
Chapter 3: Existing Conditions - DRAFT

This chapter documents the existing condition of the transportation system in the City of Junction City for all travel modes including pedestrian, bicycle, transit, motor vehicle, air, rail, pipeline, and water. The findings from this chapter will provide a baseline for determining the existing and future transportation needs and will guide development of transportation projects within Junction City. This chapter concludes with a summary of key findings that will be carried forward for consideration through the Transportation System Plan (TSP) update process.

STUDY AREA

The City of Junction City is located near the southern end of the Willamette Valley, approximately five miles northwest of Eugene and 26 miles south of Corvallis. OR 99 runs from north to south through the center of the city, splitting into OR 99W and OR 99E near the north city limits. OR 99 to the south (also known as Ivy Street through the city) creates a direct connection to the Eugene/Springfield area, Interstate 5, and the McKenzie Highway, which provides access to the Willamette National Forest and destinations in central Oregon. To the north, OR 99W parallels Interstate 5 for over 100 miles and connects Junction City to Corvallis and several other cities before terminating in Portland. OR 99E connects Junction City to Harrisburg and Albany and provides a route to Interstate 5 for travelers destined to the north. In addition, OR 36 intersects OR 99 near the south end of town and provides a connection to the coast and other destinations to the west.

Along with the state highway system, two railroad lines, owned by Union Pacific Railroad (UPRR) and Burlington Northern Santa Fe (BNSF), play a major role in Junction City's regional transportation network. These railroad lines parallel OR 99 to the east through Junction City, with the BNSF line running down the middle of Holly Street and the UPRR line running approximately 600 feet further east.

The study area for the TSP is shown in Figure 1 and includes the entire transportation network within the Junction City Urban Growth Boundary (UGB).¹

¹ The UGB shown is consistent with the adopted Comprehensive Plan as of September 14, 2012. An amendment to the Comprehensive Plan that would expand the UGB is currently under consideration. Should amendments to the Junction City Comprehensive Plan and UGB be adopted, the enclosed figures will be updated accordingly.

To understand existing travel characteristics and conditions in Junction City, an inventory of the existing transportation infrastructure was conducted in March of 2011. In addition to the citywide inventory, 14 study intersections were selected for focused operational analysis. These intersections are listed below and illustrated in Figure 1.

- Birch Street/1st Avenue-River Road
- Pitney Lane/1st Avenue-High Pass Road
- Prairie Road-Maple Street/1st Avenue
- Oaklea Drive/1st Avenue-High Pass Road
- Oaklea Drive/6th Avenue
- Oaklea Drive/10th Avenue
- Oaklea Drive/18th Avenue
- OR 99W/OR 99E
- OR 99/1st Avenue
- OR 99/6th Avenue
- OR 99/10th Avenue
- OR 99/Prairie Road
- OR 99/OR 36-Prairie Road
- OR 99/Milliron Road

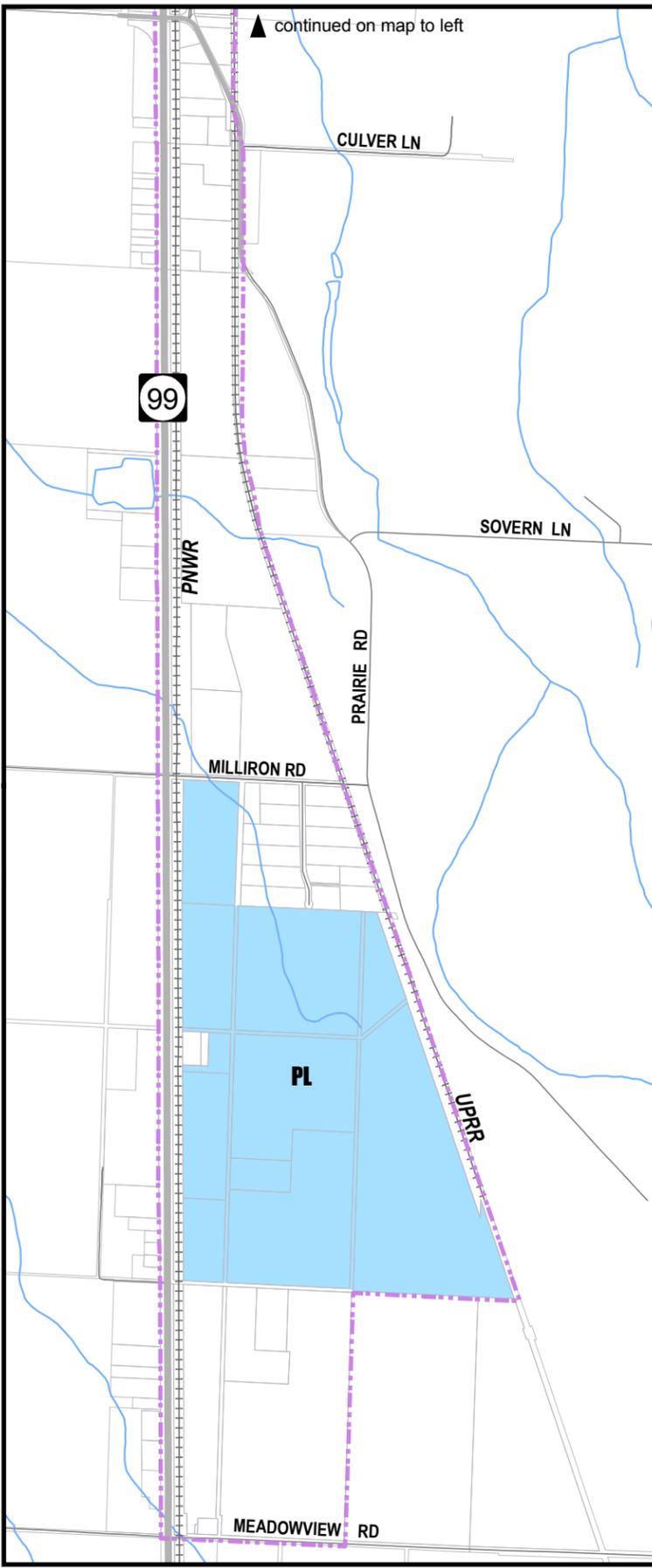
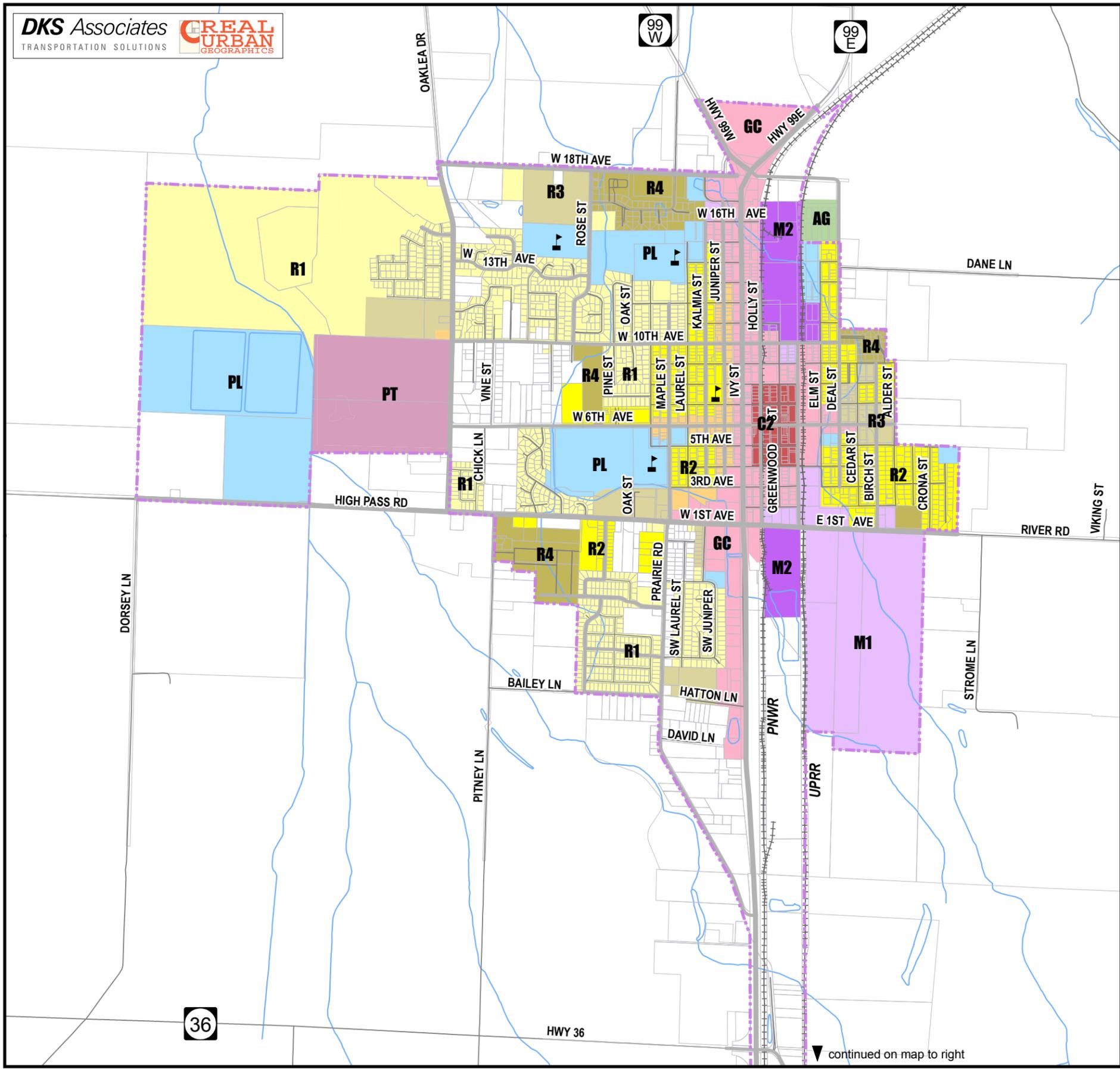
Land Use and Zoning

The relationship between existing land uses, zoning, Comprehensive Plan designations, and the transportation infrastructure in Junction City is an important element in understanding traffic patterns and potential for growth. Existing land uses, such as commercial, industrial, or residential development, create the traffic volumes experienced on the local transportation network today. The adopted zoning districts identify what type of development is allowed to happen in the future. Similarly, Comprehensive Plan designations identify types of development planned to be in place over the 20-year planning horizon. In many cases, the Comprehensive Plan designations align with current zoning districts. However, where they differ, future zoning changes must align with the Comprehensive Plan designations.

The adopted zoning districts and Comprehensive Plan designations within the Junction City UGB can be seen in Figures 2 and 3, respectively. Existing land uses align well with the current zoning districts, with commercial development and zoning centered on the OR 99 corridor and within the downtown area. Residential uses abut the commercial lands to the east and west, with most residentially-zoned land to the west due to the locations of the city limits and UGB. Industrial lands are located east of OR 99, with one area between 10th and 17th Avenues and the other from 4th Avenue to the southern UGB. As shown in the zoning districts map in Figure 2, there are several pockets of land west of OR 99 that are surrounded by the city limits but have not yet been annexed into the city.

As mentioned, the adopted Comprehensive Plan designations shown in Figure 3 align well with the zoning districts in Figure 2. When comparing the two, the most noticeable difference is the growth potential within the UGB to the south, where a significant amount of industrial land has been designated east of OR 99 extending south to Meadowview Road. To the west of OR 99, the commercial corridor and abutting residential land has also been extended, but only as far as Prairie Road. Also, the pockets of land that have not yet been annexed into the city (west of OR 99) are designated for residential development, matching surrounding uses.

<p>NOTE: Proposed Comprehensive Plan Amendments for residential and commercial districts are not reflected in Figure 3. These amendments include expansion of the current Urban Growth Boundary. Figure 3 will be revised if and when the proposed amendments are adopted.</p>
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Junction City
Transportation
System Plan

FIGURE 2
Zoning Districts

Legend

Zoning

- Agricultural
- Central Commercial
- Commercial/Residential
- General Commercial
- Light Industrial
- Heavy Industrial
- Public Land
- Professional/Technical
- Single-Family Residential
- Duplex Family Residential
- Multi-Family Residential
- Multi-Structural Residential

Roadways

- ARTERIAL
- COLLECTOR
- LOCAL STREET

SCHOOL

URBAN GROWTH BOUNDARY

TAX LOTS

RAILROAD

STREAM

0 1,000 2,000

Feet

36

HWY 36

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MEADOWVIEW RD

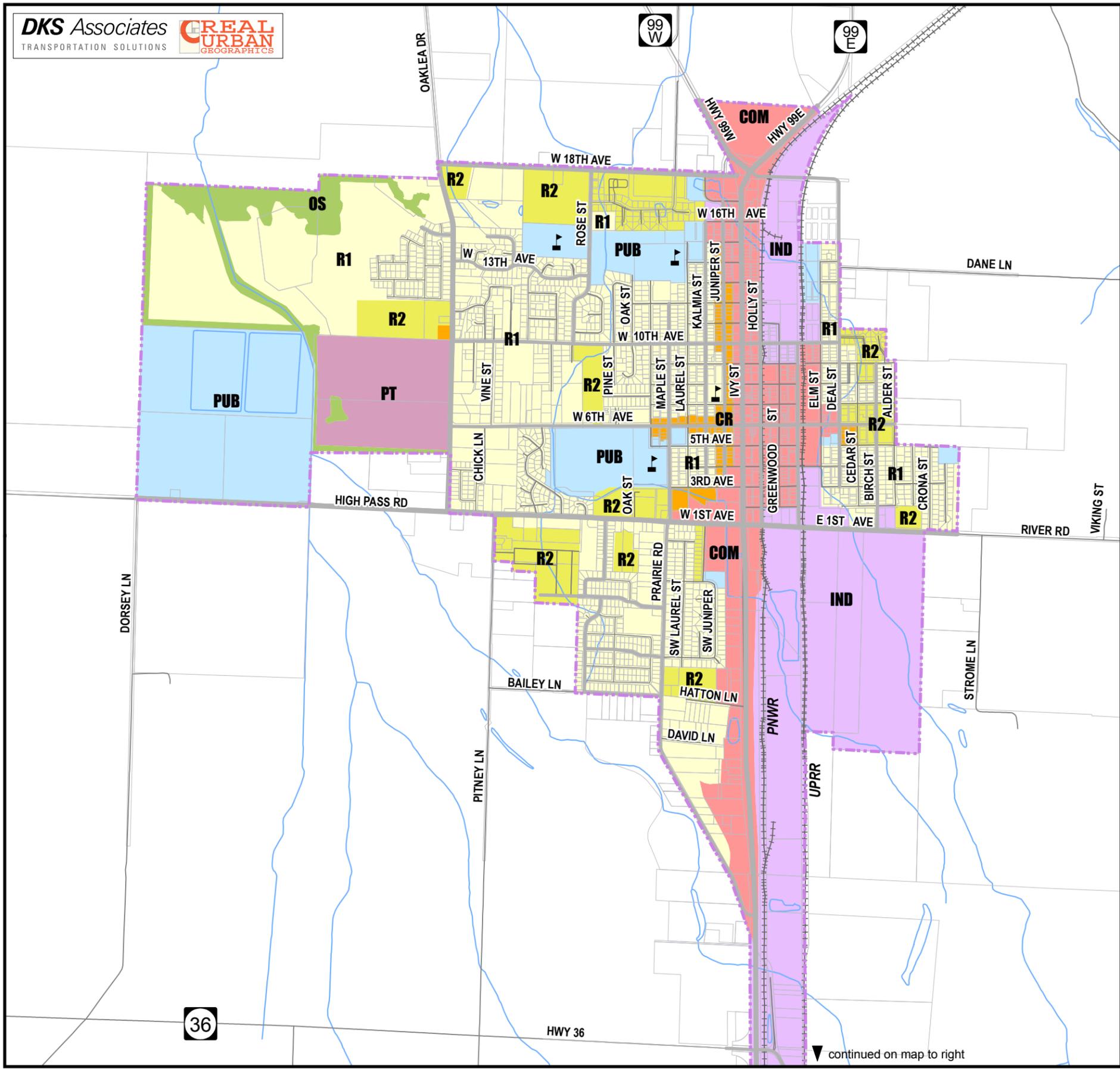
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UPRR

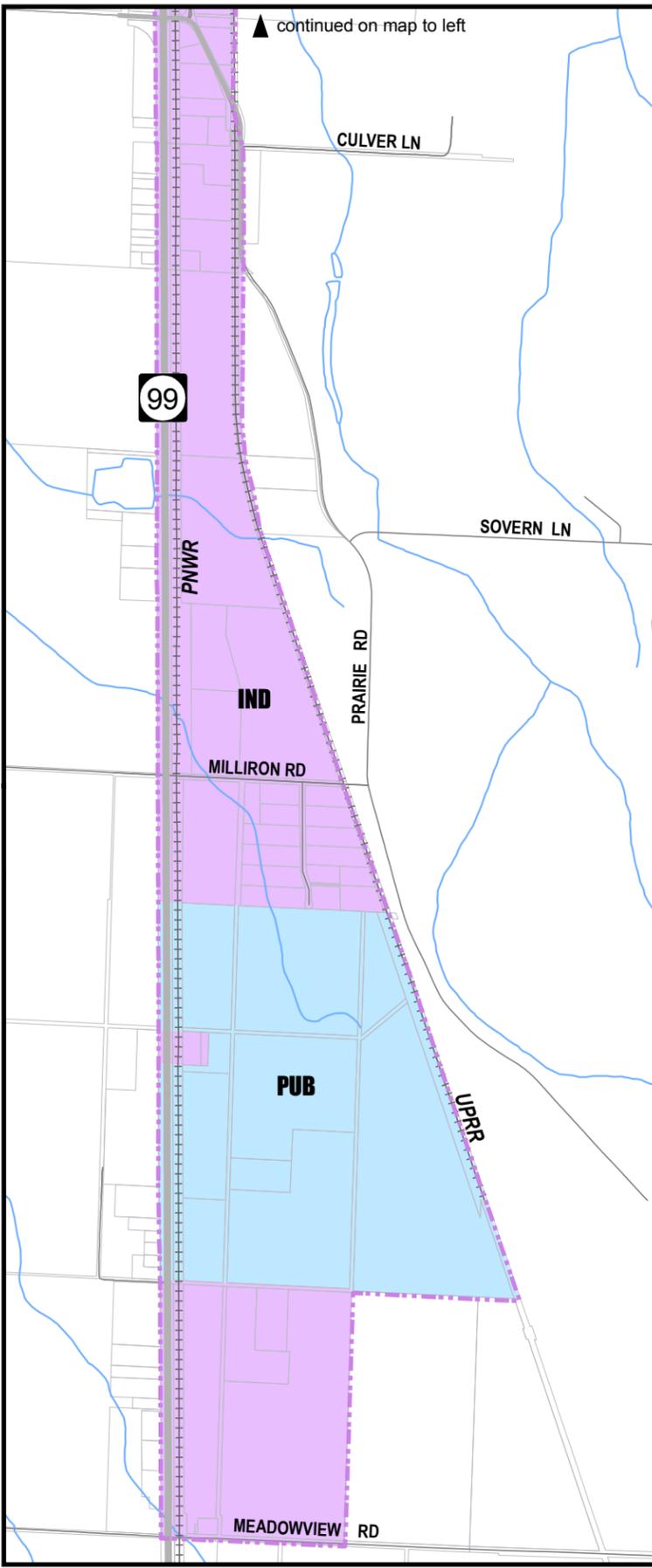
PNWR

99

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Junction City

Transportation System Plan

FIGURE 3
Comprehensive Plan Designations

- Legend**
- Designations*
- Commercial
 - Commercial/Residential
 - Industrial
 - Low Density Residential
 - Medium Density Residential
 - Open Space/Wetland
 - Professional/Technical
 - Public Land
- Roadways*
- ARTERIAL
 - COLLECTOR
 - LOCAL STREET
- SCHOOL
 - URBAN GROWTH BOUNDARY
 - TAX LOTS
 - RAILROAD
 - STREAM

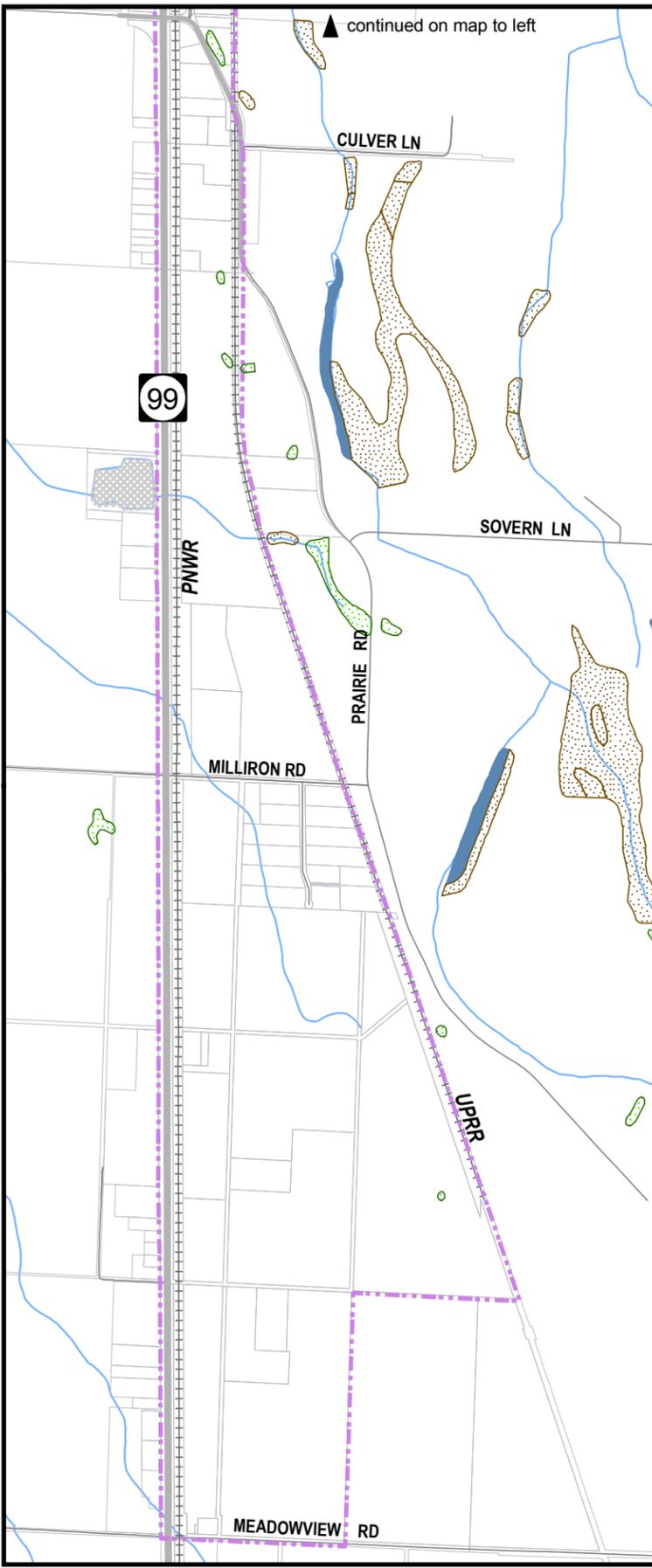
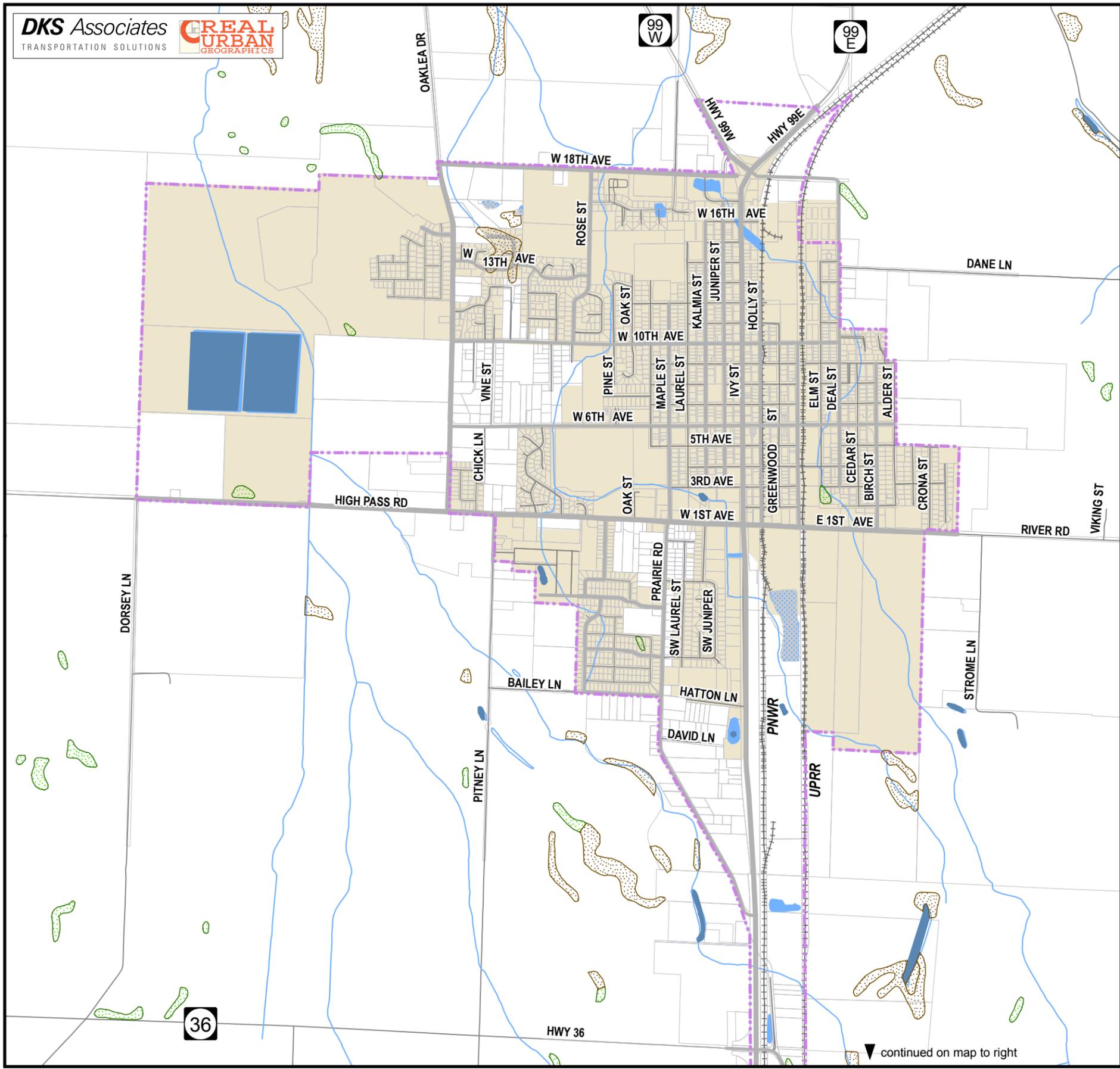


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Goal 5 Resources

Goal 5 is a broad statewide planning goal that covers more than a dozen resources, such as waterways, wildlife habitats, historic places, energy sources, aggregate, and scenic areas. Avoiding or minimizing impacts to such resources supports the development of a sustainable transportation system that reduces project costs and preserves those resources for future generations.

Streams and wetlands resources have been mapped in Figure 4, where information describing them was readily available. Historic and archeological sites were also identified, but the sites and specific locations are protected under state law, and have not been mapped to protect their potential sensitivity. However the archeological resources recorded in the study area vicinity will be referenced and considered as future potential projects are discussed. As improvement projects are developed for the TSP, potential conflicts with these resources will be included as part of alternatives evaluation.



Junction City

Transportation System Plan

FIGURE 4
Streams & Wetlands

Legend

- STREAMS
- Wetlands**
 - FRESHWATER EMERGENT WETLAND
 - FRESHWATER FORESTED/SHRUB WETLAND
 - FRESHWATER POND
 - RIVERINE
 - OTHER
- Roadways**
 - ARTERIAL
 - COLLECTOR
 - LOCAL STREET
- CITY LIMITS
- URBAN GROWTH BOUNDARY
- TAX LOTS
- RAILROAD

0 1,000 2,000 Feet

36

HWY 36

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MEADOWVIEW RD

PEDESTRIANS

The livability of a city is in part determined by citizens' perceptions of their ability to safely and comfortably walk to key destinations such as schools, parks, local shopping, and other services. The pedestrian system serves all types of pedestrians making different types of trips. It is especially important to provide safe pedestrian accessibility for children, seniors, low-income households and other transportation-disadvantaged populations. Walkable cities promote independence for a wide range of people that may not be able to drive and lessen reliance on travel by motor vehicle.

Junction City has the potential to have a well-utilized pedestrian network due to the generally compact layout of most of the activity generators (downtown shops, schools, parks, and community centers). Most activity generators, as well as most of the transportation-disadvantaged populations, are located in or near the city-core, within a ½-mile walk between key locations. This proximity helps to create a very walkable environment because most pedestrian trips are less than one mile in length, with trips less than ½-mile generally considered to be within a comfortable walking distance.

To improve the pedestrian environment in Junction City, the activity generators need to be better connected; with fewer barriers to direct travel. Gaps in pedestrian facilities should be filled to provide a grid of travel ways that promotes both short and long-distance trips. Pedestrian facilities also need to be maintained to keep the environment comfortable and attractive to all potential users.

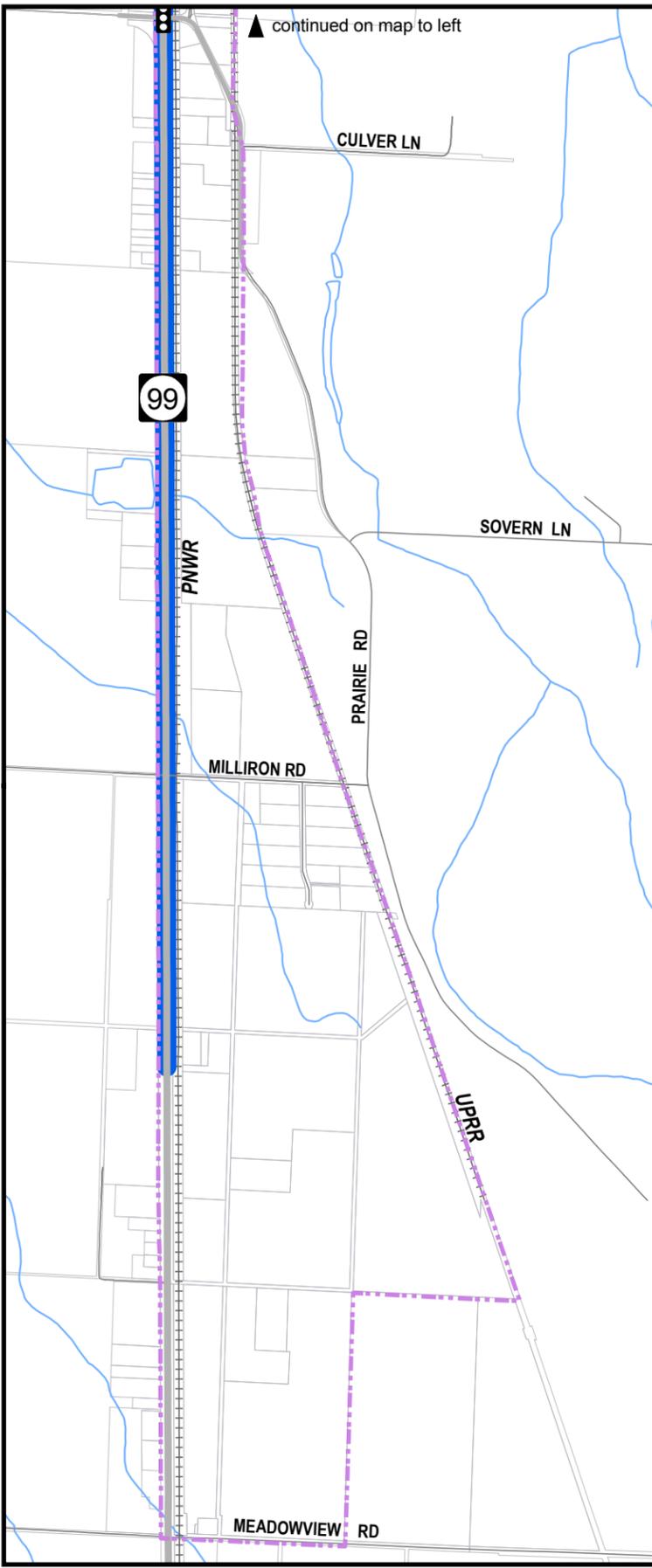
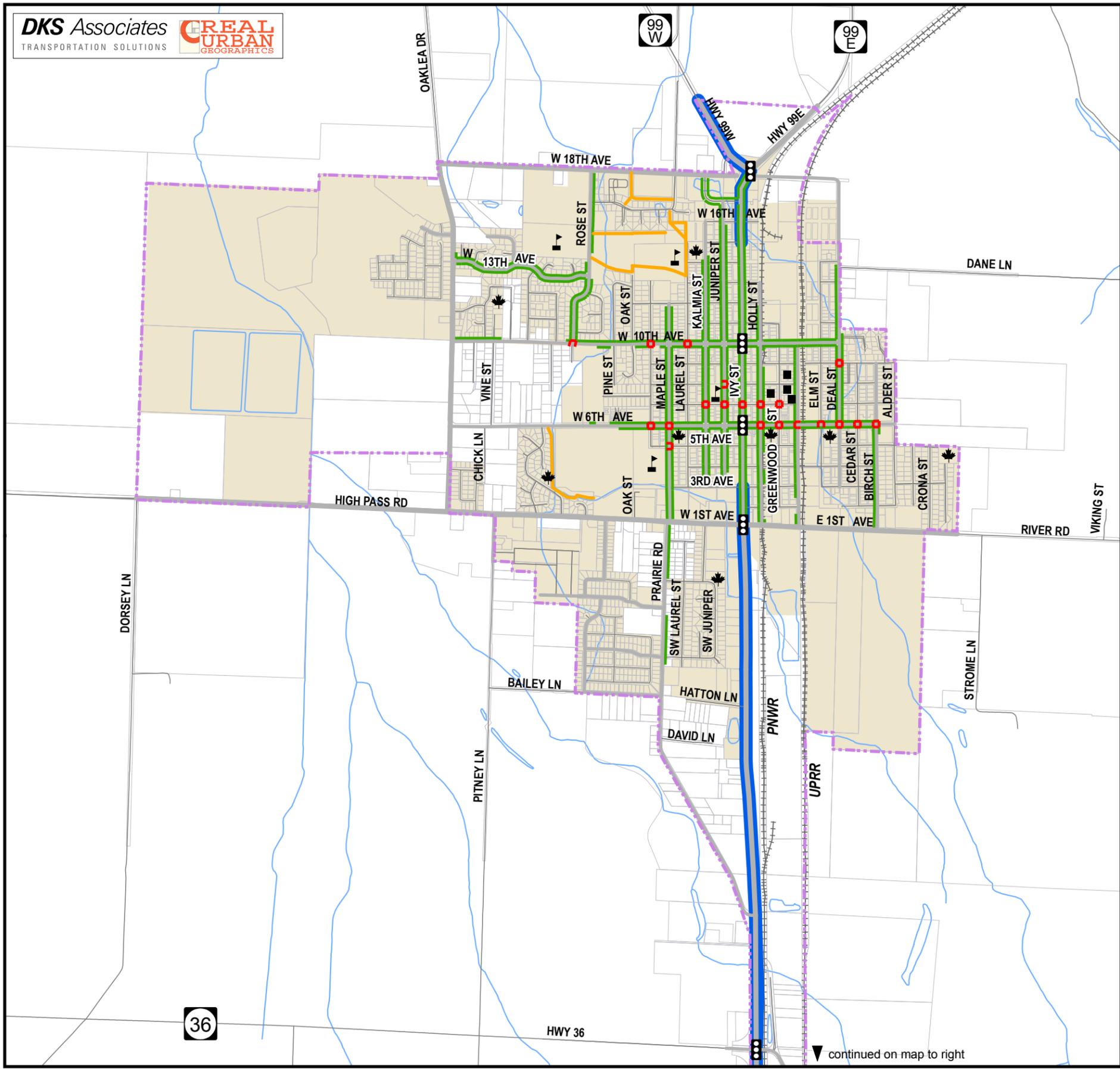
This section describes the current pedestrian facilities within Junction City, including sidewalks, shared-use paths, and crossings.

Sidewalks

The primary form of pedestrian infrastructure is sidewalks; generally located along roadways. It is important that sidewalks be located along arterial and collector streets so that pedestrians have convenient access to the same high-demand locations as motor vehicles, while having physical separation from motor vehicle travel. Sidewalks should be continuous and should provide increased connectivity as pedestrians get closer to major facilities and activity generators.

Figure 5 presents an inventory of pedestrian facilities on the arterial and collector street network in Junction City. The arterial and collector streets located near the downtown core have sidewalks on either one side or both sides of the street. The presence of sidewalks on arterials and collector streets generally becomes less common with increased distance from downtown. Sidewalks on neighborhood streets are more common in newer residential developments.

Significant gaps in the sidewalk network occur along Oaklea Drive, 18th Avenue, 1st Avenue, and the western ends of 10th and 6th Avenues. Sidewalk infill is also needed on Prairie Road from 1st Avenue to at least Bailey Lane. In addition, the layout of many neighborhoods and streets between Maple Street, 1st Avenue, Oaklea Drive, and 18th Avenue has limited connectivity, making walking distances to many destinations much longer. This limited connectivity also has an impact on the accessibility of area schools, which has resulted in some students cutting through private property to shorten their trips, such as reported at Scandia Village near the high school.



Junction City

Transportation System Plan

FIGURE 5
Pedestrian & Bicycle Facilities

Legend

- TRAFFIC SIGNAL
- Arterial and Collector Inventory**
 - MARKED CROSSWALK
 - EXISTING SIDEWALK
 - SHOULDER BIKEWAY
 - SHARED-USE PATH
- Roadways**
 - ARTERIAL
 - COLLECTOR
 - LOCAL STREET
- Places of Interest**
 - CIVIC/GOV'T
 - PARK
 - SCHOOL
- CITY LIMITS
- URBAN GROWTH BOUNDARY
- TAX LOTS
- RAILROAD
- STREAM

0 1,000 2,000 Feet

36

HWY 36

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MEADOWVIEW RD

99

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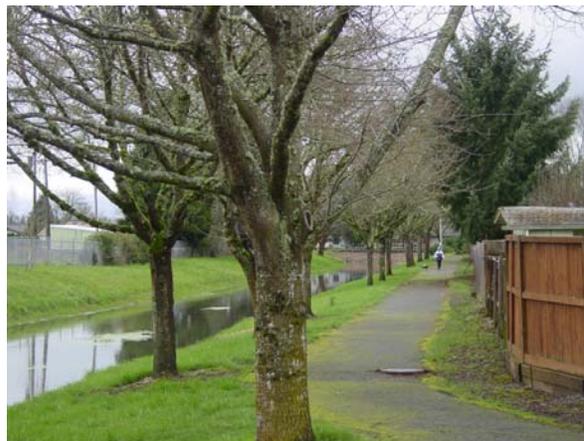
Sidewalks along roadways may be located either directly adjacent to the curb or separated from the road by landscaping or planter strips. Along higher-speed roadways (especially 45 mph and above), buffers between pedestrians and motor vehicles are recommended to provide a comfortable walking environment. In high pedestrian use areas such as downtown, as much as 13 feet of width is preferred to allow for storefront displays, outdoor seating, parking meters, utility poles and other features in addition to providing a comfortable walkway. Most sidewalks in Junction City are five to six feet wide, including many of the sidewalks in the downtown, which is not wide enough to accommodate a furnishing zone or storefront displays.

Existing sidewalk facilities in the city should be enhanced to provide an improved pedestrian environment. The sidewalks along OR 99 (Ivy Street, the primary north-south arterial through downtown Junction City) are five to six-foot wide, curb-tight sidewalks, which in many places are abutting building frontages. Due to OR 99 being a designated truck and freight route, wind gusts and spray from heavy vehicles can be uninviting for pedestrians using the facility. In contrast, some older neighborhoods along Maple Street, Kalmia Street, and Juniper Street, have more attractive walking environments, with fairly continuous sidewalks buffered by planter strips.

Sidewalks and other pedestrian facilities need to be compliant with Americans with Disability Act (ADA) standards and regulations. It is important for all users that sidewalks be well maintained and free of significant obstacles to travel. Some sidewalks in the city are cracked or crumbling due wear, weathering, and underground roots. In addition, flooding can occur during heavy rains. Plugged drains were identified along Juniper Street and Kalmia Street.

Shared-Use Paths

Shared-use paths are separated transportation facilities that enhance access and circulation for non-motorized modes of travel. Shared-use paths may be paved or gravel and particularly support recreational uses such as walking, jogging, and bicycling. Shared-use paths are generally wider than sidewalks, enough for safe passing to occur between different types of users. The preferred width for shared-use paths is 12 feet wide in urbanized and high-use areas, with a minimum width of eight feet allowable in short, constrained locations where necessary.



Shared-Use Path along west side of Junction City High School

The pedestrian and bicycle network in Junction City includes several shared-use paths, primarily around the Junction City High School and Laurel Elementary School. They are typically eight feet wide and paved with asphalt or concrete.

Street Crossings

Because street crossings expose pedestrians to conflicts with motor vehicle traffic, they can be safety concerns and may act as barriers to a well-connected pedestrian network. Factors such as

the crossing width, speed of traffic, volume of traffic, and visibility play a significant role in the level of comfort and safety of a crossing.

While there are many different types of treatments available to improve pedestrian crossings, the two most commonly seen in Junction City are traffic signals and striped crosswalks. Marked crosswalks on arterial and collector streets and intersections with traffic signals are illustrated in Figure 5.

Traffic signals are commonly installed to facilitate the movement of motor vehicles, but they also provide controlled crossing opportunities for pedestrians. All of the traffic signals in the city are located along OR 99. While these intersections do provide controlled crossings and most have ADA accessible curb ramps, they are also very far apart. The closest pair of signals (10th and 6th Avenues) are approximately ¼-mile apart. For a corridor surrounded by a grid of streets providing pedestrian access every 300 feet, these signals are too far apart to be usable for many pedestrians.

Off of OR 99, marked crosswalks are most frequently located along 10th Avenue and 6th Avenue. Many marked crosswalks connect to curb ramps, but most ramps are of older construction and not ADA accessible. In some cases, the curbs have no ramps at all.

Unique crosswalk designs using green paint were identified in school zones and in the downtown. However, because the use of green paint for such markings does not comply with the Manual on Uniform Traffic Control Devices (MUTCD), it may create a liability for the City should an incident occur. Therefore, unless this treatment is being tested as part of a state or federal sanctioned pilot project, it is recommended that they be removed and replaced with compliant designs.



Crosswalk design using green paint

Pedestrian Activity

Pedestrian counts were taken at study intersections during weekday afternoon peak periods to help gauge the level of activity. These counts were taken at the same time as the motor vehicle counts; primarily during September 2010, when school was in session. The weather was conducive to walking - dry with no precipitation and a high temperature of 81 degrees.

The most active location was the intersection on OR 99 with 6th Avenue, which experienced more than 150 pedestrian crossings from 3:00 to 6:00 p.m., with as many as 70 crossings occurring in one hour. The intersection on OR 99 with 10th Avenue had the second-most pedestrian crossings, but totaled only 75 during the three-hour period. Other intersections along OR 99 experienced far fewer crossings, with only the intersection at 1st Avenue serving a notable demand of about 20 crossings in the afternoon peak.

Off of the OR 99 corridor, the intersection on 1st Avenue with Maple Street/Prairie Road experienced 42 crossings during the afternoon peak. However, the demand at all other non-highway study intersections was very low.

With the flat terrain, compact form, and good overall connectivity, the design of Junction City makes walking a viable travel option. The pedestrian crossing counts and field observations confirm that many people do choose to walk and that demand can be concentrated in areas where connectivity is limited (such as 1st Avenue/Maple Avenue/Prairie Road) or where opportunities to traverse barriers are provided (such as the signals on OR 99).

Pedestrian Collision History

A review of the Oregon Department of Transportation's (ODOT's) collision data from January 1, 2007, to December 31, 2009, was conducted to help better understand pedestrian safety issues in Junction City. The collision data identified two accidents involving pedestrians at the intersection of OR 99 and 6th Avenue. Both accidents occurred when a motor vehicle was making a left turn from 6th Avenue heading south onto OR 99 (Ivy Street). The pedestrians were crossing east-west on the south leg of the intersection. In each case, the weather was clear and dry and the pedestrians hit were in their teens (15 and 17, respectively) and sustained minor injuries. The accidents occurred between 2:00 and 3:00 p.m. Due to the location of the Junction City High School, these teenagers may have been leaving school on their way home. Through field observations during this time period, it was confirmed that highway crossings by teenagers are a common occurrence. However, it was also noted that many teenagers did not use the signalized crossing properly and attempted to cross while highway traffic had the right of way.

Two additional locations within the city also experienced pedestrian accidents. In the first accident, two pedestrians were hit at the intersection of Holly Street and 10th Avenue when a vehicle made a westbound left. The injuries of the pedestrians from this accident were moderate to low severity. The other accident location occurred at Coral Street and Prairie Road. At this location the driver also made a westbound left and hit a pedestrian crossing from the west to the east side of the street. The pedestrian experienced injuries of moderate severity.

BICYCLES

Traveling by bicycle can result in environmental and health benefits, while also saving money and reducing traffic congestion for others. After walking, bicycling is the second most common non-motorized mode of transportation. Bicycle travel can facilitate longer non-motorized trips, well beyond the ½ mile to 1 mile limit for most pedestrian trips.

Bikeways are required on all arterials and collectors by OAR 660-012-0065. Bikeways can be provided in a number of ways, but most commonly include bike lanes, shoulder bikeways, shared roadways, or shared-use paths. This section describes the findings from an inventory completed of Junction City's existing bicycle facilities. Existing bicycle facilities can be seen in Figure 5.

Bike Lanes

Bike lanes are 5 to 6-foot wide shoulders that have been designated for bicycle use, most commonly by pavement markings. There are no designated bike lanes in Junction City.

Shoulder Bikeways

Shoulder bikeways can be any roadway shoulder where bicyclists are allowed to ride, although the route is not specifically designated for bicycle use. To comfortably accommodate bikes, these shoulders should preferably be 6 feet wide, or at least 5 feet wide where there are adjacent barriers such as curbs or guardrail. Shoulders as narrow as 4 feet can be used in constrained areas when needed.

At the north end of the city on OR 99W and OR 99E, most of the shoulder is wide enough to be used by bicyclists. South of the intersection of OR 99W with OR 99E, adequate shoulders are available for bicyclist through the Flat Creek bridge. However, from the south end of the bridge to 3rd Avenue, there are no shoulders or separate bicycle facilities available on OR 99 (Ivy Street). During our field visit, several bicyclists were seen in this area riding down the sidewalks along OR 99. South of 3rd Avenue, the shoulders widen again and are adequate for bicycle use through the remainder of the study area.

Off of OR 99, the only roadway with consistently wide enough shoulders to accommodate bike travel is 1st Street east of OR 99.

Shared Roadways

Shared roadways are virtually any road where bikes ride in travel lanes with cars because separate facilities (e.g., bike lanes or shoulders) are not available. While this may not be suitable for safe and comfortable travel in some situations, generally, this can be a cost-effective and acceptable solution on roads where average daily traffic volumes are at 3,000 vehicles per day or fewer and speeds are 25 mph or lower. Routes can be further enhanced with warning signing and pavement markings to let drivers know to expect bikes on the road.

Most roadways in Junction City could be considered shared roadways. Even on many of the arterial and collector streets, traffic volumes are low enough to accommodate a shared roadway, but speeds may be too high. As decisions are made regarding where bike lanes and other types of bike facilities should be constructed in the future, areas where shared roadways could be safely created at lower costs should be considered.

Shared-Use Paths

The shared-use paths in Junction City are discussed in the Pedestrian section. The paths are paved and in good condition for bicycles. At 8 feet wide, they are somewhat narrow for frequent bicycle use. Limited bike route signage is located along the shared-use paths and the existing signage is in poor condition.

Bike Parking

Bike parking is an essential element of bike facility infrastructure because it allows users to feel secure in knowing their bike is safe while they access destinations such as schools, work places, and local businesses.

Bicycle parking was identified at a few key locations such as the Junction City Library, the Community Services Center, and at the local schools. The existing bike racks are of the older wave and modified-grid design, which are generally less space efficient for sidewalk application and less secure than newer inverted-U bike racks, also known as staple racks. In addition, most bike parking locations are not in highly visible areas, which tend to deter theft.



Modified-Grid Style Bike Parking at Oaklea Middle School

Bicycle Activity

Bicycle counts were taken at study intersections at the same time as the motor vehicle and pedestrian counts, which occurred primarily in September 2010. Intersection activity was measured during the afternoon peak period from 3:00 to 6:00 p.m.

In general, bicycle activity was fairly low with only a few bicyclists observed at most intersections during the three-hour afternoon period. The greatest amount of activity was at the intersections of OR 99 at 6th Avenue and 1st Avenue at Maple Street/Prairie Road where 13 and 12 bicyclists were observed, respectively. At the OR 99/6th Avenue intersection, most bicyclists were crossing the highway.

While the data used is very limited, it does suggest that there may be a moderate amount of bicycle travel in the city and that it is being channeled into key locations where connectivity is limited or where crossings of busy roads are facilitated. A better picture of the existing bicycle activity levels may be obtained by counting bicyclist at key locations during periods known for having higher activity, especially near schools during hours immediately prior to and immediately following the school day.

Bicycle Collision History

A review of ODOT's collision data from January 1, 2007 to December 31, 2009 was conducted to help better understand bicycle safety issues in Junction City. Within this time period, one bicycle collision was reported. The collision involved a 13-year old bicyclist traveling north to south on Kalmia Street colliding with a motorist on 5th Avenue traveling from east to west. The bicyclist sustained minor injuries.

TRANSIT

Public travel options are provided to Junction City by different forms of transit, which operate on fixed schedules and routes or are demand-responsive. Public transit is a way to provide citizens with mobility without using or owning a personal vehicle. It is particularly important for transit-dependent populations: the young, the elderly, persons with disabilities, and/or lower incomes. A transit system can enhance the livability of a city and provide economic benefits by reducing roadway volumes, and providing safe and efficient means to access shopping and employment centers. The existing fixed route, paratransit, and inter-city passenger bus services in Junction City are described in this section.

Fixed Route Transit Service

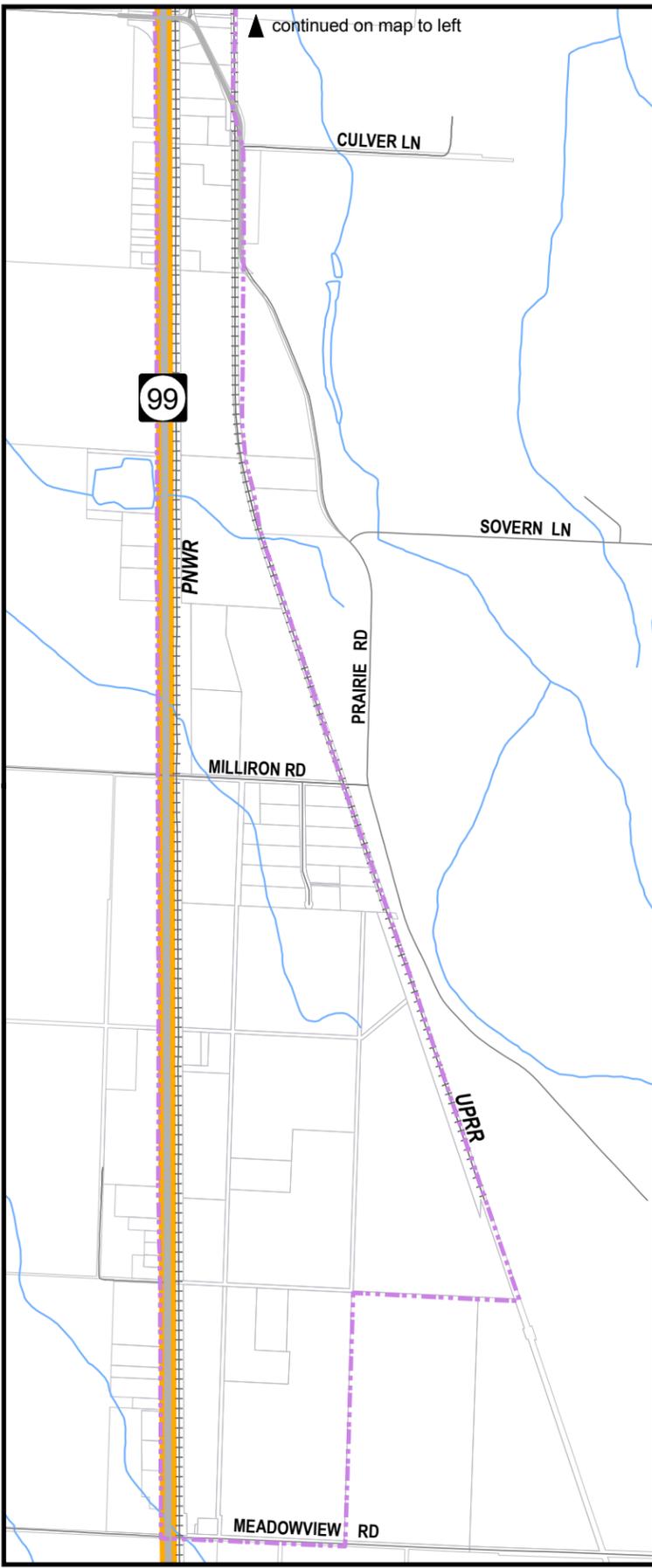
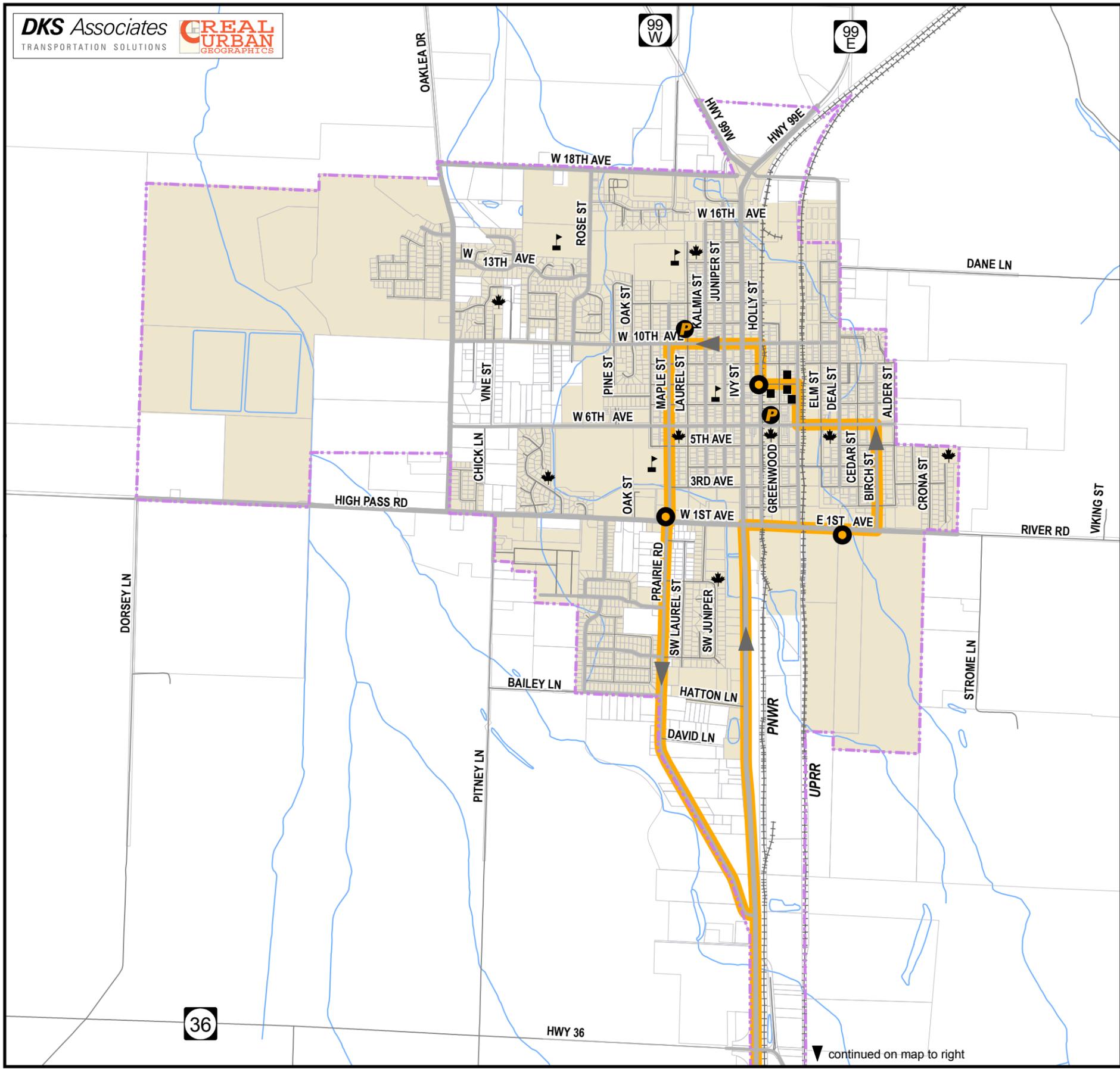
Lane Transit District (LTD)

Lane Transit District (LTD) is a fixed-route public transit provider operating within Lane County, Oregon. Since 1970, LTD has been providing transport services to the Eugene-Springfield metropolitan area and its surrounding communities. Route frequencies and locations continue to evolve based on rider volumes and available resources.

Junction City is served by one designated Rural Route, which is mapped in Figure 6. Route 95 picks up Monday through Friday two times during the morning (6:44 a.m. & 8:00 a.m.), midday (12:00 p.m. & 3:14 p.m.), and evening (5:16 p.m. & 6:13 p.m.) hours and runs once in the morning and the evening on Saturday. No Sunday services are provided and on Saturday, the route varies and does not serve Oak Street due to the Junction City Saturday Farmer's Market. Route 95 has six stop locations per their published route map, three of which are located in the Junction City UGB. Two Park & Rides are located along Route 95 in Junction City at the Junction City United Methodist Church (70 West 10th Avenue) and in Downtown Junction City (West 7th Avenue and Holly Street). The Park & Rides are free and provide direct bus service to destinations within the service area. All buses are equipped to be Americans with Disabilities Act (ADA) accessible and have bike racks.



Bus stop on Maple Street



Junction City
Transportation System Plan

FIGURE 6
Transit

Legend

- BUS STOP
- BUS ROUTE
- PARK AND RIDE

Roadways

- ARTERIAL
- COLLECTOR
- LOCAL STREET

Places of Interest

- CIVIC/GOVT
- PARK
- SCHOOL

- CITY LIMITS
- URBAN GROWTH BOUNDARY
- TAX LOTS
- RAILROAD
- STREAM

0 1,000 2,000
Feet

At the time of the last TSP update, Junction City did have another service route. Route 95X was an express route with limited stops, however, the route was discontinued in August 2008 due to poor ridership. LTD has seen an overall decrease in ridership from residents in Junction City from approximately 61,000 passengers in 2005 with Route 95 and 95X in service, to roughly 46,000 passengers in 2010 with only Route 95 serving the community. Some of the ridership decrease is a result of jobs lost in Junction City.

To assist older adults and persons with disabilities, LTD has developed an EZ Access Program, which offers special transportation services.² The EZ Access Program provides half fare for persons with disabilities and Medicare cardholders. Their Honored Rider Program offers free bus passes to anyone older than 65 years of age. LTD also conducts individualized training for older adults and persons with disabilities to learn how to use the accessible features of the system. The accessible features of the system include: on-board announcements at stops, kneeling buses to make the first boarding step easier to reach for those with trouble climbing steps, and lifts and ramps to making boarding easier for those using a mobility device or who are unable to use stairs. In addition, LTD has extended paratransit service (RideSource) that provides a range of transportation services to people who are unable to use the bus. However, as discussed below, paratransit service is not available to Junction City.

Benton County Special Transportation Fund (STF)

Benton County's Special Transportation Fund (STF) is a program that promotes Benton County public transportation options for seniors and persons of any age group with disabilities. As part of the STF, Benton County has a rural transportation service that provides transportation opportunities for people residing, working or doing business north and south of Benton County. The rural transportation service has one route from Adair Village to Corvallis. This service runs five days a week and operates four round trips per day. Benton County did have an 99 Express Routes from Monroe to Junction City, however, due to low ridership and budget cuts the route was removed.

Paratransit Transit Service

A demand-response service for persons unable to use the bus is provided by LTD as part of their requirement to meet the Americans with Disabilities Act. This act requires that a complementary paratransit service be provided when a fixed-route system is operational.³ LTD provides their required paratransit service through a program called RideSource. The service boundary for RideSource is the Eugene-Springfield Metropolitan Planning Organization (MPO). Junction City would need to join the MPO to receive complementary paratransit service from RideSource.

² *RIDER'S DIGEST Routes and Schedules*. Lane Transit District. January 9, 2011.

³ *Part 37-Transportation Services for Individuals with Disabilities (ADA)*. ADA Regulations, Guidance, and Procedures. Federal Transit Administration. Revised October 1, 2007. Web address: http://www.fta.dot.gov/civilrights/ada/civil_rights_3906.html.

Inter-City Passenger Bus and Rail Services

Inter-city passenger bus and rail services are available through Greyhound⁴ and Amtrak⁵ in both Eugene and Corvallis. Per the last TSP update, Greyhound did stop in Junction City, however the stop is no longer a Greyhound station location. To access Greyhound or Amtrak, Junction City residents must travel to Eugene or Corvallis.

Greyhound services Eugene eight times a day with four trips from Portland to Eugene and four trips from Eugene to Portland. Several of these trips stop in Corvallis on their way to either Portland or Eugene. Corvallis is serviced five times a day with two trips from Corvallis to Portland and three trips from Corvallis to Eugene.

Amtrak services both Eugene-Springfield on the Amtrak Cascades route and provides services to Corvallis through the Pacific Coast Thruway Bus Connections with the service provider Valley Retriever. Valley Retriever operates out of the Corvallis Greyhound Station.⁶

MOTOR VEHICLES

The use of private motor vehicles is the predominant transport mode for Junction City residents and visitors. Motor vehicles give drivers flexibility in route and destination, are a critical mode of travel for freight movement, and are important for travelers living on the outskirts of Junction City. Existing motor vehicle facilities, volumes, intersection operations, safety, and issues within the City of Junction City are described in this section.

Motor Vehicle Facilities

The motor vehicle system within Junction City includes state highways, county roads, and city streets. Roadway jurisdictions, classifications, standards, and physical conditions are discussed below.

Roadway Jurisdiction and Functional Classification

The responsibility for facility operation and maintenance within the Junction City UGB depends on which agency has jurisdiction. While the City of Junction City maintains jurisdiction over most roadways in the city, the state highways, which include OR 99E, OR 99W, OR 99, and OR 36, are under the jurisdiction of ODOT. Lane County also maintains jurisdiction over many roadways surrounding and within the city. The jurisdiction of area roadways, along with their designated functional classifications, are described below.

⁴ *Locations: States: Oregon.* Greyhound. Website accessed March 7, 2011. Web Address: <http://www.greyhound.com/en/locations/locations.aspx?state=or>.

⁵ *Browse by Region – Northwest.* Amtrak. Website accessed March 7, 2011. Web Address: <http://www.amtrak.com/servlet/ContentServer?c=Page&pagename=am%2FLayout&p=1237405732508&cid=1237608346792>.

⁶ *Amtrak Cascades.* Amtrak. Effective January 3, 2011. Web address: <http://www.amtrak.com/servlet/ContentServer/Page/1237405732505/1237405732505>.

Junction City Roadways and Functional Classification

Functional classification describes how a facility is intended to be designed and operated. This is often described by the level of access or mobility that the facility is intended to provide.

Generally, when a facility provides a higher degree of direct access, the level of mobility it is able to provide decreases. The City of Junction City has four designated functional classifications including arterials, major collectors, minor collectors, and local streets.

Designated City street functional classifications are illustrated in Figure 7, with descriptions of each classification from the existing TSP provided below.

Arterials

Access to arterials should typically be from the collector road system. These roadways should be protected against strip development and access driveways that will reduce their capacity and decrease their effectiveness. Highway 99, 1st Avenue (including High Pass and River Road segments), W 18th Avenue, and Oaklea Drive are classified as arterials in Junction City. These facilities need to be safe, high volume traffic movers and serve as regional connectors.

Major Collectors

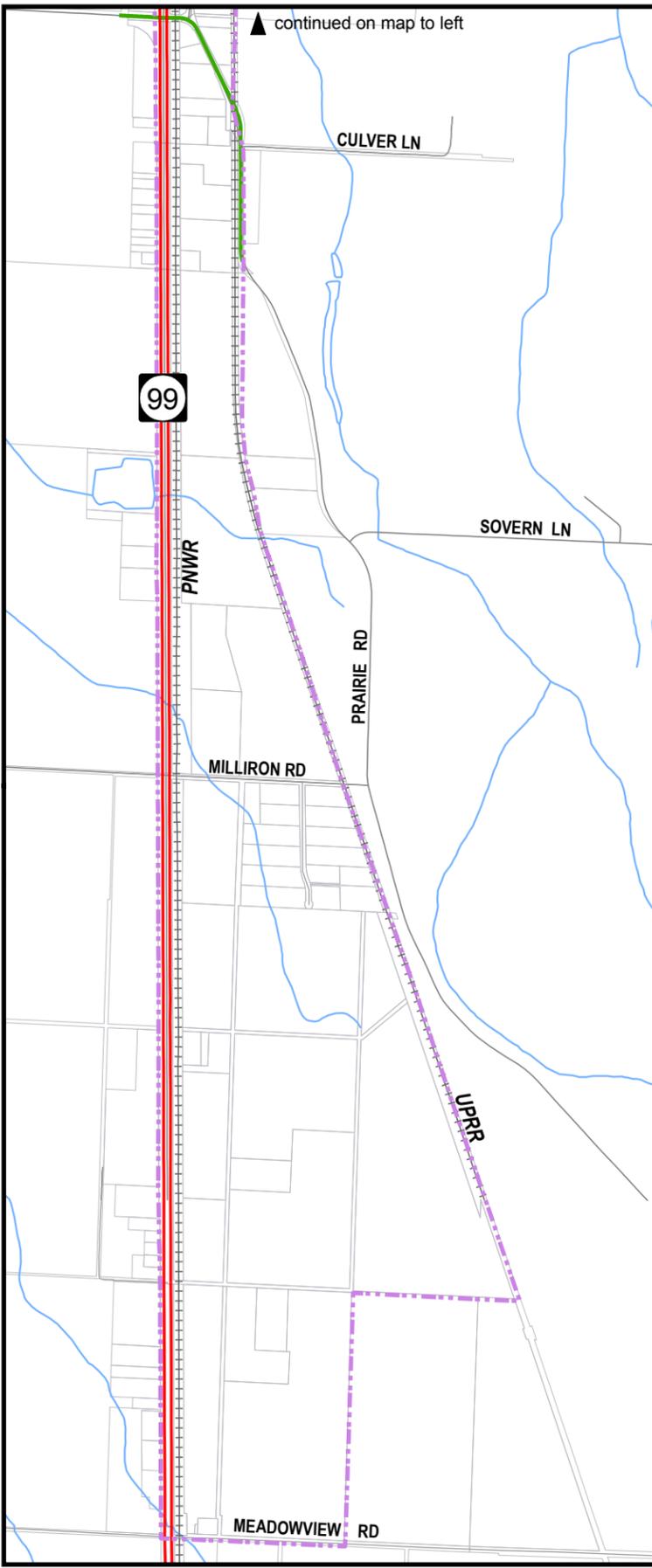
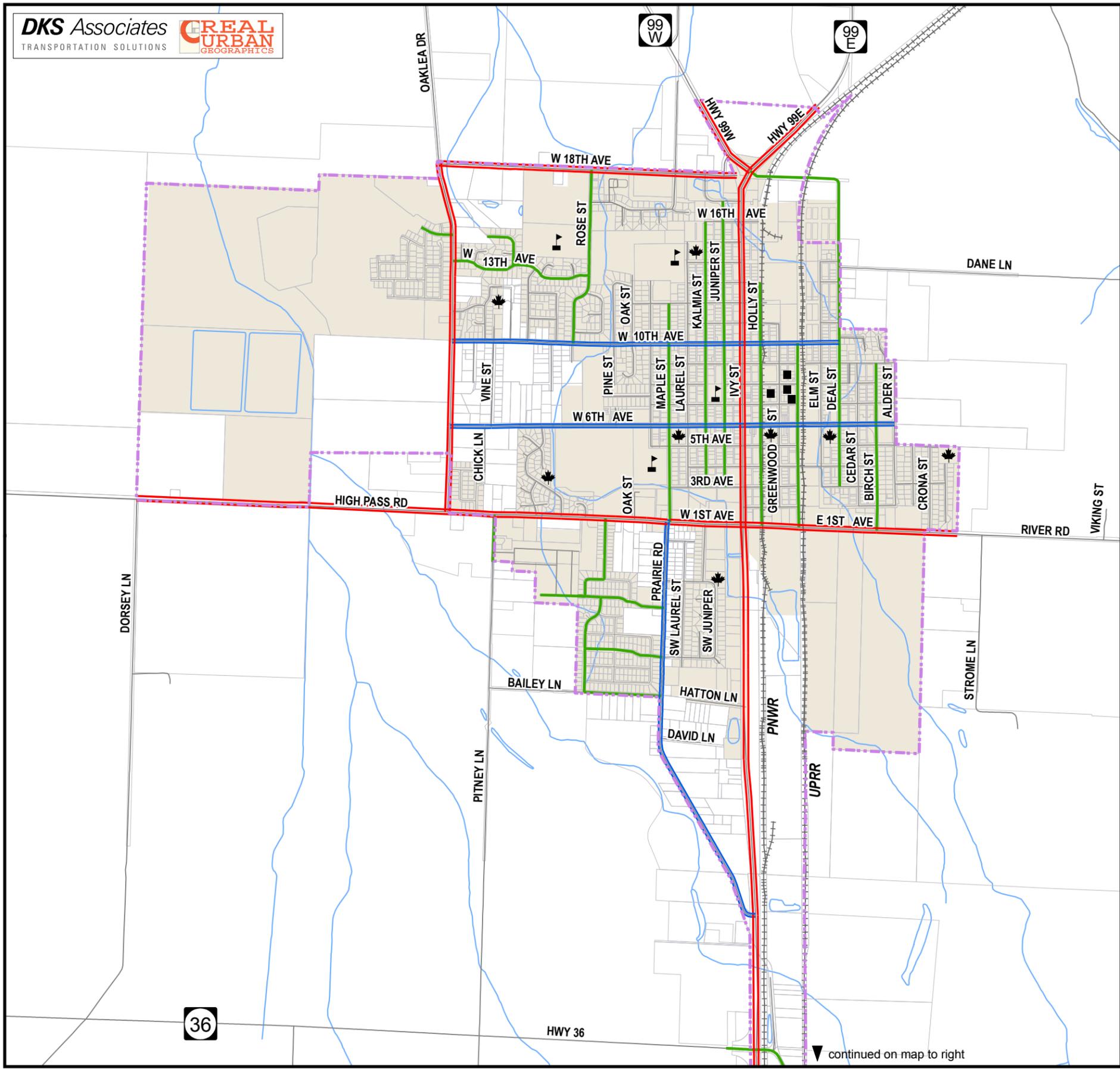
Major collectors move traffic from local streets and minor collectors to their arterial system and back. Individual accesses appear more frequently than on arterials, but are managed to minimize degradation of capacity and traffic safety. Prairie Road, 6th Avenue, and 10th Avenue are considered major collectors in Junction City.

Minor Collectors

Minor collectors provide access to abutting properties and serve local access to neighborhoods including limited through traffic. New development that generates a significant amount of traffic shall be discouraged from locating on minor collectors that serve residential areas and traffic studies will be used to analyze impacts of the proposed uses. Minor collectors include Rose, Maple, Kalmia, Juniper, Holly, Front, Deal, and Birch Streets.

Local Streets

Local streets provide direct property access as well as access to collectors and minor arterials. All streets not listed above are categorized as local streets.



Junction City
Transportation
System Plan

FIGURE 7
Roadway Functional
Classification

Legend

Roadways

- ARTERIAL
- MAJOR COLLECTOR
- MINOR COLLECTOR
- LOCAL

Places of Interest

- CIVIC/GOVT
- 🌳 PARK
- 🏫 SCHOOL

Other Features

- CITY LIMITS
- ▭ URBAN GROWTH BOUNDARY
- ▭ TAX LOTS
- +++ RAILROAD
- STREAM

0 1,000 2,000
Feet

A north arrow and a scale bar are provided for reference. The scale bar shows 0, 1,000, and 2,000 feet.

State and County Roadways and Functional Classification

The Oregon Highway Plan (OHP) classifies all state highways according to their intended function. State highways within the vicinity of Junction City are described in Table 1. Both OR 99E and OR 99W are classified as Regional Highways north of the city before they merge into OR 99, which serves as the main north-south corridor through town. OR 36 is classified as a District Highway. The intended functions of Regional and District Highways are described below.

Regional Highways

Regional Highways provide connections to regional centers, Statewide or Interstate Highways, or economic or activity centers of regional significance. The management objective of regional highways is to provide safe and efficient, high-speed, continuous-flow operation in rural areas and moderate to high-speed operations in urban and urbanizing areas. A secondary priority is to serve land uses in the vicinity of these highways.

District Highways

District Highways serve a county-wide significance and function largely as county and city arterials or collectors. They provide connections and links between urbanized areas, rural centers, and urban hubs, and also serve local access and traffic. The management objective for district highways is to provide safe and efficient, moderate to high-speed continuous-flow operation in rural areas and moderate to low-speed operation in urban and urbanizing areas.

OR 99E, OR 99W, and OR 99 are also designated as federal truck routes. OR 99W and OR 99 are further designated by ODOT as State Freight Routes. The Freight Route designation is intended to facilitate efficient and reliable interstate, intrastate, and regional truck movement through a designated freight system. On these routes, the needs of freight movement must be balanced with the needs of other highway users. Where freight routes coincide with a local community's main street, there may be competing objectives for the design and function of the highway. In such cases, a management plan may be needed.

Lane County uses similar functional classification system designations as Junction City, including arterials, collectors, and local roadways. Because Lane County maintains jurisdiction over a number of roadways through and surrounding Junction City (see Table 1), close coordination between agencies regarding design, permitting, and maintenance is required.

Both ODOT and Lane County monitor pavement conditions on their roadways. The most recent pavement condition ratings along state highways and county roads are provided in Table 1. Roadways are scored in a variety of categories that can sum to 100 points on an established scale. The rating system used by ODOT is as follows: Very Good (100-96), Good (95-76), Fair (75-46), Poor (45-21), and Very Poor (20-0). For Lane County, ratings less than 60 identify a need for repaving or reconstruction.

TABLE 1: State and County Roadway Functional Classifications and Pavement Conditions

Roadway Name	Segment	Functional Classification	Other Designations	Pavement Condition Index Rating* (0-100 scale)
ODOT Roadways				
OR 99E	North Junction City UGB to OR 99W/OR 99E Intersection	Regional Highway	Federal Truck Route	Good (88)
OR 99W	North Junction City UGB to OR 99W/OR 99E Intersection	Regional Highway	State Freight Route, Federal Truck Route	Good (79)
OR 99	OR 99E/OR 99W Intersection to South End of Flat Creek Bridge	Regional Highway	State Freight Route, Federal Truck Route	Good (92)
OR 99	South End of Flat Creek Bridge to W. 3 rd Avenue	Regional Highway	State Freight Route, Federal Truck Route	Good (84)
OR 99	W. 3 rd Avenue to Meadowview Road	Regional Highway	State Freight Route, Federal Truck Route	Good (94)
OR 36	OR 99 to West Junction City UGB	District Highway	-	Good (80)
Lane County Roadways				
W 6 th Avenue	Oaklea Drive to Spruce Street	Major Collector	-	69
W 10 th Avenue	Oaklea Drive to Rose Street	Major Collector	-	-
11 th Street	Tamarack Street to Spruce Street	Local	-	80
E 18 th Avenue & Deal Street	OR 99 to 0.30 miles east (UGB)	Minor Collector	-	83
W 18 th Avenue	Oaklea Drive to Safeway	Major Collector	-	100
Bailey Lane	Pitney Lane to UGB	Local	-	81
Dane Lane	All	Local	-	82
High Pass Road	OR 99 to West UGB	Major Collector	-	100
Meadowview Road	OR 99 to East	Minor Collector	-	90
Meadowview Road	OR 99 to West	Minor Collector	-	90
Milliron Road	OR 99 to East	Local	-	80**
Milliron Road	OR 99 to West	Local	-	78
Oaklea Drive	OR 99W to High Pass Road	Major Collector	-	100
Pitney Lane	High Pass Road to OR 36	Local	-	73
Prairie Road	Bailey Lane to OR 99	Major Collector	-	90
Prairie Road	OR 99 to Meadowview Road	Major Collector	-	81 – 83
River Road	OR 99 to East UGB	Minor Arterial	-	80
Rose Street	South of 10 th Avenue	Local	-	78
Spruce Street	North of 10 th Avenue	Local	-	85
Spruce Street	South of 10 th Avenue	Local	-	83
Tamarack Street	North of 10 th Avenue	Local	-	78
Vine Street	6 th Avenue to 10 th Avenue	Local	-	82
Walnut Street	South of 10 th Avenue	Local	-	83

* Pavement condition ratings last reported in 2010 for state roadways and in 2011/2012 for county roadways.

**Pavement condition rating reported in 2009/2010 for county roadway.

Access Management Standards

Access management includes the planning, design, and regulation of how people enter and leave a roadway. The design and operation of access points along a roadway can have a significant impact on the efficiency and safety of travel. Therefore, access is typically managed in a manner that is consistent with the functional classification that has been assigned to a roadway. Key elements often include: spacing between access points, provision of circulation between adjacent properties, visibility, design, and formal permitting process.

Junction City Access Management Standards

Junction City has established access management regulations through the Municipal Code (Chapter 17.85). These regulations include permitting and site plan review processes, design and spacing standards, and requirements for the provision of inter-parcel circulation and joint access. The City's requirements for access spacing are shown below in Table 2, with spacing measured from centerline to centerline of the intersection. New accesses shall meet or exceed these minimum spacing requirements. However, where no alternatives exist or where strict application of the standards are impractical, the City may allow variances.

TABLE 2: City of Junction City Access Spacing Standards

Functional Classification	Minimum Access Spacing
Arterial	150 feet
Major Collector	75 feet
Minor Collector	50 feet
Local Street	25 feet

Source: City of Junction City Ordinance 17.85.060

In addition to the access management standards described above, both Junction City and Lane County adopted an Access Management Plan as part of the OR 99 Junction City Refinement Plan.⁷ The Access Management Plan applies to OR 99W, OR 99E, and OR 99 from approximately the northern UGB to OR 36 and supersedes the access management standards for adopting agencies. It includes an access management action plan that outlines short-, medium-, and long-range actions for each access point (public street intersections and private driveways) to these highways. Short-range actions could be implemented immediately, medium-range actions are dependent on property redevelopment, and long-range actions would occur as part of or following a construction project by ODOT or the City. The ultimate objective of this plan is to identify incremental improvements to make safety and operations enhancements to the corridor.

The Access Management Plan also includes guidance for modifying plan recommendations in the future, as well as recommendations for modifications to the public alleys in the downtown area to better support side street access. The ability to use the modified alleys for primary access points to highway adjacent properties has recently been questioned as being impractical and too

⁷ OR 99 Junction City Refinement Plan, 2008.

costly to support local development. This element of the plan is being reconsidered as part of the TSP update.

State Access Management Standards

Access management standards for state highways are provided through the *1999 Oregon Highway Plan* and OAR 734-051. Much like the City’s access management regulations, ODOT’s regulations include a formal process for the review and approval of access permits, as well as spacing and design requirements. Highway access spacing standards vary with highway classification, surrounding area type, volume of traffic served, and posted speed.

The Access Management Plan included as part of the OR 99 Junction City Refinement Plan supersedes ODOT’s access spacing standards where applicable. State highways not affected by that plan include OR 99 south of OR 36 and OR 36. The access spacing standards for those highway segments are shown in Table 3.

TABLE 3: State Access Spacing Standards for Select Highway Segments

Highway Segment	Classification	Average Annual Daily Traffic Volume	Posted Speed (mph)	Area Type ^a	Spacing Standard ^b
OR 99: OR 36 to Meadowview Road	Regional Highway	13,000	55	Urban	990 feet
OR 36: OR 99 to Pitney Lane	District Highway	3,300	55	Rural	650 feet

^a The Urban standard applies in UBGs unless a management plan agreed to by ODOT and the local government(s) establishes a different standard.

^b Measurement of the approach road spacing is from center to center on the same side of the roadway.

Source: 1999 Oregon Highway Plan, as amended December 2011.

Lane County Access Management Standards

The Lane Code includes regulations pertaining to access to County roads in Chapter 15.138. Lane County access spacing standards for arterial and collector roadways are shown in Table 4. Spacing standards for local roadways range from 20 to 100 feet, depending on the use being served.

TABLE 4: Lane County Access Spacing Standards for Arterials and Collectors (Feet)

Posted Speed or Traveled Speed (mph)	Principal Arterial	Minor Arterial	Major Collector	Minor Collector
> 55	700	475	475	325
50	550	475	475	325
40 & 45	500	400	400	325
30 & 35	400	275	275	220
< 25	400	200	200	150

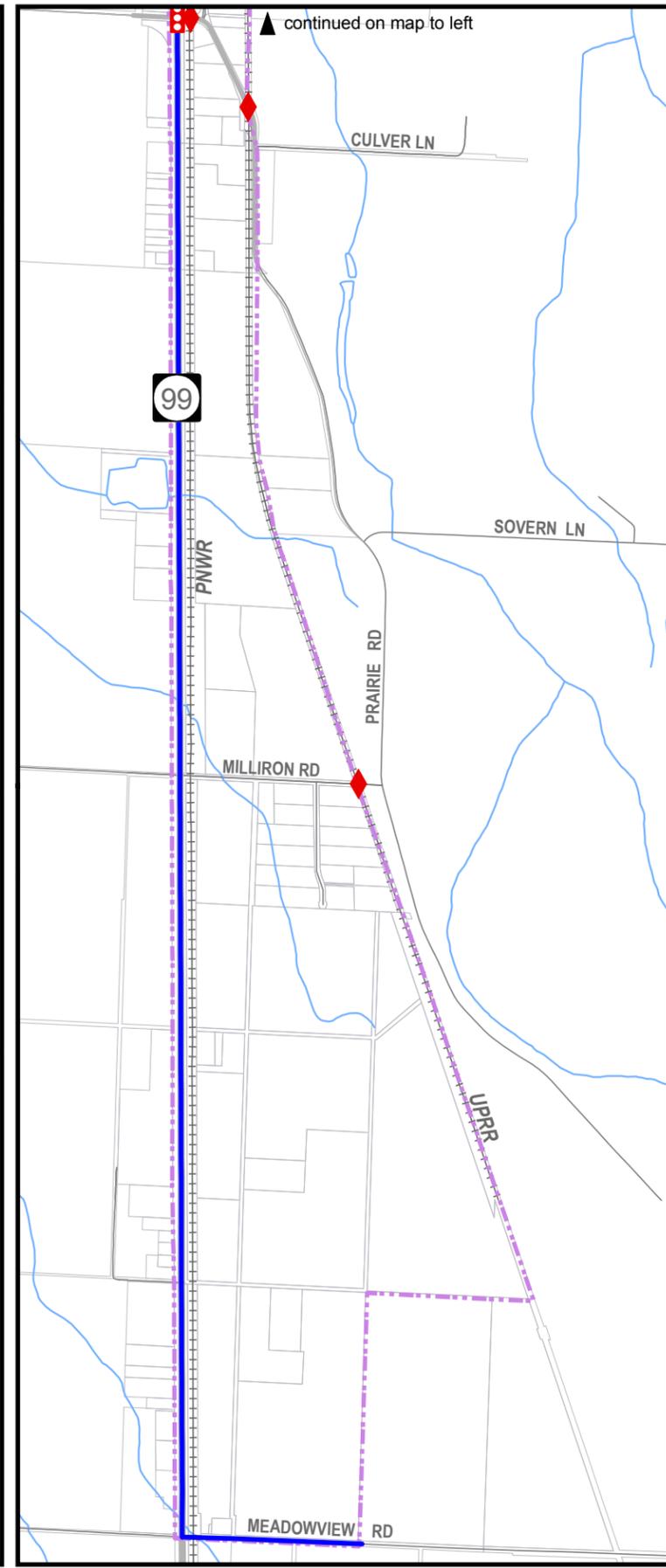
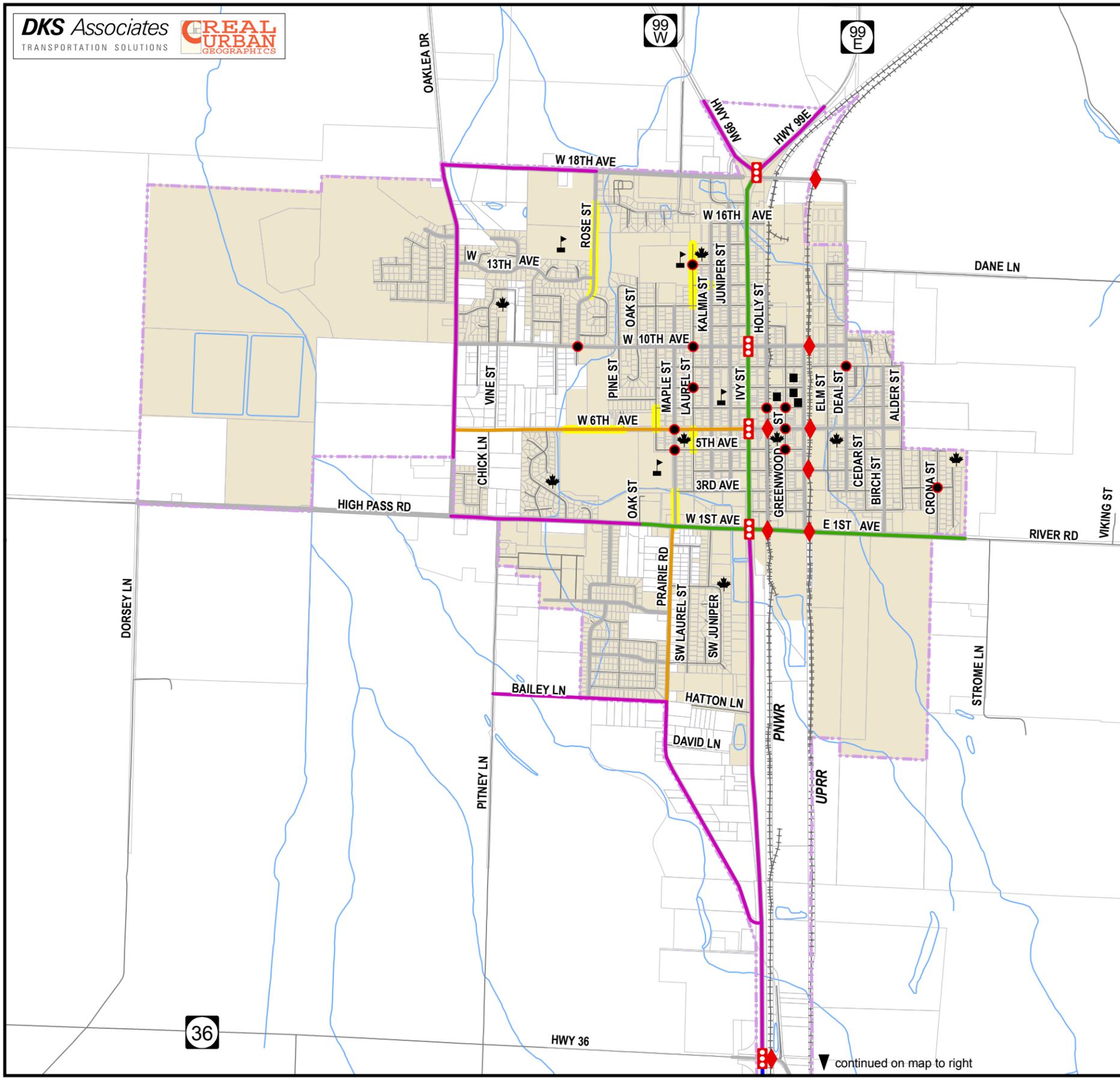
Posted Speeds and Traffic Control

An inventory of posted speeds and intersection traffic controls within the Junction City UGB is shown in Figure 8. The majority of streets within the UGB have speed limits of 25 miles per hour (mph) or are not posted. OR 99 through town is posted at 30 mph, but outside of the downtown speeds are between 45 and 55 mph.

There are currently five traffic signals in Junction City, with all of them being on OR 99. A sixth signal is planned to be constructed on OR 99 at the intersection with Milliron Road to serve the future state hospital and prison.

On-Street Parking

On-street parking in Junction City is permitted on residential streets and in the downtown core. Most parking spaces in the downtown core are marked; however, outside of the downtown core spaces are typically not marked. One recent change to parking has occurred on 6th Avenue east of OR 99. Some formerly parallel parking spaces have been adjusted to angled parking on the south side of the roadway. This change was made in the summer of 2010 to provide more parking spaces in the downtown. Parking in the downtown is free of charge but is restricted to two-hour limits in some locations.



Junction City

Transportation System Plan

FIGURE 8
Vehicle Speed Limits and Traffic Controls

- Legend**
- Intersection Control**
- TRAFFIC SIGNAL
 - ALL WAY STOP
 - SCHOOL ZONE
- Railroad Control**
- GATES
- Posted Speed Limit**
(25 MPH or less if not shown)
- 30 MPH
 - 35 MPH
 - 45 MPH
 - 55 MPH
- Roadways**
- ARTERIAL
 - COLLECTOR
 - LOCAL STREET
- Places of Interest**
- CIVIC/GOVT
 - PARK
 - SCHOOL
- Other Features**
- CITY LIMITS
 - URBAN GROWTH BOUNDARY
 - TAX LOTS
 - RAILROAD
 - STREAM



Motor Vehicle Volumes

Motor vehicle traffic counts were collected at study intersections and on several key area roadways. On most roads, traffic volumes are generally moderate to low, indicating that they are well under capacity and should not be experiencing congestion. The highest traffic volumes occur along the OR 99 corridor.

Weekday traffic along OR 99 often experiences a brief peak in the morning between 7:00 and 8:00 a.m. before dropping to moderate levels during the midday. Traffic volumes then steadily rise after 2:00 p.m., reaching the highest levels of the day between 4:00 and 5:00 p.m. (typical peak hour estimated to be 4:30 to 5:30 p.m.). By 7:00 p.m., traffic volumes on OR 99 have decreased substantially and can be fairly low.

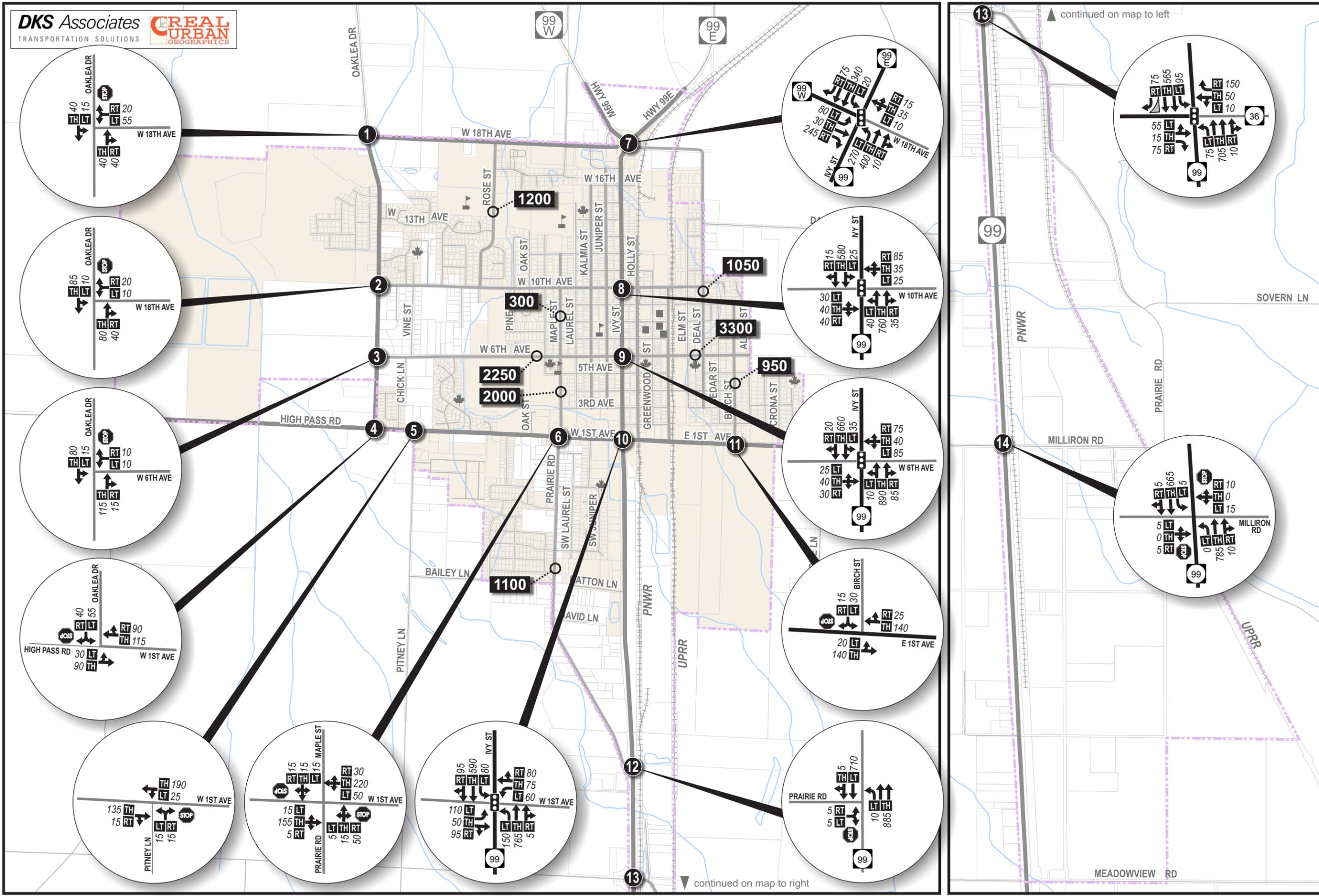
Design Hour Traffic Volumes

Prior to measuring system performance and the need for improvements, a design hour must be selected. The 30th highest annual hour traffic volume (30 HV) was selected because it is a commonly used design period for transportation improvements and is also the basis for ODOT's mobility targets. Therefore, prior to using the traffic counts collected for analysis, they were factored to better represent this time period. The methodology used for seasonally adjusting traffic volume counts obtained in Junction City was consistent with that used recently for the *OR 99 Junction City Refinement Plan*⁸ as well as with the ODOT Transportation Planning Analysis Unit's *Analysis Procedures Manual* (Chapter 4 Developing Design Hour Volumes).

The ODOT 2010 Seasonal Trend Table⁹ was used to generate seasonal factors for the traffic counts. Due to the characteristics of traffic in Junction City and to be consistent with previous analysis, an average of the "Commuter" and "Summer" trends was used to produce a seasonal factor. The seasonal factor calculation methodology can be found in the appendix. The resulting traffic volumes for use in analysis for this project are similar to those that would be experienced during a weekday afternoon peak hour in the summer. These volumes are illustrated in Figure 9.

⁸ *OR 99 Junction City Refinement Plan*, DKS Associates, LCOG, 2008.

⁹ *2010 Seasonal Trend Table*. Retrieved February 16, 2011, from Oregon Department of Transportation Web site: http://www.oregon.gov/ODOT/TD/TPAU/A_Data.shtml



Junction City

Transportation System Plan

FIGURE 9
2010 Existing PM Peak Hour Traffic Volumes

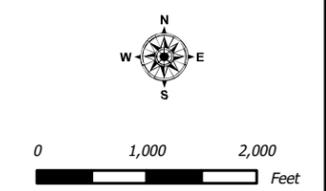
Legend

Study Intersection
 ○ STUDY INTERSECTION

Roadways
 — ARTERIAL
 — COLLECTOR
 — LOCAL STREET

General
 ■ CITY LIMITS
 □ URBAN GROWTH BOUNDARY
 □ TAX LOTS
 + RAILROAD
 — STREAM

Traffic Volume Data
 ● STOP SIGN
 ● TRAFFIC SIGNAL
 ← LANE CONFIGURATION
 000 PM PEAK HOUR TRAFFIC VOLUME
 LT|TH|RT VOLUME TURN MOVEMENT
 Left+Thru+Right
 ○ WEEKDAY AVERAGE DAILY TRAFFIC



Traffic Operations

Existing traffic operations were analyzed at the 14 study intersections using Synchro 7 software to measure the levels of congestion currently being experienced. These intersections were selected because they are controlling traffic flow on the major corridors in Junction City and affect how efficiently the roadway system operates.

Intersection Performance Standards

The use of mobility standards or targets for roadways identifies the maximum amount of congestion that an agency has deemed to be acceptable. Such standards are commonly used to assess the impacts of proposed land use actions and to help determine transportation improvement needs for project planning.

Junction City does not currently maintain adopted mobility standards for roadways in the city. However, both ODOT and Lane County do have adopted mobility standards for facilities under their jurisdiction. ODOT's mobility "targets" are based on volume to capacity (v/c) ratios, and vary by functional classification, area type, and posted speed. Lane County's mobility standards are based on both v/c ratios and levels of service. The measures of v/c ratios and levels of service are both described below, with applicable ODOT and County mobility targets/standards provided in Tables 5 and 6.

Volume to capacity (v/c) ratio

The v/c ratio represents a facility's level of saturation (i.e., what proportion of capacity is being used), with values ranging from 0.00 to 1.00. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases and performance is degraded. At a ratio of 1.00, the intersection, lane, or movement is saturated and usually experiences excessive queues and long delays.

Level of service (LOS)

The level of service (LOS) is a performance measure that is similar to a "report card" rating and is based on average vehicle delay. Level of service A, B, and C indicate conditions where traffic moves without significant delays. Level of service D and E are progressively worse operating conditions. Level of service F represents conditions where average vehicle delay has become excessive and demand is near capacity. This condition is typically evident by long queues and delays, with intersection delays often being difficult to measure because congestion may extend into and be affected by adjacent intersections. The average delay value (in seconds) corresponding to each level of service designation, along with additional level of service descriptions, are provided in the appendix.

It should be noted that mobility targets shown in Table 5 for ODOT facilities are taken from the *1999 Oregon Highway Plan (OHP)* and are used to measure when improvements will be needed. A different set of mobility targets for state facilities will be used later in the TSP project to assess the adequacy of proposed improvements.

TABLE 5: ODOT Highway Peak Hour Mobility Targets (v/c ratios)¹⁰

Highway Category	Inside Urban Growth Boundary		
	Non-MPO outside of STAs where non-freeway posted speed ≤ 35 mph	Non-MPO outside of STAs where non-freeway speed > 35 mph, but < 45 mph	Non-MPO where non-freeway speed limit ≥ 45 mph
Freight Route on a Regional or District Highway	0.90	0.85	0.85
Regional Highway	0.90	0.85	0.85
District/ Local Interest Roads	0.95	0.90	0.90

Note: For unsignalized intersections, achieving the volume to capacity ratios for the state highway approaches indicates that state mobility targets are being met. In order to maintain safe operation of the intersection, non-state highway approaches are expected to meet or not to exceed the volume to capacity ratios for District/Local Interest Roads.

TABLE 6: Lane County Peak Hour Mobility Standards¹¹

Inside Urban Growth Boundaries		Outside Urban Growth Boundaries
Speed Limit <45 mph	Speed Limit ≥45 mph	Outside Unincorporated Communities
v/c ≤ 0.85	v/c ≤ 0.75	v/c ≤ 0.70

Note: Arterial and Collector streets must also perform at a level of service D or better.

Existing Operating Conditions

The traffic volumes representing the design hour (shown in Figure 9) under existing conditions where analyzed at the study intersections, with the results compared to applicable mobility targets/standards. As shown in Table 7, all study intersections are meeting mobility targets/standards with no significant congestion noted. The analysis worksheets can be found in the appendix.

¹⁰ *Ibid.*

¹¹ *Lane County Transportation System Plan, Goal 4, June 2004 and Lane Code 15.696.*

TABLE 7: Existing (2010) Weekday PM Peak Hour Intersection Operations

Intersection (North-South / East-West)	Jurisdiction	Mobility Target	Intersection Performance		
			Delay (sec)	LOS	V/C
Oaklea Dr. / 18 th Ave.	Lane County	0.75 V/C or LOS D	9.7	A/A	0.11
Oaklea Dr. / 10 th Ave.	Lane County	0.75 V/C or LOS D	9.4	A/A	0.09
Oaklea Dr. / 6 th Ave.	Lane County	0.75 V/C or LOS D	9.7	A/A	0.09
Oaklea Dr. / 1 st Ave. – High Pass Rd.	Lane County	0.75 V/C or LOS D	10.8	A/B	0.14
Pitney Ln. / 1 st Ave. – High Pass Rd.	Lane County	0.75 V/C or LOS D	10.3	A/B	0.10
Prairie Rd.-Maple St. / 1 st Ave.-High Pass Rd.	Junction City/ Lane County	0.85 V/C or LOS D	13.7	A/B	0.11
OR 99E / OR 99W	ODOT	0.85 V/C	13.3	B	0.47
OR 99 / 10 th Ave.	ODOT	0.90 V/C	8.4	A	0.43
OR 99 / 6 th Ave.	ODOT	0.90 V/C	10.2	B	0.51
OR 99 / 1 st Ave.	ODOT	0.90 V/C	20.6	C	0.47
Birch St. / 1 st Ave. – River Rd.	Junction City/ Lane County	0.85 V/C or LOS D	11.2	A/B	0.13
OR 99 / Prairie Rd.	ODOT	0.90 V/C*	13.5	A/B	0.30
OR 99 / OR 36	ODOT	0.85 V/C	15.0	B	0.49
OR 99 / Milliron Rd	ODOT	0.90 V/C*	15.5	A/C	0.32
<u>Signalized Intersection:</u> Delay = Average Intersection Delay (sec.) LOS = Level of Service V/C = Volume to Capacity Ratio Shaded values do not meet standards		<u>Unsignalized Intersection:</u> Delay = Critical Movement Approach Delay (sec.) LOS = Major Street LOS / Minor Street LOS V/C = Critical Movement Volume to Capacity Ratio Note: LOS for all-way stop intersections reported for entire intersection * Mobility target shown is for stopped minor street approaches			

Traffic Safety

The relative level of safety experienced on the streets within Junction City was assessed by obtaining three-years (2007 through 2009) of collision data from ODOT and analyzing it for trends and comparisons with similar facilities.

Intersection Collisions

Most motor vehicle collisions in Junction City (more than two-thirds) occur along OR 99, which is also where most of the traffic is. It is also common for most collisions to occur at or near intersections, since these are the places where most conflicts between vehicles occur. The first level of analysis conducted was to identify the intersections experiencing the highest rates of collisions compared to the volume of traffic served.

Table 8 reports the three-year collision history of the intersections in the city with the most notable frequency of collisions. At each intersection, collisions are broken down by type and severity, and an overall rate of collisions is calculated. The use of collision rates (collision per million entering vehicles, or “MEV”) with respect to the volume of traffic served provides for a better comparison between locations than when just looking at the total number of collisions. Typically, a collision rate of 1.0 MEV or greater warrants further investigation.

The most collisions occurred at the intersections on OR 99 with 10th, 6th, and 1st Avenues. However, only the intersection with 10th Avenue experienced a rate of collisions greater than 1.0 per million entering vehicles, which may be high for that level of traffic.

It should also be noted that the severity of collisions was generally low for most locations. The exception was at the intersection on OR 99 with OR 36, where moderate severity injuries were more common than any other type. This may be due to the higher speeds in that area. No fatalities or serious injuries were reported at any intersection during this time period.

TABLE 8: Intersection Collision Summary (2007-2009)

Intersection	Collision Severity					Total Collisions	Collision Rate ^e
	Fatal	Injury Type A ^a	Injury Type B ^b	Injury Type C ^c	PDO ^d		
OR 99 W / OR 99E	0	0	0	3	4	7	0.49
OR 99 / 10 th Ave	0	0	2	3	12	17	1.09
OR 99 / 9 th Ave	0	0	0	3	2	5	0.31
OR 99 / 6 th Ave	0	0	1	4	7	12	0.68
OR 99 / 1 st Ave	0	0	1	5	9	15	0.85
Birch St @ 1 st Ave	0	0	0	1	2	3	0.76
OR 99 / OR 36	0	0	5	2	1	8	0.50

^a Injury Type A = Incapacitating injury – bleeding, broken bones

^b Injury Type B = Non-incapacitating injury

^c Injury Type C = Possible injury – complaint of pain

^d PDO = Property damage only

^e Average annual collisions per million entering vehicles (MEV); MEV estimates based on 2009 ODOT Volume Tables or 30HV

Source: ODOT Collision Data for 2007, 2008, 2009.

The most common collision types at the intersections on OR 99 with 10th, 6th, and 1st Avenues are rear-end and turning collisions. While rear-end collisions are typically the most common at signalized intersections, turning collisions were found to be the most common at the intersection with 10th Avenue (more than double the amount of rear-end collisions). Also, as described previously, two pedestrian-related collisions occurred at the intersection on OR 99 with 6th Avenue.

These findings are relatively consistent with recent Safety Priority Index System ratings developed by ODOT. The Safety Priority Index System (SPIS) identifies hazardous locations on state highways, with the score based on three years of collision data considering collision

frequency, rate, and severity. This rating provides a general comparison of the overall safety of the highway based on collision information for all highway segments throughout the state. In general, ratings within the top 10% are considered for improvements. The 2007 and 2008 SPIS data sets found that the intersection of OR 99 at 10th Avenue was a top 5% SPIS site. In 2009, this intersection remained within the top 10%.

Through field observations, another potentially hazardous location was found at the intersection on Oaklea Drive with 18th Avenue. From the stopped 18th Avenue approach, the driver's line of sight is partially obstructed to the south by hedges and trees on private property because of the curvature of the roadway. This can make safely pulling out into the roadway difficult to do with oncoming traffic traveling at 45 mph. It also obscures the view of the 18th Avenue intersection from northbound drivers on Oaklea Drive, which can result in sudden braking.

No collisions were reported at this intersection within the three-year period examined (2007-2009). However, a resident of a nearby home did offer that she frequently hears sudden braking and skidding tires.



View from 18th Avenue looking south on Oaklea Drive

Corridor Collisions

Approximately one-third of the collisions that occurred in Junction City happened on segments of roadways in between intersections. More than half of those occurred along OR 99. The 12 collisions that occurred on city and county streets were spread about the area with no one location having more than one collision. Collisions on county and city streets tended to be low severity and nearly all of them involved a collision with a parked car.

Along the OR 99 corridor, there were 15 collisions in between intersections, with most of those being rear-end collisions. Most collisions occurred in the segment between 1st and 11th Avenues.

ODOT compiles collision data on state highways and calculates the rate of collisions per million vehicle miles that occurred on each roadway for comparison purposes. Table 9 shows the collision rates for the years 2007, 2008, and 2009 that occurred on the OR 99 corridor in comparison to the rates experienced on similar facilities around the state.

As shown, the section of OR 99 within the city limits has been experiencing collision rates much greater than the statewide average for similar facilities. Considering the findings of the previously described analysis, this is likely a result of the concentrated area of collisions from OR 99E to 1st Avenue and the high density of intersections in between.

TABLE 9: Comparison of OR 99 Collision Rate to Statewide Average (2007-2009)

Highway Milepoints	Section Description	Collisions per Million Vehicle Miles		
		2007	2008	2009
Statewide Average Rate (Minor Arterials in Rural Cities)		1.71	1.60	1.61
MP 108.51 – MP 110.46	Junction City North City Limit to Junction City South City Limit (Minor Arterial in Rural City)	2.49	2.38	2.35
Statewide Average Rate (Minor Arterials in Rural Areas)		0.99	0.95	0.93
MP 110.46 – MP 15.04	Junction City South City Limit to Eugene Urban Area (Minor Arterial in Rural Area)	0.57	0.28	0.59

Source: ODOT 2009 State Highway Crash Rate Tables

Bold font indicates that OR 99 collision rate is greater than the statewide average for similar facilities.

Safety concerns related to roadway speeds have also been expressed by community members. This includes the corridor along OR 99 south of OR 36, where the Police Chief would like to see the posted speed reduced to at least 50 mph to help lessen the severity of crashes. While changing roadway speed limits will not be accomplished through this TSP update, it is recommended that a process for handling speed zone reduction requests be outlined.

RAIL FACILITIES

Junction City has two freight rail service tracks running north-south, east of OR 99. Both the Union Pacific Rail Road (UP) and the Pacific Northwest Rail Road (PNWR) operate within the city with a total of 23 crossings (UP has 7 crossings and PNWR has 16 crossings). The UP line is the main freight line and trains typically travel at speeds up to 79 mph through town roughly 15 times per day. The PNWR is a smaller line and train speeds vary from 10 mph to 40 mph through town with one to two trains per day.

Railroad crossing controls vary between the UP and PNWR lines. The UP line, which runs parallel to the east side of Front Street and operates at much higher speeds and frequency, uses both gates and some type of flashing lights at all of its seven crossing in town.

The PNWR runs just east of OR 99 and down the middle of Holly Street. Traffic controls used include cross bucks, stop signs, or other signs or signals. The highly used intersection of 6th

Avenue at Holly Street has crossing gates. Ultimately, the City would like to see the tracks along Holly Street removed, with service relocated to another corridor. This could include consolidation of services along the existing UP railroad.

While the PNWR line operates at much lower speeds and frequencies, it still introduces many challenges for other modes of travel. This is especially true where the tracks run down Holly Street. When trains pass through town, motor vehicle traffic must move out of the way or wait prior to entering the street. Furthermore, the pavement adjacent to the railroad tracks is often in disrepair, creating hazardous crossings for pedestrians and bicyclists.



PNWR Train traveling North on Holly Street

From 2000 to 2010, four collisions involving trains have been reported in Junction City. In 2005, a train associated with PNWR stuck a truck/trailer near 12th Street. The train was traveling at approximately 10 mph and the incident only resulted in injury to the driver of the motor vehicle. In 2006, a train associated with UP traveling at approximately 23 mph struck a truck/trailer at 4th Avenue. No injuries were reported as a result of this collision.

In addition to these, two pedestrian deaths occurred at the intersection of the UP line and 6th Avenue. In both cases, pedestrians were hit and killed by Amtrak trains traveling at speeds over 70 mph. In 2004, an elderly woman who reportedly had a hard time hearing was hit and killed while crossing the tracks during the afternoon on a clear day. In 2010, a pedestrian was hit at night time while attempting to beat the train. In both cases, pedestrians disregarded the warning system and gates to cross the tracks.

AIR FACILITIES

The City of Junction City does not have its own airport or other air service facilities within the UGB. The closest major airport to Junction City is the Eugene Airport, which is located approximately five miles south of the city and provides service for both passengers and freight. The Eugene airport is the second largest airport in the State of Oregon and is the largest non-hub airport in the nation. The airport provides regular direct service to Portland, Seattle, San

Francisco, Oakland, Los Angeles, Denver, Salt Lake City, Las Vegas, and Phoenix-Mesa.¹² Allegiant Air will begin offering a direct service to Hawaii at the beginning of November 2012.¹³

PIPELINE

Northwest Pipeline Company operates a major regional natural gas transmission line between Portland and Eugene, which passes through Junction City along railroad right-of-way. The gas is distributed in the Junction City area by Northwest Natural Gas. This six-inch high-pressure main interconnects storage facilities in the state, as well as interstate sources.

Kinder Morgan operates an eight-inch major petroleum transmission pipeline, which runs along the railroad right-of-way. It extends from Portland to Eugene and has been in operation since 1962. This pipeline is a common carrier, designed to handle alternately gasoline, biodiesel, or diesel fuel. It currently transmits approximately 45,000 barrels of fuel per day to Eugene (roughly equivalent to 210 tanker trucks of fuel).¹⁴ From Eugene, it is distributed by truck to end destinations or for storage in tank facilities nine miles south of Junction City.

WATER FACILITIES

No navigable waterways exist within the Junction City urban growth boundary. The Willamette River runs north-south approximately three miles east of the study area.

SUMMARY OF KEY FINDINGS

Based on the inventory and analysis of existing transportation conditions, the following key findings were identified for consideration during the development of transportation solutions for the city.

Pedestrian

- The compact layout of most activity generators in the city creates opportunities to establish walking as an attractive mode of travel.
- The layout of older neighborhoods in the central city and newest neighborhoods around the perimeter provide good connectivity for convenient walking.
- Sidewalks upgrades for ADA compliance are being made around the city.
- Gaps in the sidewalk network need to be filled on key routes, including: Oaklea Drive, 18th Avenue (south side only), 1st Avenue, the western ends of 10th and 6th Avenues, and Prairie Road from 1st Avenue to Bailey Lane.

¹² flyEUG. *About Us*. [flyEUG Website: http://www.flyeug.com/about.cfm](http://www.flyeug.com/about.cfm). Accessed March 2, 2011.

¹³ *Eugene to Honolulu direct? Aloha, Allegiant*. The Register-Guard. <http://projects.registerguard.com/web/newslocalnews/28071792-41/eugene-allegiant-hawaii-airport-service.html.csp>. Accessed September 13, 2012.

¹⁴ *Motor Fuel & Distillate in Oregon: Quality, Sources, and Distribution*, Oregon Department of Energy, 2009.

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- The layout of many neighborhoods between 1st Avenue, Maple Street, 18th Street, and Oaklea Drive has limited connectivity, making walking less convenient. As an example, there have been reports of high school students walking through the private streets of Scandia Village to reach homes to the north.
 - Sidewalks on OR 99 are narrower than typically preferred in high-use commercial areas with storefronts.
 - Sidewalks on OR 99 are too close to traffic, which can make walking uncomfortable and uninviting.
 - Sidewalk maintenance, especially in older neighborhoods, is needed to repair severely damaged and flooded areas.
 - Shared-use paths are present, but a comprehensive network does not exist.
 - Many people in Junction City are choosing to walk, but barriers may be making walking more difficult or less convenient. Key barriers noted include poor connectivity in some areas and lack of good crossing opportunities on high-volume, high-speed streets such as OR 99.
 - Crosswalk treatments should be consistent with recognized federal and state standards to facilitate recognition by motorists.

Bicycle

- The compact layout of most activity generators in the city creates opportunities to establish biking as an attractive mode of travel.
- Relatively low levels of observed bicycle travel indicate that there may be unrealized demand that can be served by enhancing bicycle facilities.
- There are no facilities for bicycles on OR 99 between the Flat Creek Bridge and 3rd Avenue. Bicyclists were observed riding on the sidewalks in this area.
- Off of OR 99, no roadways include designated bicycle facilities. On some roadways, widening to include bicycle facilities could be challenging due to adjacent constraints. As an example, widening along High Pass Road may be difficult without impacting the historic cemetery that is very close to the road right of way..
- Many roadways in Junction City serve low traffic volumes at relatively low speeds. These roads may be candidates for designation as shared roadways for bicycle travel, which can be a cost-effective way to create bike routes through the city.
- Shared-use paths (8 feet wide) are somewhat narrow for comfortable bicycle travel.
- Provision for secure and convenient bike parking is generally infrequent.
- Poor connectivity in some areas creates longer trips for bicycle travel.
- Convenient and comfortable crossings of OR 99 are needed.

Transit

- A centrally located fixed bus route provides service to Eugene, with three stops and two Park & Ride lots in the city.
- Accessibility of bus stops for bicycles and pedestrians should be enhanced to encourage transit use.
- Transit access to Monroe (formerly the Benton County 99 Express Route) was discontinued due to low ridership and budget cuts.
- LTD offers an EZ Access Program to educate and encourage transit use by older adults and persons with disabilities.
- Paratransit service in Junction City is not available. It would become available if Junction City joined the MPO.

Motor Vehicle

- OR 99 is a state and federally designated Truck/Freight route, which emphasizes a need for mobility and efficient movement of large vehicles. However, it also creates a barrier for pedestrians and bicyclists desiring to cross town or travel to the downtown area.
- A recently adopted access management plan for OR 99 includes recommendations for use of alleyways to support side street access instead of accessing directly from OR 99. This has been questioned as potentially being impractical and costly.
- Key intersections examined throughout the city are operating well with little congestion. They are all in compliance with state and county standards for mobility. The city does not currently have an adopted standard for mobility.
- More than two-thirds of all motor vehicle collisions in Junction City occur on OR 99.
- Approximately two-thirds of all motor vehicle collisions in Junction City occur at intersections.
- Most collisions occur on OR 99 between OR 99E and 1st Avenue. The intersections with the most collisions in that area are at 10th, 6th, and 1st Avenues. The 10th Avenue intersection experiences the most collisions.
- The severity of crashes in the city is generally low. However, crash severities worsen on OR 99 to the south where posted speeds are higher.
- There is an existing sight obstruction to the south at the intersection on Oaklea Drive with 18th Avenue.

Rail

- Railroad crossings along the high-speed, high-frequency UP line are typically controlled with gates and flashing lights.
- For the low-speed, low-frequency PNWR line, crossing controls vary widely. In some cases, such as where the train runs down Holly Street, there are no controls.

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- Trains traveling down the PNWR line along Holly Street create conflicts with other modes of travel. However, these trains do travel at low speeds and are infrequent.
 - Railroad crossings often create hazardous barriers for pedestrians and bicyclists due to pavement disrepair and gaps between rails and pavement where bicycle, wheelchair, and walker wheels can become stuck.