DRAFT Crook County Transportation System Plan

Prepared for
Crook County, OR

September 2025

Parametrix

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Prepared for

Crook County, OR
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Acronyms and Abbreviations

AADT	annual average daily traffic
AASHTO	American Association of State Highway and Transportation Officials
CET	Cascades East Transit
LOS	level of service
NBI	National Bridge Inventory
ODOT	Oregon Department of Transportation
PMT	Project Management Team
TNC	transportation networking company
TSP	transportation system plan
UGB	urban growth boundary
V/C	volume to capacity

Big Moves

Crook County has grown rapidly in recent years. Since the 2017 Transportation System Plan (TSP), population growth has accelerated, and recent estimates show that the county is on track to exceed future projections. With more people living and traveling in the county, congestion and safety on regional roads and highways, a lack of connections in some areas, and limited options to get around—especially for older adults—have created pressing needs for transportation infrastructure investment.

This TSP provides a comprehensive plan for improving transportation throughout the county now and for the next 20 years, but implementation requires new resources, partnerships, and grants. While the TSP identifies a range of projects that cover all modes of transportation, the following projects describe the greatest transportation challenges and solutions in Crook County, highlighting the importance of these projects to community safety, mobility, and livability.

Project R-1A: Construct a single-lane roundabout at the intersection of OR 126 and SW Powell Butte Highway.

This intersection is a key concern for the Crook County community. Traffic analysis shows that this location exceeds mobility targets in current a future conditions, meaning that travelers can experience significant congestion and delays. There are also safety concerns due to high travel speeds and traffic volumes. Community feedback reflected a strong desire to improve operations, safety, and comfort at this location. The TSP explored several project options to address these concerns.

A key element of this project, seen in Figure 1, also considers the post office, which is located on the southeast corner of the intersection. It is a community priority to preserve this location, and this project will create an opportunity to improve access management for this parcel.

Benefits of the OR 126 and SW Powell Butte Highway Project

- Maintains turning movements.
- Reduces turning conflicts.
- Reduces traffic delays in the near term.
- Provides easier navigation of intersection.
- Expected to cost less than dual lane roundabout.
- **Cost: $3,400,000**

Figure 1. SW Powell Butte Highway and OR 126

Project JC-1: Develop a new roadway to expand access to Juniper Canyon.

A new access route or routes for Juniper Canyon was identified as a desired critical improvement by the Juniper Canyon community throughout the plan development. Traffic analysis conducted during the TSP process shows that the intersection of SE Juniper Canyon Road and OR 380 is not expected to meet mobility targets in the future. Additionally, SE Juniper Canyon Road is the only access route into and out of the community today; traffic collisions and icy conditions can block this roadway, limiting both residential access and emergency service response. This also means that all traffic from Juniper Canyon must travel through Prineville, resulting in increased congestion in the city.

Benefits of the Juniper Canyon Access Project (JC-1)

- Helps relieve congestion along SE Juniper Canyon Road.
- Provides additional travel options for emergency response.
- **Cost:** $9,300,000 to $20,000,000

Building on prior planning and public engagement efforts, the TSP analysis evaluated access alternatives to identify a preferred route. This process is described in greater detail in Appendix E, Juniper Canyon Alternatives Analysis. The preferred route identified in the TSP and shown in Figure 2 aims to address needs related to traffic operations. Community members have also expressed concern regarding emergency evacuation routes, especially during events such as wildfires; the County is continuing to explore strategies to improve public safety and wildfire response.

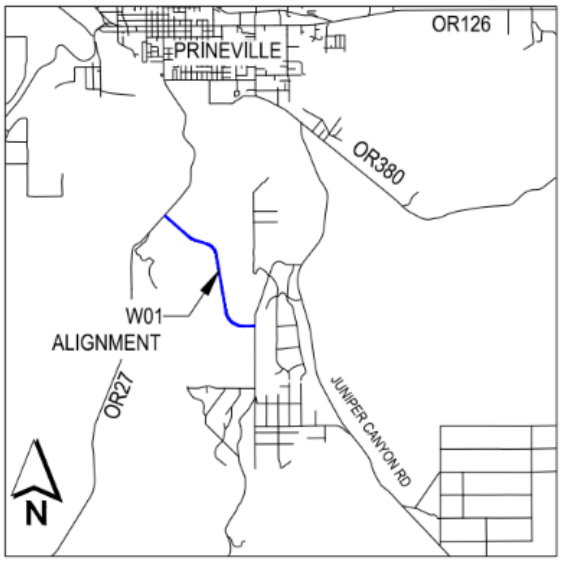

Figure 2. Juniper Canyon Access Project JC-1

Project JC-2: Develop a new gravel roadway to provide an emergency evacuation route for Juniper Canyon

Based on continued exploration of route alternatives with County staff, elected officials and project partners, Project JC-2 would connect SE Simpson Rd to OR 380, as shown in Figure 3. This route is located primarily on BLM lands and responds to community desire for a route that better serves southern areas of Juniper Canyon. The proposed route would be approximately 20 feet in width and have a gravel surface. In addition to this route, the County is continuing to explore strategies to improve public safety and wildfire response.

Benefits of the Juniper Canyon Access Project (JC-2)

- Provides emergency evacuation route for community members in southern areas of Juniper Canyon
- **Cost:** $24,000,000 to $52,000,000

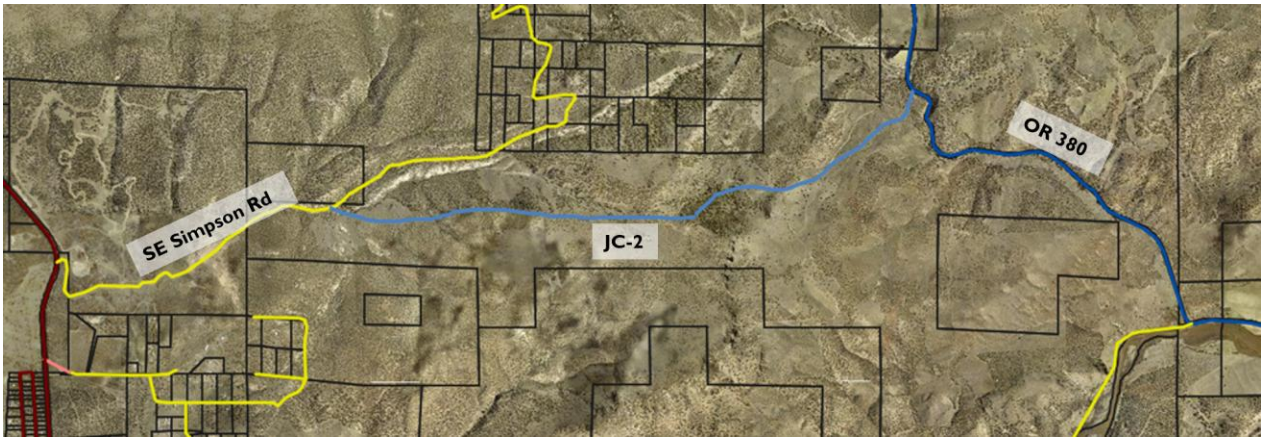

Figure 3: Juniper Canyon Access Project JC-2

Project R-2A: Construct a single-lane roundabout at the intersection of OR 126 and SW Williams Road.

Benefits of the OR 126 and SW Williams Road Project

- Improves safety performance for all modes.
- Provides traffic calming

Cost: $3,400,000

The intersection of OR 126 and SW Williams Road is an important community connection with several destinations located at this intersection, including a school, church, and a country store. Traffic analysis shows that this location is expected to exceed traffic mobility targets in 2045, and school pickup and drop-off activities are reported to affect travel patterns today. Community members identified safety concerns at this intersection, including high travel speeds and access to destinations. Crook County has identified a single-lane roundabout as the preferred improvement at this intersection to provide traffic calming and improve safety performance for all modes of travel. An Intersection Control Evaluation is required to identify the most appropriate traffic control change.

1. Introduction

The Crook County Transportation System Plan (TSP) Update is a long-term plan for managing, preserving, and improving the transportation system to support the needs of the Crook County community. This section introduces the updated 2025 TSP and provides an overview of the purpose, planning process, and policy context that influenced the development of the update.

1.1 Purpose of the Transportation System Plan

The 2025 TSP update establishes the vision for Crook County's transportation system over the next 20 years. It updates the most recent TSP from 2017 to address population growth, transportation safety concerns, and the need for new access routes. Since publication of the 2017 TSP, Crook County's population has grown faster than previously projected, requiring a new evaluation of transportation system needs. The TSP update guides future decisions and investment priorities to improve the transportation system for all travelers. The TSP includes descriptions of the following analysis and conclusions:

- Assesses existing and future conditions to determine transportation needs and issues for all modes of travel, including driving, walking, biking, and public transportation.
- Evaluates transportation safety and identifies solutions for locations experiencing severe crashes.
- Identifies preferred alternatives to address congestion, safety, and access issues in the Powell Butte and Juniper Canyon communities.
- Includes both near- and long-term projects and programs that directly address transportation issues in the County and provides an evaluation system for prioritizing these projects.
- Includes an implementation plan for funding and financing projects.

1.2 Plan Process

The 2025 TSP update was developed through research, data analysis, documenting research and analysis in technical reports, and public involvement. The process began in fall 2023 and concluded in fall 2025.

The Project Management Team (PMT) led the TSP development process and was composed of staff from Crook County (County) and the consultant team. A separate Project Advisory Committee representing community members, partner jurisdictions, and the Oregon Department of Transportation (ODOT) provided input and recommendations at key milestones throughout the project. The Project Advisory Committee reviewed project documents and recommendations, considered public input, and provided feedback to the PMT.

The PMT also engaged with Crook County community members throughout the planning process to gather feedback on system needs, proposed goals, and identified solutions. The PMT held three community open houses, maintained a project website that included draft documents for review and public surveys, and shared information with project partners. As shown in Figure 4, community members, interested parties, and project partners were involved in the project, providing feedback that informed final decisions by the Crook County Board of Commissioners.

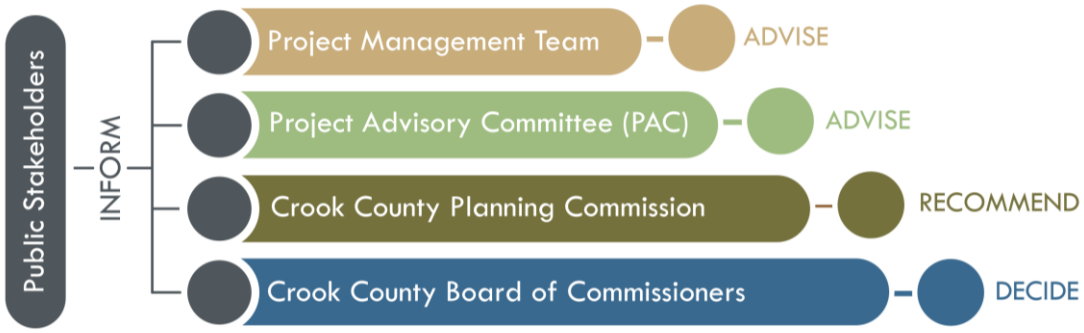

Figure 4. TSP Decision-Making Process

1.3 Policy Context

TSPs are developed per the Oregon Transportation Planning Rule (Oregon Administrative Rule 660012) and must be consistent with existing regional, state, county, and local plans, policies, and documents including the Oregon Highway Plan (ODOT 2023a), the ODOT Transportation System Plan Guidelines (ODOT 2024b), and the Crook County Comprehensive Plan (adopted in 1978 and codified in 2003). The Transportation Planning Rule implements Statewide Planning Goal 12 – Transportation, which is intended to promote the development of safe, convenient, and economic transportation systems designed to maximize the benefit of investment and reduce reliance on automobiles. The project team reviewed more than two dozen plans, policies, and other documents while developing the 2025 TSP update, including the 2017 Crook County TSP (Crook County 2017), the 2003 Crook County Comprehensive Plan (Crook County 2003), other applicable state and regional plans.

1.4 Study Area

Located in central Oregon, Crook County spans 2,991 square miles east of Deschutes County and the cities of Bend and Redmond. The city of Prineville is located in western Crook County and is the only incorporated city in the county. The Crook County TSP considers all land within county boundaries and roadways under County and State ownership, including US 26, Ochoco Highway/OR 126 (OR 126), NW O'Neil Highway/OR 370 (OR 370), SE Paulina Highway/OR 380 (OR 380), and OR 27. It does not include the city of Prineville or land within Prineville's urban growth boundary (UGB). The study area is displayed in Figure 5; the TSP focused on transportation in the western half of Crook County. Much of eastern Crook County is federal lands and sparsely populated.

Although this TSP update does not include the city of Prineville, the PMT coordinated closely with City of Prineville staff to align with project recommendations developed as part of their concurrent TSP update.

Figure 5. Study Area

1.4.1 Current Land Use

A county's zoning heavily influences transportation behavior. How far people must travel from their residences to work, learn, and recreate can be a factor in what transportation method they use. Crook County's land use includes a dispersed mix of farming, residential, industrial, and commercial uses, as shown in Figure 6. The majority of Crook County is zoned Exclusive Farm Use. The Juniper Canyon area and several other small communities in the Powell Butte area and northwest of Prineville are zoned Rural Residential.

Crook County has several community destinations, recreational areas, resort destinations, and other uses that attract trips within the county. As shown in Figure 7, Figure 8, and Figure 9, the following are key activity generators within the county:

- Brasada Ranch Resort
- Ochoco National Forest
- Crooked River Recreation Areas
- Prineville and Ochoco Reservoirs
- Paulina and Powell Butte Schools
- Prineville Airport
- City of Prineville Railway
- Crook County Landfill
- Powell Butte Post Office
- Powell Butte Community Center

In addition to these major activity centers in the county, destinations such as major employment centers, schools, medical facilities, and shopping centers are located within the city of Prineville. Although the transportation system within the city of Prineville is not part of the study area, connectivity between the county and nearby cities (e.g., Prineville, Redmond, and Bend) is an important aspect considered in this TSP update. Feedback from community members highlighted the importance of maintaining and improving access to key destinations in the county, including the Powell Butte Post Office.

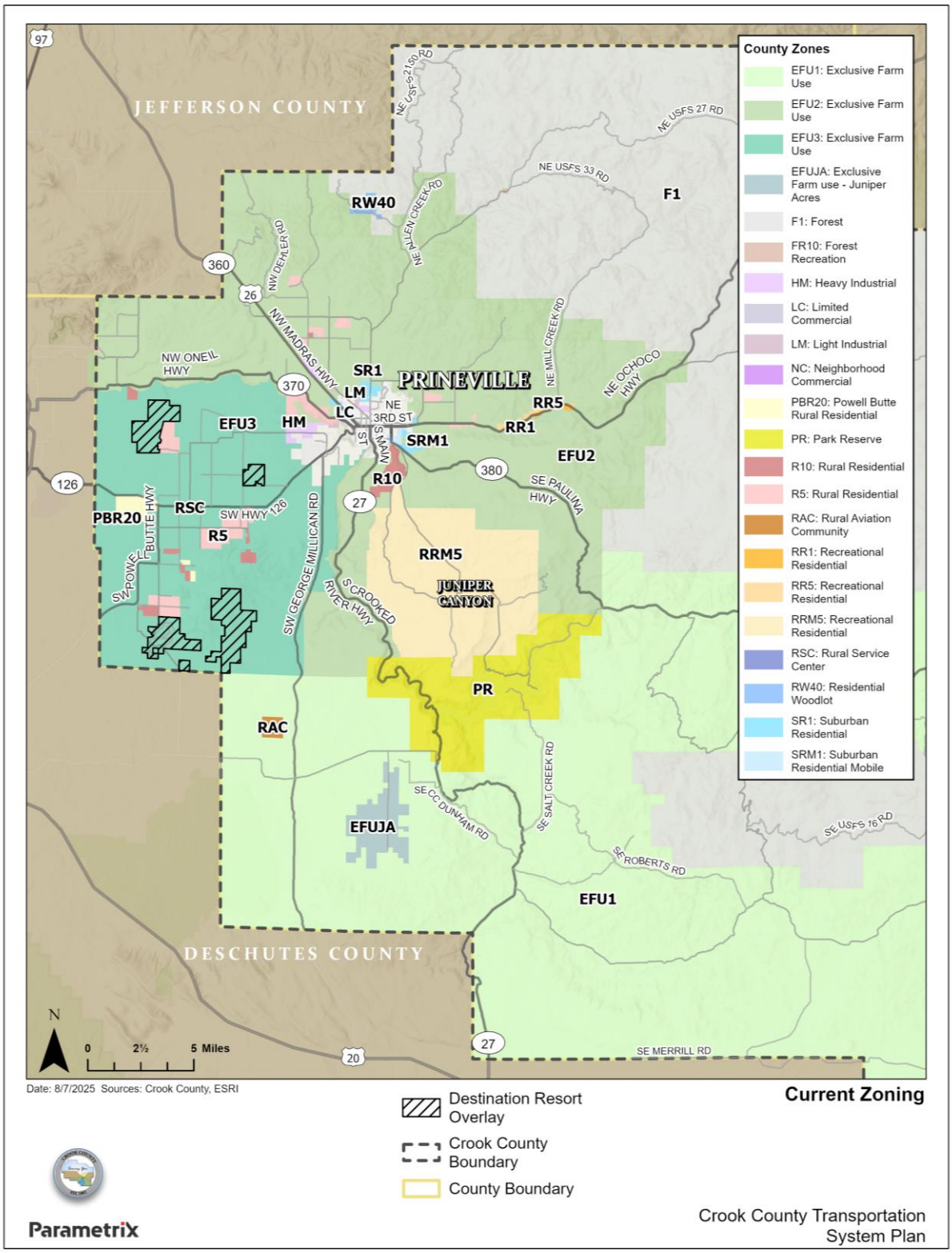

Figure 6. Current Zoning

Figure 7. Community Destinations - West

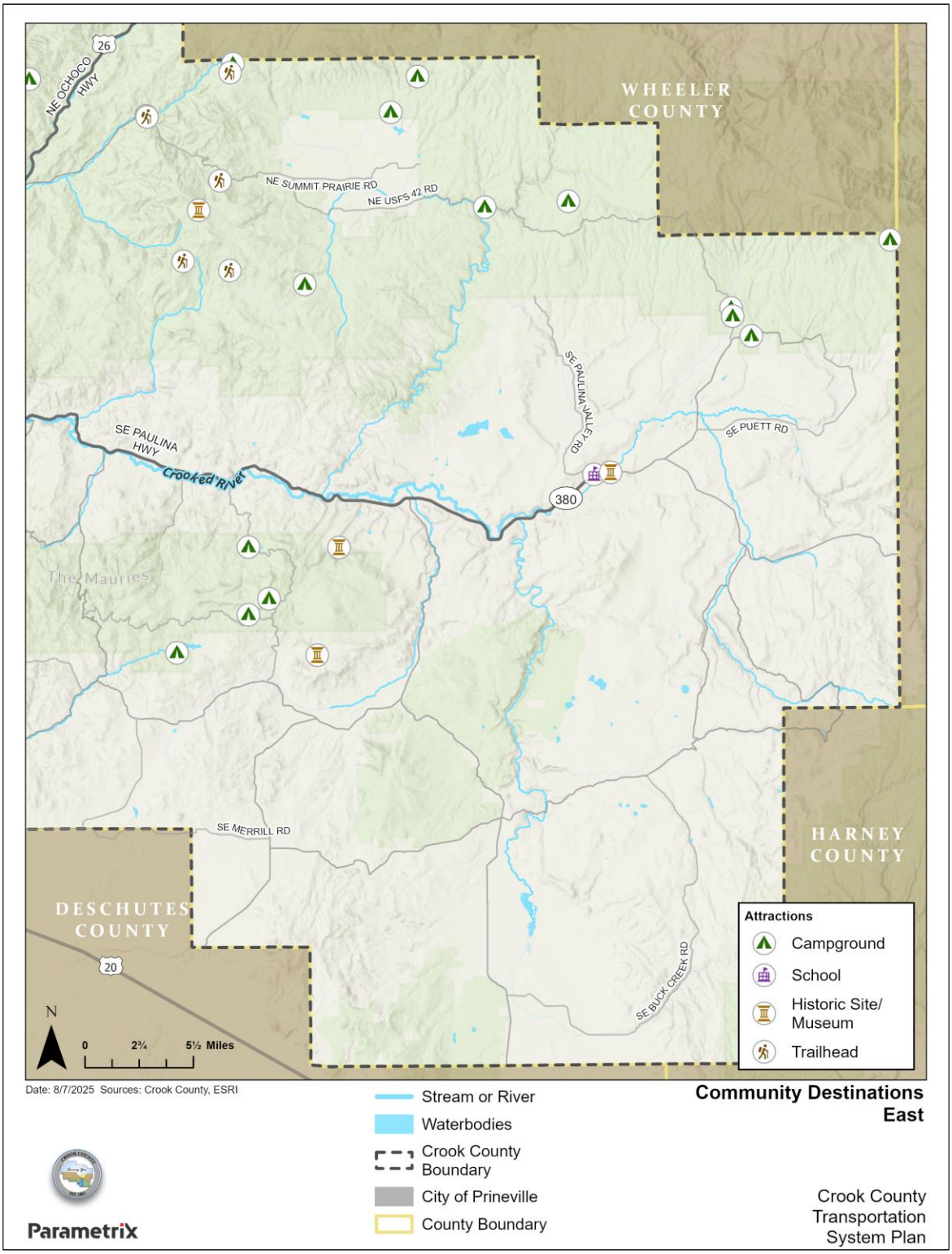

Figure 8. Community Destinations- East

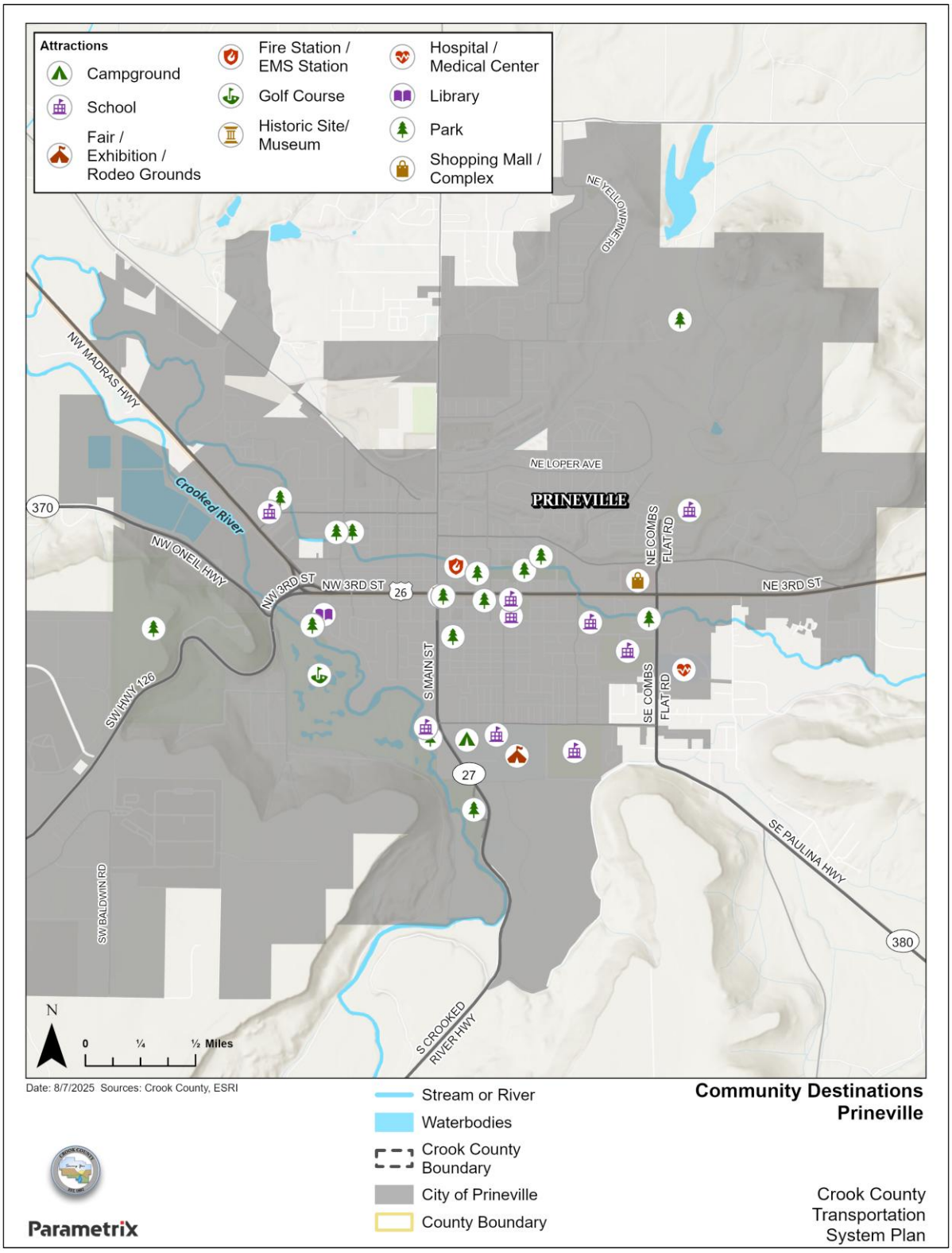

Figure 9. Community Destinations Prineville

1.4.2 Community Profile

As of 2022, Crook County was home to nearly 25,000 residents, with just over half (56.3%) living in unincorporated Crook County. The population has grown by more than 5% since 2020 and by nearly 30% since 2000, with unincorporated areas growing faster than the city of Prineville. By 2072, an estimated 42,000 people will live in Crook County, with approximately 40% of this population in unincorporated areas. More information about existing and projected populations can be found in Appendix A. Table 1 compares community characteristics in Crook County to characteristics for Oregon. The table is based on 2022 American Community Survey (U.S. Census Bureau 2023) data published by the U.S. Census Bureau. Notable demographic information includes the following:

- Crook County has a higher population of older adults (25%) compared to the state of Oregon (21%).
- Crook County has a slightly lower median household income ($74,969) compared to the state of Oregon ($76,632).
- Crook County has a slightly lower population of people who speak limited English (<1%) compared to the state of Oregon (2%).
- Crook County has a slightly higher population of people with disabilities (18%) compared to the state of Oregon (15%)

1.4.3 Future Land Use

Crook County is rapidly growing; more than 42,000 residents are expected to live in the county by 2072. This figure includes the Prineville UGB; however, nearly 18,000 people are expected to live in unincorporated Crook County. Growth in unincorporated areas is expected to occur primarily in and around the communities of Powell Butte and Juniper Canyon, including both residential development and tourism-focused resort communities.

It is important to note that while projections anticipate nearly 16,000 people will live in unincorporated Crook Canyon by 2047, recent population estimates from the U.S. Census are rapidly approaching this number. To account for the observed high rate of growth, the TSP evaluated two growth scenarios to understand potential impacts to the transportation system. The first scenario calculated growth rates based on the ODOT Future Highway Volume Table (ODOT 2024b), with additional PM peak hour trips included to represent expected developments in the Powell Butte area. The second scenario adjusted expected peak hour trips to also include a higher growth rate in Juniper Canyon based on recent development data maintained by the County. More information about these approaches can be found in Appendix A, Existing Conditions and Needs Analysis.

Table 1. Community Characteristics

	Crook County	Oregon
Population	24,987	4,240,137
Age		
Youth (under 18)	20%	20%
Older adults (65 years+)	25%	18%
Income Characteristics		
Median household income	$74,969	$76,632
Low-income population (Less than 200% federal poverty level)	26%	28%
Race and Ethnicity		
American Indian and Alaska Native alone	1%	<1%
Asian alone	<1%	4%
Black or African American alone	<1%	2%
Hispanic or Latino	8%	14%
Native Hawaiian and Other Pacific Islander alone	<0%	<1%
White alone	87%	73%
Some other race alone	0%	<1%
Two or more races	4%	5%
Other Characteristics		
Limited English-speaking households	<1%	2%
Persons with disabilities	18%	15%
Commuting Characteristics		
Households with zero vehicles available	1%	3%
Drove alone	81%	67%
Carpool	7%	9%
Public transportation	0%	3%
Walked	<1%	3%
Other means	<1%	3%
Worked at home	10%	15%

Source: U.S. Census Bureau, 2022 American Community Survey 5-Year Estimates, 2023.

2. Existing and Future Transportation Needs

This section summarizes the current state of Crook County's transportation system and includes an analysis of transportation system performance. This inventory and analysis—including current safety and mobility conditions for drivers, bicyclists, and pedestrians—guided development of solutions for this TSP update. More detail on the existing conditions and deficiencies of the transportation system can be found in Appendix A, Existing Conditions and Needs Analysis.

2.1 Motor Vehicle System

Crook County's motor vehicle system serves people driving to destinations in Crook County and connects people traveling across the region. As the region has rapidly grown in population, more people rely on the transportation network to get around, resulting in additional demands on major roadways. Roadways such as US 26, OR 126, OR 380, and OR 27 are critical routes that connect communities, especially across long distances; these roadways are owned and operated by ODOT. Other roadways, including SE Juniper Canyon Road and SW Powell Butte Highway, are owned and operated by Crook County. To best support continued growth and future transportation system demands, the TSP process included research, analysis, and engagement with Crook County residents to understand key conditions and priority issues. These issues are summarized below and detailed further in Appendix A, Existing Conditions and Needs Analysis.

2.1.1 Traffic Volumes and Congestion

- Analysis of four highway segments showed that all corridors are operating at a level of service (LOS) C or better. However, in future conditions, LOS is expected to decrease. SE Juniper Canyon Road south of OR 380 is expected to operate at LOS E.
- Community members identified congestion along SE Juniper Canyon Road south of OR 380 as a key concern.

2.1.2 Intersection Operations

- The volume-to-capacity (V/C) ratio (a standard measure of congestion) under current conditions at SW Powell Butte Highway and OR 126 exceeds the state's mobility target. The other study intersections do not exceed the mobility target. Community members identified congestion at the intersection of OR 126 and SW Powell Butte Highway as a key concern.
- Two growth scenarios were analyzed to evaluate future conditions. In the No Build scenario, two of the six study intersections exceeded their mobility targets. However, in the higher growth scenario, five of the six study intersections exceeded their mobility targets (see Table 2).

Table 2. Study Intersections' Operations Summary

Study Intersection	Mobility Targets	2023 Existing Traffic Operations V/C Ratio & LOS	2045 No-Build Traffic Operations V/C Ratio & LOS	2045 No-Build (Juniper Canyon Higher Growth) Traffic Operations V/C Ratio & LOS
SW Powell Butte Hwy & OR 126	Major: V/C < 0.70 Minor: V/C < 0.80	Major: 0.34 **Minor: 1.30**	Major: 0.45 **Minor: 10.36**	**Major: 0.84** **Minor: 2.40**
SW Williams Rd & OR 126	Major: V/C < 0.70 Minor: V/C < 0.80	Major: 0.49 Minor: 0.22	Major: 0.65 Minor: 0.42	**Major: 0.95** **Minor: 2.11**
SW Parrish Ln & OR 126	Major: V/C < 0.70 Minor: V/C < 0.80	Major: 0.44 Minor: 0.07	Major: 0.59 Minor: 0.07	**Major: 0.85** Minor: 0.21
S Powell Butte Hwy & SW Bussett Road	LOS E or LOS F with V/C ratio < 0.95	LOS Major St: A LOS Minor St: B	LOS Mainline: A LOS Side Street: C	LOS Mainline: A LOS Side Street: D
S Powell Butte Hwy & Alfalfa Rd	LOS E or LOS F with V/C ratio < 0.95	LOS Major St: A LOS Minor St: B	LOS Mainline: A LOS Side Street: D	LOS Mainline: A **LOS Side Street: F**
SE Juniper Canyon Rd & OR 380	Major: V/C < 0.80 Minor: V/C < 0.80	Major: 0.54 Minor: 0.34	**Major: 0.97** Minor: 0.62	**Major: 2.27** **Minor: 1.67**

Bold = Exceed Mobility Standards

LOS = level of service; V/C = volume to capacity.

2.1.3 Roadway Connections

- Community members expressed desire for a new access into and out of Juniper Canyon to address a number of issues including traffic congestion, access in the event of a blockage or inclement weather, and improved emergency services response. Community members also discussed a desire to have an evacuation route in the case of a natural disaster, such as during wildfires.

2.1.4 Pavement Conditions

- Crook County roadways have an overall pavement conditions index of 80 out of 100; this exceeds the County's goal of 70.
- ODOT-owned roadways generally range from fair to good pavement condition. However, OR 126 and several segments of OR 380 and OR 27 are rated as poor.

2.2 Bridges

Crook County maintains 111 bridges. Sufficiency ratings assigned by ODOT provide information about a bridge's condition, load capacity, dimensions, and materials. Ratings below 50 (on a scale of 0 to 100) signify priority for repair or replacement. Bridges may also be identified as functionally obsolete. Bridges are also classified based on length; bridges measuring over 20 feet in length are part of the National Bridge Inventory (NBI; FHWA 2025b) and are eligible for federal funding. Bridges less than 20 feet in length are not eligible for federal funding and must rely on County funding for repair or replacement.

The 2017 TSP identified NBI bridges in need of repair or replacement. Four locations remain in need of improvement:

- Bridge 19083 located on County Road 221 over Paulina Creek.
- Bridge 03291 on SW Powell Butte Highway over Powell Butte Canal.
- Bridge 032983 on SW Powell Butte Highway over Powell Butte Wasteway.
- Bridge 13C06A located on Johnson Creek Road NE over Ochoco Main Canal.

2.3 Safety

During the 5-year period between 2017 and 2021, 732 crashes in unincorporated Crook County resulted in 17 fatalities and 54 serious injuries. Fatal and serious injury crashes occurred most often in the western areas of the county, generally clustered near OR 126, SE Juniper Canyon Road, and north of Prineville. Crashes most frequently occurred along straight roadways (more than 47% of all reported crashes); 27% of all reported crashes occurred at horizontal curves. Fixed-object crashes were the most common crash type, representing over 40% of all reported crashes. Traveling too fast for conditions was the most frequent contributing factor (22%).

During this time, there were two pedestrian-involved crashes. One crash resulted in a pedestrian fatality on Millican Road near Reservoir Road. The second crash involved three pedestrians and resulted in suspected serious injuries. One bicycle-involved crash resulted in suspected serious injuries. Crash locations are shown by mode and severity in Figure 10.

Additional analysis was completed for both the TSP study intersections and segments along five highways or corridors to determine if any locations exceeded the critical crash rate or the expected number for crashes for similar locations. More information about these analyses can be found in Appendix A, Existing Conditions and Needs Analysis.

Based on this analysis, the following locations were identified as exceeding the critical crash rate:

- S Powell Butte Highway and SW Bussett Road
- OR 126 east of SW Powell Butte Highway
- OR 370 west of Lone Pine Road
- OR 370 east of Happy Hollow Drive
- OR 380 south of NE 3rd Street

Feedback throughout the TSP development emphasized that improving transportation safety in the county is a community priority.

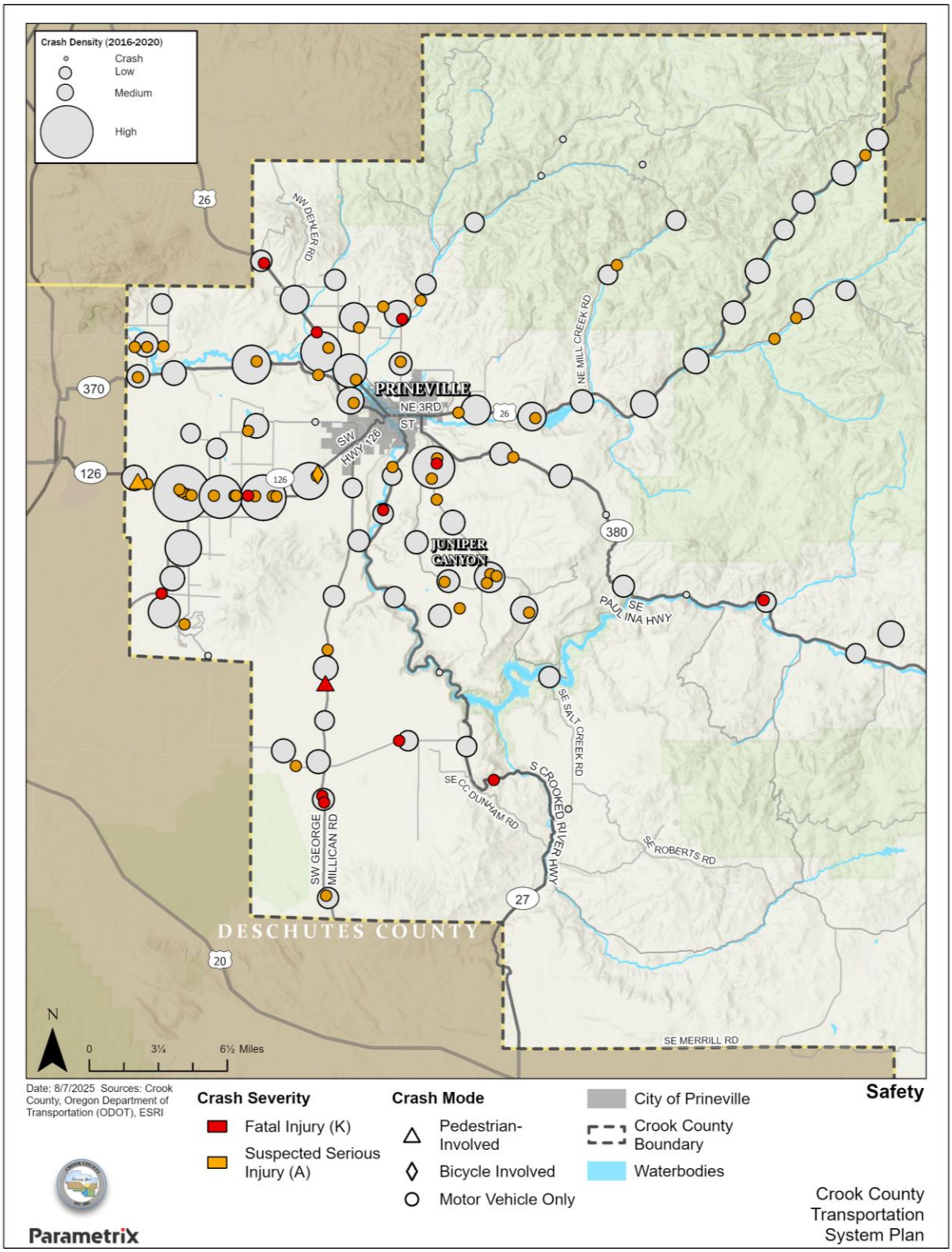

Figure 10. Crash History (2017–2021)

2.4 Active Transportation System

A well-connected and well-maintained active transportation system enables safer, more comfortable, and more convenient travel for people walking, rolling, or bicycling. A connected network of sidewalks, crosswalks, bicycle lanes, and multiuse trails can support local connections between communities and community destinations such as schools, parks, and other recreation areas. Existing active transportation conditions are described below.

2.4.1 Pedestrian System

No sidewalks exist in unincorporated Crook County. Connections to pedestrian generators—such as Juniper Pantry, Powell Butte Elementary School, and Paulina Elementary School—require travel along the roadway or shoulder, where available.

2.4.2 Bicycle System

Existing bicycle facilities in the county include designated bike lanes, multiuse trails, and wide shoulders. However, existing facilities are intermittent and disconnected. Where no designated facilities are available, bicyclists must share the road with motor vehicles; only the most confident, experienced riders are likely to be comfortable sharing high-speed rural roads.

Crook County also features popular recreational routes along gravel or primitive roads. Located in areas such as Ochoco National Forest, these routes provide riders with a low-traffic, immersive ride experience in nature. Featured on popular recreational websites, these routes can be instrumental in attracting more people to ride bicycles and raising awareness of people riding bicycles for transportation on roads. While gravel routes generally provide a traffic-free experience for recreational bicycle riders, reaching these locations by bike often requires travel along high-stress roadways with no paved shoulder, such as NE McKay Creek Road. This can discourage less-confident riders from riding to the beginning of their recreational route and limit access to recreational areas.

Figure 11 displays the locations and widths of shoulders along ODOT-owned roadways. Where present in the unincorporated county, they are typically less than 5 feet wide.

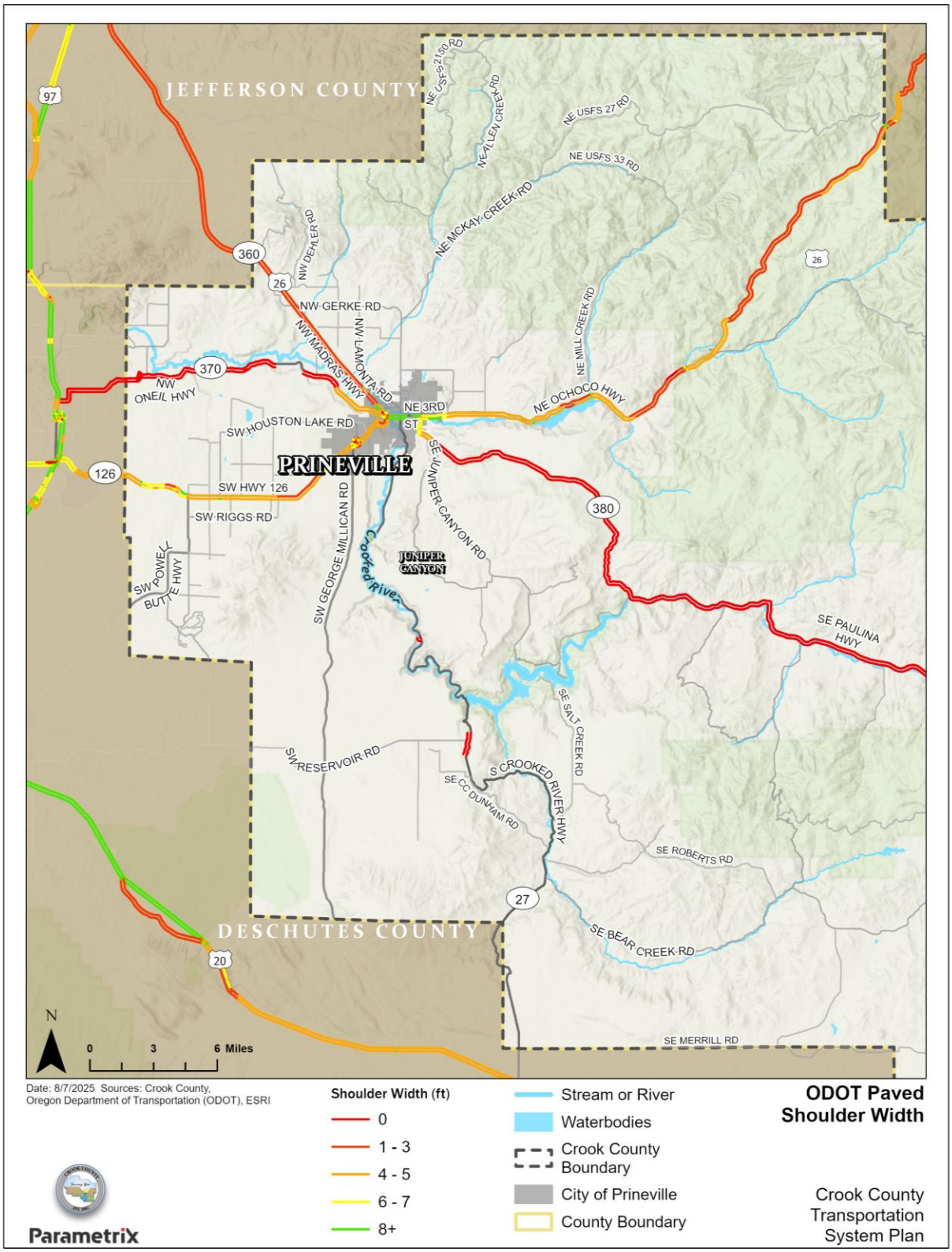

Figure 11. ODOT Paved Shoulder Width

2.5 Public Transportation

Cascades East Transit (CET) provides fixed-route and dial-a-ride services in limited areas of the county. The fixed-route service Route 26 runs on weekdays and connects Prineville to Redmond. Route 26 has one stop in Powell Butte at a church that serves as a park and ride. Transit vehicles provide bike racks for multimodal integration. Dial-a-ride service is available on weekdays in some areas of the county. The CET service route is shown on Figure 12.

Rural communities have desired expanded dial-a-ride coverage as well as enhanced fixed-route and local service. In the CET 2040 Transit Master Plan, CET hopes to work toward a higher level of service in Crook County for the Route 26 bus line by increasing the frequency and length of service between Prineville and Redmond and Bend (CET 2020). The plan also indicates that Route 26 will interline with Route 24 to provide a one-seat ride to Bend, add weekend service, re-route to serve the Redmond Airport and Central Oregon Community College, and improve accessibility for residents in more rural areas of the county. The transit master plan also identifies extending dial-a-ride service hours to 5:30 p.m., an expansion that is in effect as of this TSP, as well as adding evening and Saturday limited circulation as part of a Route 26 flex-route.

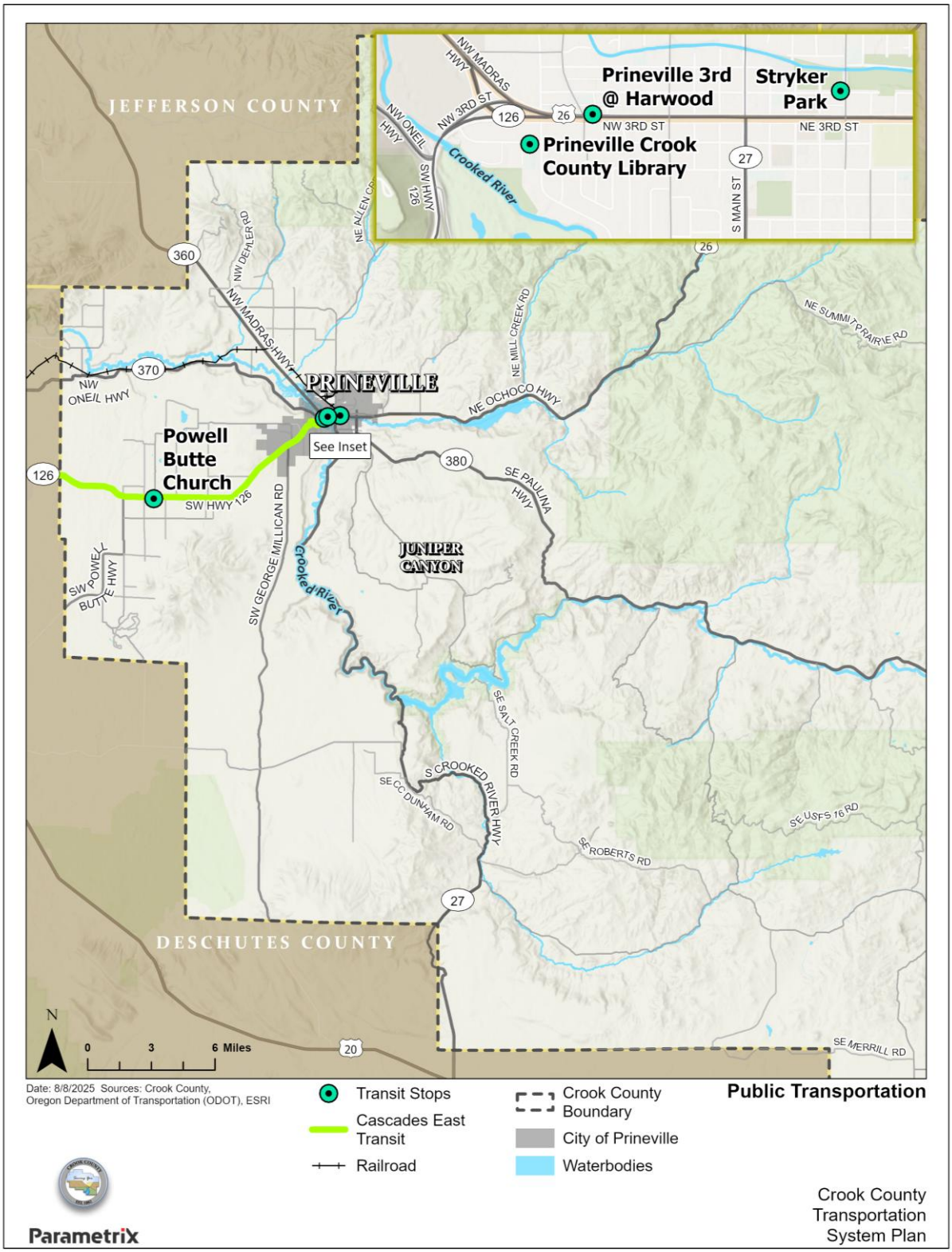

Figure 12. Public Transportation

2.6 Freight

Freight is primarily moved by truck and rail. US 26 (west of Prineville) and OR 126 both serve as designated state freight routes. These routes are also designated as reduction review routes whose vehicle-carrying capacity cannot be reduced unless safety or access factors require a reduction. Local governments can also request an exemption. The Prineville Freight Depot and Prineville-Crook County Airport, both accessible by OR 126, support intermodal connections. Industrial locations within the unincorporated area of the county such as the Crook County Landfill and Facebook receive freight from a variety of roadways such as OR 126, which serves a connection between Bend and Prineville and therefore may experience higher freight volumes than other roadways. In addition, Millican Road is a common truck route that provides access to the industrial land on the eastern side of Prineville.

2.7 Railroad

The City of Prineville Railway operates a Class III short-line freight railroad. This is the only railroad in Crook County. The railway carries a variety of products including consumer and forest products, chemicals, and building materials. The railway short line connects with Class I railroads in Redmond on the Oregon Trunk Line that runs from the Columbia River to Klamath Falls. The existing railroad ends west of the Main Street and 10th Street intersection north of downtown Prineville. Roadway traffic volumes would increase if rail service were discontinued due to the large quantities of freight moved by the railway.

There are six public railroad crossings in Crook County (not including locations within the Prineville UGB). Of these, five are at-grade crossings, and in one location the roadway (US 26) crosses under the rail. Table 3 lists these crossing locations. As shown in Figure 13, there are also approximately 30 rail crossings that involve private roadways. There is no passenger service for residents of Crook County. The nearest passenger service is available on Amtrak at the passenger station in Chemult.

Table 3. Railroad Crossing Locations

Location	Crossing Type	Road Authority
Gumpert Rd	At Grade	Crook County
NW Lone Pine Rd	At Grade	Crook County
Elliot Ln	At Grade	Crook County
NW Bus Evans Ln	At Grade	Crook County
US 26	Railroad Overpass	ODOT
NW Elliot Ln	At Grade – Spur	Crook County

Source: ODOT TransGIS, 2024.

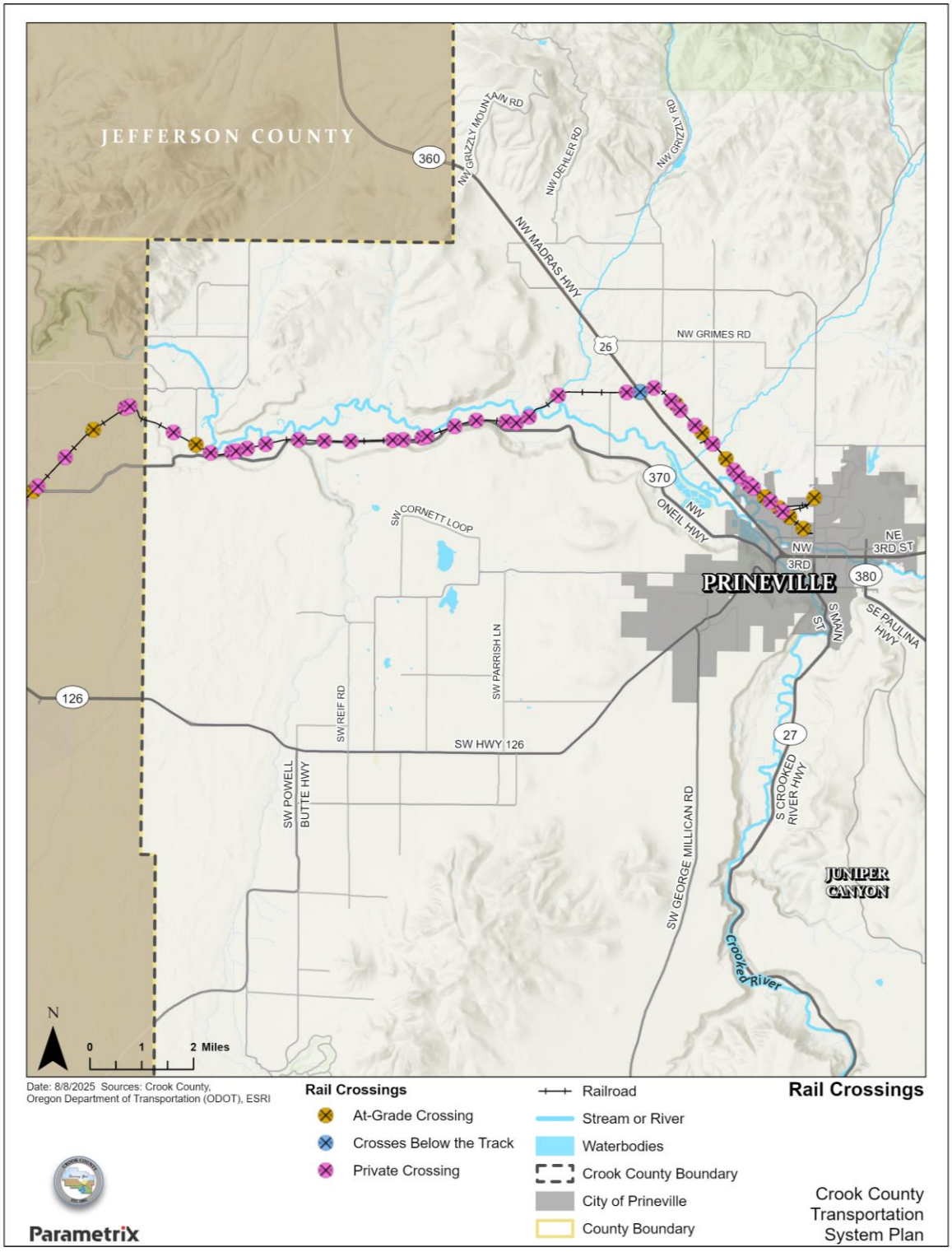

Figure 13. Rail Crossings

3. Goals

The project team developed goals and a criteria framework for evaluating and screening TSP projects. This section summarizes the 2025 TSP goals.

3.1 Transportation System Goals

The 2025 TSP goals reflect the vision for Crook County's transportation system while acknowledging the goals established in the 2017 TSP. The goals listed below will guide the implementation of new projects, programs, and policies for the Crook County transportation system. A complete description of the goals, objectives, and evaluation criteria can be found in Appendix B, Goals, Objectives, Evaluation Criteria.

- Goal 1. Mobility and Connectivity -- Promote a transportation system that links rural communities to key destinations in the county, Prineville, and adjacent counties, and serves existing and future needs for transporting goods and people.
- Goal 2. Economic Development -- Plan a transportation system that supports existing industry, encourages economic development in the county, and responds to population growth in Crook County and adjacent communities.
- Goal 3. Safety -- Provide a transportation system that promotes the safety of current and future travel modes for all users.
- Goal 4. Multimodal Users -- Provide a multimodal transportation system that permits safe and efficient transport of people and goods through active modes, which may also provide a benefit in improved health and environment.
- Goal 5. Environment – Provide a transportation system that balances transportation services with the need to protect the environment.
- Goal 6. Planning and Funding – Maintain the safety, physical integrity, and function of the County's multimodal transportation network, consistent with Goal 6 of the Oregon Transportation Plan, which focuses on creating a transportation funding structure that serves both current and future needs (ODOT 2023b).
- Goal 7. Equity -- Provide access to the transportation system for all users.

4. Transportation System Plan

The TSP describes projects, policies, and programs to fulfill Crook County's transportation needs. Where applicable, projects from the 2017 TSP were carried forward. The development of new projects and project prioritization were guided by review of prior planning efforts and analyzing existing needs and future conditions. Public involvement from Crook County residents also shaped projects and priorities when addressing multiple needs across the county. This chapter includes a comprehensive summary of the TSP projects, what they address, their costs, and prioritization considerations. More information about proposed and preferred improvements can be found in Appendix C, Solutions Analysis and Funding Program, and Appendix D, Preferred Solutions.

4.1 Transportation System Plan Projects Summary

The TSP projects include improvements that enhance safety and connectivity in Crook County, with consideration for needs both today and in the future. The complete list of projects is summarized in Table 4.

Cost estimates were developed for most improvements and represent planning-level estimates to guide project programming and prioritization. Projects are prioritized by time frame as near-term (0 to 5 years), medium-term (5 to 10 years), and long-term (>10 years) based on the need, costs, and perceived level of implementation difficulty. Some projects, including those along OR 126, would be completed in partnership with ODOT.

Table 4. Transportation System Plan Projects Summary

Project ID	Project Name/Location	Improvement Time Frame	Cost Estimate	Possible Funding Source
R-1A	OR 126 & Powell Butte: ▪ Construct a single-lane roundabout.	Medium	$3,400,000	ODOT, Development, Local Funds
R-2A	OR 126 & SW Williams Rd: ▪ Construct a single-lane roundabout. ▪ Requires an Intersection Control Evaluation to determine appropriate traffic control change.	Medium	$3,400,000	ODOT, Safe Routes to School, Local Funds
R-3A	OR 126 & SW Parrish Ln: ▪ Widen OR 126 from SW Valley View Rd to Stillman Rd (center two-way left-turn lane).	Near	$900,000	ODOT, Local Funds
R-4A	SE Juniper Canyon Rd & OR 380: ▪ Realign intersection with left acceleration lane.	Long	$2,100,000	Local Funds
JC-1	Juniper Canyon Access: ▪ Develop new roadway connection in Juniper Canyon between Davis Loop and OR 27.	Near	$9,300,000 to $20,000,000	Local Funds, Grants
JC-2	Juniper Canyon Access: ▪ Develop new gravel roadway connection in Juniper Canyon between SE Simpson Rd and OR 380	Near	$24,000,000 to $52,000,000	Local Funds, Grants

Project ID	Project Name/Location	Improvement Time Frame	Cost Estimate	Possible Funding Source
R-5	OR 126 at Kissler Rd.	Medium	$20,000	ODOT
R-6	OR 126 at Copley Rd.	Medium	$20,000	ODOT
R-7	OR 126 at Minson Rd.	Medium	$20,000	ODOT
R-8	OR 126 at Yates Rd.	Medium	$20,000	ODOT
R-9	OR 126 at Wiley Rd.	Medium	$20,000	ODOT
BR-1	County Road 221 bridge over Paulina Creek (NBI Bridge 19083): ▪ Study cost of repairing or replacing this functionally obsolete bridge.	Medium	$30,000	Local Funds, Grants
BR-2	SW Powell Butte Hwy bridge over Powell Butte Canal (NBI Bridge 03291): ▪ Replace bridge.	Medium	$1,500,000	Grants
BR-3	SW Powell Butte Hwy bridge over Powell Butte Wasteway (NBI Bridge 03293): ▪ Replace bridge.	Medium	$1,500,000	Grants
BR-4	Johnson Creek Rd NE bridge over Ochoco Main Canal (NBI Bridge 13C06A): ▪ Replace bridge.	Medium	$1,500,000	Grants
BR-5	Non-NBI bridge replacement program: ▪ Replace one non-NBI bridge per year.	Medium	$4,500,000	Local Funds
S-1	S Powell Butte Hwy & SW Bussett Rd: ▪ Install rumble strips along the curve. ▪ Implement variable speed limits that lower in icy conditions. ▪ Install lighting. ▪ Reassess curve warning signage and check sign spacing. ▪ Install acceleration lanes on S Powell Butte Hwy. ▪ Reconstruct intersection to simplify circulation patterns and turning movements.	Long	$870,000	Local Funds, Grants
S-2	Rimrock Acres Loop & OR 370: ▪ Install lighting. ▪ Install raised pavement markings. ▪ Evaluate existing curve warning signage locations and warning speeds. ▪ Install curve chevrons, guardrail, and rumble strips.	Medium	$180,000	Local Funds, Grants
S-3A	S Powell Butte Hwy & Alfalfa Rd: ▪ Install lighting and curve chevrons along S Powell Butte Hwy. ▪ Reassess curve warning signage and check for sign spacing.	Near	$71,000	Local Funds, Grants
S-4	OR 126 east of Powell Butte Hwy to Copley Rd: ▪ Widen edge line striping.	Near	$260,000	ODOT

Project ID	Project Name/Location	Improvement Time Frame	Cost Estimate	Possible Funding Source
S-5	OR 370 east of Happy Hollow Dr: ▪ Install rumble strips and/or wider edge line striping.	Near	$22,000	ODOT
S-6	OR 380 south of NE 3rd St: ▪ Evaluate access management along the corridor.	Near	N/A	ODOT
S-7	Juniper Canyon Rd variable speed limit: ▪ Implement variable speed limit based on weather conditions.	Near	TBD based on future evaluation	Local Funds
S-8	Juniper Canyon Rd alignment delineation: ▪ Add raised pavement markers on SE Juniper Canyon Rd. ▪ Add edge-line rumble strips to SE Juniper Canyon Rd.	Near	$94,000	Local Funds
S-9	Juniper Canyon Rd horizontal curve signage and markings.	Near	$10,000	Local Funds
S-10	Powell Butte Rd horizontal curves pavement markings.	Near	$10,000	Local Funds
S-11	Davis Loop Rd tree removal.	Medium	TBD based on future study	Local Funds
S-12	Powell Butte (OR 126) Speed Feedback Signs.	Medium	$50,000	ODOT
S-13	US 26 systemic safety treatments including edge-line rumble strips.	Medium	$50,000	ODOT
S-14	Lamonta Rd horizontal curve signage, speed feedback sign, and delineators.	Medium	$50,000	Local Funds
S-15	OR 126 systemic safety treatments including edge-line rumble strips.	Medium	$50,000	ODOT
B-1	OR 126 from SW Powell Butte Hwy to Prineville urban growth boundary: ▪ Shared-use trail along the south side of OR 126.	Medium	$6,600,000	ODOT, Local Funds
B-2	Barnes Butte Rd: ▪ Add paved shoulder.	Long	$3,800,000	Local Funds
B-3	Barnes Butte Shared-Use Trail Connections: ▪ Shared-use trail connecting Barnes Butte Rd to Iron Horse Shared-Use Trail in Prineville.	Long	$4,900,000	Local Funds
B-4	OR 27 Scenic Bikeway Bicycle Hub.	Long	$30,000	Private Partnership
B-5	US 26 (Madras Highway) shared-use trail: ▪ Extend existing shared-use trail northwest to the county line parallel to US 26.	Long	$7,100,000	ODOT, Local Funds
B-6	Houston Lake Rd, SW Williams Rd, and Reif Rd shared-use trails.	Long	$10,500,000	Local Funds
B-7	Juniper Canyon Rd (south) paved shoulders.	Long	$5,400,000	Local Funds
B-8	OR 27 shared-use trail to connect to planned path in Prineville.	Medium	$4,400,000	ODOT, Local Funds

Project ID	Project Name/Location	Improvement Time Frame	Cost Estimate	Possible Funding Source
B-9	Bicycle signage.	Medium	$50,000	Local Funds
P-1A	OR 126 and SW Williams Rd: ▪ Install sidewalk, curb and gutter, curb ramps, and intersection lighting. ▪ Install marked crosswalks on all four legs of the intersection.	Medium	$2,900,000	ODOT, Local Funds, Sidewalk Improvement Program
T-1	Crook County Service Enhancement Plan: ▪ Institute evening and Saturday limited circulation as part of Route 26 flex route.	Medium	Already adopted as part of other plans.	
T-2	Fixed-route enhancements to increase service in Prineville and expand connections to destinations.	Long	TBD	CET City of Prineville Local Funds
T-3	Dial-a-ride enhancements and transportation network company encouragement.	Near	Already adopted as part of other plans.	
T-4	Transit community outreach.	Near	Variable	ODOT City of Prineville Local Funds
F-1	Bus Evans Rd and Elliott Ln.	Long	$15,000,000	Local Funds Grants
F-2	US 26 railroad bridge feasibility study.	Medium	$35,000	ODOT

CET = Cascades East Transit; NBI = National Bridge Inventory; ODOT = Oregon Department of Transportation; TBD = to be determined.

4.2 Motor Vehicle System Plan

The motor vehicle system plan includes improvements to the roadway network, including intersection operations, safety, bridges, and access management. The improvements respond to needs identified both through analysis and community engagement. Together, these projects seek to reduce conflicts between users, enhance safety, reduce congestion, and improve connections between destinations.

4.2.1 Functional Classification

Roadways are organized by functional classifications, which help describe the purpose and scale of each segment, including the amount and type of vehicular traffic expected, elements to support active and shared modes of travel, and the design of the roadway. Functional classifications for Crook County roadways are shown in Figure 14. These functional classifications include the following:

- **Principal arterials** primarily provide mobility between large population centers or regional activity generators. Motor vehicle movement is emphasized over local access connections.
- **Minor arterials** serve mobility needs over local access, but they may provide important local connections. Minor arterials have a narrower right-of-way than major arterials to better address local needs.
- **Major collectors** connect local roads to arterials. They often serve shorter trips than arterials and may have lower posted speeds.
- **Minor collectors** also facilitate connections between regional and local roadway networks but serve lower volumes of traffic. They can also provide circulation within neighborhoods or other areas. Intersections are typically spaced closer together compared to arterials or major collectors.
- **Local roads** provide direct access to destinations and typically serve shorter trips. Local roads do not typically support through-trips, and travel is generally at lower speeds than on other roadway classifications.

Proposed design standards are shown in Table 5 for each functional classification. While these represent the minimum design standards, conditions may require different elements and dimensions.

Table 5. Functional Classification and Proposed Minimum Design Standards

Functional Classification	ROW Width (feet)	Paved Width (feet)	Travel Lane Width (feet)	Paved Shoulder Width	Surface Type	Max. Grade	Min. Intersection Spacing	Min. Access Spacing (feet)	Design Speed, Min. Tang., Min. Curve	Recommended AADT Range
Principal Arterial	100	State Highway – See Oregon Department of Transportation								
Minor Arterial	80	28	12	5–7 ft	6 in HMAC	6%	0.5 miles	500	AASHTO Green Book (AASHTO 2018)	>5,000
Major Collector	80	28	12	4–6 ft	4 in HMAC	8%	0.5 miles	500		1,500–5,000
Minor Collector	80	28	12	4–6 ft	4 in HMAC	8%	0.25 miles	300		400–1,500
Local	60	24	12	N/A	4 in HMAC	10%	150 feet	N/A		<400

AADT =annual average daily traffic; AASHTO = American Association of State Highway and Transportation Officials; ft = feet; HMAC = hot-mixed asphalt concrete; in = inches; max. = maximum; min. = minimum; ROW = right-of-way; tang. = tangent.

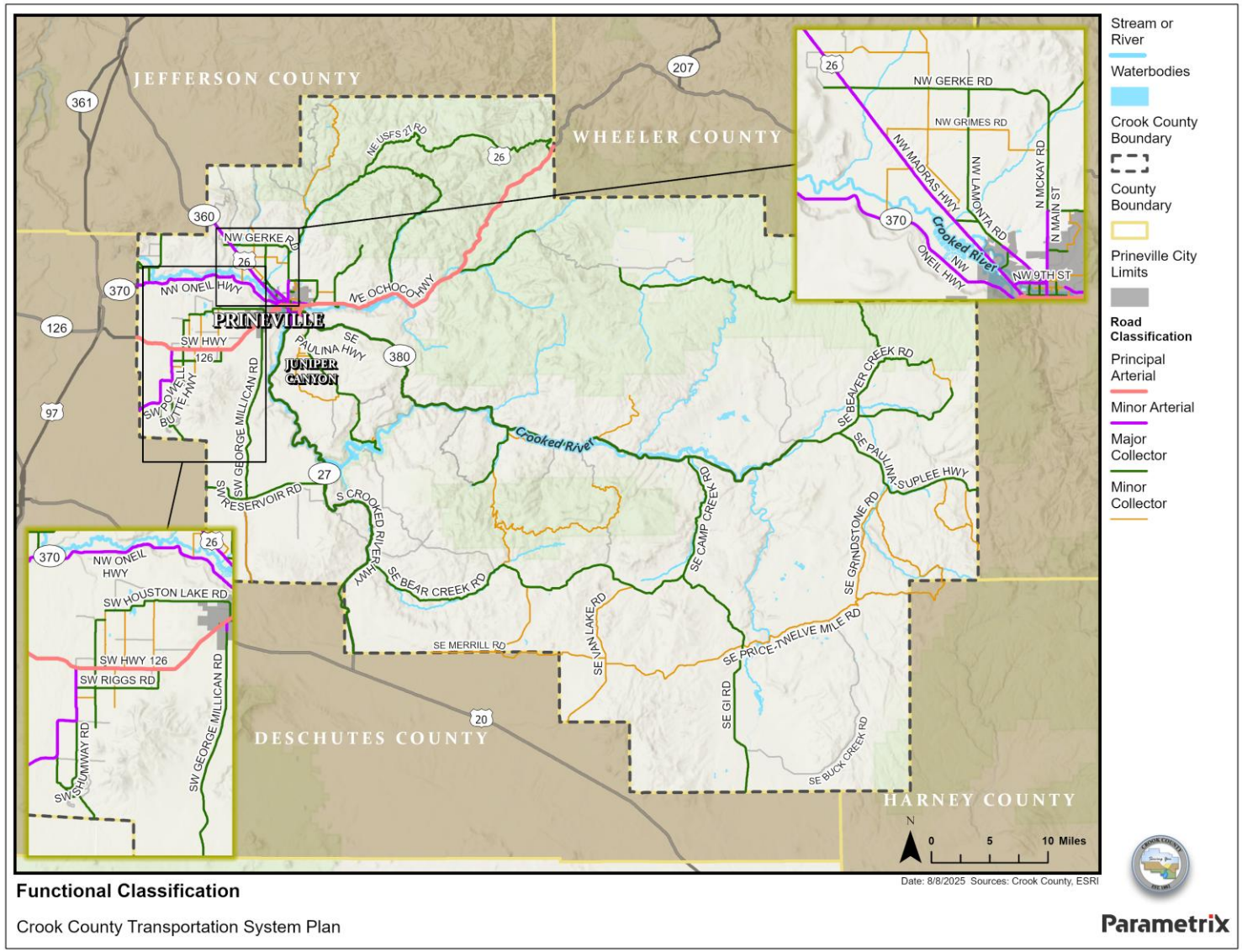

Figure 14. Functional Classification

4.2.2 Roadway and Intersection Improvements

As the county grows, Crook County needs new streets to serve the growing population. The TSP identifies one new roadway connection in Juniper Canyon to alleviate traffic congestion, provide an alternate access route for the community, and expand options that limit travel through Prineville. This new connection also creates an opportunity to include multimodal improvements to support people walking and biking.

The TSP also identifies intersection improvements to address current and anticipated future congestion, as well as improve safety for all roadway users. Several roadway and intersection projects are described in more detail in the Big Moves section of this plan. More information about the remaining projects is included below. Roadway and intersection improvements are summarized in Table 6 and shown in Figure 17.

4.2.2.1 Project R-4A: Realign intersection with left acceleration lane at SE Juniper Canyon Road and OR 380.

The intersection of SE Juniper Canyon Road and OR 380 is a critical connection between the growing Juniper Canyon community and Prineville. The current configuration is skewed, limiting sight distance and impacting turning movement from Juniper Canyon Road onto OR 380. This intersection is expected to exceed mobility targets in the 2045 no-build higher growth scenario. The preferred solution for this location is to realign the intersection and add a left acceleration lane, as shown in Figure 15. By realigning the intersection to a 90-degree angle, this project will improve sight distances, reduce vehicle time in the intersection, and reduce potential conflict points. This project is expected to meet mobility targets for intersection performance.

Figure 15. SE Juniper Canyon Road and OR 380 Preferred Solution

4.2.2.2 Project R-3A: Construct a center two-way left-turn lane at the intersection of OR 126 and SW Parrish Lane.

OR 126 and SW Parrish Lane is expected to exceed mobility targets in the future no build higher growth scenario. The existing roadway configuration does not include a dedicated left turn lane on the west leg of the intersection to facilitate turns onto SW Parrish Lane. Based on analysis of existing traffic volumes, this intersection meets turn lane warrants.

The preferred solution for this location is to widen OR 126 from SW Valley View Road to Stillman Road to include a center two-way left turn lane, as shown in Figure 16. A center two-way left turn lane would improve traffic operations and meet mobility targets; marking and other physical elements could also be included to help visually narrow the roadway and delineate travel lanes, which would encourage vehicles to slow.

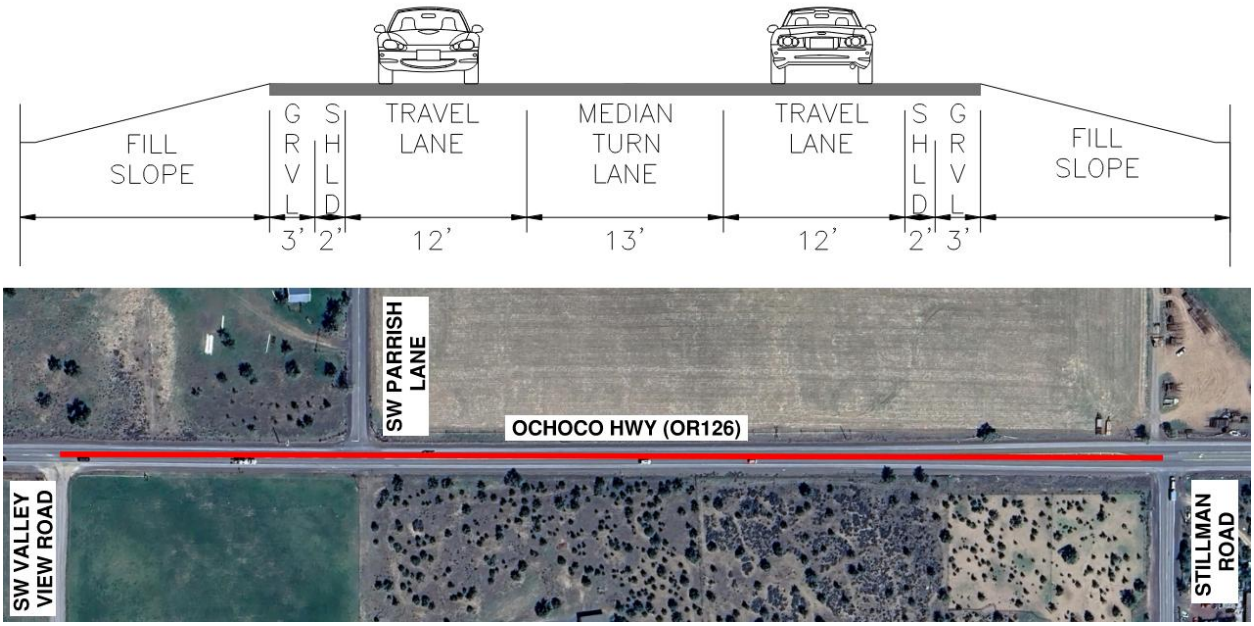

Figure 16. OR 126 and SW Parrish Lane Preferred Solution

Table 6. Intersection and Operations Improvements

Project ID	Project	Needs Addressed	Priority	Cost Estimate
R-1A	OR 126 & Powell Butte Hwy: ▪ Construct a single-lane roundabout.	▪ Reduces traffic congestion and delays in the near term. ▪ Maintains all turning movements while reducing turning movement conflict. ▪ Increases safety.	Medium	$3,400,000
R-2A	OR 126 & SW Williams Rd: ▪ Construct a single-lane roundabout.	▪ Improves safety performance for all roadways users. ▪ Provides traffic calming. ▪ Requires an Intersection Control Evaluation to determine the appropriate intersection control change.	Medium	$3,400,000
R-3A	OR 126 & SW Parrish Ln: ▪ Widen OR 126 from SW Valley View Road to Stillman Road (center two-way left-turn lane)	▪ Reduces traffic congestion and delay. ▪ Opportunity to add medians/physical markers on the east leg to encourage vehicles to slow.	Near	$900,000
R-4A	SE Juniper Canyon Rd & OR 380: ▪ Realign intersection with left acceleration lane.	▪ Improves intersection safety while retaining existing movements. ▪ Reduces conflict points, helping drivers avoid misjudging gaps in traffic ▪ Reduces traffic congestion and delay.	Long	$2,100,000
JC -1	Juniper Canyon Access: ▪ Develop new roadway connection in Juniper Canyon between Davis Loop and OR 27.	▪ Improves emergency access in Juniper Canyon.	Medium/Long	$9,300,000 to $20,000,000
JC-2	Juniper Canyon Access: ▪ Develop new gravel roadway connection in Juniper Canyon between SE Simpson Rd and OR 380	▪ Creates a new gravel emergency evacuation route for Juniper Canyon.	Near	$24,000,000 to $52,000,000

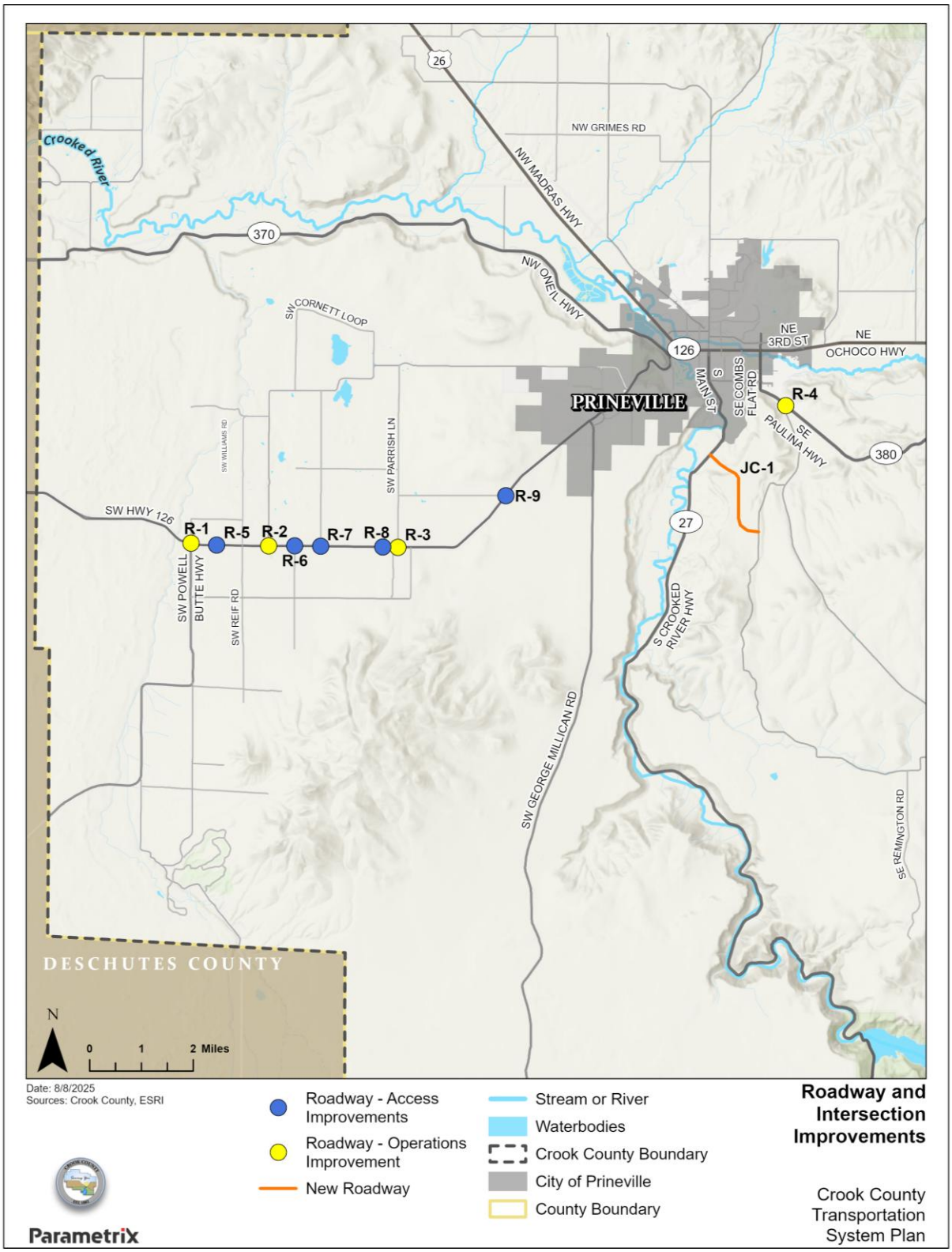

Figure 17. Roadway and Intersection Improvements

4.2.3 Access Management Improvements

Providing adequate access to other public roadways, land uses, and destinations is a critical part of an effective transportation system. However, it is necessary to balance access with the need for mobility and safety on the system. Providing access via other public streets and driveways to land uses creates friction from a traffic operations perspective; it may reduce mobility and introduces points of conflict that can increase the potential for crashes. Proposed access improvements align with improvements proposed in the 2017 TSP and the OR 126 Corridor Plan (Crook County 2012). The locations are summarized in shown in Figure 17.

and shown in Figure 17.

Table 7. Intersections that Need to Balance Destination Access with Mobility and Safety of the Transportation System

Project ID	Project	Priority	Cost Estimate
R-5	OR 126 at Kissler Rd	Medium	$20,000
R-6	OR 126 at Copley Rd	Medium	$20,000
R-7	OR 126 at Minson Rd	Medium	$20,000
R-8	OR 126 at Yates Rd	Medium	$20,000
R-9	OR 126 at Wiley Rd	Medium	$20,000

4.2.4 Bridge Improvements

Table 8 summarizes bridges in the study area that are included in the NBI database and that are eligible for federal funding for repair. These bridges were identified for replacement or repair. In addition to these projects, the TSP recommends that the County continues to replace one non-NBI bridge per year. This is summarized in Project BR-5 and represents the anticipated cumulative cost.

Table 8. Bridge Improvements

Project ID	Project	Needs Addressed	Priority	Cost Estimate
BR-1	County Road 221 bridge over Paulina Creek (NBI Bridge 19083): ▪ Study cost of repairing or replacing this functionally obsolete bridge.	▪ Identifies future bridge cost needs.	Medium	$30,000
BR-2	SW Powell Butte Highway bridge over Powell Butte Canal (NBI Bridge 03291): ▪ Replace bridge.	▪ Replaces low-sufficiency bridge.	Medium	$1,500,000
BR-3	SW Powell Butte Highway bridge over Powell Butte Wasteway (NBI Bridge 03293): ▪ Replace bridge.	▪ Replaces low-sufficiency bridge.	Medium	$1,500,000
BR-4	Johnson Creek Road NE bridge over Ochoco Main Canal (NBI Bridge 13C06A): ▪ Replace bridge.	▪ Replaces low-sufficiency bridge.	Medium	$1,500,000

Project ID	Project	Needs Addressed	Priority	Cost Estimate
BR-5	Non-NBI bridge replacement program: ▪ Replace one non-NBI bridge per year.	▪ Repairs or replaces non-NBI bridges.	Medium	$4,500,000

NBI = National Bridge Inventory

4.2.5 Safety Improvements

Safety improvements are intended to increase safety for all roadway users and would be made on both intersections and roadway segments. These improvements were developed based on the existing conditions analysis and feedback received from the Crook County community. Analysis identified one study intersection as exceeding the critical crash rate, meaning that there were more reported crashes than expected for similar intersections. The preferred improvement for the intersection of S Powell Butte Highway and SW Bussett Road is described below in further detail.

Improvements identified in the 2017 TSP are also included. Table 9 summarizes the recommended safety improvements, and Figure 19 shows the projects' locations. Crook County is also developing a transportation safety action plan that will identify other needed safety improvements in the county.

4.2.5.1 Project S-1: Realign intersection and install acceleration lanes at S Powell Butte Highway and SW Bussett Road.

The intersection of S Powell Butte Highway and SW Bussett Road (see Figure 18) exceeds the critical crash rate based on the TSP's safety analysis. Community members also identified safety concerns in this area, especially due to poor visibility and high travel speeds. The recommended project in the TSP would reconstruct the intersection, install acceleration lanes on S Powell Butte Highway, and add rumble strips and lighting. Acceleration lanes were added to this project based on community feedback. The project would also incorporate variable speed limits to encourage slower driving in bad weather and reassess warning signage at the roadway curve.

Figure 18. S Powell Butte Highway and SW Bussett Road

Table 9. Safety Improvements

Project ID	Project	Needs Addressed	Cost Estimate	Priority
S-1	S Powell Butte Hwy & SW Bussett Rd: ▪ Install rumble strips along the curve. ▪ Implement variable speed limits that lower in icy conditions ▪ Install lighting. ▪ Reassess curve warning signage and check sign spacing. ▪ Install acceleration lanes on S Powell Butte Highway. ▪ Reconstruct intersection to simplify circulation patterns and turning movements.	▪ Improves visibility and awareness. ▪ Simplifies travel patterns. ▪ Aligns with ODOT and AASHTO standards. ▪ Responds to and mitigates inclement weather conditions and associated safety challenges. ▪ Reduces roadway departure crashes.	$870,000	Long
S-2	Rimrock Acres Loop & OR 370: ▪ Install lighting. ▪ Install raised pavement markings. ▪ Evaluate existing curve warning signage locations and warning speeds. ▪ Install curve chevrons, guardrail, and rumble strips.	▪ Improves visibility and awareness at curve and intersection. ▪ Enhances curve navigation.	$180,000	Medium

Project ID	Project	Needs Addressed	Cost Estimate	Priority
S-3A	S Powell Butte Hwy & Alfalfa Rd: ▪ Install lighting and curve chevrons along S Powell Butte Hwy. ▪ Reassess curve warning signage and check for sign spacing.	▪ Improves visibility and awareness at curve and intersection. ▪ Enhances curve navigation.	$71,000	Near-
S-4	OR 126 east of Powell Butte Hwy to Copley Rd: ▪ Widen edge line striping.	▪ Improves visibility and awareness. ▪ Location identified in ODOT SPIS (2018).	$260,000	Near
S-5	OR 370 east of Happy Hollow Dr: ▪ Install rumble strips and/or wider edge line striping.	▪ Improves visibility and awareness. ▪ Reduces roadway departure crashes. ▪ Enhances roadway navigation.	$22,000	Near
S-6	OR 380 south of NE 3rd St: ▪ Evaluate access management along the corridor.	▪ Improved access management can reduce potential conflicts.	N/A	Near
S-7	Juniper Canyon Rd: ▪ Implement variable speed limit based on weather conditions.	▪ Responds to inclement weather conditions and associated safety challenges. ▪ Location identified in ODOT SPIS (2018, 2020, 2021).	TBD based on future evaluation	Near
S-8	Juniper Canyon Rd: ▪ Add raised pavement markers on SE Juniper Canyon Rd. ▪ Add edge-line rumble strips to SE Juniper Canyon Rd.	▪ Delineates alignment of the roadway for night driving. ▪ Reduces roadway departure crashes. ▪ Enhances roadway navigation. ▪ Location identified in ODOT SPIS (2018, 2020, 2021).	$94,000	Near
S-9	Juniper Canyon Rd ▪ Add or enhance horizontal curve signage and markings.	▪ Improves visibility and awareness at curve. ▪ Enhances curve navigation. ▪ Location identified in ODOT SPIS (2018, 2020, 2021). ▪ Aligns with recommendation of ODOT Roadway Departure Plan.	$10,000	Near
S-10	Powell Butte Rd ▪ Add or enhance horizontal curves pavement markings.	▪ Improves visibility and awareness at curve. ▪ Enhances curve navigation. ▪ Aligns with recommendation of ODOT Roadway Departure Plan.	$10,000	Near
S-11	Davis Loop Rd ▪ Remove trees within clear zone.	▪ Reduces fixed-object crashes with trees. ▪ Location identified in ODOT SPIS (2018).	TBD based on future study	Medium
S-12	Powell Butte (OR 126) ▪ Install/maintain speed feedback signs.	▪ Improves awareness. ▪ Encourages speeding drivers to slow down.	$50,000	Medium

Project ID	Project	Needs Addressed	Cost Estimate	Priority
		▪ Location identified in ODOT SPIS (2018, 2019, 2020, 2021).		
S-13	US 26 ▪ Add systemic safety treatments, including edgeline rumble strips.	▪ Reduces roadway departure crashes. ▪ Enhances roadway navigation.	$50,000	Medium
S-14	Lamonta Rd ▪ Install horizontal curve signage, speed feedback sign, and delineators.	▪ Improves visibility and awareness at curve. ▪ Enhances curve navigation. ▪ Encourages speeding drivers to slow down.	$50,000	Medium
S-15	OR 126 ▪ Install systemic safety treatments, including edgeline and centerline rumble strips.	▪ Reduces roadway departure crashes. ▪ Enhances roadway navigation. ▪ Location identified in ODOT SPIS (2018, 2019, 2020, 2021).	$50,000	Medium

TBD = to be determined.

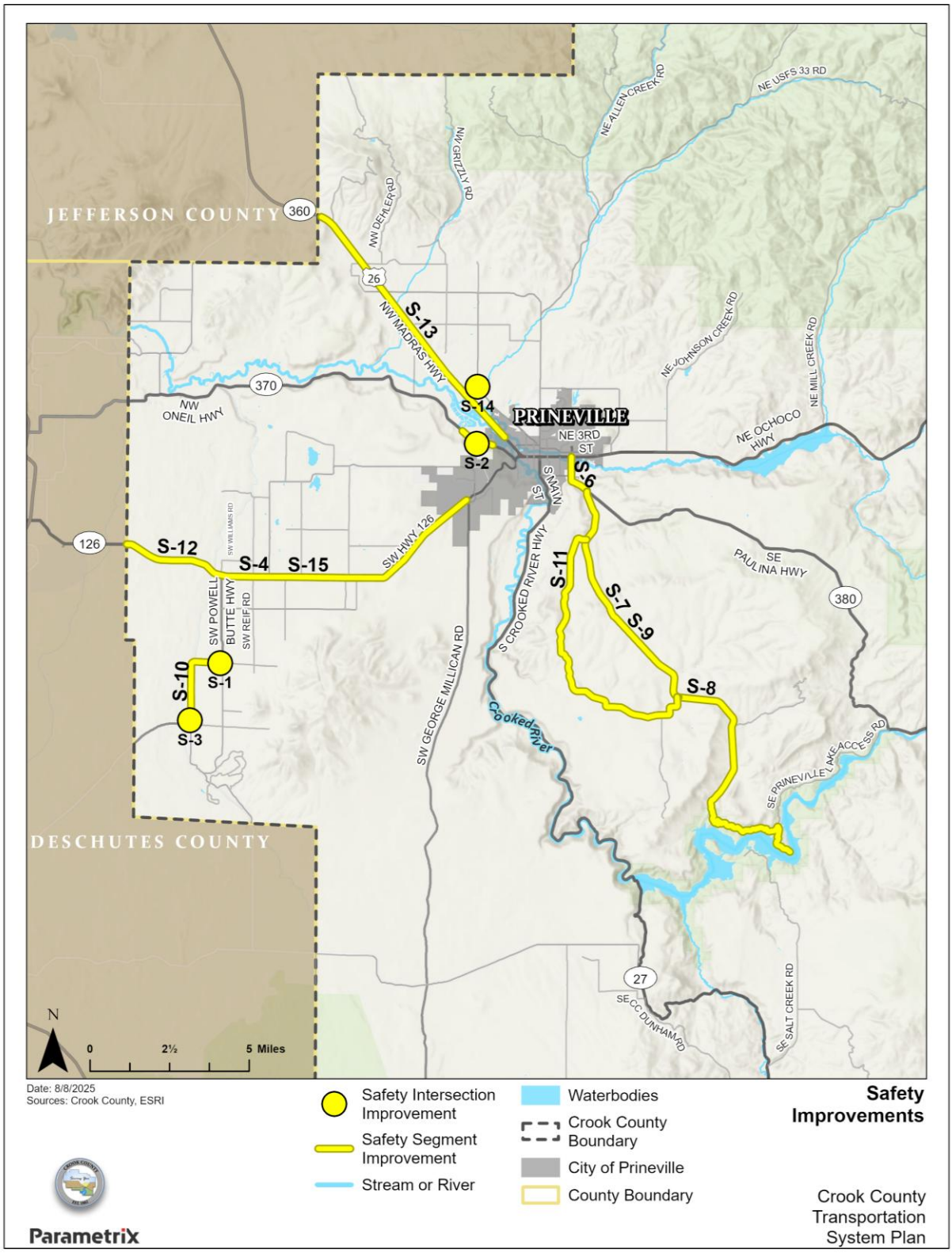

Figure 19. Safety Improvements

4.3 Active Transportation System Plan

This section describes improvements to the active transportation system and includes projects that enhance safety and connectivity for people walking, rolling, and bicycling. These include projects focusing solely on pedestrian and bicycle infrastructure, as well as multiuse paths and trails, which accommodate both people walking and people bicycling. Both pedestrian and bicycle improvements are shown in Figure 20.

4.3.1 Pedestrian Improvements

The identified pedestrian project would provide greater connectivity, safety, access, and comfort in the Powell Butte community where there is a higher density of community destinations. Summarized in Table 10, this project would be coordinated with project R-2A at the intersection of OR 126 and SW Williams Road.

Table 10. Pedestrian Improvements

Project ID	Project	Needs Addressed	Priority	Cost Estimate
P-1	OR 126 & SW Williams Rd: ▪ Install sidewalk, curb and gutter, curb ramps, and intersection lighting. ▪ Install marked crosswalks on all four legs of the intersection.	▪ Improved safety and comfort for travel to community destinations. ▪ Increased visibility at roadway crossings.	Medium	$2,900,000

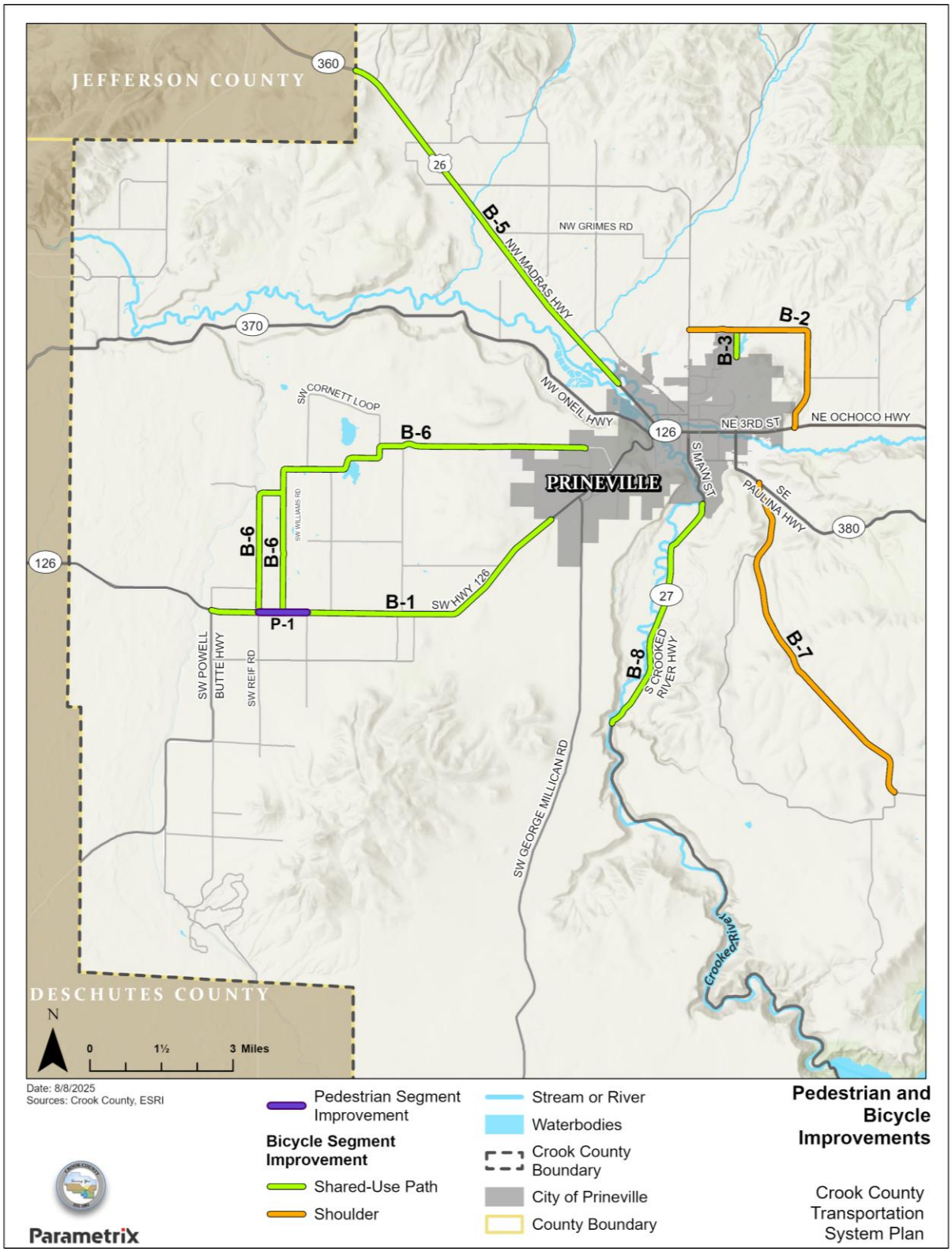

Figure 20. Pedestrian and Bicycle Improvements

4.3.2 Bicycle Improvements

Bicycle system improvements carry forward several projects from the 2017 TSP that still meet the identified need, although modifications have been made to better align the project with the current goals and cost constraints. New projects were identified based on evaluation by the project team and focus on new shared-use trails, paved shoulders in strategic locations, and programmatic improvements such as wayfinding and travel information to improve awareness of bicycle facilities and route opportunities. Improvements are summarized in Table 11 and shown in Figure 20.

Table 11. Bicycle Improvements

Project ID	Project	Needs Addressed	Priority	Cost Estimate
B-1	OR 126 from SW Powell Butte Hwy to Prineville UGB: ▪ Shared-use path along the south side of OR 126.	▪ Improves safety and comfort for people walking, rolling, and biking. ▪ Improves multimodal connectivity. ▪ A shared-use path could be considered in coordination with Project P-1 to accommodate all active modes.	Medium	$6,600,000
B-2	Barnes Butte Rd: ▪ Add paved shoulder to Barnes Butte Rd.	▪ Improves safety and comfort for bicycle travel. ▪ Improves multimodal connectivity. ▪ Aligns network with recommended roadway design standards.	Long	$3,800,000
B-3	Barnes Butte Shared-Use Trail Connections: ▪ Add shared-use trail connecting Barnes Butte Rd to Iron Horse shared-use trail in Prineville.	▪ Improves multimodal connectivity. ▪ Connects to planned Iron Horse shared-use path in Prineville.	Long	$4,900,000
B-4	OR 27 Scenic Bikeway ▪ Construct a bicycle hub, or "rest stop," for hikers, bicyclists, recreationalists, and community members along the OR 27 scenic bikeway corridor; provide small shelter, information kiosk (map/community calendar), bicycle tool station, and bench/sitting area.	▪ Provides needed support for people traveling along the popular OR 27 route.	Long	$30,000
B-5	US 26 (Madras Highway) shared-use trail: ▪ Extend existing shared-use trail northwest to the county line parallel to US 26.	▪ Improves multimodal connectivity. ▪ Connects with existing Prineville shared-use path system.	Long	$7,100,000
B-6	Houston Lake Rd, SW Williams Rd, and Reif Rd: ▪ Add shared-use trails.	▪ Improves multimodal connectivity.	Long	$10,500,000
B-7	Juniper Canyon Rd ▪ Add paved shoulders	▪ Improves multimodal connectivity.	Long	$5,400,000

Project ID	Project	Needs Addressed	Priority	Cost Estimate
B-8	OR 27 ▪ Add shared-use trail to connect to planned path in Prineville.	▪ Improves safety and comfort of active mode travel along a popular cycling route that has high demand for both bicycle and motor vehicle travel. ▪ Connects to planned shared-use path in Prineville.	Medium	$4,400,000
B-9	Countywide ▪ Add bicycle route signage.	▪ Improves legibility of designated bicycle network in Crook County. ▪ Supports navigation between major destinations.	Medium	$50,000

4.4 Public Transportation Plan

Public transportation recommendations include projects and enhancements identified in the CET 2040 Transit Master Plan, as well as policy and programmatic recommendations identified in the 2017 TSP. Summarized in Table 12, it is important to note that improvements such as an expanded dial-a-ride service across the county would increase the ability for residents to age in place.

Table 12. Public Transportation Improvements

Project ID	Project Name/Location	Needs Addressed	Priority	Cost Estimate
T-1	Crook County Service Enhancement Plan: ▪ Institute evening and Saturday limited circulation as part of Route 26 flex route.	▪ Increases public transportation service frequency.	Medium	Already adopted as part of other plans.
T-2	Fixed-route enhancements to increase service in Prineville and expand connections to destinations.	▪ Provides transit access to key destinations in Prineville.	Long	TBD
T-3	Dial-a-ride enhancements and transportation network company encouragement.	▪ Increases on-demand transit service area. ▪ Increases accessibility for rural residents.	Near	Already adopted as part of other plans.
T-4	Transit community outreach.	▪ Enhances ease of use of the bicycle, pedestrian, and transit system in Crook County.	Near	Variable

TBD = to be determined

4.5 Freight System Plan

Freight is most commonly moved by truck and by rail within the county. OR 126 and US 26 are designated ODOT freight routes, while other corridors, such as Millican Road, carry significant amounts of freight traffic within Crook County and connect to freight routes in neighboring counties. OR 126 and US 26 are both reduction review routes, meaning that the vehicle-carrying capacity of the route cannot be reduced except in specific circumstances.

The 2017 TSP identified height constraints on US 26 due to the railroad trestle as the primary freight challenge. Due to the height constraint, traffic currently travels along Bus Evans Road and Elliot Lane, resulting in increased demand on these roads. The two projects are described in Table 13 and shown in Figure 21.

Table 13. Freight Improvements

Project ID	Project Name/Location	Needs Addressed	Priority	Cost Estimate
F-1	Bus Evans Rd and Elliott Ln: ▪ Reconstruct intersection to freight route standards.	▪ Reconstructs intersection to freight route standards.	Long	$15,000,000
F-2	US 26 railroad bridge feasibility study.	▪ Identifies feasibility of accommodating oversized loads on US 26.	Medium	$35,000

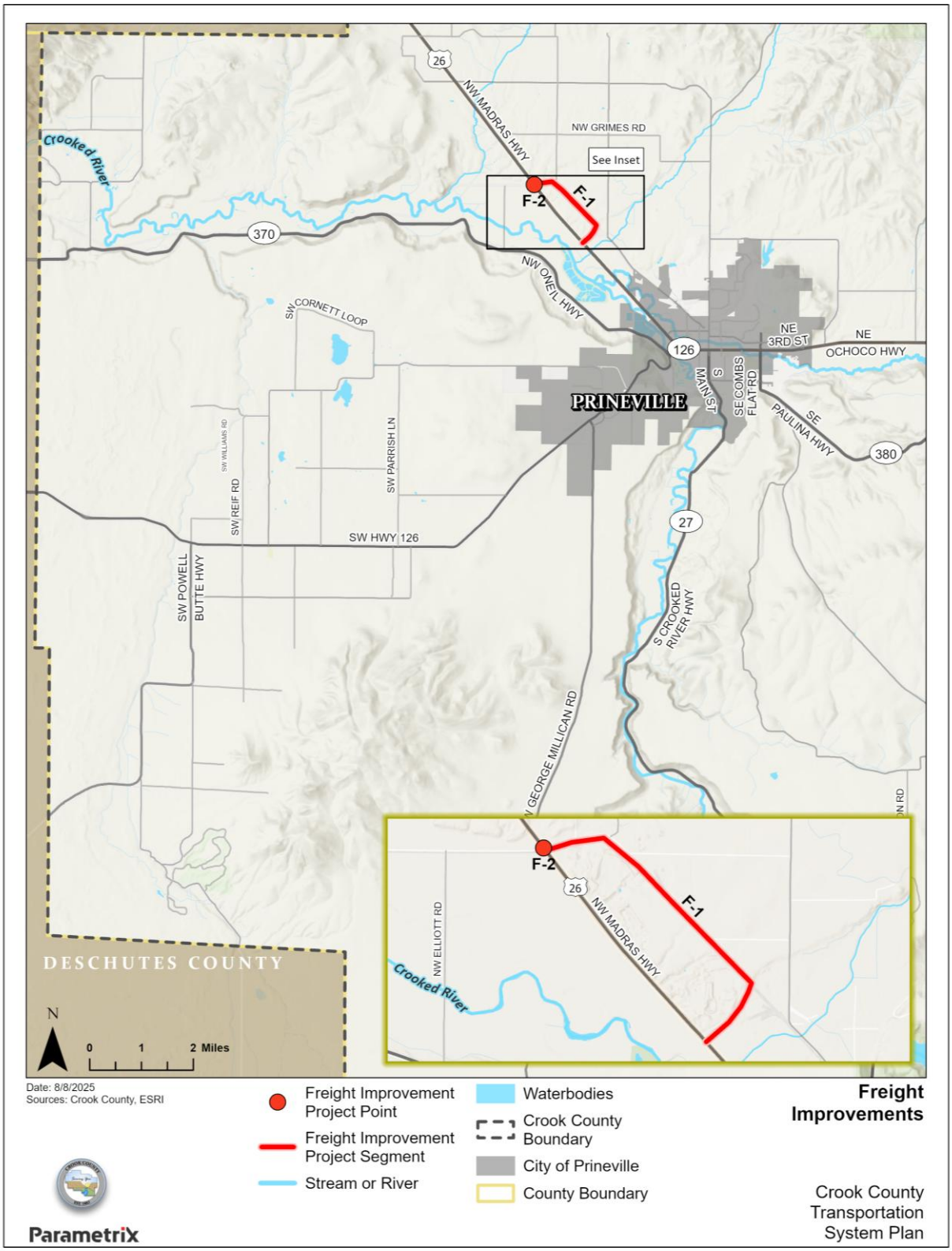

Figure 21. Freight Improvements

5. Implementation

The 2025 TSP contains projects that may be implemented on a short-, medium-, or long-term basis. Project prioritization includes factors such as community desire, staff capacity, and County leadership support. As limited funding exists, some projects may take years, if not decades, to complete. Over time, projects not included in this TSP may be added to address new needs that arise as Crook County's population continues to change. **As of the publication of this TSP, the County has no dedicated source of funding for transportation.** This section describes options for funding TSP projects, including through potential funding opportunities such as grants or County fees.

5.1 Funding Forecast and Funding Gap

All identified projects with cost estimates would cost approximately $112.9 million in 2024 dollars.[1] Of this total, $85.4 million is needed for solutions relying primarily on local funding or grant sources, while solutions in partnership with ODOT total $27.5 million. Based on recent annual transportation funding in Crook County and input provided by County staff, Crook County does not expect to have available funding to support new capital projects. A new funding source is needed to implement projects identified in the TSP.

5.2 Funding and Financing Options

This section briefly summarizes local transportation funding sources that have been used historically, as well as new sources to increase transportation funding.

Crook County's capital projects, operations, and maintenance of roadways are funded through the Crook County Transportation Budget, which relies on various sources. The Crook County Road Fund relies on fuel tax paid to the County based on the number of vehicles registered to the County, as well as Secure Rural Schools funding. Additionally, the Special Transportation Fund accounts for federal and state transportation programs; Crook County typically enters into intergovernmental agreements with the Central Oregon Intergovernmental Council to perform these services.

The County's largest expenditure under the Road Fund is the maintenance of roads. When forecasting for future budgets, the adopted 2024 budget (Crook County 2024) notes that "maintaining operations at the historical status quo continues to spend down fund balance." In particular, the forecast identifies a significant increase in maintenance expenditures compared to historical trends. The Road Department is exploring more sustainable operations and funding. The County does not currently have transportation utility fees, registration fees, system development charges, or other supplemental revenue for transportation.

5.2.1 Local Funding Options

Local revenue is an important source of funds for transportation projects and programs, and it also serves as a local match for grants. Table 14 describes potential new sources for local funding.

[1] This calculation assumes the low end of the range provided for Projects JC-1 and JC-2.

Table 14. Potential Local Funding and Financing Mechanisms

Local Funding / Financing Option	Description	Considerations
User Fee	Fees added to a monthly utility bill or tied to the annual registration of a vehicle to pay for improvement, expansion, and maintenance of the street system.	This type of fee is becoming more common in cities but would require substantial investment in rate studies, administrative staffing, and software and computer systems to enable the County to collect the revenue. This source is generally better suited to funding operations than for capital improvements, but it may free up existing resources for capital projects.
System Development Charges	One-time fees obtained from new development and redevelopment intended to cover part of the cost of transportation facilities to support the new development.	Fees would increase the cost of development for developers. The County would determine the appropriate fee to cover transportation costs while also ensuring that development remains affordable for developers.
Local Gas Tax	A local tax assessed on the purchase of gas within the County. This tax is added to the cost of gasoline at the pump, along with the state and federal gas taxes. Many communities in Oregon assess local gas taxes, typically ranging from $0.01 to $0.10 per gallon.	A local-option fuel tax would be easy to collect because the infrastructure is already in place. It would generate revenue for the County from motorists passing through the county. This method could fund operations and capital programs.
Tax Increment Financing (TIF)	A tool counties use to create special districts (tax increment areas) where public improvements are made in order to generate private-sector development. During a defined period, the tax base is frozen at the pre-development level. Property taxes for that period can be waived or paid, but taxes derived from increases in assessed values (the tax increment) resulting from new development can go into a special fund created to retire bonds issued to originate the development or leverage future improvements.	A number of small- to medium-sized communities in Oregon have implemented, or are considering implementing, urban renewal districts that will result in a TIF revenue stream.
Road/Local Improvement Districts	A local improvement district is a geographic area where local property owners are assessed a fee to cover the cost of a public improvement in that area.	This may be especially useful for non-state facilities that are ineligible for federal or state funding. This type of fee must be approved by the majority of property owners.
General Fund	Property taxes from the County's permanent tax rate.	Diverting General Fund revenue to the Road Fund would have significant consequences for other County services.
Bonds or Levies	Voter-approved measures to either acquire funds through an increased tax rate (levy) or through the sale of bonds.	Requires voter approval.
Motor Vehicle Title Fee	Requires all motor vehicles registered in the county to all have the title recorded as personal property.	This would generate two sources of revenue: from the fee itself and from personal property taxes levied on motor vehicles. This could be problematic for renters and would increase taxable property that the assessor must account for.

5.2.2 Grant Opportunities

Grants provide an important source of funds for projects, supplementing local funds. Grants are often targeted toward specific types of transportation projects. Table 15 describes potential grant funding sources and their applicability to TSP projects in Crook County.

Table 15. Grant Opportunities

Source	Funding Available	Description	Eligibility and Considerations
Statewide Transportation Improvement Program (STIP; ODOT 2025g) Administered by ODOT	Approximately $2 billion available statewide for the 2024–2027 STIP. Match requirements vary.	The STIP is the major statewide program for funding significant projects, usually of regional importance. The STIP programs both state and federal dollars.	Major projects on state roadways through Crook County are most likely eligible for funding, though the STIP process is extremely competitive. Projects included in the STIP are generally regionally significant and are prioritized by ODOT, metropolitan planning organizations, and area commissions on transportation.
Recreational Trails Program Administered by OPRD (2025b)	Approximately $1.6 million allocated each year. Minimum grant request: $10,000. Recommended grant request maximum: $150,000 for nonmotorized proposals. Applicants must commit to at least a 20% match. Match can include volunteer labor or other donations.	Funds to develop, improve, or expand trails and facilities for motorized and nonmotorized use. Recreational Trails Program funding is intended for recreational trail projects and can be used for construction of new trails, major rehabilitation of existing trails, development or improvement of trailhead or other support facilities, acquisition of land or easements for the purpose of trail development, and safety and education projects.	This funding source is very competitive, and funding is generally based on the needs identified in the Oregon Statewide Recreation Trails Plan (OPRD 2016).
Oregon Community Paths Program Administered by ODOT (2025c)	Project refinement funding: $150,000 to $750,000 per project. Construction funding: $500,000 to $6,000,000 per project. Requires a local match of 10% to 30% depending on funding source (federal or state).	Supports multiuse path projects including paths that pass through a park or along a greenway to connect community centers, services, housing, employment, schools, and recreation. Types of community path projects: ▪ Critical Links. Walking and biking connections to schools, downtowns, shopping, employment, and other essential destinations. ▪ Regional Paths. Connect communities no more than 15 miles apart or traverses one community with a path 10 miles long or greater.	Oregon Community Paths Program projects must serve a transportation purpose (not recreational). The TSP includes multiuse path projects that fall under the *Critical Link*s project type

Source	Funding Available	Description	Eligibility and Considerations
Safe Routes to School Administered by ODOT (2025d)	$60,000 to $2,000,000 New funding program guidance is under development by ODOT. 20% to 40% match required.	Funds projects that improve, educate, or encourage children safely walking or biking to school. Projects must be within a 1-mile radius of a school, within a local roadway, and in a jurisdictional plan. Projects in smaller communities, for elementary and middle schools, and that can demonstrate substantial need are likely to fare best.	Because the Crook County TSP is likely to include projects that would have a direct impact on cycling and walking to school in Powell Butte, Safe Routes to School is likely a promising source of funding for projects.
Sidewalk Improvement Program Administered by ODOT (n.d.)	$7.4 million annually for federal fiscal years 2022 to 2024. No match is required. State pedestrian and bicycle funds can be used as a match for federal dollars.	Allocates funds to improve walking and biking infrastructure (e.g., crossings, sidewalks, bike facilities) on or along state highways. Provides grants on a rotating regional basis to construct larger pedestrian and bicycle projects (or bundles of systemic improvements) needed to address priority needs identified in the Oregon Bicycle and Pedestrian Plan (ODOT 2016) and the Statewide Active Transportation Needs Inventory (ATNI; ODOT 2025a).	Eligible for improvements on or along state highways. ATNI web map shows prioritization scores within Crook County ranging from the 60th to 80th percentile.
Statewide Transportation Improvement Fund (STIF) Administered by ODOT (2025f)	Funding amount varies. There is no match for STIF formula; STIF Discretionary match is generally 20%. STIF formula funds may be used as the local match for state and federal funds which also provide public transportation. STIF Discretionary funding is used for new or pilot projects and for capital purchases.	STIF formula funds may be used for public transportation purposes that support the effective planning, deployment, operation, and administration of public transportation programs. The STIF Discretionary fund supports a wide variety of project types but cannot be used to fund ongoing operations. The Intercommunity Discretionary fund supports maintaining, expanding, and improving public transportation services between two or more communities. The Oregon Transportation Commission finalizes award decisions using criteria derived from statute and the Oregon Public Transportation Plan (ODOT 2018).	STIF formula funding is awarded through the Qualified Entity which is a county or transit district, based on population and taxes paid within their respective jurisdiction. STIF Discretionary and Intercommunity Discretionary funds are awarded to public transportation service providers to improve public transportation through a competitive grant process.
Rivers, Trails, and Conservation Assistance Program Administered by National Park Service (2025)	Funding amount varies. No local match is required.	Annual funding available for technical assistance for recreation and conservation projects, including shared-use paths.	This fund has advanced projects in Crook County in both 2020 and 2022, supporting both the Barnes Butte Recreational Complex and Crooked River National Grasslands Trails efforts. Projects related to recreational areas and access to recreational areas may qualify.

Source	Funding Available	Description	Eligibility and Considerations
All Roads Transportation Safety Program Administered by ODOT (2025b)	Funding amount varies. A 10% local match is required.	Annual funding for projects that address safety issues on highways and high-risk rural roads.	Projects are typically identified through the state's Safety Priority Index System (ODOT 2025e) or systemic network screening. Projects are awarded based on benefit/cost ratio.
Federal Lands Access Program Administered by FHWA (2025a)	Varies.	Funds projects that improve transportation facilities that provide access to, are adjacent to, or are located within federal lands.	Projects that improve access to federal lands, such as Bureau of Land Management land, are eligible. Many proposed projects expand access to BLM land.
Transportation and Growth Management Program (TGM) Administered by ODOT (2025h)	Varies; annual grant cycles.	Funds projects that help local communities plan for streets and land use to create more livable communities. Category 1 TGM grants focus on meeting the requirements for the Transportation Planning Rule, while category 2 TGM grants focus on integrated land use and transportation planning, especially for active transportation, transit, and multimodal facilities.	Category 2 TGM projects aim to encourage "livable, affordable, and accessible communities for all ages and incomes…" Advancing projects that aim to improve access to transit and community destinations may be eligible for funding.
Land and Water Conservation Fund Administered by OPRD (2025a)	Approximately $5 million annually. Requires a 50% local match.	Funds to acquire land for public outdoor recreation or to develop basic outdoor recreation facilities. Project types may include shared-use pathways, bikeways, and sidewalks.	Projects identified in the TSP include shared-use pathways, bikeways, and sidewalks that may be eligible.

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Appendix A

Existing Conditions and Needs Analysis

Appendix B

Goals, Objectives, and Evaluation Criteria

Appendix C

Solutions, Analysis, and Funding Program

Appendix D

Preferred Solutions

Appendix E

Juniper Canyon Alternatives Analysis