

ROGUE VALLEY ACTIVE TRANSPORTATION PLAN

Date	November 8, 2019
To	Mike Kuntz, Jackson County Jenna Marmon, ODOT
From	Nick Gross and Susan Wright Kittelson & Associates, Inc.
Project	Rogue Valley Active Transportation Plan
Subject	Final Regional Bicycle and Pedestrian Needs, Level of Traffic Stress, and Potential Barriers

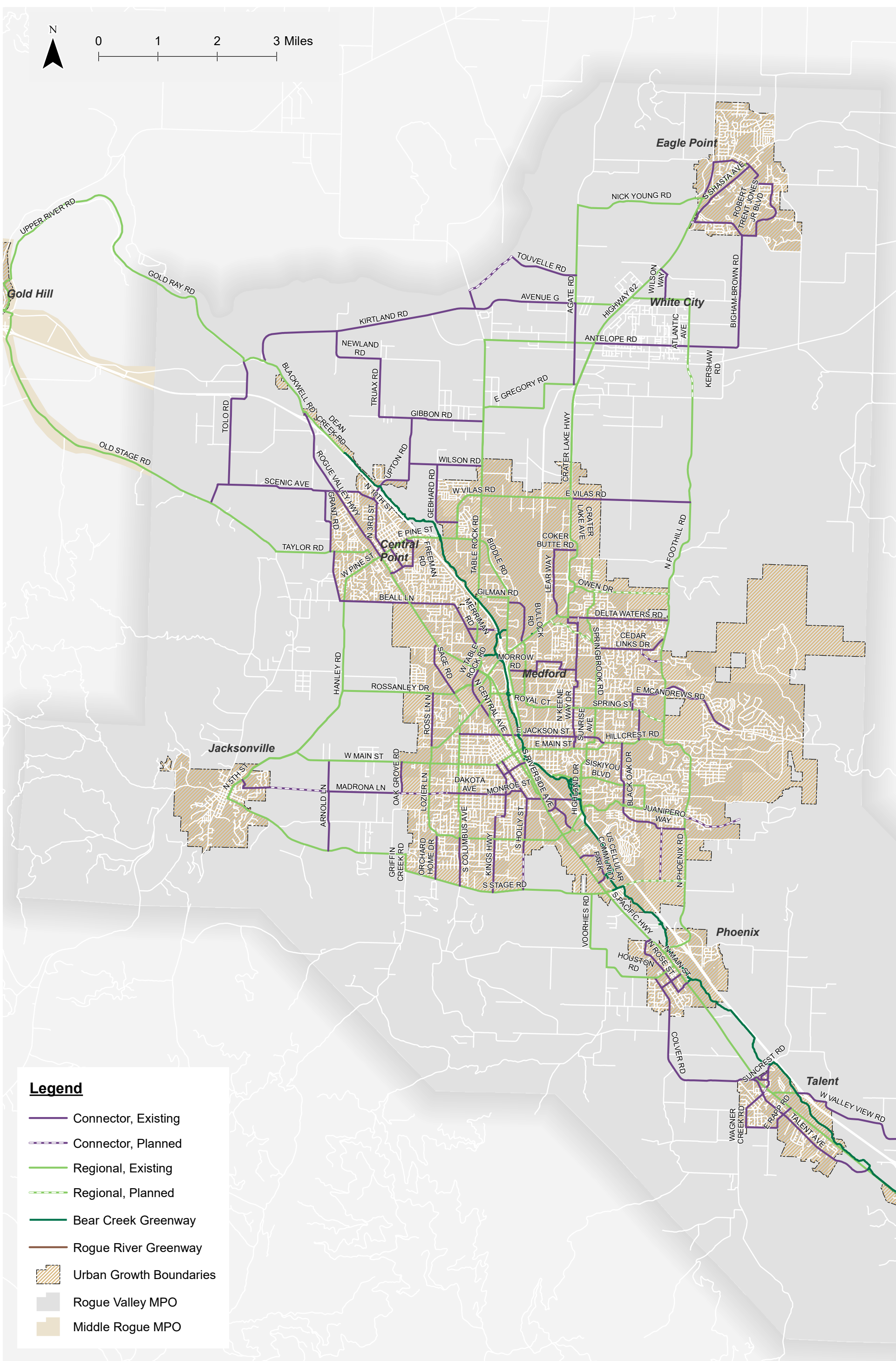
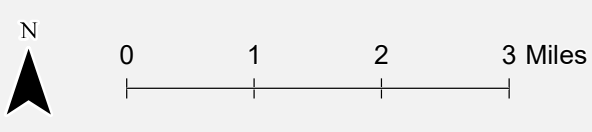
The Regional Bicycle and Pedestrian Needs, Level of Traffic Stress, and Potential Barriers establishes the framework for identifying the necessary infrastructure investment to address the gaps, deficiencies, and barriers along the Regional and Connector Routes within the Rogue Valley. This multi-step process for defining the active transportation system needs draws on the plans vision statement, goals and objectives, bicycle and pedestrian level of traffic stress (LTS) analysis, and input provided by the project's technical advisory committee (TAC) and community advisory committee (CAC). Figure 1 illustrates the Regional and Connector Routes. At its core, the needs represent a comparison of the envisioned active transportation system (Regional and Connector Routes) with the infrastructure provided along the existing system. Areas where the existing system does not match the envisioned system (exceeds LTS 2) are determined to be "needs."

Existing Data for Bicycle and Pedestrian Facilities

In order to identify the infrastructure needs on the Regional and Connector route network, a comprehensive data collection of existing bicycle and pedestrian facilities was inventoried. The following roadway attributes and characteristics were collected along the Regional and Connector Route system:

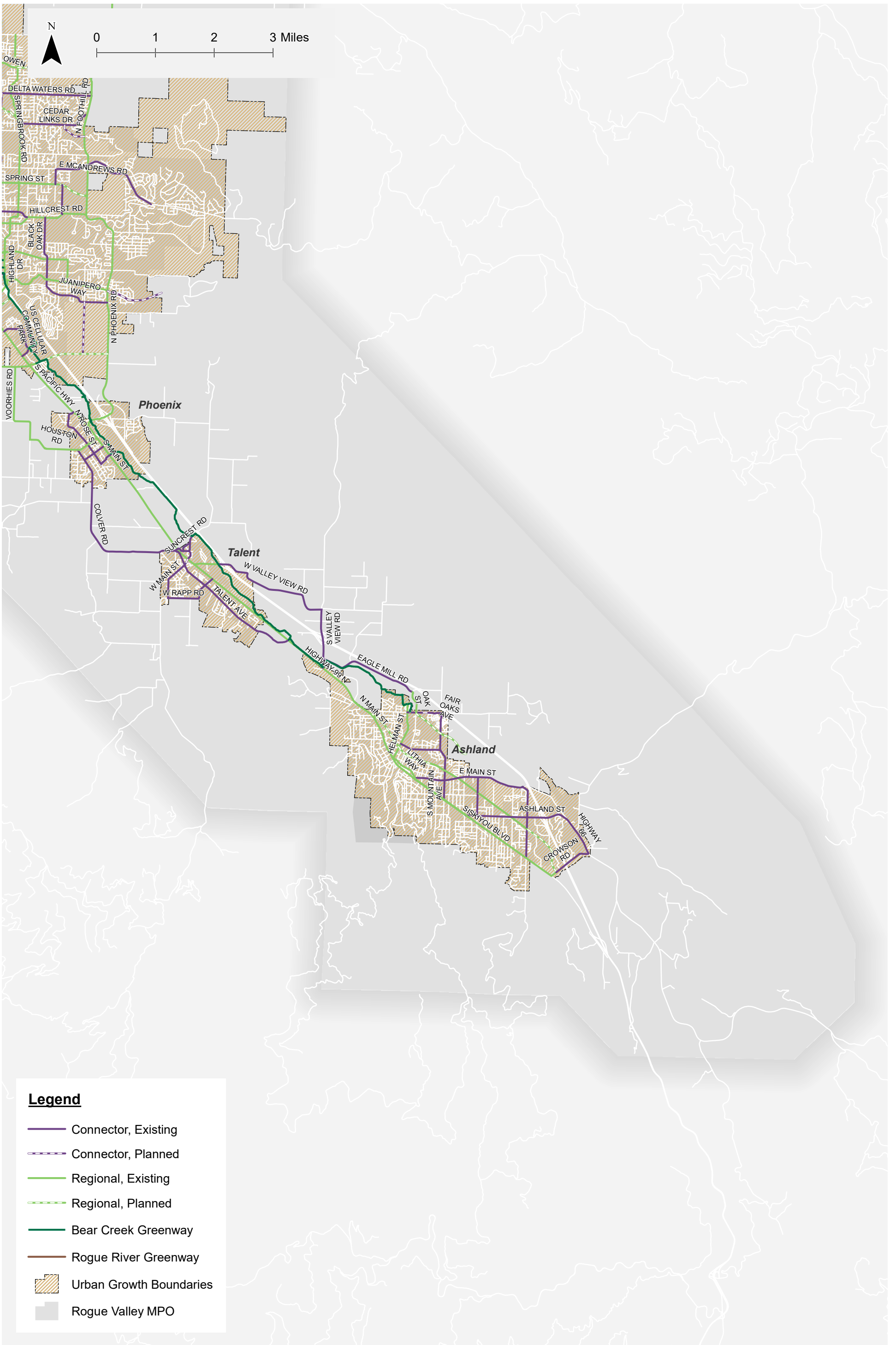
- ▶ Ownership (Jurisdiction)
- ▶ Functional Classification
- ▶ Area Type (Urban or Rural)
- ▶ Average Daily Traffic (ADT)
- ▶ Posted Speed
- ▶ Paved Width
- ▶ Parking and Parking Width
- ▶ Number of Lanes
- ▶ Travel Lane Width
- ▶ Bike Type and Width (ie. Bike Lane, Buffered Bike Lane, Shoulder, Shared Use Path, or Shared Lane)
- ▶ Pedestrian Type and Width (ie. Sidewalk, Shoulder, Shared Use Path, Sidepath)
- ▶ Pedestrian Type Condition (ie. Sidewalk condition: Good, Fair, Poor, Very Poor)
- ▶ Buffer Type and Width (Landscape, Landscaped with Trees, Vertical, Solid)
- ▶ Presence of Lighting

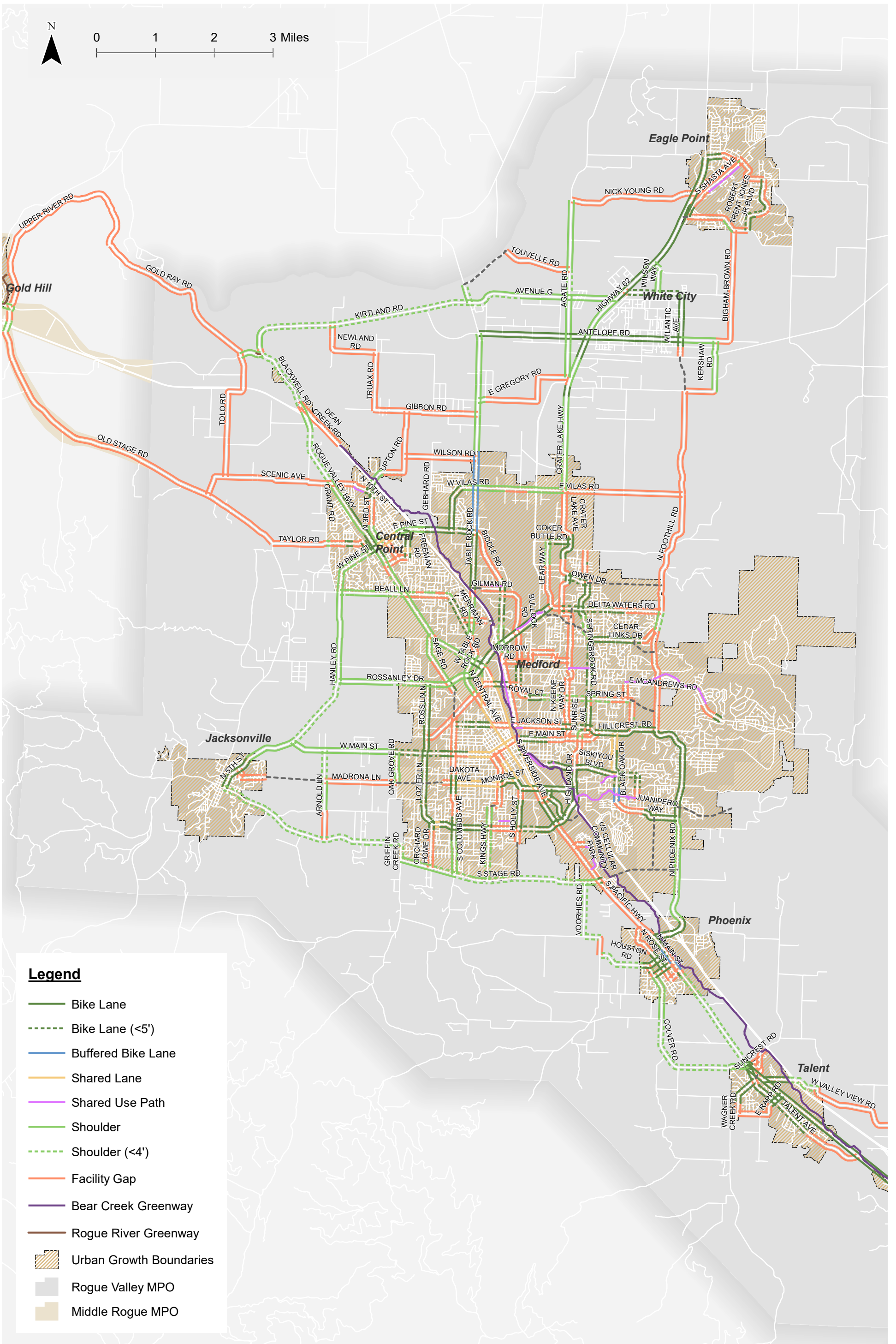
Figure 2 and Figure 3 illustrate the existing bicycle and pedestrian facilities as well as the gaps, and deficiencies along the Regional and Connector routes. *Note: Pedestrian facilities, gaps, and deficiencies are illustrated for urbanized areas, roadway segments with Rogue Valley Transit District (RVTD) 2020 plan transit service, OR 99, and unincorporated areas between South Medford and Phoenix.*



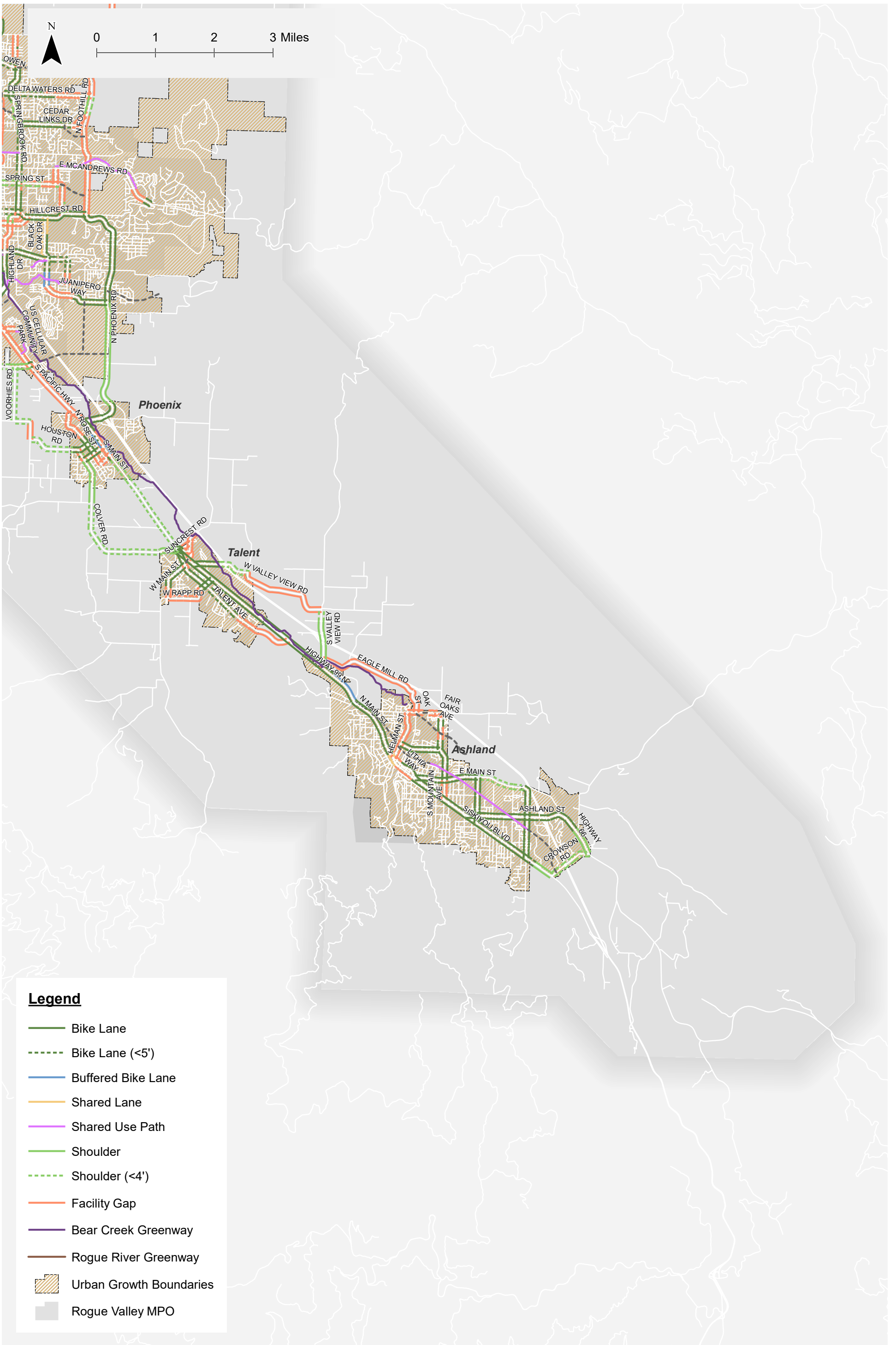
Legend

- Connector, Existing
- Connector, Planned
- Regional, Existing
- Regional, Planned
- Bear Creek Greenway
- Rogue River Greenway
- Urban Growth Boundaries
- Rogue Valley MPO
- Middle Rogue MPO



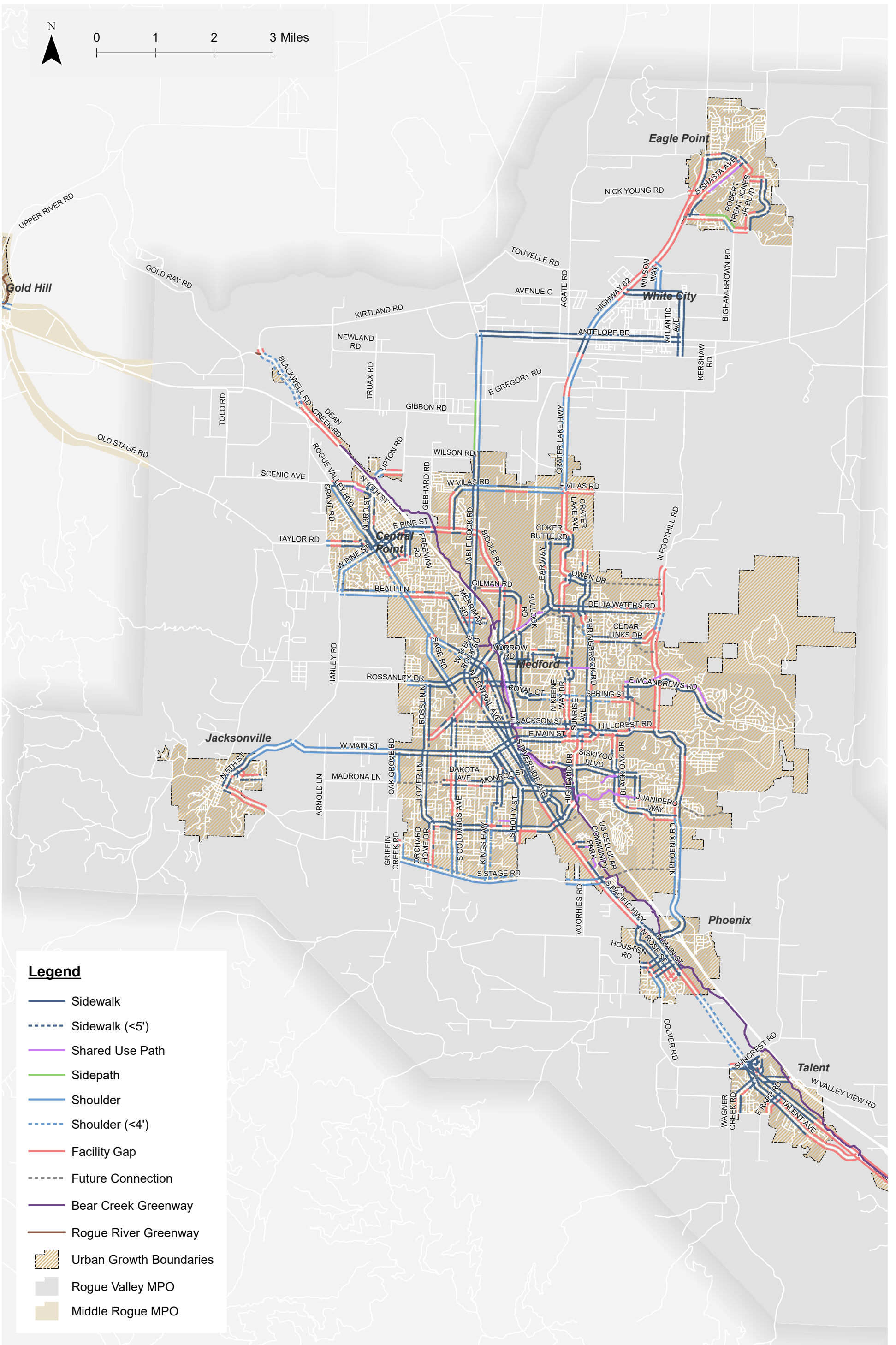


Existing Bicycle Facilities, Gaps, and Deficiencies on Regional and Connector Routes
Jackson County, OR

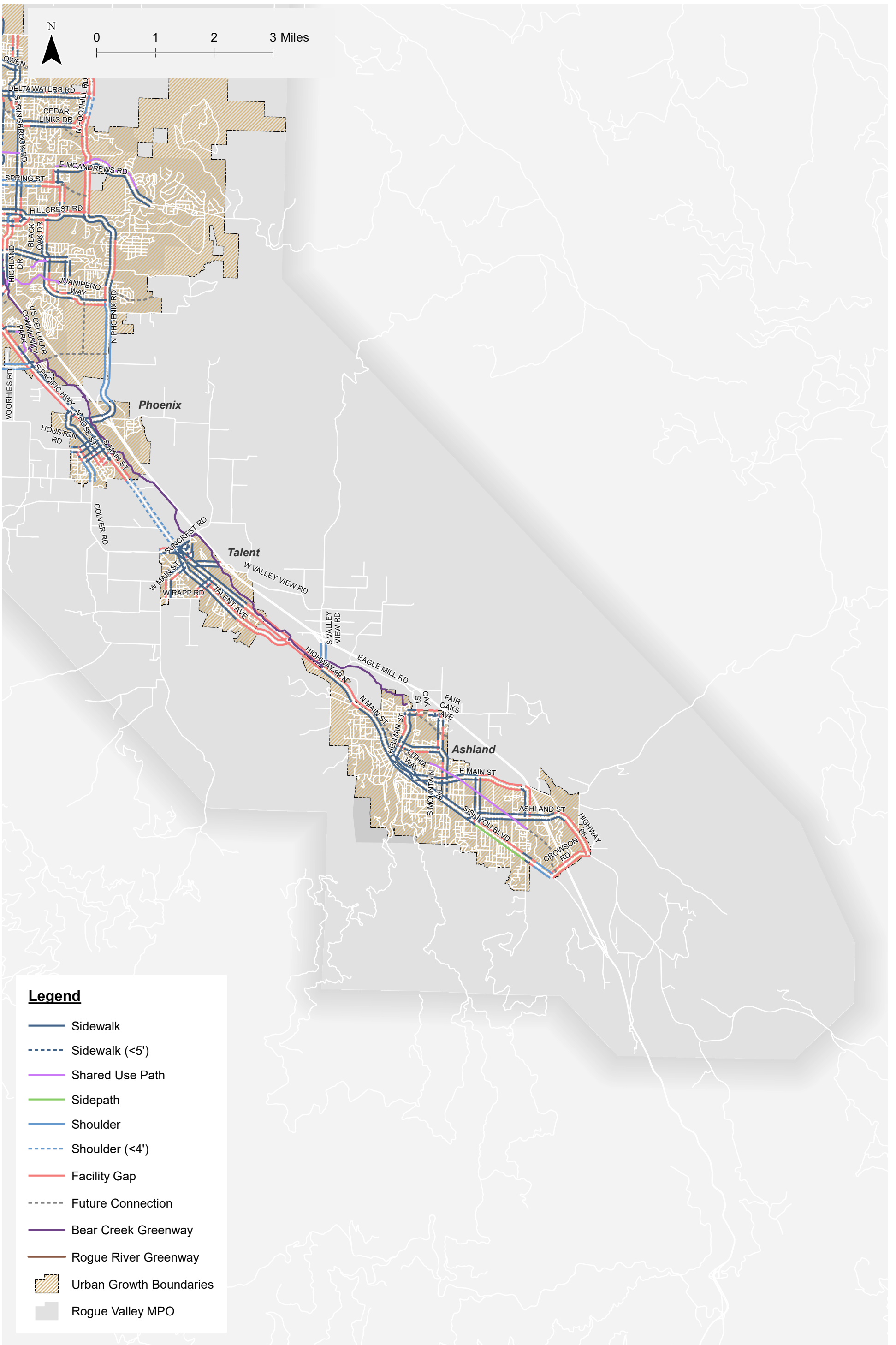


Legend

- Bike Lane
- Bike Lane (<5')
- Buffered Bike Lane
- Shared Lane
- Shared Use Path
- Shoulder
- Shoulder (<4')
- Facility Gap
- Bear Creek Greenway
- Rogue River Greenway
- Urban Growth Boundaries
- Rogue Valley MPO



Existing Pedestrian Facilities, Gaps, and Deficiencies on Regional and Connector Routes
Jackson County, OR



Existing Pedestrian Facilities, Gaps, and Deficiencies on Regional and Connector Routes
Jackson County, OR

As illustrated in Figure 2 and Figure 3, a vast majority of the Regional and Connector route system consists of facility gaps and deficiencies. A “gap” is considered to be a roadway segment that does not provide any facility for people walking or biking; a deficiency is considered to be a roadway segment that provides a facility but is inadequate based on the facility width or condition. For example, bike lanes and sidewalks less than 5-feet and shoulders in rural areas less than 4-feet are considered to be deficiencies. This assessment does not take into account whether the facility provides a desired comfort level for the Regional and Connector route system.

Future Connections are anticipated to be developed to the roadway design standard set by the jurisdiction the Future Connection is located in with specific recognition of the need for multimodal accommodations as part of a recognized route within the Rogue Valley ATP. Future Connections should strive to achieve a LTS “2” rating for any new roadway or connection constructed.

Bicycle and Pedestrian Level of Traffic Stress

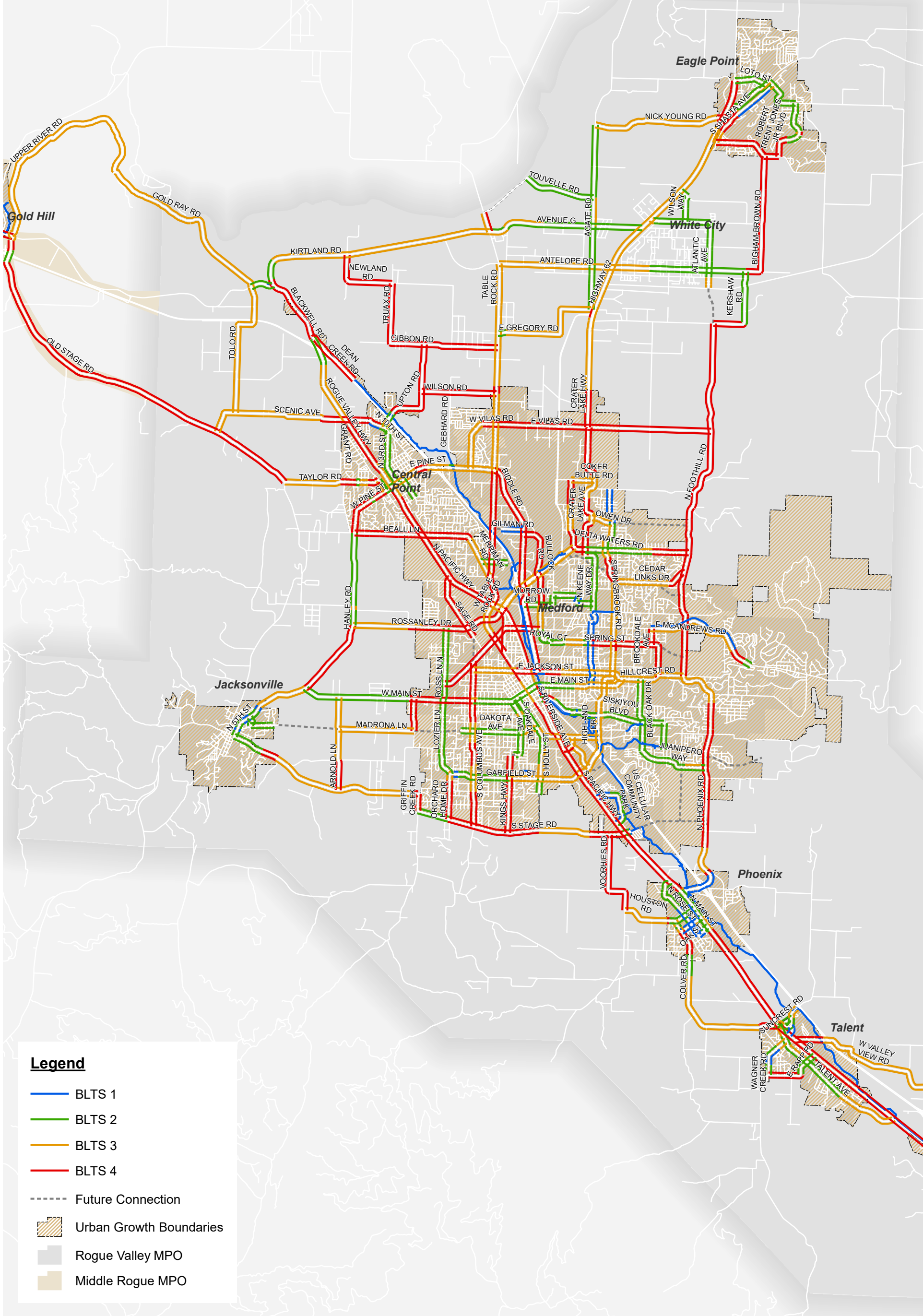
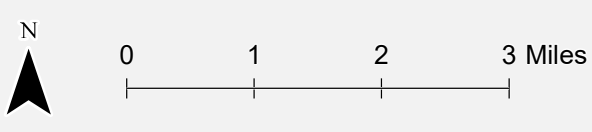
The Oregon Department of Transportation (ODOT) Analysis Procedures Manual (APM) provides a methodology for evaluating bicycle and pedestrian facilities within urban and rural environments known as bicycle level of traffic stress (BLTS) and pedestrian level of traffic stress (PLTS). This methodology classifies four levels of traffic stress that people biking or walking can experience on a given roadway, ranging from LTS 1 (little-to-no traffic stress) to LTS4 (high traffic stress).

A roadway segment with a LTS 1 generally has low traffic speeds and volumes and is suitable for all people biking including children. A road segment with a LTS 4 generally has high speeds and volumes and is perceived as unsafe by most adults. LTS 2 is considered appealing to a majority of people biking and walking and has been established as the target on the Rogue Valley’s Regional and Connector active transportation network¹.

Figure 4 and Figure 5 illustrate the Bicycle and Pedestrian Level of Traffic Stress results, respectively. Segments illustrated as a LTS 3 or above are identified as “need”.

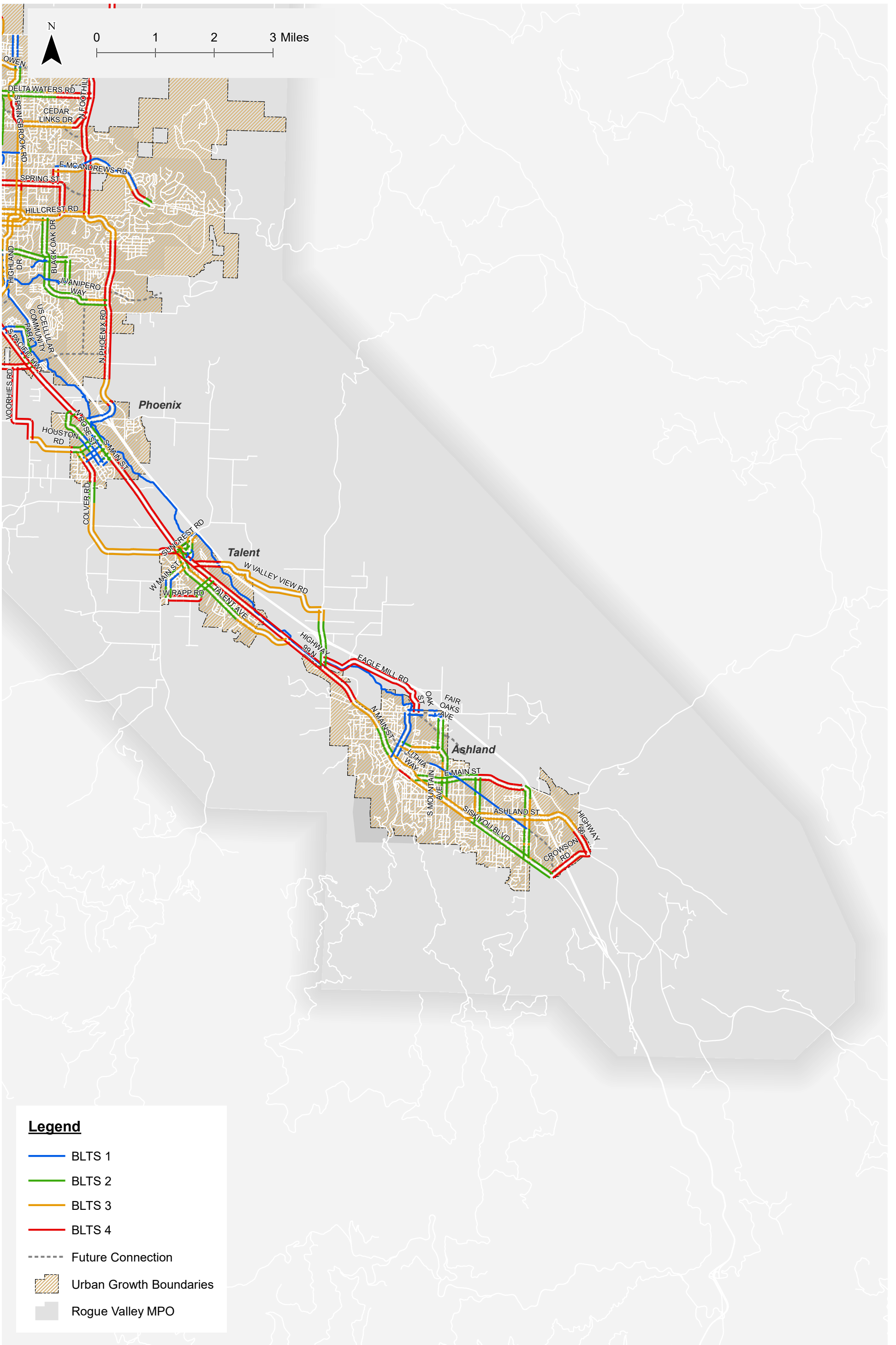
The results of the Bicycle and Pedestrian LTS analysis can also be used to look at network connectivity and will be used as a network prioritization tool. Figure 6 and Figure 7 illustrate the Bicycle and Pedestrian LTS results for segments rated LTS 1 or LTS 2. As illustrated in Figure 6 and Figure 7, the majority of the Regional and Connector route system is not suitable for the users of all ages and abilities; however, several small networks of LTS 1 and LTS 2 exist within the urbanized areas. Roadways and roadway segments rated greater than LTS 2 that can link segments of the existing low-stress network together should be prioritized for future investment as they allow for a better connected low-stress active transportation system.

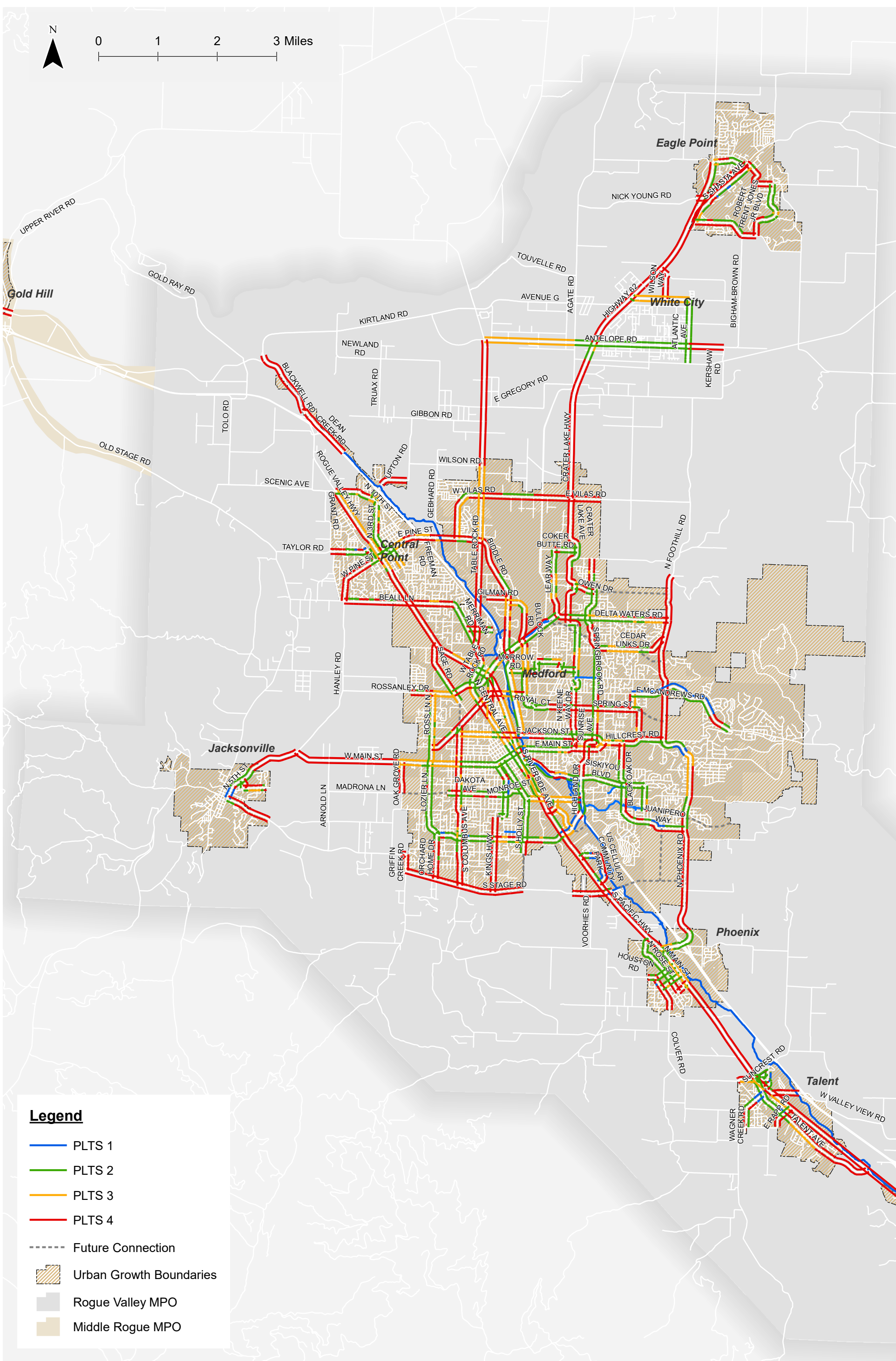
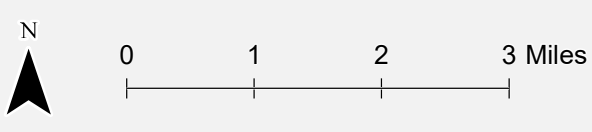
¹ When evaluating networks near schools (within a ¼ mile), the desirable level of traffic stress is LTS 1.



Legend

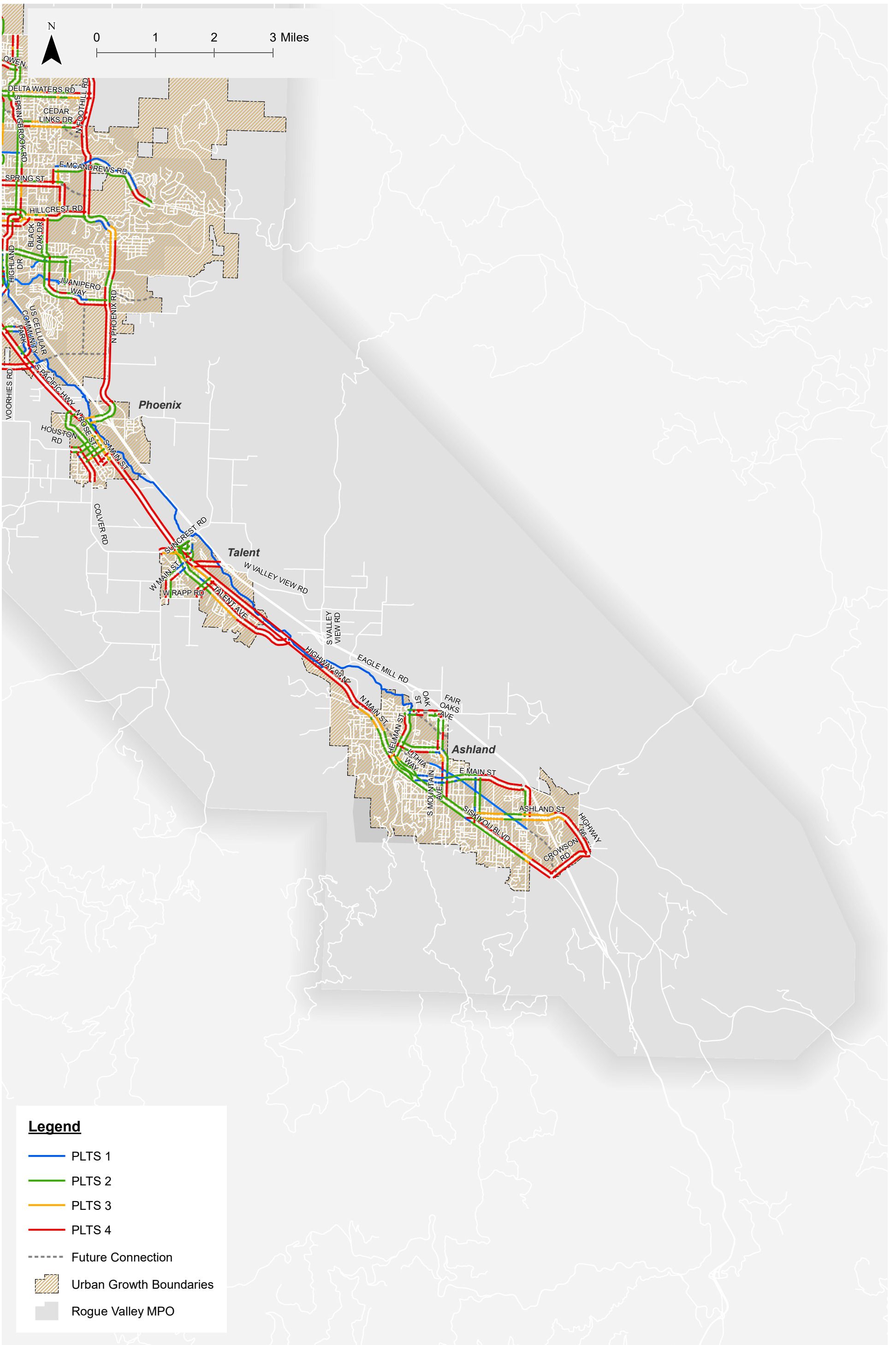
- BLTS 1
- BLTS 2
- BLTS 3
- BLTS 4
- - - - Future Connection
- Urban Growth Boundaries
- Rogue Valley MPO
- Middle Rogue MPO





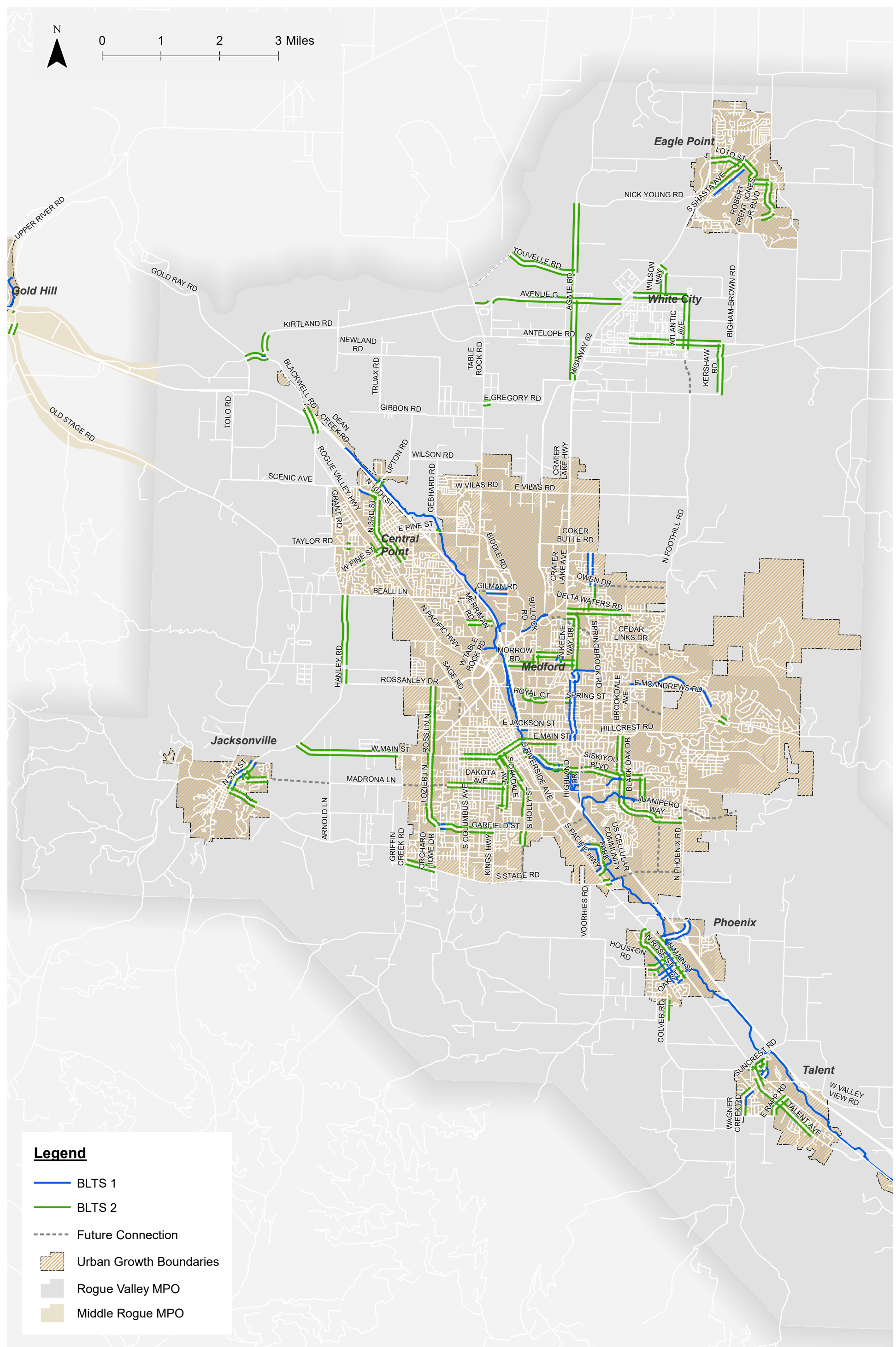
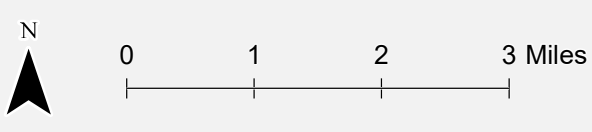
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- PLTS 1
- PLTS 2
- PLTS 3
- PLTS 4
- Future Connection
- Urban Growth Boundaries
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- Middle Rogue MPO



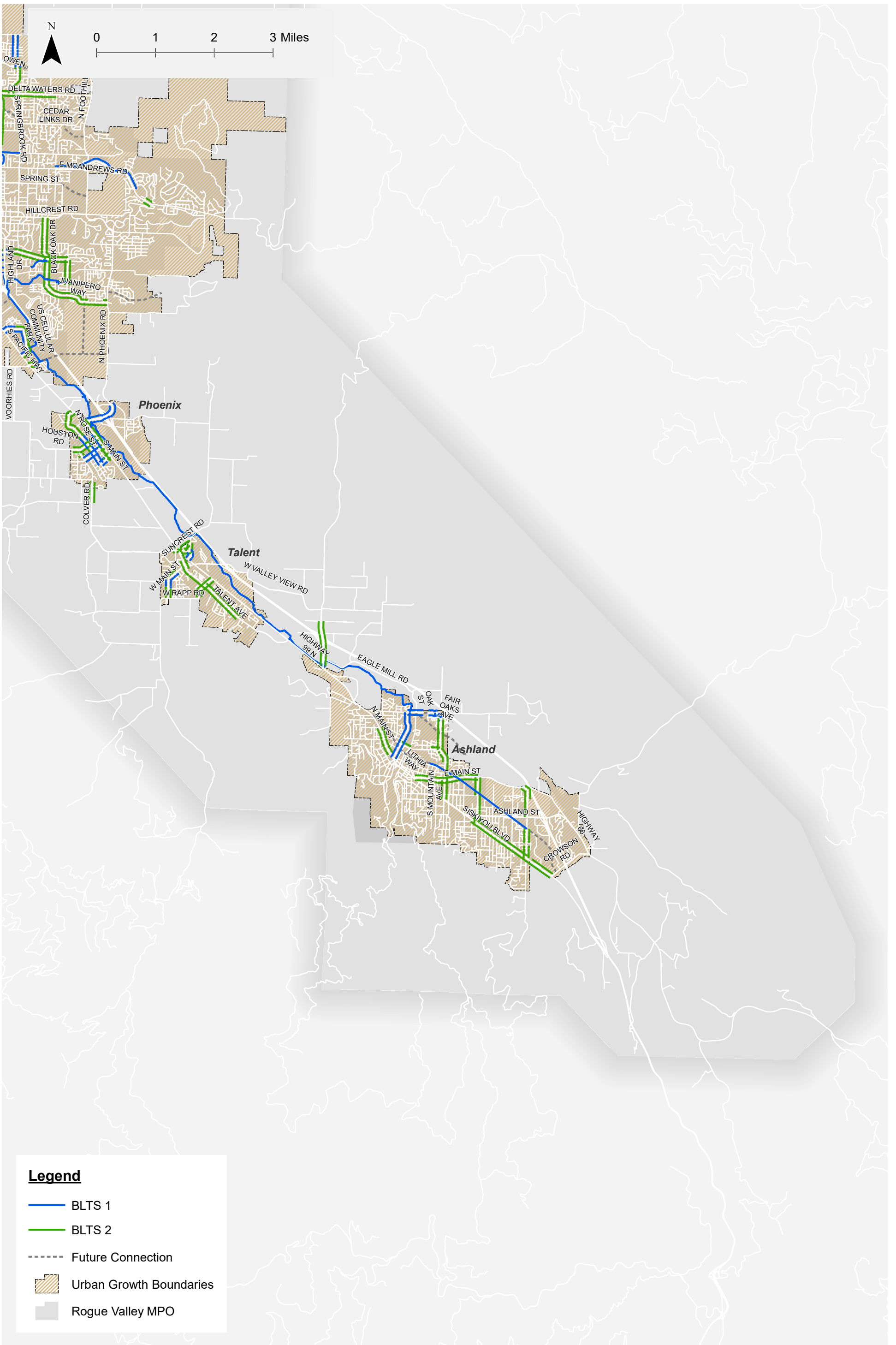
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- PLTS 1
- PLTS 2
- PLTS 3
- PLTS 4
- - - - - Future Connection
- Urban Growth Boundaries
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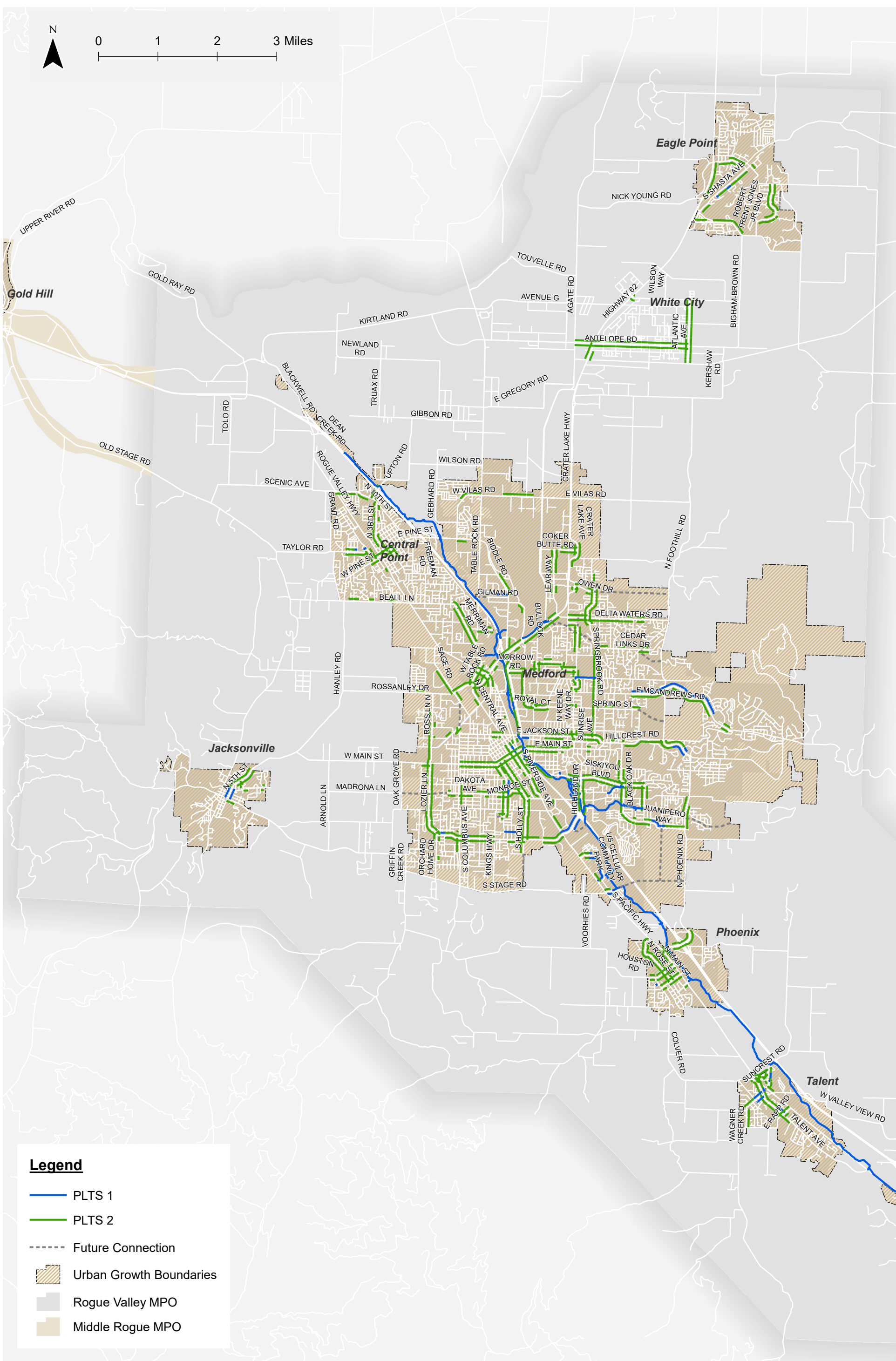
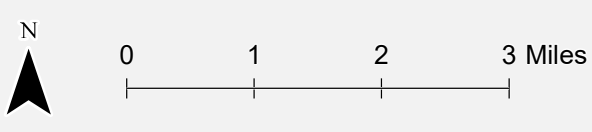
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- BLTS 1
- BLTS 2
- - - - Future Connection
- Urban Growth Boundaries
- Rogue Valley MPO
- Middle Rogue MPO



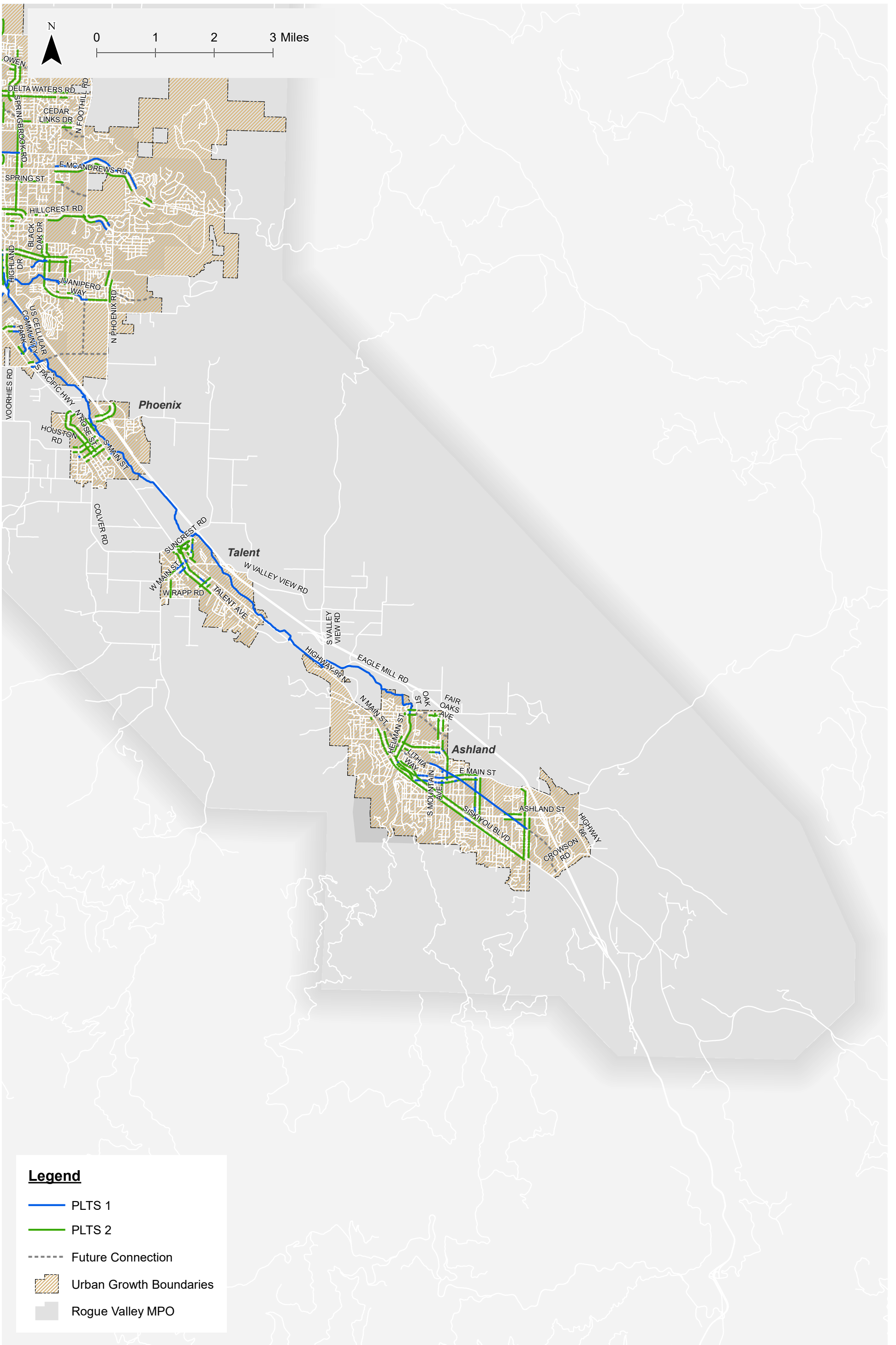
Legend

- BLTS 1
- BLTS 2
- - - - Future Connection
- Urban Growth Boundaries
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Legend

- PLTS 1
- PLTS 2
- - - - Future Connection
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Potential Barriers on Regional and Connector Routes

The Potential Barriers on Regional and Connector Routes map was developed to identify site specific locations that currently limit the opportunity for people to walk and bike within the Rogue Valley due to perceived or experienced safety risks.

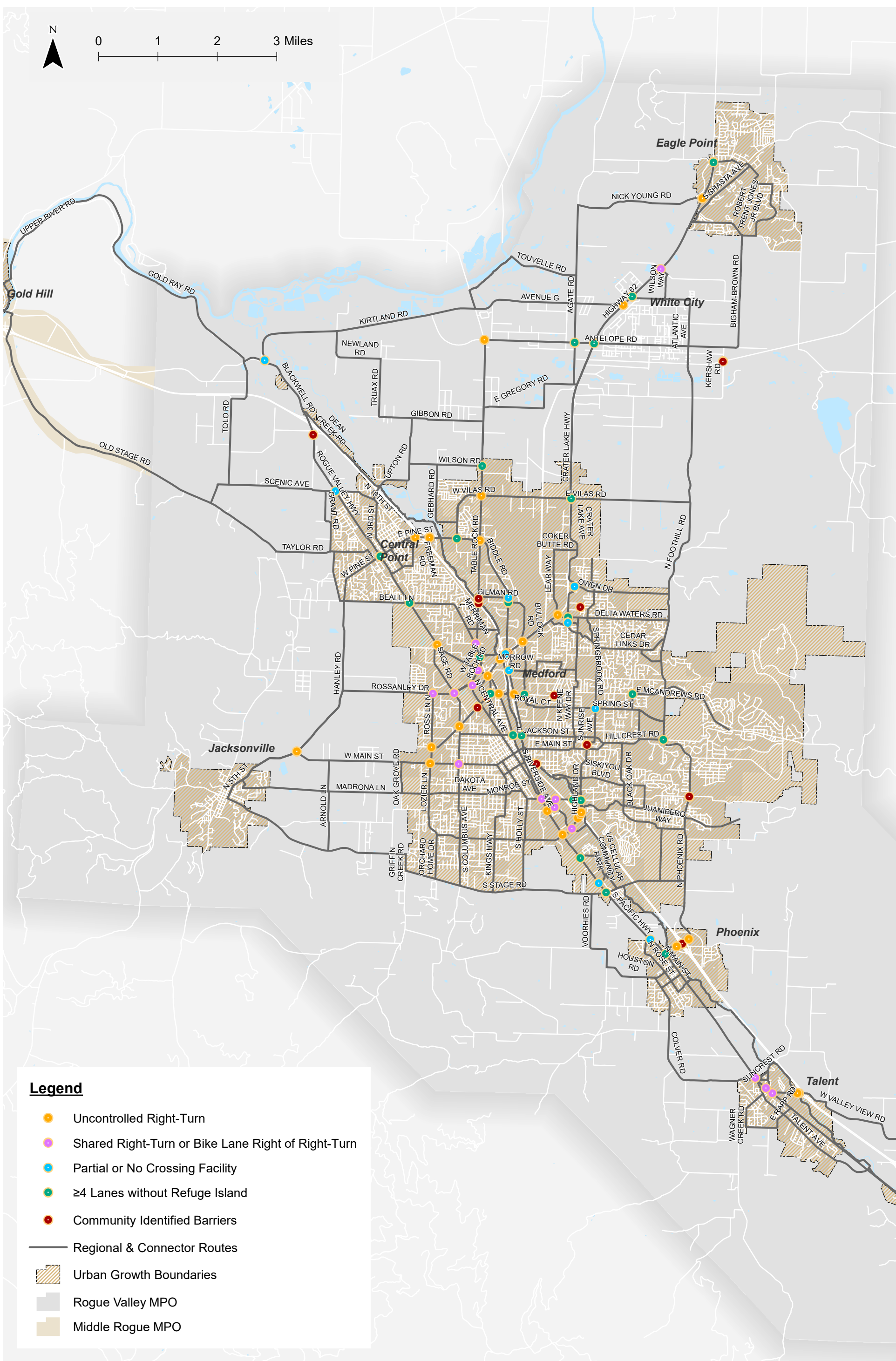
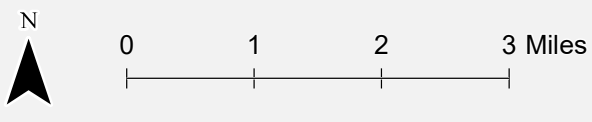
It is intended to serve as a complimentary map to the bicycle and pedestrian level of traffic stress (LTS) maps; whereas, the LTS maps identified high stress roadway segments, the Potential Barriers on Regional and Connector Routes map identifies intersections and locations that may be barriers to walking and biking. Together, the bicycle and pedestrian LTS maps (segments of LTS 3 and 4) combined with the Potential Barriers on Regional and Connector Routes map provides a comprehensive look at the roadway facilities and locations within the Rogue Valley that limit the potential for increased walking and biking opportunities.

Potential Barrier Criteria and Development

The Potential Barriers on Regional and Connector Routes were identified based on community input received from the online interactive mapping exercise (conducted as part of Task 2: Public & Stakeholder Involvement), input received from the TAC and CAC, as well as a planning level assessment of all Regional and Connector routes that cross each other (intersections). Intersections along Regional and Connector Routes were flagged as potential barriers when one or more of the following attributes was found to be present at a given intersection:

- ▶ Presence of Uncontrolled Right-Turn
- ▶ Shared Right-Turn or Bike Lane on Right side of Right-Turn
- ▶ Community Identified Barrier
- ▶ Partial or No Crossing Facility
- ▶ ≥4 Lanes without Refuge Island

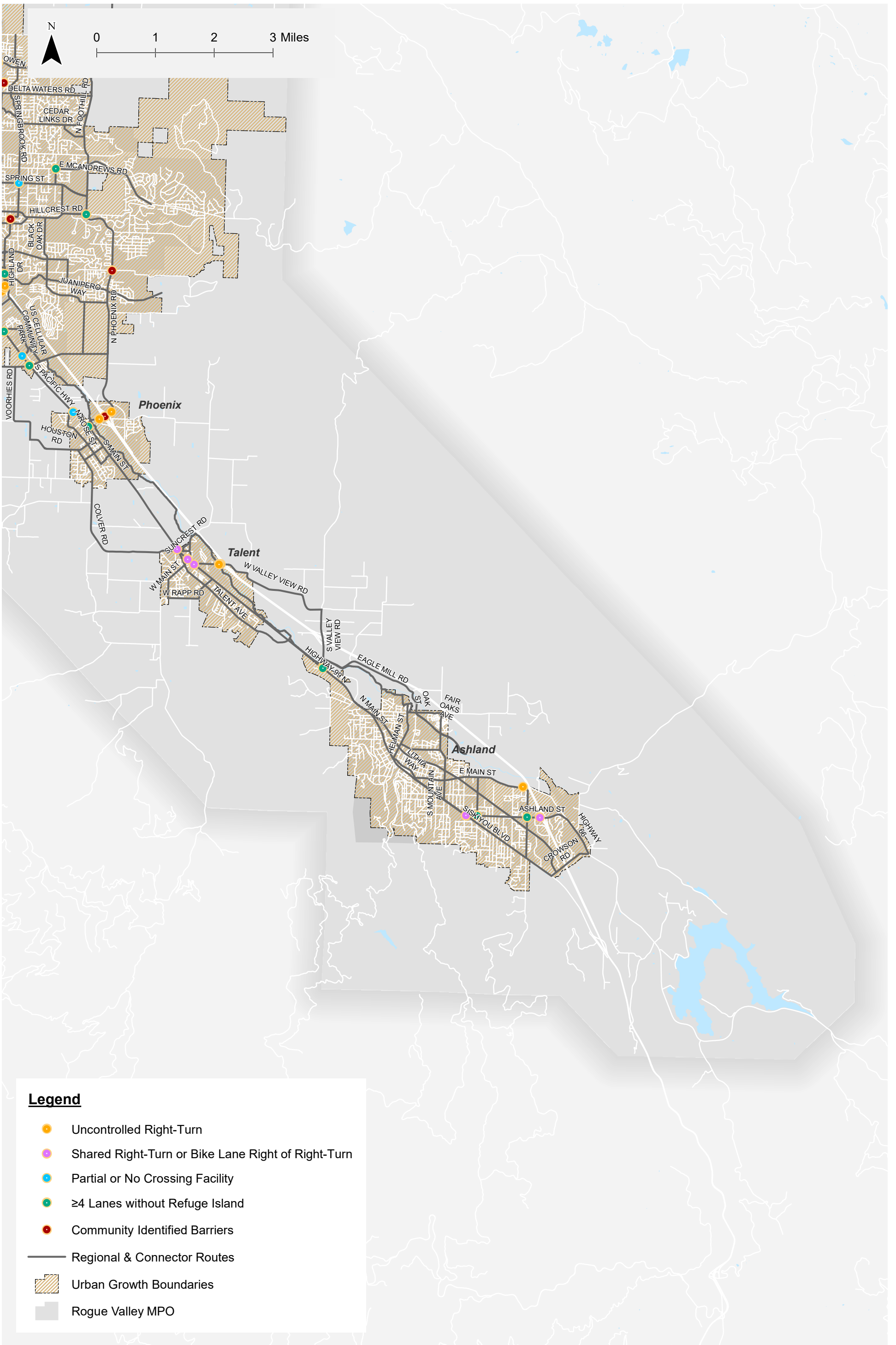
Figure 8 illustrates the Potential Barriers on Regional and Connector Routes. Potential Barriers are illustrated based on the type of attribute contributing to the barrier designation. The severity of the barrier, consideration of the segment LTS ratings, and appropriate countermeasures will be considered as part of the Regional prioritization process. Barriers on or connecting to existing low-stress routes will be the highest priority, followed by barriers on high priority segments for improvement.



Legend

- Uncontrolled Right-Turn
- Shared Right-Turn or Bike Lane Right of Right-Turn
- Partial or No Crossing Facility
- ≥4 Lanes without Refuge Island
- Community Identified Barriers
- Regional & Connector Routes
- Urban Growth Boundaries
- Rogue Valley MPO
- Middle Rogue MPO

Potential Barriers on Regional and Connector Routes
Jackson County, OR



Potential Barriers on Regional and Connector Routes
Jackson County, OR