



EXISTING CONDITIONS

March 2024

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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**.

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.

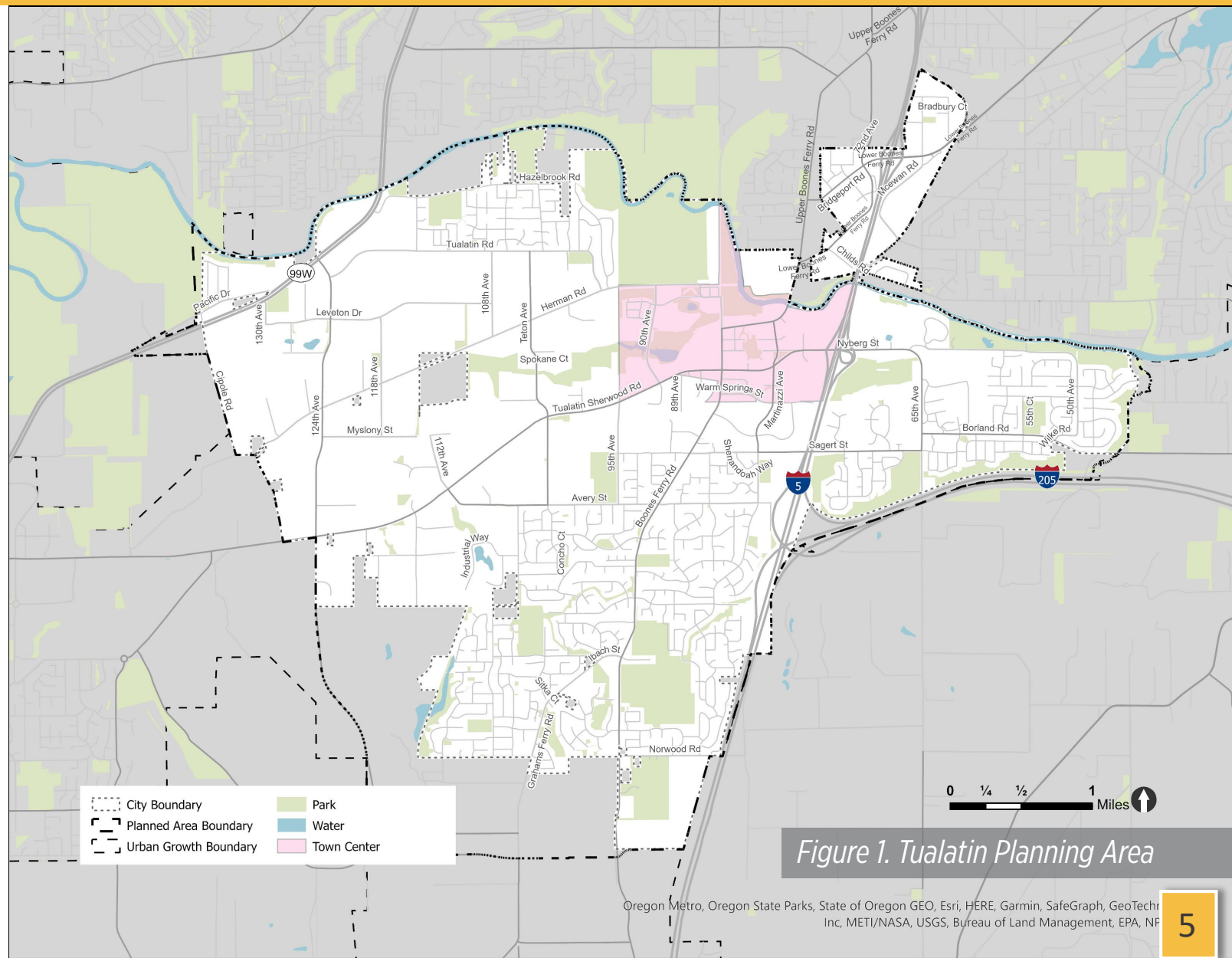


Figure 1. Tualatin Planning Area

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.

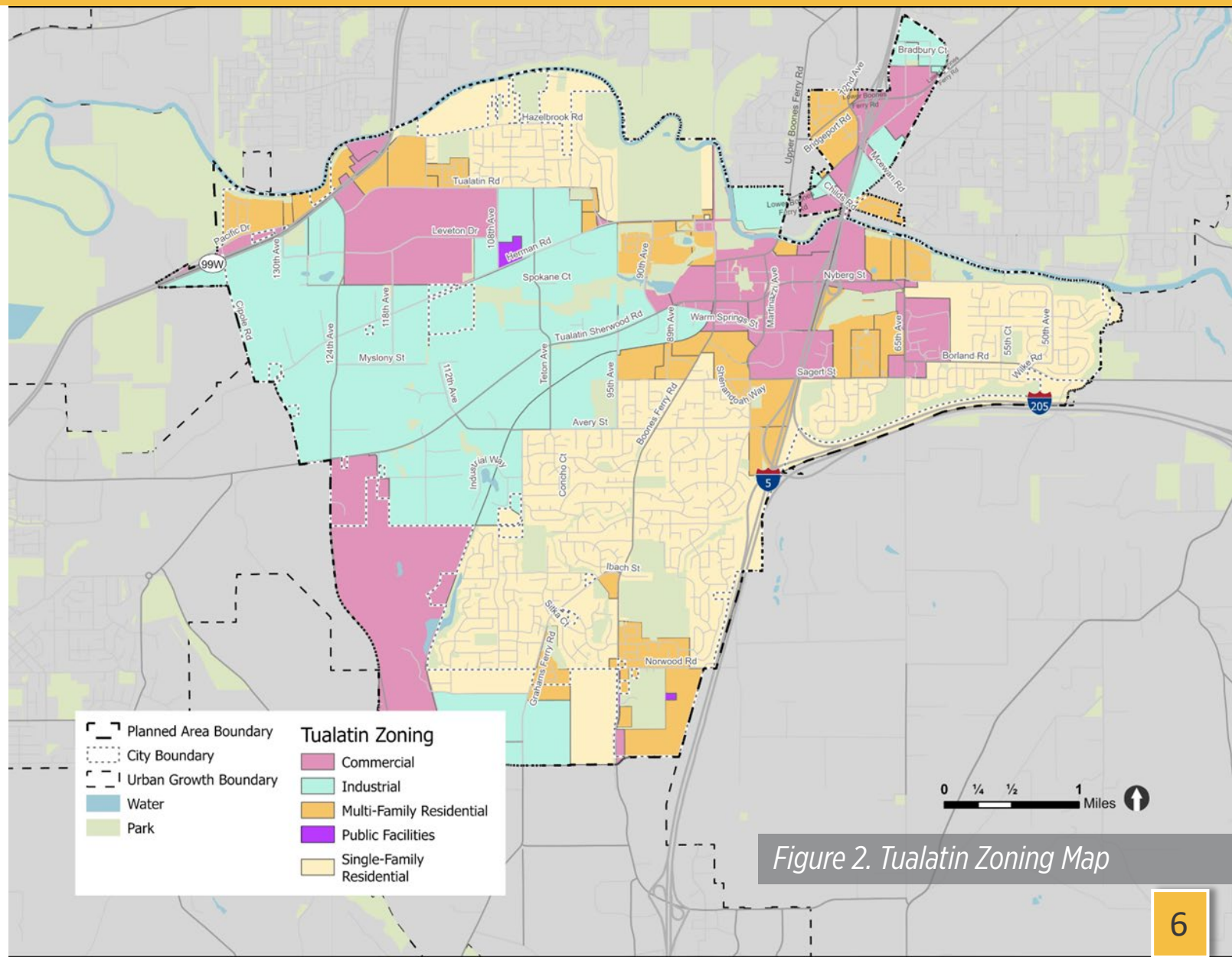


Figure 2. Tualatin Zoning Map

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.

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.

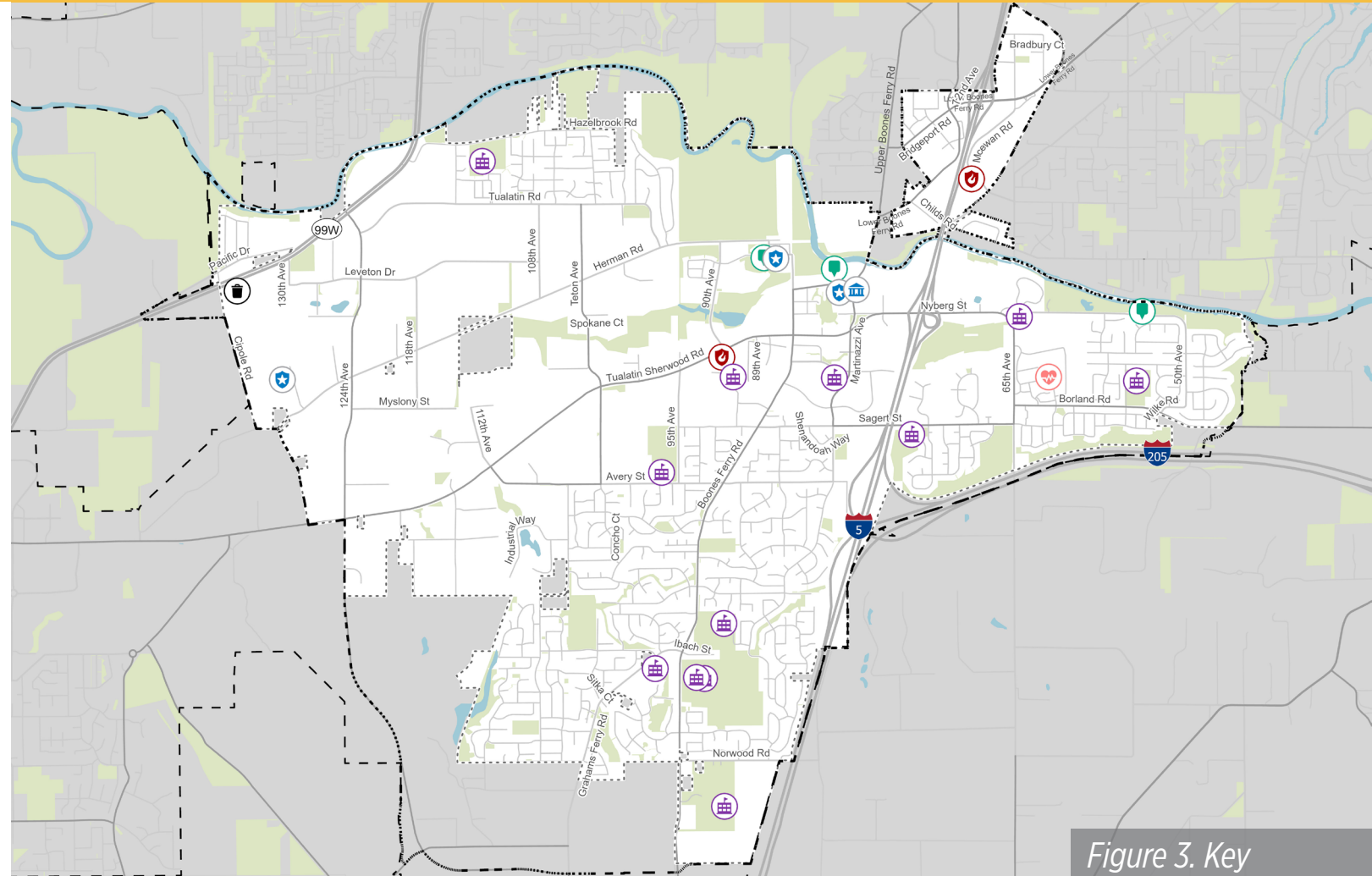


Figure 3. Key Destinations

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.

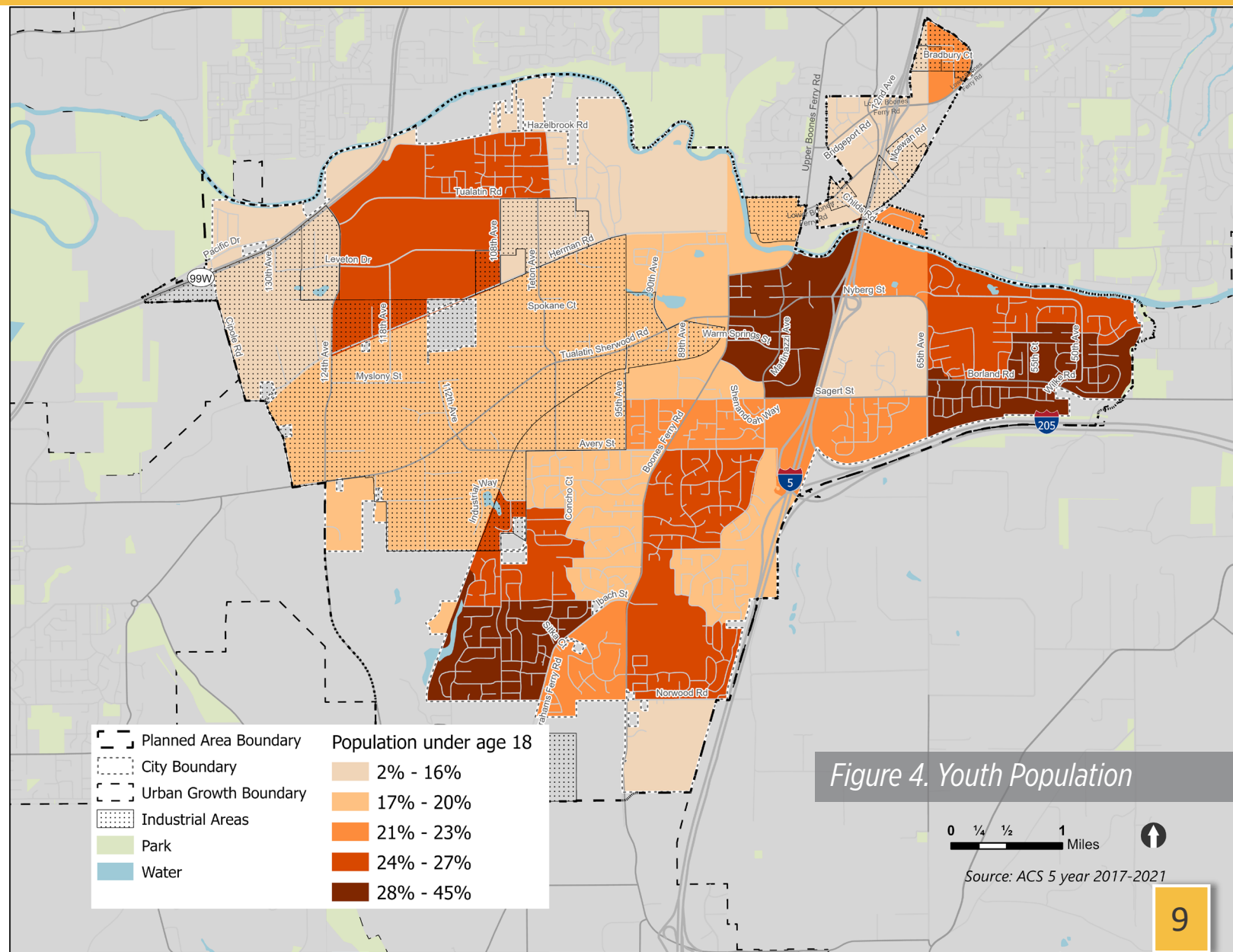


Figure 4. Youth Population

0 1/4 1/2 1 Miles

Source: ACS 5 year 2017-2021

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.

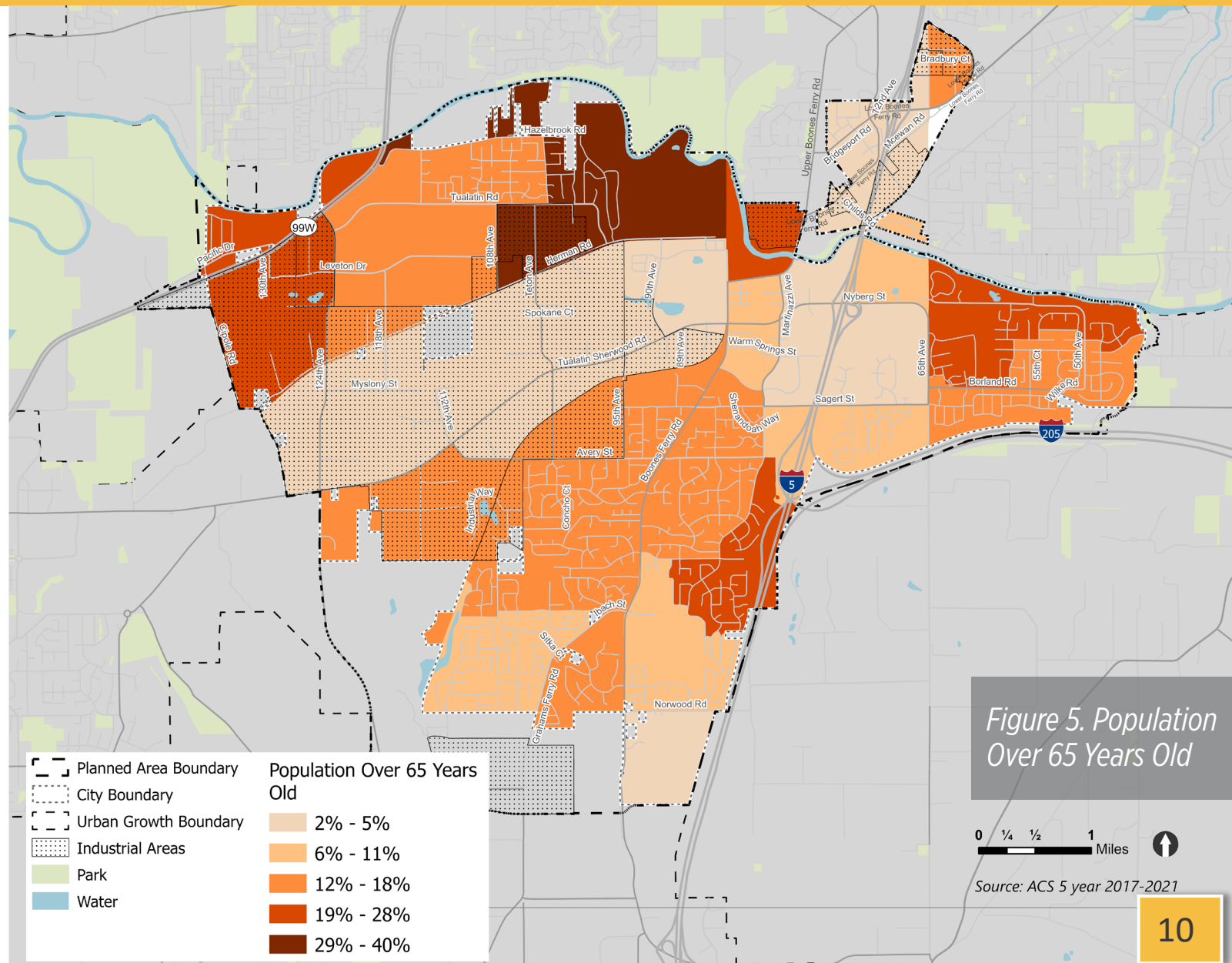


Figure 5. Population Over 65 Years Old

0 1/4 1/2 1 Miles

Source: ACS 5 year 2017-2021

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

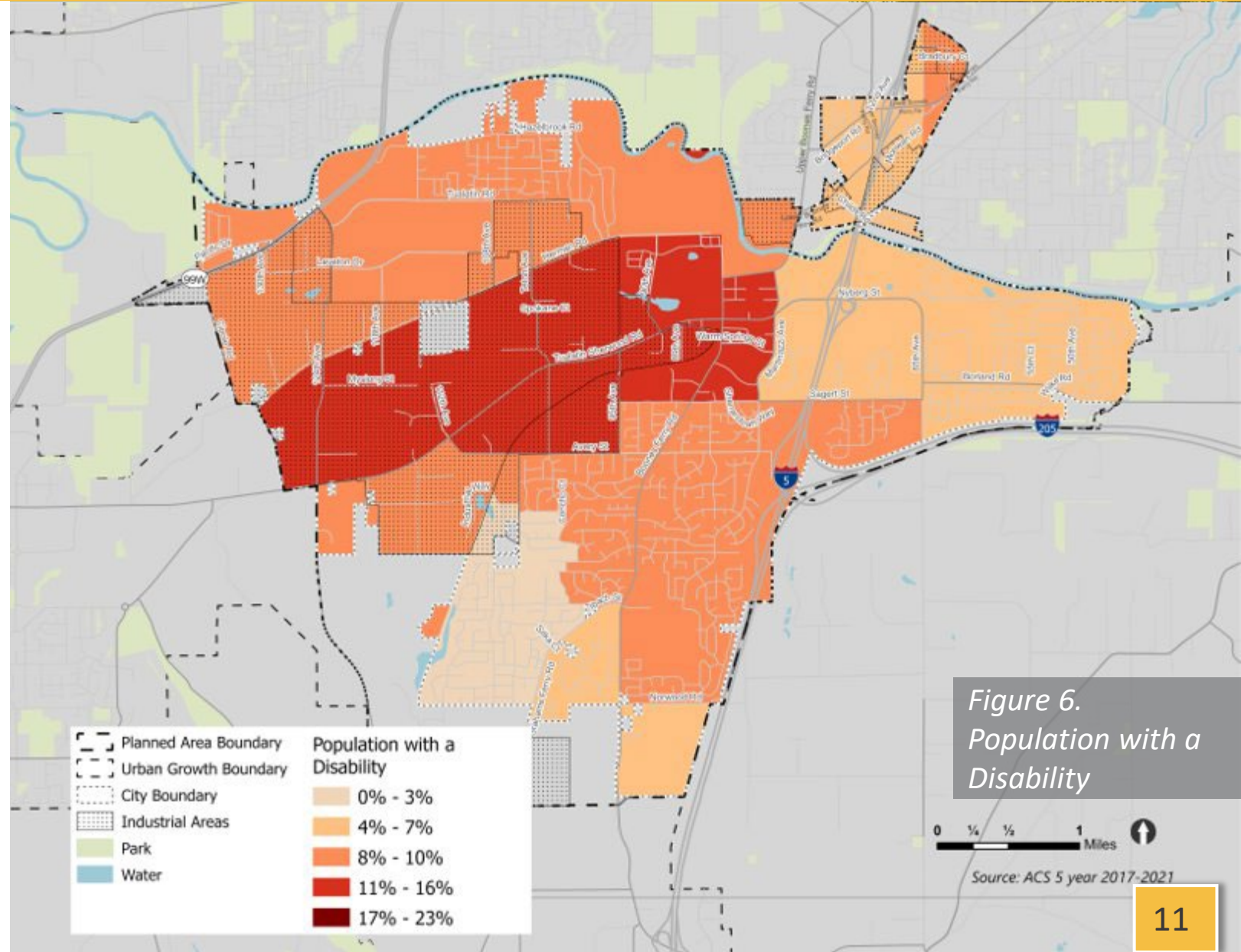


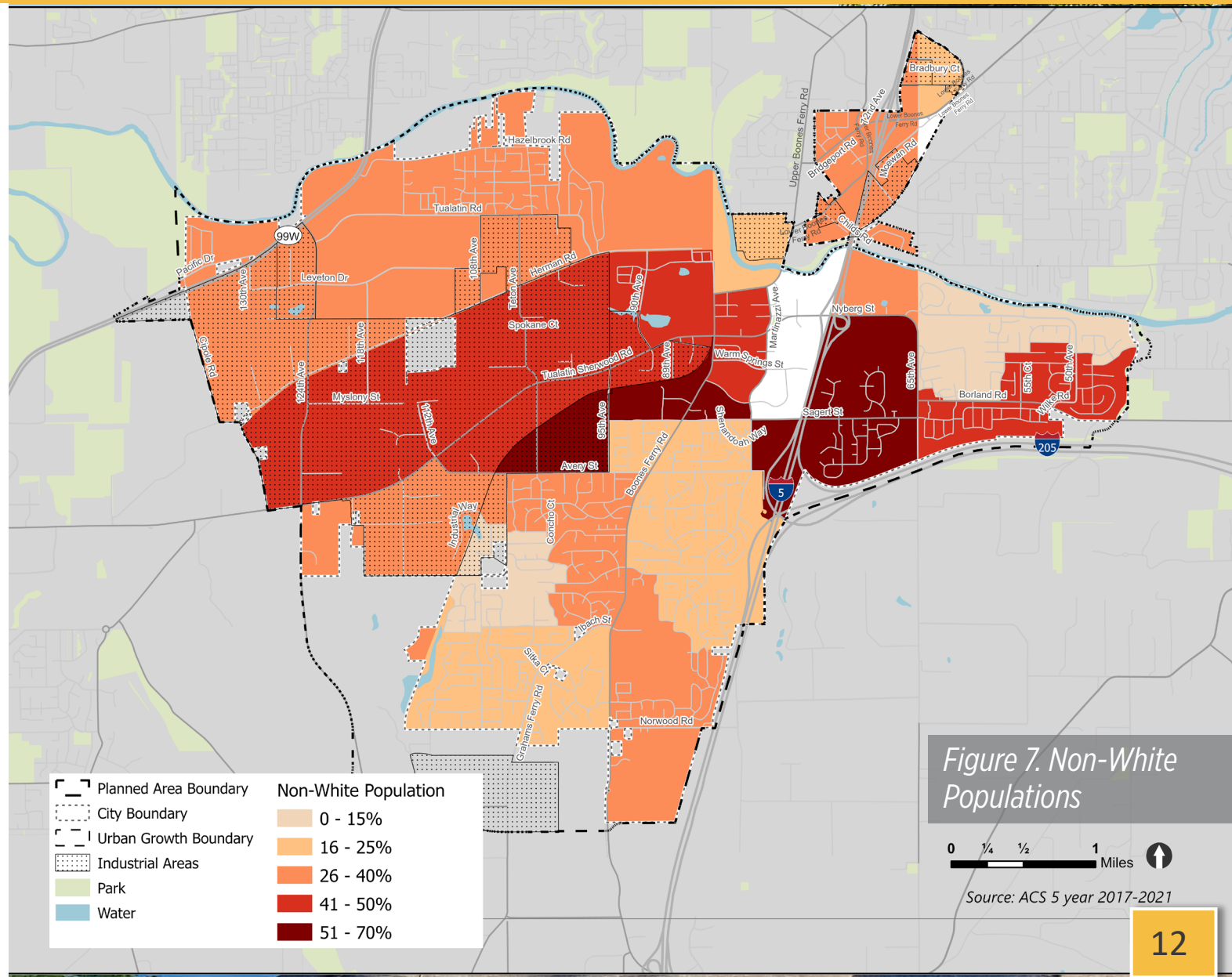
Figure 6.
Population with a
Disability

Source: ACS 5 year 2017-2021

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.



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.

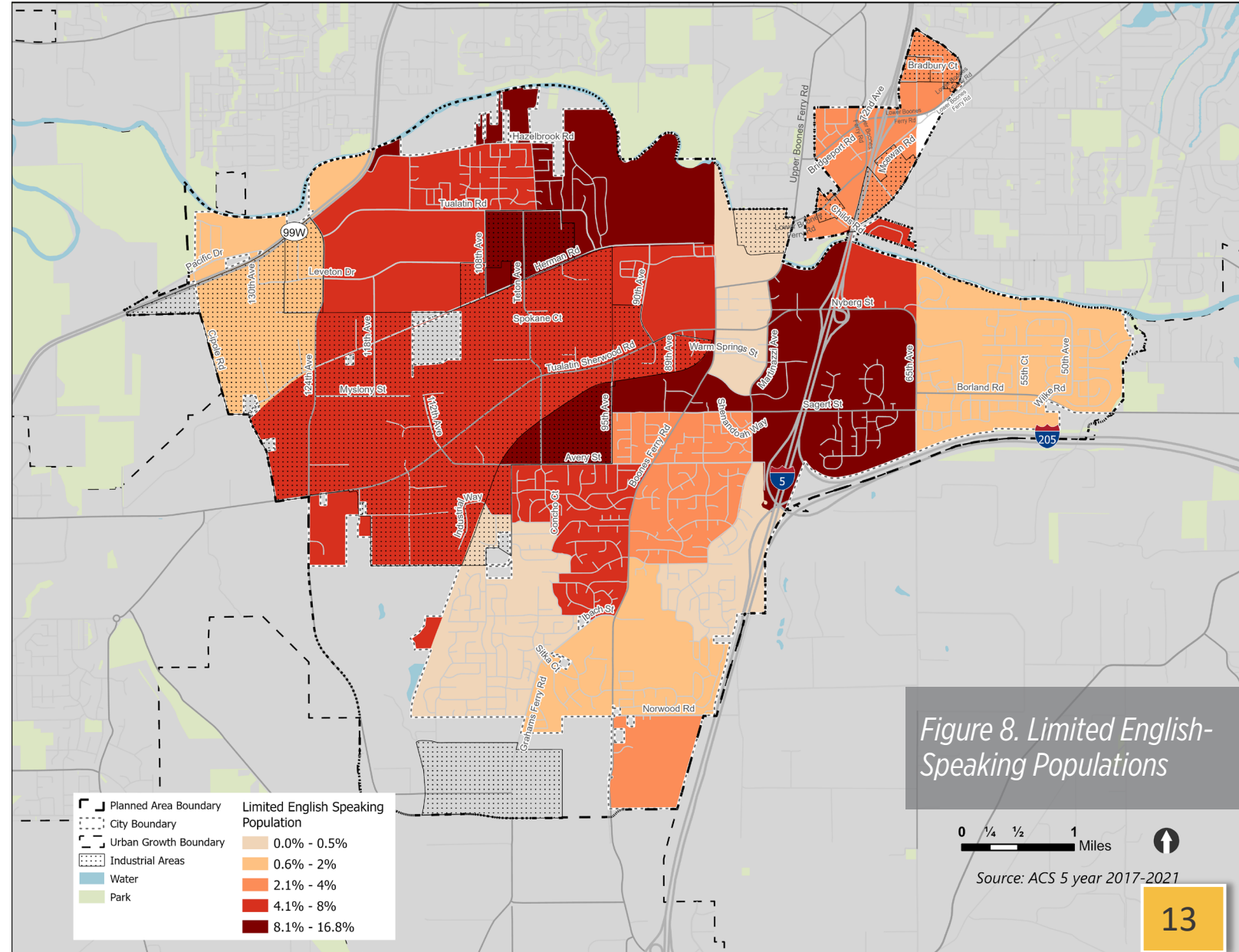
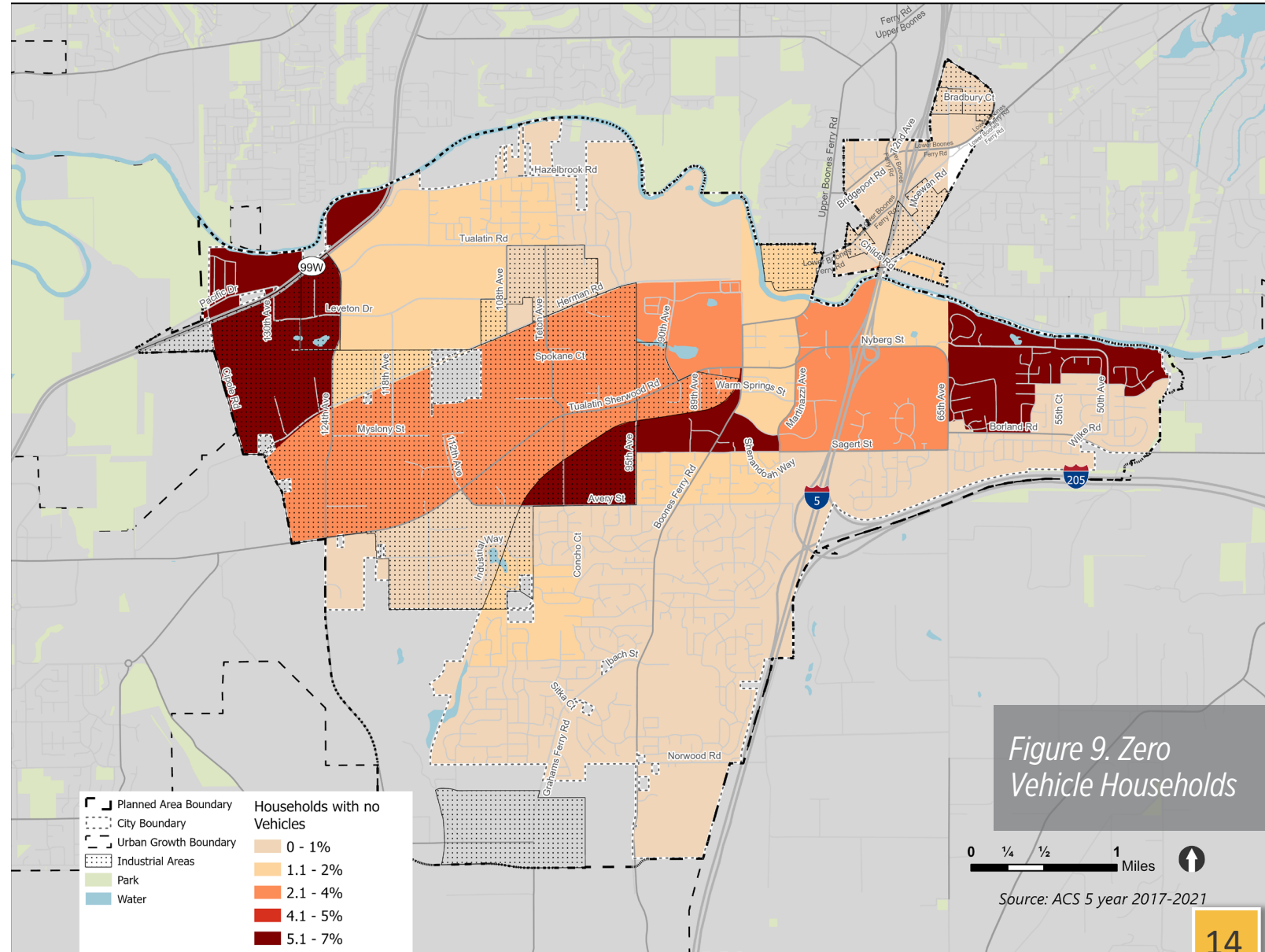


Figure 8. Limited English-Speaking Populations

0 1/4 1/2 1 Miles
Source: ACS 5 year 2017-2021

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.



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.

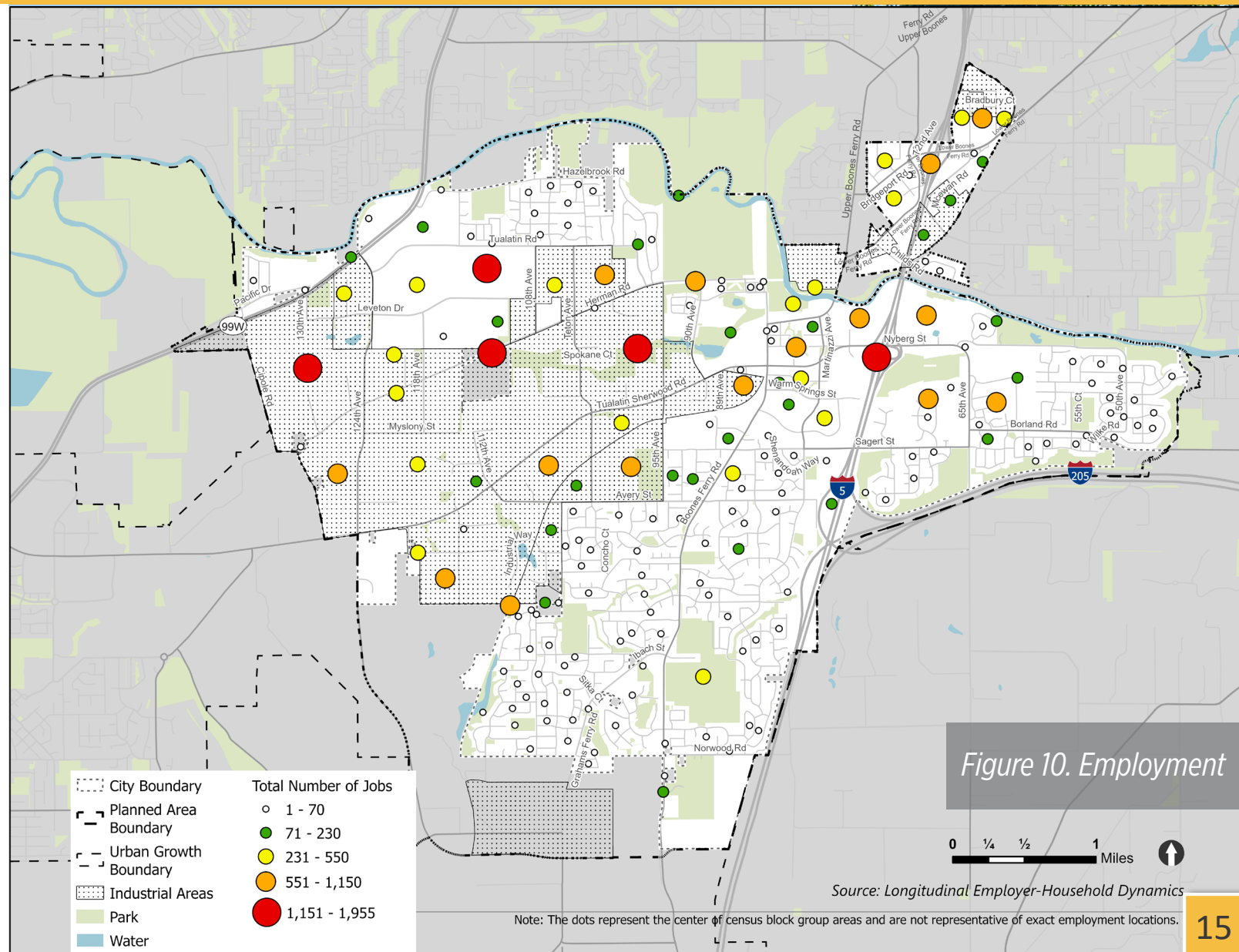
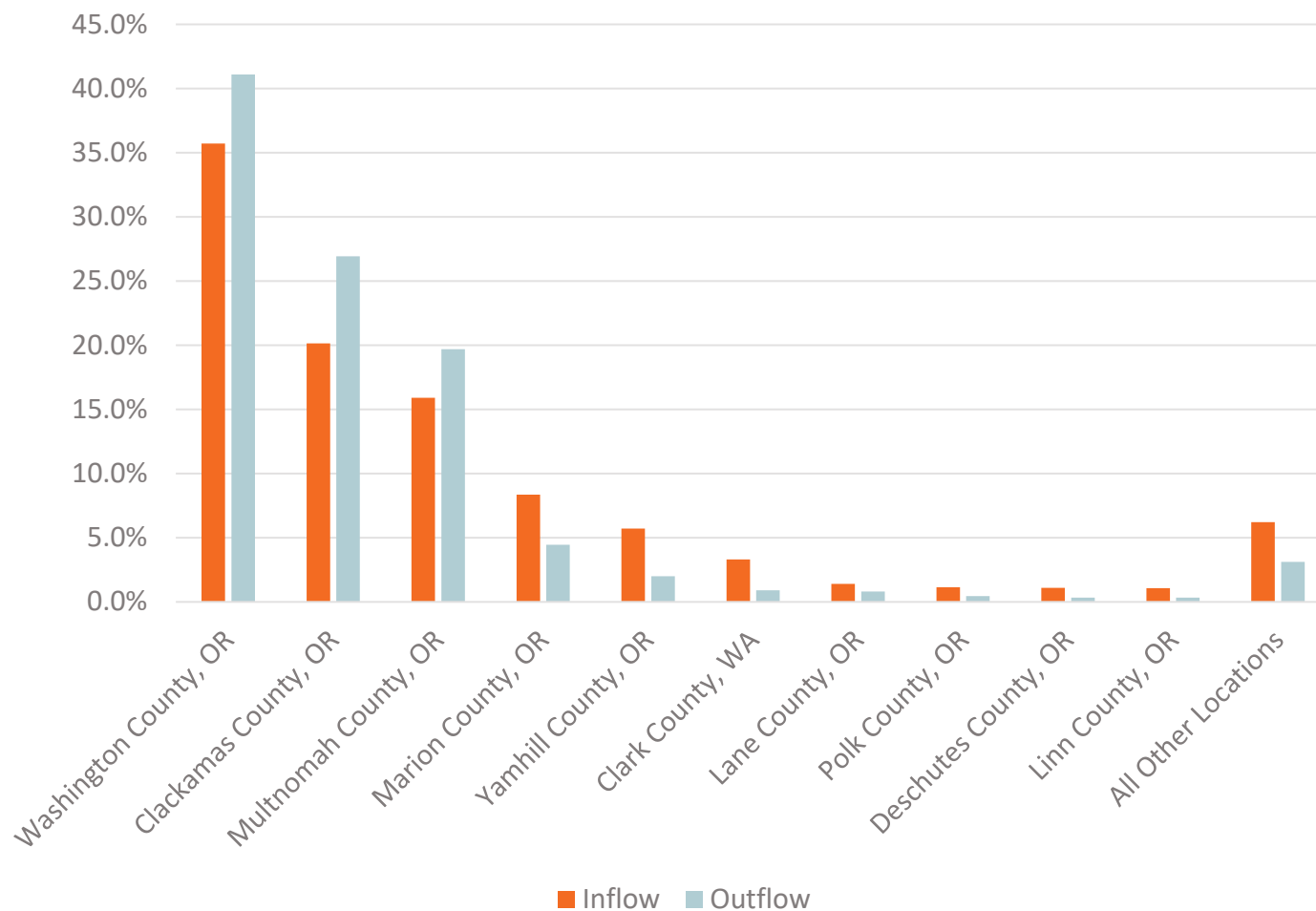


Figure 10. Employment

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

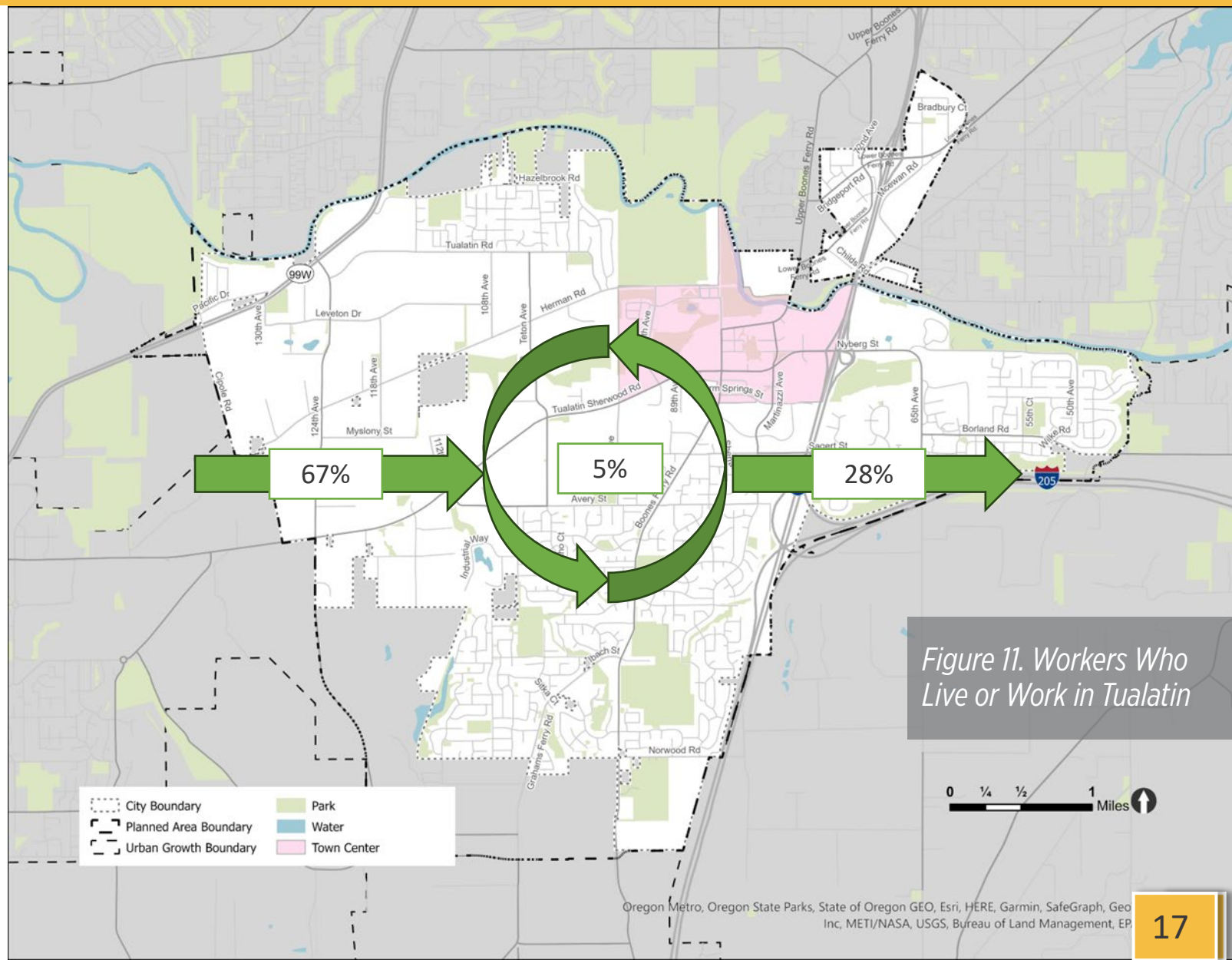
12.3% of workers who live in Tualatin work outside the Metro region.

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




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.



Existing System Inventory



Roadway Network





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.

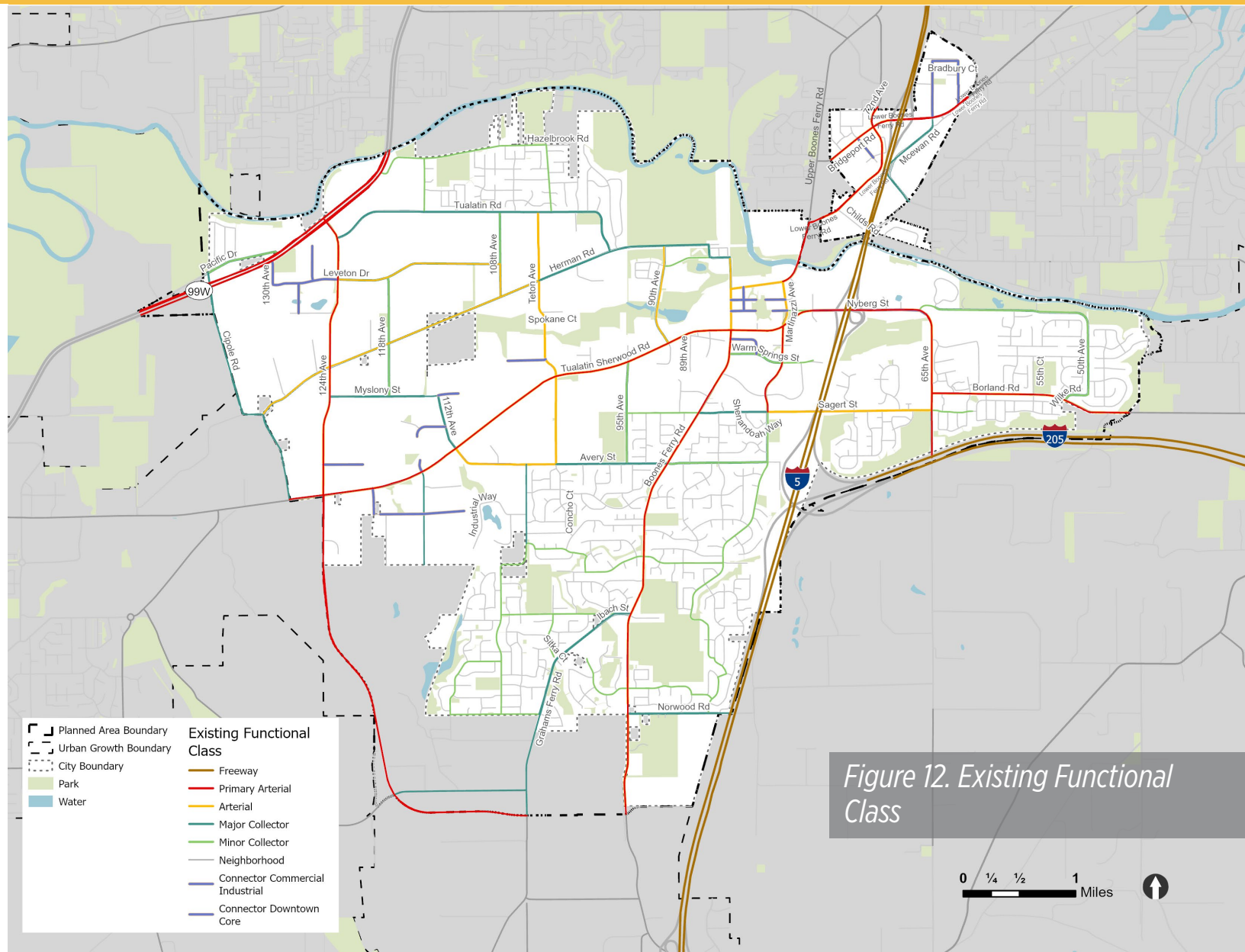


Figure 12. Existing Functional Class





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.

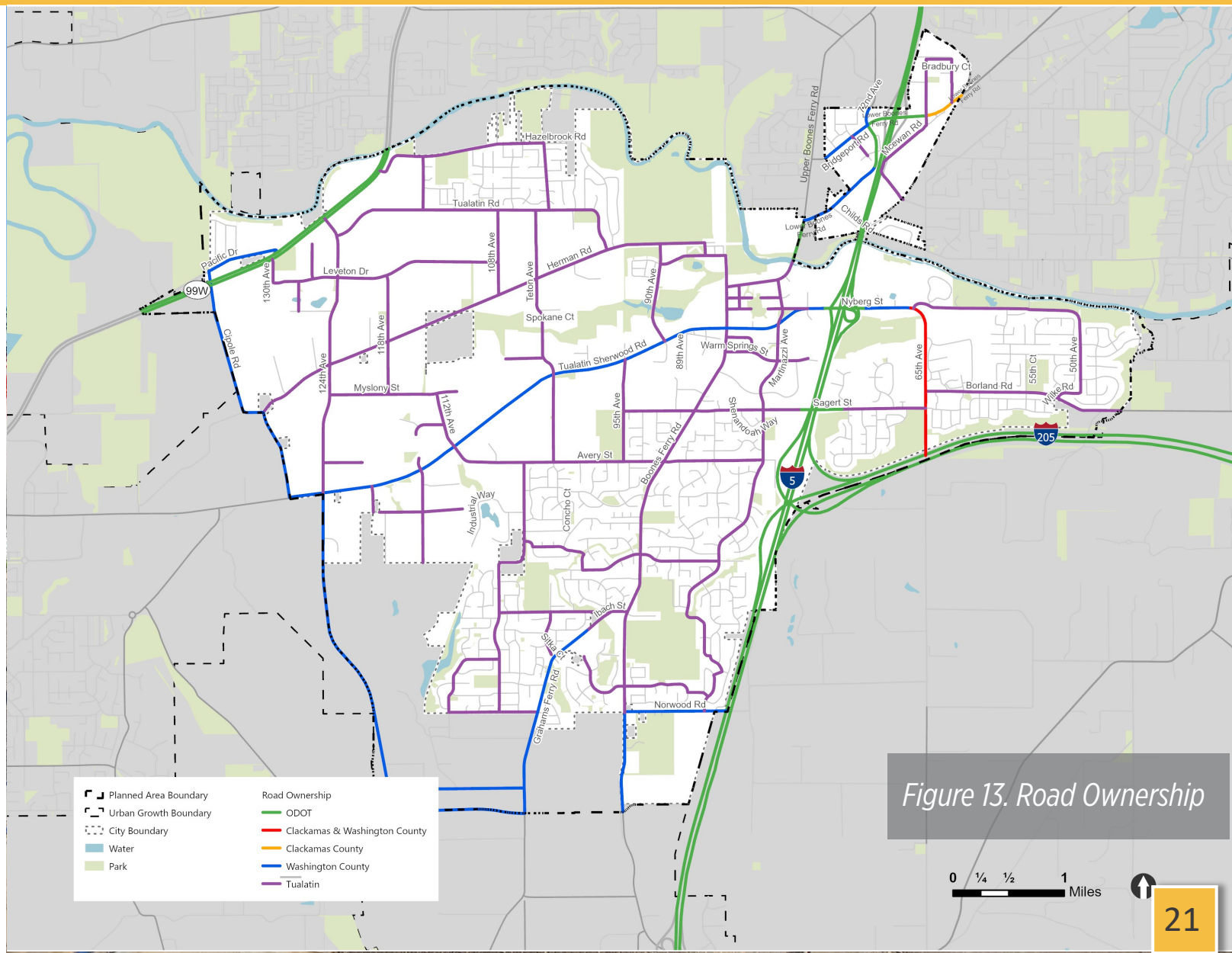


Figure 13. Road Ownership



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.

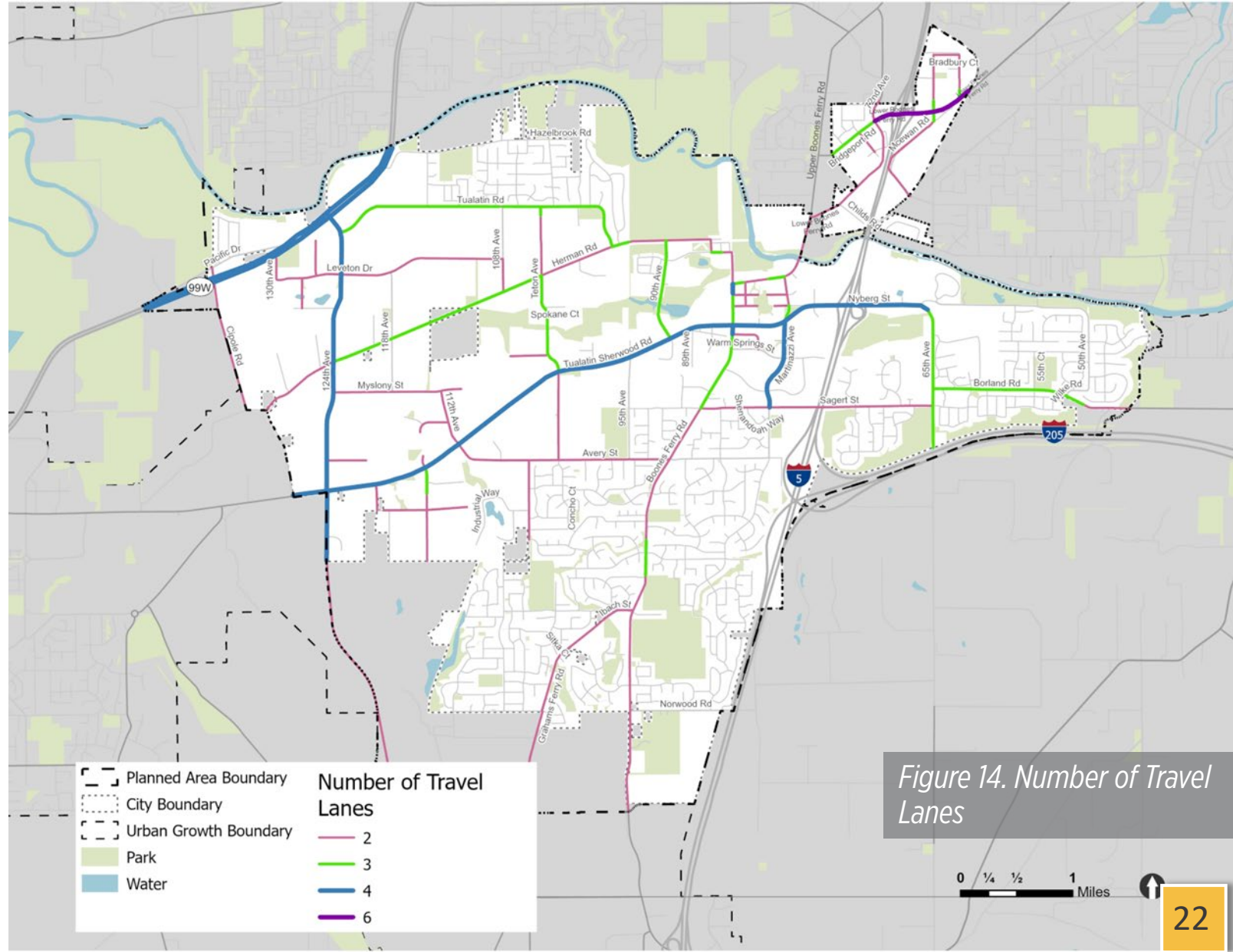


Figure 14. Number of Travel Lanes



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

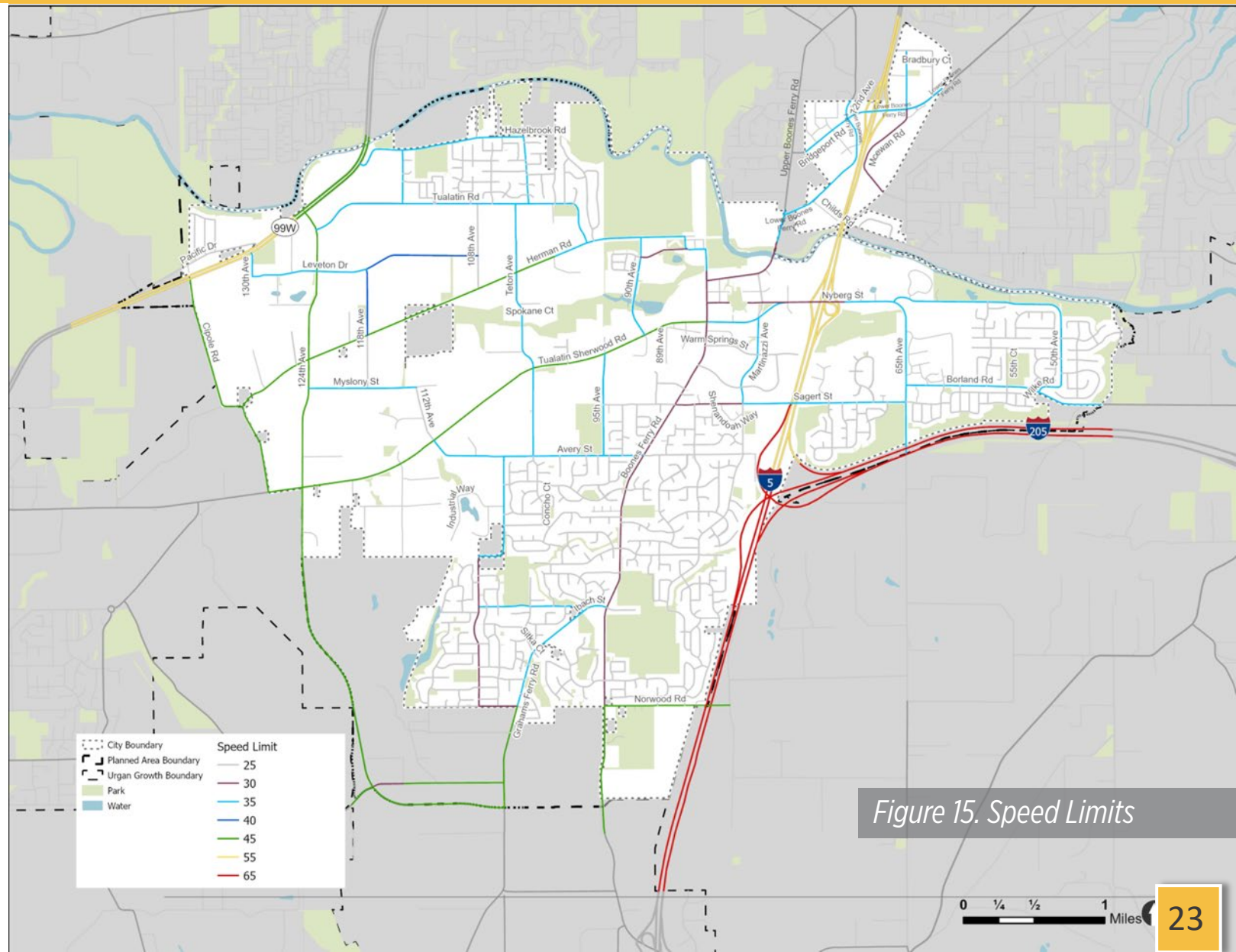


Figure 15. Speed Limits



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.

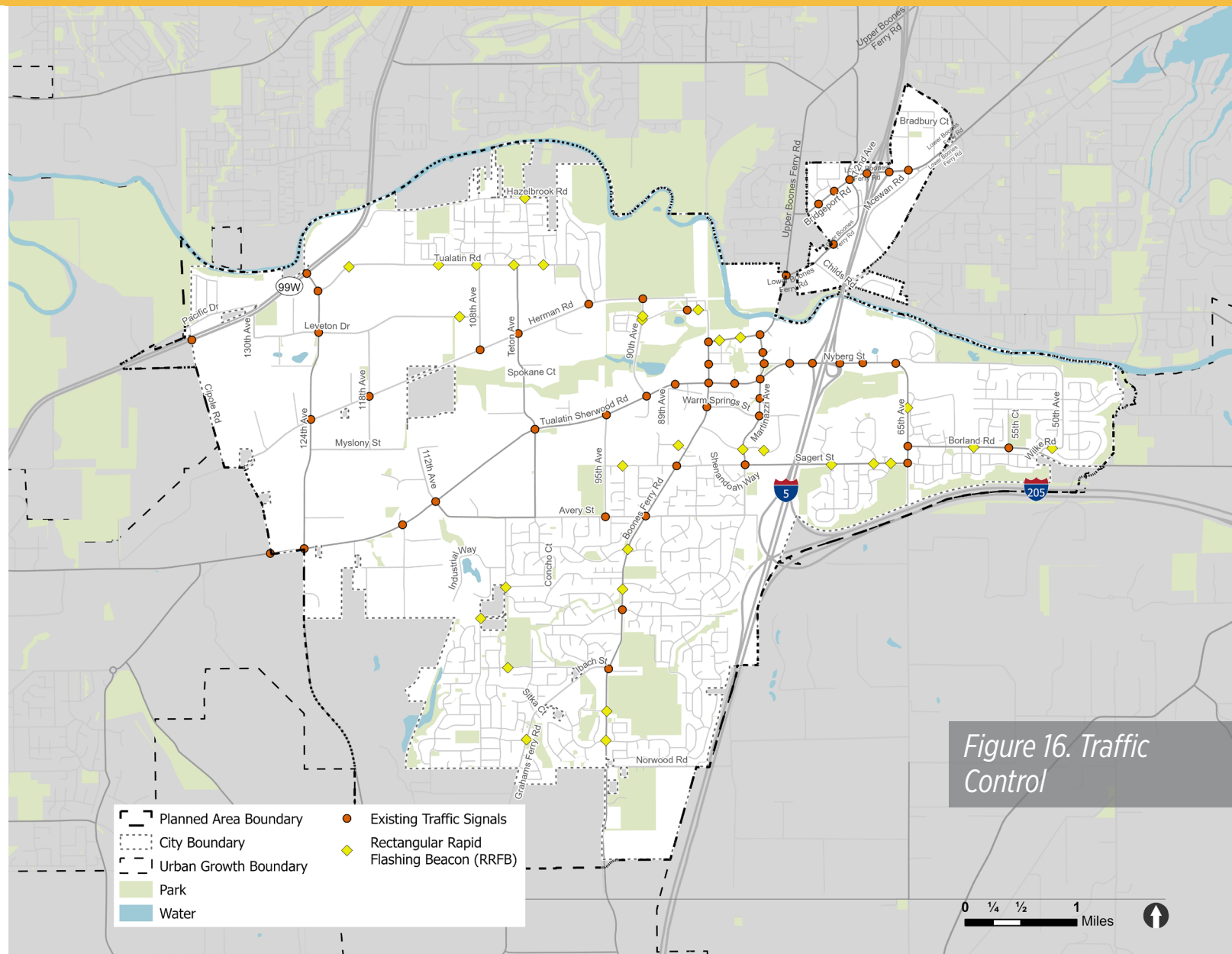


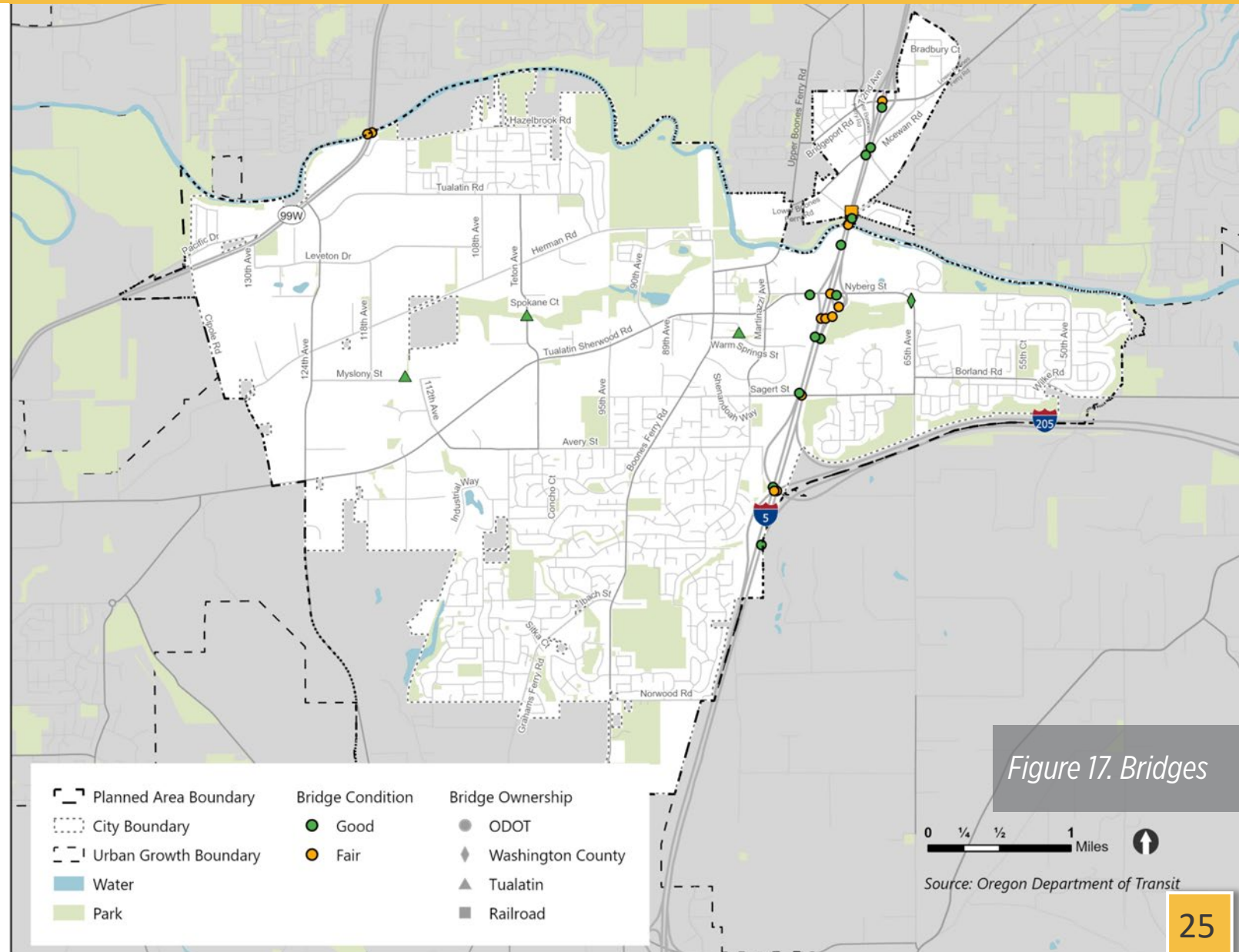
Figure 16. Traffic Control



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.



Transit System





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.

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.

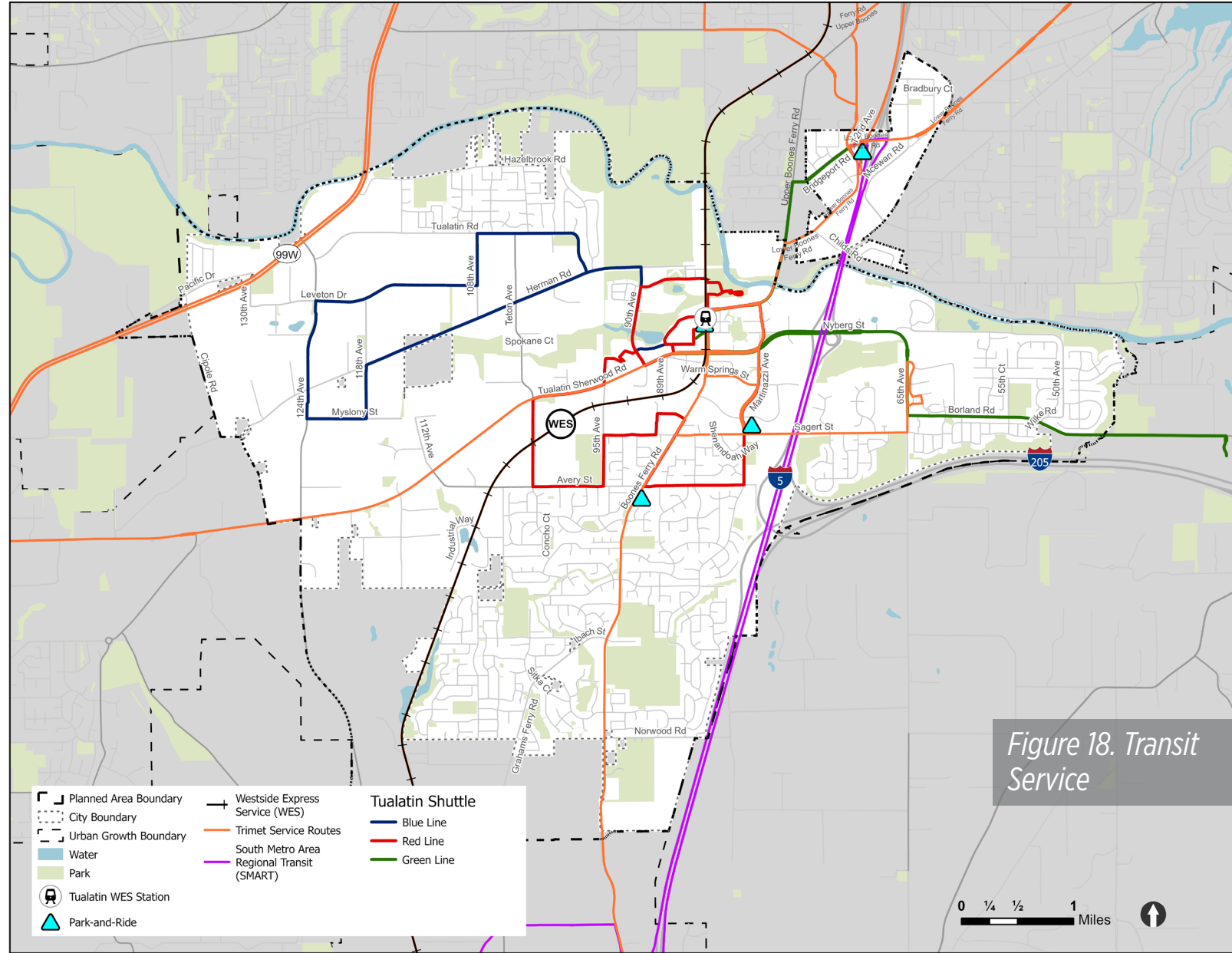


Figure 18. Transit Service



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.

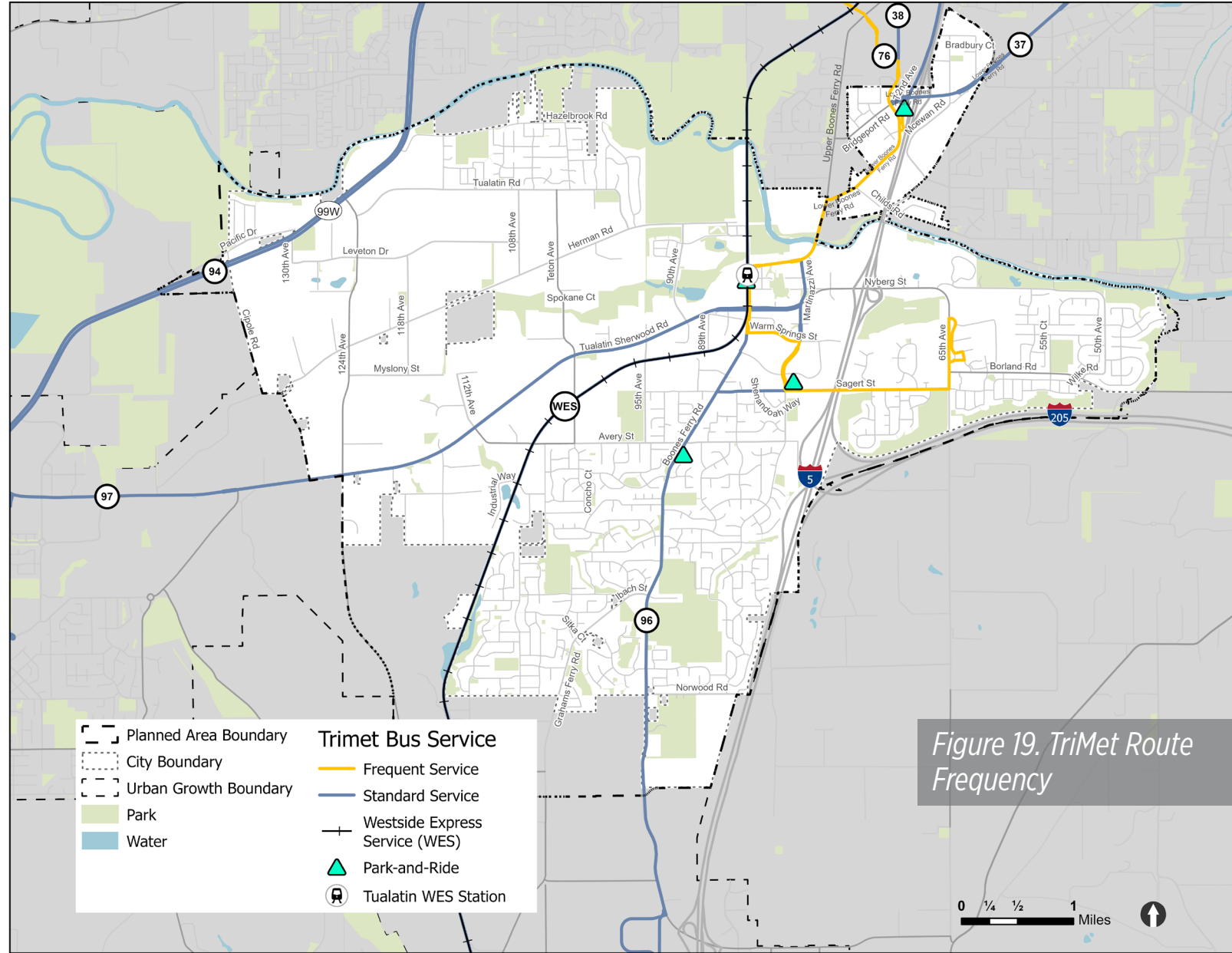


Figure 19. TriMet Route Frequency

Pedestrian System



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.

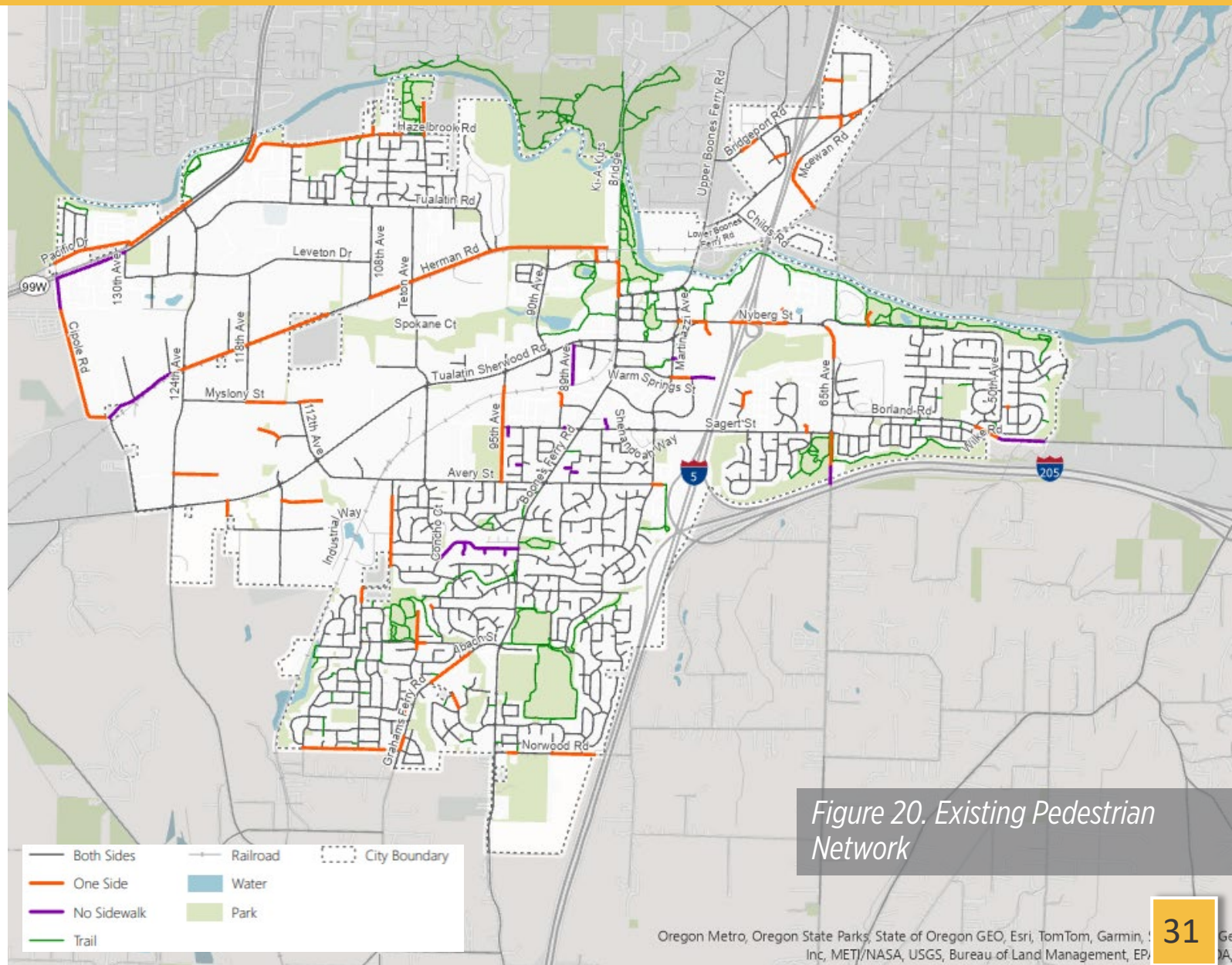


Figure 20. Existing Pedestrian Network



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.

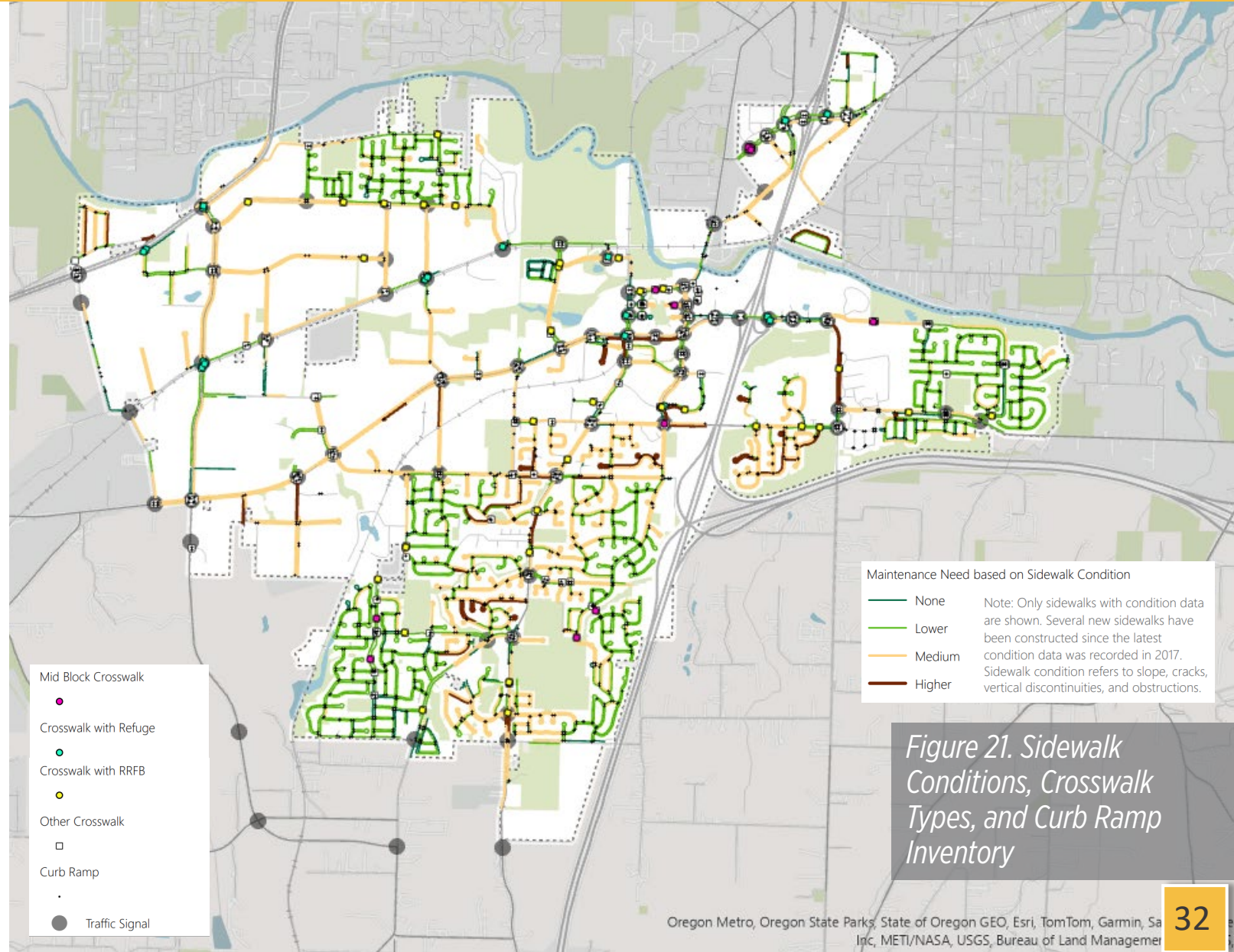


Figure 21. Sidewalk Conditions, Crosswalk Types, and Curb Ramp Inventory

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.

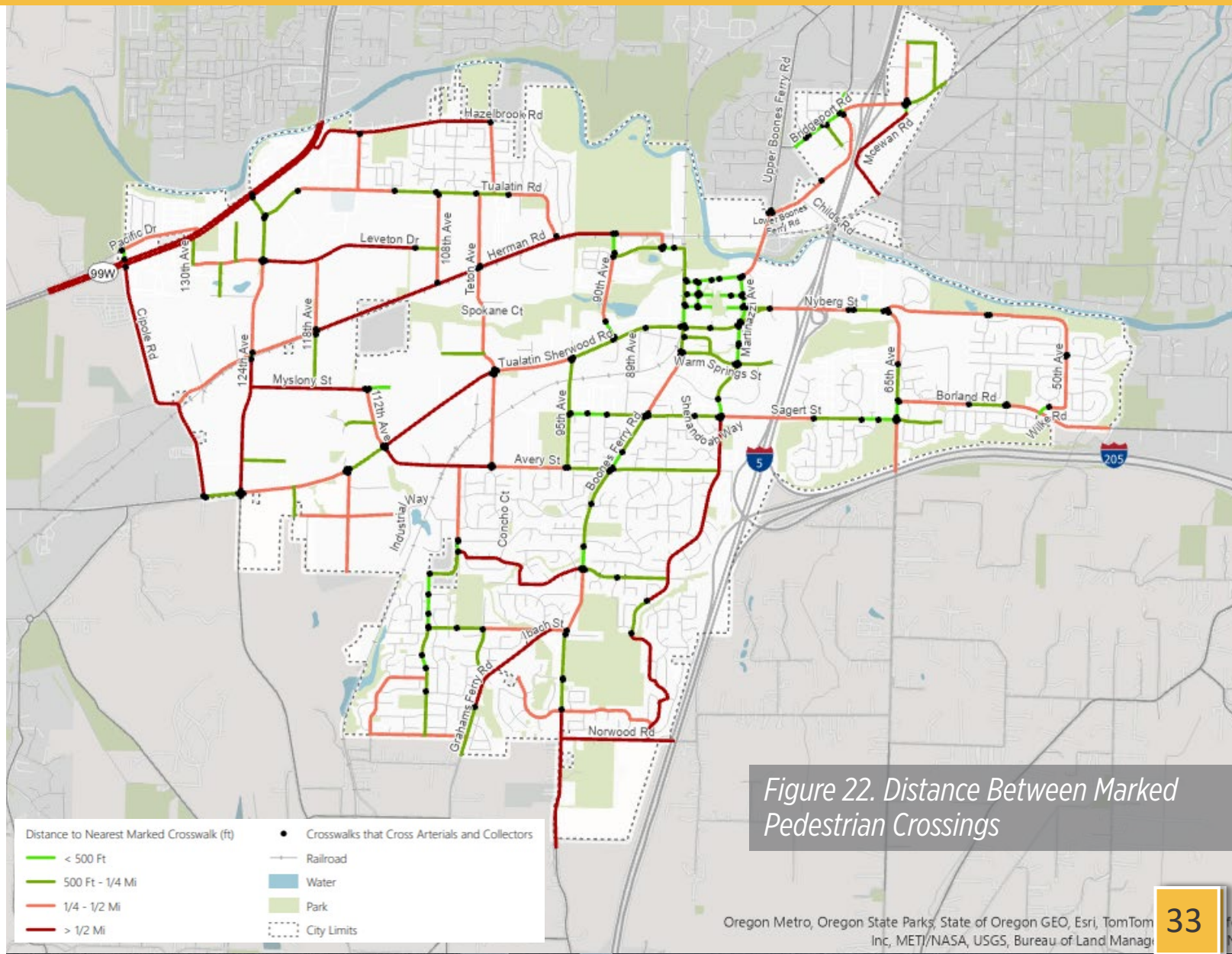


Figure 22. Distance Between Marked Pedestrian Crossings

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.

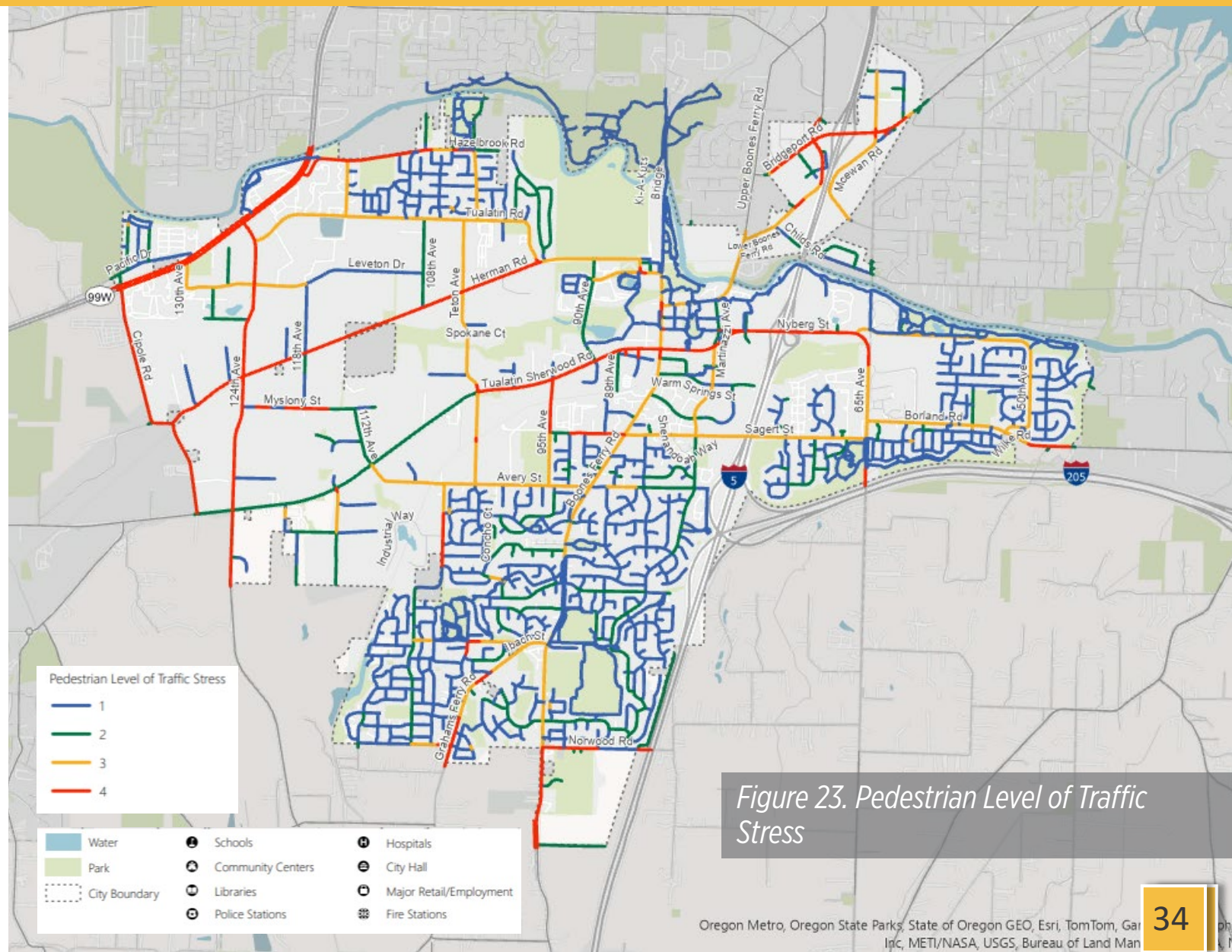


Figure 23. Pedestrian Level of Traffic Stress

Bicycle System

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.

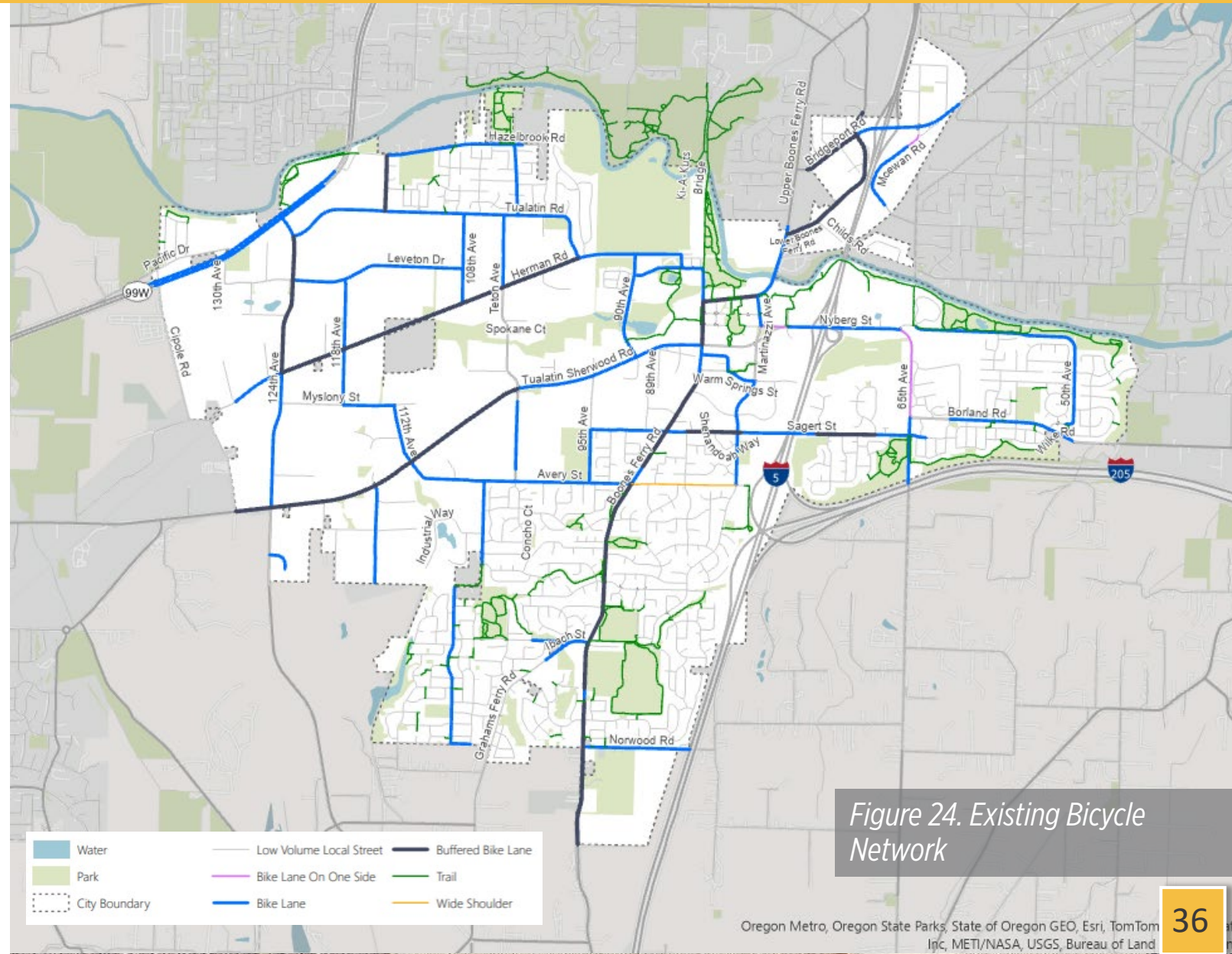


Figure 24. Existing Bicycle Network

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.

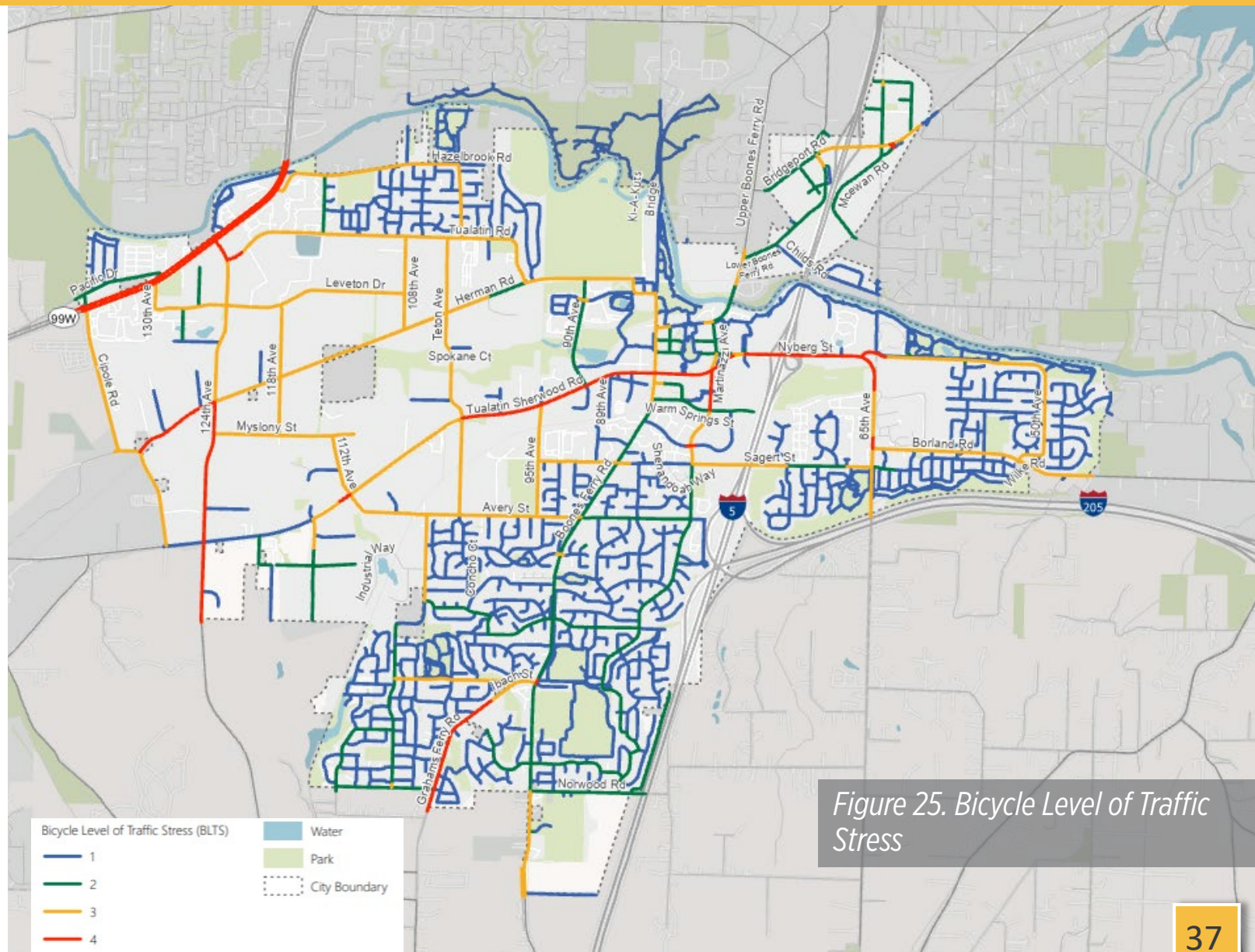


Figure 25. Bicycle Level of Traffic Stress

edEx

Ground

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.

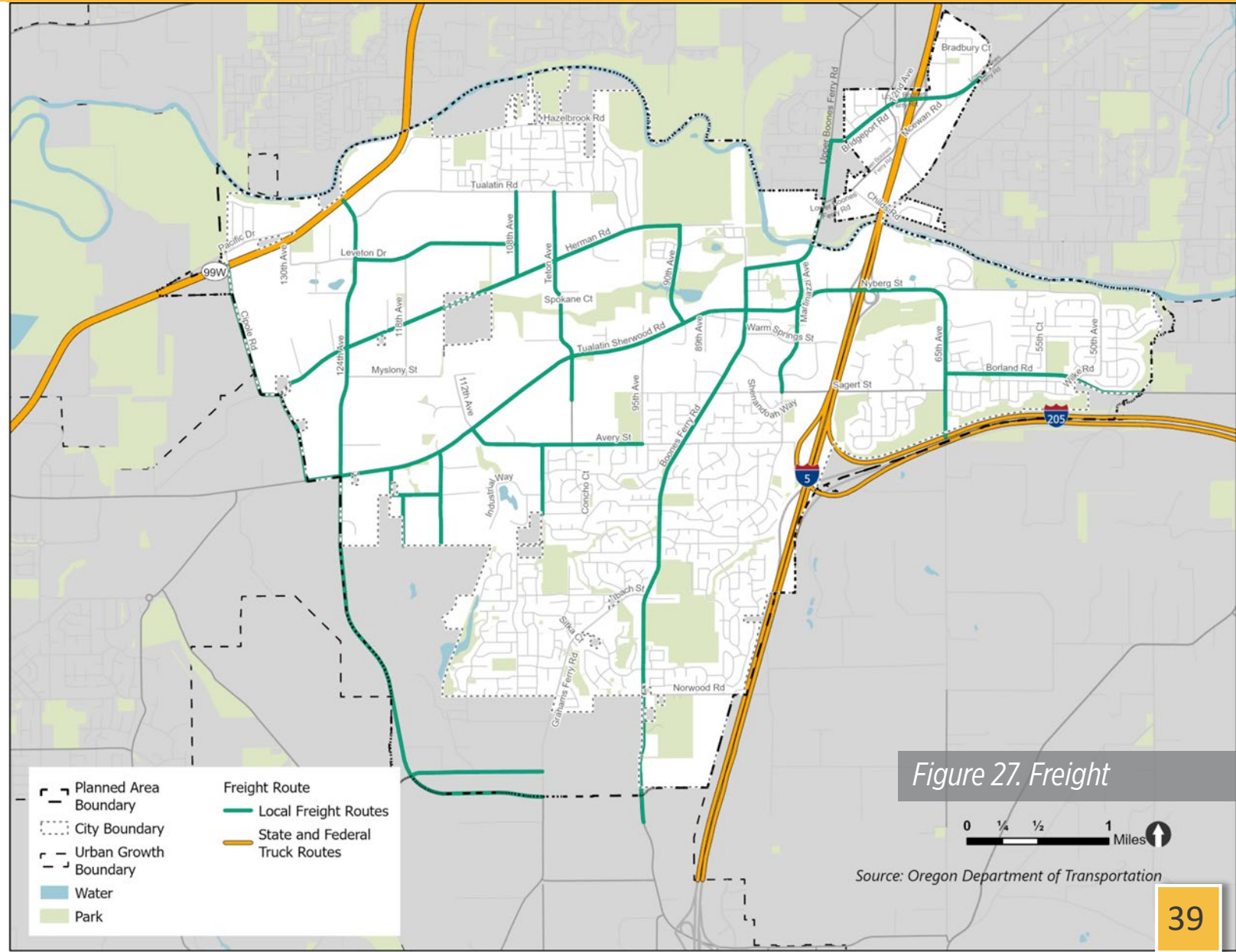


Figure 27. Freight

0 1/4 1/2 1 Miles

Source: Oregon Department of Transportation

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.

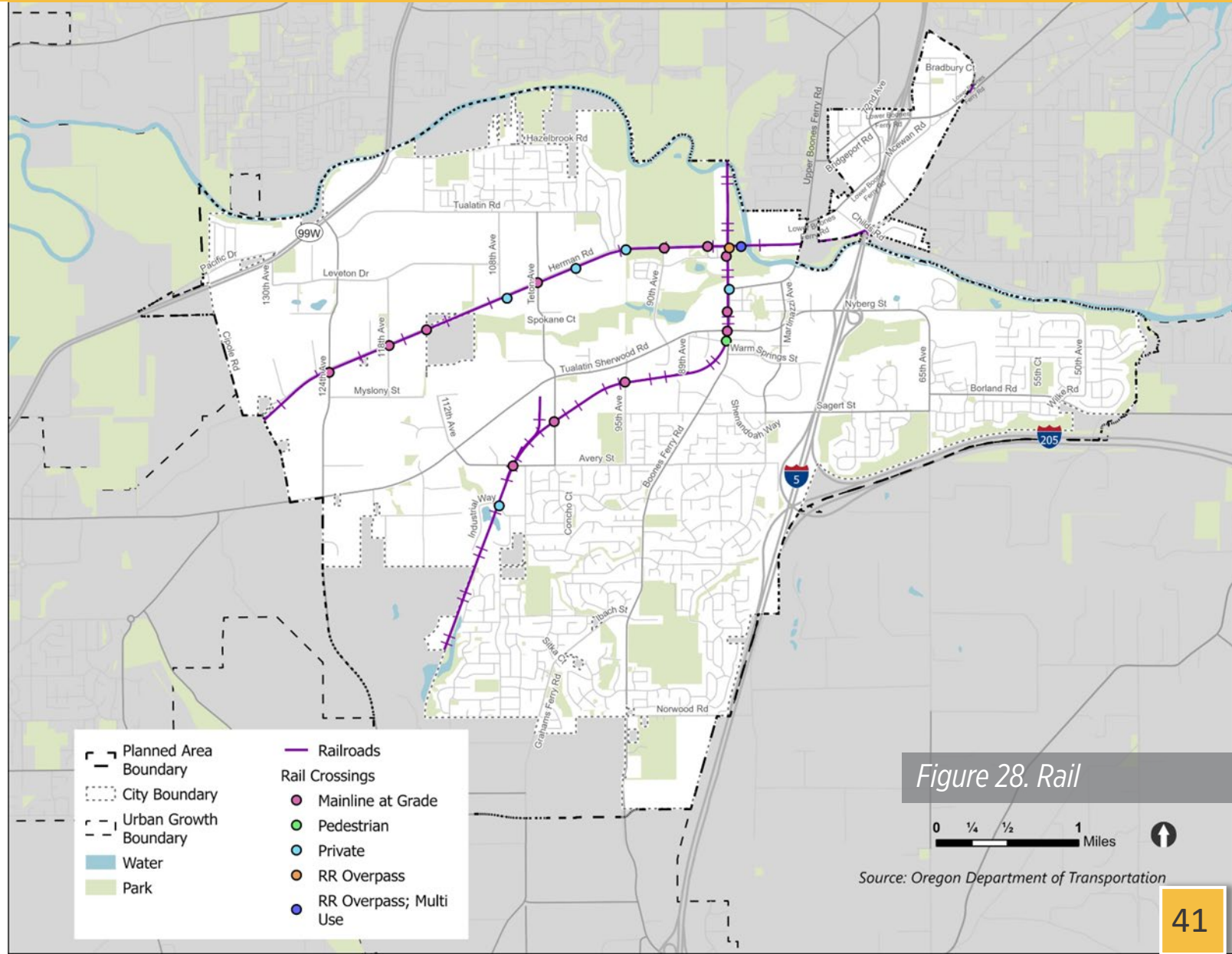


Figure 28. Rail

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

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.

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.

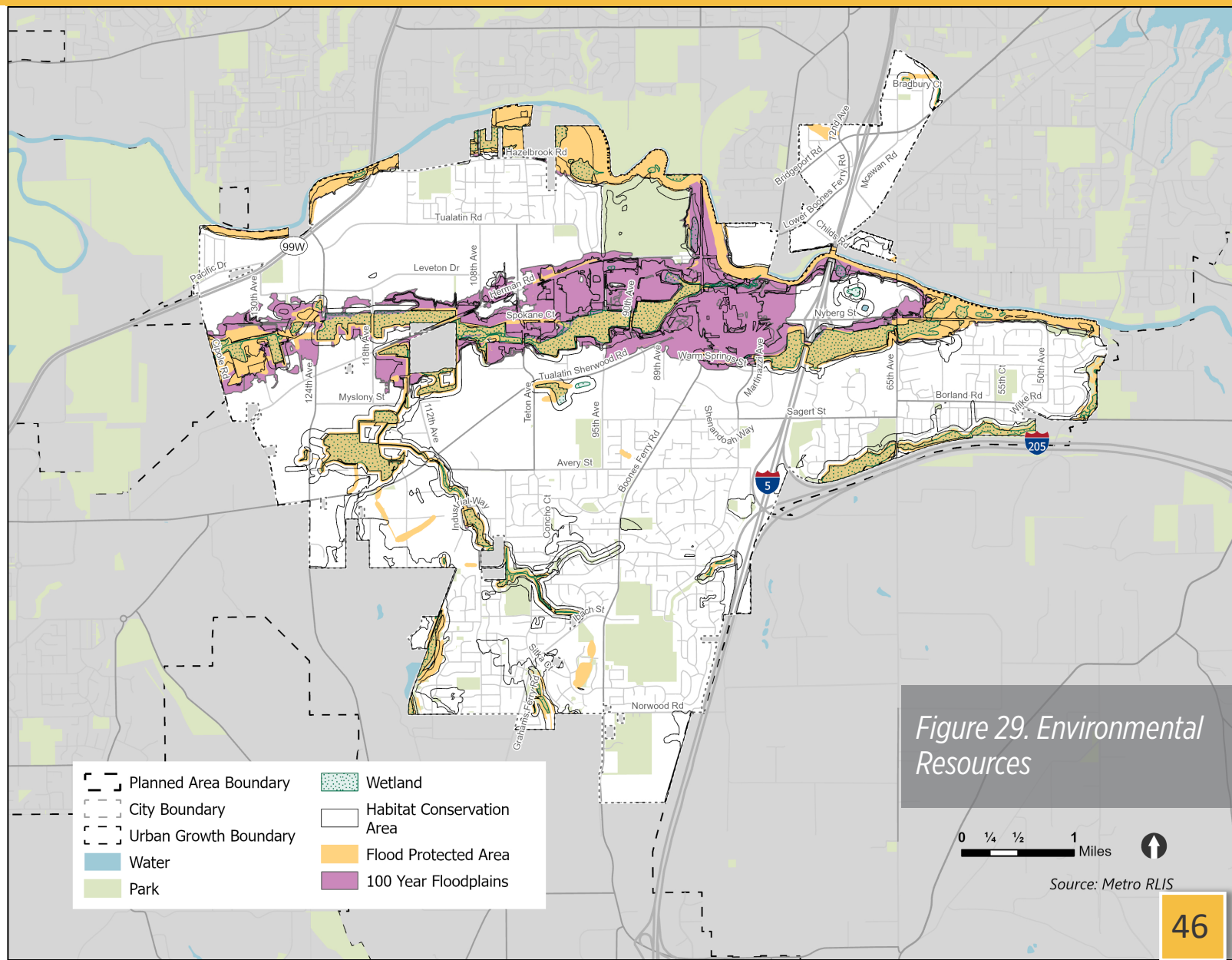


Figure 29. Environmental Resources

Source: Metro RLIS

Operations and Safety





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.

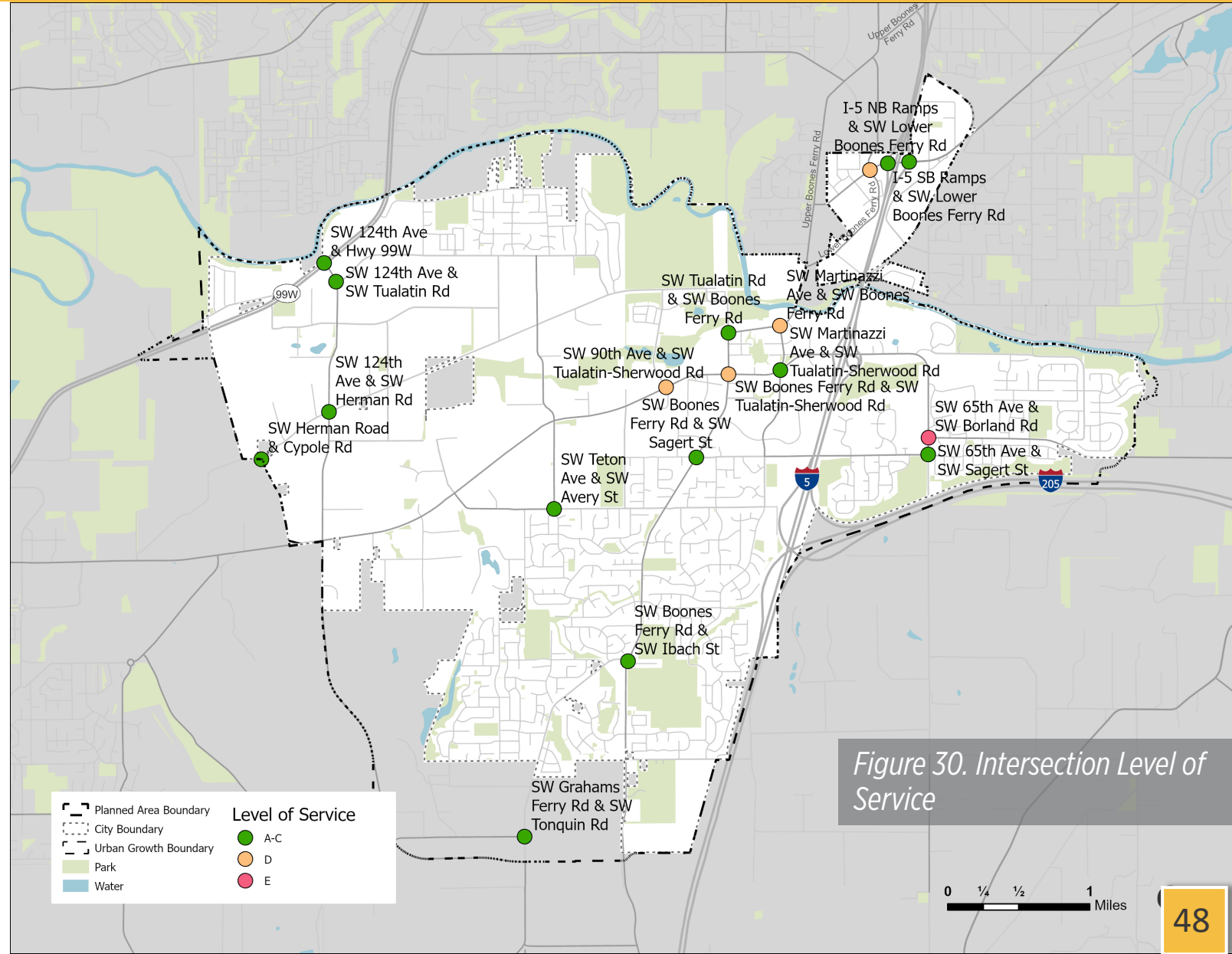


Figure 30. Intersection Level of Service



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.

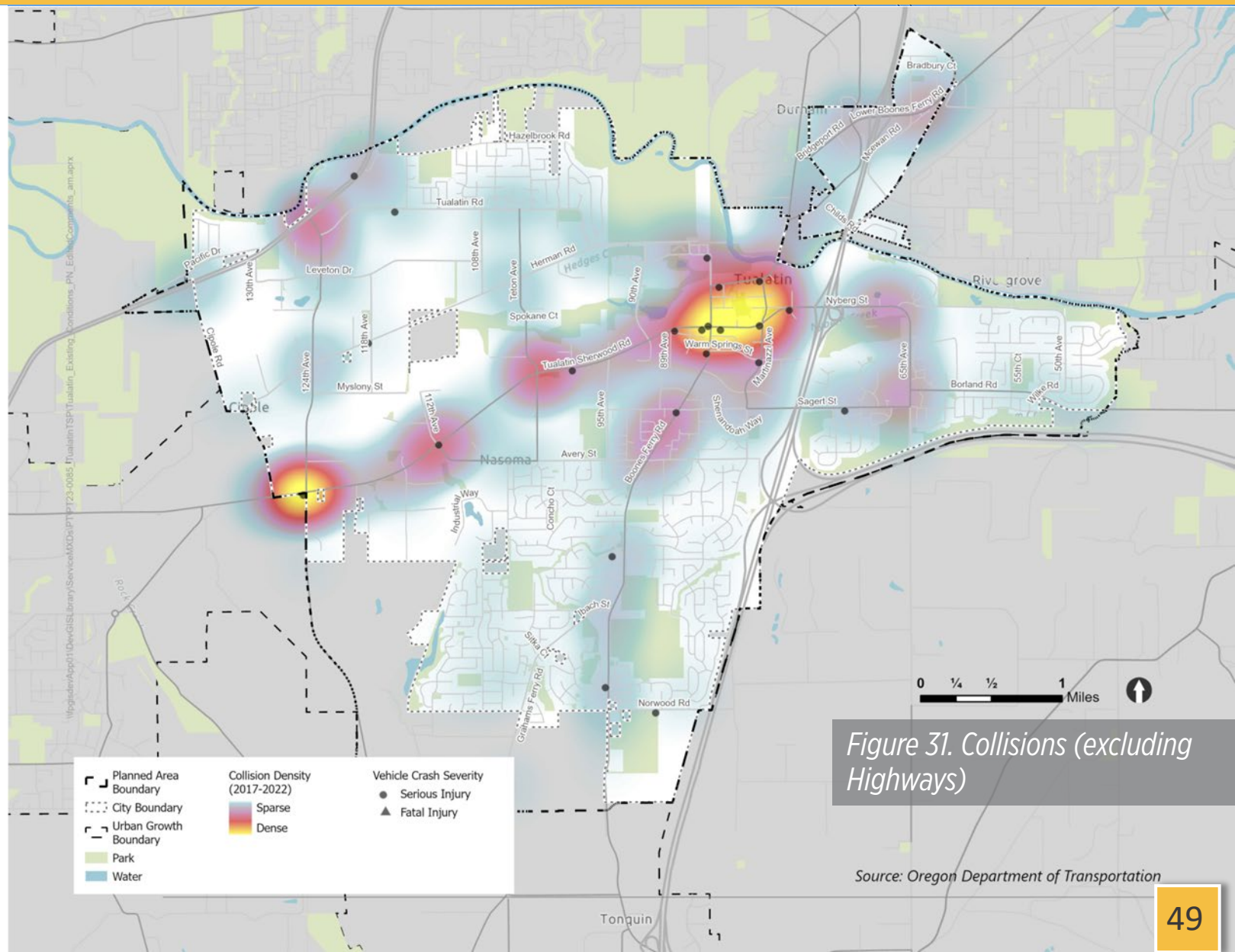


Figure 31. Collisions (excluding Highways)

Source: Oregon Department of Transportation

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

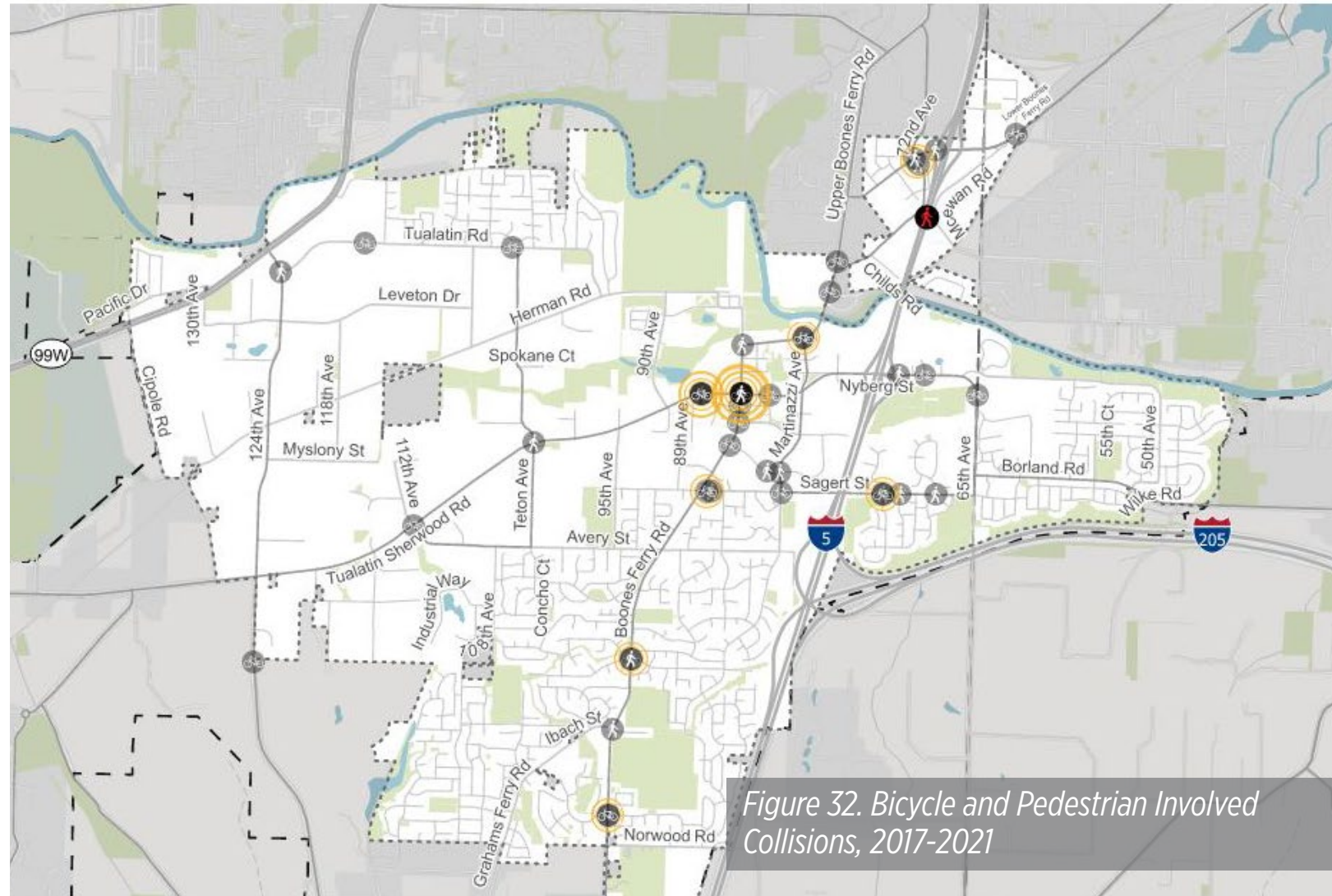


Figure 32. Bicycle and Pedestrian Involved Collisions, 2017-2021



Data source: Oregon Department of Transportation