity exists relative to the benefits and burdens of growth and change to the region's communities.

Regional Trails System Plan (2022)

The latest edition of the Regional Trail System Plan shows the draft results of a prioritization tool for regional trails based on six factors:

- Neighborhood Demographics
- Access to Nature
- Traffic Safety
- Connectivity to Destinations
- Transportation Potential
- Gap Completion

Project Relevance

The map includes existing trails and proposed trails in the Tualatin area, including the Ice Age Tonquin Trail and the Tualatin River Trail (also known as the Tualatin River Greenway) that should be included in TSP project development.

Tri-County Public Transportation Improvement Plan (FY2021-FY2023)

The Oregon Legislature enacted House Bill 2017 (HB 2017), or the Keep Oregon Moving act, in mid-2017 in order to fund the expansion of public transportation services. This necessitated a need for an improvement plan. The Tri-County PTIP serves as the region's 2020 PTIP update. The PTIP documents the existing public transportation services, current demographics, a needs assessment within the TriMet service district, factors affecting TriMet ridership, and proposed funding levels for TriMet, Clackamas County, Multnomah County, and Washington County. It establishes a five-year roadmap for the provision of future services and programs to improve service in low-income communities as well as provides for planned revenue and service improvements and programs within 2021 and 2023.

Project Relevance

The PTIP assesses public transportation needs across the region and identifies proposed service and capital improvements. Its goals are based on goals from other plans, including but not limited to, the Oregon Public Transportation Plan, the Washington County TSP, and the TriMet Coordinated Transportation Plan.

Key Goals and Policy Areas

The PTIP goals are based on goals from other plans, including but not limited to, the Oregon Public Transportation Plan, the Washington County TSP, and the TriMet Coordinated Transportation Plan.

Metro Climate Smart Strategy (2014)

The Metro Council adopted the Climate Smart Strategy in December 2014 to respond to a state mandate to reduce per capita greenhouse gas emissions from cars and small trucks by 2035. The Climate Smart Strategy is a set of policies, strategies, and near-term actions to guide how the region will reduce greenhouse gas emissions, provide more transportation choices, and build a strong economy and healthy and equitable communities.

Project Relevance

The TSP update should consider policy areas and actions from the Climate Smart Strategy toolbox for integration into the updated TSP's policies, transportation design standards, programs, and project selection.

Key Goals and Policy Areas

The following are relevant Climate Smart Strategy policy areas:

1. Implement adopted local and regional land use plans.
2. Make transit more convenient, frequent, accessible, and affordable.
3. Make biking and walking safe and convenient.
4. Make streets and highways safe, reliable, and connected.
5. Use technology to actively manage the transportation system.
6. Provide information and incentives to expand the use of travel options.
7. Make efficient use of vehicle parking and land dedicated to parking.
8. Support transition to cleaner, low carbon fuels and more fuel-efficient vehicles.
9. Secure adequate funding for transportation investments.

City of Tualatin Plans

Transportation System Plan Update (2014)

The City of Tualatin's TSP was adopted in 2014 and is the most recent TSP update. It establishes the policies, projects, and programs necessary to achieve Tualatin's long-range transportation goals.

The 2014 Tualatin TSP describes modal plans and policies for the Street System; Transit; Pedestrian, Bicycle, and Multi-Use Path; Freight; Rail; Water, Pipeline and Air; Transportation Demand Management; Transportation System Management; and Parking. It establishes a project list and also discusses implementation methods and funding sources.

Project Relevance

Tualatin's current TSP should serve as a starting point for the TSP update. The TSP should meet the Transportation Planning Rule requirements and should be updated to reflect changing community and council priorities for the transportation system.

Key Goals and Policy Areas

The TSP update has the following goals:

1. **Access and Mobility:** Maintain and enhance the transportation system to reduce travel times, provide travel-time reliability, provide a functional and smooth transportation system, and promote access for all users.
2. **Safety:** Improve safety for all users, all modes, all ages, and all abilities within the City of Tualatin.
3. **Vibrant Community:** Allow for a variety of alternative transportation choices for citizens of and visitors to Tualatin to support a high quality of life and community livability. Produce a plan that respects and preserves neighborhood values and identity.
4. **Equity:** Consider the distribution of benefits and impacts from potential transportation options, and work towards fair access to transportation facilities for all users, all ages, and all abilities.
5. **Economy:** Support local employment, local businesses, and a prosperous community while recognizing Tualatin's role in the regional economy.
6. **Health/Environment:** Provide active transportation options to improve the health of citizens in Tualatin. Ensure that transportation does not adversely affect public health or the environment.

7. **Ability to Be Implemented:** Promote potential options that are able to be implemented because they have community and political support and are likely to be funded.

Comprehensive Plan 2040

The City of Tualatin's Comprehensive Plan 2040 outlines goals, policies, significant projects, and plan maps that help guide the future physical development of Tualatin. It is implemented by the zoning code, zoning maps, service coordinator agreements, annexations, Urban Renewal Areas, and development agreements. The Comprehensive Plan is used when making land use decisions, particularly those that include a change or exception to the established development regulations. The Plan discusses goals and policies for different topic areas, including Housing, Parks, and Transportation.

Project Relevance

The TSP is the transportation component of the Comprehensive Plan. The Comprehensive Plan will need to be updated to reflect the transportation goals and policies in Tualatin's TSP. The TSP should also not be in conflict with the goals in other sections of the Comprehensive Plan. New goals developed as part of the TSP process should not conflict with existing goals in the Comprehensive Plan.

Key Goals and Policy Areas

The following goals are relevant to the TSP:

1. **Community Involvement**
    a. Implement community involvement practices in line with Statewide Planning Goal 1.
2. **Housing & Residential Growth**
    a. Encourage the establishment of funding sources to support development of affordable housing and related public infrastructure.
    b. Encourage development and redevelopment in Tualatin that supports all modes of transportation, including walking, biking, and mass transit.
3. **Other Land Uses**
    a. Locate public services and utilities in a manner that minimizes negative impacts and enhances public benefits.
4. **Transportation**

a. **Goal 8.1: Access and Mobility.** Maintain and enhance the transportation system to reduce travel times, provide travel time reliability, provide a functional and smooth transportation system, and promote access for all users.
b. **Goal 8.2: Safety.** Improve safety for all users, all modes, all ages, and all abilities within the City of Tualatin.
c. **Goal 8.3: Vibrant Community**. Allow for a variety of alternative transportation choices for citizens of and visitors to Tualatin to support a high quality of life and community livability.
d. **Goal 8.4: Equity.** Consider the distribution of benefits and impacts from potential transportation options, and work towards fair access to transportation facilities for all users, all ages, and all abilities.
e. **Goal 8.5: Economy.** Support local employment, local businesses, and a prosperous community while recognizing Tualatin's role in the regional economy.
f. **Goal 8.6: Health/Environment.** Provide active transportation options to improve the health of citizens in Tualatin. Ensure that transportation does not adversely affect public health or the environment.
g. **Goal 8.7: Ability to Be Implemented.** Promote potential options that are able to be implemented because they have community and political support and are likely to be funded.

    i. **Policy Area 8.8: Functional Classification Policies.** Functional classification policies support the City's transportation goals and objectives. Policies help provide direction for roadways and roadway classifications.

        A. **Policy 8.8.1.** Major and minor arterials will comprise the main backbone of the freight system, ensuring that freight trucks are able to easily move within, in, and out of the City.
        B. **Policy 8.8.2.** Continue to construct existing and future roadways to standard when possible for the applicable functional classification to serve transportation needs within the City.

    ii. **Policy Area 8.9: Roadway Policies.** The following establishes the City's policies on roadways.

        A. **Policy 8.9.1.** Implement design standards that provide clarity to developers while maintaining flexibility for environmental constraints.
        B. **Policy 8.9.2.** Ensure that street designs accommodate all anticipated users including transit, freight, bicyclists and pedestrians, and those with limited mobility.
        C. **Policy 8.9.3.** Work with Metro and adjacent jurisdictions when extending roads or multi-use paths from Tualatin to a neighboring City.

    iii. **Policy Area 8.10: Access Management Policies.** The following establish the City's policies on access management.

        A. **Policy 8.10.1.** No new driveways or streets on arterial roadways within the City, except where noted in the TDC, usually when no alternative access is available.
        B. **Policy 8.10.2.** Where a property abuts an arterial and another roadway, the access for the property shall be located on the other roadway, not the arterial.

C. **Policy 8.10.3.** Adhere to intersection spacing.
D. **Policy 8.10.4.** Limit driveways to right-in, right-out (where appropriate) through raised medians or other barriers to restrict left turns.
E. **Policy 8.10.5**. Look for opportunities to create joint accesses for multiple properties, where possible, to reduce the number of driveways on arterials.
F. **Policy 8.10.6.** No new single-family home, duplex or triplex driveways on major collector roadways within the City, unless no alternative access is available.
G. **Policy 8.10.7.** On collector roadways, residential, commercial and industrial driveways where the frontage is greater or equal to 70 feet are permitted. Minimum spacing at 100 feet. Uses with less than 50 feet of frontage shall use a common (joint) access where available.

iv. **Policy Area 8.11: Transit Policies.** The following establish the City's policies on public transit:

A. **Policy 8.11.1.** Partner with TriMet to jointly develop and implement a strategy to improve existing transit service in Tualatin.
B. **Policy 8.11.2.** Partner with the Tualatin Chamber of Commerce to support grant requests that would expand the Tualatin Shuttle services.
C. **Policy 8.11.3.** Partner with TriMet, Metro, and neighboring communities to plan the development of high-capacity transit in the Southwest Corridor, as adopted in the Metro High Capacity High-Capacity Plan.
D. **Policy 8.11.4.** Partner with TriMet, Metro, and neighboring communities to plan development of high-capacity transit connecting Tualatin and Oregon City, as adopted in the Metro High Capacity High-Capacity Plan.
E. **Policy 8.11.5.** Coordinate with ODOT and neighboring communities on conversations related to Oregon Passenger Rail between Portland and Eugene.
F. **Policy 8.11.6.** Develop and improve pedestrian and bicycle connections and access to transit stops.
G. **Policy 8.11.7.** Encourage higher-density development near high capacity high-capacity.
H. **Policy 8.11.8.** Metro in the RTP calls for increased WES service frequency. The City will coordinate with TriMet, Metro, and ODOT to explore service frequency improvements and the possible inclusion of a second WES station in south Tualatin.

v. **Policy Area 8.12: Bicycle And Pedestrian Policies.** The following establish the City's policies on bicycle and pedestrian facilities:

A. **Policy 8.12.1.** Support Safe Routes to Schools (SRTS) for all Tualatin schools.
B. **Policy 8.12.2.** Work with partner agencies to support and build trails.
C. **Policy 8.12.3.** Allow wider sidewalks downtown for strolling and outdoor cafes.
D. **Policy 8.12.4.** Add benches along multi-use paths for pedestrians throughout the City (especially in the downtown core).

E. **Policy 8.12.5.** Develop and implement a toolbox, consistent with Washington County, for mid-block pedestrian crossings.
F. **Policy 8.12.6:** Implement bicycle and pedestrian projects to help the City achieve the regional non-single-occupancy vehicle modal targets in Table 11-1.
G. **Policy 8.12.7.** Implement bicycle and pedestrian projects to provide pedestrian and bicycle access to transit and essential destinations for all mobility levels, including direct, comfortable, and safe pedestrian and bicycle routes.
H. **Policy 8.12.8.** Ensure that there are bicycle and pedestrian facilities at transit stations.
I. **Policy 8.12.9.** Create on- and off-street bicycle and pedestrian facilities connecting residential, commercial, industrial, and public facilities such as parks, the library, and schools.
J. **Policy 8.12.10.** Create obvious and easy to use connections between on- and off-street bicycle and pedestrian facilities and integrate off-street paths with on-street facilities.

vi. Policy Area 8.13 Freight Rail Policies. The following establish the City's policies on freight rail:

A. **Policy 8.13.1.** Continue to coordinate with PNWR and TriMet to ensure that railroad crossings are safe and have few noise impacts on adjacent neighborhoods.
B. **Policy 8.13.2.** Look for opportunities to shift goods shipments to rail to help reduce the demand for freight on Tualatin's roads.
C. **Policy 8.13.3.** Look for opportunities to create multi-modal hubs to take advantage of the freight rail lines. Passenger Rail Policies. The City of Tualatin's policies on public transit are described in Policy Area 8.11, as part of the Transit Modal Plan. Those policies that may relate to the existing heavy rail lines in Tualatin include Transit Policies 8.11.3, 8.11.4, 8.11.5, and 8.11.8.

vii. Policy Area 8.14: Transportation Demand Management Policies. The following policies support other modal plans in the TSP and help Tualatin meet its mode-share targets, as required by the RTP and presented in Table 8-1:

A. **Policy 8.14.1.** Support demand reduction strategies, such as ride sharing, preferential parking, and flex-time programs.
B. **Policy 8.14.2.** Partner with the Tualatin Chamber of Commerce, the Westside Transportation Alliance, major employers, and business groups to implement TDM programs.
C. **Policy 8.14.3.** Explore the use of new TDM strategies to realize more efficient use of the City's transportation system.
D. **Policy 8.14.4.** Support Washington County's regional TDM programs and policies to reduce the number of single occupancy vehicle (SOV) trips.
E. **Policy 8.14.5.** Promote the use and expansion of the Tualatin Shuttle program.

Tualatin Parks & Recreation Master Plan (2018)

The Tualatin Parks & Recreation Master Plan (2018) documents the City's vision for the parks and recreation system and describes objectives and recommendations to guide systemwide improvements alongside more specific site recommendations.

Project Relevance

The TSP should consider any facilities and plan recommendations outlined in the Parks & Recreation Master Plan and how people will need to access those facilities, as well as any pedestrian or bicycle facilities that are recommended in the Plan. The TSP should not conflict with any of the policies in the Master Plan.

Key Goals and Policy Areas

Goal 2 of the Plan is as follows:

- Create a walkable, bikeable, and interconnected city by providing a network of regional and local trails.

City of Tualatin Capital Improvement Plan (2023/24 – 2027/28)

The City of Tualatin's CIP establishes, prioritizes, and plans funding for projects to improve existing infrastructure and facilities and develop new infrastructure and facilities. This plan promotes efficient use of the City's limited financial resources, reduces costs, and assists in the coordination of public and private development.

Project Relevance

The CIP is a source for planned projects and infrastructure and facility needs that can influence the TSP Update. Future CIPs will draw transportation projects from the TSP.

Key Goals and Policy Areas

The criteria used in the ranking process include, but are not limited to:

- Addressing health and safety concerns – enhancing, improving, or protecting overall health and safety of the City's residents;
- Supporting Council goals - supporting the goals established by the City Council, meeting city-wide long-term goals, and meeting the Tualatin Community Plan;
- Meeting a regulatory or mandated requirement – proposed projects satisfy regulatory or mandated requirements;
- Considering service delivery needs – the potential for projects to improve service delivery, including coordination with other projects to minimize financial or development impacts to maintain and enhance the efficiency of providing services in Tualatin;
- Including outside funding and partnerships - outside funding has been identified, committed to, or may be obtained through other revenue sources or partnerships;
- Implementing a Master Plan - maintenance and development of existing or new facilities and infrastructure is identified in one of the City's Master Plans, enabling the City to continue to deliver essential services to residents.

Tualatin, OR Development Code

The development code sets standards for various kinds of development, including streets. Street design standards are based on the functional and operational characteristics of streets, such as travel volume, capacity, operating speed, and safety.

Project Relevance

All streets must be designed and constructed according to the City's preferred standard. The Tualatin Development Code will likely be updated based on the new TSP.

The Core Opportunity Reinvestment Area Plan (2022)

The Core Opportunity Reinvestment Plan (2022) is the result of the recognition that Tualatin has limited land supply for residential and employment land development. The City Council directed City staff to conduct two feasibility studies in the areas of Southwest Industrial/Basalt Creek and the Town Core Areas for use as urban renewal areas. A working group was formed to provide feedback on the existing conditions and proposed vision, objectives, boundary, area projects, project direction, and identify. resulting Core Opportunity Reinvestment Area Plan area

Project Relevance

This plan outlines a land use and transportation vision for downtown Tualatin. The TSP should be consistent with the specialized planning effort in this area and any proposed transportation facilities and goals.

Key Goals and Policy Areas

The following goals are relevant to the TSP:

5. **Goal 1: Blight Remediation.** Encourage and facilitate the redevelopment of historically underutilized and vacant parcels and buildings through direct or public-private partnerships.
6. **Goal 2: Enhanced Connectivity.** Provide residents and workers access to a connected and efficient multi-modal system within, and to/from Plan Area.

Southwest and Basalt Creek Development Area Plan (2021)

This plan establishes an urban renewal area as a result of past work in the Southwest Tualatin Concept Plan Area and the Basalt Creek Concept Plan Area. The Southwest and Basalt Creek Development Area Plan Area (Area) consists of approximately 717.3 total acres: 646.51 acres of land in tax lots and 70.79 acres of public rights-of-way. It is anticipated that the Southwest and Basalt Creek Development Area Plan (Plan) will take thirty years of tax increment collections to implement. The maximum amount of indebtedness that may be issued for the Plan is not to exceed $53,200,000.

Project Relevance

This plan outlines a land use and transportation vision for the Southwest and Basalt Creek subareas in Tualatin. The TSP should be consistent with the specialized planning effort in these areas and any proposed transportation facilities.

Key Goals and Policy Areas

The following goals are relevant to the TSP:

1. **Goal 1: Public Involvement.** Implement community involvement practices.
2. **Goal 2: Employment and Land Development.** Encourage land development that provides high density employment opportunities. Encourage land development in ways that strengthen the local tax base and support Tualatin's employment lands as a

major local and regional employment center. Manage land development impacts to the environment and other uses.

3. **Goal 3: Transportation Infrastructure.** Maintain and enhance the transportation system to reduce travel times, provide travel-time reliability, provide a functional and smooth transportation system, and promote access and safety for all users. Allow for a variety of alternative transportation choices for citizens of and visitors to Tualatin to support a high quality of life and community livability. Support local employment, local businesses, and a prosperous community while recognizing Tualatin's role in the regional economy.
4. **Goal 5: Developer Assistance and Incentives.** Facilitate development and redevelopment on sites in the Area, stimulating growth, providing new employment opportunities and an increased tax base in the Area. Assist in the provision of infrastructure to support the development of additional housing options in the Area.

Central Urban Renewal Plan (2009)

The Central Urban Renewal Plan governs the activities of the Tualatin Development Commission (the Urban Renewal Agency of the City of Tualatin) within Tualatin's Central Urban Renewal Area (Area).

The plan describes the history of urban renewal in the Area, the Commission's goals and objectives, anticipated activities within the Area, real property acquisition and disposition authorized within the Area, how land use is regulated within the Area, and how changes to the Plan are to be accomplished.

Project Relevance

The plan may outline urban renewal projects that may require construction of transportation facilities.

Key Goals and Policy Areas

The following goals relate to the TSP:

1. **Goal 5: Transportation.** To provide transportation access and circulation which is supportive of central area development.
2. **Goal 6: Pedestrian and Bikeways.** To develop a pedestrian/bicycle system linking the Urban Renewal Area to residential areas, parks, natural areas, and to link the business district on the south side of SW Boones Ferry Road to the future business district on the north side of SW Boones Ferry Road.
3. **Goal 7: Transit.** To support the development of the metropolitan transportation system (Tri-Met) in order to provide alternative transportation modes for the residential and employment population of the Urban Renewal Area.

4. **Goal 9: Parks.** To provide a high-quality park and recreation system to offset the environmental effect of large areas of commercial and industrial development.

Climate Action Plan

Tualatin's Climate Action Plan will outline actions the City can take to adapt to events resulting from the changing climate, such as wildfires, smoke, and extreme heat, and mitigate climate impacts, such as fossil fuel emissions from the transportation sector.

Project Relevance

Tualatin's TSP should be consistent with the transportation-related policies and recommendations in the Climate Action Plan.

Key Goals and Policy Areas

Pending the finalized Climate Action Plan in late 2023.

2040 TSP Appendix

Engagement Summary

Memorandum

Date: February 25, 2024

To: City of Tualatin

From: Katie Selin and Katie Mangle, Alta Planning + Design

Subject: Phase 2 Tualatin TSP Engagement Summary

Introduction

The Tualatin Transportation System Plan Update provides an opportunity for public comment as required by Oregon Transportation Planning Rule. This memo details the results of the Tualatin Transportation System Plan Update Phase 2 engagement efforts, which are based around the four distinct phases of the project:

1. **Recruit**- Build our project contact list and awareness of the TSP
2. **Listen and Learn**- Broad engagement, focus groups, workshop, awareness campaign, survey
3. **Reflect**- Connect the dots. What did we hear? Share draft project recommendations.
4. **Refine**- Share the draft plan and updated project recommendations. Are we on track? What did we miss?

In addition, the Tualatin Transportation System Plan project seeks to make a special effort to ensure underserved populations, as identified in OAR 660-012-0125, are offered a meaningful opportunity to inform the planning process and project outcomes. This report outlines the activities that took place during the Phase 1-2 Tualatin TSP engagement process and summarizes key takeaways. The following table summarizes the events that took place during the Tualatin TSP engagement process.

	Viva Tualatin	National Night Out	Pumpkin Regatta	TSP Open House	Focus Groups	Project Survey Feedback
Location	*Atfalati Park*	*Stoneridge Park*	*Tualatin Commons*	*Tualatin Library*	*Zoom*	*Online*
Timeframe	*8/22/23*	*8/7/23*	*10/22/23*	*11/1/23*	*11/4, 11/6, 11/9*	*10/9-11/10*
Participants	*Approx 100*	*Approx 50*	*Approx 300*	*Approx40*	*23*	*202*

Project Survey Feedback

The Tualatin TSP Survey was open for public comment between 10/9 and 11/10, through an online portal and in print. Community members learned about the survey through yard signs posted around Tualatin, the City newsletter and email list outreach, an ad in Tualatin Life, a utility bill announcement, a large banner on Tualatin-Sherwood Rd, targeted engagement from community liaisons, and through promotion during the in-person TSP Open House event. Community members shared their current travel modes and weighed in on what their priorities are for the future of transportation in Tualatin through a set of seven questions. At the end of the survey, community members optionally shared demographic information to help the project team better understand the audience of the survey. In total, 202 community members provided their input on the project survey.

Current and Aspirational Mode-Use Frequency

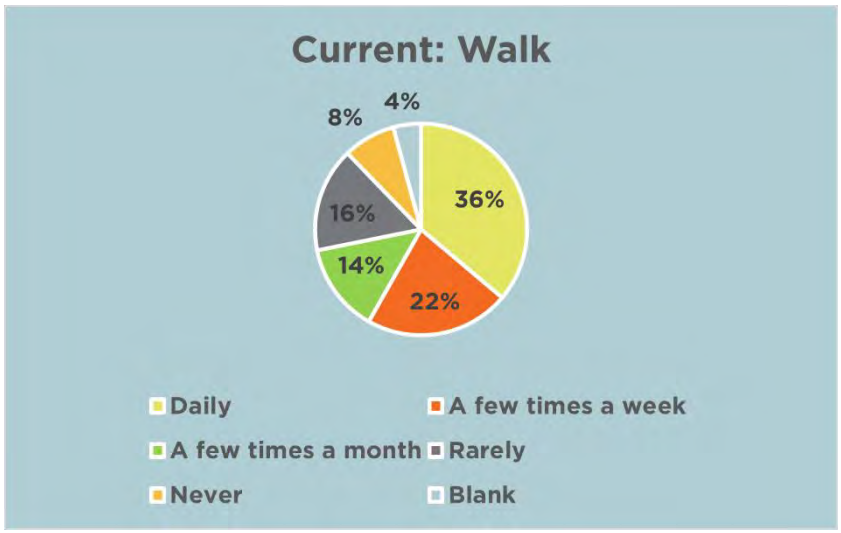
Questions 1 and 2 of the TSP Survey asked community members how frequently they travel to places they need to go or for recreation, using a range of travel modes including:

- Walk
- Roll in a wheelchair or use another assistive device
- Bike/E-bike Scooter/E-Scooter
- Public Transit (TriMet, SMART, school bus, Ride Connection Shuttle)
- Drive my own Car or Truck
- Carpool
- Motorcycle or Motor Scooter
- Taxi, Lyft, or Uber

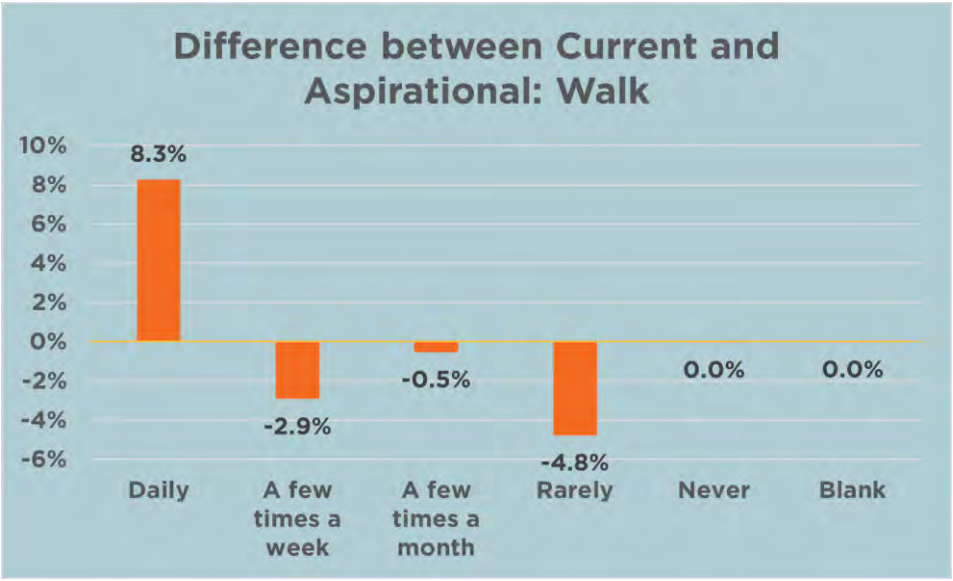
Comparing the modes community members currently use to travel with the modes that they want to use to travel can reveal where mode-specific investments can be made in Tualatin's transportation system. There may be certain transportation modes community members do not use currently that they would prefer to use if given the opportunity. The following sections compare current and aspirational travel frequency by travel mode excluding rolling in a wheelchair or using another assistive device, a comparison that may not be informative for this analysis. Overall, Tualatin residents would like to be able to walk, bike, and take transit more frequently and drive less frequently than they do today.

Walk

Figures 1-3. Current and aspirational walk frequency


Current: Walk
4%
8%
36%
16%
14%
22%
Daily
A few times a week
A few times a month
Rarely
Never
Blank

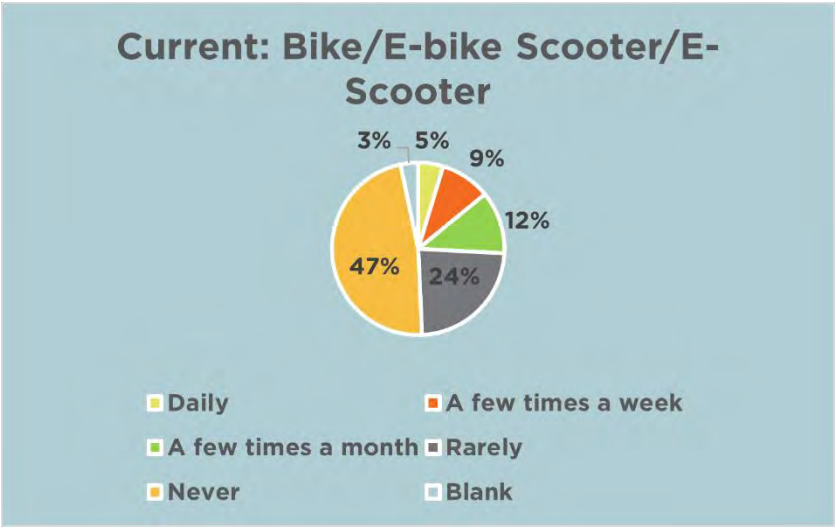

Aspirational: Walk
4%
8%
11%
45%
13%
19%
Daily
A few times a week
A few times a month
Rarely
Never
Blank

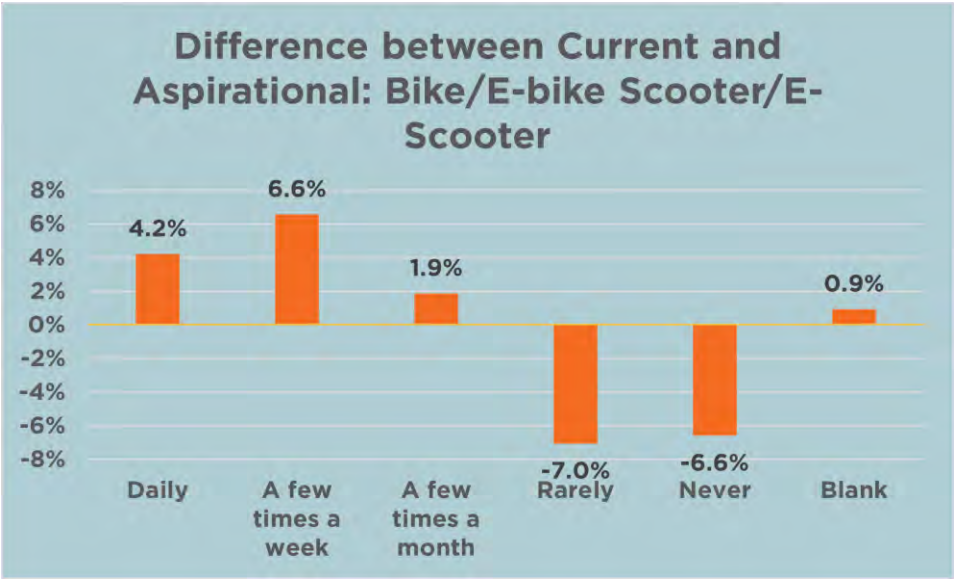


Of all the transportation modes, walking showed the greatest increase of those wanting to walk "daily" in comparison to their current behavior, from 36% to 45%, an 8% increase. The increase in those wanting to walk daily mostly came from people who had initially indicated that they walk rarely, which decreased by 5%.

Bike/E-bike Scooter/E-Scooter

Figure 4-6. Current and aspirational Bike/E-bike or Scooter/E-Scooter frequency

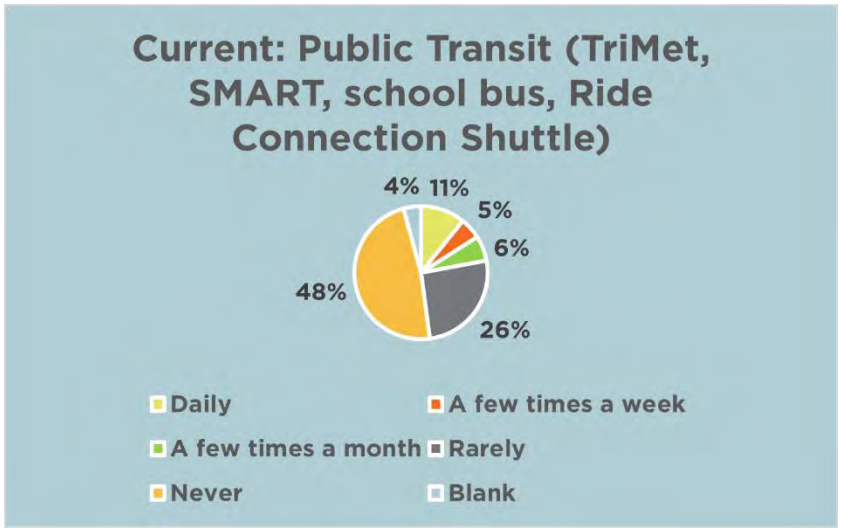


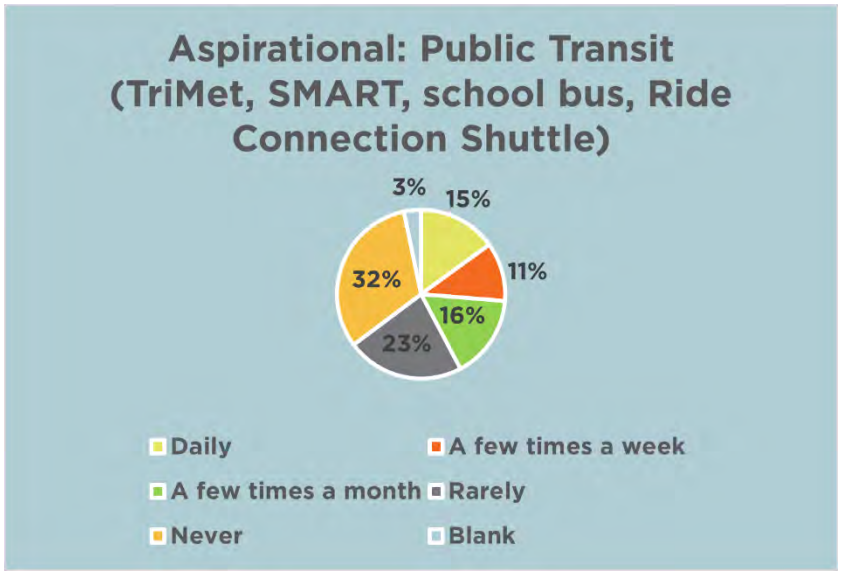


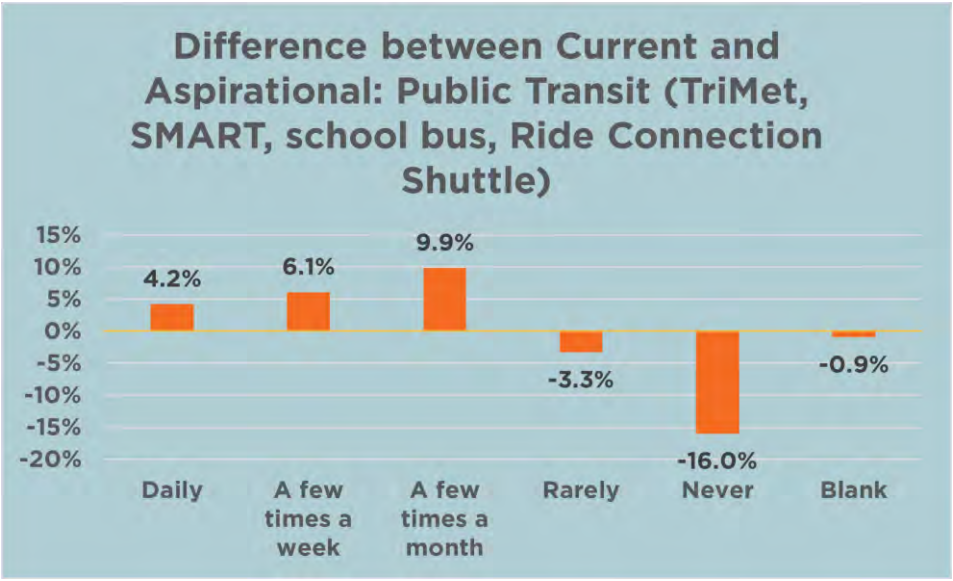
The greatest increase among frequencies for traveling by bicycle or scooter was for a "a few times a week," which increased 7% between current and aspirational. Other frequencies, "daily" and "a few times a week" increased slightly by 4% and 2% respectively, while "rarely" and "never" showed decreases between current and aspirational

Public Transit (TriMet, SMART, school bus, Ride Connection Shuttle)

Figure 7-9. Current and aspirational public transit frequency



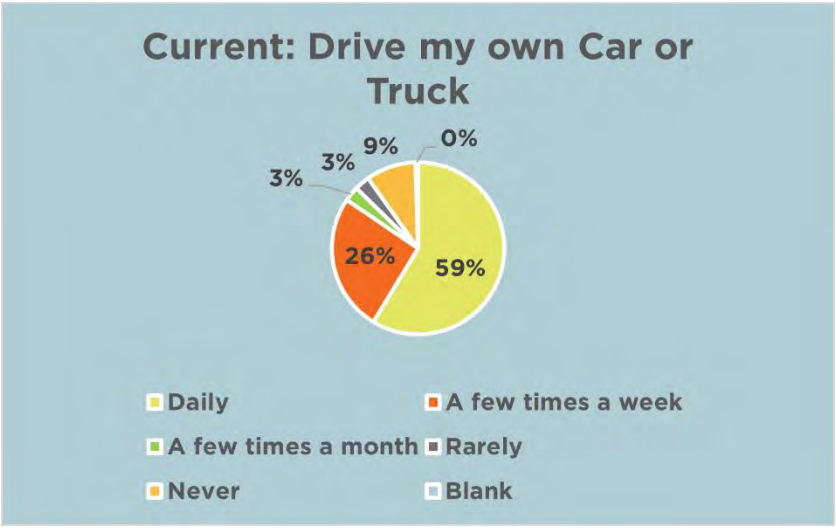


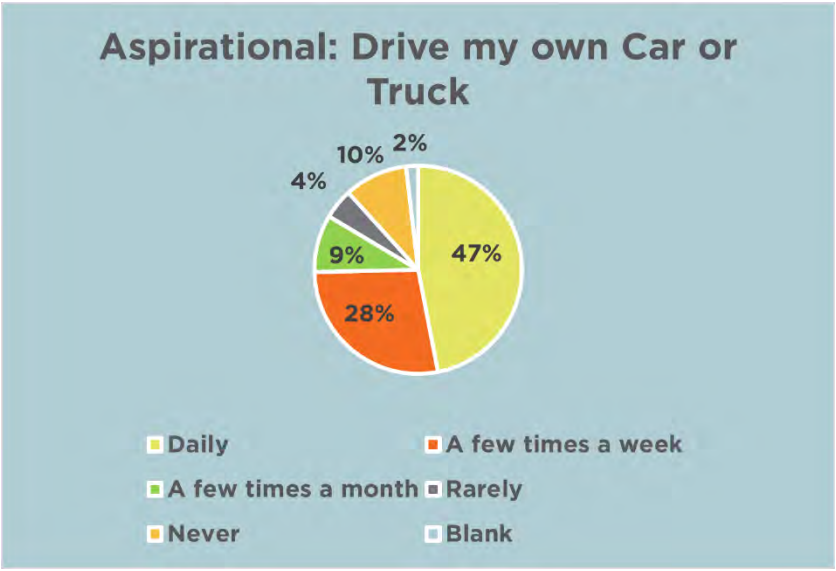


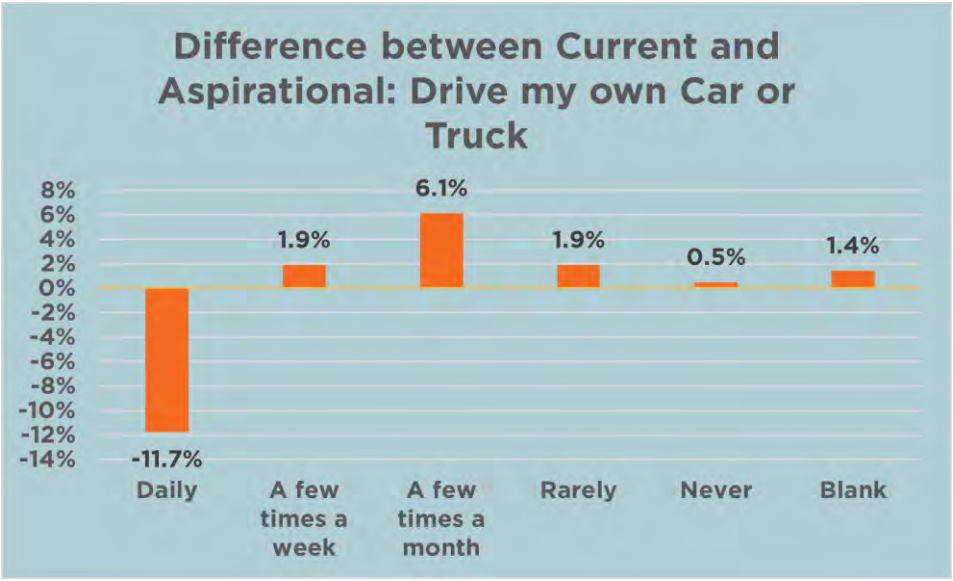
The frequency that changed the most between current and aspirational transit use was from the option, "never." The percent of respondents indicating "never" between current and aspirational use decreased from 48% to 32%, which coincided with increases in respondents who indicated that they want to take transit "daily," "a few times a week," and "a few times a month" of 4%, 6%, and 10% respectively. This indicates that many would like to take transit more than they are currently.

Drive my own Car or Truck

Figure 10-12. Current and aspirational drive their own car or truck frequency



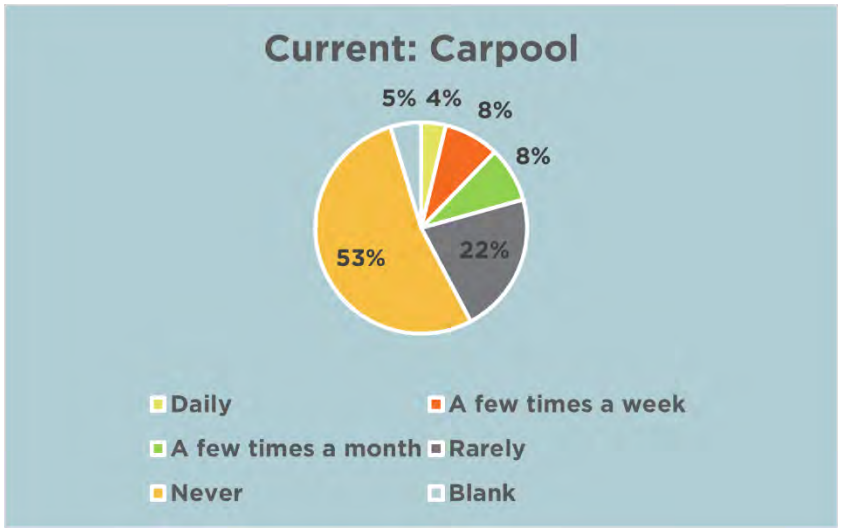


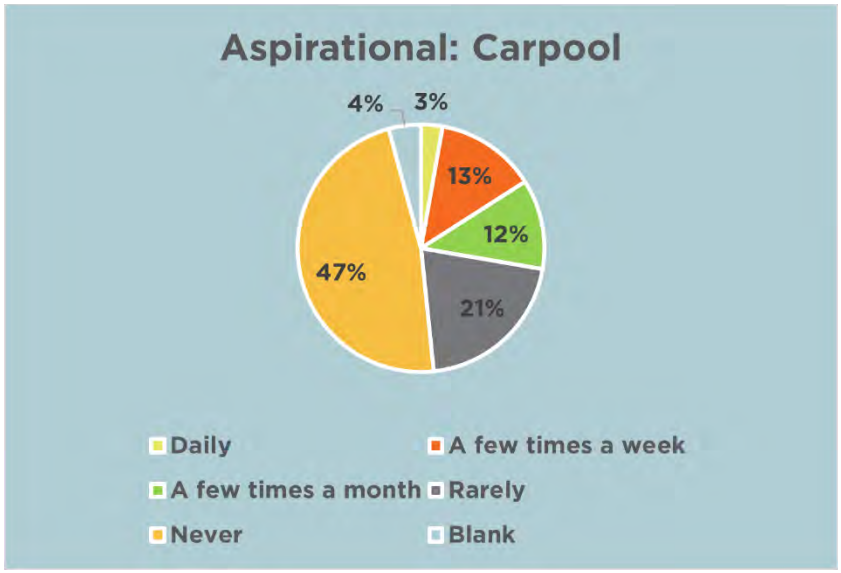


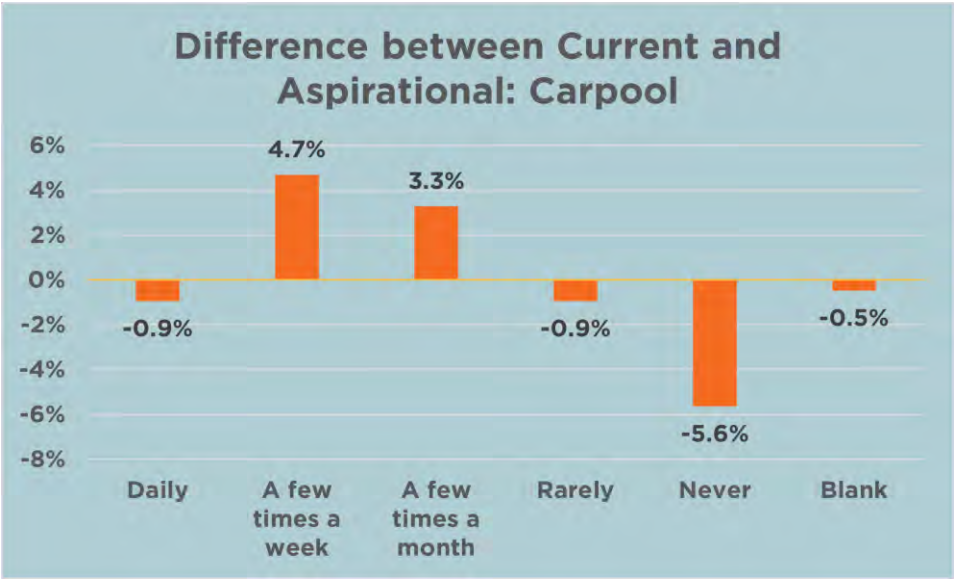
Among all the transportation modes, "drive my own car or truck" had the greatest share of those indicating daily use for both current and aspirational. Of all the transportation modes, people taking the survey indicated that they aspired to drive cars or trucks less often than they do now with the category "daily" decreasing in comparison to their current travel behavior from 59% to 47%, a -12% drop. Among other frequency options, "a few times a month increased the most, from 3% to 9% by 6%.

Carpool

Figure 13-15. Current and aspirational carpool frequency



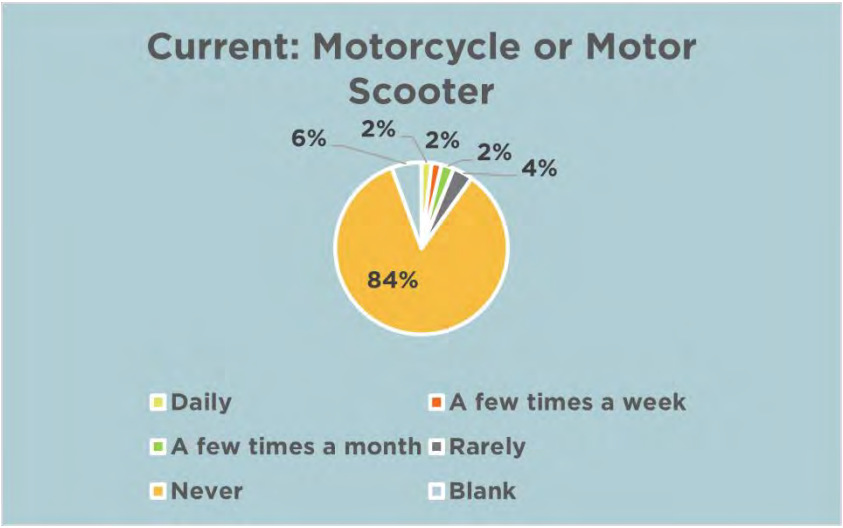


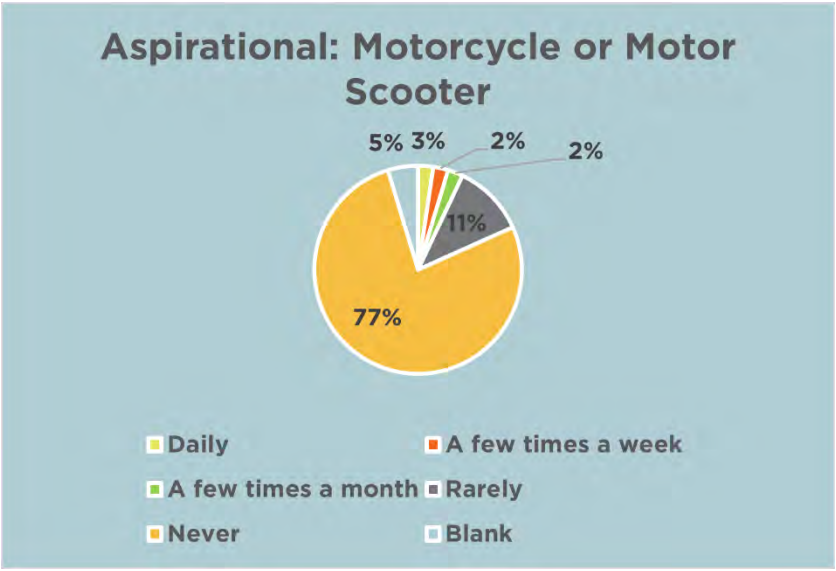


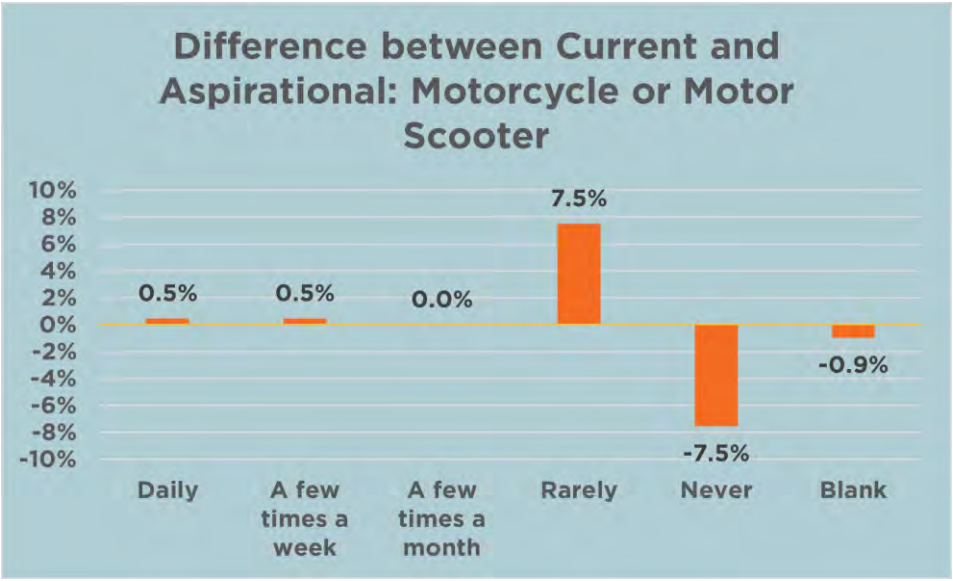
In general, participants indicated that they wanted to carpool more than they do currently. The category, "never" decreased by 6% between current and aspirational and a few times a week increased by 5%.

Motorcycle or Motor Scooter

Figure 16-18. Current and aspirational motorcycle or motor scooter frequency



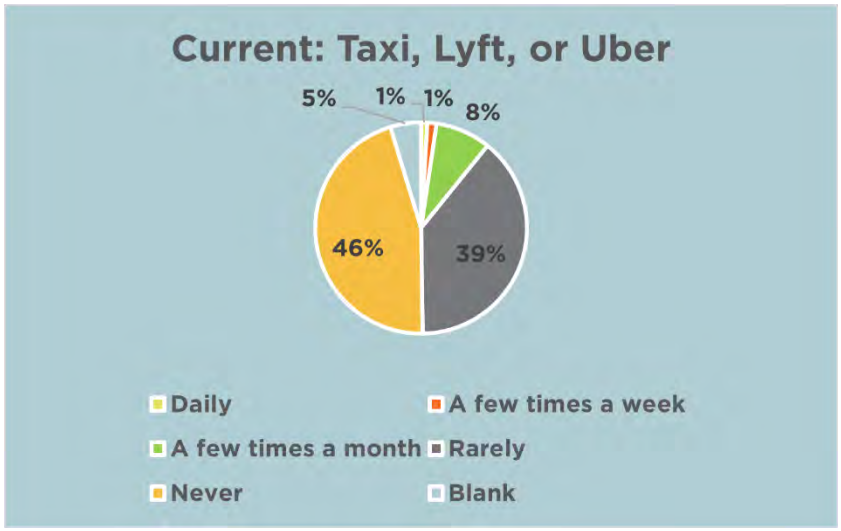


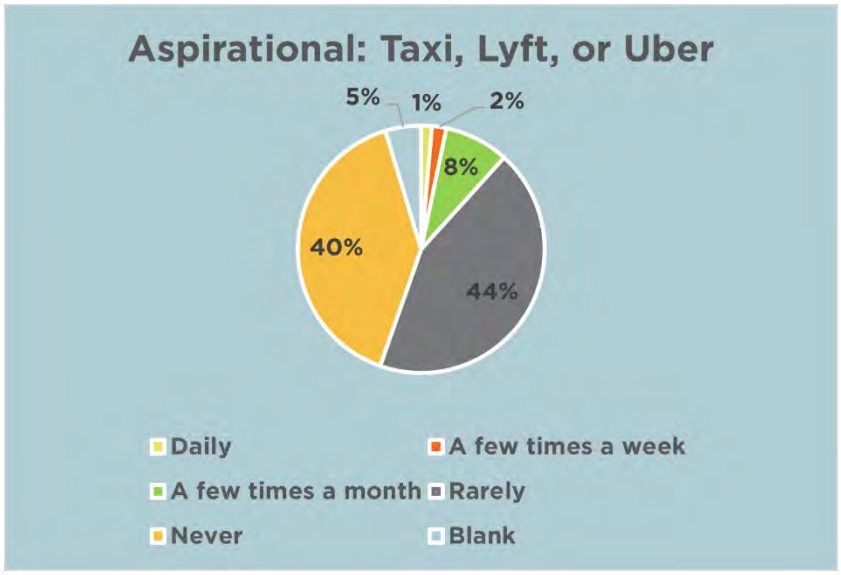


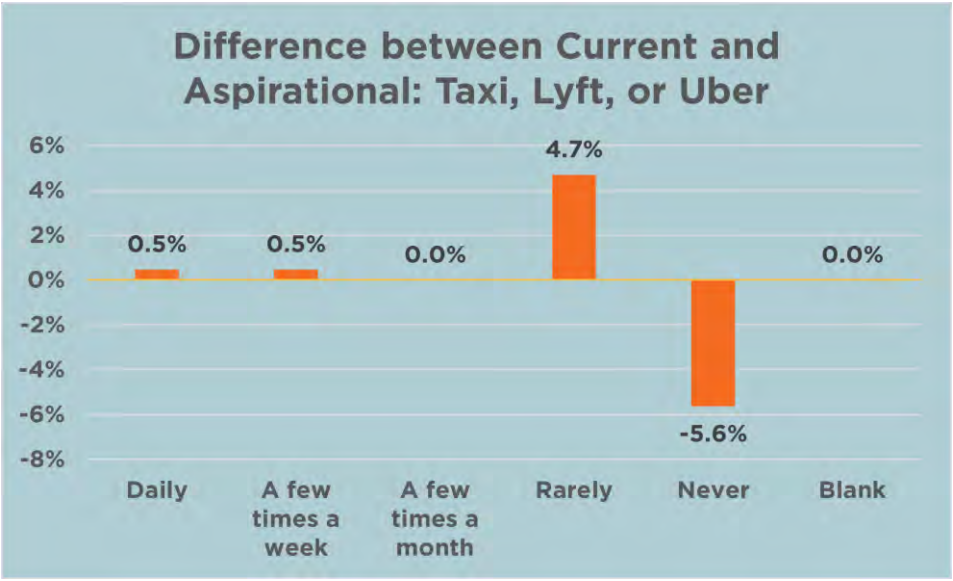
In general, participants indicated that they want to drive a motorcycle or motor scooter slightly more than they do currently. 8% of participants who indicated they never travel by motorcycle or motor scooter, indicated that they would like to "rarely" travel by motorcycle or motor scooter. Participants taking the survey indicated that they currently and want to travel by motorcycle or motor scooter

Taxi, Lyft, or Uber

Figure 19-21. Current and aspirational taxi, Lyft, or Uber frequency







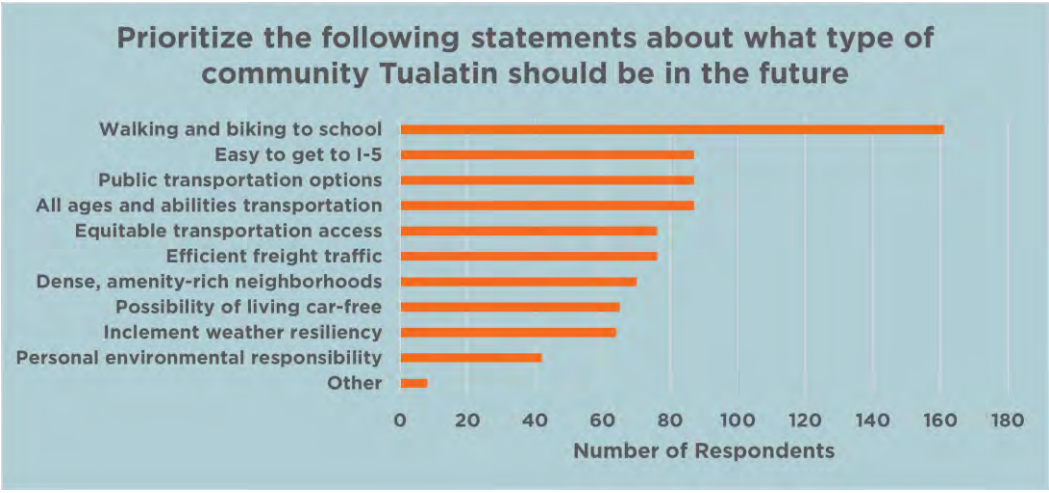
Similar to motorcycle and motor scooter travel, people taking the survey indicated that they want to take taxi, Lyft, or Uber "rarely" slightly more than they do currently.

Transportation Priorities, Issues, and Ideas

The people taking the survey shared their transportation priorities for the type of community they think Tualatin should be in the future, the biggest transportation issues, and what goals the City of Tualatin should prioritize for the future of its transportation system. This question asked participants to imagine the future they most want to see in Tualatin. "Tualatin is the type of place where....:, for example, "families can walk and bike to school."

What type of community should Tualatin be in the future?

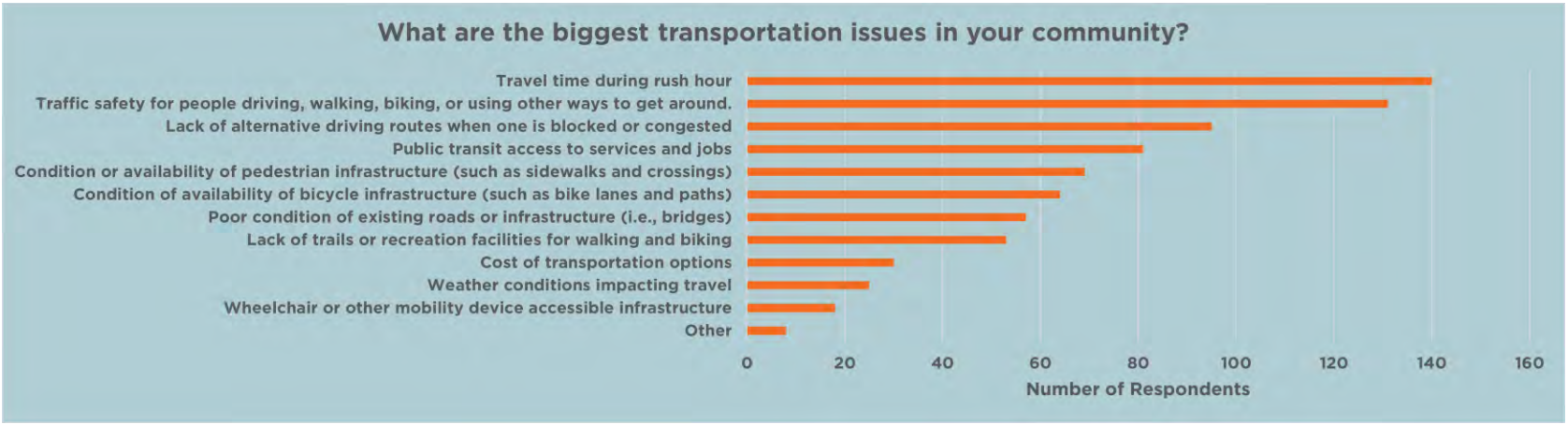
Figure 22. City of Tualatin Community Priorities



When asked about what type of community Tualatin should be in the future, the survey participants selected four priorities among ten predefined statements, which align with potential TSP goals. For the purposes of this analysis, the survey response options are abbreviated. The most frequently selected statement was "walking and biking to school," which the survey participants chose nearly twice as much as the next most popular option. The top eight options were chosen by between 60 and 90 of the survey participants which included "easy to get to I-5," "public transportation options," "all ages and abilities transportation," and "equitable transportation access."

Transportation Issues in Tualatin

Figure 23. Transportation Priority Issues



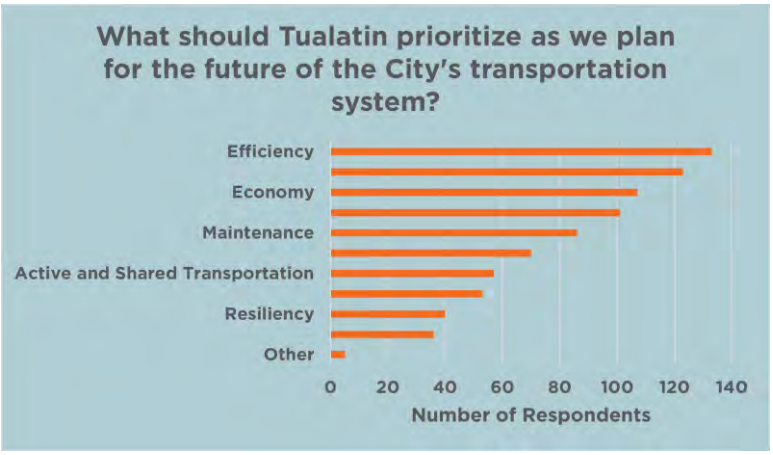
When asked what the biggest transportation issues are in their community, the survey participants selected four priority issues among eleven predefined options. The most frequently selected issue was "travel time during rush hour," followed by "traffic safety for people driving; walking; biking; or using other ways to get around" and "lack of alternative driving routes when one is blocked or congested."

In addition, survey participants shared reasons why they care about the transportation issues they selected. Survey participants included explanations such as:

- "I've lived in or near Tualatin since I was a kid, I just wish it was more accessible for differently abled folks and that there was better transit systems within the city. I feel there should be at least one more bus line and that routes should extend to more rural areas as well, to help connect communities more and increase options of travel for people who don't drive."
- "Traffic is my primary concern. It is already almost impossible to get from Riverpark to the freeway without major delays both in the morning and afternoon. It is extremely frustrating especially given the massive high density housing going in on Boones Fy. I wish Tualatin had a lovely downtown to walk and a wide array of local businesses, but we just don't. I love living here, but traffic is slowly killing livability and the draw Tualatin business have."
- "I often feel unsafe when biking to work. Even though there's is a bike lane for most (but not all) of the way, cars are too fast and erratic for me to feel safe."
- "Difficult to get downtown; Limited hours on WES and Sherwood bus"

Prioritizing the Plan Goals

Figure 24. Priority of the TSP Goals



As part of the survey, the survey participants weighed in on the potential plan goals for the TSP. Of the ten potential goals, the survey participants most frequently selected "efficiency" as their priority, followed by "safety" and "economy."

Desired Transportation System

When asked what ideas they had for the future of transportation in Tualatin if they had the power to make it the way they wanted, the respondents provided commentary on a range of transportation topics. Given the free-response nature of the question, the survey respondents would often provide comments that correspond with multiple topics. The project team observed the following comment categories, which are listed below with standout comments.

- Safety Improvements – **25 comments**
  - "Better signage and better paint on road ways that can be seen on dark and stormy nights."
  - "Roundabouts may be a good idea moving forward, less power is used and no worries about power going out. It may also help congestion worries and accidents, as if someone is in the wrong lane and tried to get into it from another in heavy traffic they can cause a hold up in up to 2 lanes, or if traffic is moving at a faster speed and someone moves over to correct an error that can cause an accident (being predictable on the road is key to reducing accidents). In a roundabout, you can loop again and correct in a safer manner."
- Active Transportation Gaps (Additional Bike/Ped Facilities, Bike/Ped Bridges, Etc.) – **24 comments**
  - "Pedestrian bridge over the Tualatin river near Jurgens Park! Also expand the Tualatin river Greenway path such that it goes from Jurgens all the way to browns ferry"
  - "A cycling network such as Tucson's 131 mile Loop which includes under and overpasses to avoid most at-grade crossings and connects to activity centers (shopping, schools, employment centers). Multimodal connections to neighboring cities (Wilsonville, Tigard, Beaverton, Portland, West Linn, Lake Oswego, etc) incorporating existing infrastructure (e.g. the Fanno Creek Trail - widened and raised)"
- Transit Improvement – **24 comments**
  - "More WES service!!! It's ridiculous that it's only during commuter hours."
  - "A seamless transit system (bus or light rail) with frequent service from and into Tualatin that serves the entire Metro region (North-South, East-West). A grid network of frequent bus routes throughout Tualatin to reduce driving. Southwest Corridor would become a reality. The MAX system in addition to the Southwest Corridor, would extend from Tualatin to connect with the Green Line at Clackamas Town Center."
- Signal Timing / Traffic Flow – **23 comments**
  - "Fix the Charbonneau - Norwood I-5 bottleneck."

    - "We would have the ability to travel through the City with as few stop lights as possible. Tualatin Sherwood Road is a serious bottleneck and hope that 124th makes an impact to bypass cars/truck for through traffic to I-5. We have a tremendous base of industrial uses and need to make the access for these businesses as reliable as possible."

- Land Use / Housing / Walkable Neighborhoods – **9 comments**
    - "Houses and shopping and coffee shops would be close enough to walk and we could take a train into the city on the weekends or at night for special events."
- Car-Free Lifestyle / Pedestrianized Downtown – **6 comments**
    - "People don't have to use personal vehicles. They can walk, bike, or roll to work, school, shop, and back home safely. There are more green spaces that people get out in and use to connect with one another."
- Enforcement / Compliance – **6 comments**
    - "...robust enforcement of traffic laws, speed, school zones etc."
- Tualatin Shuttle Service – **4 comments**
    - "longer and more choices of shuttle routes including to and through the lunch hours. I almost always have to plan my trips to avoid the long waits through the noon hours. Also on almost every ride there is a break time when the shuttle has to sit idle for up to a half hour at which time I am forced to step off in all kinds of weather and await the driver's return. It is not the drivers fault but it is rough on the riders."
- ADA Accessibility – **3 comments**
    - "Benches along sidewalks that include maps would greatly help people with mobility issues, the maps for people who have mental disabilities or tourists who don't know the areas very well."
- Landscaping – **3 comments**
    - "We need to plant more trees along the roads. That's what makes Oregon so beautiful."
- Electric and Autonomous Vehicles – **2 comments**
    - "[I would like] To have electric vehicle charging stations throughout the city."

Desired Improvements

Participants weighed in on potential projects that the City of Tualatin or partner agencies can undertake in the future. Participants answered the question, "How important is it for the City of Tualatin and other regional partners to invest in or advocate for the following types of

projects?" by selecting one of the following options: "Not at all important," "Not very important," "I'm not sure," "Somewhat important," and "Very important." The charts below depict the support of participants for each project type. The following sections list all the potential projects and show the level of support each project had among repondents. The top three project types that received the "very important" designation from survey participants were projects that

- improve safety for all road users (122),
- improve safety of roadway crossings for people walking and biking (122),
- and improve street lighting (96).

Figure 25. Support for reducing signal wait time

Figure 26. Support for building more roadway connections

Figure 27. Support for improving multimodal roadway crossings

Figure 28. Support for slowing driving speeds

Figure 29. Support for roadway safety

Figure 30. Support for repaving streets

Figure 31. Support for expanding reach of bus service

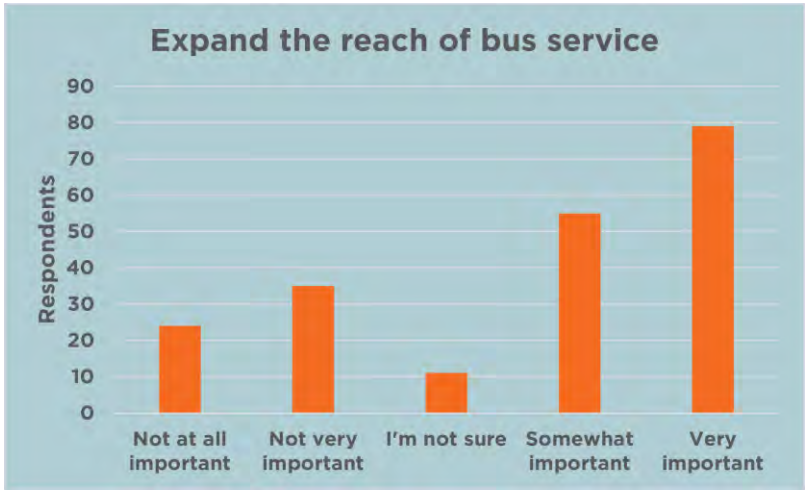


Figure 32. Support for improving bus stops and amenities

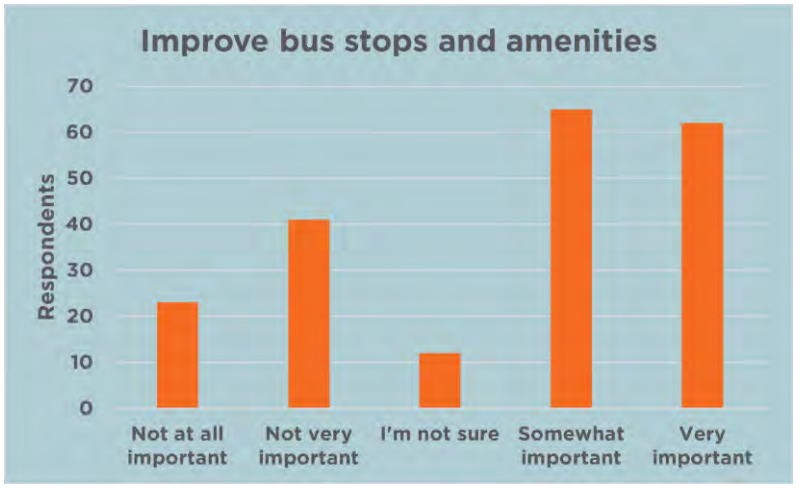


Figure 33. Support for building more ADA sidewalks

Figure 34. Support for building more safe, connected bikeways

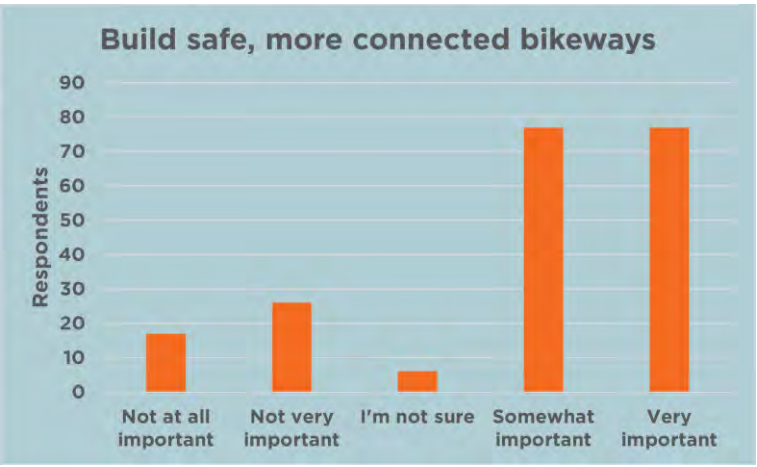
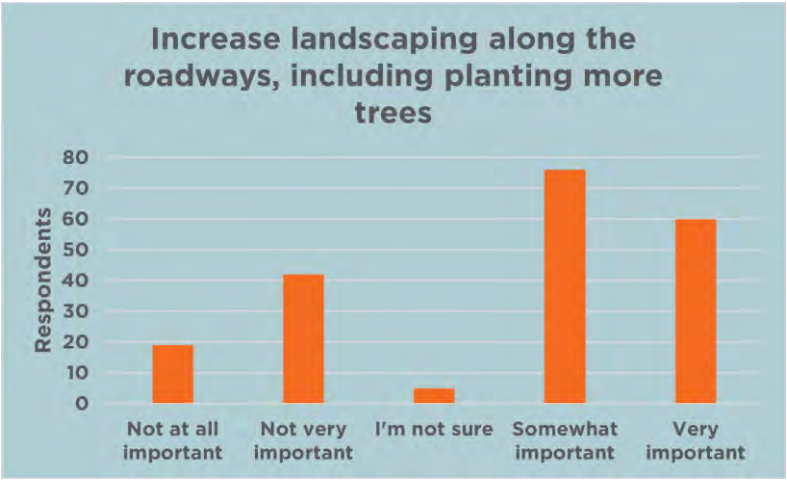


Figure 35. Support for improving existing bikeways and sidewalks

Figure 36. Support for improving street lighting

Figure 37. Support for increasing landscaping



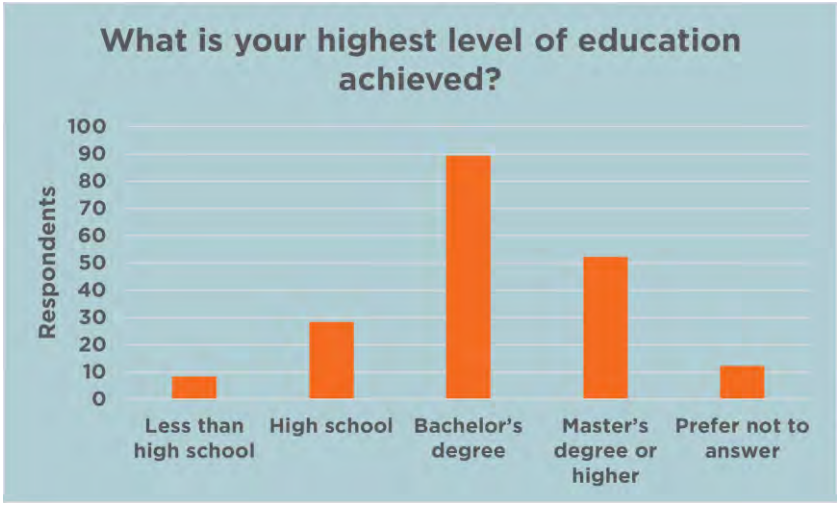
Who Took the Tualatin TSP Survey?

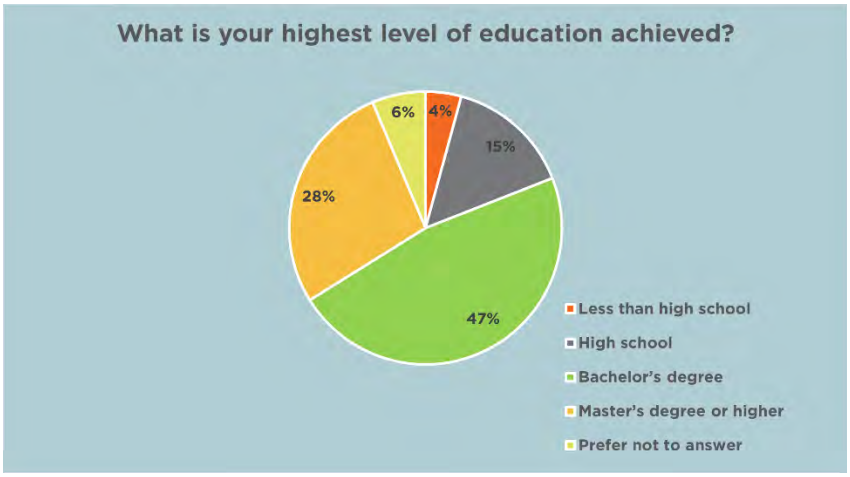
At the end of the Tualatin TSP survey, respondents were given the chance to share information about their background, which included questions about education, income, and their race or ethnicity. These questions help shed light on who were the people who the people were who took part in the survey and if they match the demographics of Tualatin as a whole.

Education

Participants in the Tualatin TSP were given the option to share information on their educational background. Respondents of the Tualatin TSP came from a variety of educational backgrounds. Approximately 75 percent of respondents had a bachelor's degree or higher and 28 percent of respondents had a Master's degree or higher.

Figures 38-39. Highest level of education

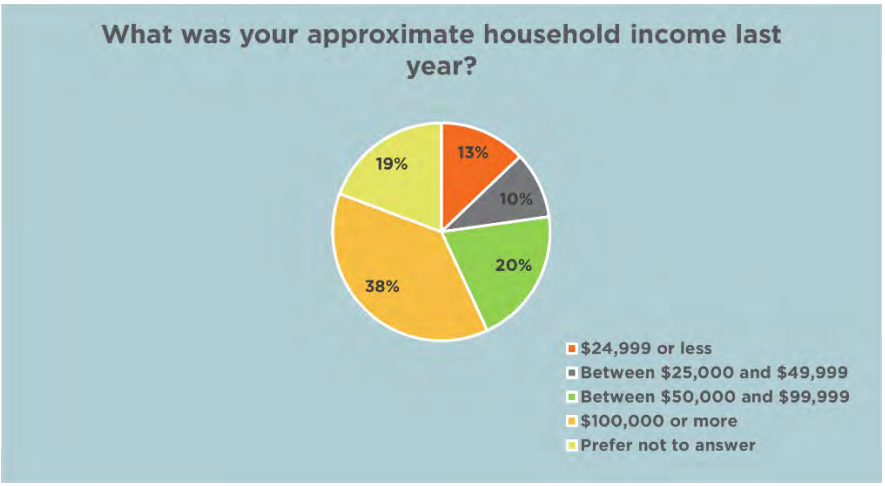




Income

Participants in the Tualatin TSP survey had the opportunity to share their household income. The most frequently chosen household income range was over $100,000, with 38 percent of the survey participants. There were, however, a large portion of the survey respondents who indicated that they would prefer not to share their income level at 20 percent.

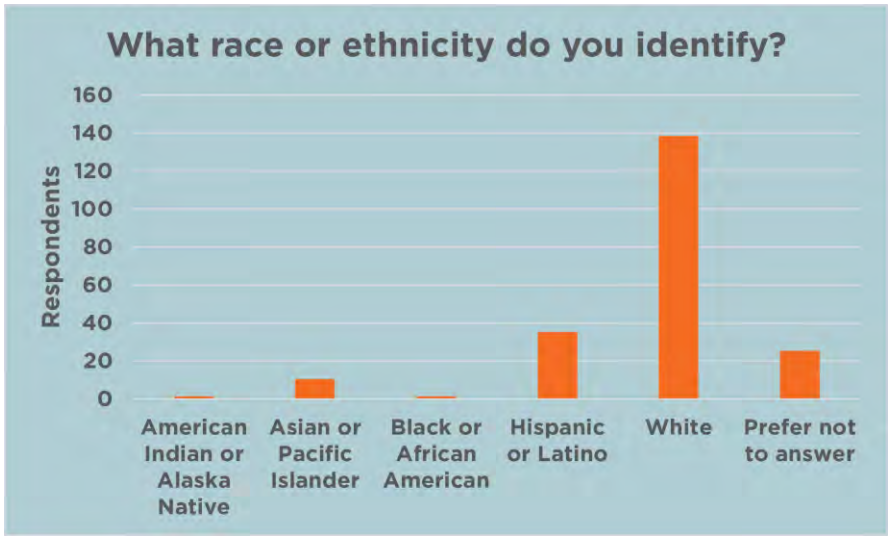
Figures 40-41. Approximate household income last year

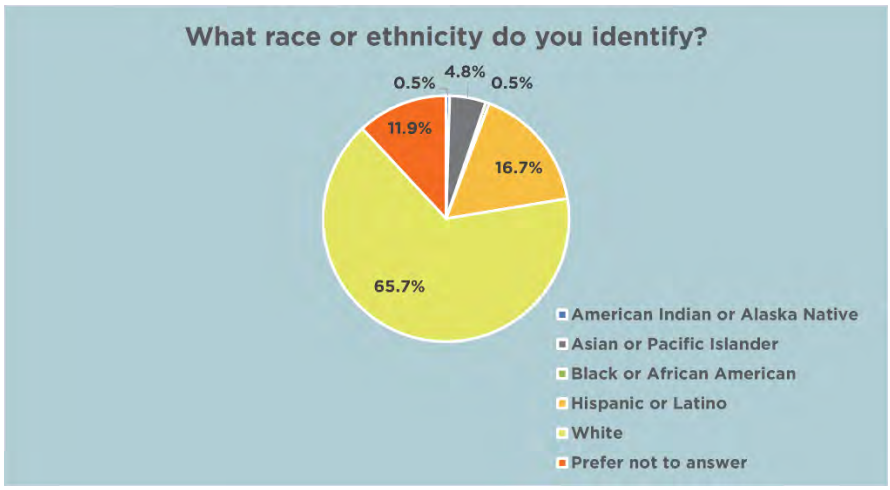


Race or Ethnicity

Survey participants were also given the opportunity to share their race or ethnicity on the TSP survey. Among the options listed, the majority of survey respondents indicated that they identify as White, with 65.7% of the respondents. None of the participants responded that they identified as "other." 11.9 percent of the respondents indicated that they preferred not to answer the question.

Figures 42-43. Race or ethnicity





Social Map Comments

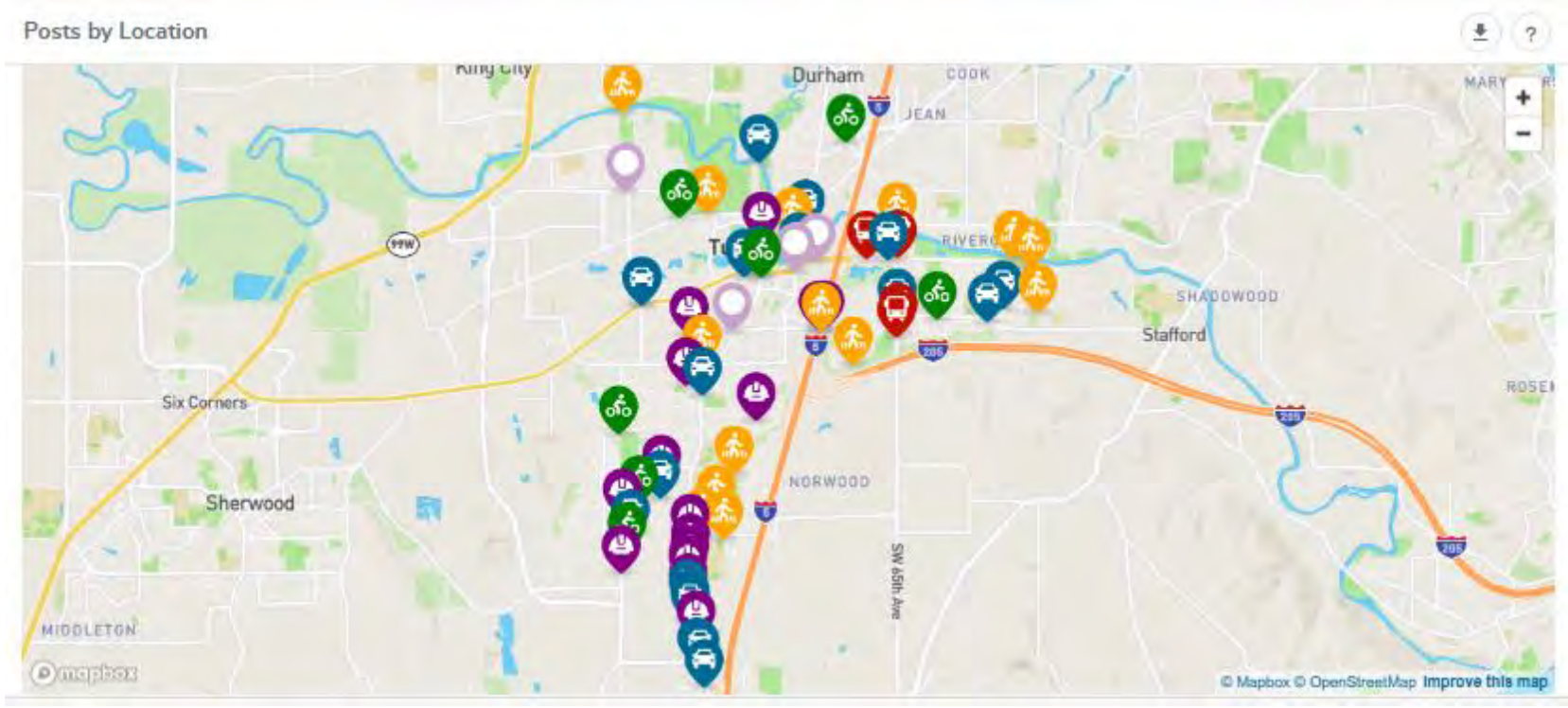
Members of the public provided comments about specific areas of Tualatin through the TSP Survey Social Map. The map interface allowed survey participants to add point features to a map of Tualatin under the following categories:

- General – **4 comments**
- Driving – **22 comments**

- Walking – **14 comments**
- Cycling – **8 comments**
- Taking Transit – **4 comments**
- Safety – **16 comments**

The following map shows the distribution of comments across Tualatin.

Figure 44. Tualatin TSP Social Map Results



Summer Events

CELs staff tabled at the following events to get the word out about the project, discuss transportation issues and recruit for the focus groups:

- Viva Tualatin July 22, Atfalati Park
- National Night Out August 7, Stoneridge Park

Some feedback from these conversations included:

- Most folks reported owning and commuting by car.
- Some reported they have never used the public transportation system even though a few family members use it sporadically.
- A traffic light at the entrance of Las Casitas may minimize big cars parking at the entrance.
- Parking challenges continue to be a problem in Las Casitas.
- Trailers and boats should not park in neighborhood areas, and the city should provide affordable and accessible parking facilities and alternatives.
- A couple people mentioned they have never used the transit system due to language and system barriers. They think it is too complex to ride on it.
- Recommended at the bus stops to set shelters to protect from rain and sun with sufficient benches.
- An idea is to create a bike day per week or per month by closing a few streets for people to use their bikes and other forms to use the roads as trails.
- A couple people expressed concern about the toll on I-205 because it could affect business and residents.

Pumpkin Regatta Mobile Event

The purpose of the Pumpkin Regatta Event on 10/22/23 at Tualatin Commons was to get the word out about the survey, community workshop, and survey. Over 20,000 people attend this event. Project staff helped support the City booth, where they gave out candy and had a photo booth to draw in crowds. Over 300 flyers and postcards were distributed to festival participants and many people from the email listserv stopped by to say hello.

Focus Group Feedback

Members of the public shared their travel patterns and provided feedback on Tualatin's transportation system during three focus groups held virtually between 11/4/23 and 11/9/23 each with 7-9 participants and a moderator. There were three focus groups that each centered on a different demographic group of people who spend time in Tualatin. The focus group facilitators had a set of questions that mirrored the questions from the TSP survey; however, the format of the conversation allowed for unstructured conversation. Focus group members each had the choice to receive a $50 Fred Meyer gift card as an incentive for their participation in the conversation and as a gesture of gratitude for taking the time.

BIPOC Focus Group

The project team hosted a focus group designed to center communication with BIPOC[1] community members. This focus group was held on 11/4/2023 and seven members of the public attended. Six out of seven participants in this group identified as people of color. Key takeaways from the focus group include:

[1] This acronym stands for Black, Indigenous, People of Color, which is defined as groups outside of the "White Only" category. This category includes the following groups: American Indian or Alaska Native, Asian or Pacific Islander, Black or African American, Hispanic or Latino, Two or more Races, or Other.

- Congestion is a serious issue in Tualatin and some roads such as Tualatin-Sherwood Road could be widened to improve traffic flow. There was also interest in improving signal timing to be more efficient.
- Public transit needs to be improved which could include expanding service frequency, adding amenities such as lighting and shelters, and improving security.
- The focus group participants expressed their unease riding bikes or walking in Tualatin with aggressive drivers.

LatinX Focus Group

The project team hosted a focus group designed to center communication with LatinX community members. This focus group was held on 11/6/2023 and nine members of the public attended. These members of the public identified as Spanish-speaking people and Latina/o/e/x. Key takeaways from the focus group include:

- The focus group participants are appreciative of transportation changes that have occurred in recent years in Tualatin and notice the differences.
- Certain areas of Tualatin are unsafe when its dark such as: 65th Ave, Boones Ferry Rd on the Tualatin River Bridge, Roadways near Tualatin View Apartments, Martinazzi Ave, and Seneca St.
- Traveling by vehicle is the most common mode of travel for the participants; however, children and others who cannot drive need to have a way of getting around. Improving public transportation is a priority.
- There was an interest in expanding bus services, especially those that travel within Tualatin and to other communities such as Sherwood, Newberg, and Wilsonville.
- There is a concern about insensitivity on the part of the City of Tualatin, such as how the City held the TSP Open House on Day of the Dead and how the City's VIVA festival is not dedicated to the City's Spanish-speaking community, yet it appropriates a Spanish word.

General Focus Group

This focus group was held on 11/4/2023 and seven members of the public attended. Participants in this focus group were residents of Tualatin, generally recruited outside of the City's standard email lists, by intercept conversation, stopping in local businesses, and church groups. Key takeaways from this focus group includes:

- Most of the focus group participants typically drive but would like to take public transportation more often.
- There was interest in public transportation that provides more coverage than what is currently provided through the existing service.

- There was interest in mixed-use development in areas that are currently one distinct land-use, such as commercial or residential.
- There was interest in establishing wayfinding in Tualatin for pedestrians and have that wayfinding include accessibility for people with disabilities.
- The focus group participants want pedestrians and bicyclists to be a priority.
- There was a desire to improve signal timing and traffic flow in certain locations such as the intersection of Tualatin Sherwood Road and Boones Ferry Road and the intersection of Tualatin Sherwood Road and the entrance to the Fred Meyer parking lot.

TSP Open House (11/1)

The Tualatin Transportation System Plan Open House was held on Wednesday November 1st from 5:30-7:00 PM at the Tualatin Public Library. Members of the project team and City staff answered questions about the project. The City also had poster boards on display with maps and other visuals from the existing conditions work undertaken by the project team up until that point. These poster boards were displayed in English and Spanish. Three Community Engagement Liaisons engaged with community members who may prefer to communicate in a language other than English and to promote focus groups. Light refreshments were provided.

Members of the public shared their Big Idea for the TSP to help bring focus to a particular issue or concern they may have about transportation in Tualatin. Eleven big ideas were shared by members of the public, as seen in the following image.

In addition, as part of Phase 2 of the TSP community engagement efforts, project team members sought to introduce community members to the draft project goals and gain community feedback on those goals.

Project team members also asked meeting participants to scan a QR code to access the project's online survey and spread the word about the survey. The survey was also available as hard copies at this event.

Prioritization Activity

Another board activity provided community members with the chance to prioritize transportation improvements they would like to see in the upcoming TSP. Each participant was given four stickers which they would place on their top four priority transportation categories. Standout priorities are highlighted in bold. The following are the sums of each prioritization category:

Pedestrians

- **Fill sidewalk gaps – 8**
- ADA compliant ramps – 4
- RRFB Crossings – 4
- Safer Crosswalks – 4
- Improve Signals – 3
- Wayfinding Signage – 2
- Wider sidewalks - 1

Transit Users

- Access to public transit – 5
- How to take transit programs – 5
- More transit options 5
- Bus shelters – 4

Drivers

- ***Category created by public: Traffic congestion* - 9**
- Efficient signal timing – 6
- Complete roadways network – 5
- Repave roads – 3
- Slower traffic – 2
- Public electric charging stations – 1

Other

- **Improve lighting – 6**
- Better connections to schools – 4
- More street trees – 4
- Micromobility – 1
- More stormwater facilities – 1
- Improve freight access – 0

People who bike

- Neighborhood greenway – 5
- Trail connections – 5
- Bike lanes – 4
- More bike parking -1

Comments shared here:

- ADA ramps: Slippery; truncated domes especially when wet and smelly
- More lighting at crosswalks
- Push button accessible to wheelchairs
- Pave roads: Accessibility priority; splashing
- Trail connections: Pressure wash; slippery when wet + debris
- Micromobility: concern about sidewalk blockage

Community members provided supplemental feedback on specific issues or locations of concern by posting sticky notes to the maps on the project boards. Several comments were written in Spanish. The translations to English are provided in parentheses.

Comments on the goals included:

When asked to provide feedback on the draft project goals, members of the public largely voiced specific concerns they had about transportation in Tualatin.

- Traer Farmer Markets a Tualatin (Bring Farmer Markets to Tualatin) (two checks)
- Traer mercados para personas de bajos recursos. Bring markets for people with low resources
- Crear más rutas de buses que vayan a Sherwood y Portland (Create more bus routes that go to Sherwood and Portland)
- Promover el uso de bicicletas (Promote the use of bicycles)
- Improve parking in unused spaces
- Add more bus lines
- 76 Bus route is only
- Buses has limited schedule before 8 PM

Comments on Driving and Transit use in Tualatin.

- Bus – too long, too much waiting
- Need weekend bus service paratransit and bus
- Transit doesn't go where we need to go or when
- Transit: hard to get to airport, Beaverton TC
- Potholes + maintenance; railroad tracks are really noisy
- Signal timing at Boones Ferry / T-S road not enough time for N/S through cars; red light running
- Both morning+ afternoon traffic on Boones Ferry Road
- Traffic light Martinazzi and Sherwood Road light is short = bottle neck.
- 90th by Portland clinic, manhole that sprays up water when it rains
- 65th/Sagert/Borland traffic, tolling could push traffic to Borland Rd
- Bus pullouts on Boones Ferry Road
- Passthrough traffic from Wilsonville
- Reduce Speed on Boones Ferry Road; currently 45 mph
- Bus stop would like crossing (at Horizon HS and BFR)
- Development in Basalt Creek = More traffic on Grahams Ferry; Curbs/gutters/bike lanes, etc NEEDED!

Comments on Walking and Biking

- Trail mileage markers, trail wayfinding, connections to cook Pane with Wayfinding + mileage
- Crossing Tualatin River
- Missing trail segment along the river, even through shows as a trail
- Optimize traffic synchronization on Boones Ferry and Tualatin Sherwood Road
- Mas alumbrado público (more public lighting)
- Complete Trail connections on this N/S trail, some sections aren't connected
- 9745 SW Tualatin Road uplift; 9395 Siuslaw Ln Sidewalk uplift; "change code" Arikara RRFB
- Grahams Ferry – disjointed infrastructure, shoulders, sidewalks
- Multiple layers of thermoplastic makes bumpy crossings
- Heritage center bridge is missing freeze warning
- Green bike paint on ground by McDonalds confusing, hard to understand where bikes are going.

Open House Key Takeaways

- Concern about lack of public lighting in certain places such as Sagert Rd across I-5.
- Concerns about the impact of tolling on traffic congestion and bottle necks in certain places such as the intersection of Tualatin Sherwood Road + Boones Ferry Road and 65th Ave + Borland Road.
- Concern about the impact of future developments on the existing transportation system, including Basalt Creek area developments and the provision of transit amenities to the surrounding areas.
- Desire to improve the trail network with increased connections and amenities.
- Concern that transit is infrequent and does not go where people want to go. Desire to improve transit and demand response transit service in Tualatin with increased frequency and coverage.

Overall TSP Engagement Key Takeaways

Based on the results of the engagement activities, Tualatin residents want to retain driving as an option and are concerned about increasing congestion; however, they are also very interested in active transportation options such as walking and biking. Specifically, community members who participated in engagement activities are very interested in improving the walkability of Tualatin (ADA access, addressing sidewalk gaps, safety improvements, better lighting, etc.). There is the desire for a balanced transportation system in Tualatin that so people can get around in different ways. Many Tualatin residents rarely or never take transit, transportation network companies

(Uber, Lyft, etc.), carpool, walk, or travel by bike; however, the community is very interested in increasing their transit options and options to walk and bike to get where they need to go.

2040 TSP Appendix

Project Evaluation Framework

Tualatin TSP - Project Prioritization Criteria

Title	Goal	Scoring Guidance	TPR Prioritization Framework Cross-reference (660-012-0155)	TPR Modal Prioritization (-0520, -0620, -0720, -0820)	Scoring
Our Land Use Vision	Create a transportation system that enhances Tualatin's growing economy and future land use vision.	Is located within an urban renewal area (Core Opportunity and Reinvestment Area or Basalt Creek Area)	3aB Supporting compact pedestrian-friendly development 3e Improving access to destinations	3a Investments in CFAs 3e Access to destinations	Project meets one criteria - 1 point Project meets more than one criteria - 2 points
		Connect residents or employees from outside the city to Tualatin	3e Improving access to destinations	3e Access to destinations	
		Is located near and connects to multifamily housing	3b Improving equitable outcomes	3b Areas with underserved populations	
		Is located along a designated freight route and have a freight component	3g Supporting economies		
Provide a High Quality of Life	Safely and efficiently move people and goods to provide a high quality of life for people who live, work, learn, and play in Tualatin.	Addresses a vehicular bottleneck on a principal arterial	3aA Reducing VMT		Project meets one criteria - 1 point Project meets more than one criteria - 2 points
		Be located at a location with at least one severe or fatal injury collision and/or bike/ped involved collisions of any severity	3c Improving safety 3b Improving equitable outcomes	3d Reported crash locations	
		Creates a new bike/ped/trail connection	3f Completing the multimodal transportation network	3f Fills gaps in the multimodal network	
		Adds a new street connection	3aA Reducing VMT	3f Fills gaps in the multimodal network	
Expand Opportunities for Safe Mulit-Modal transportation	Expand travel options for users of all ages, abilities, and backgrounds by improving options for walking, rolling, cycling, and accessing transit.	Adds or enhances a sidewalk, crossing, bike lane, or trail	3d Improving access for people with disabilities 3f Completing the multimodal transportation	3f Fills gaps in the multimodal network	Project meets one criteria - 1 point Project meets more than one criteria - 2 points
		Creates or improves a transit stop (e.g., add a shelter, add seating, etc.) or enhances transit service (e.g., increase service frequency, etc.)	3b Improving equitable outcomes 3e Improving access to destinations 3d Improving access for people with disabilities	3f Fills gaps in the multimodal network	
		Reduces a major pedestrian barrier (I-5, T-S Rd, Railroad tracks, Tualatin River)	3c Improving safety 3aC Reducing SOV travel 3f Completing the multimodal transportation network	3c Areas with safety risk factors 3f Fills gaps in the multimodal network	
		References a project in the Park and Recreation Master Plan	3f Completing the multimodal transportation network	3f Fills gaps in the multimodal network	
Advance Climate and Health Goals	Reduce greenhouse gas emissions from the transportation system and support the City's climate and health goals.	Creates new walking or biking connections in residential areas	3aC Reducing SOV travel 3f Completing the multimodal transportation network	3f Fills gaps in the multimodal network	Project meets one criteria - 1 point Project meets more than one criteria - 2 points
		Includes lighting, landscaping, shade structures, and/or a reduction of impervious surfaces in project scope	3h Other factor determined by the community	3c Areas with safety risk factors (lighting)	
		Adds electric vehicle or e-bike/e-scooter infrastructure, such as charging stations	3aA Reducing VMT	3f Fills gaps in the multimodal network	
		Includes stormwater management in the project scope	3h Other factor determined by the community		
Invest Wisely	Maximize transportation funding by effectively maintaining the transportation assets we have, finding creative maintenance solutions that can help improve the transportation system, and leveraging outside funding opportunities.	Qualifies for funding from regional or state governments or grants	3h Other factor determined by the community		Project meets one criteria - 1 point Project meets more than one criteria - 2 points
		Low-cost quick-build project (<$250k) that requires little to no ROW acquisition	3h Other factor determined by the community		
		Includes TDM or TSMO/ITS solutions in project scope	3aA Reducing VMT		
		Is located on a facility owned or managed by Washington County, Clackamas County, and/or ODOT	3h Other factor determined by the community		
			Total Possible Points:		**10**

2040 TSP Appendix

Technical Modal Analysis

Memorandum

Date: August 2024

To: City of Tualatin

From: Jai Daniels, Briana Calhoun, and Kendra Breiland, Fehr & Peers
Katie Selin, Phil Longenecker, and Katie Mangle, Alta Planning + Design

Subject: Tualatin Transportation System Plan - Future Network Analysis

Introduction

This memorandum summarizes major policy shifts proposed in this TSP update and describes strategies to guide the development of Tualatin's multimodal transportation system over the next twenty years. Future land use, population, and employment growth are summarized along with planned transportation improvements in Tualatin and the region to proactively plan for shifts in transportation in the coming decades. Modal network policies are described for roadway, transit, bicycle, and pedestrian networks to provide the foundation for the overall guidance for how Tualatin's multimodal transportation system should be improved over time to realize the goals of this TSP. These policies are used, along with the existing conditions analysis and future growth projections, to identify modal gaps and needs.

Future 2045 Conditions

The horizon year of this plan is 2045, which is consistent with the Metro Regional Transportation Plan (RTP) that was completed in 2023. Metro uses projected growth and a list of financially constrained transportation projects to model what traffic and travel patterns will look like in 2045 and how the region will perform against its stated goals.

Land Use, Population, and Employment Growth

Tualatin is planning for growth in households and employment by 2045. This growth includes new businesses, increased density in the city center, and planned development in the Basalt Creek area in southwest Tualatin and unincorporated Washington County. To continue providing an effective,

multimodal transportation system, the City must account for this growth when planning future investments in multimodal infrastructure and programs.

As shown in Table 1, Tualatin is forecasted to see 8% growth in households and 15.5% growth in employment from 2020 to 2045. Compared to Washington County and the Metro region, these percentage growths are lower, although this difference is more pronounced in households than in employment.

Table 1. Planned Regional Growth from 2020 to 2045

	Households			Employment		
	2020	2045	% growth	2020	2045	% growth
Metro Region	930,121	1,282,760	37.9%	1,192,694	1,535,571	28.7%
Washington County	226,008	316,859	40.2%	314,694	394,817	25.5%
Tualatin	11,503	12,421	8.0%	34,293	39,608	15.5%

Source: Washington County Travel Demand Model

The forecasted household growth is highest in the Basalt Creek planned area, while the job growth is concentrated in the industrial areas of the city along Tualatin Sherwood Road from 115th Ave to 95th Ave.

Planned Transportation Improvements

Regional Improvements

Paired with land use growth are the transportation infrastructure investments planned to serve this growth. Metro's RTP was updated in 2023 with the planned projects in Tualatin and throughout the Metro region that are expected to be in place by 2045. These projects are included in the regional travel demand model of 2045 conditions.

The RTP has a financially-constrained project list which includes projects that are within the estimated funding available for the 2045 time period. Many projects are identified as important, but do not fit within the funding expectation; these are included in a separate list of "strategic" projects. The financially-constrained 2045 projects within Tualatin are listed in Table 2 below.

Table 2. Metro 2023 Regional Transportation Plan Constrained Projects in Tualatin

RTP ID	Project Name	Description	Time Period
10745	Nyberg Creek Greenway Trail - East	Shared Use Path with boardwalk sections through wetland/natural areas. Trail will provide access to nature and jobs for communities of color, and English language learners. Includes grade-separated crossing under/over I-5.	2023-2030
11426	Phase 1: 65th Ave – Safety Improvement NB Turn Lane	To improve safety for residents and employees, add a share use path on one side of this roadway section. Include northbound right-turn lane on 65th at Borland.	2023-2030
11422	Boones Ferry Capacity Improvements (TS Rd Intersection)	Improve traffic capacity through the addition of turn lanes and increased stacking distance on northbound or southbound Boones Ferry to Tualatin-Sherwood Road. Possible turn lanes on Tualatin-Sherwood, and possible side street closure intersecting Boones.	2023-2030
10718	Herman Rd Widening (Cipole to 124th Ave)	Reconstruction: Widen to 3-lanes from Cipole to 124th	2023-2030
11327	SMART Commuter Bus Service to Neighboring Communities	Additional service hours for new services and related bus stop and ROW improvements to neighboring communities; such as but not limited to Salem, Tigard, Tualatin, Sherwood, Keizer, Woodburn, Portland, etc.	2023-2030
12322	HCT: Southwest Corridor Project Development	Project Development for High Capacity Transit project between Portland and Tualatin via Tigard.	2023-2030
12301	HCT: Southwest Corridor Project Development Support	Project development to address traffic mitigation and access improvements for SW Corridor High Capacity Transit project between Portland and Tualatin via Tigard.	2023-2030
10043	Borland Rd: Tualatin to Stafford Rd	Add paved shoulders and turn lanes at major intersections. The project or a portion of the project is outside the designated urban growth boundary	2031-24045
12292	HCT: Southwest Corridor: PD, Engineering and ROW	Project Development, Engineering and Right of Way for High Capacity Transit project between Portland and Tualatin via Tigard.	2031-2045
11967	Westside Regional Trail Segment #19	Design and construct a 12' wide regional, multi-use trail segment connecting THPRD and Portland trail systems, completing a gap, serving historically marginalized communities, improving safety, increasing access to jobs, schools, and 2040 centers.	2031-2045

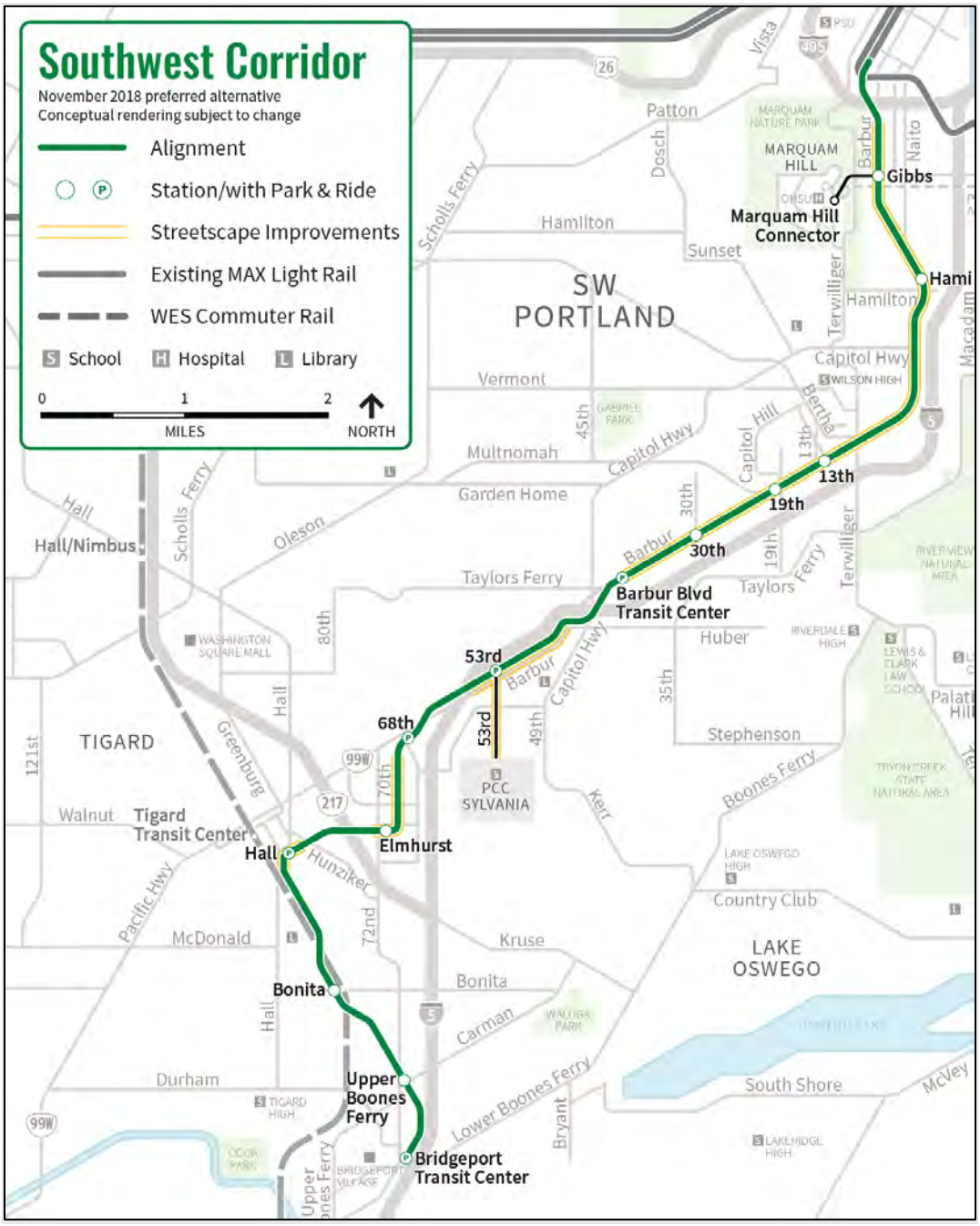
RTP ID	Project Name	Description	Time Period
12300	HCT: Southwest Corridor Engineering and ROW Support	Support SW Corridor engineering and right-of-way for High Capacity Transit project between Portland and Tualatin via Tigard.	2031-2045
10743	OR 99W Sidewalks (S. to N. City Limits)	Install sidewalks on both sides of 99W from Cipole to Tualatin River	2031-2045
11961	Boones Ferry Safety Improvements (Bridgeport to Tualatin Rd)	Provide mid-block crossings, buffered bike lane or shared use path.	2031-2045
11427	Ice Age Tonquin Trail (Segment 17)	Construct shared-use path consistent with Metro Ice Age Tonquin Trail Master Plan.	2031-2045
11428	Martinazzi Safety Improvements (Warm Springs to TS Rd)	To improve safety for employees and residents, add bike lanes or other improvements for pedestrians, cyclists, and vehicle flow/safety on this section of roadway.	2031-2045
11431	Norwood Street Sidewalks and Bike Lanes	Add sidewalks and bike lanes, upgrade to urban standards.	2031-2045
10744	Tualatin River Pathway	Fill in system gaps from eastern city limits to western city limits.	2031-2045
11419	Boones Ferry Rd Upgrade (Norwood to I-5)	Upgrade to urban standards and add sidewalks.	2031-2045
10717	Cipole Street Reconstruction (OR 99W - Tualatin-Sherwood)	Reconstruct/widen to 3 lanes from 99W to Tualatin-Sherwood Road and include shared-use path for the Ice Age Tonquin Trail. The project or a portion of the project is outside the UGB.	2031-2045
11962	Grahams Ferry Rd Upgrade (SW Ibach to Helenius)	Upgrade SW Grahams Ferry Road to roadway standards between SW Ibach Road and Helenius Road.	2031-2045
11430	Helenius Upgrade to Urban Standards (109th to Grahams Ferry)	Upgrade to urban standards	2031-2045
10716	Myslony Widening (Hedges Creek to 124th Ave)	Reconstruct/widen from 112th to 124th to fill system. Improve the intersection of 124th and Myslony.	2031-2045
11420	Nyberg On-Ramp Lane and Safety Enhancement	Add an additional on-ramp lane for vehicles traveling westbound on SW Nyberg Street to I-5 northbound (northeast quadrant of the Nyberg Interchange). Reduce the pedestrian island and improve illumination to enhance safety.	2031-2045

RTP ID	Project Name	Description	Time Period
10738	Teton Ave Safety Improvements (Tualatin Rd to Avery)	Safety and active transportation improvements: Widen Teton to three lanes, add bike lanes. Add right-turn lanes from NB Teton to WB T/S Road. Signalize intersection of Teton/Tualatin Rd. Add SB turn-pocket at Teton/Avery and signalize intersection.	2031-2045

There are other major regional investments that will affect travel behavior in and around Tualatin. These include investments by regional agencies that will provide direct service for Tualatin residents and employers.

The Southwest Corridor, shown in Figure 1, is a planned new light rail line that would run from downtown Portland and end at Bridgeport Village in Tualatin. Planning efforts for this line began in 2009 with preliminary design and environmental review phases of the project occurring through mid-2020, resulting in the Draft Environmental Impact Statement and the Conceptual Design Report. In early 2022, Metro, TriMet and the Federal Transit Administration completed the Final Environmental Impact Statement (FEIS) and issued a Record of Decision (ROD) to ensure the project is eligible for future federal funding. The project is considered on-hold until funding is identified and is still included in planning assumptions for 2045.

Figure 1. Planned Southwest Corridor Alignment



County Improvements

While this TSP update will be used to create a new list of projects for the City to implement, there are already a few key projects that Washington County is undertaking. They are currently improving Tualatin-Sherwood Road between Teton Avenue and Langer Farms Parkway by widening the road to five lanes (two travel lanes in each direction and a center turn lane) with bicycle facilities. The project includes installation of a Willamette Water Supply pipeline. Additionally, the intersection where Highway 99W meets Roy Rogers Road and Tualatin-Sherwood Road is being improved. The intersection will be improved by adding two eastbound-to-northbound dual left-turn lanes, adding a westbound through-lane, adding an eastbound-to-southbound dedicated right-turn lane, and adding a southbound-to-westbound dedicated right-turn lane.

Modal Network Policies

In the following subsections, we describe modal strategies that provide the foundation for the solutions that will be developed as the next steps in this TSP process. These will also serve as guidance for how Tualatin's multimodal transportation system should transform over time to realize the goals of this TSP.

Roadway Network Policies

The City of Tualatin currently measures LOS for vehicles by measuring the average vehicle delay at intersections. The City sets a standard of LOS E for all unsignalized intersections and LOS D for signalized intersections.

The new level of service standard will maintain intersection LOS D for all signalized intersections, roundabouts, and all-way stop-controlled intersections, and LOS E for two-way stop-controlled intersections. At all intersections, no individual movement can perform at LOS F. In the future, the City wants to find ways to measure corridor LOS, such as speed, vehicle capacity, and reliability.

Transit Network Policies and Standards

While the City of Tualatin does not operate the fixed route transit system and thus cannot directly control the fixed route bus and rail operations, the City has the ability to support transit service on its streets and advocate for community transit needs with TriMet, SMART, and Ride Connection.

Improvements to transit can be categorized as:

- Increasing the frequency or the coverage of existing service,
- Improving the reliability of service,
- Maximizing rider comfort while waiting at a transit stop,

- Increasing access to transit stops and first/last mile considerations, and
- Implementing land use strategies to support Transit-Oriented Development (TOD)

Key elements of this network include:

- **Priority Transit Routes/TOD Priority Areas:** These are routes or Transit Oriented Development areas that will accommodate high frequency transit, including both bus and rail.
- **Continuous Transit Service Corridors:** These are streets where the City would like to see continuous transit service
- **Flexible Service Areas:** These are areas of the City that do not have the land use to support traditional fixed route service, but where provision of flexible services such as neighborhood shuttles would help community needs, particularly those with fewer mobility options.

Strategies for Tualatin to improve reliability, amenities, and access for each of these components of the transit network are summarized in Table 3.

Table 3. Planned Transit Network Strategies

Policy	Performance Measure	Potential Projects/Actions
Tier 1: Transit Priority Corridors and TOD Priority Areas		
Support frequent and reliable service.	Strive for average travel speed along key transit routes.	Speed and reliability treatments, such as transit signal priority and queue jumps Advocate for increased service/reduced headways
Maximize rider comfort.	Stop amenities	City investments in comfort/amenities at major stops; e.g., lighting; seating; comfortable shelters; real time transit information
Expand rider access.	Distance from stops to a marked crossing.	Sidewalks/trails connecting to stops Enhanced street crossings Bike parking Curb space management considerations
Tier 2: Areas Where Continuous Transit Service is Desired		
Support continuous service.	Strive for continuous service, based on hours/day and days/week	Advocate for continuous service and minimum headways
Maximize rider comfort.	Stop amenities	Shared investments in comfort/amenities at stops e.g., lighting; seating; comfortable shelters

Expand rider access.	Distance from stops to a marked crossing.	Sidewalks/trails connecting to stops Enhanced street crossings
Tier 3: Flexible Service Needs		
Support flexible services	Percent of the city with access to flexible, on-demand, or shuttle service.	Advocate for flexible service that meets community needs Support flexible service that is equitable (well publicized, accessible to people of all ages/all abilities) Partner to support affordable service

Bicycle Network Policies

The City of Tualatin's Comprehensive Plan policies support implementation of bicycle projects to provide access to transit and "essential destinations" for all mobility levels, through on- and off-street facilities. The policies support implementation to help the City support meeting regional modal targets.

The goal for Tualatin's bicycle network plan is a connected network of bicycle facilities that provides a safe, low stress, direct, and comfortable experience for people of all ages and abilities. The following policies will guide the planning and implementation of projects and programs to achieve this goal. Many policies below are based on existing City policy; new concepts are marked with an asterisk.

- Provide a robust bicycle network of connected bike lanes, low traffic streets, trails, and crossings, to allow people of all ages and abilities to comfortably and safely travel by bike in Tualatin.*
- Work with partner agencies to support, build, and maintain trails that connect neighborhoods with destinations and each other.
- Implement bicycle projects to help reduce vehicle miles traveled and the community's dependance on the automobile for short trips.
- Implement bicycle projects to provide bicycle access to transit and essential destinations for all ages and abilities.
- Support provision of end-of trip bicycle facilities at transit stations, parks and other destinations.
- Create on- and off-street bicycle facilities connecting residential, commercial, industrial, and public facilities such as parks, the library, and schools.
- Create obvious and easy to use connections between on- and off-street bicycle facilities and integrate off-street paths with on-street facilities.

Bicycle Network Planning

Tualatin's bicycle system is planned to provide safe and comfortable routes for a range of users and abilities. The bicycle system is intended to serve people riding bicycles and other vehicles that operate at a similar speed and scale to people riding bicycles. These vehicles include all

classifications of electric bicycles, kick-style and electric scooters, and skateboards but do not include motorcycles.

A connected bicycle network is comprised of both the ability to access key destinations within a community and enough coverage of safe and comfortable facilities to ensure most people within the community can travel by bicycle. Tualatin's bicycle network includes a series of interconnected bicycle facilities that together provide direct routes to key destinations. It consists of connected bicycle facilities including separated and protected bicycle facilities, bicycle boulevards, and multi-use or bicycle paths. An important element of the network is comfortable and convenient crossings of streets with high volumes of traffic or high-speed traffic.

The continuous, direct bikeways that serve Tualatin will span multiple functional classifications and streets of varying widths. Tualatin has three types of bikeways:

- **Cross-Town Connector:** Routes that provide direct access across the city, connecting a string of segments to allow people to bike between neighborhoods and to destinations. The key investments to unlock these routes will address barriers, add wayfinding, and provide separation from traffic and other hazards.
- **Low-Traffic Streets:** Routes within neighborhoods or quadrants of the city providing local connectivity. Frequently these will require minimal investments, such as wayfinding signage and enhanced crossings of roadways.
- **Trails:** Also referred to as shared use paths, trails are paved and typically 10-15 ft wide.

The specific facility required to make each segment safe and comfortable for people of all ages and abilities will depend on the context.

Minimum Bicycle Facilities

The City's objective is to design and construct bicycle facilities to provide people riding bikes in Tualatin with an experience described as:

- Level of Traffic Stress 1: Due to the separation of people biking from moving cars and trucks, this score represents little traffic stress. Since traveling by bike requires the rider to pay little attention to traffic, it is suitable for use by people of all ages and abilities.

- Level of Traffic Stress 2: People feel some traffic stress. Biking on the street requires more attention to traffic conditions than young children would be expected to deal with, so is suitable for teens and adults with adequate bike handling skills.

Planning and design for bicycle facilities will consider the context of adjacent motor vehicle facilities and land uses. Facility design will provide higher levels of separation or protection along streets that have higher volumes or speeds of traffic as shown in Table 4. Enhanced crossings will be provided at all bikeway intersections with collectors and arterials.

Table 4. Preferred Bikeway Design

		Preferred bikeway design	
Motor vehicle speed	**Daily Vehicle volume**	**In Climate Friendly Area, or school zone**	**All other areas**
<20mph	<1500	Bicycle boulevard, shared lane	Bicycle boulevard, shared lane
<25 mph	<3000	Conventional bike lanes	Buffered bike lanes
25-30 mph	<6000	Buffered bike lanes	Separated bike lanes, multiuse path
>30mph	>6000	Separated bike lanes, multiuse path	Separated bike lanes, multiuse path

NACTO's Urban Design Guide includes Contextual Guidance for Selecting all Ages and Abilities Bikeways to provide more nuanced information to use during project development. Tualatin's standards for bicycle system planning and facilities will result in a safe, low stress, and comfortable experience for people of all ages and abilities, as outlined in the NACTO: The Urban Bikeway Design Guide for City and County streets and The Blueprint for Urban Design for ODOT facilities.

Pedestrian Network Policies

Currently, Tualatin's Comprehensive Plan policies support implementation of pedestrian projects to provide access to transit and "essential destinations" for all mobility levels, through on- and off-street facilities. The policies support implementation to help the City support meeting regional modal targets. Additionally, the policies highlight support for Safe Routes to Schools programs and emphasis on enhanced sidewalks and amenities (such as benches) in the downtown area and along paths.

The goal of Tualatin's pedestrian network is for the build-out of a connected network of pedestrian facilities that provides a safe, low stress, direct, and comfortable experience for people of all ages and abilities to access transit and travel without a vehicle. The following policies will guide planning and implementation of projects and programs to achieve this goal. Many policies below are based on existing City policy; new concepts are marked with an asterisk.

- Provide a robust pedestrian system of connected sidewalks, crossings, trails, and paths. *
- Support Safe Routes to Schools (SRTS) for all Tualatin schools.
- Complete the network of sidewalks and other pedestrian facilities, filling gaps in the network on both sides of the street.
- Provide enhanced pedestrian facilities downtown, on high traffic streets, and near major transit stops, and in equity priority areas.
- Provide mid-block pedestrian crossings that protect people from conflicts with moving vehicles and connect walking routes across busy streets.
- Implement pedestrian projects to help reduce dependency on driving for short trips by providing access to transit and local destinations for people with all mobility abilities.

Minimum Pedestrian Facilities

Sidewalks or other pedestrian facilities will be provided on all streets and highways, other than expressways, on both sides of each street except:

- where topography or other barriers would make it difficult to build a pedestrian facility on the other side of the street, or
- where existing and planned land uses make it unnecessary to provide pedestrian access to the other side of the street.

Street crossings must be provided near each end of sections where there is a pedestrian facility on only one side of the street.

Enhanced pedestrian facilities, such as wide, protected sidewalks and pedestrian zones, will be provided along streets classified as arterials; in climate-friendly areas and Metro Region 2040 centers; and in equity priority areas. Enhanced crossings are pedestrian facilities to cross streets or highways that provide a high level of safety and priority to people crossing the street. Enhanced crossings must have adequate nighttime illumination to see pedestrians from all vehicular approaches. Enhanced crossings must be provided, at minimum, in the following locations:

- In Climate Friendly Areas (CFAs) and Equity Priority areas:
- Closely spaced, to a maximum of 500’ between crossings, on arterials
- Near transit stops
- On arterial and collector streets
- On a priority transit corridor
- In CFAs
- At off-street path crossings

Future Network Gaps and Needs

Vehicle Network

The following section discusses the traffic operations on the future roadway network. The analysis evaluates the demand for the network for vehicles and how well the future system serves the residents of Tualatin.

Future Traffic Conditions

The evaluation of future traffic conditions focuses on daily volumes along key corridors in Tualatin, along with afternoon peak-hour operations at 21 intersections in the City.

Intersection Operations

One way to quantify delay experienced by drivers is through intersection operations analysis. As part of the existing conditions inventory, 21 key intersections in Tualatin were evaluated during the evening commute hour to identify locations where congestion occurs on the existing transportation system during peak travel hours.

Level of Service (LOS) is a standard method for characterizing delay at an intersection. For signalized and all-way stop controlled (AWSC) intersections, the LOS is based on the average delay for all approaches. For two-way stop controlled (TWSC) intersections, the movement with the highest delay is used. As mentioned above in the Roadway Network Policies section, the City will maintain intersection LOS D for all signalized intersections, roundabouts, and all-way stop-controlled intersections, and LOS E for two-way stop-controlled intersections. At all intersections, no individual movement can perform at LOS F.

As shown in **Table 5**, there are seven study intersections with an LOS in the future that do not meet the new City standard. The intersection of SW 65th and SW Borland Road was the only intersection under existing with an LOS E, indicating a high amount of delay.

Table 5. Future Intersection Level of Service (LOS) Summary

ID	Name	Control	LOS / Delay	Worst Mvmt	HCM
1	SW 124th Ave & Hwy 99W	Signal	D/46	-	HCM 2000
2	SW 124th Ave & SW Tualatin Rd	Signal	C/22	-	HCM 2000
3	SW 124th Ave & SW Herman Rd	Signal	C/21	-	HCM 7th
4	SW Cipole Rd & SW Herman Rd	AWSC	C/21	-	HCM 7th
5	SW 124th Ave & Tualatin-Sherwood Rd	Signal	/	-	-
6	**SW Tonquin Rd & SW Grahams Ferry Rd**	**TWSC**	**F/946**	**EBL**	**HCM 7th**
7	SW Ibach St & SW Boones Ferry Rd	Signal	D/45	-	HCM 7th
8	SW Avery St & SW Teton Ave	AWSC	C/20	-	HCM 7th
9	SW Sagert St & SW Boones Ferry Rd	Signal	D/55	-	HCM 7th
10	**SW 90th Ave & SW Tualatin-Sherwood Rd**	**Signal**	**E/67**	**-**	**HCM 7th**
11	**SW Boones Ferry Rd & SW Tualatin-Sherwood Rd**	**Signal**	**E/79**	**-**	**-**
12	SW Martinazzi Ave & Tualatin-Sherwood Rd[1]	Signal	/	-	-
13	SW Nyberg St & I-5 SB Ramps	Signal	/	-	-
14	SW Nyberg St & I-5 NB Ramps	Signal	/	-	-
15	**SW 65th Ave & SW Borland Rd**	**Signal**	**F/134**	**-**	**HCM 7th**
16	**SW 65th Ave & SW Sagert St**	**Signal**	**F/163**	**-**	**HCM 7th**

17	SW Tualatin Rd & SW Boones Ferry Rd	Signal	C/29	-	HCM 2000
18	**SW Martinazzi Ave & SW Boones Ferry Rd**	**Signal**	**E/76**	**-**	**-**
19	**SW Bridgeport Rd & SW Lower Boones Ferry Rd**	**Signal**	**E/79**	**-**	**HCM 7th**
20	SW Lower Boones Ferry Rd & I-5 SB Ramps	Signal	B/19	-	HCM 7th
21	SW Lower Boones Ferry Rd & I-5 NB Ramps	Signal	C/25	-	HCM 7th

Source: Fehr & Peers, 2024

Mitigation Strategies

The following mitigation strategies are detailed for each intersection to meet the new City LOS standards.

In Future conditions, **intersection 6, SW Tonquin Road & SW Grahams Ferry Road** is a two-way stop-controlled intersection with high northbound and southbound through volumes causing eastbound left (EBL) delay to be high to wait for the available gap to turn. As a TWSC intersection, the intersection is LOS F with over 900 seconds of delay. The intersection could be upgraded to a signalized intersection to meet the needs of the future demand of vehicles and meet the city's standard. The intersection control type change could bring the intersection from LOS F to LOS D and meets the City's signalized intersection LOS standard.

The other 6 intersections that do not meet the LOS standard are signalized in existing conditions, so the mitigation strategies include adjustments to the timing and phasing settings, further than the future conditions analysis of optimization of cycle lengths and cycle splits. No additional roadway widening is recommended, however, right turn pockets were analyzed as mitigation strategies that could potentially fit within the current right-of-way.

Intersection 10, SW 90th Ave & SW Tualatin-Sherwood Rd, is LOS E, but movements eastbound left (EBL) and westbound through (WBT) are LOS F, which does not meet the City's standard as no individual movements can perform at LOS F. The EBL and WBL turn type control is protected in future conditions, so the mitigation strategy could include changing the turn type control to permitted and protected to provide enough time for the vehicles in the turn queue to clear the intersection. With this mitigation, the intersection performs at LOS D and no movements are LOS F.

Intersection 11, SW Boones Ferry Rd & SW Tualatin-Sherwood Rd, similar to intersection 10 operates at LOS E and the EBL and WBT movements are LOS F, however, this intersection has higher right and left turn volumes. Potential mitigation measures for the eastbound movements include separating the eastbound through (EBT) and eastbound right (EBR) movements by adding a short northbound right turn pocket and short second left turn pocket, as well as changing the right turn type control from permitted to permitted and overlap. Potential mitigation measures for the westbound movements by separating the westbound through (WBT) and westbound right (WBR) movements and northbound through (NBT) and northbound right (NBR) by adding a short

westbound and northbound right turn pocket, as well as changing the right turn type control from permitted to permitted and overlap. The intersection operates at LOS D and no movements operate at LOS F. The City has a project on the project list to grade separate SW Boones Ferry Rd & SW Tualatin-Sherwood Rd but as an interim measure some of the above mitigations could be explored.

The City is currently underway with improvement to study intersections 15 and 16, for the intersections to meet the LOS standards.

Intersection 15, SW 65th Ave & SW Borland Rd, is LOS F with most individual movements also operating at LOS F. Movements eastbound left (EBL) and westbound left (WBL) have high enough volumes with low through volumes that changing the turn type control from permitted to protected allows more vehicles through the intersection reducing delays significantly. Additionally, the northbound right (NBR) movement has a large volume that benefits from changing the right turn type control from permitted to permitted and overlap. These changes result in an intersection LOS C, with no individual movements LOS F.

Intersection 16, SW 65th Ave & SW Sagert St, is LOS F with most individual movements also operating at LOS F. Mitigation strategies for signal timing inputs like the above mentioned cycle lengths and splits, as well as turn type controls still resulted in the intersection operating at LOS F. Potential mitigation strategies for this intersection could include geometric changes to the intersection to accommodate higher volumes at all movements. Eastbound movement could separate the shared eastbound through and right to individual movements with a right turn pocket to reduce delay at the right turn movement. The northbound through and southbound through volumes could significantly reduce delay by widening the intersection footprint to allow for two through movements for both the northbound and southbound approaches to the intersection. All of these mitigations could result in LOS D, with all movements operating above LOS F. To meet the City's LOS standard, the intersection would require significant mitigation strategies.

Intersection 18, SW Martinazzi Ave & SW Boones Ferry Rd, operates at LOS F, but it is in a town center, so the space to make improvements to the vehicle network are limited, so the city will consider trade-offs for accommodating all users of the roadway network. Mitigation strategies the City could consider include:

- Southbound movement only triggered when a vehicle is present as is it a driveway that has few vehicles entering and exiting, none in the afternoon peak hour. This would allow for more time for the northbound left and northbound right vehicles to clear the intersection and reduce the queue.
- The westbound left and eastbound through movements both have high volumes that are competing for green time.
- The intersection could be restriped to increase the storage space for vehicles to allow more vehicles through the intersection.

Intersection 19, SW Bridgeport Rd & SW Lower Boones Ferry Rd, operates at LOS F, and multiple mitigation strategies could potentially improve the operations to meet the City standard. This could include additional westbound right turn lane, changing the turn type controls to allow for more time for turning vehicles to clear the queue at the approaches. These strategies could improve the

overall intersection operation to LOS C, with each movement operating just above LOS F individually.

As shown in Table 6, the mitigation strategies are incorporated into the analysis for all intersections but one to fail in the future scenario with mitigation strategies included.

Table 6. Future Intersection Level of Service (LOS) With Mitigations Summary

ID	Name	Control	LOS / Delay	Worst Mvmt	HCM
1	SW 124th Ave & Hwy 99W	Signal	D/46	-	HCM 2000
2	SW 124th Ave & SW Tualatin Rd	Signal	C/22	-	HCM 2000
3	SW 124th Ave & SW Herman Rd	Signal	C/21	-	HCM 7th
4	SW Cipole Rd & SW Herman Rd	AWSC	C/21	-	HCM 7th
5	SW 124th Ave & Tualatin-Sherwood Rd[1]	Signal	/	-	-
6	**SW Tonquin Rd & SW Grahams Ferry Rd**	**Signal**	**D/49**		**HCM 7th**
7	SW Ibach St & SW Boones Ferry Rd	Signal	D/45	-	HCM 7th
8	SW Avery St & SW Teton Ave	AWSC	C/20	-	HCM 7th
9	SW Sagert St & SW Boones Ferry Rd	Signal	D/55	-	HCM 7th
10	**SW 90th Ave & SW Tualatin-Sherwood Rd**	**Signal**	**D/47**	**-**	**HCM 7th**
11	**SW Boones Ferry Rd & SW Tualatin-Sherwood Rd**	**Signal**	**D/50**	**-**	**-**
12	SW Martinazzi Ave & Tualatin-Sherwood Rd[1]	Signal	/	-	-
13	SW Nyberg St & I-5 SB Ramps	Signal	/	-	-
14	SW Nyberg St & I-5 NB Ramps	Signal	/	-	-
15	**SW 65th Ave & SW Borland Rd**	**Signal**	**C/32**	**-**	**HCM 7th**
16	**SW 65th Ave & SW Sagert St**	**Signal**	**D/36**	**-**	**HCM 7th**
17	SW Tualatin Rd & SW Boones Ferry Rd	Signal	C/29	-	HCM 2000
18	**SW Martinazzi Ave & SW Boones Ferry Rd**	**Signal**	**E/76**	**-**	**-**
19	**SW Bridgeport Rd & SW Lower Boones Ferry Rd**	**Signal**	**E/79**	**-**	**HCM 7th**
20	SW Lower Boones Ferry Rd & I-5 SB Ramps	Signal	B/19	-	HCM 7th
21	SW Lower Boones Ferry Rd & I-5 NB Ramps	Signal	C/25	-	HCM 7th

Source: Fehr & Peers, 2024

Freight Network

Tualatin's freight network is intended to guide roadway planning and direct heavy vehicles to specific roadways in the City. In reviewing the current freight network alongside future growth projections the following changes are proposed:

Removal from the Freight Network:

- Boones Ferry Road currently serves as a freight route in Tualatin's freight network. However, it currently serves many other travel modes and the land use is primarily residential south of Tualatin-Sherwood Road. It is proposed to remove Boones Ferry Road south of Tualatin-Sherwood Road from the freight network and direct heavy vehicles to 124th Avenue instead. This will also serve the future employment growth in the Basalt Creek area.
- Martinazzi Avenue south of Tualatin-Sherwood Road is currently a freight route, but the freight designation abruptly ends at Sagert Street and there are no heavy vehicle employment centers along that segment.

Addition to the Freight Network:

- Teton Avenue currently serves as a freight route from Tualatin Road to Tualatin Sherwood Road, but the freight designation partly does not exist between Tualatin-Sherwood Road and Avery Street. The freight network should continue on Teton Avenue to connect to Avery Street where there is also a freight designation in order to create a more complete network.
- There is currently a freight designation on Leveton Drive between 124th Avenue and 108th Avenue. We propose extending the designation along Leveton Drive, west of 124th Avenue.
- Additionally, no freight route exists on 95th Avenue between Tualatin-Sherwood Road and Sagert Street. We propose creating a freight designation for this corridor in order to create a logical connection to the freight generators in this area of the city.
- Near Industrial Way, an internal freight circulation connection should be added in order to create a logical connection near a freight generator.

Transit Network

While the City of Tualatin does not operate the fixed route transit system and thus cannot directly control the fixed route bus and rail operations, the City has the ability to support transit service on its street and advocate for community transit needs with the transit providers. The network strategies described below discuss how Tualatin can either directly or indirectly improve and enhance transit in the City.

Transit Service Improvements

Changes to Transit Service

While Tualatin does not run the transit service, it can work with transit providers to identify areas of the city that may benefit from new or improved fixed route service. Some areas of Tualatin may not have the density or potential ridership needed to support a fixed route bus service. In these areas, alternative transit services such as on-demand service organized through an app or small circulator shuttles that pick up and drop off at key destinations can help to fill the gap in transit service. There may be opportunities to pilot new and expanded alternative transit services for the general population with providers such as Ride Connection.

Current service needs include:

- Currently, Boones Ferry is served by standard bus service. To encourage more transit ridership along this corridor and alleviate vehicle demand, this corridor would benefit from more frequent service.
- Today, the three Ride Connection shuttles in the City operate one way, which forces some riders to ride the entire circuit to access the stop they need. To improve local shuttle service, shuttles should run bi-directional.
- The north side of the city is the most well served by transit, including Tualatin-Sherwood Road and Boones Ferry Road. However, the southwest side of the city and the new Basalt Creek area could use more service.

Transit Bottleneck Improvements

Congestion and delay on the roadways affect not only people traveling in personal vehicles but transit vehicles and their passengers. The corridors with the highest current transit ridership are among the most congested roadways. While roadway congestion is typically an issue for all modes, the increased travel time for transit riders can pose a barrier to attracting new riders. Tualatin owns and maintains many of the roadways in the City and could explore improvements such as transit signal priority or bus queue jumps to decrease those bottlenecks. For ODOT or county-owned roadways such as Highway 99W or Tualatin Sherwood Road, Tualatin can partner with these agencies to promote congestion relief projects on transit routes. Projects that decrease delay and help to relieve congestion on priority transit corridors make transit a more reliable and feasible travel option for residents.

Transit Amenities

Many of the transit stops in the City could benefit from new or improved amenities such as benches, shelters, real time arrival information, and lighting. Improving these amenities can increase rider comfort while waiting for the bus, potentially increasing ridership. Updating amenities is also an opportunity for Tualatin to partner with TriMet, as they are usually located in the City's right-of-way and funding could be split between the agencies if appropriate.

Access to Transit and First/Last Mile Connections

Increasing access to transit involves building out the bicycle and pedestrian networks, including sidewalks, bike facilities, and crossings, to provide complete and safe infrastructure for all residents, regardless of age or ability, to get to transit stops. Often these access improvements are focused on the areas directly around transit stops to provide safe and comfortable connections from a traveler's starting point to their boarding transit stop, and from their alighting transit stop to their destination. These first/last mile connection improvements remove barriers that could prevent travelers from taking transit. Gaps and needs for these connections are discussed in the pedestrian section below.

Transit Oriented Development

Transit Oriented Development (TOD) is a set of land use strategies to support transit use and access, especially around major stations or transit centers. These strategies support planning and design decisions by TriMet, private development, and the City to create the conditions around each station that will allow TOD to thrive and enable the city to achieve its land use vision. Some example TOD strategies include encouraging more dense retail and residential development around a transit station, smaller block sizes, provisions for affordable housing, and building infrastructure to encourage non-auto travel modes. Tualatin already has a TOD Project Charter with TriMet to describe efforts they will take to facilitate TOD around light rail stations in Tualatin consistent with the city's strategic vision.

Bicycle Network

Gaps and Needs

Tualatin's bicycle network is connected, but primarily comprised of striped bike lanes on arterial and collector roads. While Tualatin does have an extensive off-street trail system, it lacks connectivity which limits users' ability to travel around the city on it. Tualatin has begun to build more and more buffered bike lanes, although though gaps remain. Today, streets in most residential areas offer comfortable cycling, except in neighborhoods near 99W and the Bridgeport area.

As the city plans for additional bikeways that are accessible for riders of all ages and abilities, it will be important to plan for future trail crossings of major streets. It will also be important to consider how low-traffic-volume streets could be enhanced for bicyclists, such as designating key routes as bicycle boulevards or neighborhood greenways. Finally, the City needs to fill the remaining gaps within the on-street bicycle network and identify places where we can provide more separation from traffic with protected facilities and two stage-turn boxes (reducing the need to merge across lanes).

Pedestrian Network

Gaps and Needs

Tualatin's pedestrian network is well built out with sidewalks on both sides of residential streets in most neighborhoods. Exceptions to this are neighborhoods near 99W and the Bridgeport area, where some roadways only have sidewalks on one side. Today, the trail system provides strong east-west connections, including across I-5, through the area north of Nyberg Street, and through the Ibach neighborhood, though there are still many planned trails that have not been built yet.

There are several roadways within Tualatin where the distance between marked crossings is high. When the distance between marked crossings is high, pedestrians may be more likely to cross at unsafe locations or at unsafe times. The distance between marked crossings is lowest downtown and longest in the industrial areas. There are multiple arterial and collector roadways with crossing

distances greater than a quarter mile, including: 99W, Tualatin-Sherwood Road, Herman Road, Sagert St, and Avery Street. It will be important to plan for additional crossings in these places, and to upgrade existing crossings with improved facilities like rectangular-rapid-flashing-beacons (RRFBs), among other options.

There are several high stress roadways such as Boones Ferry Road, which have higher traffic volume and speeds, that make it challenging for pedestrians to walk from residential areas to commercial areas. Understanding where sidewalk conditions are insufficient and where safe crossings are located is critical for creating a more accessible transportation system for vulnerable communities. As the project moves forward, we will be considering places where access to walking and biking opportunities is hindered by difficulty crossing major roadways.

Safety Needs

One indicator of roadway safety is the number of collisions and severity of collisions that occur. To understand recent trends in Tualatin, five years of collision data was analyzed and summarized in the existing conditions report. This analysis found the highest concentration of collisions occurs on Tualatin-Sherwood Road with hot-spots near downtown and 124th Avenue. This was also true for serious injury collisions, with most of those occurring on Tualatin-Sherwood Road or Boones Ferry Road near downtown.

Around 80% of collisions in Tualatin occurred on arterials, with many of these collisions occurring on SW Tualatin Sherwood Road. Boones Ferry Road also had a significant number of crashes. Over half of collisions for all modes are rear-ends. Around 17% and 11% of collisions occurred due to turning movements and overtaking, respectively. The most common cause of bicycle-involved collisions was from vehicles making turning movements.

Table 7. Types of Vehicular Collisions

Type of Collision	Percentage
Angle	2%
Backing	1%
Fixed Object or Other Object	8%
Head-On	0%
Miscellaneous	1%
Non-collision	0%
Parking Maneuver	0%
Pedestrian	1%
Rear-End	57%
Sideswipe - Meeting	1%
Sideswipe - Overtaking	11%
Turning movement	17%

Source: ODOT Collision Data, 2017-2021

Of the 2,264 reported collisions in Tualatin within the past five years, 43 collisions (1.9%) involved a pedestrian or bicyclist. Approximately 70% of these occurred at intersections with at least one arterial roadway. Vehicular collisions are shown in Table 7 above.

Air, Rail, Marine, and Pipeline Systems

The current TSP provides a review of existing Air, Rail, Marine, and Pipeline systems. No planned changes or new issues have been identified. As such, no changes are proposed for the TSP update.

Conclusion

This memorandum outlines the proposed major policy shifts, modal strategies, and key transportation investments crucial for the development of Tualatin's multimodal transportation system as detailed in this TSP update. It provides a comprehensive overview of future conditions, including land use, population, and employment growth, alongside planned transportation improvements. The TSP serves as a vital guide for the City of Tualatin's planning efforts over the next twenty years, aiming to close multimodal gaps, address capacity issues, and meet transportation needs identified through thorough analysis. With a focus on modal network policies for roadway, transit, bicycle, and pedestrian networks, this TSP sets the stage for transformative improvements to enhance mobility, accessibility, and safety for all residents and commuters in Tualatin.

Using this understanding of future growth, modal networks, and policies, as well as the identified needs, the TSP will pinpoint essential capital improvements to enhance infrastructure and meet anticipated demands. In parallel, the TSP will focus on optimizing the existing system's efficiency through innovative strategies and management practices. By addressing both the physical expansion and the operational effectiveness of the transportation network, the TSP aims to create a resilient, adaptable, and sustainable system that can accommodate future growth while improving current transportation experiences.

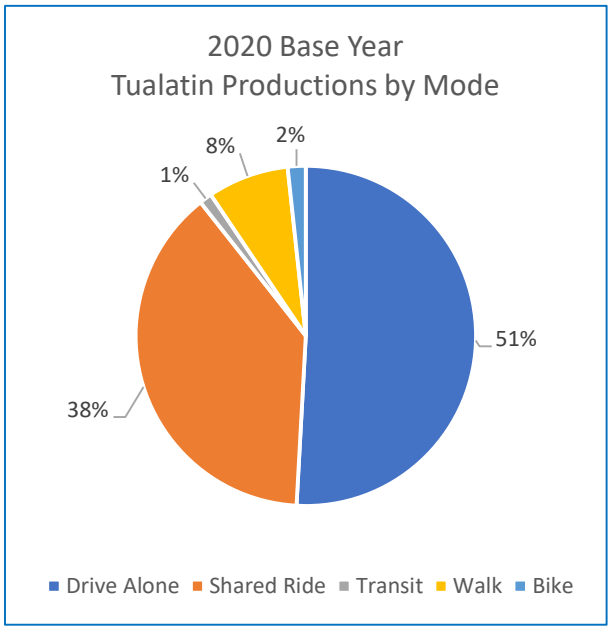
2040 TSP Appendix

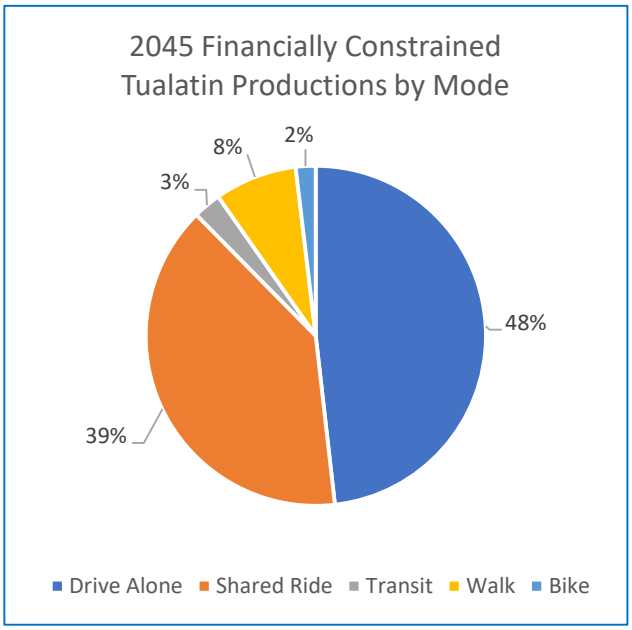
2045 Model Results

2023 Regional Transportation Plan Travel Model Results
Tualatin Planning Area Trips by Mode and Purpose and Land Use Summary

2020 Daily Trip Productions by Mode	Tualatin Area	Washington County
Drive Alone	62,299 (51%)	1,020,741 (49%)
Shared Ride	52,450 (39%)	849,863 (41%)
Transit	1,625 (1%)	47,013 (2%)
Walk	10,488 (8%)	126,978 (6%)
Bicycle	2,351 (2%)	38,358 (2%)
Total	**136,211**	**2,082,953**

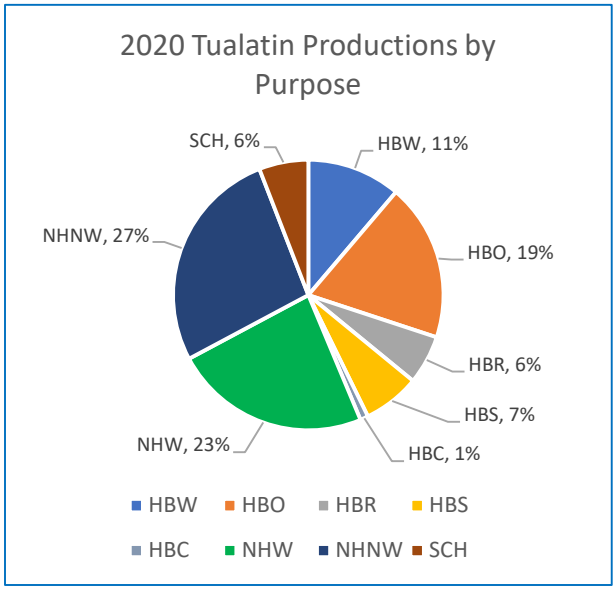
2045 Daily Trip Productions by Mode	Tualatin Area	Washington County
Drive Alone	76,116 (48%)	1,322,613 (47%)
Shared Ride	62,247 (39%)	1,155,864 (41%)
Transit	4,219 (3%)	94,191 (3%)
Walk	12,335 (8%)	173,689 (6%)
Bicycle	3,014 (2%)	56,101 (2%)
Total	**157,931**	**2,802,457**

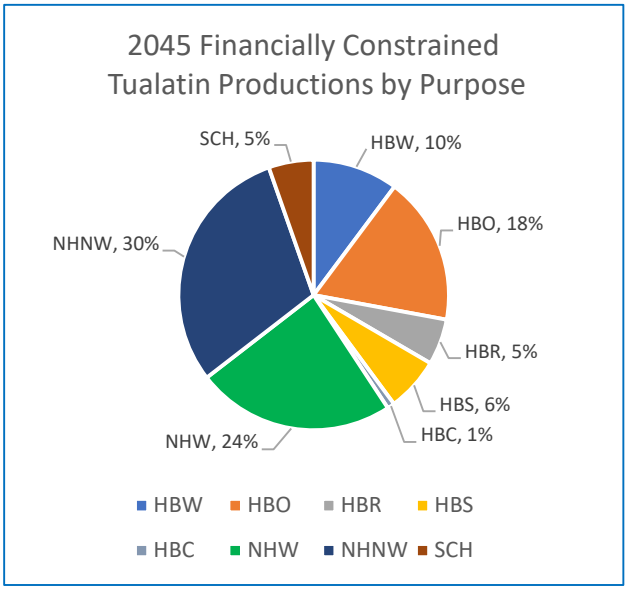




2020 Daily Trip Productions by Purpose	Tualatin Area	Washington County
Home Based Work	15,290 (11%)	304,379 (15%)
Home Based Other	25,667 (19%)	524,145 (25%)
Home Based Recreation	7,966 (6%)	164,299 (8%)
Home Based Shopping	9,310 (7%)	187,566 (9%)
Home Based College	1,270 (1%)	24,767 (1%)
Non-Home Work	32,007 (23%)	313,739 (15%)
Non-Home Non-Work	36,647 (27%)	396,416 (19%)
School	8,055 (6%)	167,643 (8%)
Total	**136,211**	**2,082,953**

2045 Daily Trip Productions by Purpose	Tualatin Area	Washington County
Home Based Work	16,133 (10%)	409,161 (15%)
Home Based Other	27,975 (18%)	729,968 (26%)
Home Based Recreation	8,685 (5%)	227,776 (8%)
Home Based Shopping	10,198 (6%)	264,700 (9%)
Home Based College	1,382 (1%)	34,466 (1%)
Non-Home Work	37,542 (24%)	399,233 (14%)
Non-Home Non-Work	47,533 (30%)	515,327 (18%)
School	8,483 (5%)	221,826 (8%)
Total	**157,931**	**2,802,457**

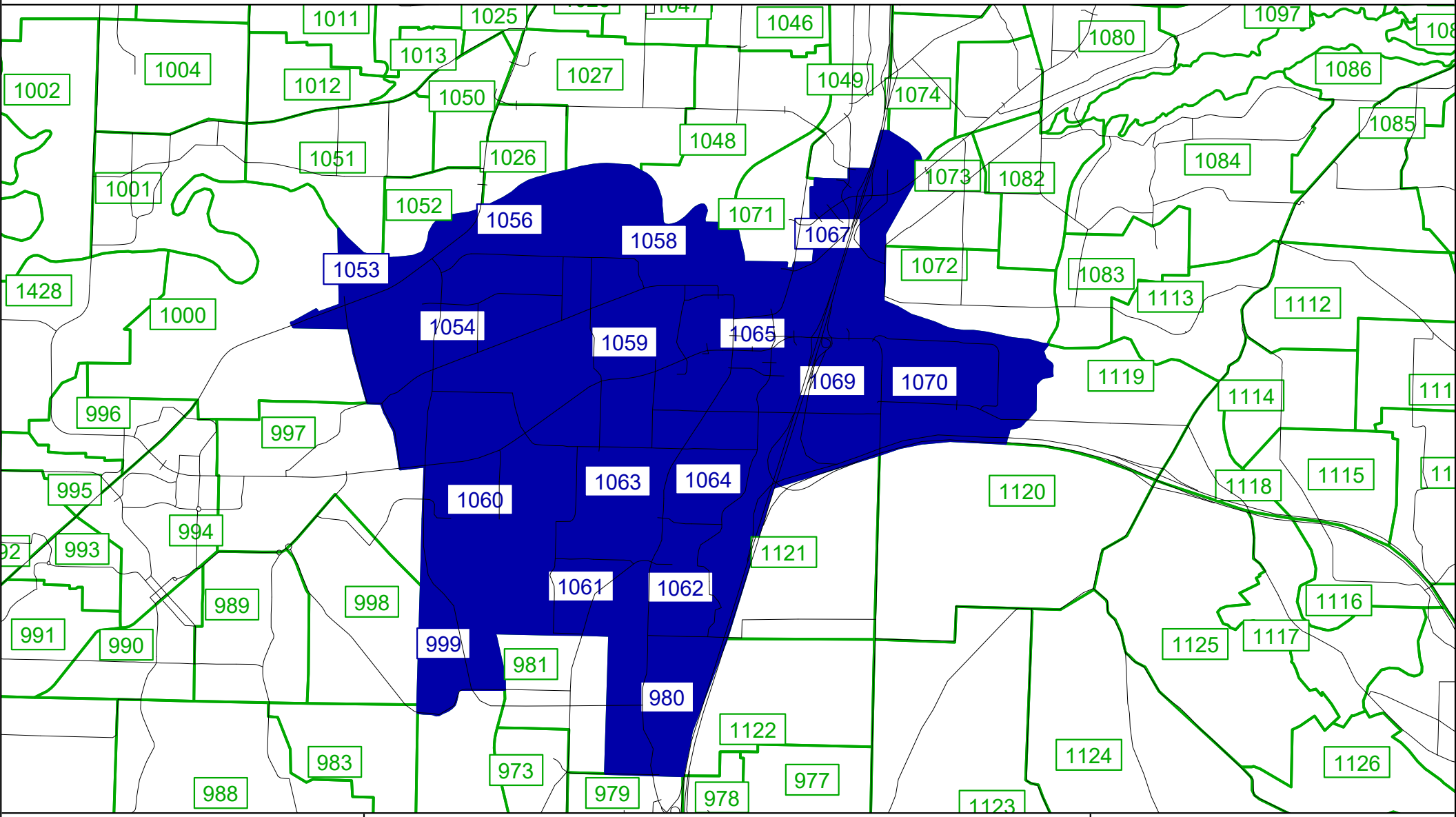




Land Use assumptions and growth in the travel forecast:

Land Use	Households				Employment			
	2020	2045	growth	% growth	2020	2045	growth	% growth
Metro Region	930,121	1,282,760	352,639	37.9%	1,192,694	1,535,571	342,877	28.7%
Washington County	226,008	316,859	90,851	40.2%	314,694	394,817	80,123	25.5%
Tualatin Area	11,503	12,421	918	8.0%	34,293	39,608	5,315	15.5%

2045 financially constrained network: Tualatin Zones



Washington County	Westside Focus Model	2045 PM 1-Hour
Steve L Kelley	2045_westside_calibrated_baseC1.ver	29.10.2024

2040 TSP Appendix

Final Project List Development

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Ibach St Sidewalk Project	Install 6 ft sidewalks to infill 190 ft of sidewalk gaps along Ibach St between 103rd St and Hedges Dr.	Active Transportation	Tualatin	$ 39,000	5	Yes
East Tualatin Low Traffic Biking Streets	Designate mapped street(s) as a Low Traffic Biking Streets and slow traffic speeds with elements facilitating cycling (extents shown on project map)	Active Transportation	Tualatin	$ 101,000	5	Yes
103rd Ave Sidewalk Project	Install 6 ft sidewalks to infill 293 ft of sidewalk gaps along 103rd Ave between Ibach St and Taylors Dr.	Active Transportation	Tualatin	$ 59,000	5	Yes
North Tualatin Low Traffic Biking Streets	Designate mapped street(s) as a Low Traffic Biking Streets and slow traffic speeds with elements facilitating cycling (extents shown on project map)	Active Transportation	Tualatin	$ 64,000	4	Yes
124th Ave and Pacific Hwy	Upgrade existing crossings with intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes
124th Ave and Tualatin Rd	Upgrade existing crossings with intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	3	Yes
65th Ave and Nyberg Creek Trail	Install new crossing with intersection treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Washington County, Clackamas County	$ 75,000	6	Yes
72nd Ave and Lower Boones Ferry Rd	Upgrade existing crossings with intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Washington County	$ 75,000	4	Yes
Avery St and 95th Ave	Intersection treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	4	Yes
Avery St and Boones Ferry Rd	Intersection treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	4	Yes
Boones Ferry and Blake St	Intersection treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes
Boones Ferry Rd and Norwood Rd	Install new crossing and/or intersection treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	7	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Boones Ferry Rd between Mohawk St and and Nasoma Ln	Install new crossing and/or intersection treatments to facilitate pedestrian crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	6	Yes
Hedges Creek Trail and 90th Ave	Install new crossing and/or treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes
Herman Rd and Teton Ave	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	3	Yes
Herman Rd and Tualatin Rd	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes
Kalispell St and 115th Ave	Install new crossing and/or intersection treatments to facilitate pedestrian crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	4	Yes
Martinazzi Ave and Boones Ferry Rd	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	4	Yes
Martinazzi Ave and Nyberg Creek Trail	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	6	Yes
Martinazzi Ave and Seneca St	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	3	Yes
Martinazzi Ave and Tualatin Sherwood Rd	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes
Martinazzi Ave and Warm Springs St	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	4	Yes
Nyberg Creek Trail and Warm Springs St	Crossing and/or treatments to facilitate pedestrian crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes
Nyberg St and Tualatin Sherwood Rd	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Sagert St and Boones Ferry Rd	Intersection treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	5	Yes
Teton Ave and Hedges Creek Trail	Treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	4	Yes
Tualatin Rd and Sweek Dr	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 75,000	4	Yes
Tualatin Sherwood Rd at South Access to Lake at the Commons	Treatments to facilitate pedestrian crossings and turning movements.	Active Transportation	Washington County	$ 75,000	5	Yes
Avery St Sidewalk Project	Install 6 ft sidewalks to infill 421 ft of sidewalk gaps along Avery St between Martinazzi Ave and 80th Ave.	Active Transportation	Tualatin	$ 85,000	5	Yes
Basalt Creek Trail	Construct a new shared-use path connection in conjunction with Basalt Creek residential development.	Active Transportation	Tualatin	$ 91,000	6	Yes
Southwest Tualatin Low Traffic Biking Streets	Designate mapped street(s) as a Low Traffic Biking Streets and slow traffic speeds with elements facilitating cycling (extents shown on project map)	Active Transportation	Tualatin	$ 253,000	4	Yes
Victoria Woods Trail	Upgrade the Victoria Woods Trail to a paved shared-use path connecting Sw 104th Terrace to SW Miami Dr.	Active Transportation	Tualatin	$ 123,000	4	Yes
Leveton Dr Sidewalk Project	Install 6 ft sidewalks to infill 654 ft of sidewalk gaps along Leveton Dr between 124th Ave and 126th Ave.	Active Transportation	Tualatin	$ 131,000	5	Yes
61st Ter and Borland Rd	Treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 150,000	4	Yes
Nyberg Ln and 65th Ave Trail	Install new crossing with intersection treatments to facilitate pedestrian and bicycle crossings and turning movements.	Active Transportation	Tualatin	$ 150,000	8	Yes
Jurgens Ln Sidewalk Project	Install 6 ft sidewalks to infill 777 ft of sidewalk gaps along Jurgens Ln between Hazelbrook Rd and Jurgens Park.	Active Transportation	Tualatin	$ 156,000	5	Yes
Cheyenne Way-Tualatin River Greenway Trail	Construct a new shared-use path connection between Cheyenne Way and the Jurgens Ln-Tualatin River Greenway spur (45).	Active Transportation	Tualatin	$ 193,000	5	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Apache Dr Sidewalk Project	Install 6 ft sidewalks to infill 994 ft of sidewalk gaps along Apache Dr between Sagert St and Boones Ferry Rd.	Active Transportation	Tualatin	$ 199,000	5	Yes
East Side Trail Connections	Construct new shared-use path connections between neighborhoods and the I-205 Path and Saum Creek Greenway at Delaware Cir, Sw 69th St, SW Saum Way, and SW Chunut Ct.	Active Transportation	Tualatin	$ 223,000	4	Yes
72nd Ave Sidewalk Project	Install 6 ft sidewalks to infill 1249 ft of sidewalk gaps along 72nd Ave between Wasco Ct and Sagert St.	Active Transportation	Tualatin	$ 250,000	5	Yes
95th Ave and Tualatin Sherwood Rd	Intersection treatments to facilitate bicycle crossings and turning movements.	Active Transportation	Washington County	$ 250,000	5	Yes
Nyberg Creek Trail Extension	Construct a new shared-use path from Las Casitas Park northward to the Nyberg Creek Greenway and to Nyberg St.	Active Transportation	Tualatin	$ 311,000	6	Yes
105th Ave Sidewalk Project	Install 6 ft sidewalks to infill 1660 ft of sidewalk gaps along 105th Ave between Siletz Dr and Paulina Dr.	Active Transportation	Tualatin	$ 333,000	4	Yes
Sagert St Bikeway and Sidewalk	Upgrade the existing bike facilities on Sagert St between 95th Ave and 86th Ave. Install 6 ft sidewalks to infill 882 ft of sidewalk gaps, and improve crossing at 86th Ave for pedestrians and bicyclists	Active Transportation	Tualatin	$ 775,000	4	Yes
Nyberg-50th Bikeway	Construct continuous bike facilities along Nyberg Ln, 50th Ave, and Wilke Rd (fill gaps). Upgrade existing bike facilities along these extents to facilities with more cyclist separation from traffic.	Active Transportation	Tualatin	$ 500,000	4	Yes
Warm Springs St Sidewalk Project	Install 8 ft sidewalks to infill 1533 ft of sidewalk gaps along Warm Springs St between Martinazzi Ave and I-5.	Active Transportation	Tualatin	$ 422,000	5	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Upgrade to Trail Connections	Upgrade the following locations to shared-use bicycle and pedestrian path connections by ensuring curb access is provided on both ends of the connection, widening the connection to a minimum of 10ft (if possible, though in most cases the ROW is too narrow) and adding signage to encourage slower riding speeds (<5mph) or dismounting in the narrow through way: Ibach Park Trail,106th - Meier Connector, Tualatin High School Trail, Bridgeport Elementary School Trail, Bryon Elementary School Trail, Indian Meadows Greenway Trail	Active Transportation	Tualatin	$ 427,000	2	Yes
95th Ave Sidewalk Project	Install 6 ft sidewalks to infill 1050 ft of sidewalk gaps and add bike facilities along 95th Ave between Tualatin-Sherwood Rd and Sagert St.	Active Transportation	Tualatin	$ 1,000,000	5	Yes
I-5 Trail	Construct a new shared-use path on the west side of I-5 from Norwood Rd to Lower Boones Ferry Rd at SW Hazel Fern Rd. Include connections to the Shaniko Greenway and SW 80th Ave, as well as a spur to connect to the Chieftan/Dakota Greenway Trailhead. Construct new roadway crossings for trail users at Norwood Rd, Sagert St, and Nyberg St. Ensure the path connects with the Nyberg Creek Trail (#3).	Active Transportation	Tualatin	$ 462,000	6	Yes
124th Ave Bikeway	Construct Multi-Use paths along both sides of 124th Ave between Pacific Hwy and Tualatin Sherwood Rd	Active Transportation	Tualatin	$ 1,935,000	2	Yes
Downtown Boones Ferry Rd Bikeway	Upgrade the existing bike facilities on Boones Ferry Rd and Tualatin Rd between Warm Springs St and Chinook St to facilities with more cyclist separation from traffic. Include intersection treatments.	Active Transportation	Tualatin	$ 2,000,000	4	Yes
Tualatin River Greenway Trail to Hedges Creek Trail East-West Connection	Construct new shared-use path connections around Tualatin Community Park by creating a new East-West trail connection from Tualatin River Trail across or under Martinazzi then across existing and new park property to the Hedges Creek Trail	Active Transportation	Tualatin	$ 323,000	5	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Tualatin River Greenway Trail to Hedges Creek Trail North-South Connection	Construct new shared-use path connections around Tualatin Community Park by creating a North-South trail connection from Boones Ferry Road to the Ki-a-Kuts Bridge.	Active Transportation	Tualatin	$ 301,000	5	Yes
Pacific Hwy Sidewalk Project	Install 8 ft sidewalks to infill 5951 ft of sidewalk gaps along Pacific Hwy between Cipole Rd and Pacific Dr.	Active Transportation	ODOT	$ 770,000	5	Yes
Tualatin Rd Bikeway	Upgrade the existing bike facilities on Tualatin Rd between 124th Ave and Herman Rd to facilities with more cyclist separation from traffic.	Active Transportation	Tualatin	$ 3,000,000	4	Yes
Bridgeport to Milwaukie Trail	Construct a new shared-use path connecting the I-5 Trail to city limits following the Bridgeport to Milwaukie conceptual trail alignment via Lower Boones Ferry Rd.	Active Transportation	Tualatin	$ 865,000	5	Yes
Leveton Bikeway	Upgrade the existing bike facilities on Leveton Dr between 124th Ave and 108th Ave to facilities with more cyclist separation from traffic.	Active Transportation	Tualatin	$ 250,000	1	Yes
Killarney Ln Sidewalk Project	Install 6 ft sidewalks to infill 5354 ft of sidewalk gaps along Killarney Ln between Moratoc Dr and Boones Ferry Rd.	Active Transportation	Tualatin	$ 1,071,000	4	Yes
Pacific Hwy Bridge over Tualatin River	Construct a new shared-use pedestrian and bicycle facility across the Tualatin River at the Pacific Highway Bridge, connecting the Tualatin River Greenway on the south side of the river to the Tualatin River Greenway on the north side of the river.	Active Transportation	ODOT	$ 1,500,000	6	Yes
Martinazzi Bikeway	Construct continuous bike facilities along Martinazzi Ave from Sagert St to Nyberg St. Ugrade existing bike facilities along these extents to facilities with more cyclist separation from traffic.	Active Transportation	Tualatin	$ 1,000,000	6	Yes
65th Ave Trail	Construct a new shared-use path on 65th Ave from Nyberg Ln to I-205	Active Transportation	Washington County, Clackamas County	$ 2,000,000	6	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Tualatin Sherwood Rd Bikeway	Upgrade the existing bike facilities on Tualatin Sherwood Rd between Boones Ferry Rd and West of Teton Ave, connecting to the existing shared-use path on the south side of Tualatin Sherwood Rd to facilities with more cyclist separation from traffic.	Active Transportation	Washington County	$ 2,000,000	5	Yes
Southeast Tualatin Low Traffic Biking Streets	Designate mapped street(s) as a Low Traffic Biking Streets and slow traffic speeds with elements facilitating cycling (extents shown on project map)	Active Transportation	Tualatin	$ 57,000	5	Yes
Saum Creek Greenway Trail	Construct a new shared-use path extension of the Saum Creek Greenway Trail from Atfalati Park to the I-205 Trail. Include a new crossing at 65th Ave. Construct a spur to the west connecting to the existing Saum Creek Greenway Trails.	Active Transportation	Tualatin	$ 2,453,000	4	Yes
Southwest Plan Area Trails	Construct a new shared-use path in the Southwest Plan Area, connecting Tualatin-Sherwood Rd to the north to the Ice Age Tonquin Trail to the south. Include a spur to the east connecting to Johnnie and William Koller Wetland Park.	Active Transportation	Tualatin	$ 2,723,426	5	Yes
Upper Boones Ferry Rd Bikeway	Upgrade the existing bike facilities on Boones Ferry Rd between Tualatin Rd and 84th Ave, 450ft west of Martinazzi Ave	Active Transportation	ODOT	$ 260,000	5	Yes
Avery St Bikeway	Upgrade the existing bike facilities on Avery St between Tualatin Sherwood Rd and Boones Ferry Road to facilities with more cyclist separation from traffic.	Active Transportation	Tualatin	$ 2,235,000		Yes
Sagert St Sidewalk Project 1	Construct pedestrian cyclist bridge along existing bridge to infill 1626 ft of sidewalk gaps along Sagert St between Martinazzi Ave and 72nd Ave.	Active Transportation	Tualatin	$ 3,326,000	5	Yes
Teton Ave	Widen sidewalks into multi-use paths along SW Teton Avenue between Tualatin-Sherwood Road and Herman	Active Transportation	Tualatin	$ 4,000,000	4	Yes
108th Ave/Jurgens Park Area Bridge	Construct a new bicycle and pedestrian bridge across the Tualatin River in the 108th Ave / Jurgens Park area, connecting the Tualatin River Greenway on the north and south sides of the river.	Active Transportation	Tualatin	$ 5,000,000	3	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
65th Ave Pedestrian and Bicycle Bridge	Construct a new bicycle and pedestrian bridge across the Tualatin River at 65th Ave, connecting the Tualatin River Greenway on both sides of the river.	Active Transportation	Tualatin	$ 5,000,000	10	Yes
Westside Trail	Construct a new bicycle and pedestrian bridge across the Tualatin River as part of the Westside regional trail alignment, connecting to the Tualatin River Greenway on the north and south side of the river, and the Ice Age Tonquin Trail on the south side of the river.	Active Transportation	Tualatin	$ 5,575,000	4	Yes
Dundee - Tualatin Regional Trail	Construct a new shared-use path from I-5 to Cipole Rd following the Dundee - Tualatin Regional Trail alignment.	Active Transportation	Tualatin	$ 8,000,000	5	Yes
Dundee-Tualatin Regional Trail Extension	Construct a new shared-use path and bridge connecting McEwan Rd on the east side of I-5 to the Dundee - Tualatin Regional Trail and SW Childs Rd on the west side of I-5. Could be coordinated with the new I-5 crossing in the Bridgeport area.	Active Transportation	Tualatin	$ 8,000,000	5	Yes
Helenius Greenway - Hedges Creek Trail Extension	Construct a new shared-use path from Tualatin-Sherwood Rd to the north to 105th Ave and to Ibach Park to the south.	Active Transportation	Tualatin	$ 1,668,000	5	Yes
Nyberg Creek Trail	Construct a new shared-use path under I-5, connecting 65th Ave in the east to Martinazzi Ave in the west with a spur on the west side of I-5 connecting north to Nyberg St. Include a crossing at 65th St.	Active Transportation	Tualatin	$ 8,000,000	6	Yes
Tualatin River Greenway Trail	Construct a new shared-use path along the south side of the Tualatin River through the north end of Jurgens Park, from the proposed West Side Trail bridge to the west to the Ki-A-Kuts Bicycle and Pedestrian Bridge to the east.	Active Transportation	Tualatin	$ 8,000,000	5	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Hedges Creek Trail	Construct a new shared-use path from Sweek Dr to the Ice-Age Tonquin Trail following the planned Hedge Creek regional trail alignment. As part of this project, construct a bicycle and pedestrian bridge at the intersection of 95th Ave and Tualatin Sherwood Rd to continue the 95th Ave bikeway to the Hedges Creek Trail. Include an eastward spur connecting to 90th Ave. Include a spur connecting to Herman Rd where the trail alignment is closest in proximity to Herman Road.	Active Transportation	Tualatin	$ 8,215,000	8	Yes
Ice Age Tonquin Trail	Construct a new shared-use path from the Tualatin River Greenway to Tualatin Sherwood by way of Cipole Rd following the Ice Age Tonquin regional trail alignment.	Active Transportation	Tualatin	$ 8,690,000	3	Yes
Helenius Greenway - Blake Street bridge over the railroad tracks	Connect to the shared use path with an east-west spur at Blake St over the rail road tracks connecting Blake St to the Hedges Creek Greenway Trail.	Active Transportation	Tualatin	$ 8,000,000	5	No
Avery St and 105th Ave	Intersection improvements including a traffic signal or roundabout and treatments to facilitate pedestrian and bicycle crossings and turning movements.	Complete Streets	Tualatin	$ 605,000	2	Yes
IAMP	Develop Interchange Area Management Plans for Bridgeport and Nyberg interchanges establishing lists improvements to be made to accommodate development and how proportional share contributions are collected from developers and used to make improvements	Complete Streets	ODOT	$ 200,000	4	Yes
Jurgens Ln and Tualatin Rd	Add signal or roundabout at SW Tualatin Road and SW Jurgens Avenue	Complete Streets	Tualatin	$ 605,000	3	Yes
Boones Ferry Rd and Iowa Dr	Intersection Improvements, including a possible signal or roundabout and elements to facilitate bicycle and pedestrian crossings.	Complete Streets	Tualatin	$ 1,000,000	3	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Norwood Rd	Upgrade SW Norwood Road to urban roadway standards, including enhanced sidewalk, new bike trail, and signal or roundabout at Norwood/Boones Ferry intersection	Complete Streets	Washington County	$ 500,000	7	Yes
Tualatin Rd/ 115th Ave	SW Tualatin Road and SW 115th Avenue Intersection Improvements (such as a traffic signal or roundabout)	Complete Streets	Tualatin	$ 609,000	3	No
Teton Ave and Avery St	Add a signal or roundabout at SW Avery Street and SW Teton Avenue.	Complete Streets	Tualatin	$ 609,000	2	Yes
Tualatin Rd and SW Teton Ave	Add signal or roundabout at SW Tualatin Road and SW Teton Avenue	Complete Streets	Tualatin	$ 609,000	3	Yes
Teton Ave and SW Tualatin-Sherwood Rd	Intersection improvements such as additional turn lanes (such as adding a right and second left turn lane for southbound traffic and a westbound right) and improvements for cyclists and pedestrians	Complete Streets	Tualatin	$ 1,000,000	4	Yes
Tualatin Community Park entrance / Tualatin Road	Improve safety and access for all modes.	Complete Streets	Tualatin	$ 500,000	2	Yes
Adaptive Signal System Update and Possible Expansion	Update or replace the existing SCATS adaptive traffic signal control system in Tualatin. Includes costs for a consultant to develop new timing/coordination plans for each signal in the updated system. Possible expansion to additional signals along Boones Ferry or Elsewhere	Complete Streets	Tualatin	$ 2,000,000	5	Yes
Boones-Ferry Road & Tualatin High School Area	Improvements for traffic safety and flow in the Boones Ferry Road / Tualatin High School area, including intersection treatments to facilitate pedestrian and bicycle crossings and turning movements	Complete Streets	Tualatin	$ 2,000,000		Yes
Hazelbrook Rd	Upgrade SW Hazelbrook Road to urban roadway standards, includes a bike lane, sidewalk, and crossing improvements	Complete Streets	Tualatin	$ 2,000,000	5	Yes
Helenius Rd	Upgrade SW Helenius Road to urban roadway standards, including sidewalk and bike facilities	Complete Streets	Tualatin	$ 2,000,000	6	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
65th and Sagert/65th and Borland	Implement the outcomes of the conceptual design.	Complete Streets	Tualatin	$ 2,500,000	4	Yes
Tonquin Rd	Upgrade SW Tonquin Road between SW Waldo Way and SW Grahams Ferry Road and add sidewalks. Includes signalizing Tonquin Rd/Grahams Ferry Rd	Complete Streets	Tualatin	$ 3,000,000	6	Yes
Borland Rd from 65th Ave to Tualatin city limits	Upgrade SW Borland Road to urban roadway standards, includes new pedestrian crossing at Saum Creek Greenway Trail, sidewalks, and upgrade existing bike facilities along these extents to facilities with more cyclist separation from traffic.	Complete Streets	Tualatin	$ 4,000,000	6	Yes
Boones Ferry Rd Upgrade (Norwood to Future City Limits)	Upgrade to urban standards and add multi-use paths on both sides or sidewalks plus additional separation for cyclists.	Complete Streets	Tualatin	$ 5,000,000	6	Yes
McEwan Road	Upgrade to urban standards, including walking and cycling improvements and intersection improvements (including bike/ped) at Lower Boones Ferry Road	Complete Streets	Tualatin	$ 5,000,000	3	Yes
Myslony Street	Upgrade SW Myslony Street to roadway standards, including bike lane and 2119 ft of sidewalk gaps	Complete Streets	Tualatin	$ 3,000,000	4	Yes
New roadway connection across I-5 near the Bridgeport Interchange	Create a new crossing across I-5	Complete Streets	ODOT	$ 10,000,000	8	Yes
Tualatin-Sherwood Road and Boones Ferry Road and Portland & Western Railroad	[Bigger Project] Grade-Separate Tualatin-Sherwood Road from the railroad and/or Boones Ferry Road to eliminate the at-grade rail crossing and improve traffic flow, safety, and walking and cycling in this area. This would include one road and/or the railroad bridging over or tunneling under the other road and/or railroad. This could be revised to [Smaller Project] additional turn lanes and/or through lanes and improvements for walking and cycling to improve flow and safety at this intersection	Complete Streets	Tualatin, Washington County	$ 25,000,000	9	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Herman Rd	Upgrade SW Herman Road to a 3-lane cross section between SW 124th Avenue and SW Cipole Road	Complete Streets	Washington County	$ 3,400,000	1	No
Avery Street	Add a center turn lane or median on SW Avery Street between SW Teton Avenue and SW Tualatin-Sherwood Road	Complete Streets	Tualatin	$ 3,600,000	1	No
Blake Street Extension	Extend Blake Street across I-5 as a 2 lane collector	Complete Streets	ODOT	$ 15,000,000	8	No
New east-west roadway between SW 115th and SW 124th Avenue	Build the roadways from the SW Concept Plan: : Create an east-west connection between SW 115th and SW 124th Avenues.	Complete Streets	Tualatin	$ 31,446,000	4	No
124th Avenue	Add on-demand service line to Basalt Creek area	Transit	RideConnection	$ -	3	Yes
Basalt Creek	Identify transit service to connect Basalt Creek new development to nearby frequent transit routes	Transit	TriMet	$ -	5	Yes
Boones Ferry Rd	Increase service on Boones Ferry to frequent service	Transit	TriMet	$ -	6	Yes
Bridgeport Park and Ride	Coordinate with TriMet regarding SW corridor planning around Bridgeport Park and Ride	Transit	TriMet	$ -	6	Yes
HCT: Southwest Corridor Engineering and ROW Support	Support SW Corridor engineering and right-of-way for High Capacity Transit project between Portland and Tualatin via Tigard.	Transit	TriMet	$ -	4	Yes
HCT: Southwest Corridor Project Development	Project Development for High Capacity Transit project between Portland and Tualatin via Tigard.	Transit	TriMet	$ -	4	Yes
HCT: Southwest Corridor Project Development Support	Project development to address traffic mitigation and access improvements for SW Corridor High Capacity Transit project between Portland and Tualatin via Tigard.	Transit	TriMet	$ -	4	Yes
HCT: Southwest Corridor: PD, Engineering and ROW	Project Development, Engineering and Right of Way for High Capacity Transit project between Portland and Tualatin via Tigard.	Transit	TriMet	$ -	4	Yes
High-use bus stops	Identify high-use bus stops that need additional amenities, such as benches, shelters, and improved lighting	Transit	TriMet	$ -	5	Yes

Tualatin TSP - Project List

Project Title	Project Description	Mode	Current Road Authority	City Cost Estimate	Total	Constrained List
Leveton Expansion Area	Expand transit to the Leveton employer area	Transit	TriMet, RideConnection	$ -	4	Yes
New Transit service to Canby region	Transit Service from Tualatin to Canby, Molalla, and surrounding areas	Transit	Canby Area Transit	$ -	4	Yes
New Transit service to Salem region	Transit Service from Tualatin to Woodburn, Keizer, Salem, and surrounding areas	Transit	SAMTD	$ -	4	Yes
New Transit service to Yamhill County	Transit Service from Tualatin via Sherwood to Newberg, Dundee, Lafayette, McMInnville, and surrounding areas	Transit	Yamhill County Transit	$ -	4	Yes
Southwest Tualatin	Identify local transit connections in SW Tualatin to connect people to more frequent service on Tualatin-Sherwood Rd and Boones Ferry	Transit	TriMet, RideConnection	$ -	4	Yes
Two-way service on shuttles	Work with Ride Connection to provide a two-way service on the shuttles and/or adjust routes to improve frequency and travel efficiency	Transit	RideConnection	$ -	3	Yes
WES Station	Add a new WES station in the Basalt Creek area	Transit	TriMet	$ 500,000	7	Yes

2040 TSP Appendix

Existing Conditions Technical Report

Memorandum

Date: February 2024

To: City of Tualatin Project Team

From: Briana Calhoun, Jai Daniels – Fehr & Peers
Katie Selin, Phil Longnecker – Alta Planning + Design

Subject: Transportation System Plan Update: Existing Conditions Inventory Technical Memorandum

Introduction

The City of Tualatin is updating its Transportation System Plan (TSP), through a process that will establish a shared understanding of how the transportation system operates today, identify needed improvements, and create a vision for enhancing community mobility in Tualatin.

To achieve the first goal of establishing a shared understanding of how the transportation system operates, document existing transportation infrastructure, and identify current infrastructure gaps or deficiencies in the transportation system, the TSP update began with development of an Existing Conditions Report.

This memorandum is intended to support the Existing Conditions Report and includes additional documentation of transportation assets in Tualatin, an overview of the methodology used to complete traffic operations and safety analysis, and a summary of existing deficiencies identified through the existing conditions inventory.

Consistent with the Existing Conditions Report, this technical memorandum provides additional information for the following topic areas:

- Demographics in Tualatin
- The existing transportation system in Tualatin, including the roadway network, transit service, pedestrian, and bicycle facilities
- Identification of basic facilities and operations for truck freight, rail, and marine transportation modes serving Tualatin
- An overview of pipeline resources that should be considered in the identification and evaluation of transportation solutions

- Base year transportation conditions, including traffic operations on key corridors, a summary of collision patterns, and pedestrian, bicycle, and truck traffic on the roadways

Tualatin Demographics

Demographic information plays a crucial role in shaping an effective transportation system by providing essential insights into the characteristics and behaviors of a population. Understanding demographic data, such as population density, age distribution, income levels, and employment patterns, will allow the project team to evaluate potential solutions with an eye towards equity and ultimately recommend transportation infrastructure improvements that meet the diverse needs of different groups within a community. This information also helped to inform the development of an inclusive public engagement plan and will be used to evaluate how effective efforts to engage historically underrepresented groups in the planning process are.

As shown in **Table 1**, there are several key demographics where Tualatin differs from the Metro region overall. Those demographic areas are shown in bold text in the table below.

Table 1. Current City and Regional Demographics

	Tualatin		Metro Region	
Race and Language				
Total Population	27,821		2,493,429	
Non-White	7,552	**27%**	469,429	19%
Hispanic or Latino	5,986	**22%**	326,336	13%
Speak a Language Other than English	5,926	22%	431,434	18%
Age				
Under Age 18	6,537	**23%**	410,824	16%
65 and Over	3,522	13%	294,303	12%
Other Demographics				
Income Below Poverty Level (in last 12 months)	2,811	10%	247,359	10%
Disability	2,387	9%	236,085	9%
No Vehicle Available	526	5%	80,387	8%
Housing				
Total Housing Units	11,171		1,033,420	
Occupied Housing Units	10,835	97%	979,213	95%

Table 1. Current City and Regional Demographics

	Tualatin		Metro Region	
Vacant Housing Units	336	3%	54,207	5%
Total Households	10,737		1,001,094	
Owner-Occupied Households	5,851	**55%**	620,678	62%
Renter-Occupied Households	4,886	**45%**	380,416	38%

Notes:
The Metro Region is comprised of the Portland-Vancouver-Hillsboro, OR-WA Metro Area.
Bold text indicates a greater than 5% variance from the Metro Region.

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Existing System Inventory

Roadway Network

The roadway network serves as the backbone of Tualatin's multi-modal transportation system. These facilities must accommodate many travel modes within their rights of way and users' experience are shaped not only by the roadway design itself but also by the surrounding land use. The following section documents the current state of the network for each mode of travel.

Lane Width

Travel lane width, or how wide the striped lanes on a roadway are, is a key characteristic for roadways. Roads that are designed to serve larger vehicles such as trucks carrying freight or buses, often have wider lanes. As more narrow lanes can help to lower vehicle speeds, roadways with on-street bicycle lanes may have narrower lanes to improve safety and comfort for those users or to take advantage of the limited right-of-way available. Within Tualatin, most arterials and collectors have lane widths between 10 and 12.5 feet.

Roadway Design Standards

In Tualatin, street design standards are based on the functional and operational characteristics of streets including travel volume, capacity, operating speed, and safety. This section summarizes design standards that apply to transportation facilities in Tualatin. **Table 2** summarizes design standards for roadway cross-section elements, which are included in Chapter 74 of the City of Tualatin's Development Code. **Table 3** summarizes Metro's roadway design guidance from the 2018 Regional Transportation Plan (RTP). This guidance applies to roadways that fall under Metro's Regional Motor Vehicle Network (RMVN).

Table 2. Roadway Design Standards, Tualatin's Development Code

Roadway Element	Design Characteristic
Minimum and preferred vehicle lane widths	• Major arterial: 12 feet minimum, 12 feet preferred • Minor arterial: 12 feet, 12 feet preferred • Major collector: 11 feet minimum, 12 feet preferred • Minor collector: 11 feet minimum, 12 feet preferred • Local: 14 feet minimum, 16 feet preferred • With multi-use path: 12 feet minimum, 12 feet preferred
Minimum and preferred number of lanes	• Major arterial: 3 lanes minimum, 5 lanes preferred • Minor arterial: 2 lanes minimum, 3 lanes preferred • Major collector: 2 lanes minimum, 3 lanes preferred • Minor collector: 2 lanes minimum, 2 lanes preferred • Local: 2 lanes minimum, 2 lanes preferred • With multi-use path: 2 lanes minimum, 3 lanes preferred
Minimum and preferred sidewalk widths	• Major arterial: 5 feet minimum, 6 feet preferred • Minor arterial: 5 feet minimum, 6 feet preferred • Major collector: 5 feet minimum, 6 feet preferred • Minor collector: 5 feet minimum, 6 feet preferred • Local: 5 feet minimum, 5 feet preferred
Minimum and preferred on-street parking widths	• Minor collector: 8 feet minimum, 8 feet preferred • With multi-use path: 8 feet minimum, none preferred
Minimum and preferred bicycle lane widths	• Major arterial: 5 feet minimum, 6 feet preferred • Minor arterial: 5 feet minimum, 6 feet preferred • Major collector: 5 feet minimum, 6 feet preferred • Minor collector: 5 feet minimum, 6 feet preferred

Table 3. Roadway Design Suggested Guidance, 2018 Regional Transportation Plan

Roadway Element	Design Standard
Maximum number of travel lanes	• Freeway: No maximum • Throughway: 6 lanes • Major Arterial: 4 lanes • Minor Arterial: 4 lanes
Median requirements	• Appropriate for roadways with 4 or more lanes
Street corner radii	• Tight Corner Radii (5 to 15 feet): preferred on regional and community boulevards • Wide Corner Radii (greater than 15 feet): preferred on highways and industrial streets

Table 3. Roadway Design Suggested Guidance, 2018 Regional Transportation Plan

Roadway Element	Design Standard
Preferred lane widths	• Freeway: 12 feet • Highway: 12 feet • Regional Boulevard: 10 feet • Community Boulevard: 10 feet • Regional Street: 10 to 11 feet • Community Street: 10 to 11 feet • Industrial Street: 11 to 12 feet

Access Management

The Oregon Transportation Planning Rule (TPR) defines "Access Management" as "...measures regulating access to streets, roads and highways from public roads and private driveways." A requirement of the TPR is that new connections to both arterials and state highways must follow designated access management categories. Typically, existing accesses can remain as long as the land use does not change.

In Tualatin, access management standards for driveways are based on use. In general, as the number of units or parking spaces increases, the number of and approach width for driveways increases. **Table 4** shows the City of Tualatin's access for driveway standards from Chapter 75.040 of the Tualatin Development Code.

Table 4. City of Tualatin Driveway Standards

Land Use Classification	Minimum Driveway Approach Width	Maximum Driveway Approach Width
Single-Family Residential, Duplexes, Triplexes, Quadplexes, Townhomes, Cottage Clusters	10 feet	26 feet for one or two car garages 37 feet for three or more car garages

Table 4. City of Tualatin Driveway Standards

Land Use Classification	Minimum Driveway Approach Width	Maximum Driveway Approach Width
Multi-family	5-49 Units = 24 feet 50-499 = 32 feet Over 500 = as required by the City Manager	May provide two 16-foot one-way driveways instead of one 24-foot driveway May provide two 24-foot one-way driveways instead of one 32-foot driveway
Commercial	1-99 Parking Spaces = 32 feet 100-249 Parking Spaces = two approaches each 32 feet	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet
Industrial	36 feet	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet
Institutional	1-99 Parking Spaces = 32 feet 100-249 Parking Spaces = two approaches each 32 feet	Over 250 Parking Spaces = As Required by the City Manager, but not exceeding 40 feet

Washington County has access standards which are established in the Washington County Community Development Code, in Section 501-8.5(A) entitled "Roadway Access." Projects being considered on County facilities will need to refer to these standards.

The Oregon Highway Plan (OHP) includes access management spacing standards for highways owned and operated by the Oregon Department of Transportation (ODOT). The access management spacing standards were amended in 2005. Interstate 5 (I-5), I-205, Highway 99W and freeway interchange areas are under ODOT management and must follow OHP standards. The OHP access management spacing standards as applied to I-5 and I-205 are shown in **Table 5**.

Table 5. OHP Access Spacing Standards

Roadway	Speed Limit	Spacing Standard
Freeway interchanges	30 mph	250 feet
I-5	55 mph or higher	1320 feet
I-205	55 mph or higher	1320 feet

Spacing for Connectivity

While access management standards establish minimum distances between intersections to maintain safe and efficient operations, this must be balanced with the need for a connected street network. The Metro RTP identifies connectivity as a system of major arterials spaced no more than one mile apart and minor arterials or collectors spaced no more than a half-mile apart. While these guidelines were established to encourage efficient mobility through the City, they also acknowledge that the realities of natural barriers (e.g., waterways and topography), major infrastructure (e.g., highways), and the built environment (e.g., established neighborhoods) may not make it possible to always meet these connectivity goals. The presence of I-5 serves as a major connectivity barrier in Tualatin. The interchanges are spaced about one mile apart (in Northern Tualatin; three miles apart in Southern Tualatin) and are among very few ways to cross the highway on foot or in a vehicle.

Parking

There is significant off-street parking for many of the retail uses throughout Tualatin, specifically in the Bridgeport Village area and many of the retail areas along Tualatin-Sherwood Road and Nyberg Street. There are also several City-owned parking lots in the Downtown area near the Tualatin Commons and the Library.

On-street parking is typically not allowed along major roadways (Arterials and Major Collectors) in Tualatin but is often allowed on Local Streets and Minor Collectors in neighborhoods and in retail areas.

Transit System

The location of transit routes that service Tualatin are shown on **Figure 19** in the Existing Conditions report. Frequency and hours of operation for each route are shown in **Table 6**.

Table 6. Transit Routes

Route	Service Type	Agency	Origin	Destination	Route Ridership[1]	Frequency	Service Span	Days	Fare
Shuttle (Red)	Local	Ride Connection	South Tualatin		-	50 minutes	5:15 – 8:45 AM / 3:30 – 7:45 PM	Monday – Friday	Fare-free
Shuttle (Green)	Local	Ride Connection	Tualatin Park & Ride	Rolling Hills Church	-	1 hour	5 – 9:30 AM / 12:15 - 7:15 PM	Monday – Friday	Fare-free
Shuttle (Blue)	Local	Ride Connection	North Tualatin		-	45 minutes	5:40 -10:00 AM / 3:00 - 7:00 PM	Monday – Friday	Fare-free
37	Regional	TriMet	Tualatin Park & Ride	Lake Oswego Transit Center	30	45 minutes during AM and 1 hour during PM	7:10 AM – 9:20 AM / 3:40 – 5:50 PM	Monday – Friday	$2.80
38	Regional	TriMet	Tualatin Park & Ride	Portland City Center	120	1 hour	6:45 AM – 10 AM / 3:30 – 7 PM	Monday – Friday	$2.80
76	Regional	TriMet	Beaverton Transit Center	Tualatin	2,630	15 minutes	6 A.M. to Midnight	Monday – Saturday	$2.80
96	Regional	TriMet	Commerce Circle	Portland City Center	420	1 hour, 30 minutes during AM & PM peak	5 A.M. to 9 P.M.	Monday – Friday	$2.80
97	Regional	TriMet	Tualatin	Sherwood	30	1 hour during the AM / 1:10 during the PM	6:15 - 9:30 A.M. / 3:30 – 7 P.M.	Monday – Friday	$2.80

Table 6. Transit Routes

Route	Service Type	Agency	Origin	Destination	Route Ridership[1]	Frequency	Service Span	Days	Fare
2X	Regional	SMART	Wilsonville Transit Center	Tualatin Park & Ride	-	1 hour, 30 minutes during PM peak	5 A.M. to 9 P.M.	Monday – Saturday	Fare-free
Cascade	Regional	POINT	Eugene	Portland	-	5 trips a day	7 A.M. - 10:00 P.M.	Monday – Saturday	$4
WES	Regional	TriMet	Wilsonville WES Station	Beaverton TC WES Station	450	45 minutes	5:30 AM – 8:45 AM 3:30 PM – 7 PM	Monday - Friday	$2.80

1 Ridership is from the TriMet Route Ridership Report from Spring 2023 and represents weekday average daily riders for the entire route.

Park & Ride

Tualatin offers four Park & Ride locations, three of which are served by transit six days per week, as shown in **Table 7**.

Table 7. Park & Ride Locations in Tualatin

Lot Name	Address	Parking Spaces	Bike Racks	Transit Connections	Days
Mohawk	SW Mohawk St & Martinazzi Ave, Tualatin, 97062	232	Yes	96 - 76	Monday-Saturday
Tualatin	SW 72nd Avenue & Bridgeport Road, Tualatin 97062	368	Yes	36 - 37 - 38 - 76 - 96 - 2X - Point	Monday-Saturday
Tualatin South	18955 SW Boones Ferry Rd, Tualatin 97062	147	Yes	WES - 76 - 97 - Tualatin Shuttle	Monday-Saturday
Boones Ferry Community Church of Christ	20500 SW Boones Ferry Rd, Tualatin, 97062	20	No	96	Monday-Friday

In Spring 2023, the Tualatin Park & Ride (northbound) had an average of 132 boardings and 54 alightings each day. The Tualatin Park & Ride (southbound) had 33 boardings and 106 alightings daily. Additionally, the Tualatin WES Station had 75 boardings and 79 alightings daily.

Pedestrian System and Bicycle System

This section provides an overview of the existing City of Tualatin pedestrian and bicycle networks to inform transportation planning and development strategies that promote sustainable modes of transportation. The overview includes information on the current state of the pedestrian and bicycle network, including where infrastructure exists, where it is and is not comfortable to walk and bike, and locations of collisions. These existing conditions details will be used to identify gaps in the network and areas where improvements are needed.

Existing Pedestrian Network and Inventory

In Tualatin, sidewalks and trails play an important role in the pedestrian network. In many parts of Tualatin, trails help to connect residential areas to parks and greenspaces in places where there are no roads or sidewalks. Trails also augment the sidewalk network and bridge barriers presented by large roadways, as in the case of the recently completed link of the Tualatin River Greenway under I-5.

Figure 20 in the Existing Conditions report shows all sidewalks and trails in Tualatin, as well as the streets where sidewalks are missing on one or both sides. The condition of sidewalks is shown in **Figure 21**. Documenting all walkable facilities helps identify where gaps remain in the pedestrian network and establishes a baseline for future planning efforts. (Note: The Existing Pedestrian Network map, included in the Existing Conditions Report reflects facilities as of November 2023 based on data provided by Metro and the City of Tualatin and the latest information about the City's capital projects.)

As part of the existing conditions inventory, the consultant team prepared a detailed Pedestrian System Inventory, incorporating details on facility types and road characteristics consistent with state standards (OAR Chapter 660 Division 12) and the requirements of the Climate-Friendly and Equitable Communities (CFEC) Program. These data are compiled in a GIS database and corresponding table containing detailed inventories of crosswalks, curb ramps, and sidewalks across the City. They contain information on the width and condition of sidewalks, crosswalk types, and curb ramp locations. Note that speed, volume, and road width data are the same as is detailed in the bicycle system inventory. Another important component of the pedestrian network is the spacing between crossings which is inventoried in **Figure 22**.

The pedestrian network of sidewalks and trails that provide routes for people to walk to their destinations is also reliant on infrastructure at intersections. **Figure 21** illustrates aspects of intersections and street crossings, such as signalized crosswalks and refuge islands, and rapid flashing beacons that have been installed to help people cross busy streets.

Sidewalk Conditions, Crosswalk Types, and Curb Ramp Inventory

Figure 21 shows the varying quality and condition of sidewalks across Tualatin. Vertical deflections, cracks, and obstructions all contribute to the quality of the sidewalk. This information is not only important for planners to understand where maintenance needs are, but also to locate areas that may be inaccessible for people who use mobility devices.

The sidewalk conditions map reflects facilities as of 2017 based on data provided by Metro and the City of Tualatin. Note that several sidewalks have been built since condition data has been collected. They are shown in the pedestrian network map (Figure 20).

For Further Study and Consideration

Understanding where sidewalk conditions are insufficient and where safe crossings are located is critical for creating a more accessible transportation system for vulnerable communities. As the project moves forward, we will be considering places where access to walking and biking opportunities is hindered by difficulty crossing major roadways.

Distance Between Marked Pedestrian Crossings

In addition to street crossing inventories, OAR rules mandate that Pedestrian System Inventories must also include the spacing between crossings. **Figure 22** illustrates the distance between marked crosswalks that cross arterial and major collector streets in Tualatin.

Multi-lane roadways can be difficult to cross, so every improved crossing helps to make the sidewalk and trail network more accessible for people walking. To create this map, residential streets and interstates were removed to leave arterials and collectors. Then, road segments with the same name were combined into single features, and divided into segments that correspond to the distances between crosswalks.

For Further Study and Consideration

The crossing spacing analysis shows the potential gaps between existing crossings and highlights priority locations for additional crossings. Thus, it will be important to understand how these crossing locations relate to places where people frequently need to cross the street, including transit stops, parks, neighborhoods, and schools.

Pedestrian Level of Traffic Stress (PLTS)

The purpose of the PLTS analysis, shown in **Figure 23,** is to classify streets in Tualatin based on how comfortable they are for walking. The analysis highlights the overall comfort of different segments of the pedestrian network and is required for Transportation System Plans in Oregon[1]. The results offer greater insight into the pedestrian experience than simply whether or not a sidewalk is present. The scores show the elements that may be missing from a street that could make pedestrians feel more comfortable, such as greater separation from traffic, wider sidewalks, smoother sidewalks, crosswalk and refuge availability, and other factors.

The analysis scores streets on a scale from 1 to 4, from most comfortable to least comfortable. In summary, the scores indicate the following conditions:

- PLTS 1- Due to the presence of sidewalks that are not adjacent to high volumes of traffic, people walking feel little to no traffic stress, requiring most people to pay little attention to the traffic situation around them.
- PLTS 2 – People feel some traffic stress; walking along this street requires more attention to the traffic situation than that of which young children may be capable. This would be suitable for children over 10, teens, and adults.
- PLTS 3 - People feel moderate stress; the facility is suitable for adults.
- PLTS 4 - People feel high traffic stress. Only able-bodied adults with limited route choices would typically use this facility.

It is important to note that roadways can score poorly even when they include a sidewalk. For example, if the sidewalk is narrow, cracked, adjacent to multi-lane roadway, it is rated as a higher PLTS. Additionally, if a road scores poorly for one criterion but better on another, the resulting score is the lowest among both – so the PLTS results reflect the worst measure, not an average of all measures. If a street has a nice sidewalk on one side, but no sidewalk on the other, it is automatically scored as a PLTS 4, reflecting the experience for pedestrians on the missing side.

For Further Study and Consideration

Understanding what factors (e.g., vehicle speed, landscape buffer, etc.) contribute to each street's PLTS score is critical to identifying future improvements that would lower the level of traffic stress for pedestrians and thereby encourage increased levels of walking for transportation. Identifying patterns among the scores will help the City use design standards to systematically improve the pedestrian experience.

Bicycle System Inventory

In accordance with the requirements of the CFEC Program and consistent with state standards (OAR Chapter 660 Division 12), the consultant team compiled a bicycle system inventory in GIS that documents facility types and road characteristics of the existing bicycle system. The dataset and corresponding table include information on the width, type, and condition of various bicycle facilities, as well as speed, volume, separation, and road width data.

Existing Bicycle Network

The bicycle facility inventory, illustrated in **Figure 24**, shows all of the designated on-street and off-street bicycle facilities in Tualatin. In Tualatin, bike facilities include striped bike lanes, striped buffered bike lanes, low-traffic-volume streets, and off-street trails and paths. Each of these facilities offers a different level of separation from traffic and are therefore more or less comfortable for riders of varying confidence and ability.

In Tualatin, low-traffic-volume streets (shown in gray) are streets where people must bike in mixed traffic and are mostly located on residential streets.

Bike lanes (shown in light blue) are found on most collectors and arterials in the city and are usually about six feet wide and defined by a wide painted stripe and bike symbol. Buffered bike lanes (shown in dark blue) increase the amount of separation between the bike lane and vehicle traffic, typically with a second painted line as a way to further delineate the space for people biking. Finally, off-street trails offer the highest level of separation from vehicle traffic. There are not currently any physically protected bike lanes in Tualatin.

Accounting for the location of all bike facilities helps identify where gaps remain in the bicycle network and establishes a baseline for future bikeway planning. This map reflects facilities as of November 2023 based on data provided by Metro and the City of Tualatin and latest information about the City's capital projects.

For Further Study and Consideration

As the city plans for additional bikeways that are accessible for riders of all ages and abilities, it will be important to understand how trails relate to enhanced crossings of major streets. It will also be important to consider how low-traffic-volume streets could be enhanced for bicyclists, such as designating key routes as bicycle boulevards or neighborhood greenways.

Bicycle Level of Traffic Stress (BLTS)

Figure 25 and the BLTS analysis classifies streets in Tualatin based on how comfortable they are to travel by bicycle. The analysis is a tool for examining the overall comfort of the bicycle network and is required for Transportation System Plans in Oregon[2]. The results offer insight into the experience of biking in the city, rather than simply whether or not a street has a bike lane. The scores identify elements, such as greater separation from traffic, lower speeds, and turn box availability, which may be missing from a street that would make biking feel more comfortable.

The analysis scores streets on a scale from 1 to 4, from most comfortable to least comfortable. In summary, the scores indicate the following conditions:

- LTS 1- Due to the separation of people biking from moving cars and trucks, this score represents little traffic stress. Since traveling by bike requires the rider to pay little attention to traffic, it is suitable for use by people of all ages and abilities.
- LTS 2 - People feel some traffic stress. Biking on the street requires more attention to traffic conditions than young children would be expected to deal with, so is suitable for teens and adults with adequate bike handling skills.
- LTS 3 - People feel moderate stress when biking because they need to pay attention to and interact with surrounding traffic. Suitable for most adults with experience biking.
- LTS 4 – Most people feel high levels of stress due to the proximity to and interactions with traffic. Only suitable for skilled adults with experience biking.

If a segment scores poorly for one criterion but better on another, the resulting score is the lowest among both - so the BLTS results reflect the worst measure, not an average of all measures.

For Further Study and Consideration

Understanding how the bike network interfaces with the BLTS scores provides insight into the improvements necessary for increasing levels of biking for transportation.

For Tualatin, a recurring theme is that left turn lanes often cause a roadway to score lower than it would otherwise. However, after discussions with the project team, this criteria table was omitted from the analysis due to widespread inflation of scores. Still, the issue of left turns remains, and ODOT recommends that left turn lane LTS scores can be improved to LTS 1 by providing two-stage left turns with regular and left-turn queue bike boxes. Identifying locations where cyclists are likely to make left turns to continue onto the bike network would help prioritize locations for bike turn boxes and would lower the LTS score for the roadway.

Recognizing that many destinations are located and surrounded by high-stress roadways, including Boones Ferry Road, Tualatin Sherwood Road, and SW Nyberg Street, underscores the importance of reviewing these locations for opportunities to improve facilities and establish low-stress routes. This proactive approach is essential to ensure the safety and well-being of the community.

Truck Freight

The freight network in Tualatin is comprised of local freight routes and state and federal truck routes, as highlighted in **Figure 27** in the Existing Conditions document. I-5 is part of the National Highway Freight Network Critical Urban Corridors. I-5 can have freight bottlenecks within the Portland Metro region that affect Tualatin.

Marine

Many companies in Tualatin produce goods that are transported by ship, or receive goods transported by ship. The viability of marine transport (shipping) to and from the Portland area affects businesses in Tualatin. The closest major marine ports are the Port of Portland and Port of Vancouver, both approximately 22 miles north of Tualatin.

Within Tualatin, marine travel is limited to the Tualatin River which has recreational boat ramps and launch platforms at the following parks:

- Jurgens Park
- Tualatin Community Park
- Browns Ferry Park

Rail

There are two rail lines in Tualatin, as seen in **Table 8**. Rail in Tualatin is important to businesses and the regional economy as it transports people and goods. However, rail can potentially cause congestion and extended blockages of crossings on the city's roadways and

create safety concerns at crossings, all of which should be considered as future projects are developed in areas where rail is present.

Table 8. Rail Lines in Tualatin

Route	Direction	Type of Service	Owners	Classification
Westside Express Service Commuter (WES)	North – South	Transit, Freight	TriMet	I
Portland & Western (PNWR)	Northeast – Southwest	Freight	PNWR	II

Pipeline

There is a natural gas pipeline, operated by Northwest Natural Gas Company, which runs north to south from Bridgeport Village through Lower Boones Ferry Road and then through Service Road OR 141. The pipeline has terminals in Durham, Oregon, and Wilsonville, Oregon.

Operations and Safety

The following section discusses the traffic operations on the existing network. The analysis evaluates the demand for the network for vehicles and how well the existing system serves the residents of Tualatin.

Existing Traffic Conditions

The evaluation of existing traffic conditions focuses on daily volumes along key corridors in Tualatin, along with afternoon peak-hour operations at 21 intersections in the City.

Intersection Operations

One way to quantify delay experienced by drivers is through intersection operations analysis. As part of the existing conditions inventory, 21 key intersections in Tualatin were evaluated during the evening commute hour to identify locations where congestion occurs on the existing transportation system during peak travel hours.

Level of Service and Delay

Level of Service (LOS) is a standard method for characterizing delay at an intersection. For signalized and all-way stop controlled (AWSC) intersections, the LOS is based on the average delay for all approaches. For two-way stop controlled (TWSC) intersections, the movement with the highest delay is used.

Table 9 summarizes the LOS and delay thresholds specified in the 6th Edition Highway Capacity Manual (HCM), which is a standard methodology for measuring intersection performance.

Table 9. Level of Service Definitions

Level of Service	Description	Signalized Intersection Delay (seconds/vehicle)	Unsignalized Intersection Delay (seconds/vehicle)
A	Free-flowing Conditions	≤ 10	0-10
B	Stable Flow (slight delays)	>10-20	>10-15
C	Stable Flow (acceptable delays)	>20-35	>15-25
D	Approaching Unstable Flow (tolerable delay)	>35-55	>25-35
E	Unstable Flow (intolerable delay)	>55-80	>35-50
F	Forced Flow (congested and queues fail to clear)	>80	>50

Source: 6th Edition Highway Capacity Manual, 2016

For most of the study intersections, traffic operations were analyzed using Synchro 11 software. For a few locations, described in more detail below, SimTraffic was used to better reflect congested conditions known to occur. The Synchro network reflects the existing roadway network including intersection geometry, signal timing, and vehicle and pedestrian/bicycle volumes.

The City has set LOS standards of D and E for signalized and unsignalized intersections respectively in Tualatin, as seen in TDC 74.440(3)(e).

Delay

Delay is a direct calculation of the wait time in seconds experienced by motorized vehicles at the intersections. Delay can be calculated for each vehicle, by approach or by intersection. The delay includes the queue delay and the control delay. Queue delay is experienced by vehicles waiting in traffic before getting through the intersection. Control delay is the wait time of vehicles at the intersections exerted by the signalized intersections alone.

Simtraffic Calibration

As described above, isolated intersection analysis using the Synchro software resulted in LOS/delay results that were found to match field observations and known congestion levels at most of the intersections. For two intersections, SW Boones Ferry Road & SW Tualatin-

Sherwood Road and SW Boones Ferry Road & SW Martinazzi Avenue, a more detailed operational analysis was required to better reflect existing conditions. For these intersections, microsimulation using the SimTraffic software was used to better reflect the impact on operations of spillback between intersections and closely spaced intersections.

The Simtraffic network was calibrated using video from the traffic count collection data and data available from Washington County's INRIX portal. INRIX data, which uses vehicle data gathered from GPS devices, was used to confirm delay experienced by movement at these intersections, while video data was used to estimate the true vehicle demand for these intersections compared to the number of vehicles that could be served during the peak hour.

To calibrate the SimTraffic network to existing conditions, delay reported by SimTraffic was compared to the delay reported by INRIX for individual movements at each intersection. For movements where SimTraffic was found to report lower delay than the delay reported by INRIX and what was observed in the field, video data was referenced to understand how volume should be adjusted to account for demand not being served.

At the intersection of SW Boones Ferry Road & SW Tualatin-Sherwood Road, the southbound left-turn onto SW Tualatin-Sherwood Road was the primary movement where calibration was needed. Calibration of this movement included increasing volume on this movement by 20% to match demand for the movement. With this change, LOS for this movement was degraded to LOS F, which matches field observations and delay reported in INRIX. Other movements at this intersection that operate with high levels of delay include: the left-turn movements on the eastbound, westbound, and northbound approaches, and the northbound through movement. Queueing was also observed to occur on the northbound approach at this intersection and while not included in this analysis, interactions with the SW Tonka Street intersection, approximately 150 feet south of the intersection, also contribute to queueing at this location. Based on SimTraffic results, the intersection as a whole operates at LOS D during the PM peak hour. This was confirmed with INRIX data, which also reports LOS D for this intersection. This is a result of prioritizing operations for the eastbound and westbound through movements, which have the highest volume, and experience the lowest amount of delay.

The other intersection evaluated in SimTraffic was the SW Boones Ferry Road & SW Martinazzi Avenue intersection. When using SimTraffic, delay at this intersection was found to correlate to LOS D operations. As data available in INRIX indicates that this intersection generally operates at LOS C, no additional adjustments were made at this intersection. The movement found to operate with the highest delay both in SimTraffic and based on data reported by INRIX is the southbound left-turn.

Summary of Existing Deficiencies

As shown in **Table 10**, there is one study intersection with an LOS E, indicating a high amount of delay. This intersection is at SW 65th and SW Borland Road.

Table 10. Intersection Level of Service (LOS)

ID	Name	Control	LOS / Delay	Worst Mvmt	HCM
1	SW 124th Ave & Hwy 99W	Signal	B/19	-	HCM 2000
2	SW 124th Ave & SW Tualatin Rd	Signal	C/21	-	HCM 2000
3	SW 124th Ave & SW Herman Rd	Signal	B/18	-	HCM 6th
4	SW Cipole Rd & SW Herman Rd	AWSC	B/11	-	HCM 6th
5	SW 124th Ave & Tualatin-Sherwood Rd[1]	Signal	/	-	-
6	SW Tonquin Rd & SW Grahams Ferry Rd	TWSC	B/15	EBL	HCM 6th
7	SW Ibach St & SW Boones Ferry Rd	Signal	C/34	-	HCM 6th
8	SW Avery St & SW Teton Ave	AWSC	B/14	-	HCM 6th
9	SW Sagert St & SW Boones Ferry Rd	Signal	C/28	-	HCM 6th
10	SW 90th Ave & SW Tualatin-Sherwood Rd	Signal	D/42	-	HCM 6th
11	SW Boones Ferry Rd & SW Tualatin-Sherwood Rd[2]	Signal	D/48	-	-
12	SW Martinazzi Ave & Tualatin-Sherwood Rd[1]	Signal	/	-	-
13	SW Nyberg St & I-5 SB Ramps[1]	Signal	/	-	-
14	SW Nyberg St & I-5 NB Ramps[1]	Signal	/	-	-
15	SW 65th Ave & SW Borland Rd	Signal	E/60	-	HCM 6th
16	SW 65th Ave & SW Sagert St	Signal	C/23	-	HCM 6th
17	SW Tualatin Rd & SW Boones Ferry Rd	Signal	C/28	-	HCM 2000
18	SW Martinazzi Ave & SW Boones Ferry Rd[2]	Signal	D/54	-	-
19	SW Bridgeport Rd & SW Lower Boones Ferry Rd[1]	Signal	D/37	-	HCM 6th
20	SW Lower Boones Ferry Rd & I-5 SB Ramps	Signal	B/15	-	HCM 6th
21	SW Lower Boones Ferry Rd & I-5 NB Ramps	Signal	B/18	-	HCM 6th

Note:
[1] Intersection is currently under construction and was therefore not analyzed in the existing conditions. These will be included in the future conditions analysis.
[2] Intersection analyzed using microsimulation, this represents the intersection average, see text for additional information on movements operating with high delay.

Safety

The collision data and analysis described below is derived from ODOT collision data from 2017 to 2021.

Collision Summary

Around 80% of collisions in Tualatin occurred on arterials, with many of these collisions occurring on SW Tualatin Sherwood Road. Boones Ferry Road also had a significant number of crashes. Over half of collisions for all modes are rear-ends, as seen in **Table 11**. Around 17% and 11% of collisions occurred due to turning movements and overtaking, respectively. The most common cause of bicycle-involved collisions was from vehicles making turning movements.

Table 11. Types of Vehicular Collisions

Type of Collision	Percentage
Angle	2%
Backing	1%
Fixed Object or Other Object	8%
Head-On	0%
Miscellaneous	1%
Non-collision	0%
Parking Maneuver	0%
Pedestrian	1%
Rear-End	57%
Sideswipe - Meeting	1%
Sideswipe - Overtaking	11%
Turning movement	17%

Source: ODOT Collision Data, 2017-2021

Bicycle and Pedestrian *Collisions*

Figure 32 documents collision locations and the frequency of collisions in Tualatin. Knowing what factors affect crash risk is an important step to implementing changes to the transportation system that might mitigate them. The map illustrates collision locations and frequency. Knowing what factors affect crash risk is an important step to implementing mitigation measures.

The collision data and analysis presented in the bicyclist and pedestrian-involved collision map are derived from ODOT records from 2017 to 2021. The yellow rings around crash

locations indicate that more than one crash occurred in that location. Error! Reference source not found. provides a summary of reported pedestrian and bicycle-related injuries and fatalities from 2017-2021.

Table 12. Bicyclist and Pedestrian-Involved Collisions (2017-2021)

Year	Bicyclist-Involved	Pedestrian-Involved	Year Total
2017	7	5	12
2018	8	3	11
2019	3	5	8
2020	4	4	8
2021	1	4	5
Total	23	20	44

For Further Study and Consideration

Safety needs for pedestrians and bicyclists span the extent of the city. Identifying priority areas with higher crash frequencies and severities, whether in proximity to high equity need areas, school zones, parks, or at other locations, can help to identify near term investments.

ODOT SPIS

A Safety Priority Index System (SPIS) identifies and ranks intersections and roadway segments that are most likely to benefit from crash reduction countermeasures. Typically, a SPIS considers linear crash data along roadway and excludes side-street crashes at intersections. Most SPISs use three-years of crash data and provide SPIS scores that range between 0 (least severe) and 100 (most severe) based on crash frequency, crash rate, and crash severity. ODOT publishes a statewide SPIS and an SPIS for each region, which includes all ODOT owned roadways and highways.

According to 2021 SPIS reports, there are 33 ODOT owned intersections and roadway segments in Tualatin that fall in the 95th percentile of SPIS scores. Of those, the top ten scores occur along I-5 and at Nyberg Road at the I-5 interchange.

Washington County SPIS

The Washington County SPIS identifies and ranks intersections similarly to the ODOT SPIS. The Washington County SPIS analyzes intersections, rather than roadway segments. Of the hundred highest ranking intersections in Washington County by SPIS (2018-2020) score, the intersections within Tualatin city limits are #2 Tualatin-Sherwood Rd at 124th Ave; #21 Tualatin-Sherwood Rd at Boones Ferry Rd; #64 Tualatin-Sherwood Rd at Teton Ave; #68

Tualatin-Sherwood Road at Nyberg Rd (and shopping center accesses); and #93 Lower Boones Ferry Rd at 72nd Ave and Bridgeport Rd.

Transportation Demand Management

Transportation Demand Management (TDM) is the application of strategies and policies to redistribute demand from single-occupancy vehicles to alternative modes of travel to lower vehicle miles traveled (VMT).

One strategy is Employee Commute Options, a mandatory program for large employers. Under the Department of Environmental Quality's (DEQ) ECO Program, employers with more than 100 employees must provide commute options to employees designed to reduce the number of cars driven to work in Portland and surrounding areas.

In and around Tualatin, there are around 4,013 employees that are ECO eligible and around 109 incentives available to encourage use of alternative modes, including bike lockers, showers, subsidized TriMet passes, and more. The Tualatin Shuttle, by Ride Connection, provides transportation for commuters to and from the Tualatin WES Commuter Rail Station.

Transportation Systems Management and Operations

Transportation Systems Management and Operations (TSMO) is a set of strategies that focus on operational improvements that can maintain and even restore the performance of the existing transportation system before extra capacity is needed. These cost-effective strategies include things like smarter signal timing, coordinated traffic incident response and traveler information. In Tualatin, some of the traffic signals on Tualatin-Sherwood Road and Nyberg Road at the I-5 interchange use adaptive signal timing to optimize the traffic flows.

Access to Schools

There are 19 schools within the City of Tualatin, ranging from elementary school to college and both publicly and privately run. There is a Safe Routes to School (SRTS) program for the Tigard-Tualatin School District that encourages active transportation to and from schools. Some schools are located near collision hot spots. Additionally, schools are often not located near completed sidewalk segments, making it difficult for students to walk to school safely.

2040 TSP Appendix

Existing Conditions Report

Tualatin
TRANSPORTATION SYSTEM PLAN TSP

EXISTING CONDITIONS

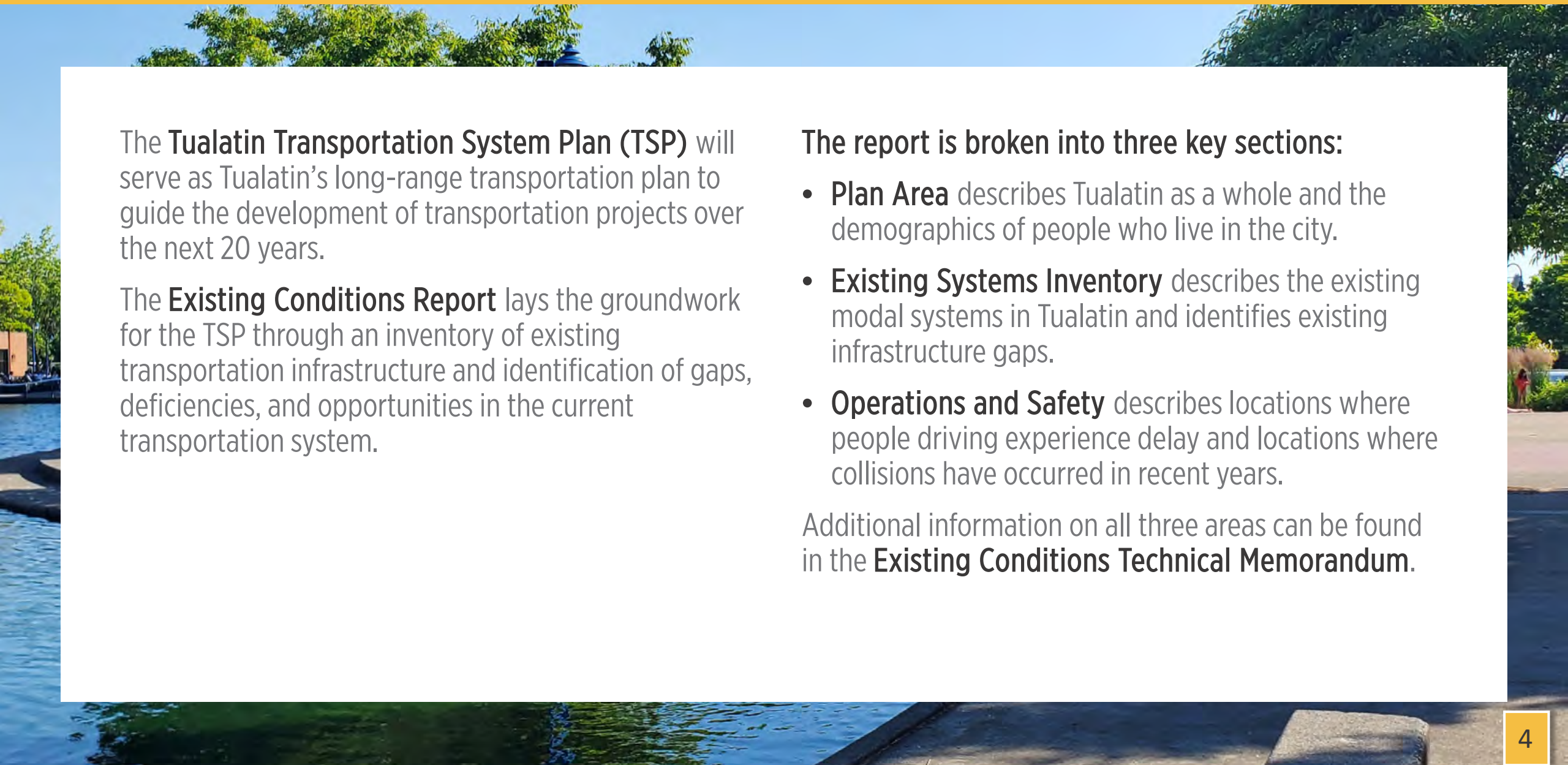
March 2024

Existing Conditions Report

Table of Contents

Introduction

Introduction



The **Tualatin Transportation System Plan (TSP)** will serve as Tualatin's long-range transportation plan to guide the development of transportation projects over the next 20 years.

The **Existing Conditions Report** lays the groundwork for the TSP through an inventory of existing transportation infrastructure and identification of gaps, deficiencies, and opportunities in the current transportation system.

The report is broken into three key sections:

- **Plan Area** describes Tualatin as a whole and the demographics of people who live in the city.
- **Existing Systems Inventory** describes the existing modal systems in Tualatin and identifies existing infrastructure gaps.
- **Operations and Safety** describes locations where people driving experience delay and locations where collisions have occurred in recent years.

Additional information on all three areas can be found in the **Existing Conditions Technical Memorandum**.

Plan Area

The City of Tualatin is located approximately 12 miles south of Portland and within both **Clackamas and Washington Counties**.

Interstate 5 (I-5) runs north-south through the city and acts as a barrier to east-west travel.

The city is also bounded by Interstate 205 (I-205) to the southeast, Oregon Route 99W to the northwest, and the Tualatin River to the north.

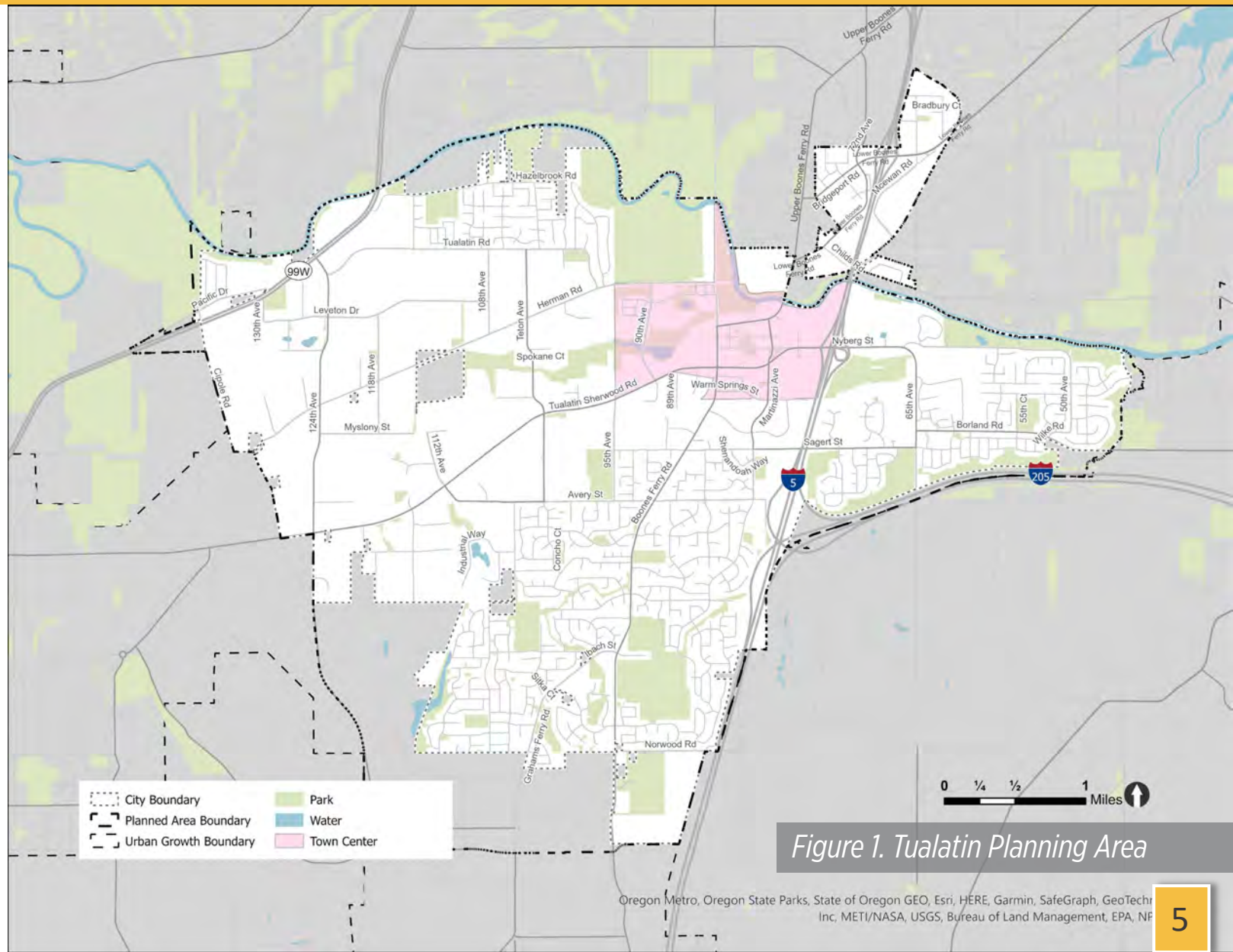


Figure 1. Tualatin Planning Area

Plan Area Land Uses

Tualatin is largely comprised of manufacturing and industrial uses in the western part of the city.

The northeastern and central parts of the city are zoned for commercial and mixed-use with several pockets of zoning for multifamily residential.

The southeastern part of the city and areas to the east of I-5 are primarily zoned for lower-density single-family residential with several areas that allow for commercial and multifamily uses.

Tualatin is home to five Commercial Centers, which are described on the following page.

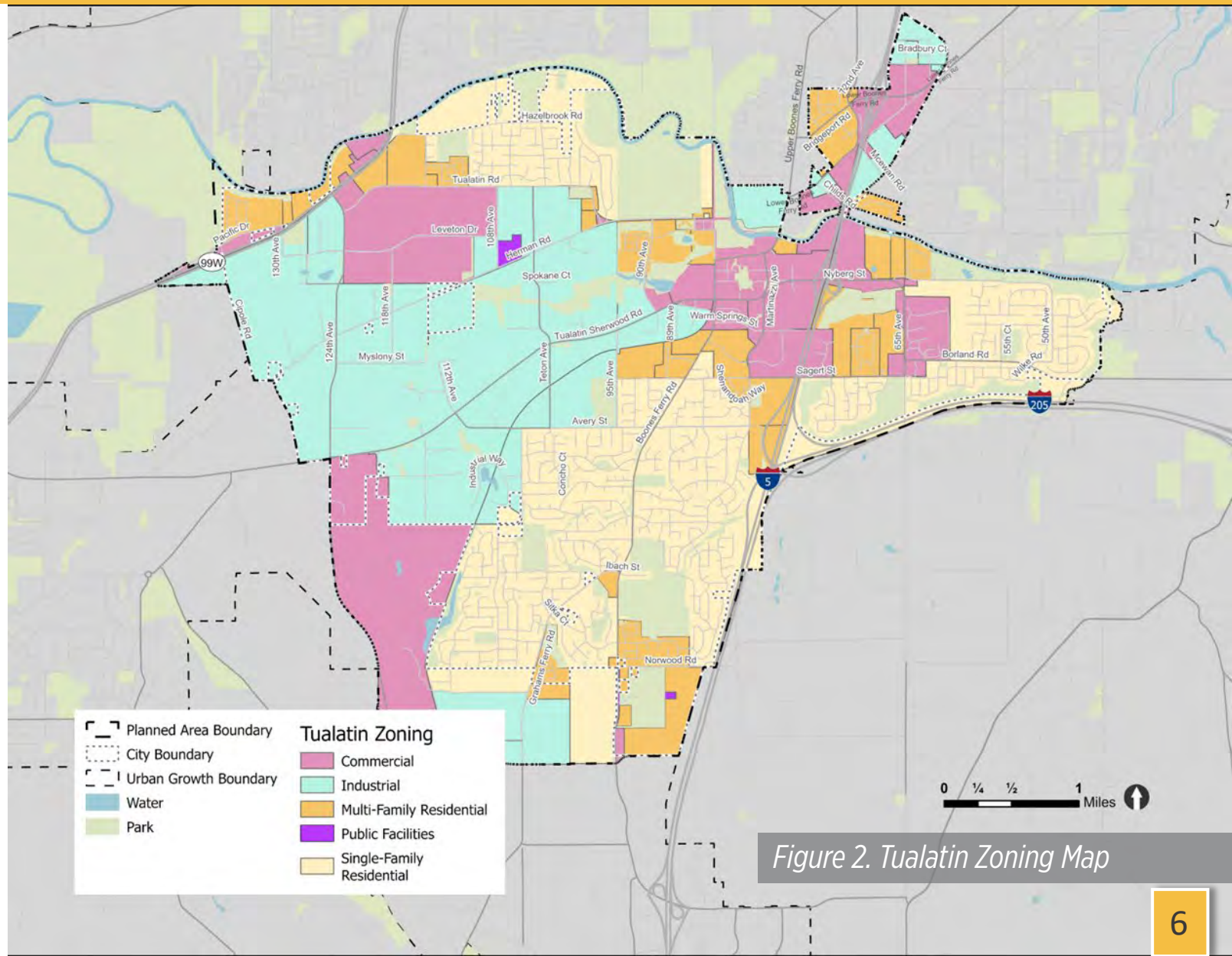
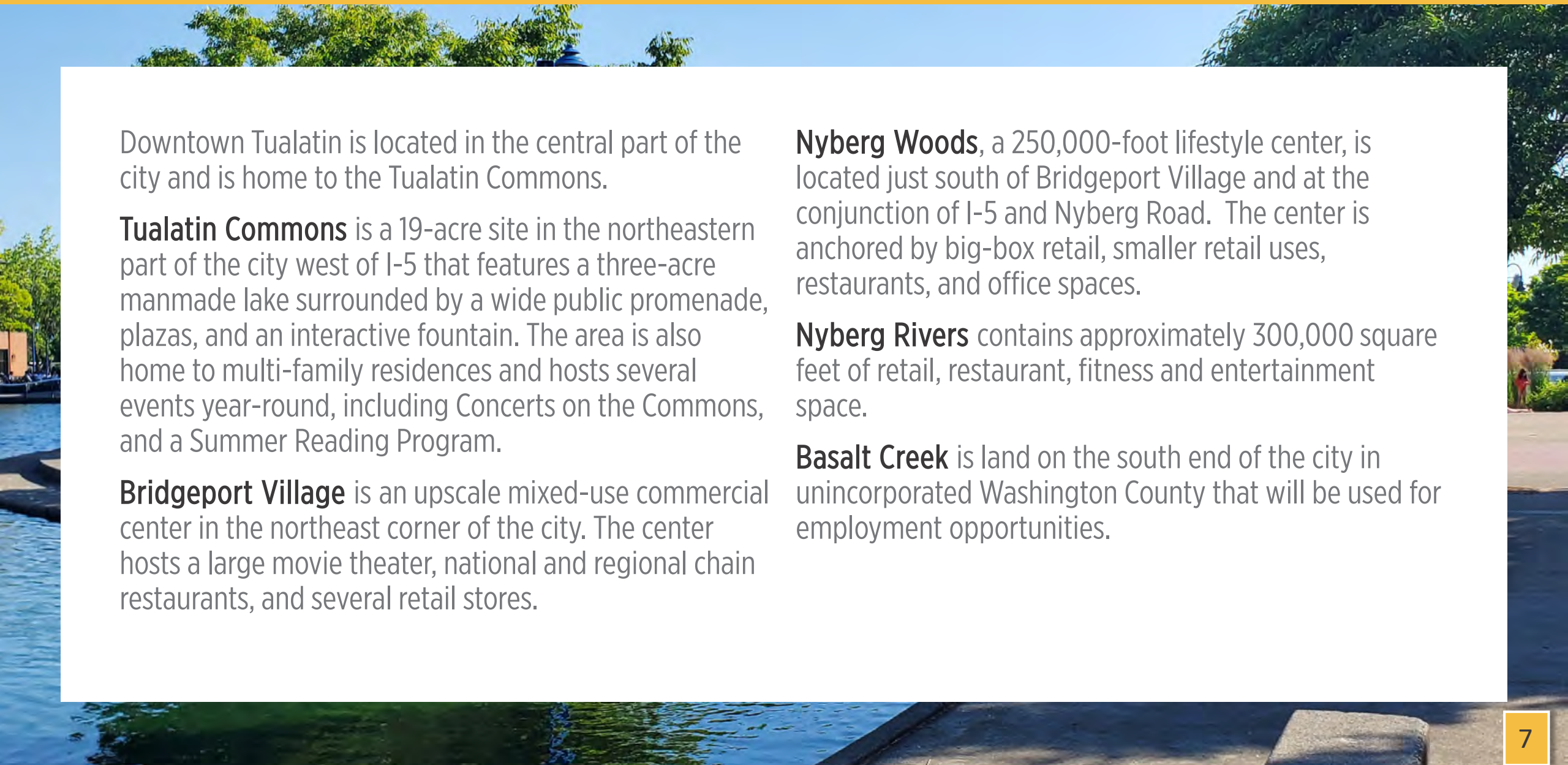


Figure 2. Tualatin Zoning Map

Plan Area Key Destinations



Downtown Tualatin is located in the central part of the city and is home to the Tualatin Commons.

Tualatin Commons is a 19-acre site in the northeastern part of the city west of I-5 that features a three-acre manmade lake surrounded by a wide public promenade, plazas, and an interactive fountain. The area is also home to multi-family residences and hosts several events year-round, including Concerts on the Commons, and a Summer Reading Program.

Bridgeport Village is an upscale mixed-use commercial center in the northeast corner of the city. The center hosts a large movie theater, national and regional chain restaurants, and several retail stores.

Nyberg Woods, a 250,000-foot lifestyle center, is located just south of Bridgeport Village and at the conjunction of I-5 and Nyberg Road. The center is anchored by big-box retail, smaller retail uses, restaurants, and office spaces.

Nyberg Rivers contains approximately 300,000 square feet of retail, restaurant, fitness and entertainment space.

Basalt Creek is land on the south end of the city in unincorporated Washington County that will be used for employment opportunities.

Plan Area Key Destinations

Understanding where community members need to travel is critical to developing a transportation system that gets people where the need to go.

Key destinations for community members traveling in Tualatin include:

- Community Centers
- Schools
- City Hall
- Emergency Service Centers

Recommendations that provide safe connections to these destinations will be one outcome of the TSP update.

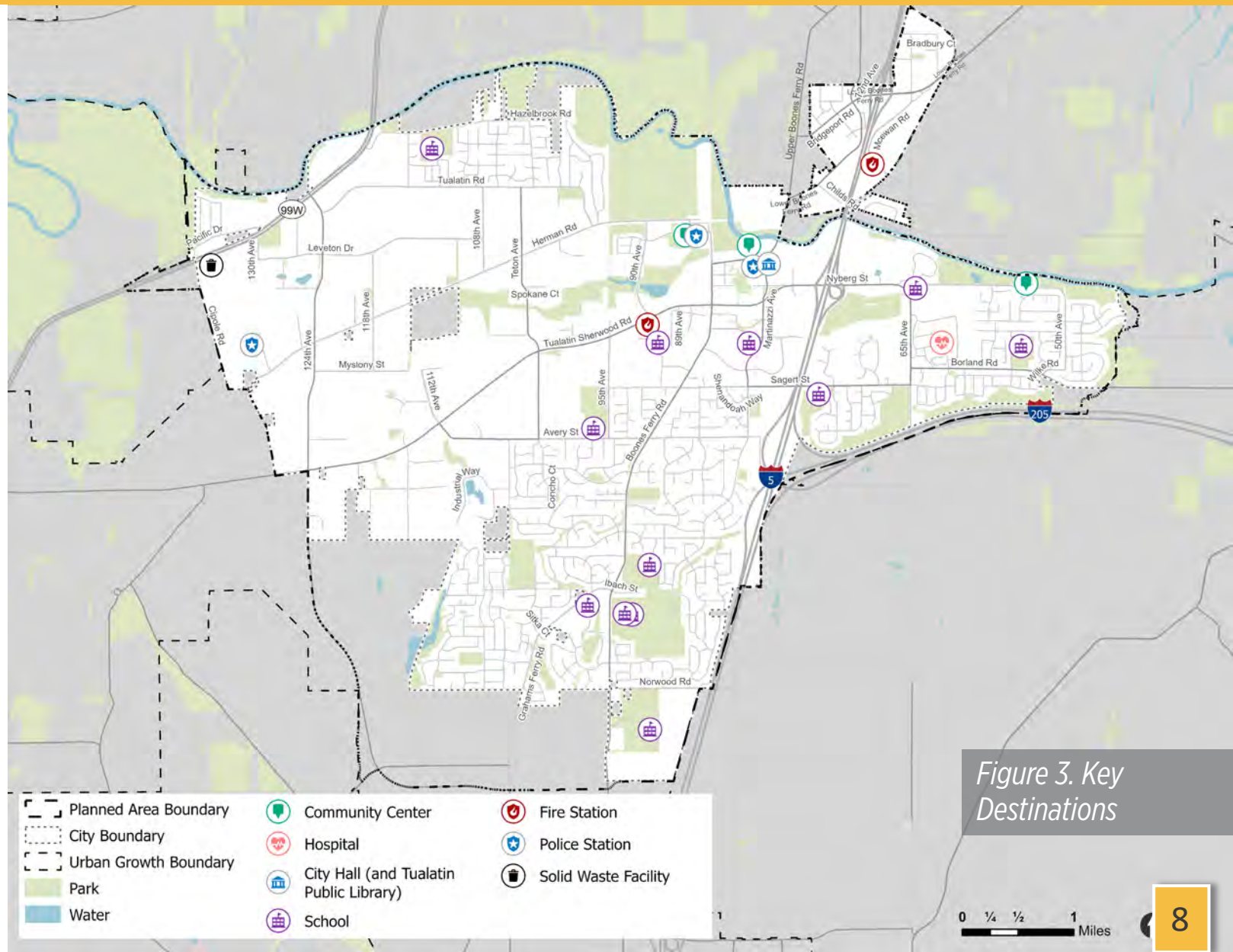


Figure 3. Key Destinations

Plan Area Demographics

The City of Tualatin is home to **27,821 people** according to the 2021 Census Data.

Understanding how and where younger populations travel is an important component of developing a transportation system that meets the needs of some of the most vulnerable users.

The city is slightly **younger** than the metropolitan region with a greater proportion of the city population under 18.

As shown, the highest concentrations of youth population are in the southwest corner of the city, areas surrounding Tualatin Commons, and the eastern edge of the city.

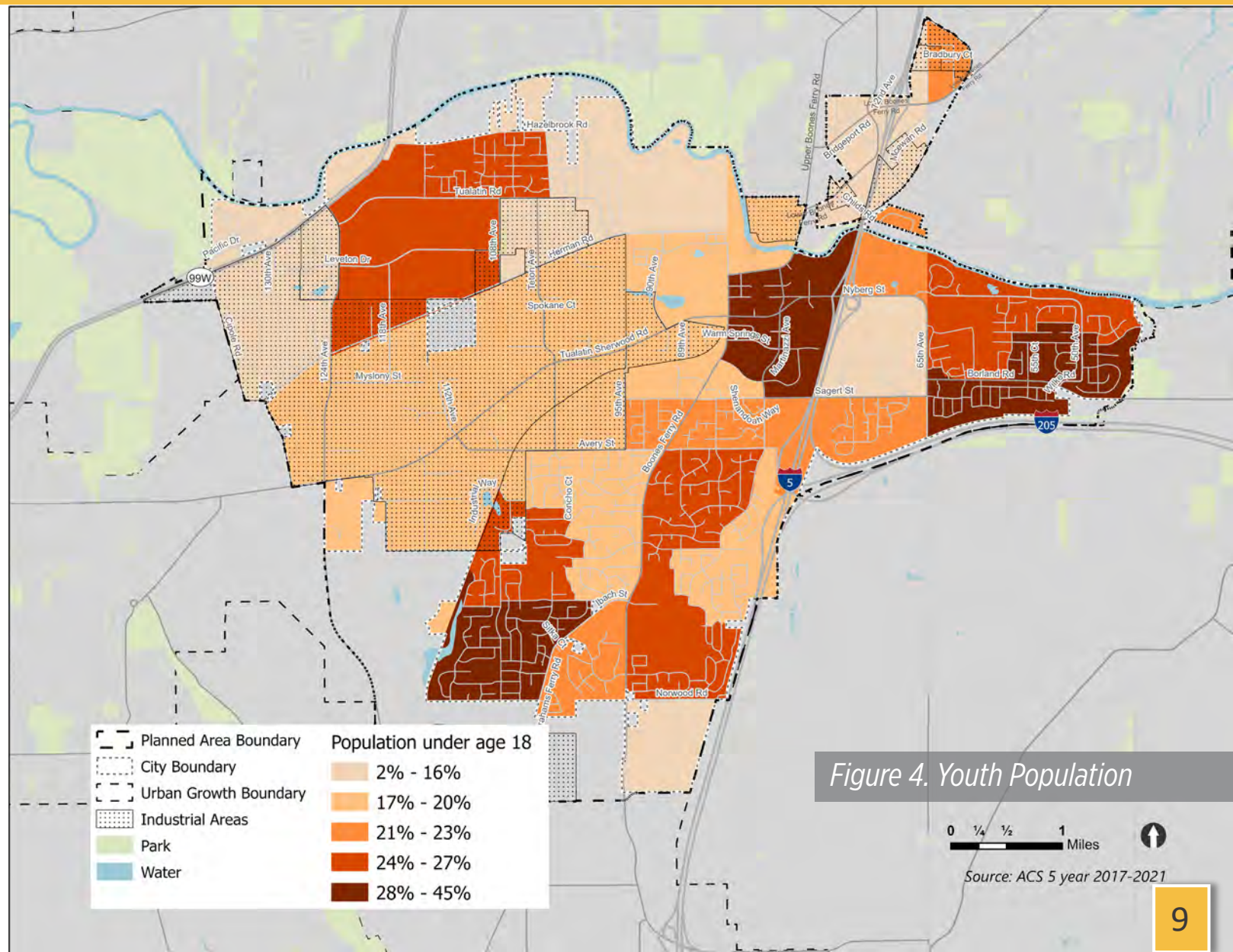


Figure 4. Youth Population

Plan Area Demographics

Understanding the travel patterns and needs of members of the population **over 65 years** old is also an important component of building a transportation system for all ages and abilities.

Figure 5 shows the concentration of members of the population over 65 years old.

The portion of the city between Boones Ferry Road and SW 106th Avenue and north of SW Herman Road has the largest concentration of population members over 65 years old within the City Boundary.

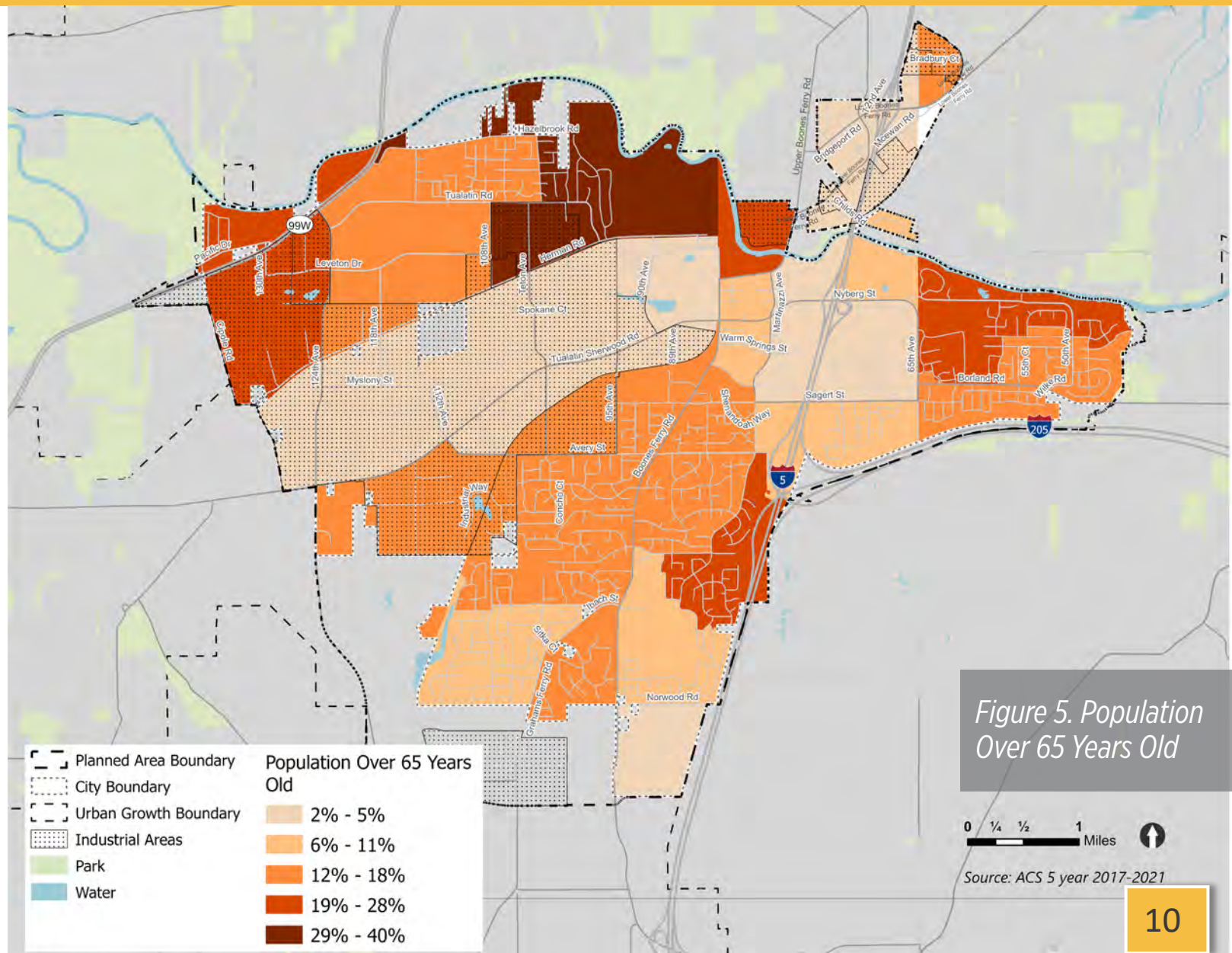


Figure 5. Population Over 65 Years Old

Plan Area Demographics

In Tualatin, the highest concentration of population with a disability live just north and south of Tualatin Sherwood Road. Much of this area is industrial so housing is concentrated toward the central city.

Disabilities captured in the American Community Survey (ACS) data include:

- Hearing
- Vision
- Cognitive
- Ambulatory

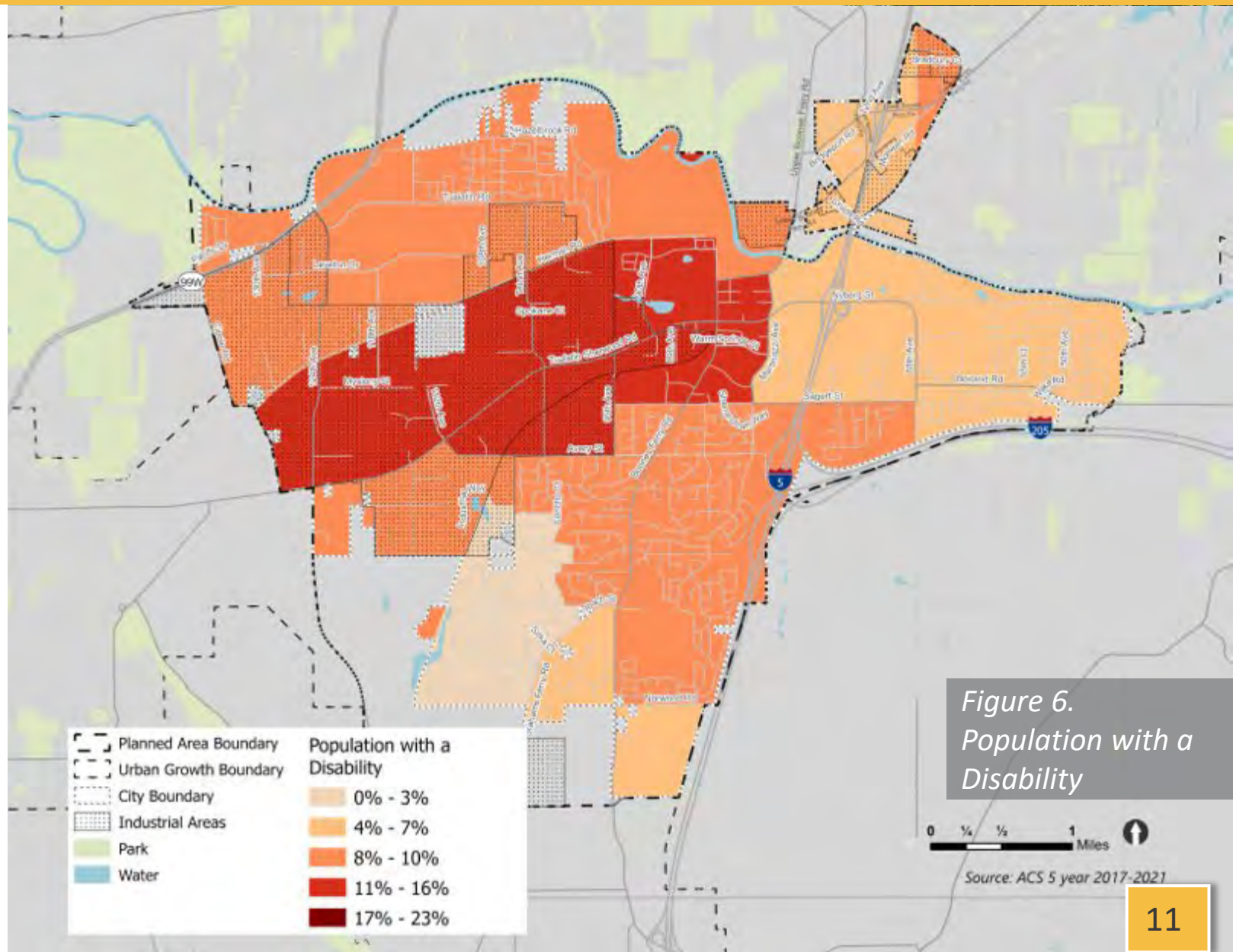


Figure 6. Population with a Disability

Plan Area Demographics

The portion of Tualatin's population that identifies as Non-White and Hispanic or Latino is **greater than the regional average** at 27% and 22%, respectively.

The highest concentration of non-white population in the city is concentrated around the I-5 interchanges in the middle of the city.

Other high concentrations include areas between Tualatin-Sherwood Road and Avery Street and on either side of Borland Road.

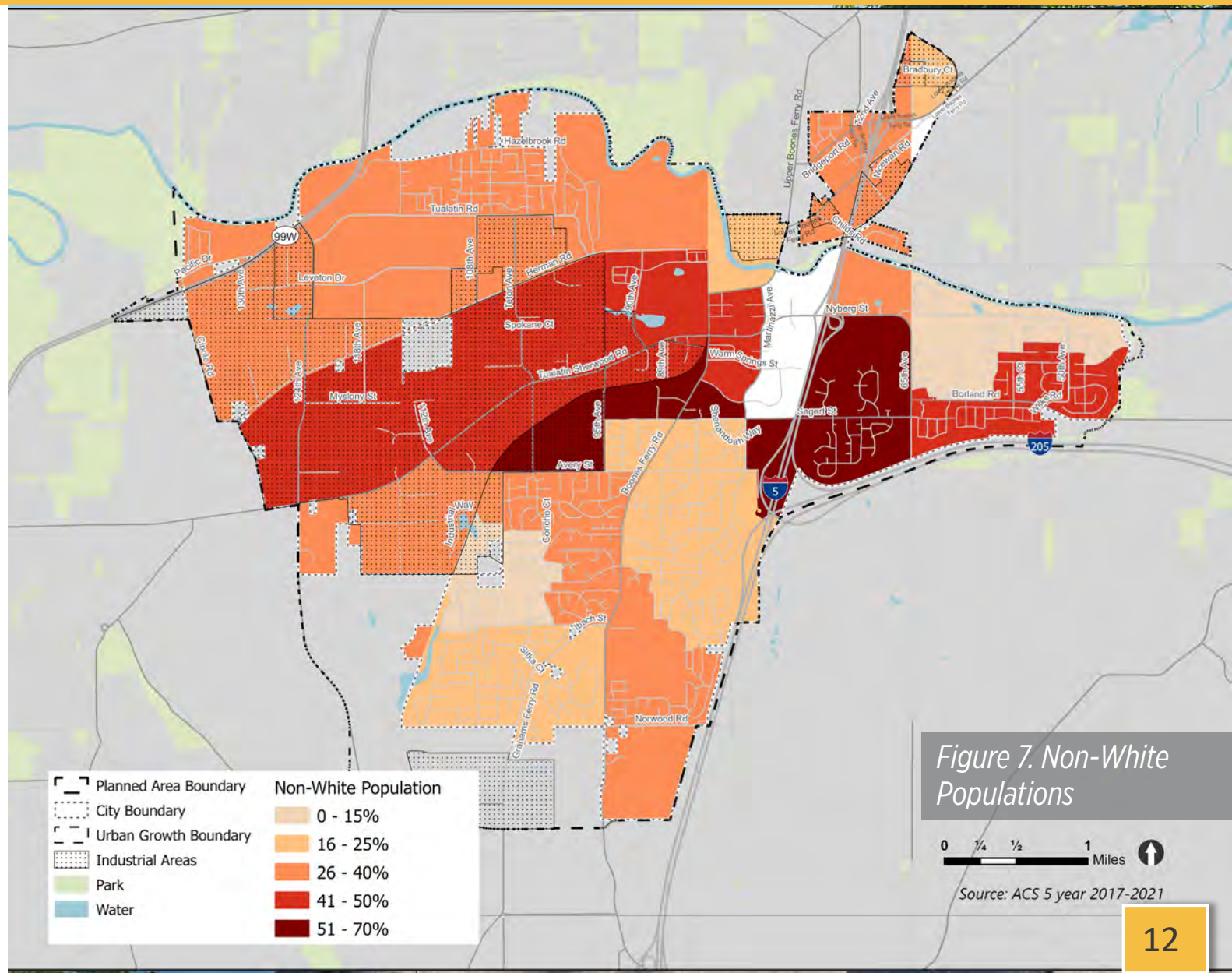


Figure 7. Non-White Populations

Plan Area Demographics

As shown on Figure 8, Limited English-speaking populations in Tualatin tend to live in the same tracts as non-white populations as well as the northernmost part of the city.

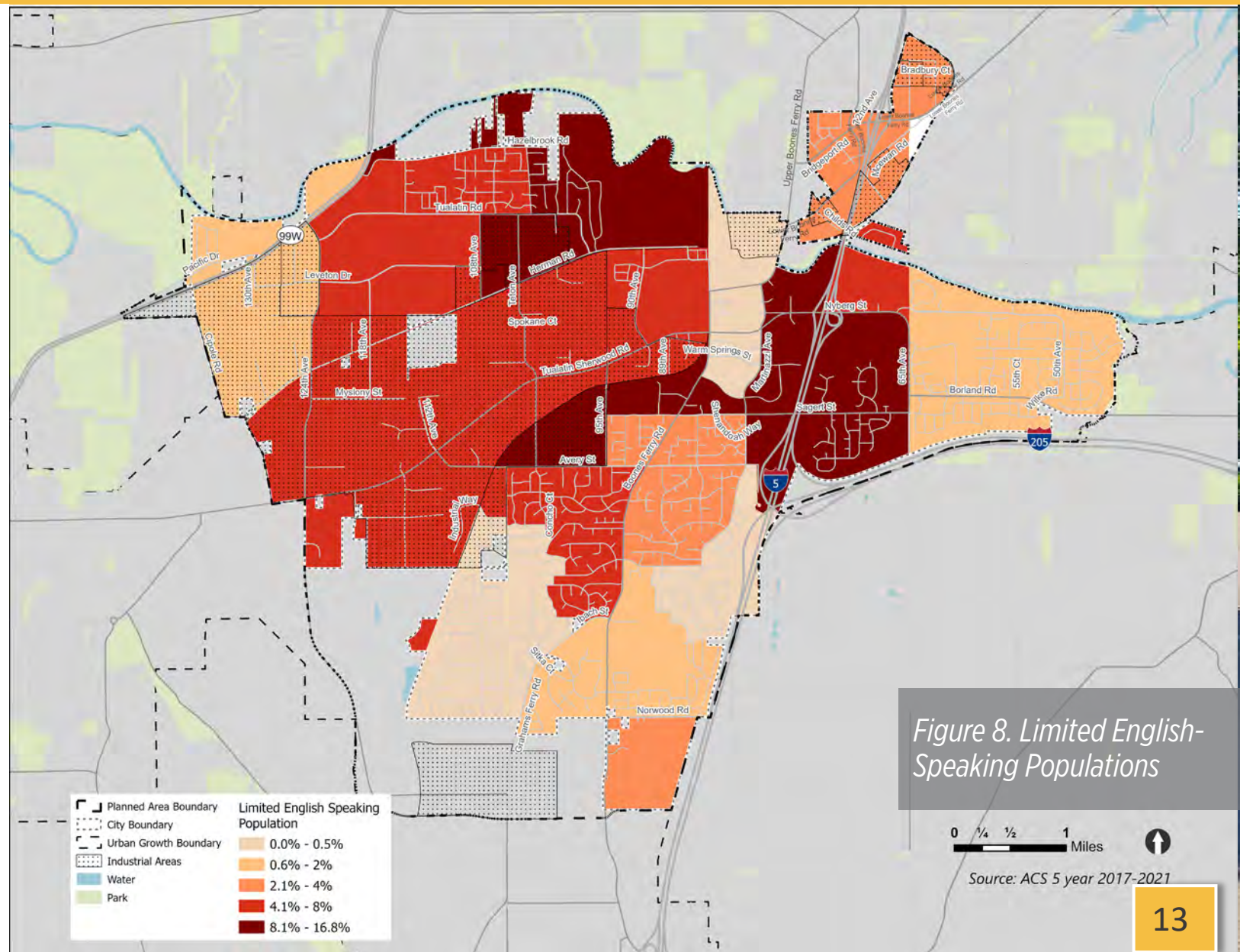


Figure 8. Limited English-Speaking Populations

Plan Area Demographics

The number of households with no vehicles in Tualatin is **three percent lower** than the regional average.

Households with zero vehicles are primarily located in westernmost and eastern most parts of the city as well as the area between the railroad track and Boones Ferry Road.

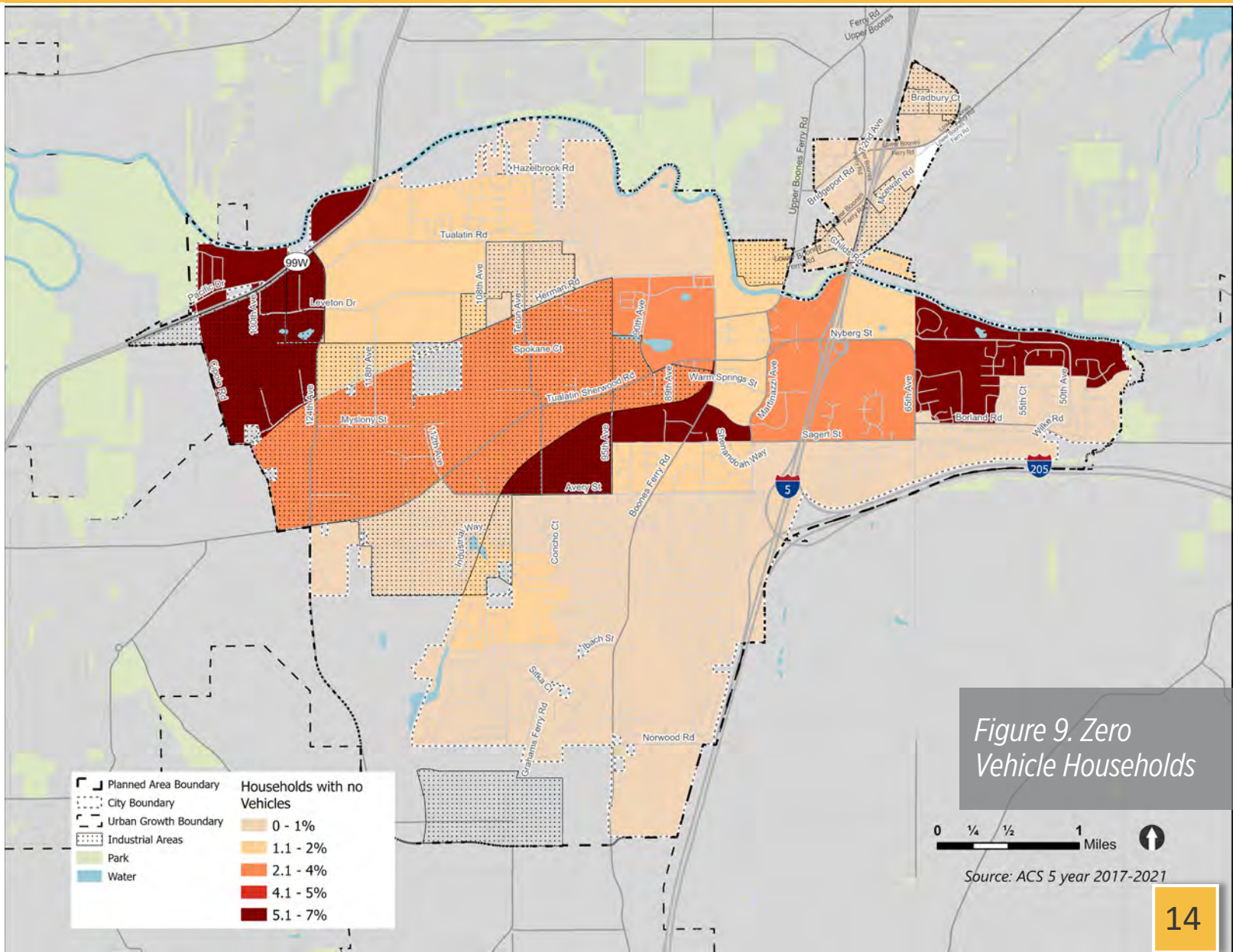


Figure 9. Zero Vehicle Households

Plan Area Employment

There are **five key industry clusters** in Tualatin that provide the majority of employment opportunities. Those five sectors are:

1. Manufacturing
2. Health Care and Social Assistance
3. Wholesale Trade
4. Construction
5. Retail Trade

The largest employer in Tualatin is **Lam Research**, a supplier of wafer-fabrication equipment and related services to the semiconductor industry.

The largest employment clusters are in the western part of the city, which is where most of the industrial uses are located.

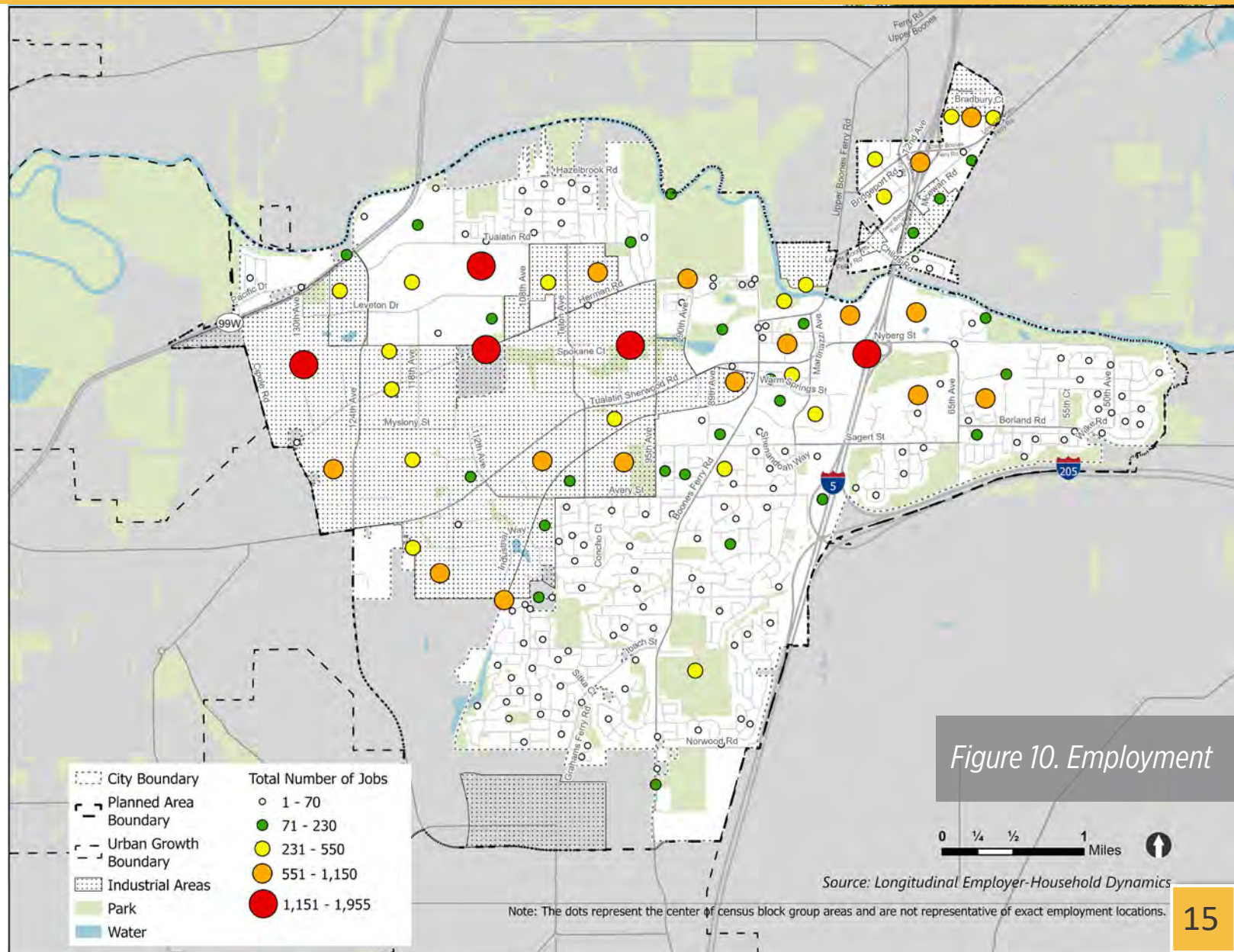


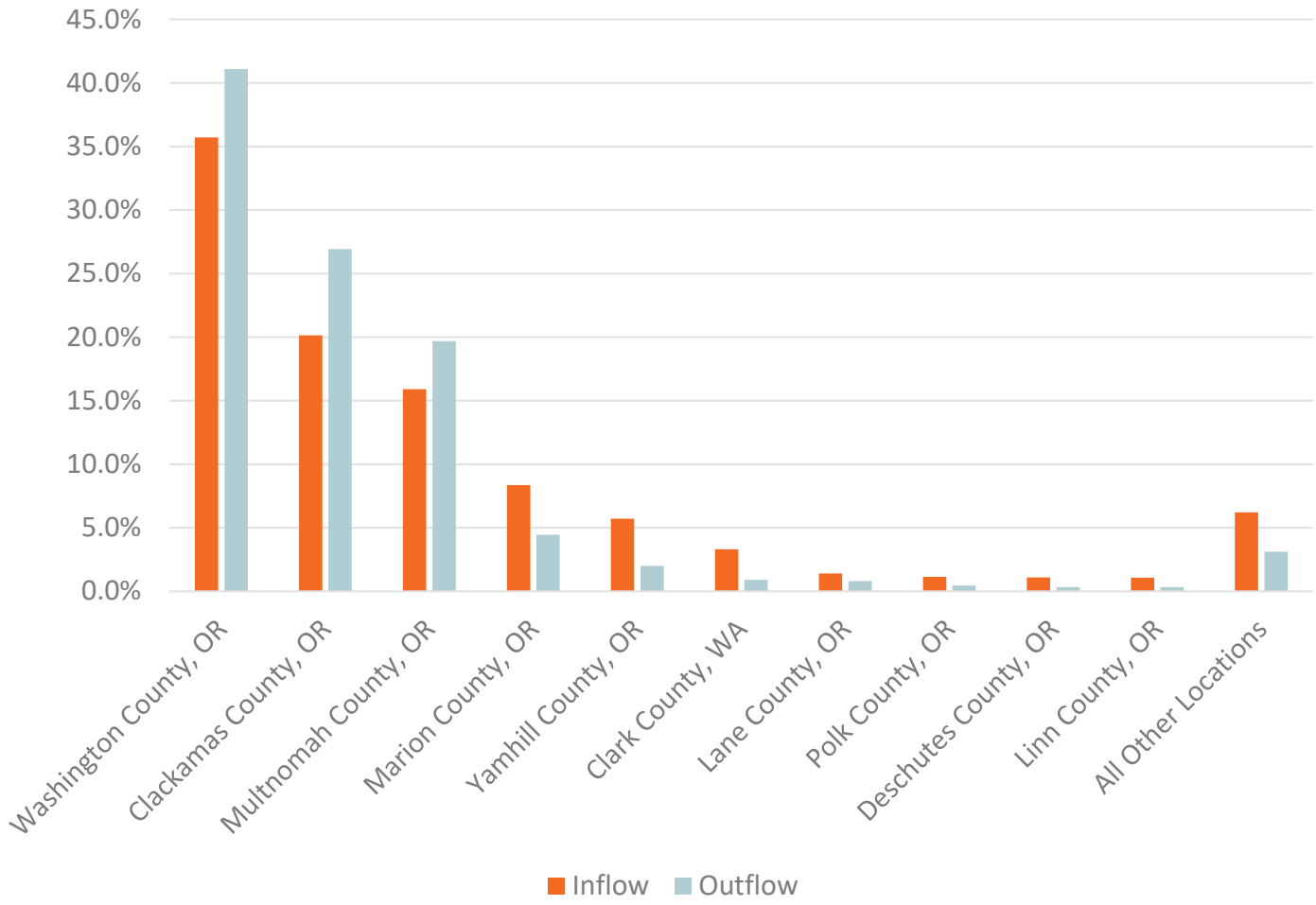
Figure 10. Employment

Plan Area Employment

While Tualatin has many employment centers, many of its workers work in other communities.

12.3% of workers who live in Tualatin work outside the Metro region.

28.3 % of workers in Tualatin live outside the Metro region.



Plan Area Employment

According to the most recent LEHD data on workers who live or work in Tualatin:

- 5%, or 1,947, of workers both live and work in Tualatin.
- 67%, or 27,991, live outside of Tualatin and come to the city to work.
- 28%, or 11,531, live in Tualatin and go outside the city to work.

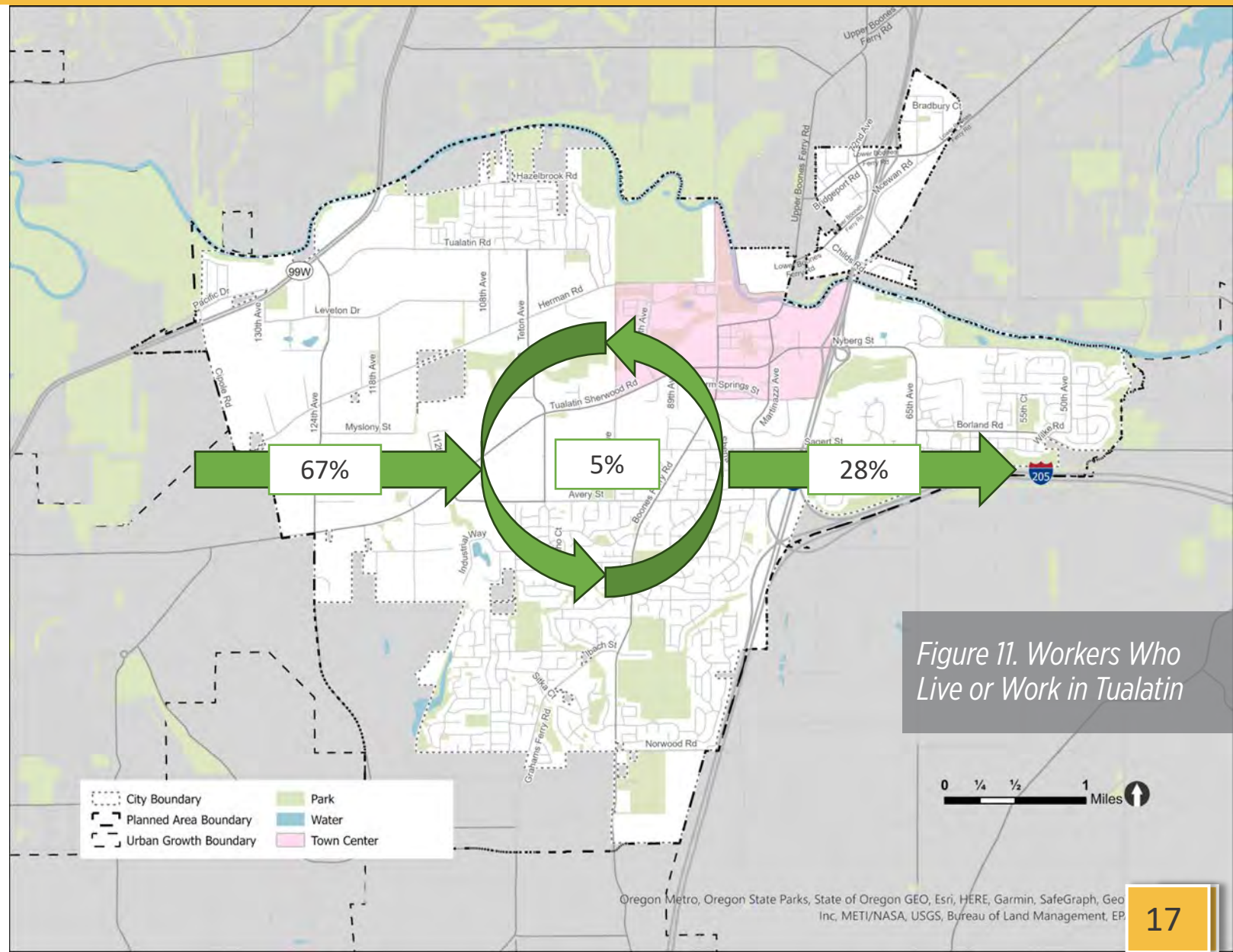


Figure 11. Workers Who Live or Work in Tualatin

Existing System Inventory

Roadway Network

Roadway Network Functional Class

Functional classification is used to sort roadways into classes based on the how a roadway is intended to function and who it is intended to serve.

Arterials are generally intended to prioritize moving vehicles through an area and connecting them to regional destinations.

Collectors are designed to connect users to local destinations, including retail and residential areas.

As shown on Figure 12, Primary Arterials in Tualatin include: 99W, Tualatin-Sherwood Road, and Boones Ferry Road.

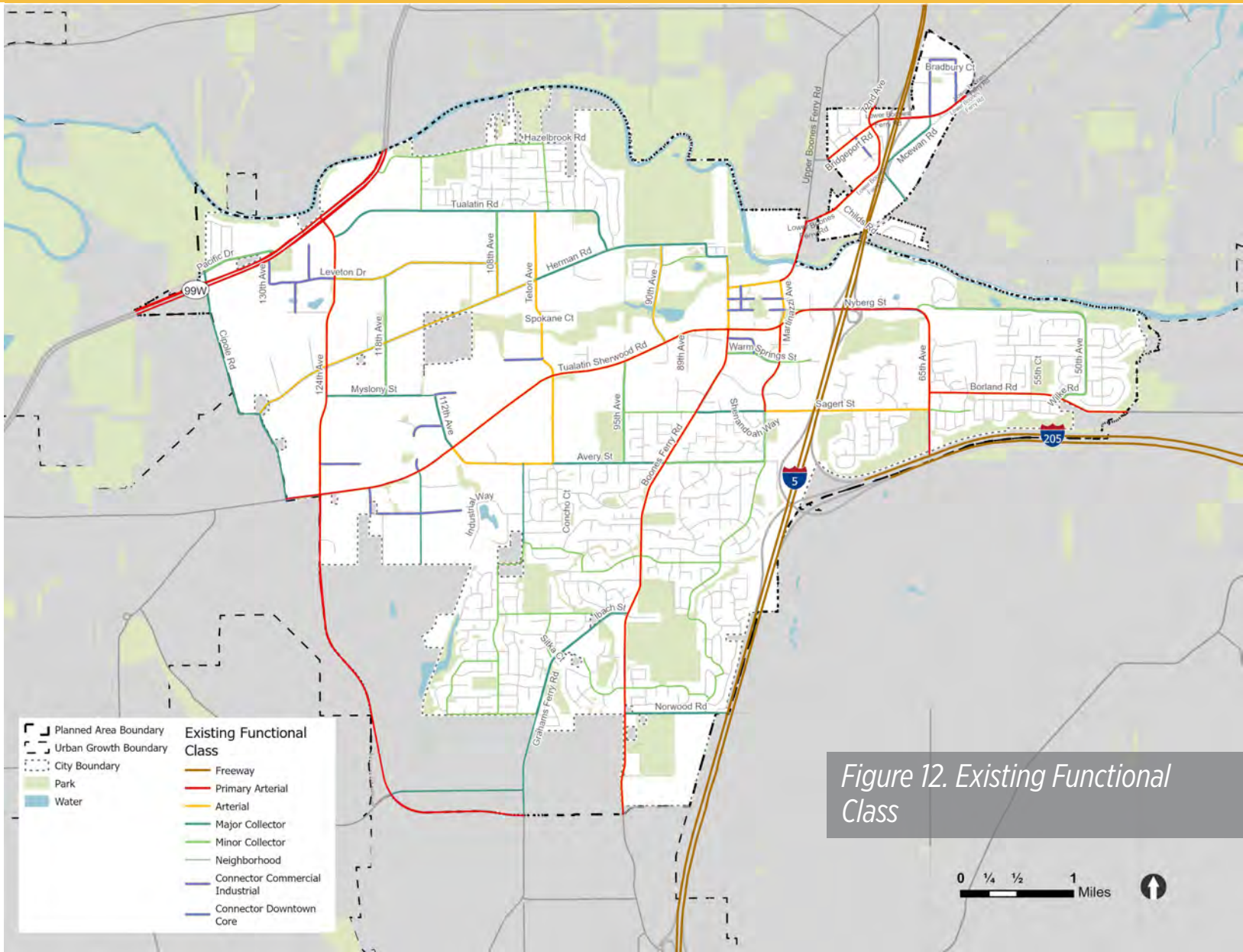


Figure 12. Existing Functional Class

Roadway Network Road Ownership

The agency that owns and operates a roadway is responsible for setting standards for roadway design and operation and must approve any changes to the roadway.

Arterials and collectors in Tualatin are owned and operated by a mix of the Oregon Department of Transportation (ODOT), Washington County, and Tualatin.

Improvements recommended on 99W, Tualatin-Sherwood Road, 66th Avenue and other key roadways not owned by Tualatin will require coordination with Washington County or ODOT.

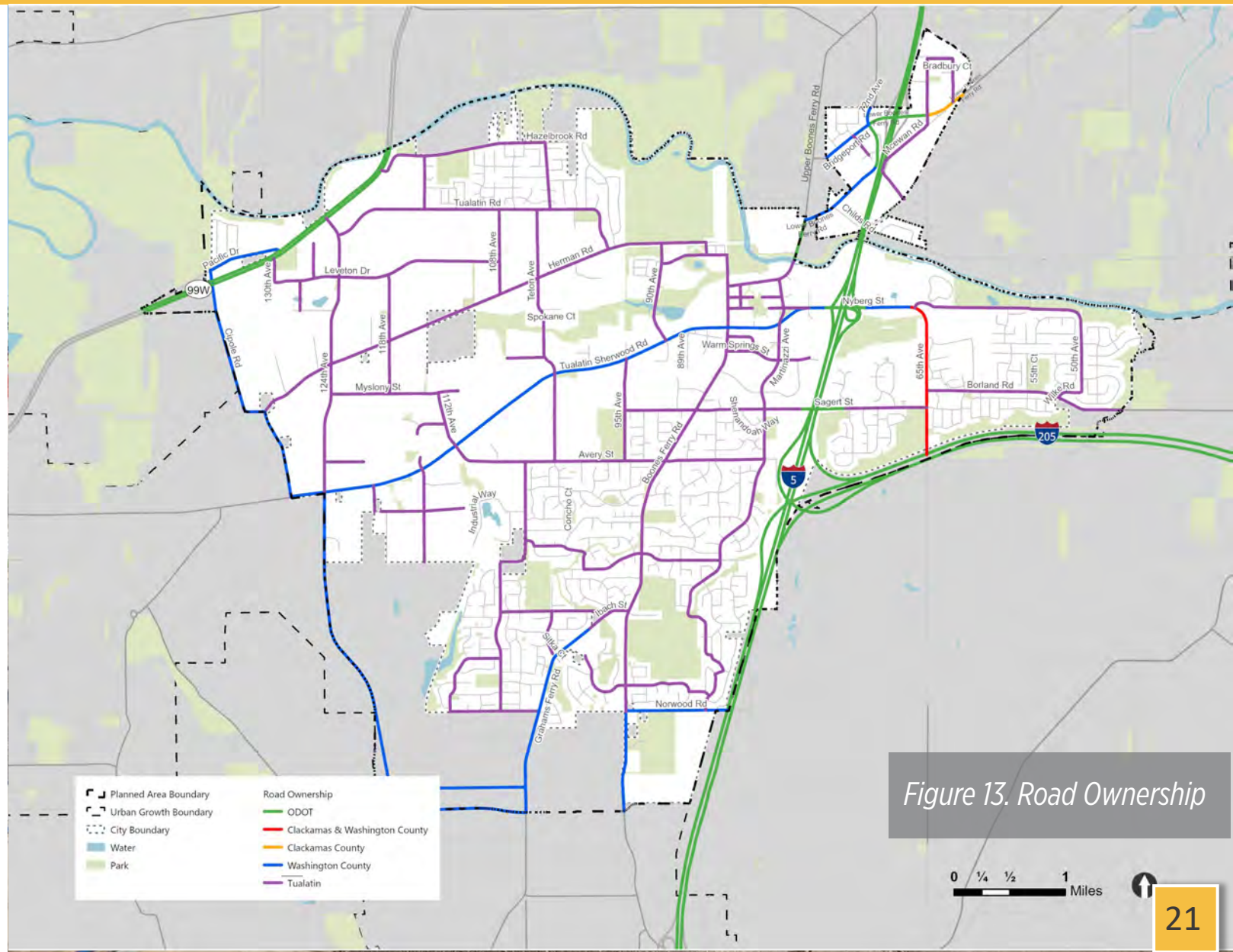


Figure 13. Road Ownership

Roadway Network Travel Lanes

The number of travel lanes provided on a roadway is the primary indicator of roadway capacity.

Figure 14 shows the number of travel lanes on arterials and collectors in Tualatin.

As shown, most roadways within the City provide two travel lanes (one lane in each direction); however, there are several areas, particularly roadways that connect to I-5 and 99W, where additional capacity is provided.

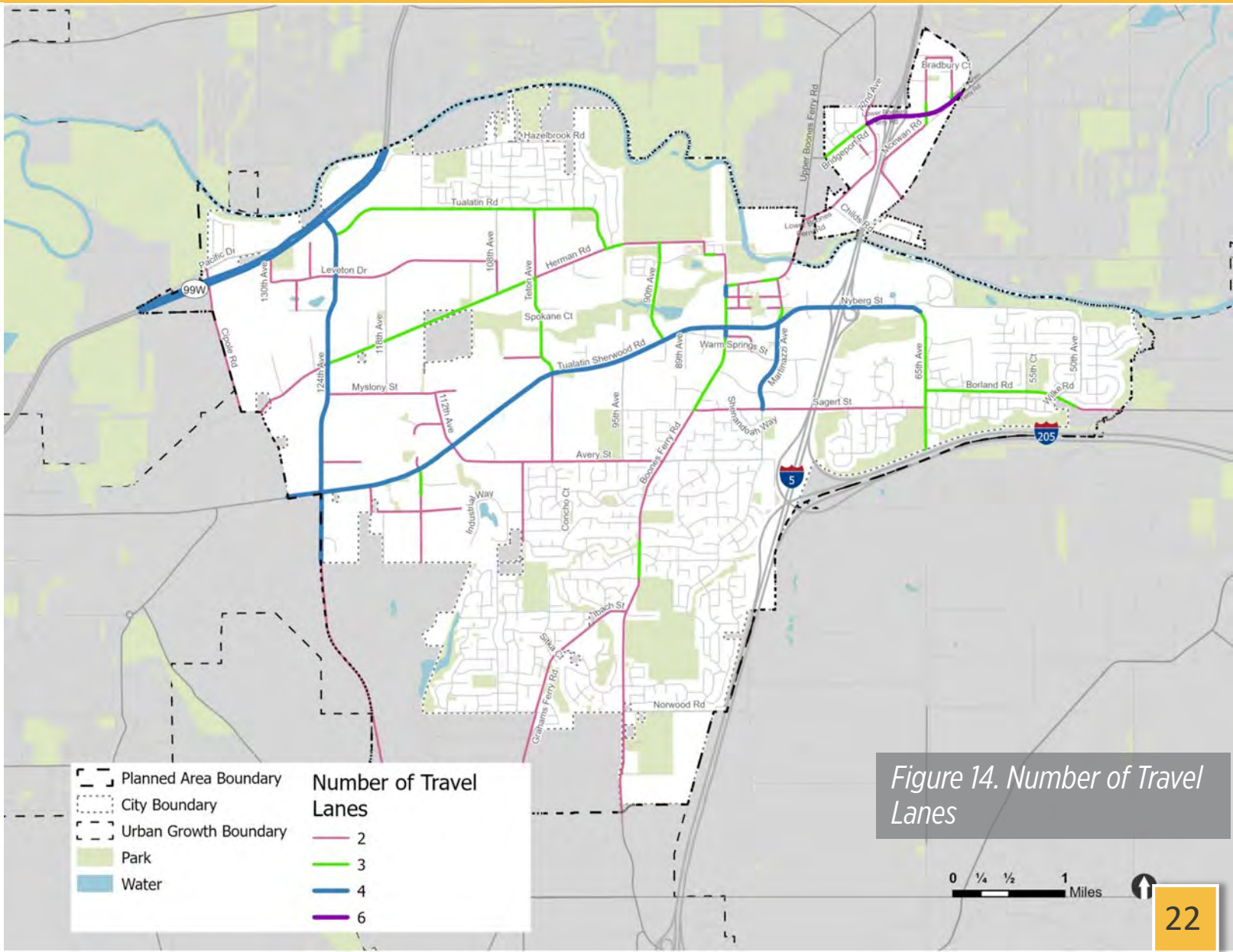


Figure 14. Number of Travel Lanes

Roadway Network Posted Speed Limits

Local streets in Tualatin, which are mostly located in residential areas, have a speed limit of 25 miles per hour (mph).

The arterials and collectors within the city generally have a posted speed limit of 35 mph or lower except for major roadways including:

- Herman Road
- 124th Avenue
- Tualatin-Sherwood Road

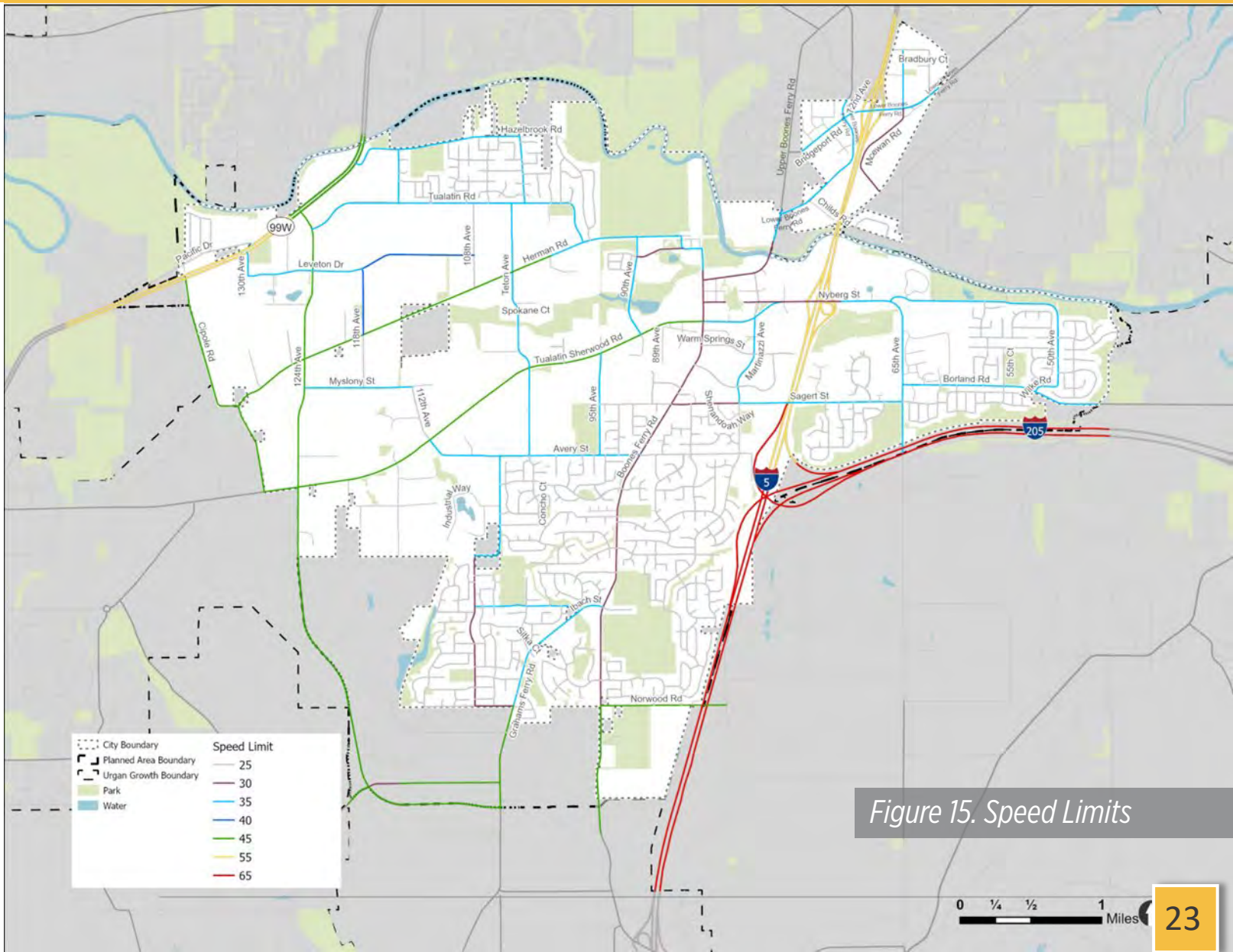


Figure 15. Speed Limits

Roadway Network Traffic Control

Figure 17 shows the existing traffic signals within Tualatin.

Most signalized intersections within the city have at least one marked crosswalk to facilitate pedestrian crossings.

There are a number of rectangular rapid flashing beacons (RRFB) around the city, located primarily on primary arterials and major collectors, that provide safer crossings for pedestrians.

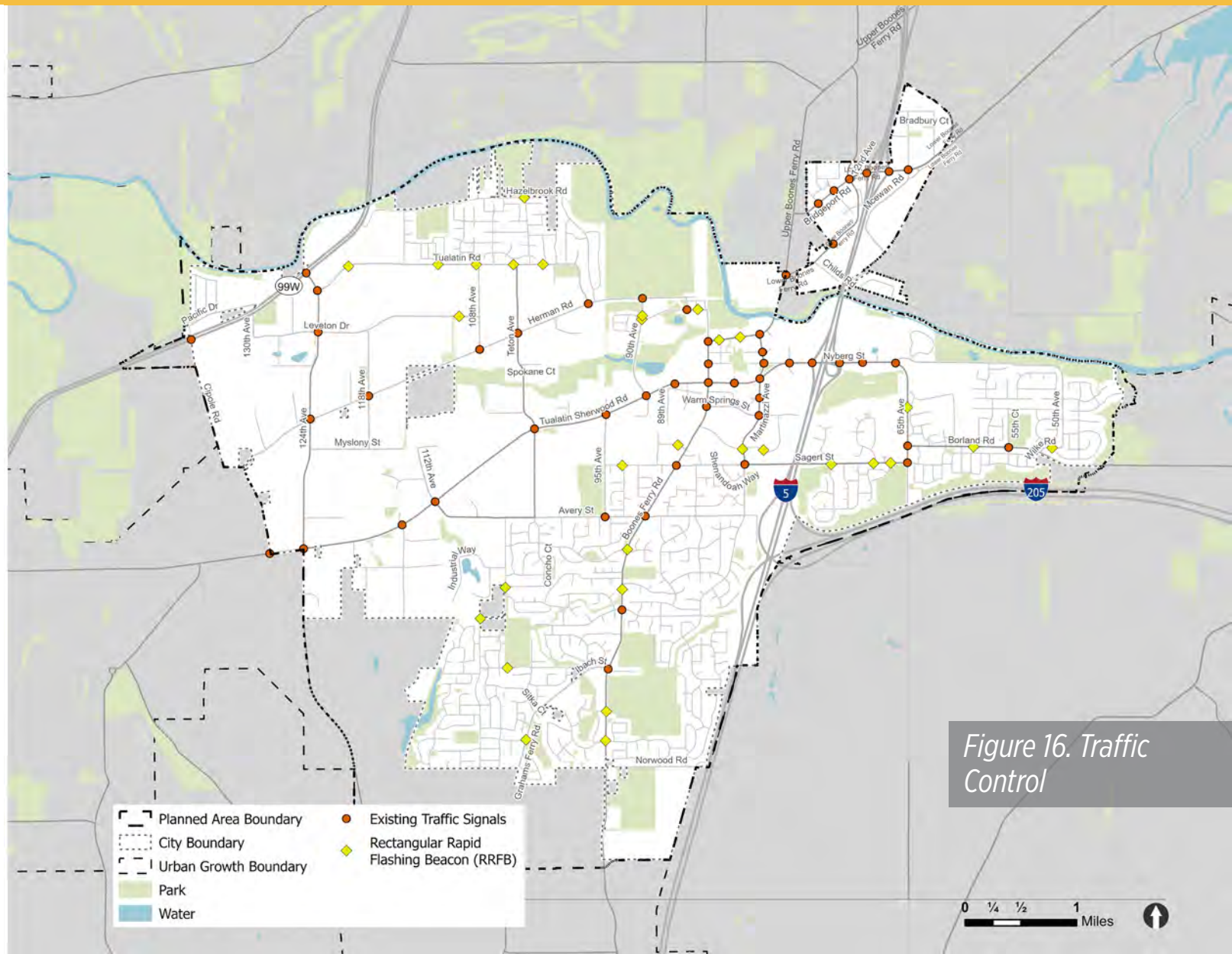


Figure 16. Traffic Control

Roadway Network Bridges

With I-5 bisecting the city and the Tualatin River acting as the northern boundary for the city, bridges are a critical piece of Tualatin's transportation system.

Only three bridges are maintained by the City of Tualatin, all of which are in good condition.

ODOT maintains most of the bridges, specifically along the I-5 and 99W corridors. All bridges maintained by ODOT are also in good or fair condition.

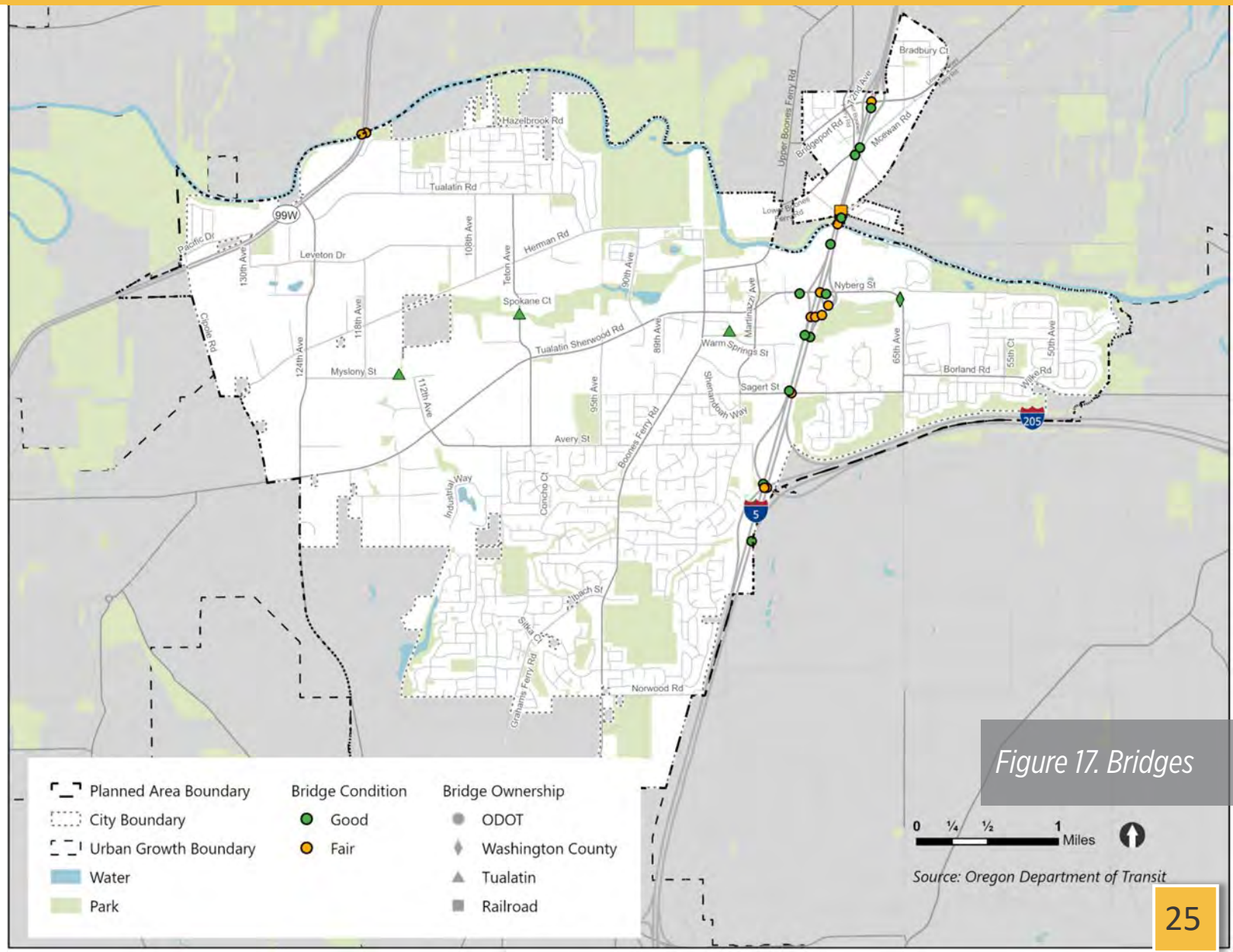
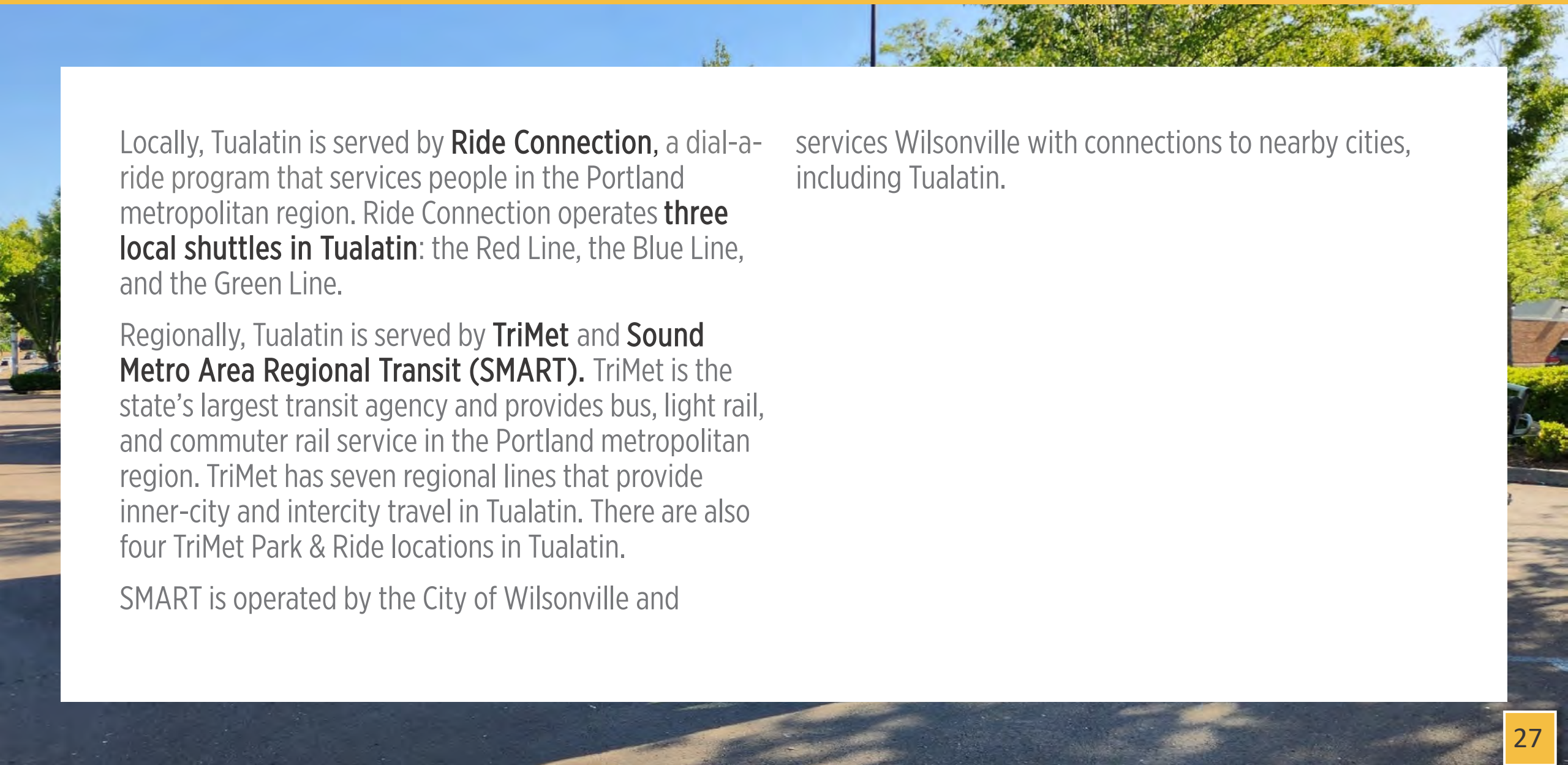


Figure 17. Bridges

Transit System

Transit System Bus Service



Locally, Tualatin is served by **Ride Connection**, a dial-a-ride program that services people in the Portland metropolitan region. Ride Connection operates **three local shuttles in Tualatin**: the Red Line, the Blue Line, and the Green Line.

Regionally, Tualatin is served by **TriMet** and **Sound Metro Area Regional Transit (SMART).** TriMet is the state's largest transit agency and provides bus, light rail, and commuter rail service in the Portland metropolitan region. TriMet has seven regional lines that provide inner-city and intercity travel in Tualatin. There are also four TriMet Park & Ride locations in Tualatin.

SMART is operated by the City of Wilsonville and services Wilsonville with connections to nearby cities, including Tualatin.

Transit System Transit Service

Within Tualatin, bus service is located primarily on roadways that connect users to retail and employment centers in Tualatin or to destinations outside Tualatin.

WES (Westside Express Service), which is also operated by TriMet, is a commuter rail line serving Beaverton, Tigard, Tualatin and Wilsonville. The service operates on weekdays during commute hours with trains every 45 minutes and is intended to connect users to employment centers and MAX service in Beaverton.

In Spring 2023, TriMet reports show that Tualatin had 682 on-boardings and 681 alightings on weekdays.

In Spring 2019, on-boardings and alightings for weekdays were 1,267 and 1,253, respectively, showing that today's number of boardings are approximately half of pre-pandemic levels.

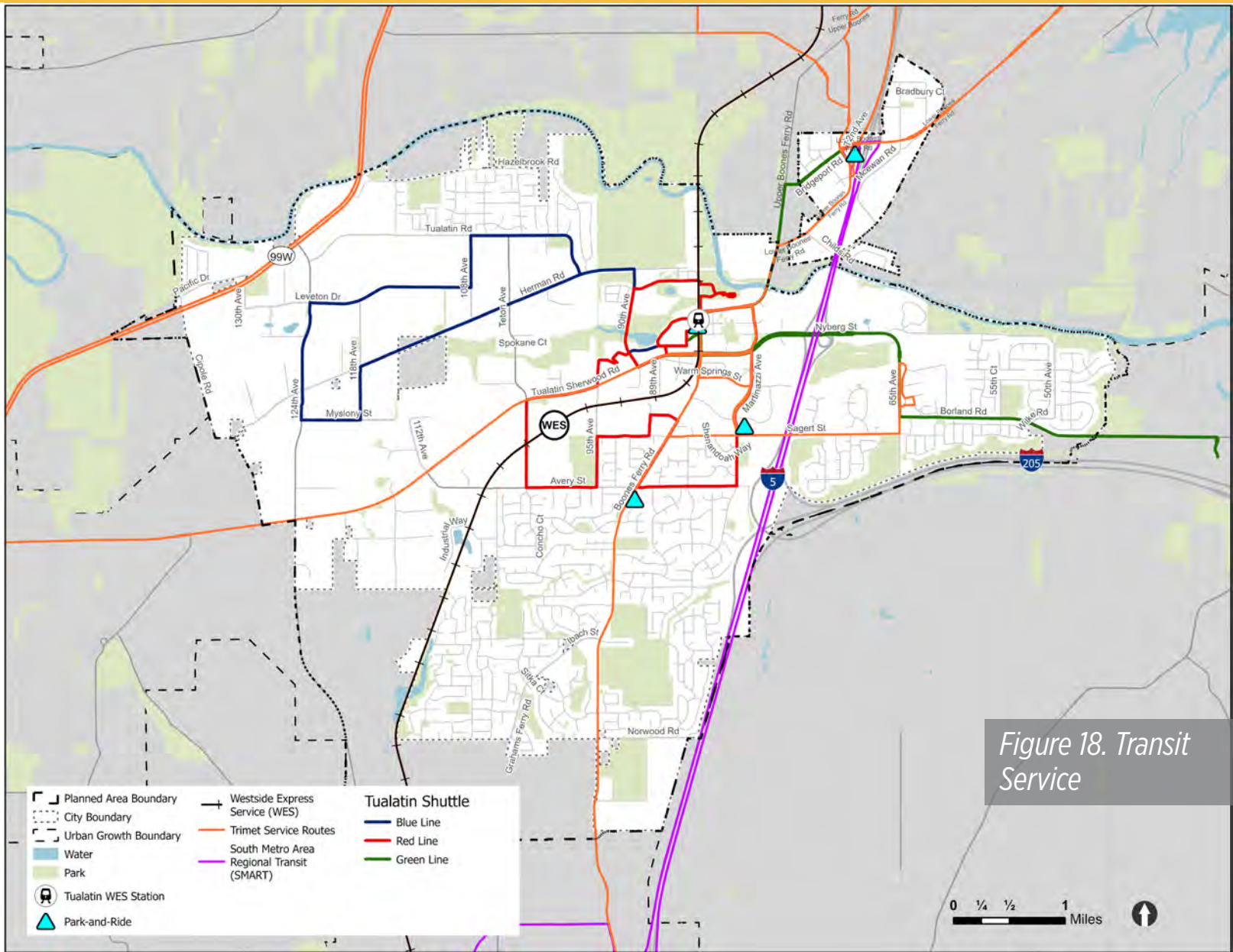


Figure 18. Transit Service

Transit System Transit Frequency

TriMet has one frequent service line in Tualatin, Line 76. It runs between the Beaverton Transit Center and Legacy Meridian Park Hospital with connections at the Tigard Transit Center, Washington Square shopping mall, and Tualatin Park & Rides. Standard service lines run along Boones Ferry Road, Tualatin Sherwood Road, 99W, and Lower Boones Ferry Road.

During weekdays in Spring 2023, 63 people boarded Line 76 at a stop in Tualatin. Around 282 people disembarked at a stop in Tualatin.

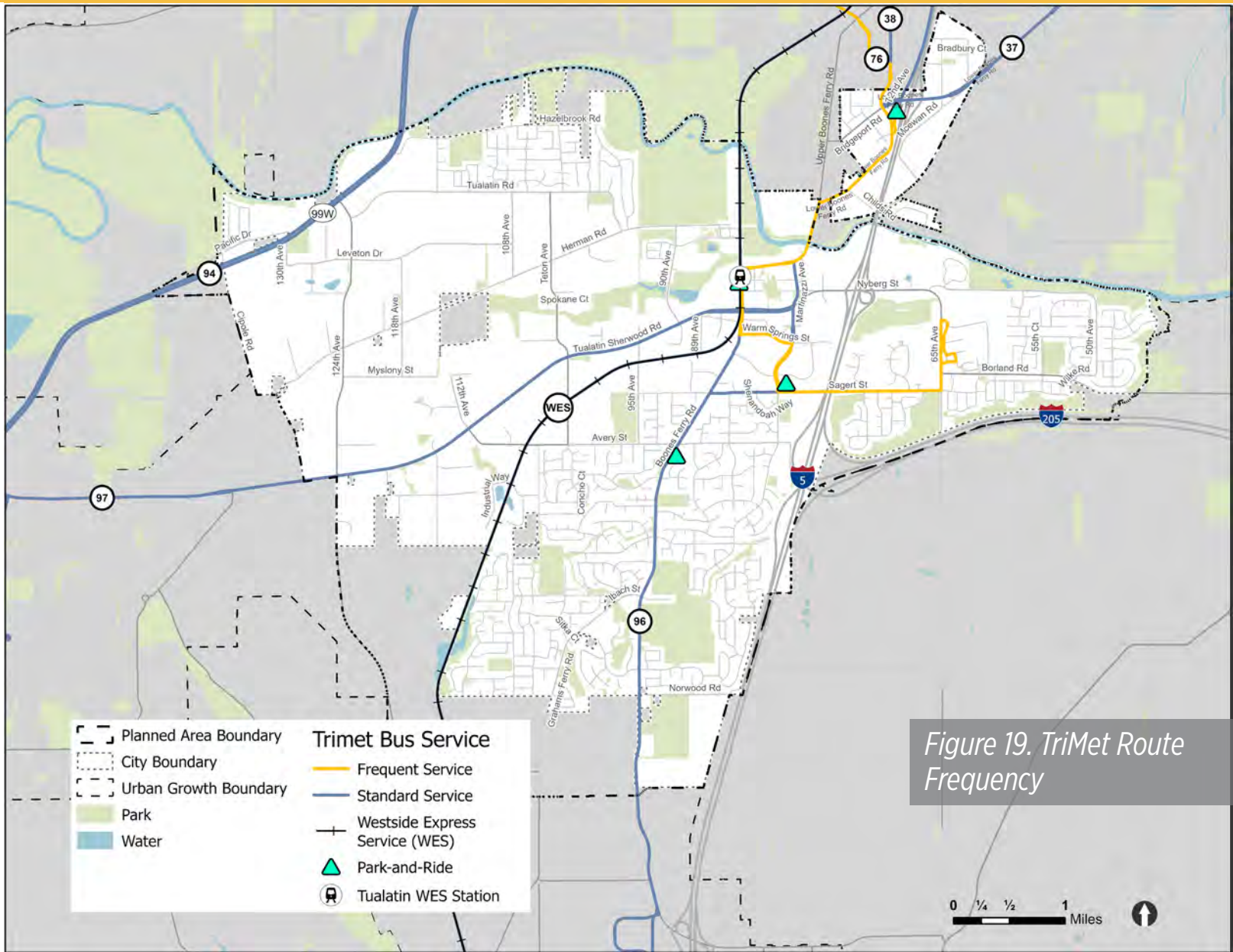


Figure 19. TriMet Route Frequency

Pedestrian System

Pedestrian System Existing Network

Tualatin's pedestrian network is well built out with sidewalks on both sides of residential streets in most neighborhoods. Exceptions to this are neighborhoods near 99W and the Bridgeport area, where some roadways only have streets only have sidewalks on one side.

Today, the trail system provides strong east-west connections, including across I-5, through the area north of Nyberg Street, and through the Ibach neighborhood.

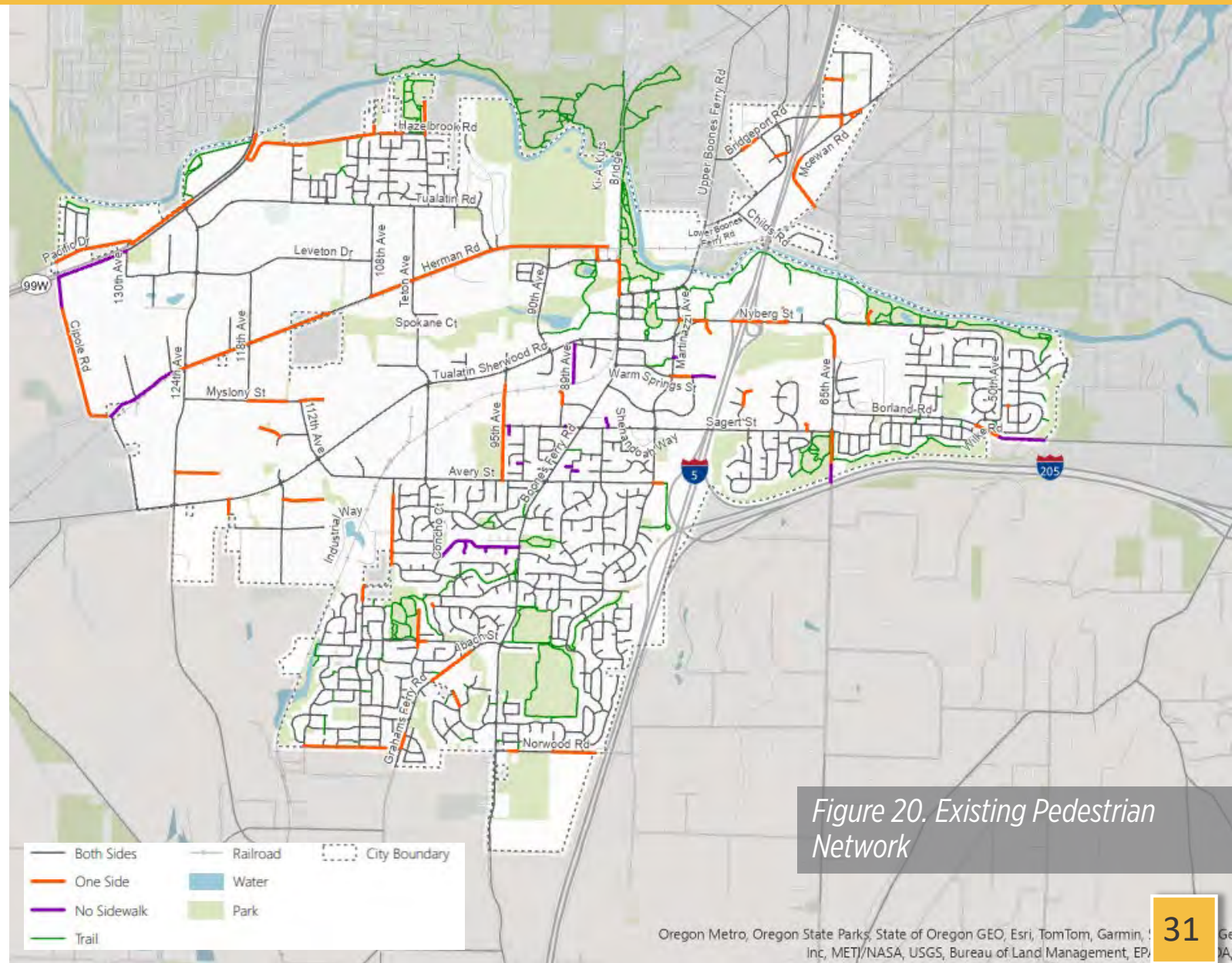


Figure 20. Existing Pedestrian Network

Pedestrian System Sidewalk & Crossing Condition

The sidewalk condition in Tualatin today varies due to pavement quality, American with Disabilities Act (ADA) compliance, and obstructions that reduce the effective width of sidewalks.

There are several roadways within Tualatin where the distance between marked crossings is high. To address this, Tualatin has installed many enhanced crosswalks along arterial and collector streets to improve existing crossings. These enhancements include Rectangular Rapid Flashing Beacons (RRFBs) and refuge islands.

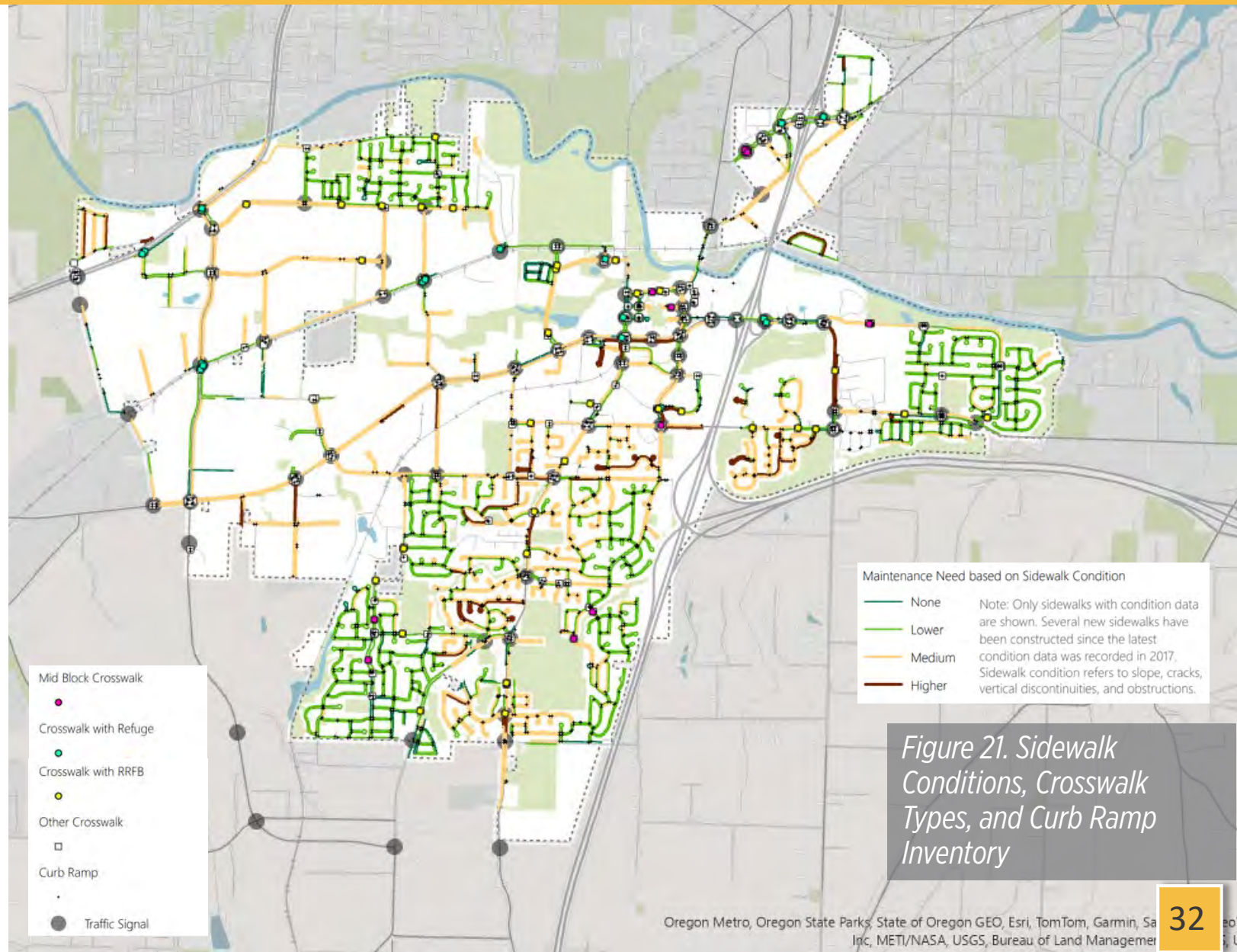


Figure 21. Sidewalk Conditions, Crosswalk Types, and Curb Ramp Inventory

Pedestrian System Crossings

When the distance between marked crossings is high, pedestrians may be more likely to cross at unsafe locations or at unsafe times.

Figure 22 shows the location of marked crossings and the distance between marked crossings on arterials and major collectors. The distance between marked crossings is lowest in downtown and longest in the industrial areas.

There are multiple arterial and collector roadways with crossing distances greater than a quarter mile, including: 99W, Tualatin-Sherwood Road, Herman Road, Sagert St, and Avery Street.

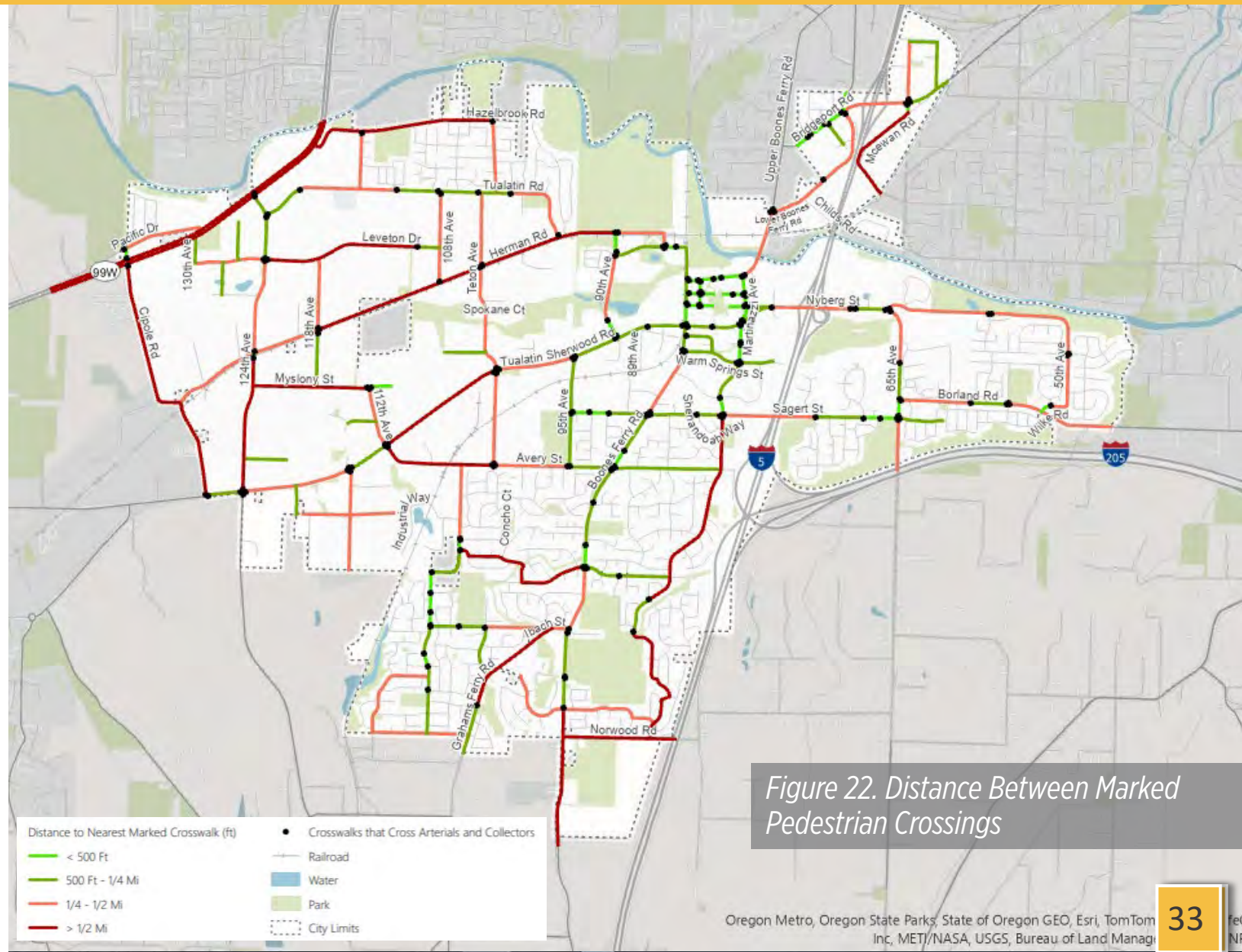


Figure 22. Distance Between Marked Pedestrian Crossings

Pedestrian System Level of Traffic Stress

Level of traffic stress (LTS) is a way to evaluate how comfortable a pedestrian feels walking along a street. LTS ranges from 1 (least stressful) to 4 (most stressful).

Based on analysis completed for the TSP, many collectors and arterials in Tualatin have a pedestrian LTS of 3 or 4, indicating pedestrians may feel high levels of stress or discomfort when waling on these roadways.

There are several high stress roadways such as Boones Ferry Road, which has higher traffic volume and speeds, that make it challenging for pedestrians to walk from residential areas to commercial areas.

Curb tight sidewalks that lack a buffer space for trees or furnishings and signalized intersections with slip lanes and permissive right turns are contributors to higher pedestrian LTS throughout the City.

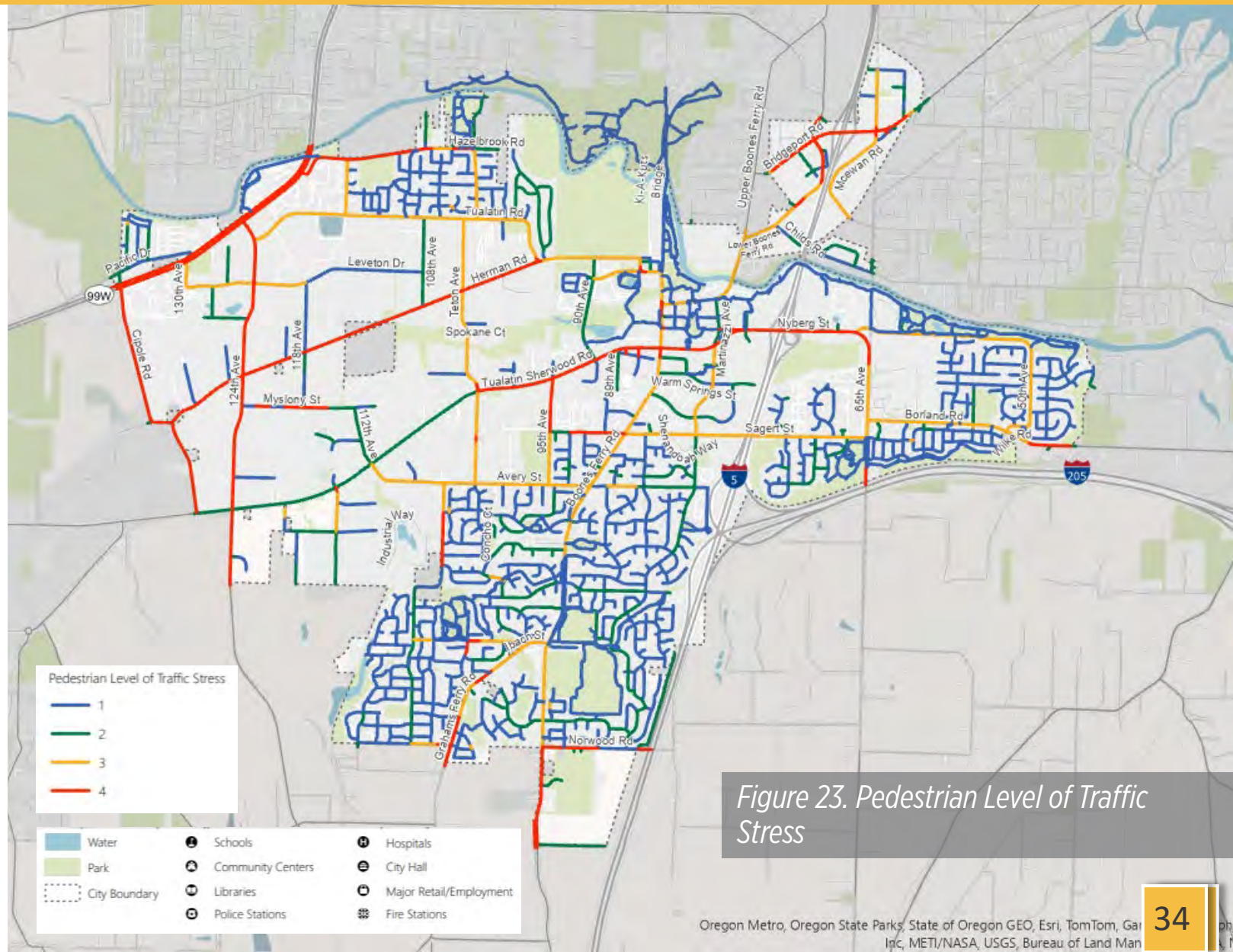


Figure 23. Pedestrian Level of Traffic Stress

Bicycle System

Bicycle System Existing Network

Tualatin's bicycle network is connected, but primarily comprised of striped bike lanes on arterial and collector roads, as shown on Figure 24.

While Tualatin does have an extensive off-street trail system, it lacks connectivity which limits users' ability to travel around the city on it.

Tualatin has begun to build more and more buffered bike lanes (dark blue) though gaps remain. Buffered bike lanes are bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.

One challenge facing Tualatin's bicycle network is I-5. Today, there are only two on-street bike lanes that connect bicyclists across the freeway.

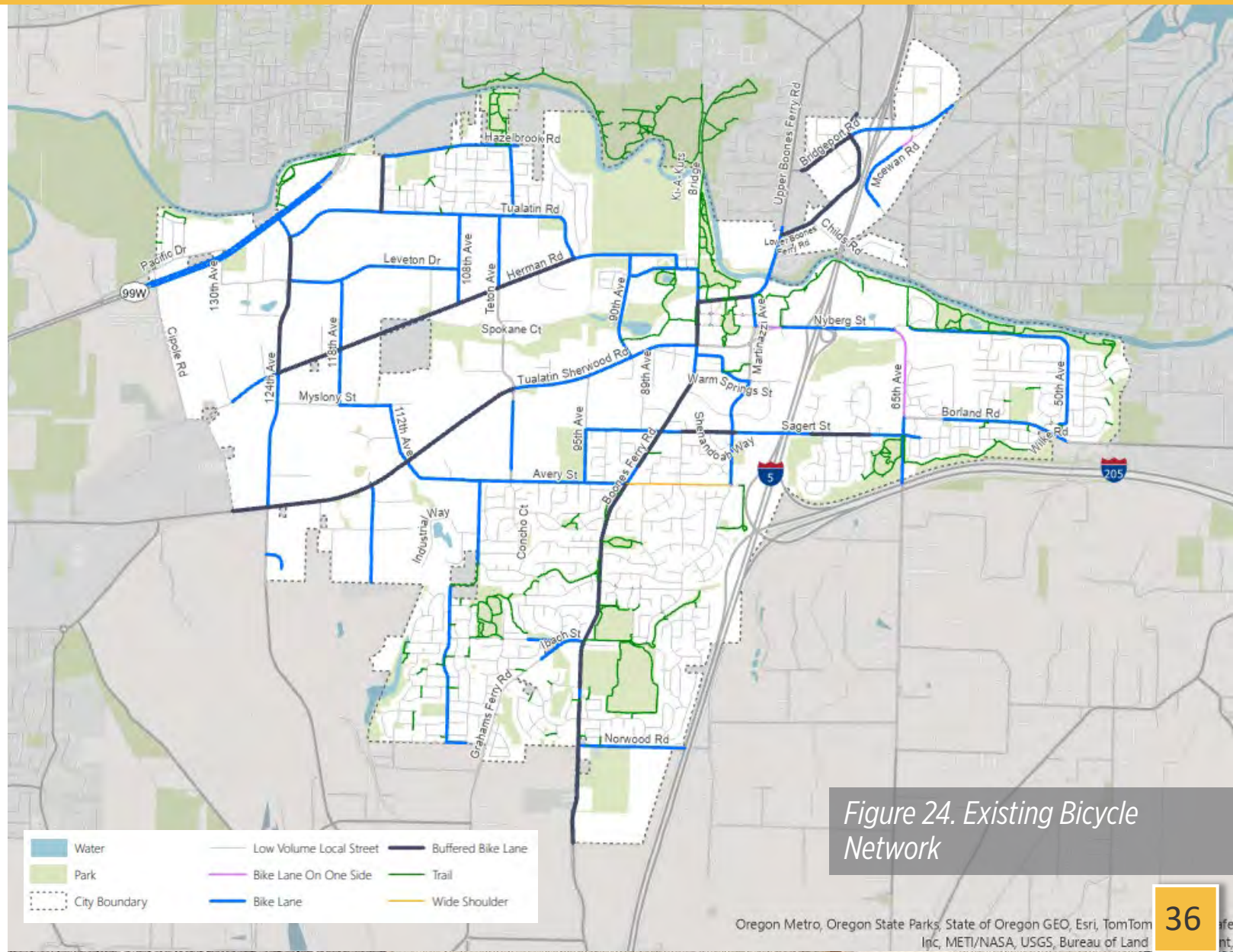


Figure 24. Existing Bicycle Network

Bicycle System Level of Traffic Stress

LTS was also used to evaluate which bicycle facilities feel the most comfortable for bicyclists in Tualatin today and where bicyclists may choose to avoid or may experience high levels of stress when riding.

Today, streets in most residential areas offer comfortable cycling, except in neighborhoods near 99W and the Bridgeport area.

While most collectors and arterials include bike facilities, they are stressful for most riders (BLTS 3-4), including on roadways in downtown Tualatin and near many schools. These multi-lane streets with BLTS 3 and 4 often create barriers between neighborhoods.

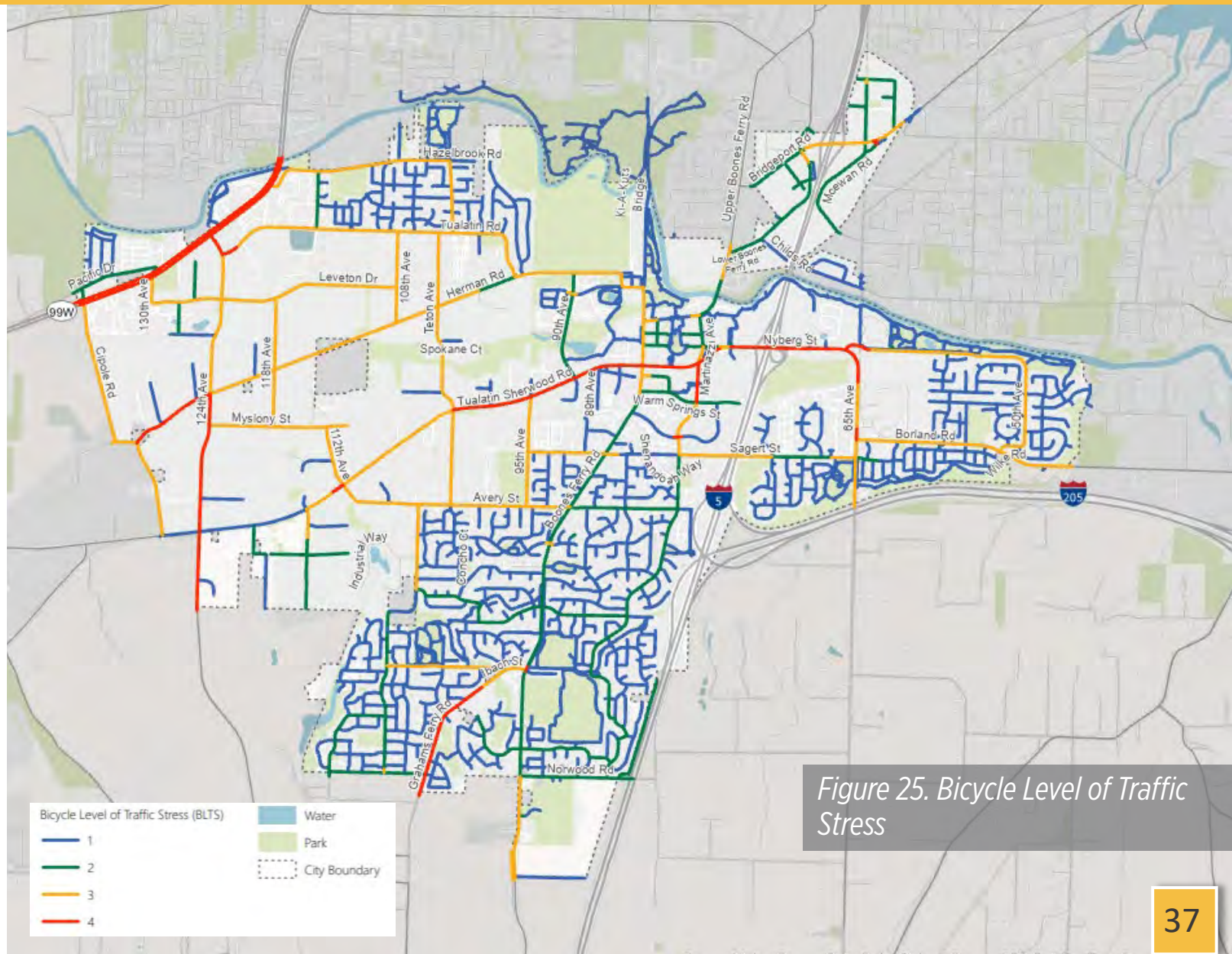


Figure 25. Bicycle Level of Traffic Stress

Freight

Freight

Tualatin's local freight network plays an important role in connecting trucks to industrial areas located in the west part of the city.

Within Tualatin the local freight network uses arterials to connect freight traffic from state highways to industrial areas.

Understanding which routes are designated for freight travel will play an important role in improving travel for pedestrians and bicyclists within Tualatin, as roads with high volumes of large trucks can be some of the most stressful for these users.

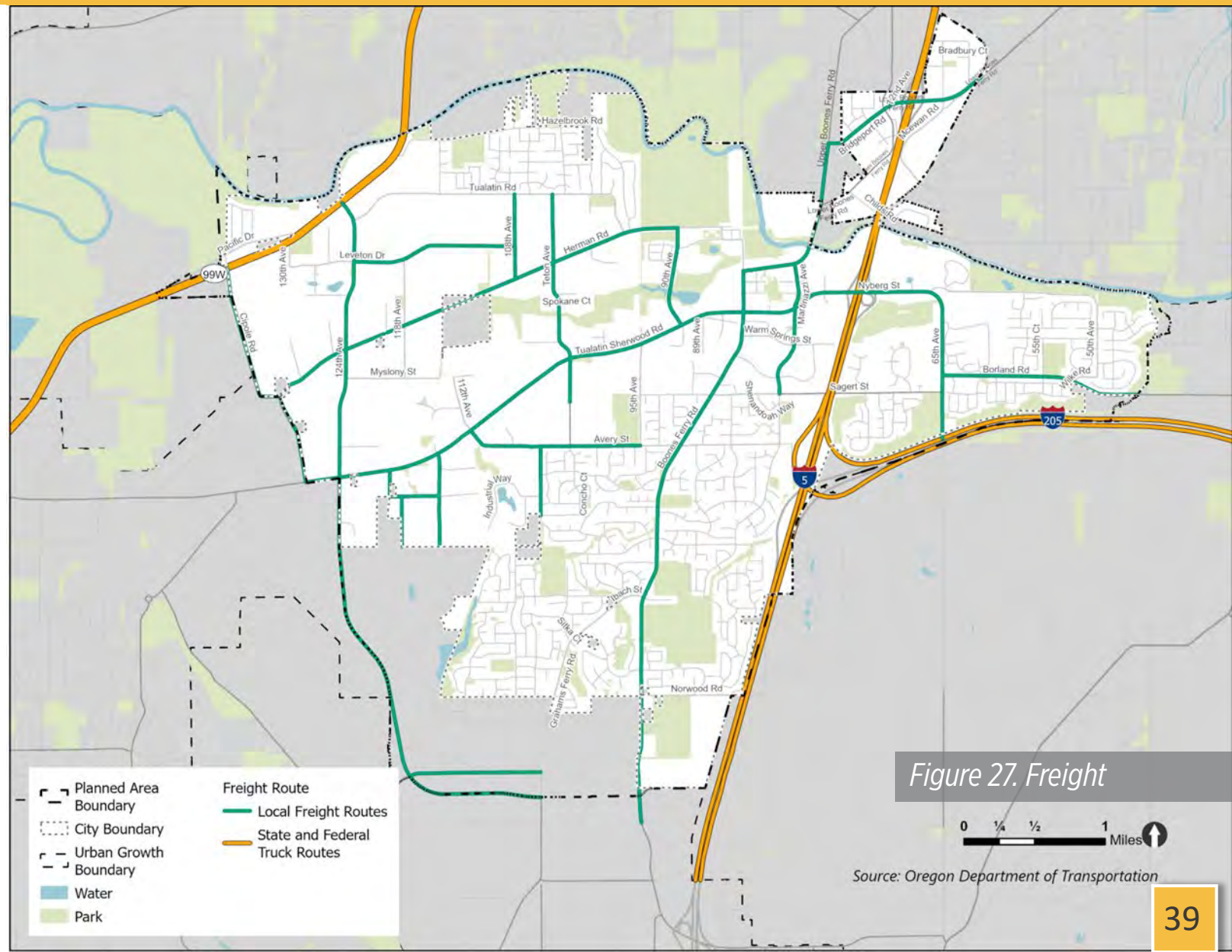


Figure 27. Freight

Rail

Rail

Tualatin has two rail operators, one commuter and one freight line.

The commuter line, WES, carries transit passengers while freight rail is operated by Portland & Western (PNWR).

As shown on the figure, there are multiple at-grade crossings throughout Tualatin, including at the Tualatin-Sherwood Road and Boones Ferry Road intersection, a key intersection for vehicle travel in Tualatin.

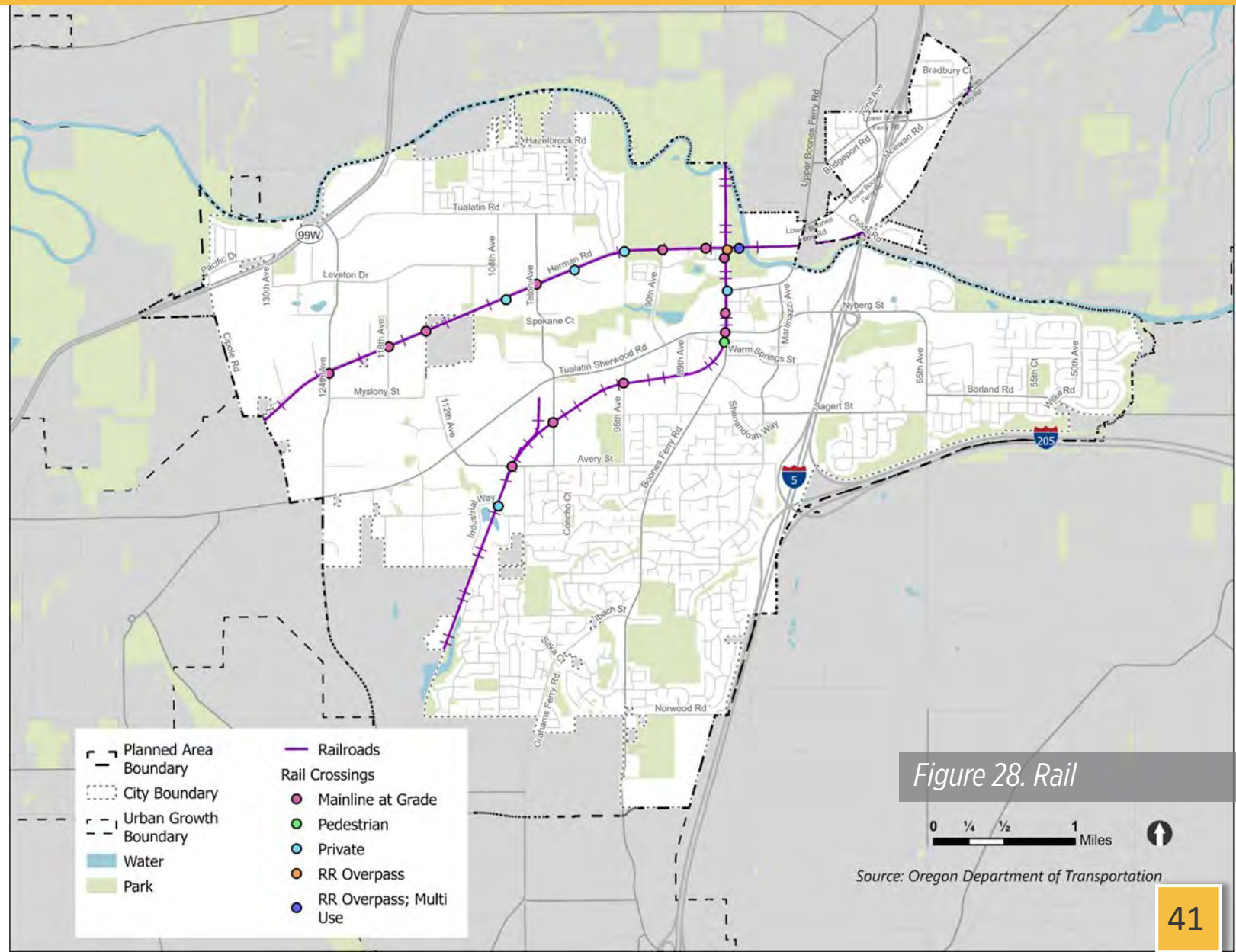


Figure 28. Rail

Source: Oregon Department of Transportation

Air

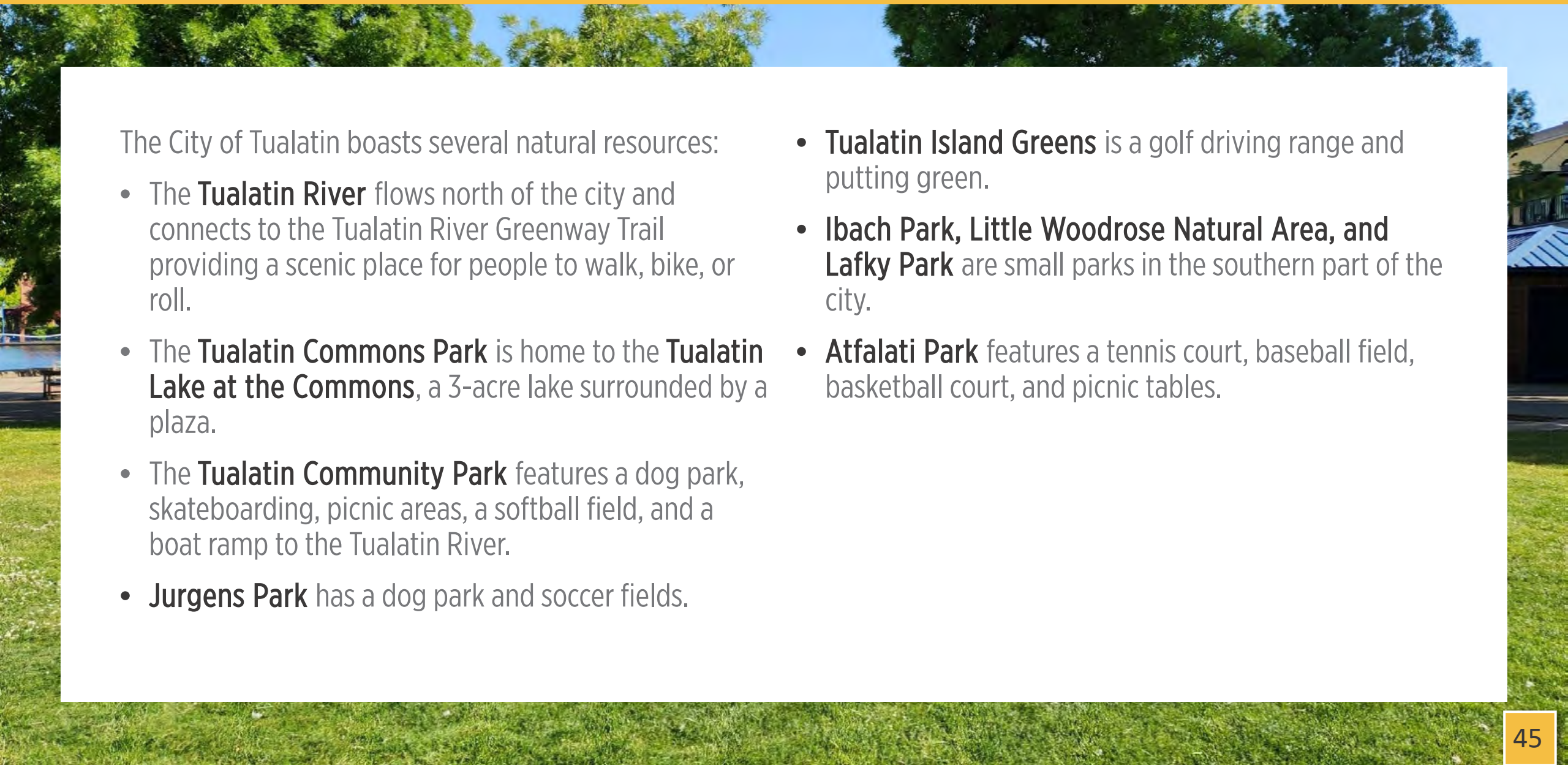
Air

While there are no airports in Tualatin, residents have access to five nearby airports, listed in the table below.

Airport	Distance from Tualatin (mi)	Service Area	Service Type	Airport Classification
Portland International (PDX)	16	International	Civil, Military	Commercial, Freight
Aurora State (UAO)	10	State	Civil	Public
Portland – Hillsboro (HIO)	15	National	Flight School, Civil	Corporate
Portland – Troutdale (TTD)	21	National	Flight School, Civil	Corporate
Pearson Field (VUO)	27	Municipal	Civil	Public

Environmental Resources

Natural Resources



The City of Tualatin boasts several natural resources:

- The **Tualatin River** flows north of the city and connects to the Tualatin River Greenway Trail providing a scenic place for people to walk, bike, or roll.
- The **Tualatin Commons Park** is home to the **Tualatin Lake at the Commons**, a 3-acre lake surrounded by a plaza.
- The **Tualatin Community Park** features a dog park, skateboarding, picnic areas, a softball field, and a boat ramp to the Tualatin River.
- **Jurgens Park** has a dog park and soccer fields.
- **Tualatin Island Greens** is a golf driving range and putting green.
- **Ibach Park, Little Woodrose Natural Area, and Lafky Park** are small parks in the southern part of the city.
- **Atfalati Park** features a tennis court, baseball field, basketball court, and picnic tables.

Environmental Resources

As shown on Figure 29, there are a number of wetland and Flood Protected Areas throughout Tualatin.

Protecting these areas while building out a well-connected transportation system can be challenging. As this TSP explores options to improve transportation in Tualatin, consideration should be given to the impact and potential cost of improving infrastructure in these areas.

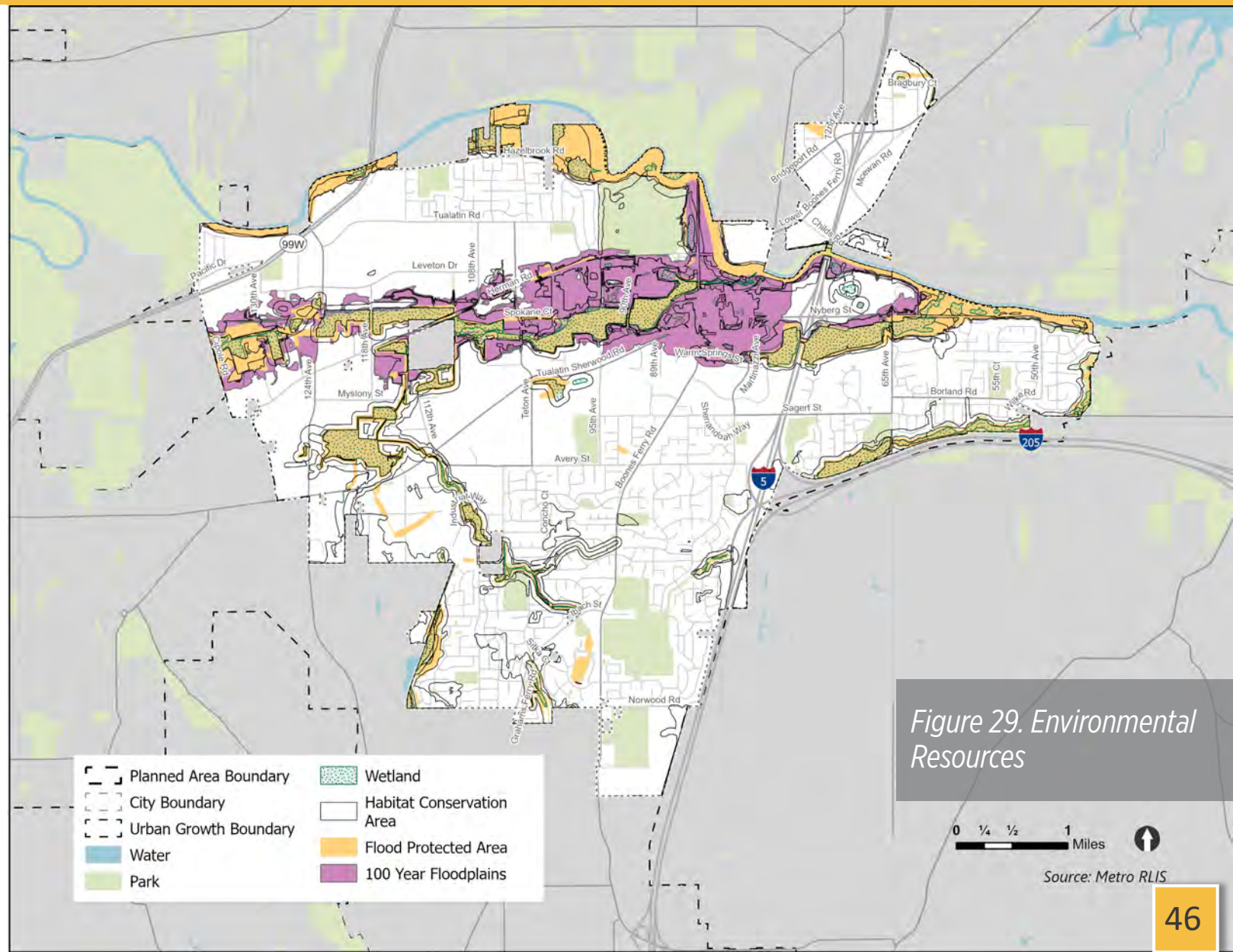


Figure 29. Environmental Resources

Operations and Safety

Operations

To establish a baseline for how Tualatin's transportation system operates today, intersection Level of Service (LOS) was evaluated at key intersections throughout Tualatin using traffic counts collected in Fall 2023 and existing roadway and intersection geometries. LOS defines how well vehicle traffic flows along a street or road.

While most intersections in Tualatin operate at LOS C or better, indicating there is minimal congestion, intersections on Lower Boones Ferry Road, Tualatin-Sherwood Road, and SW 65th Avenue were found to operate at LOS D and E. This indicates that congestion that results in queueing and higher levels of delay is occurring in these areas.

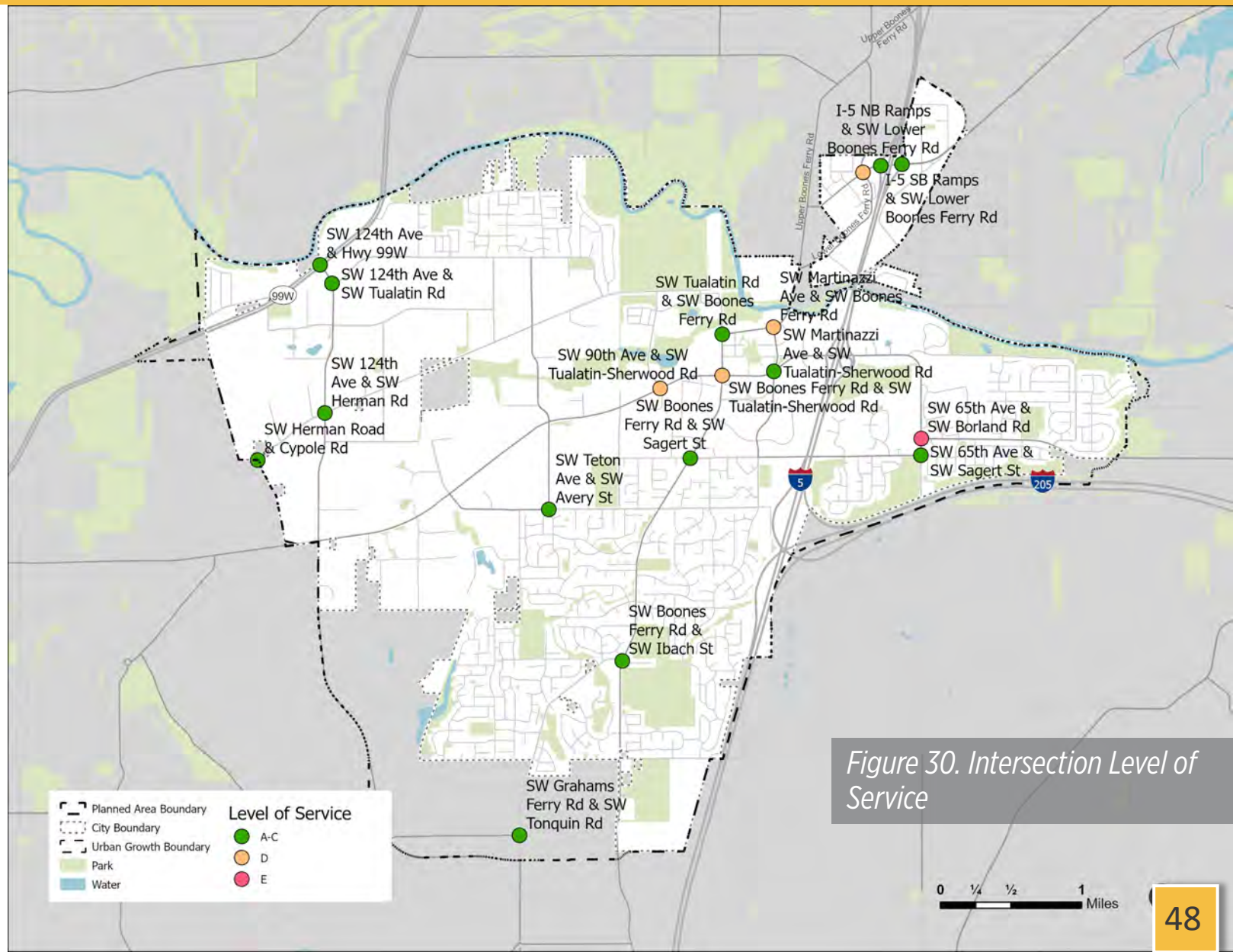


Figure 30. Intersection Level of Service

Safety Collision Density

One indicator of roadway safety is the number of collisions and severity of collisions that occur.

To understand recent trends in Tualatin, five years of collision data was analyzed.

This analysis found the highest concentration of collisions occurs on Tualatin-Sherwood Road with hot-spots near downtown and 124th Avenue.

This was also true for serious injury collisions, with most of those occurring on Tualatin-Sherwood Road or Boones Ferry Road near downtown.

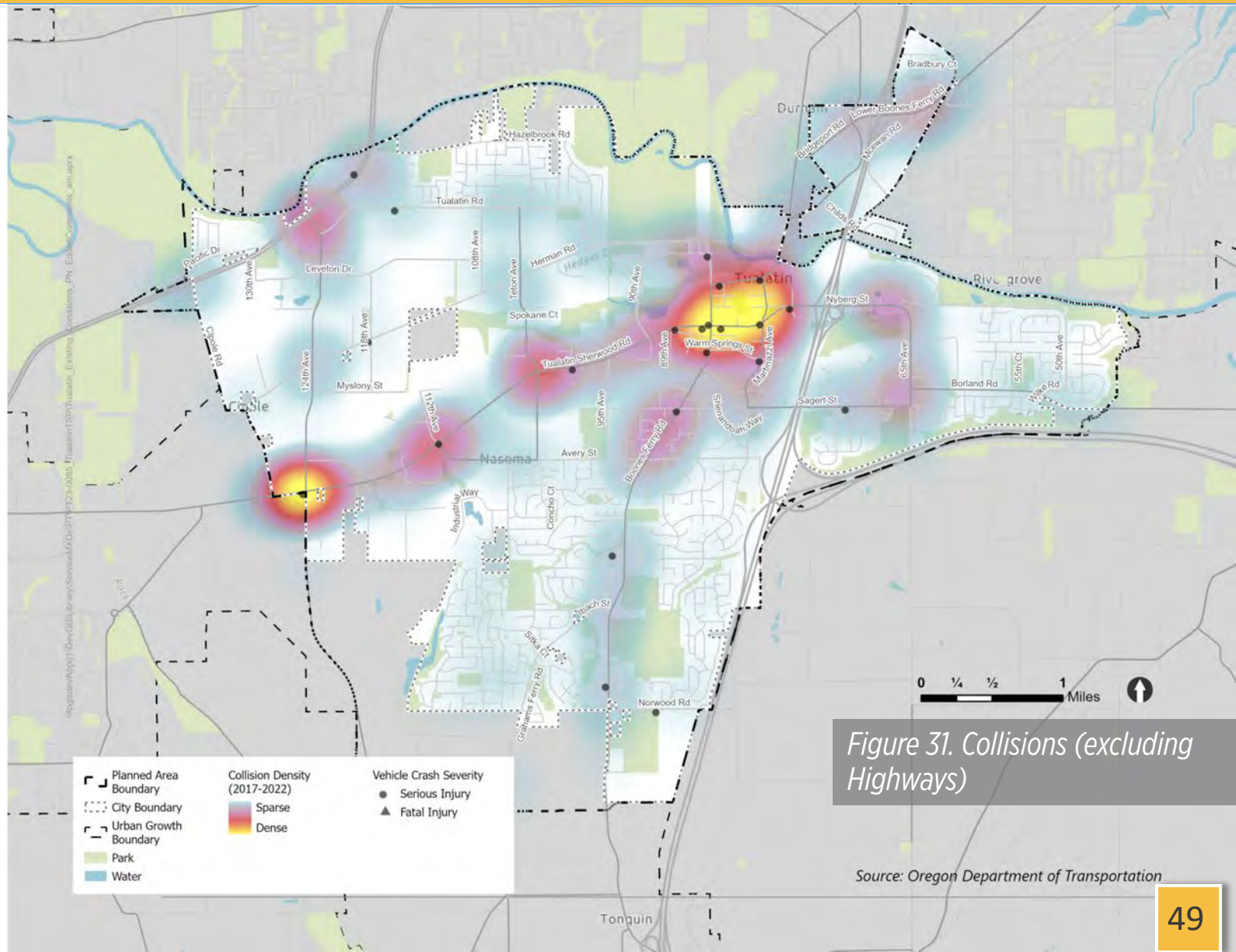


Figure 31. Collisions (excluding Highways)

Source: Oregon Department of Transportation

Safety Bicycle and Pedestrian Collisions

Five years of collision data were analyzed to identify potential hot spots for collisions involving a bicycle or pedestrian.

Of the 2,264 reported collisions in Tualatin within the past five years, 43 collisions (1.9%) involved a pedestrian or bicyclist. Approximately 70% of these occurred at intersections with at least one arterial roadway.

Both Tualatin-Sherwood Road and Boones Ferry Road showed higher numbers of bicycle or pedestrian collisions

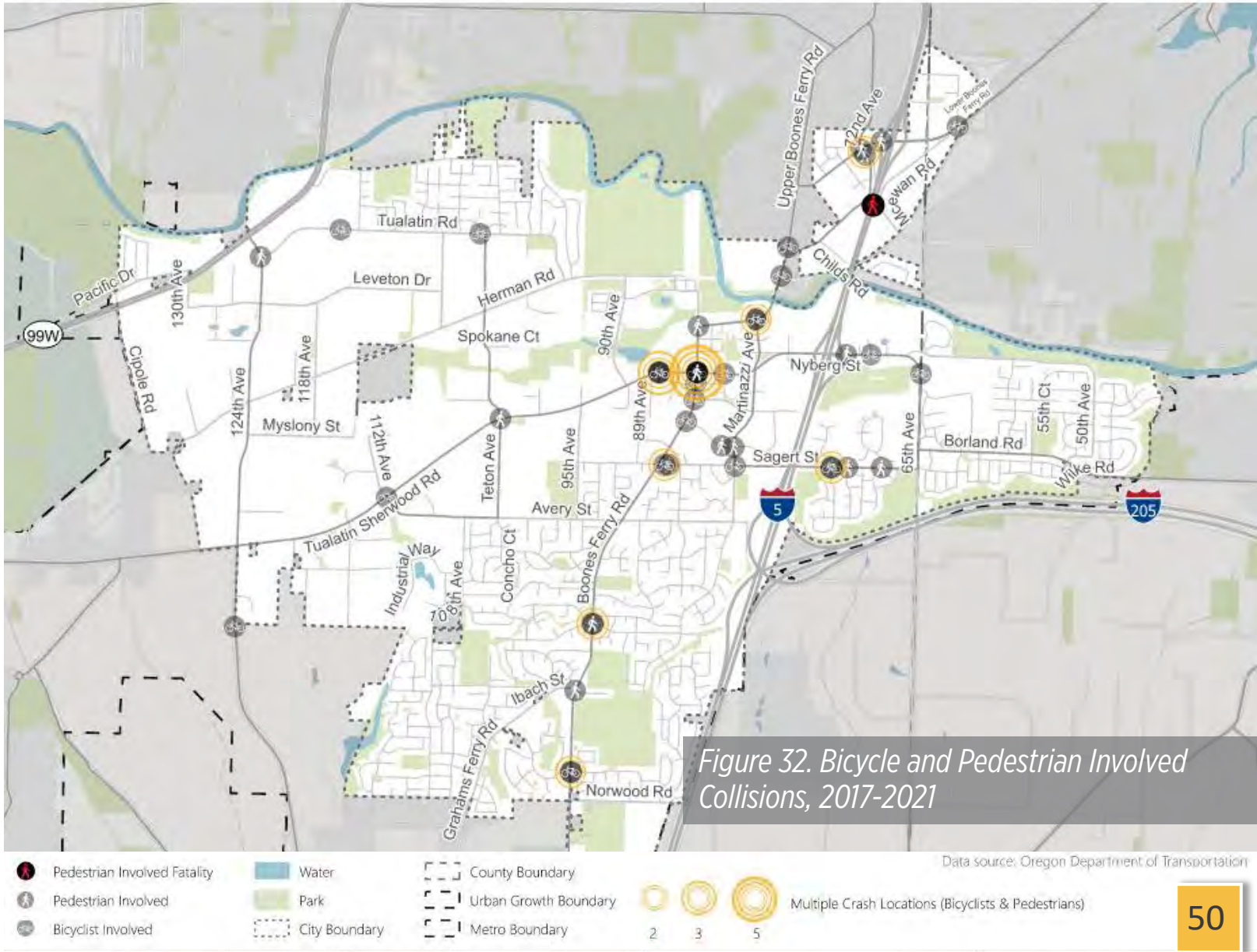


Figure 32. Bicycle and Pedestrian Involved Collisions, 2017-2021

2040 TSP Appendix

Financial Memo

DATE:	November 22, 2024
TO:	Brianna Calhoun, Fehr & Peers
FROM:	Morgan Shook
SUBJECT:	Tualatin TSP Financial Assessment

Introduction

This memorandum provides direction on funding the projects identified in the Tualatin Transportation System Plan (TSP). It includes the following summaries:

- Existing transportation expenses.
- Existing transportation funding sources, including past trends and estimated future expectations.

This chapter addresses requirements for the Transportation Financing Plan, OAR 660-012-0040, under the Transportation Planning Rule. Specifically, it responds to the requirement for transportation system plans to identify the City's existing funding mechanisms and describe how these, along with possible new funding sources, can fund the projects identified in the plan.

Financial Analysis

Summary Existing Transportaion Expenses

In Tualatin, transportation expenses are allocated across several key funds, each with a distinct purpose in supporting the city's transportation infrastructure and operations. These funds help ensure that transportation projects are effectively managed and appropriately financed.

The **Road Utility Fee Fund** is primarily used for the City's ongoing pavement maintenance program, as well as the sidewalk and street tree programs, funded by a fee charged to property owners. This ensures a consistent revenue stream to maintain the existing road network. **The Road Operating Fund** covers daily operational expenses, such as maintenance, minor repairs, and administrative costs related to the transportation system. This fund is critical to keeping the system running efficiently. A small portion of the Road Operating Fund is used for capital projects, but this amount is dwindling as regular maintenance costs increase.

The **Transportation Development Tax Fund** is a restricted revenue source derived from development fees. It is intended for funding transportation infrastructure improvements required due to growth and new developments in the city.

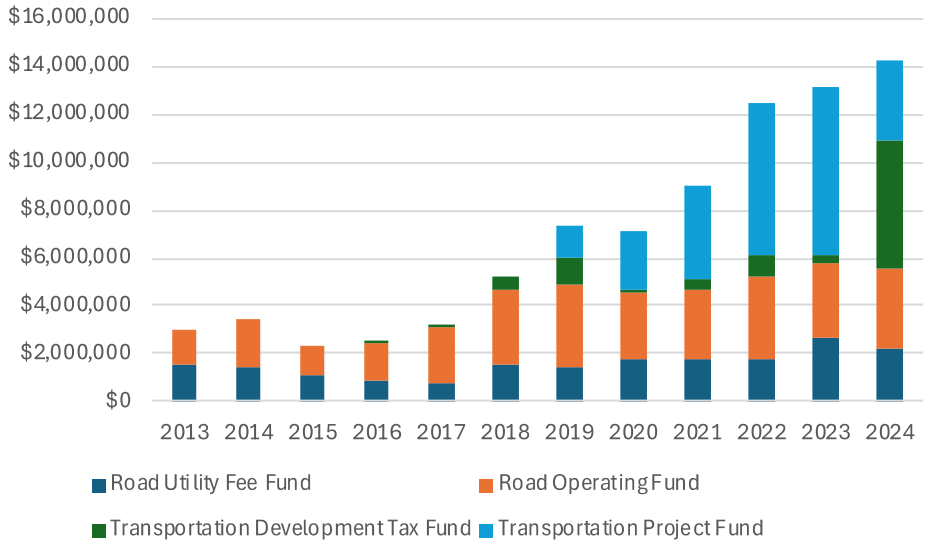
Within these funds, Tualatin organizes its expenditures into several categories. **Personal Services** cover employee salaries, benefits, and other compensation-related costs necessary for the operations and

maintenance of the transportation system. **Materials and Services** encompass day-to-day operational costs, including supplies, contract services, utilities, and maintenance expenditures. These are crucial for ensuring that transportation infrastructure remains safe and operational.

Capital Outlay refers to the funding of major infrastructure projects, such as road construction or purchasing equipment. These are often large, one-time expenses that significantly improve the transportation system. **Debt Service** involves payments on any borrowed funds, including interest, used to finance transportation-related projects. Lastly, **Transfers Out** represent funds moved to other city departments or accounts for transportation-related needs, such as contributing to general overhead costs or providing matching funds for grant applications.

This approach to organizing transportation expenses ensures that Tualatin can balance operational needs, growth-driven improvements, and major infrastructure investments effectively. The next section will delve into the historical expenditures across these funds and categories to provide insight into how these allocations have evolved over time.

Figure 1: Summary of Transportation Fund Expenses



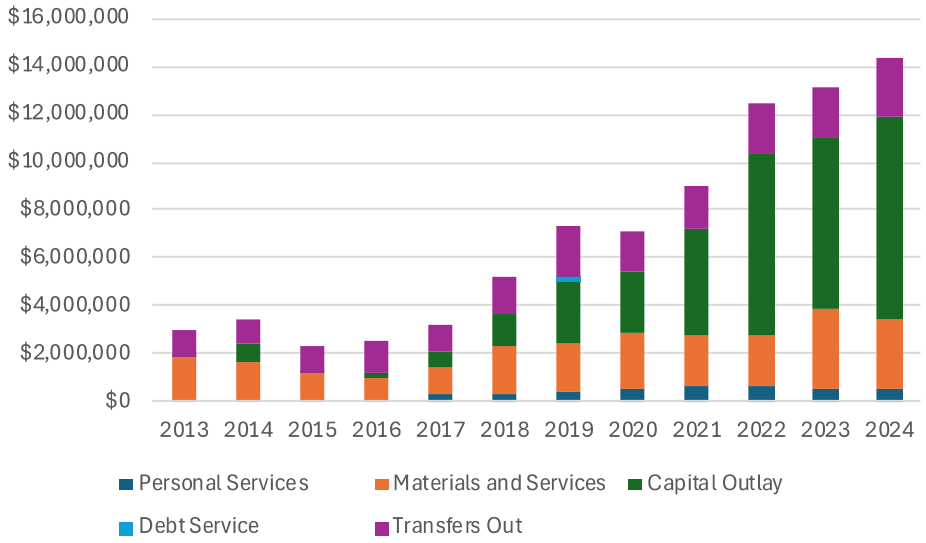
Source: City of Tualatin, 2024 (ECOnorthwest summary)
Note: The Transportation Project Fund was a limited-duration fund (that has now been closed) for spending the revenue from a specific bond measure. Tualatin implemented a transportation bond program known as Tualatin Moving Forward. In May 2018, voters approved a $20 million bond to fund transportation improvements. Due to favorable market conditions, the bonds were sold at a premium, resulting in an additional $3 million. Along with accrued interest, the total investment reached approximately $24.8 million. This funding facilitated the completion of 36 projects aimed at enhancing traffic flow, improving neighborhood safety, and providing safe access to schools and parks.

The chart in Figure 1 shows the allocation of funds across four key transportation funding funds in Tualatin from 2013 to 2024. The chart illustrates a steady increase in transportation expenses. Overall, there has been significant growth in total expenditures, especially starting around 2020, with the total reaching close to $14 million in 2024 (year to date), compared to around $2 million in 2013. The Road Utility Fee Fund has

seen consistent growth, contributing a larger share of the budget in recent years, reflecting a stronger focus on road maintenance and utility-based funding. The Road Operating Fund has grown at a more moderate pace, offering steady support for transportation operations but not increasing as dramatically as the other funds.

The Transportation Development Tax Fund (created in 2018), after which it became a more significant part of the overall funding structure, indicating a growing reliance on development-driven revenue for transportation projects

Figure 2: Summary of Transportation Expense Types

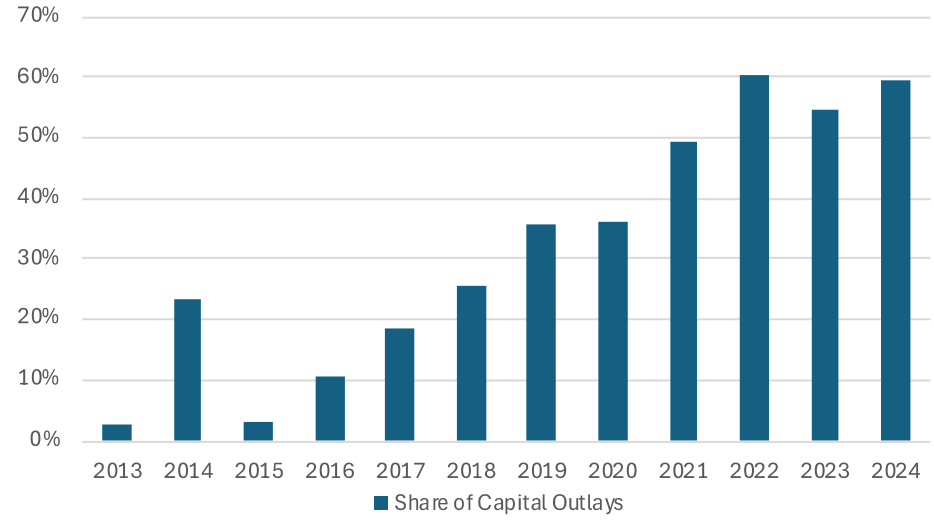


Source: City of Tualatin, 2024 (ECOnorthwest summary)
Note: The Transportation Project Fund was a limited-duration fund (that has now been closed) for spending the revenue from a specific bond measure.

The chart (Figure 2) outlines the breakdown of transportation expenditures in Tualatin from 2013 to 2024, categorized into its five spending areas across all transportation funds: Personal Services, Materials and Services, Capital Outlay, Debt Service, and Transfers Out. The most notable growth is in Capital Outlay and Transfers Out, which have become more substantial parts of the budget starting around 2018, due to greater investment in infrastructure projects and financial commitments, either in transportation budget or adjacent to it.

The expenditures on Materials and Services and Personal Services remain steady throughout the period, reflecting the city's consistent spending on operations and staffing. However, the portion dedicated to Capital Outlay has expanded significantly over time, reflecting a growing focus on major capital improvements to the transportation network (Figure 3).

Figure 3: Summary of Transportation Capital Share



Source: City of Tualatin, 2024 (ECOnorthwest summary)

Summary of Existing Funding

The City of Tualatin currently collects revenue for transportation from federal, state, and local funding sources, including:

State Highway Fund (SHF). A state funding program, composed of several major funding sources: State Motor Vehicle Registration and Title Fees, Driver License Fees, State Motor Vehicle Fuel Taxes, and Weight-Mile Tax. SHF funds are apportioned to three jurisdictional levels in the following amounts: State (50%), Counties (30%), and Cities (20%). Funds must be spent on roads, including bikeways and walkways within the State-owned highway right-of-way. State funds can be used for both capital expenditures and operations and maintenance of state roads.

Transportation System Development Tax. Fees collected when new development and some redevelopment occurs within the City. Revenues are used to fund growth-related capital improvements that are on the City's adopted project list, as prioritized by Council.

Road Utility Fee Revenue. Road Utility Fee Revenue is generated from fees paid by residents and businesses for the maintenance of local roads and transportation infrastructure. In Tualatin, this is collected through a Road Utility Fee, which provides a consistent stream of revenue dedicated and used exclusively for street maintenance, including sidewalk repair, landscape enhancements along the rights-of-way, street tree replacement, and street lighting and for no other purpose without relying heavily on unpredictable state or federal funds.

Sidewalk/Tree Program. This program typically collects fees (and other tax sources) related to maintaining sidewalks and managing urban trees. Revenues generated from this source are directed towards repairing and replacing sidewalks, as well as addressing issues caused by tree roots that impact public infrastructure.

Washington County Gas Tax. Washington County also levies its own gas tax, which supplements the state gas tax. The revenue is earmarked for countywide transportation projects, including local road maintenance and improvements. Cities within the county, including Tualatin, benefit from this additional funding stream on top of the state allocation programs.

Vehicle License Fee. Washington and Clackamas County charges a vehicle license fee, which generates revenue for transportation projects. This fee is generally collected when residents register or renew their vehicle licenses and is used for road and transportation improvements within the county. For Tualatin, which spans both Washington and Clackamas counties, this fee helps supplement the City's Pavement Maintenance Program.

Fee in Lieu. This fee is charged to developers in lieu of making direct transportation improvements when building new developments. Instead of constructing roads or related infrastructure, developers pay this fee to the city, which then uses the funds to invest in transportation projects, ensuring that growth-related transportation demands are met.

Transfers In. Funds transferred into the transportation system from other non-transportation sources to provide additional support for maintenance and operational costs. This ensures that revenue generated from utility fees can be specifically targeted towards transportation-related needs. Past transfers from the Stormwater Fund were allocated to transportation projects that intersect with stormwater management, such as road projects requiring drainage improvements and reimburses the Road Operating Fund for the share of personnel costs related to stormwater that is paid for in the Road Operating Fund; however, this practice is no longer carried forward.

Urban Renewal. A tool that diverts property tax revenues from growth in assessed value inside an urban renewal area (URA) for investment in eligible capital projects. Eligible projects must be located within the URA boundary, be identified in the URA plan, and contribute to the alleviation of blight within the URA. However, revenues can be slow to accumulate, making the actual timing and amount of available funding uncertain.

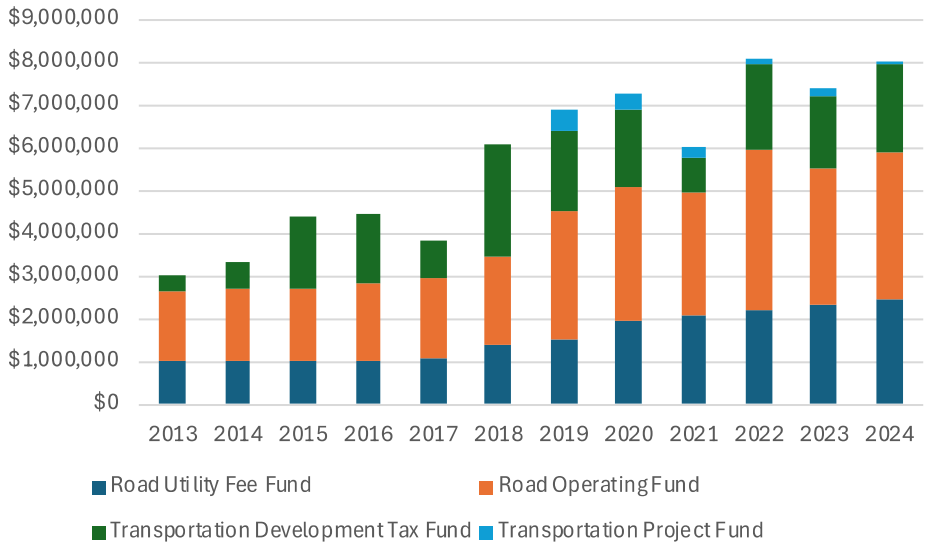
Interest on Investments. Interest on Investments refers to the earnings generated from investing transportation-related funds. This is a small but stable source of revenue that can be reinvested into transportation projects or used to supplement operational costs, helping maximize the city's financial resources.

Grants. The City of Tualatin applies for and receives grants for specific transportation capital projects. Grants are not included in the funding forecasts in this chapter because they are too project-specific and uncertain to predict. However, project costs listed in this plan are the City's share of total costs; some projects (such as those on state highways) are assumed to receive state funding.

Development Mitigation. This "funding" mechanism where land development projects contribute to the improvement of the local transportation system by directly upgrading or constructing new road infrastructure to mitigate the impacts of their development. This approach ensures that new growth does not overwhelm the existing transportation network and that necessary improvements are implemented in

tandem with development. As part of this process, developers are required to construct transportation infrastructure, such as new roads, widened intersections, or pedestrian and bike facilities, that aligns with the city's transportation goals and serves the needs of their project. To encourage and offset these investments, developers may receive credits against their Transportation Development Tax (TDT) obligations. This credit system incentivizes developers to fund and complete these critical infrastructure projects directly, reducing the financial burden on the city while ensuring the transportation system remains safe, efficient, and capable of supporting growth. This approach also fosters collaboration between the city and private developers, aligning development with long-term transportation planning.

Figure 4: Summary of Transportation Revenues by Fund



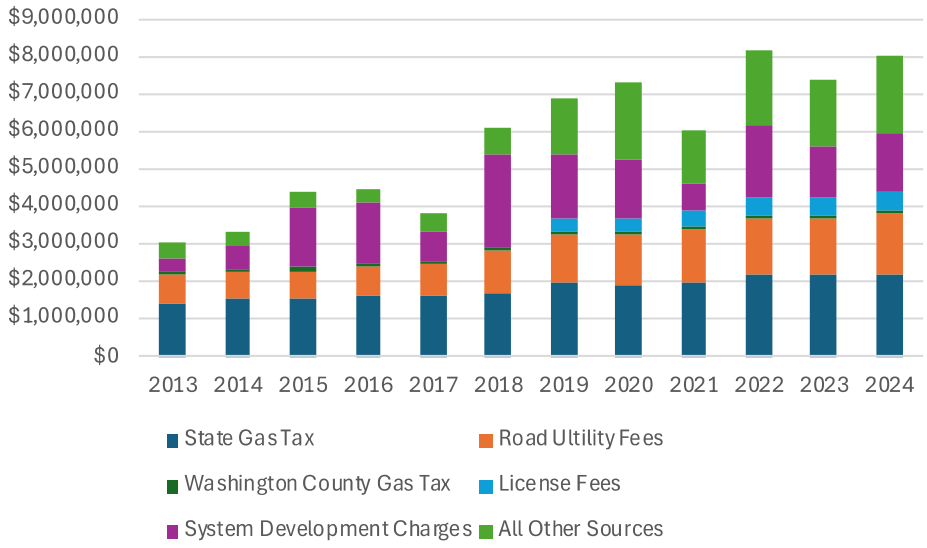
Source: City of Tualatin, 2024 (ECOnorthwest summary)
Note: The Transportation Project Fund was a limited-duration fund (that has now been closed) for spending the revenue from a specific bond measure. Tualatin implemented a transportation bond program known as Tualatin Moving Forward. In May 2018, voters approved a $20 million bond to fund transportation improvements. Due to favorable market conditions, the bonds were sold at a premium, resulting in an additional $3 million. Along with accrued interest, the total investment reached approximately $24.8 million. This funding facilitated the completion of 36 projects aimed at enhancing traffic flow, improving neighborhood safety, and providing safe access to schools and parks.

The chart in Figure 4 shows the revenue trends for Tualatin's transportation system funds from 2013 to 2024, broken down by the fund. Over this period, total revenues have steadily increased, with notable growth beginning in 2018 related to the sale of the transportation bond, sold in August 2018. By 2024, total revenues across all funds reach nearly $8 million, more than doubling from the approximately $3 million collected in 2013.

The Road Utility Fee Fund and Road Operating Fund show relatively stable growth over the years, with both providing a consistent base of revenue. The Road Utility Fee Fund has been a particularly stable contributor, supporting ongoing maintenance and operational needs, while the Road Operating Fund has seen a more gradual increase in revenues. The Transportation Development Tax Fund, which began seeing

significant revenues around 2015, has become a major source of funding, especially as development activity has increased in the city.

Figure 5: Summary of Transportation Revenues by Source



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The chart in Figure 5 summarizes the revenue sources for Tualatin's transportation funding from 2013 to 2024. The largest revenue source throughout this period is the State Gas Tax, which consistently provides a stable foundation for transportation funding. Road Utility Fees and Washington County Gas Tax also contribute steadily, showing slight increases over time to support transportation infrastructure.

Starting around 2018, there is growth in License Fees and System Development Charges, both of which see marked increases as development and vehicle-related revenues rise. The System Development Charges see substantial growth, reflecting the impact of new developments on transportation funding.

Future Transportation Funding

In Oregon, Transportation System Plans are required to not only outline current transportation needs and projects but also identify potential future funding sources to ensure long-term viability. Under Oregon's statewide planning goals, particularly Goal 12, TSPs must include a financial plan that identifies how planned transportation projects will be funded. This involves assessing existing revenue streams, such as gas taxes, development fees, and road utility fees, while also exploring alternative funding sources.

Cities often look at federal and state grants, new local taxes or fees, public-private partnerships, and regional funding programs as possible future revenue streams. The requirement to identify future funding helps ensure cities can implement the necessary infrastructure projects to accommodate both current and future transportation needs.

Future Revenue Forecast

Overall Funding

Tualatin city transportation planners prepared a detailed financial forecast as part of their collaboration with their Regional Transportation Planning Organization. This forecast includes an analysis of current and projected revenues from various sources, such as local taxes, state and federal funding, development fees, and other potential financial mechanisms.

The table in Figure 6 and the chart in Figure 7 provide a forecast of transportation funding from 2024 to 2045, divided between Capital Funding and Operations & Maintenance Funding. Over the 20-year period, both funding categories show a steady increase, with the total funding rising from around $8 million in 2025 to nearly $17 million by 2045. The table shows projected capital and operation & maintenance funding for Tualatin's transportation system from 2024 to 2045. Between 2024 and 2030, $35.41 million is allocated for capital funding and $21.57 million for operation & maintenance, while from 2031 to 2045, capital funding jumps to $116.11 million and operation & maintenance rises to $67.21 million, bringing the total funding over the entire period to $151.53 million for capital and $88.78 million for operations.

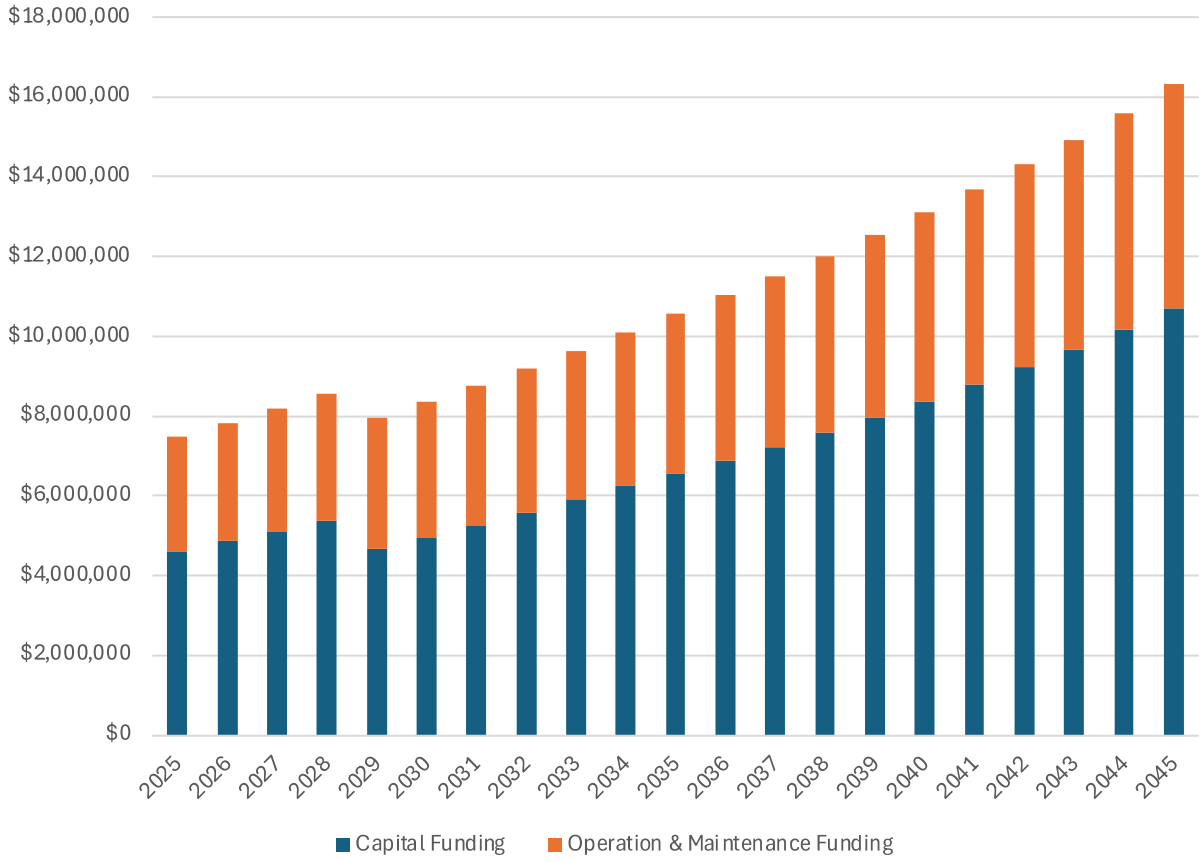
Figure 6: Summary of Transportation Funding

Timeframe	Capital Funding	Operation & Maintenance Funding
2024-2030	$35,410,000	$21,570,000
2031-2045	$116,110,000	$67,210,000
Total Funding	$151,530,000	$88,780,000

Source: City of Tualatin, 2024 (ECOnorthwest summary)

Capital funding consistently constitutes the larger share, though the gap between capital and operations & maintenance funding narrows slightly as the forecast progresses. The funding approach reflects the reality for the need of a significant focus on capital investments—such as new infrastructure and major upgrades—while still ensuring adequate resources are allocated to maintaining and operating the existing transportation network. This balanced funding strategy supports both the expansion and the preservation of Tualatin's transportation system.

Figure 7: Summary of Transportation Funding

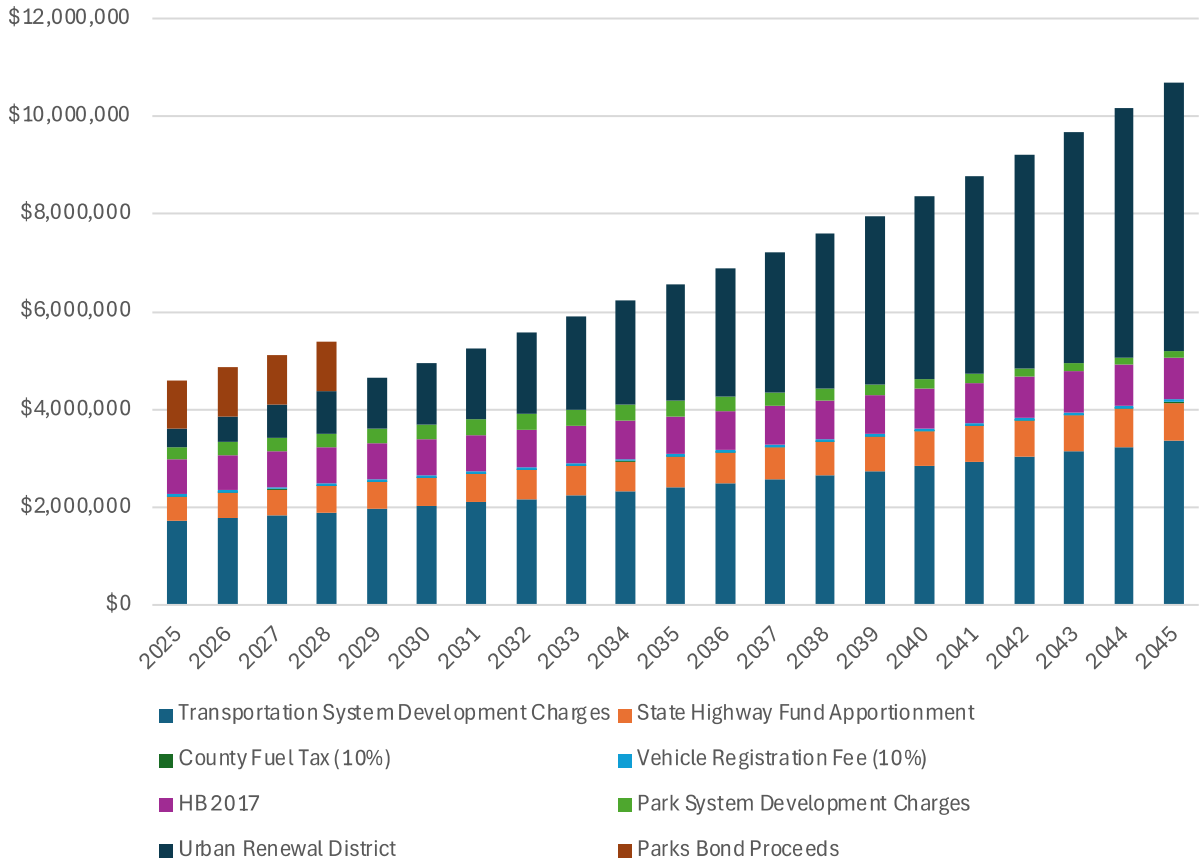


Source: City of Tualatin, 2024 (ECOnorthwest summary)

Capital Funding

The chart in Figure 8 provides a detailed breakdown of the forecast of capital funding sources for Tualatin's transportation infrastructure. The trend over the 20-year period shows a gradual increase in total capital funding, reaching just over $10 million by 2045. The largest component throughout the forecast period is the Transportation System Development Tax, which are projected to grow steadily and constitute the majority of capital funding over time.

Figure 8: Summary of Capital Transportation Funding



Source: City of Tualatin, 2024 (ECOnorthwest summary)

The State Highway Fund Apportionment also provides a consistent stream of revenue. This funding source, derived from fuel taxes and fees collected by the state, is used to support transportation projects, and while its growth is slower than other sources, it remains an essential and steady contributor to the capital funding mix. The County Fuel Tax reflects the city's policy choice of allocating 10% of revenues to capital uses. Its shows a small but consistent revenue contribution, reflecting the local fuel tax. Its contributions remain relatively stable throughout the forecast period.

Vehicle Registration Fees also reflects the city's policy choice of allocating 10% of revenues to capital uses. This fee is projected to provide a modest, consistent contribution over the 20 years. The 10% allocation is an assumption used for planning and not a policy decision and is subject to change. While its growth is limited, it remains an important part of the diversified funding approach. The funding plan also includes allocations from the city's Park System Development Charges as part of the capital funding mix, though their contribution is limited and gradually increases at a very slow rate over the forecast period. This reflects the targeted role of parks-related funding in supporting transportation infrastructure where park projects intersect with transportation needs such as regional trails facilities. However, future funding from park may not be available for transportation funding. Parks System Development Charges (SDCs) are collected based on new development and are not guaranteed to match the projected amounts in this chart.

Furthermore, these revenues are typically designated for parks and recreation projects and may not be allocated to transportation network improvements.

By actively pursuing federal and state grants, the city can reduce the reliance on transportation bonds, thereby lessening the debt burden on the city. This approach not only diversifies our funding sources but also enhances financial flexibility, allowing it to allocate resources more effectively across various transportation projects. However, it's important to recognize that grant funding can be competitive and may not always be guaranteed. Therefore, while we should proactively seek grant opportunities, it must also maintain a balanced funding strategy that includes other reliable sources to ensure the successful implementation of the Transportation System Plan.

Additional funding comes from HB 2017, Urban Renewal District contributions, and Parks Bond Proceeds. HB 2017 funds provide an increasing source of revenue as Oregon's transportation bill supports major infrastructure projects across the state. House Bill 2017 (HB 2017), also known as Keep Oregon Moving, is legislation passed by the Oregon Legislature. HB 2017 includes significant funding for road maintenance, highway improvements, public transit, pedestrian and bicycle infrastructure, and congestion relief projects. For local jurisdictions, including cities and counties, HB 2017 provides increased financial resources for addressing transportation system improvements and maintenance.

Meanwhile, Urban Renewal District funds fluctuate over time, peaking in the earlier years of the forecast before tapering off toward the later years, indicating the support of specific urban renewal projects within the forecast period. Lastly, Parks Bond Proceeds contribute a small but essential part of the overall capital funding picture, particularly in the early years, supporting joint park and transportation infrastructure.

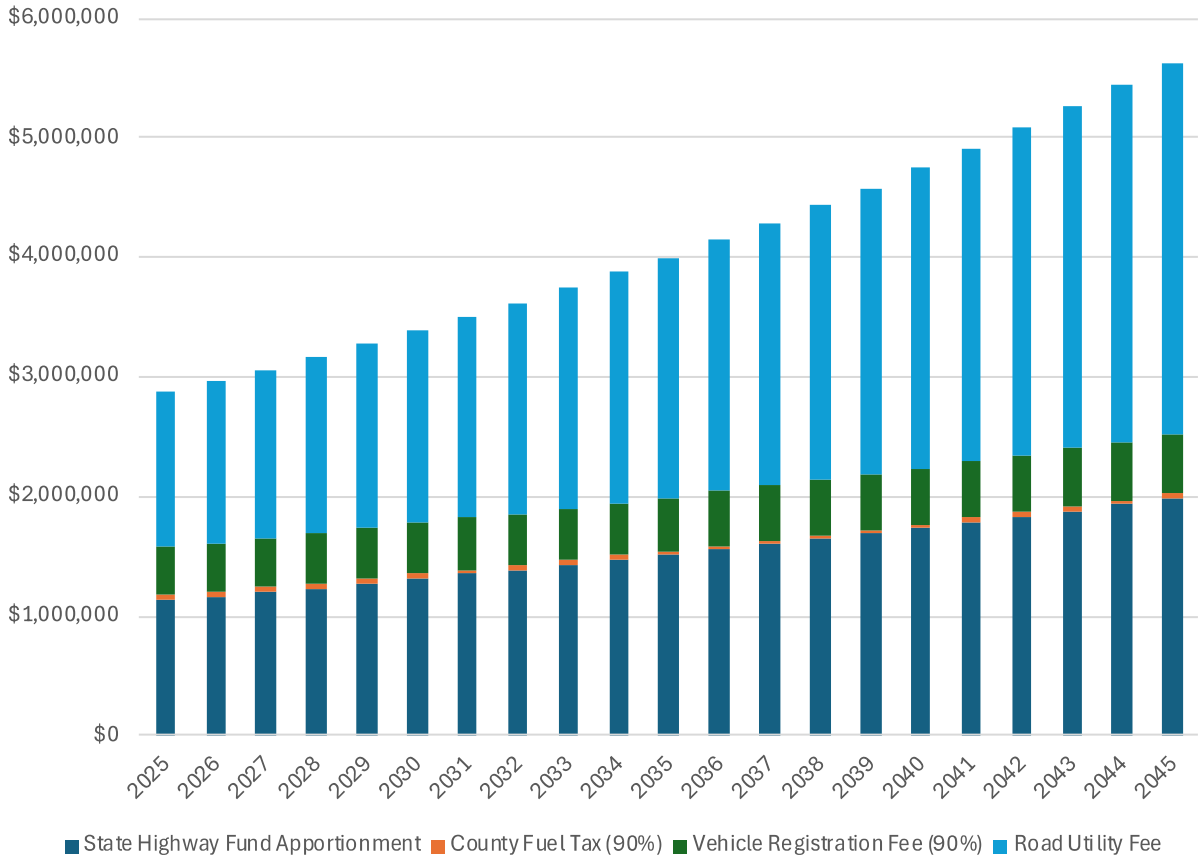
Operations and Maintenance Funding

Tualatin's current operations and maintenance funding is insufficient to meet its paving and maintenance needs. This shortfall is due to inflation and accounting for the additional costs associated with replacing ADA ramps during paving projects. The chart in Figure 9 summarizes Tualatin's forecast for funding operations and maintenance of its transportation system from 2025 to 2045. The main funding sources include the State Highway Fund Apportionment, County Fuel Tax (90% allocation), Vehicle Registration Fee (90% allocation), and the Road Utility Fee, with each contributing varying amounts over the forecast period. The total operations and maintenance funding shows a steady upward growth, starting at around $3 million in 2025 and increasing to nearly $6 million a year by 2045. The 90% allocation is an assumption used for planning and not a policy decision and is subject to change.

The State Highway Fund Apportionment is projected to provide the largest share of operations and maintenance funding throughout the forecast period, growing consistently year over year. This reflects the importance of state-level funding in sustaining local road networks and ensuring they remain operational. The Road Utility Fee, the city's single largest local source contributor, shows a steady increase as the result of indexing the fee to growth metrics, reinforcing the city's reliance on local fee-based revenues to fund routine maintenance and repairs. This fee provides a stable and growing source of revenue that aligns with the increasing maintenance demands of the expanding transportation network.

Smaller, yet important contributions come from the County Fuel Tax and the Vehicle Registration Fee, each projected to maintain a stable and gradually growing role in funding. As per city policy choice, these funds are primarily allocated to operations & maintenance although some funding is dedicated to capital.

Figure 9: Summary of Operations & Maintenance Transportation Funding

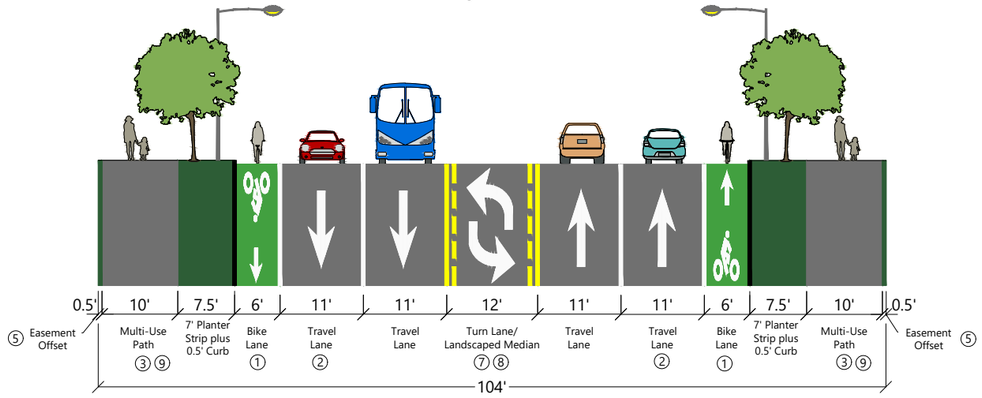


Source: City of Tualatin, 2024 (ECOnorthwest summary)

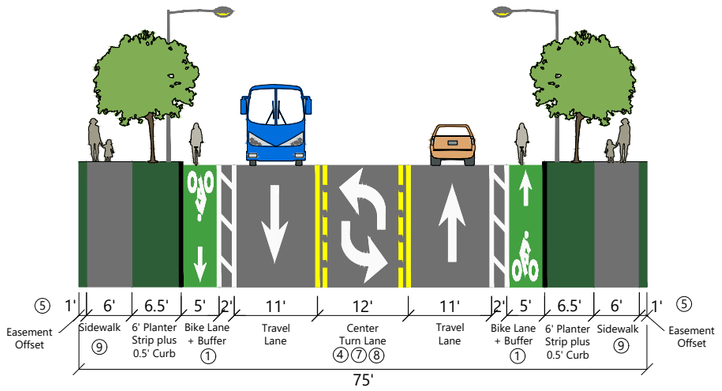
2040 TSP Appendix

Cross-Sections

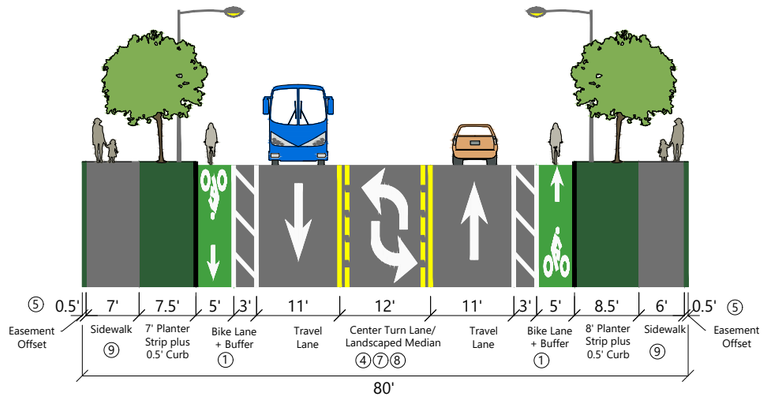
Primary Arterial



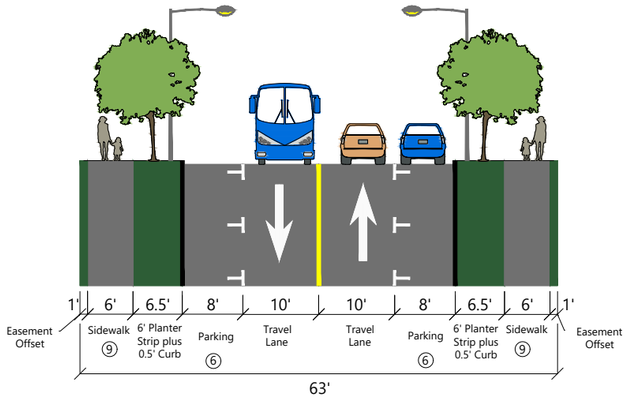
Collectors



Arterial



Neighborhood Route



General Notes

① Additional turn lanes may be required at intersection as determined by the City Engineer based on traffic volumes and/or safety needs as identified in an approved traffic study.

Notes

① The City of Tualatin may allow a 12' multi-use path to be substituted for the sidewalk and bicycle lane on either or both sides. If allowed, the planter strip must be installed between the travel lane and the multi-use path.

② Outside vehicle lanes may be deleted if street is listed as 3-lane Primary Arterial in Tualatin Transportation System Plan

③ Mark for one-way bike and two-way ped traffic.

④ City Engineer may authorize the deletion of center turn lane if they determine 20-year traffic volumes will be less than 8,000 ADT and the center turn lane is not needed for traffic flow and safety.

⑤ Homes must front away from street.

⑥ City Engineer may allow a 6' bike lane in place of on-street parking in non-residential areas with low parking demand as determined by parking study.

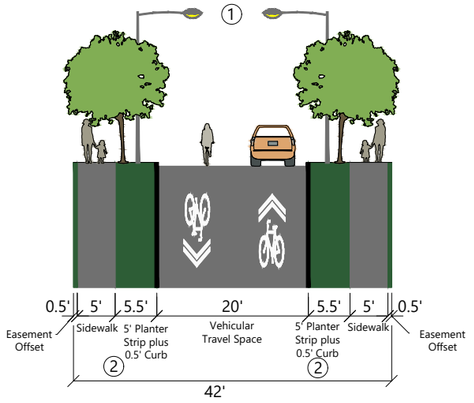
⑦ Construct turn lanes within 200ft or to 95th percentile peak hour queue length (as determined by an engineering study) of intersections, whichever is longer. Construct turn lanes within 100ft or 95th percentile peak hour queue length of driveways to multifamily or commercial properties. Construct landscaped medians with 1' shy distance from travel lanes elsewhere.

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

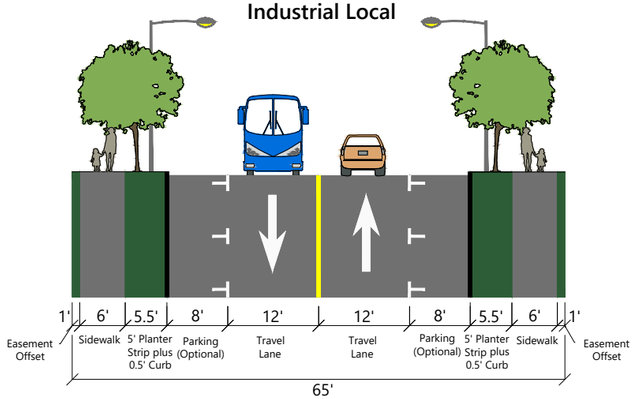
Figure 74-1A

City of Tualatin Transportation System Plan
Typical Roadway Cross Sections

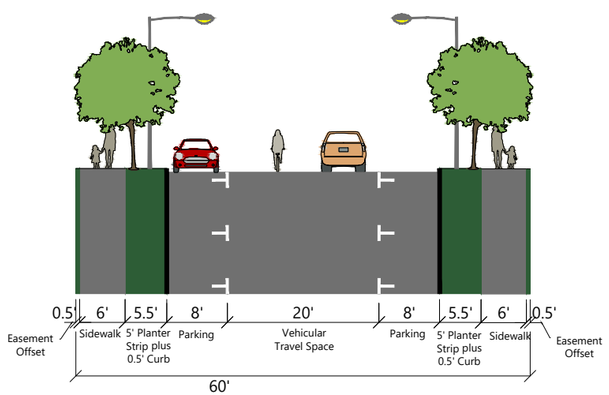
Residential Local



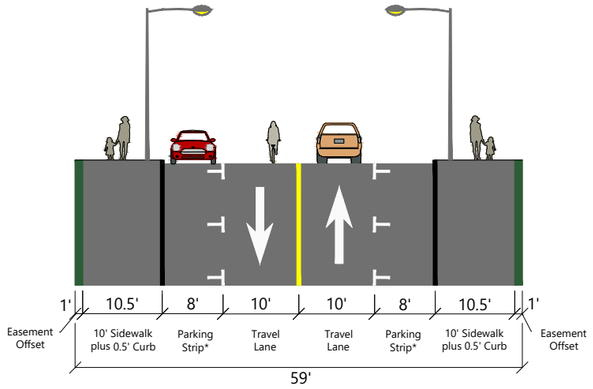
Industrial Local



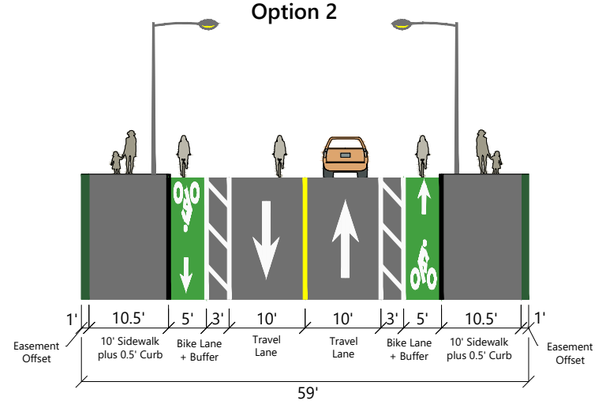
Commercial Local



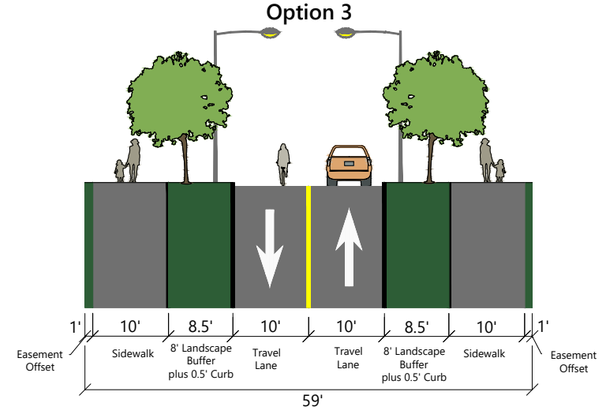
Downtown Connector Option 1



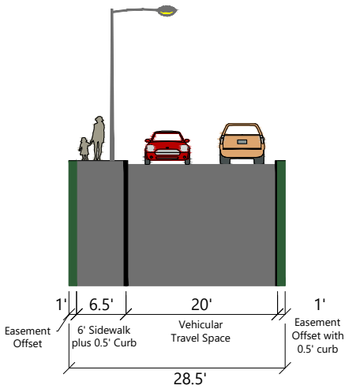
Downtown Connector Option 2



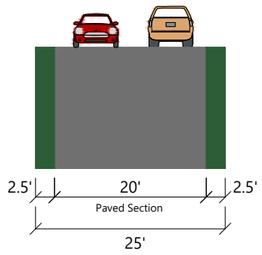
Downtown Connector Option 3



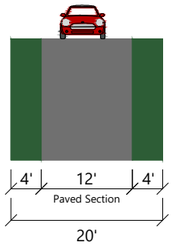
Private Street ③



Alley Way / Shared Access



Flag Lot Access



General Notes

① Local street standard is 32' curb-to-curb with parking on both sides and 5.5' planter strips, 5' sidewalks, and 0.5' easement offset in the 54-foot ROW. City engineer may approve a) 28' curb-to-curb with parking on one side in 50' ROW or b) 20' curb-to-curb with no parking in a 42-foot ROW (or parking in bays in widened ROW) if they determine that driveway density precludes on-street parking or better serves the needs of the public.

② Additional turn lanes may be required at intersection as determined by the City Engineer based on traffic volumes and/or safety needs as identified in an approved traffic study.

Notes

① One standard parking space shall be provided per 50' of local street frontage. Spaces may be parallel, diagonal, or perpendicular to the street and shall be constructed in concrete and drain towards the roadway. These spaces shall be placed within the right-of-way, and shall be between the sidewalk and the street. Acquire/dedicate right-of-way accordingly where parking is provided.

② 5' planter strip (plus 0.5' curb) may be used where parallel parking is provided.

③ Cul-de-sacs allow curb tight reinforced sidewalks with mountable curbs and 48' radius to be back of walk.

Figure 74-1B

City of Tualatin Transportation System Plan
Typical Roadway Cross Sections

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.