

Section 5 Transportation System Plan

TRANSPORTATION SYSTEM PLAN

INTRODUCTION

This section presents the individual transportation modal elements that comprise the Jackson County Transportation System Plan (TSP). The TSP addresses those components necessary for the development of the future transportation network, including:

- Roadway System Plan;
- Public Transportation System Plan;
- Bicycle and Pedestrian System Plan; and
- Air, Water, Rail, and Pipeline System Plan.

All of the TSP elements presented in this section are based on the requirements of the Oregon's Transportation Planning Rule (TPR). The modal plans have been developed based on the existing conditions and future conditions analysis, and alternatives evaluations, taking into consideration the interest of citizens, business owners, and governmental agencies, as expressed by the Technical Advisory Committee (TAC), County staff, and citizen input.

ROADWAY SYSTEM PLAN

The Jackson County roadway system plan reflects the anticipated operations and circulation needs through the year 2038 and provides guidance on how to facilitate that travel over the next 20 years. The plan focuses on the County's collector and arterial system, although road standards are also provided for local roadways.

Functional Classification

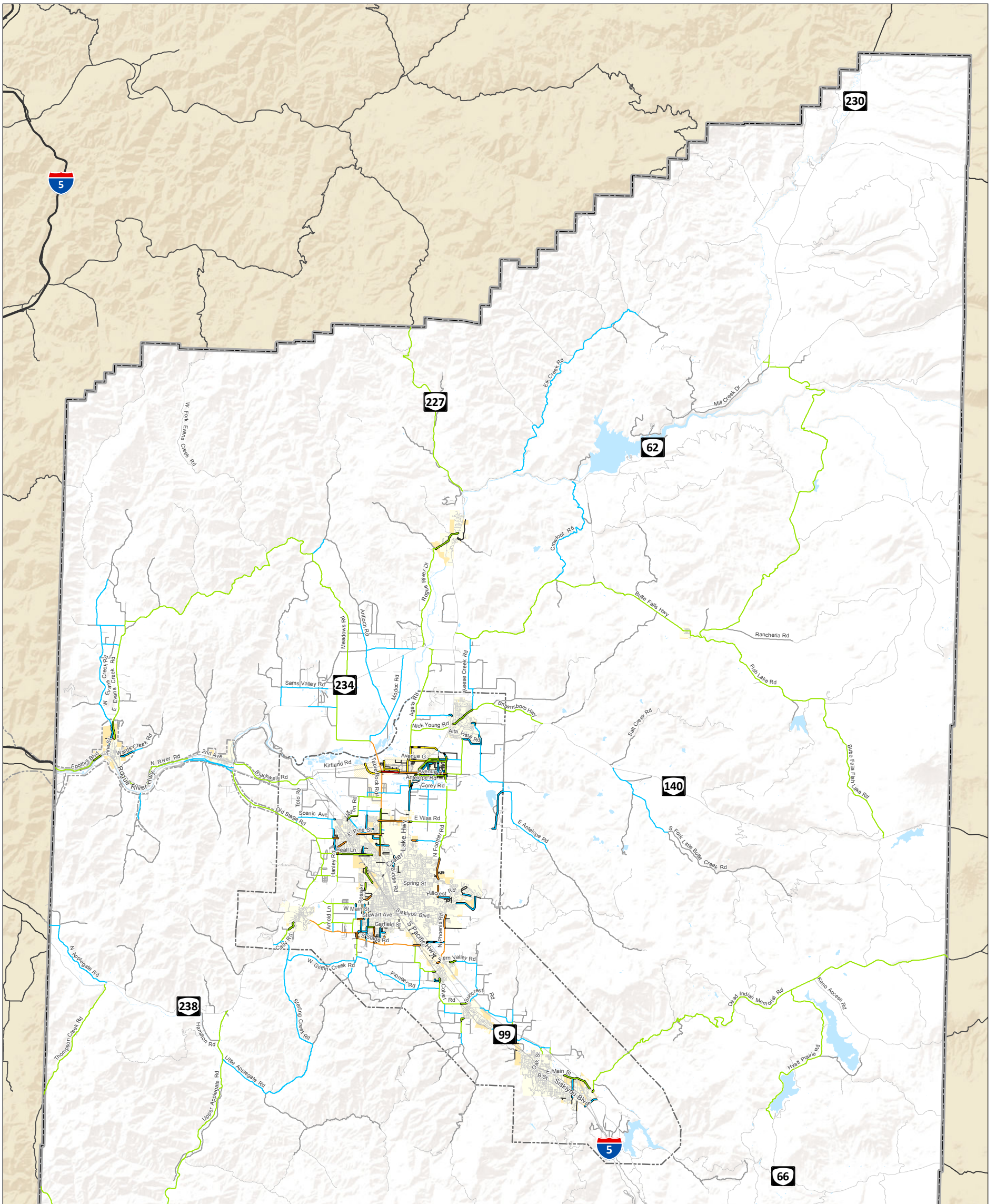
A roadway's functional classification is determined by several factors, how the facility connects with the rest of the system, the volume of traffic it is expected to carry, and the types of trips it is expected to carry. The functional classification considers the adjacent land uses and the kinds of transportation modes that should be accommodated. The public right-of-way should also provide sufficient space for utilities to serve adjacent land uses.

The functional classification system for Jackson County divides all County roadways into Urban and Rural classifications. All of the County roadways within urban growth boundaries of the incorporated cities or urban containment boundaries fall under the Urban classification. These areas are classified as urban under the federal system, but not all of the roads in these areas may be appropriate as an urban standard road. Projects within the FAUB but outside a UGB or UCB were analyzed case by case to determine whether an urban or rural standard is most appropriate. All other County roadways fall under the rural functional classification. Within these groups, roadways are categorized as Freeways,

Arterials, Major Collectors, Minor Collectors, or Local Streets or Roads. The functional classification plan for Jackson County is shown in Figure 12. Table 7 provides a detailed description of each category.

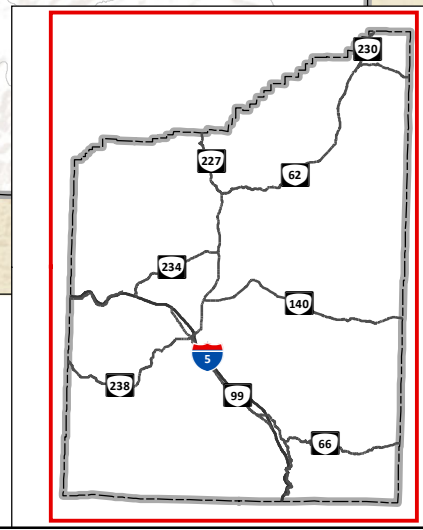
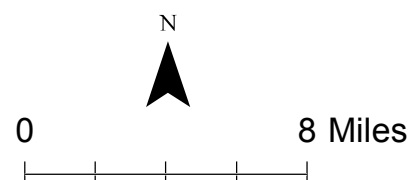
Table 6: Functional Classification Descriptions

Functional Classification	Traffic Function Description	Connectivity Function	Planned Average Daily Traffic Range
Freeway	Primary function is to carry high levels of regional vehicular traffic and public transit at high speeds; full access control, with access limited to interchanges; street crossings via grade separations; widely spaced access points; has a median; pedestrian and bicycle traffic discouraged or prohibited. High volumes of through freight traffic.	Primary connectivity function is to connect major interstate and intrastate destinations. Also, freeways should connect some major intra-regional destinations.	>20,000 (rural/urban)
Arterial	Primary function is to serve both local and through traffic as it enters and leaves urban areas; serves major traffic movements; access control may be provided through medians and/or channelization; restricted on-street parking; sidewalks and bicycle facilities provided; will be used by public transit in urban areas. Carries high volumes of freight traffic that have both local and external destinations.	Primary function is to make connection between major intra-county and regional destinations, and to connect cities and communities. Connects to adjacent counties. Connects the collector system to freeways.	>5,000 (rural) >15,000 (urban)
Major Collector (And Urban Minor Arterial)	Primary function is to serve traffic between neighborhoods and community facilities; provides some degree of access to adjacent properties, while maintaining circulation and mobility for all users; carries lower traffic volumes at slower speeds than arterials; typically has two or three lanes; pedestrian and bicycle facilities provided; may be used by public transit in urban areas. Some freight traffic is destined for local delivery or local markets.	Primarily connects local roads and minor collectors to arterials and other major collectors. May provide the primary connections between rural communities, rural areas, and rural destinations. Connects local areas to regional destinations.	4,500-15,000 (rural major collector) 3,500-14,000 (urban major collector) 5,000-18,000 (urban minor arterial)
Minor Collector	Primary function is to get traffic from neighborhoods and business areas to the arterial and major collector system; has slower speeds enhancing safety for pedestrians and bicyclists; on-street parking may be provided in urban areas; pedestrian and bicycle facilities are provided; bicycle facilities should be exclusive in urban areas and shared in rural areas; may be used by public transit in urban areas. Freight traffic tends to be destined for local delivery or local markets.	Primarily connects local roads and other minor collectors to major collectors and arterials. Connects local areas to local destinations.	1,250-5,000 (rural) 1,500-7,000 (urban)
Local Street	Primary function is to provide direct access to adjacent land uses; characterized by short roadway distances, slow speeds, and low volumes; offers a high level of accessibility; serves passenger cars, pedestrians, and bicycles, but not through trucks; may be used by public transit in urban areas; pedestrian facilities are provided in urban areas. Low volumes of freight traffic.	Primarily connects local areas to one another and the higher order system. May connect local destinations.	0-1,500 (rural) 0-2,000 (urban)



Functional Classification

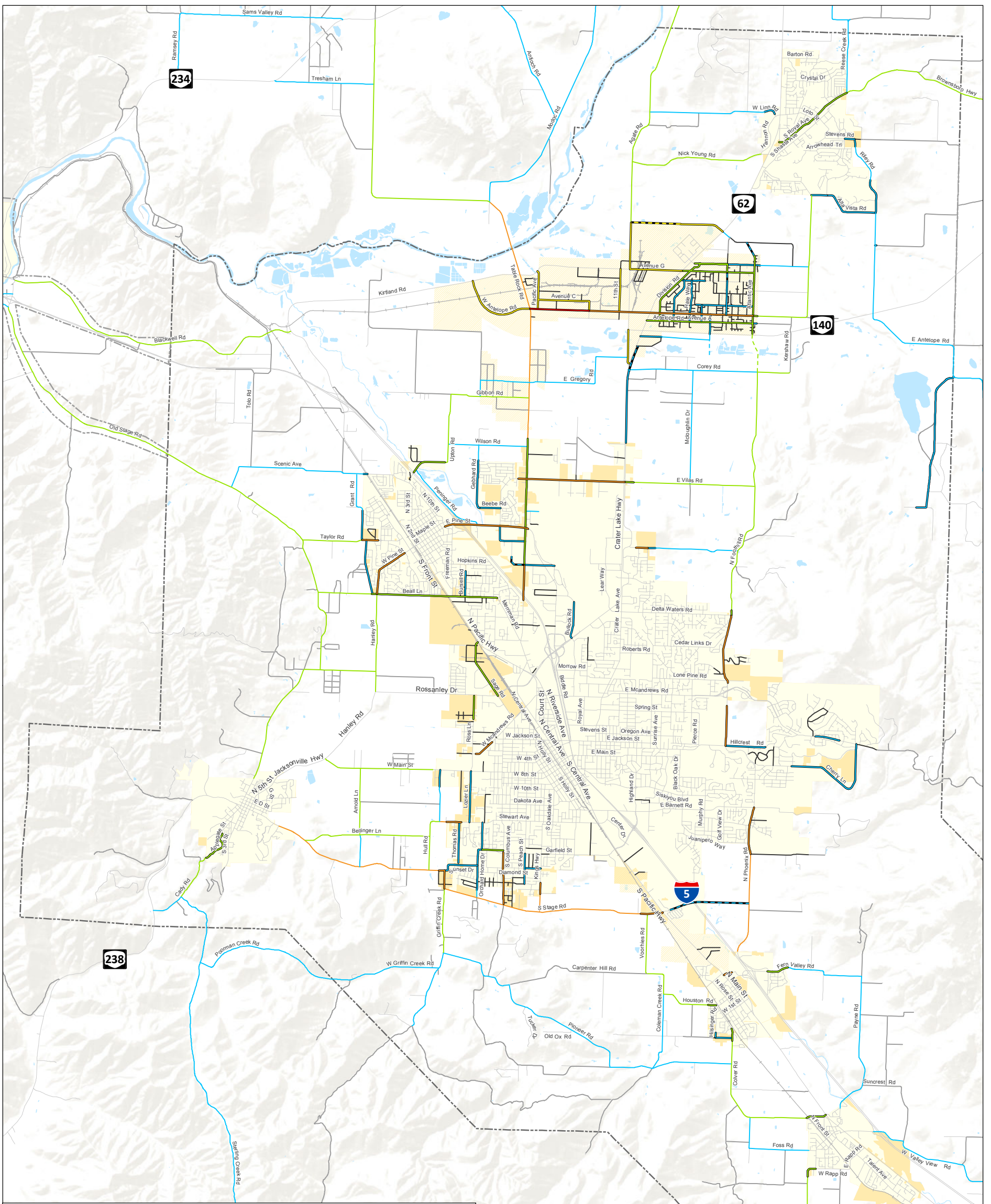
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- Urban Minor Arterial
- Rural Arterial
- Industrial Collector
- Urban Major Collector
- Rural Major Collector
- Urban Minor Collector
- Rural Minor Collector
- Industrial Local
- Urban Local
- Rural Local
- - - Future Rural Major Collector
- - - Future Rural Minor Collector
- - - Future Urban Industrial Collector
- - - Future Urban Minor Collector
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Functional Classification Plan
Jackson County, OR**

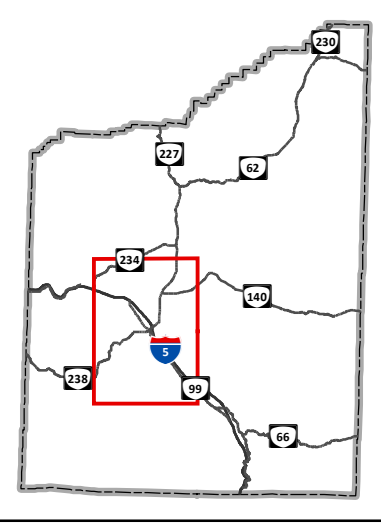
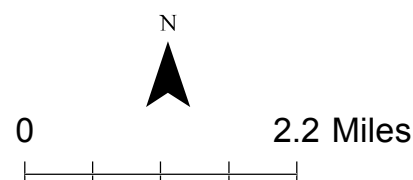
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Functional Classification

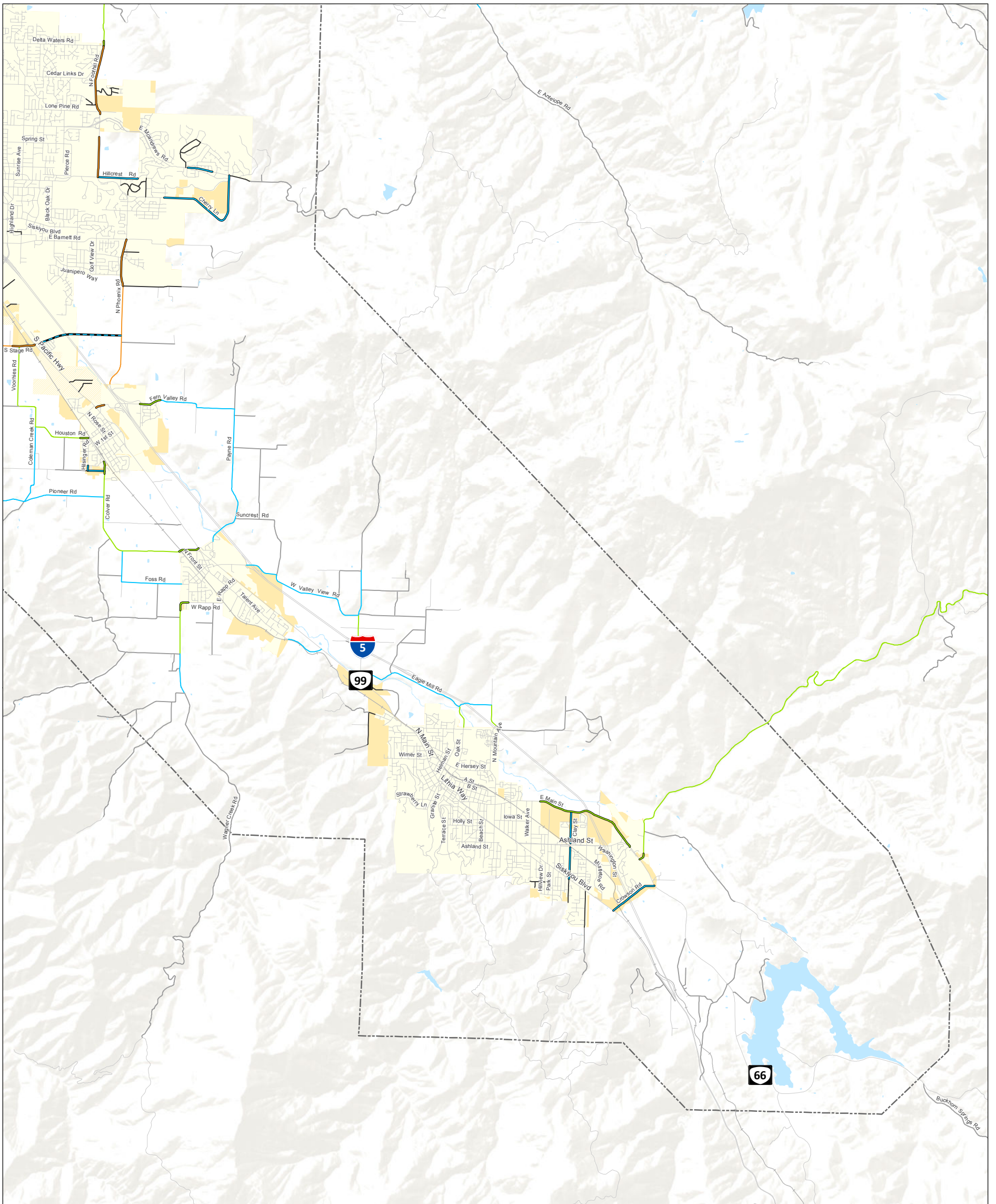
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**Functional Classification Plan
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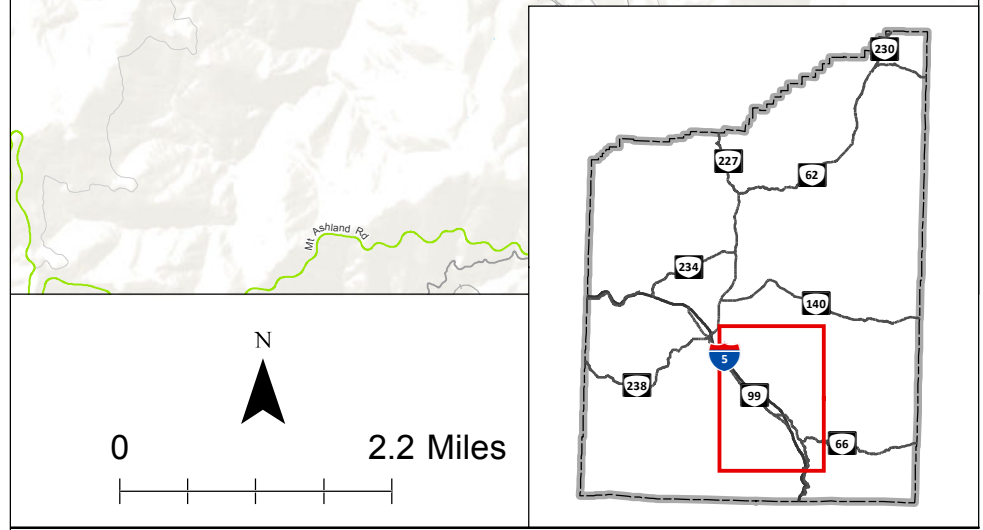
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Functional Classification

- | | | | |
|--|-----------------------|--|-----------------------------------|
| | Urban Major Arterial | | Future Rural Major Collector |
| | Urban Minor Arterial | | Future Rural Minor Collector |
| | Rural Arterial | | Future Urban Industrial Collector |
| | Industrial Collector | | Future Urban Minor Collector |
| | Urban Major Collector | | City Boundary |
| | Rural Major Collector | | Urban Cluster Boundary |
| | Urban Minor Collector | | Urban Growth Boundary |
| | Rural Minor Collector | | Middle Rogue MPO |
| | Industrial Local | | Rogue Valley MPO |
| | Urban Local | | County Boundary |
| | Rural Local | | |



**Functional Classification Plan
Jackson County, OR**

**Figure
12C**

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Roadway Design Standards

The County Roadway design standards implement the roadway functional classifications. Design standards address operational characteristics such as travel volume, operating speed, safety, and freight needs. The standards are necessary to ensure the street system that develops will be capable of safely and efficiently serving the traveling public, while also accommodating the orderly development of adjacent lands.

The County's roadway design standards are shown in Tables 8-10. The typical roadway cross sections are shown in Exhibits 1-3. The cross sections illustrate the roadways design standards, including right-of-way width, number of travel lanes, bicycle and pedestrian facilities, and amenities such as on-street parking. The standards and cross sections are intended for planning purposes for new road construction, as well as for those locations where it is physically and economically feasible to improve existing streets. Refer to Policy 4.3.5-B for the County's landscape strip policy. The Access Management Guidelines section provided below addresses variances to the County Road standard. Where a variance request is site specific and will not impact the County system beyond a localized area, no amendments to the TSP is required.

The design standard for higher order facilities in rural areas includes wider paved shoulders. The main purpose of the paved shoulders is to prevent conflicts between non-motorized travel and automobiles. Outside the MPO boundary, there are some roads that have very low traffic volumes, but are functionally classed as higher order facilities because of the connectivity function they serve. Standards that require wide paved shoulders, where the potential for auto vs. non-auto conflicts is low, may be removed or eliminated with approval of a design exception. While Jackson County does not have a formal design exception process, the ODOT Highway Design Manual (HDM) offers an approach the County could consider for future development. Per the HDM, design exceptions should include:

- Description of the exception;
- Description of the project;
- Location of design feature;
- Crash history and potential (Specifically as it applies to requested exception);
- Reasons for not attaining the standard (cost/benefit, crash history, environment, etc.);
- Effect of other standards;
- Compatibility with adjacent sections;
- Probable time before reconstruction of section;
- Mitigation for exception included in design, and;
- Supporting documentation (plans, cross sections, alignments, details, etc.).

Additional information on who prepared, reviewed, and approved the design exception should also be considered for future development.

Rural County Roadway Standards

The rural county roadway standards are shown in Table 8. The typical cross sections for rural county roadways are shown in Exhibit 1.

Table 7: Rural County Roadway Standards and Specifications

	Local Street A	Local Street B	Local Street C	Minor Collector	Major Collector	Arterial
Typical ADT (Average Daily Traffic)	0-120	120-600	600-1,500	1,250-5,000	>4,500	>4,500
Minimum Design Speed ❶	30	40	40	50	50	55
Number of Vehicle Lanes	2	2	2	2	2	2-5
Lane Width	11'	11'	11'	11'	11'	11'
Turn Lane Width	No	No	No	No	No	14'
Shoulder Width	2'	3'	5'	5'	6'	7'
Shoulder Surface	Gravel	Gravel	AC	AC	AC	AC
Pavement Width	22'	22'	32'	32'	34'	36-72'
Minimum Access Spacing ❷	50' ❸	50' ❸	50' ❸	150'	300'	300'
Surface Type	Oil Mat	Oil Mat	AC	AC	AC	AC
Minimum ROW Width	50'	50'	50'	60'	60'	60'
Applicable Specifications	❹	❹	❹	❹	❹	❹

General Notes:

1. Whenever any street or road is created or upgraded within the UGB or ½ mile of any incorporated city, the policy outlined in the Goal and Policy section of this TSP with respect to the Urban Growth Management Agreement will apply.

2. The urban roadway standard for the corresponding functional classification may be built if the County Engineer determines that the urban standard is more appropriate for the road section.

AC = Asphaltic Concrete Pavement: The asphaltic concrete mixture in the pavement may be either hot-mix or warm-mix and shall conform to Jackson County standards.

Notes:

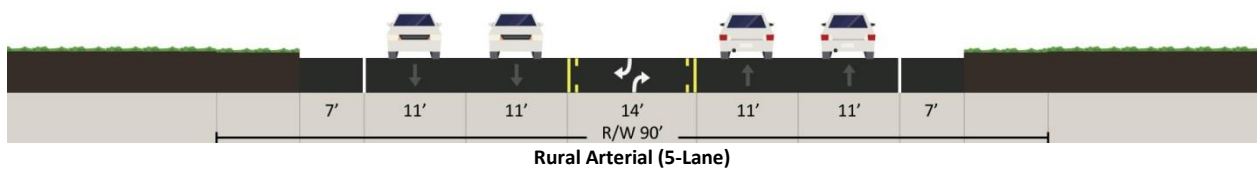
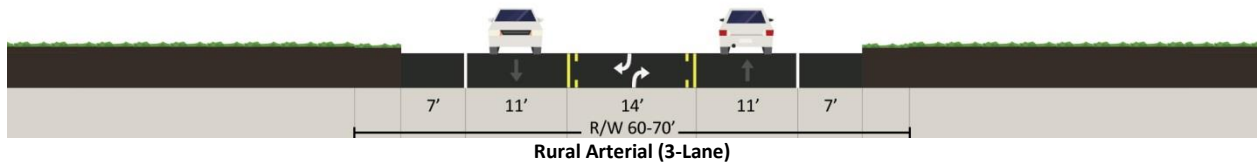
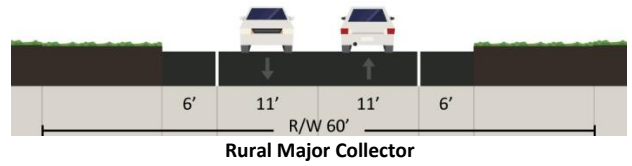
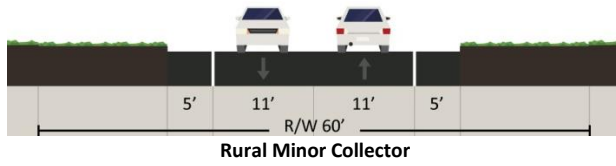
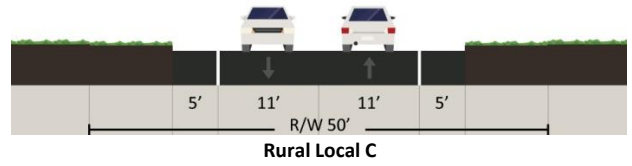
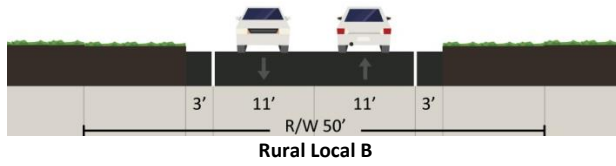
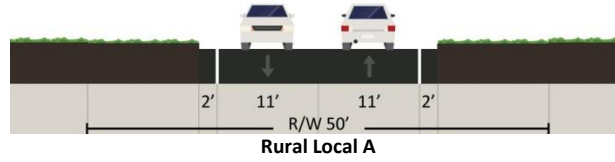
❶ Minimum Design Speed unless approved by the Department Director.

❷ Lower spacing may be allowed when supported by a traffic study and approved by the Department Director, or when no other public road access is possible.

❸ Applies to spacing between street intersections and driveways. No minimum standard between driveways.

❹ Oregon Department of Transportation “Standard Specifications for Highway Construction” and Jackson County Supplemental Specifications and “Special Provisions” applicable to the project.

Exhibit 1: Rural County Typical Cross Sections



Urban County Roadway Standards

The Urban County Roadway Standards are shown in Table 9. The typical cross sections for Urban County Roadway are shown in Exhibit 2.

Table 8: Urban County Roadway Standards and Specifications

	Local Street	Industrial Local	Industrial Collector	Minor Collector	Major Collector	Minor Arterial	Major Arterial
Typical ADT (Average Daily Traffic)	0-2,000	0-3,000	2,750-7,000	1,500-4,000	3,500-12,000	5,000-15,000	>12,000
Minimum Design Speed ⑥	25	25	35	35	45	45	50
Number of Vehicle Lanes	2	2	3	2	3	3	5
Through Lane Width	10'	11'	12'	11'	11'	11'	11'
Turn Lane/Median Width	No	No	14'	No	14'	14'	14'
Bike Lanes/Shoulders ①	No	5'	6'	5'	6'	6'	6'
On-Street Parking, Width	Both Sides, 7'	No	No	One Side, 8'	No	No	No
Pavement Width	34'	32'	50'	32'-40'	48'	48'	70'
Sidewalk Width	5'	No	No	5-7' ②	5-7' ②	5-7' ②	5-7'
Landscape Strip Width ③	7'	None	None	7'	7'	7'	7'
Right-of-Way Width ④	50'	74'	74'	42'-68'	60'-80'	60'-80'	90'-100'
Minimum Access Spacing ⑤	35' ⑦	50' ⑦	200'	150'	250'	250'	300'
Surface Type	AC	AC	AC	AC	AC	AC	AC
Minimum Stopping Sight Distance	200'	240'	240'	315'	315'	315'	350'
Applicable Specifications	⑧	⑧	⑧	⑧	⑧	⑧	⑧

General Notes:

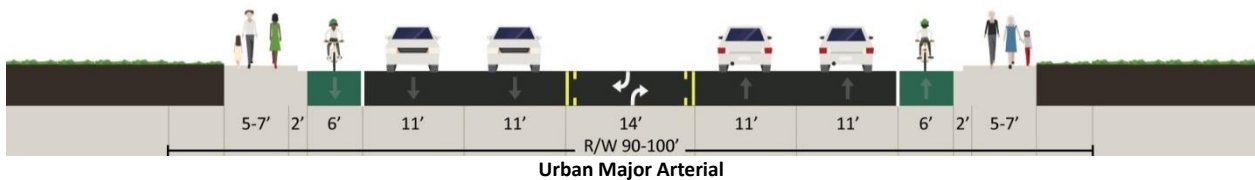
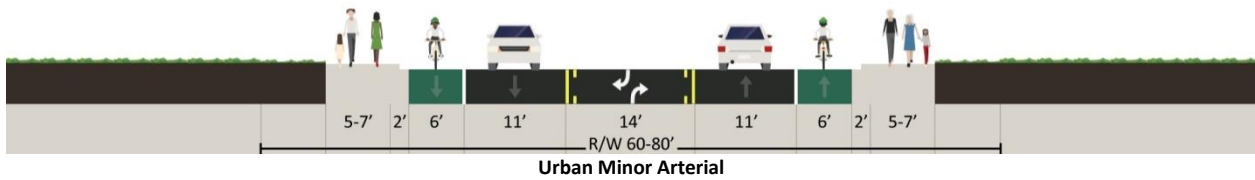
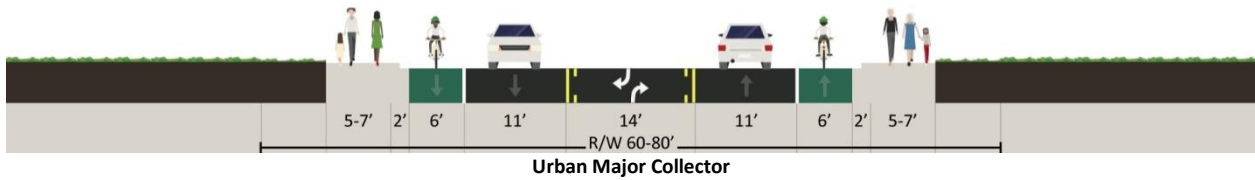
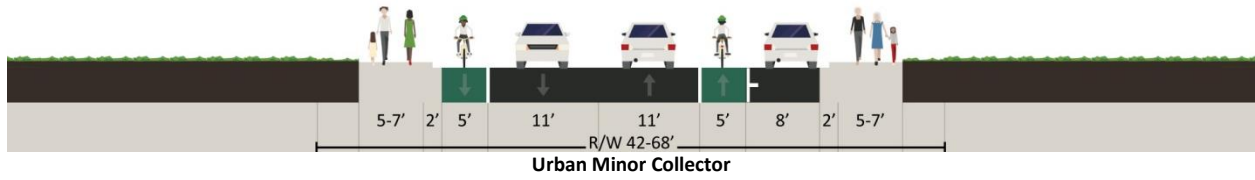
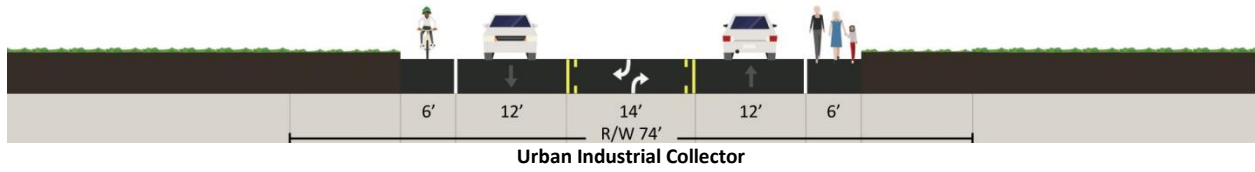
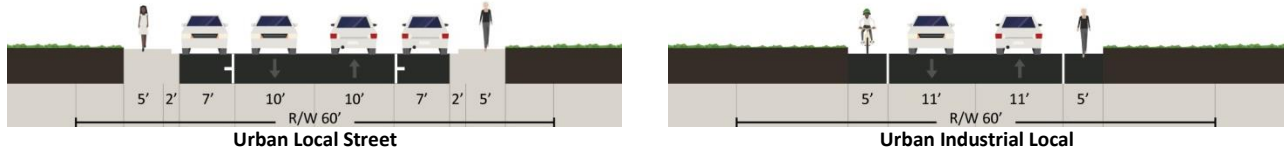
1. Whenever any street or road is created or upgraded within the UGB or ½ mile of any incorporated city, the policy outlined in the Goal and Policy section of this TSP with respect to the Urban Growth Management Agreement will apply.

AC = Asphaltic Concrete Pavement: The asphaltic concrete mixture in the pavement may be either hot-mix or warm-mix and shall conform to Jackson County standards.

Notes:

- ① Bike lane width should be measured from the edge of the concrete pan per AASHTO Guide for the Development of Bicycle Facilities.
- ② Design for maximum width unless approved by the Department Director.
- ③ Landscape strips are permitted only with agreement that the adjacent property owner will maintain.
- ④ ROW width depends on sidewalk width, inclusion of landscape strip, and inclusion of on-street parking where permitted.
- ⑤ Lower spacing may be allowed when supported by a traffic study and approved by the Department Director, or when no other public road access is possible.
- ⑥ Minimum Design Speed unless approved by the Department Director.
- ⑦ Applies to spacing between street intersections and driveways. No minimum standard between driveways.
- ⑧ Oregon Department of Transportation "Standard Specifications for Highway Construction" and Jackson County Supplemental Specifications and "Special Provisions" applicable to the project.

Exhibit 2: Urban County Typical Cross Sections



White City Roadway Standards

The White City Roadway Standards are shown in Table 10. The typical cross sections for White City Roadways are shown in Exhibit 3.

Table 9: White City Roadway Standards and Specifications

	Local Street A	Local Street B	Industrial Local	Industrial Collector	Minor Collector	Major Collector	Minor Arterial	Major Arterial
Typical ADT (Average Daily Traffic)	0-750	0-2,000	0-3,000	2,750-7,000	1,500-4,000	3,500-12,000	5,000-25,000	>12,000
Minimum Design Speed ^⑤	25	25	25	35	35	45	45	50
Number of Vehicle Lanes	No	2	2	3	2	3	3	5
Through Lane Width	No	10'	11'	12'	11'	11'	11'	11'
Turn Lane/Median Width	No	No	No	14'	No	14'	14'	14'
Bike Lanes/Shoulders ^①	No	No	6'	6'	5'	6'	6'	6'
On-Street Parking, Width	No	Both Sides, 7'	No	No	One side, 8'	No	No	No
Pavement Width	25'	34'	34'	50'	32'-40'	48'	48'	70'
Minimum Access Spacing ^④	35' ^⑤	50' ^⑤	50' ^⑤	200'	150'	250'	250'	300'
Sidewalk Width	5'	5'	No	No	5'-8' ^②	5'-8' ^②	5'-8' ^②	5'-8' ^②
Landscape Strip Width ^③	None	7'	None	None	7'	7'	7'	7'
Right-of-Way Width ^⑥	40'	60'	74'	74'	66'-74'	68'-80'	70'-80'	92'-104'
Surface Type	AC	AC	AC	AC	AC	AC	AC	AC
Minimum Stopping Sight Distance	200'	200'	240'	240'	315'	315'	315'	350'
Applicable Specifications	⑦	⑦	⑦	⑦	⑦	⑦	⑦	⑦

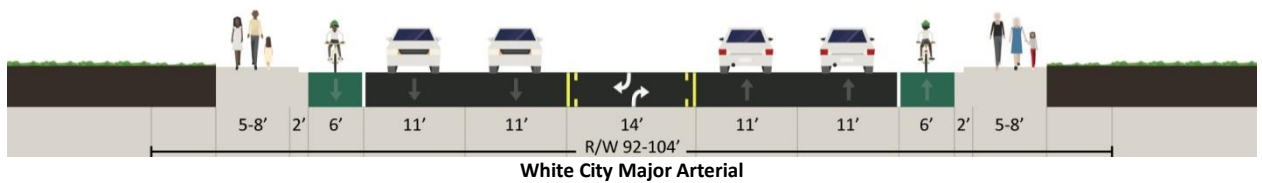
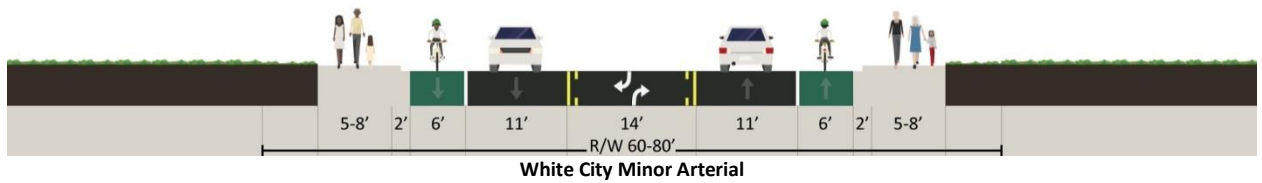
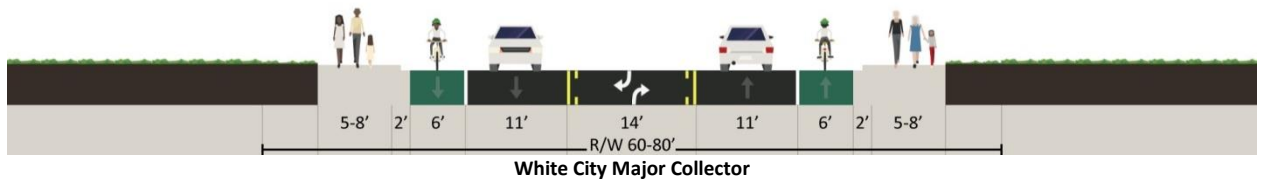
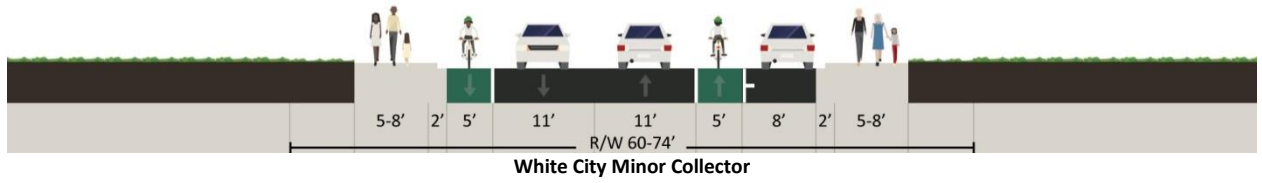
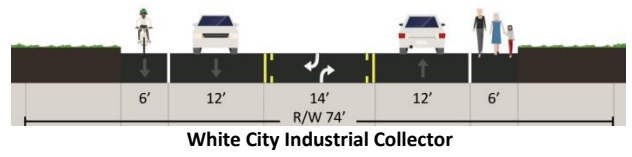
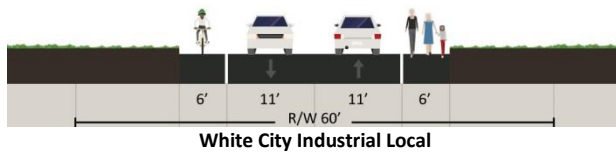
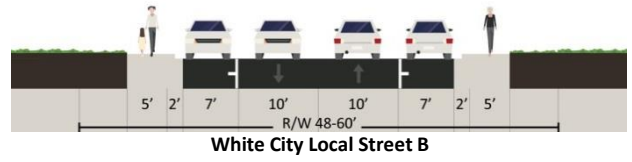
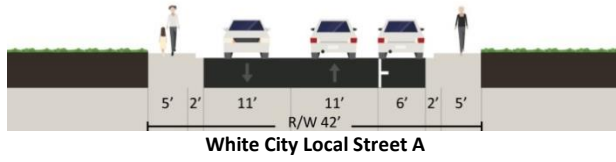
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Notes:

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- ② Design for maximum width unless approved by the Department Director.
- ③ Landscape strips are permitted only with agreement that the adjacent property owner will maintain.
- ④ Lower spacing may be allowed when supported by a traffic study and approved by the Department Director, or when no other public road access is possible.
- ⑤ Applies to spacing between street intersections and driveways. No minimum standard between driveways.
- ⑥ ROW width depends on sidewalk width, inclusion of landscape strip, and inclusion of on-street parking where permitted.
- ⑦ Oregon Department of Transportation "Standard Specifications for Highway Construction" and Jackson County Supplemental Specifications and "Special Provisions" applicable to the project.

Exhibit 3: White City Typical Cross Sections



Standards for Improvement of Existing Unpaved Roads

Jackson County recognizes that the dust, mud, wash boarding, potholes and substandard alignment of unpaved roads on existing County rights-of-way is undesirable for many citizens living and traveling on these facilities. There are three types of unpaved roads within Jackson County Jurisdiction for which these standards apply; County maintained gravel roads, unimproved County roads, and local access roads. Improving these unpaved roads to paved surface facilities meeting full county geometric and design standards is cost prohibitive and ensures that most roads will not be improved in the future.

Reduced Standards

In order to alleviate the undesirable features of unpaved roads and improve the county road network, Jackson County allows design standards to improve unpaved roads currently under its jurisdiction to hard surface facilities which are less than those required for new construction. *These standards apply only to the improvement of existing unpaved road facilities in existing County right-of-way and shall not be applied to new construction. Existing rights-of-way without any road shall be improved to full current standards.*

County Maintained Unpaved Roads

Roads improved at the request of residents will usually require the residents pay the full cost of the improvement through an LID or other source of private funding. If and when the Director determines it is in the best interest of the County to improve a County maintained unpaved road, the Director may do so provided funds are appropriated in the approved departmental budget. Once improved, Jackson County will continue to maintain these facilities.

Unimproved County Roads and Local Access Roads

Many of the unpaved roads within the county are Unimproved County Roads or Local Access Roads and are not county maintained facilities. All improvements on Unimproved County Roads and Local Access Roads will be financed through Local Improvement Districts or other sources of private funding. When improved, Jackson County will maintain these facilities.

Exceptions

All facilities improved under these standards shall not have average daily trips of 400 or more, have more than two travel lanes or be within an urban reserve area, urban growth boundary or city limits of any city.

Table 10: Standards for Improvement of Existing Unpaved Roads

	County Maintained Unpaved Roads	Local Access Road
Surface	Oil Mat	Oil Mat
Minimum Design Speed	AASHTO ①	AASHTO ①
Pavement Width	The greater of 16' or AASHTO ①	The greater of 16' or AASHTO ①
Shoulder Width	0'	0'
Horizontal Alignment	AASHTO	AASHTO
Vertical Alignment	AASHTO	AASHTO
Typical Section (Rock base + surface)	③	③

Notes:

- ① AASHTO = “Guidelines for Geometric Design of Very Low-Volume Local Roads”
- ② Only improved through LID’s or other private sources of financing
- ③ Typical sections of base rock and surface treatments can be reduced below county standards through engineering judgment. Strength of existing soil and rock surfaces, performance history, expected type and volume of traffic and other appropriate site conditions shall be taken into consideration when developing rock depth and compaction requirements and shall be completed by a registered engineer. Roads with an ADT greater than 200 or expected to be used for timber or rock extractions should have a structural section deemed equivalent by the County Engineer to the Rural Local Road B standard. Roads with less than 200 ADT and with no use for timber or rock extraction should have a structural section deemed equivalent by the County Engineer to the Rural Local Road A standard.

Multi-Modal Treatments

Attachment A includes a toolkit for the design of bicycle and pedestrian treatments that supplement the County’s design standards as well as be a guiding document for providing facilities that are an exception to the County’s existing standards. This will be useful for helping to implement the proposed Roadway Bikeway Network classifications as well as address issues on local and undesignated roads as they arise. Some example treatments that will be included in the toolkit include:

- Multi-use path
- Advisory Shoulder
- Buffered Shoulder
- Shoulder
- Shared Lane Roadways
- Limited Shoulder
- Bicycle Climbing Shoulders
- Pedestrian Path (Side path)

The above treatments may be used to address situations such on rural local roadways that are on-street alignments of the greenway system (i.e. “Park Roads”), that are part of the County’s roadway bicycle network, or that have recreational or residential bicycle and pedestrian demand that warrants some level of protection (such as a mixed use path, shoulder bikeway, or advisory lanes) or, urban areas where the space typically allocated to standard bicycle lanes and sidewalks on both sides of the roadway could be utilized differently to provide facilities that are more comfortable for all roadway users (such as a multi-use path – parallel or above grade similar to a sidewalk).

Implementation of some of the facilities and treatments in the toolkit may require a design exception or Department Director approval when inconsistent with the roadway standards.

Corridor Management Planning

In some instances a road may have the proper functional classification but the design standards in the TSP may not suite a particular road corridor well. Direct application of the basic design standards, to a particular corridor, may result in a road project that does not effectively balance the TSP goals and policies because of site-specific issues such as existing development, topography, and safety considerations. For example, there is an existing corridor management plan for Old Stage Road. This management plan reconciles the need for this corridor to serve as an important major collector linkage, while attempting to minimize adverse impacts to the existing rural residential development of the area. The Old Stage Road corridor management plan is adopted by reference and incorporated into the Jackson County TSP.

As future corridor management plans are developed, these plans should address how the plan accomplishes the goals and addresses the policies of the TSP. The plan should identify where deviations from the basic standards will occur and why these deviations are appropriate. When a corridor management plan is adopted, it should be incorporated by reference into this section of the TSP.

Access Management Standards

Safety is the first priority for access management. Access permits to the County Road system should not be issued where safe access cannot be assured. Generally, access management enhances safety by minimizing the number and type of potential conflict points. Access to state facilities is governed by ODOT's access standards. ODOT's standards may also apply to access spacing on County facilities located within the management area of a freeway or expressway interchange, when the County and ODOT jointly adopt an interchange area management plan (IAMP). Access management may be included as part of a corridor management plan; access management as part of an adopted corridor management plan supersede any additional access management provisions for the corridor.

Managing access to the County's road system is necessary to preserve the capacity of the County's arterial and collector system. Capacity is preserved by minimizing the number of points where traffic flow may be disrupted by traffic entering and exiting the roadway. Jackson County's TSP takes several approaches to access management for capacity preservation. The strategies are differentiated by geography and facility function.

Access management is administered through the road approach and land use permitting processes. Land use permits that require commercial or aggregate site plan review and/or Type 3 or 4 uses should have access points analyzed and conditions of approval should limit undue impacts on road capacity. Inside a UGB, the County will apply the city's access management provisions, consistent with Policy 4.2.1-P and its associated strategies.

Access to facilities under County jurisdiction, regardless of location or functional classification, are subject to safety analysis and Priority Level 1 of the Jackson County Access Management Guidelines. Priority Level 2 and Level 3 apply to all facilities under County jurisdiction with a functional classification of minor collector or higher within the MPO or within any UGB outside the MPO, consistent with Policy 4.2.1-V. If the basic access management provisions are not well suited to a particular development proposal then a site-specific circulation plan that is prepared by a registered professional engineer with expertise in transportation may be substituted. This type of circulation plan must show the net effects on the capacity of the system and safety hazards are no greater than with application of the basic provisions.

Access Management Guidelines:

The access management guidelines are hierarchically prioritized according to the system below (Level 1 is the highest priority). Where an access request would support a higher priority guideline at the expense of a lower priority guideline, the access that accomplishes the higher priority should be promoted.

Priority Level #1:

Avoid Negative Effects on Intersection Operations: Certain conditions, such as accesses that are too close to intersections with large peak hour queues, cause safety hazards and poor intersection operations. Taking applicable factors into consideration, such as parcel configuration and opportunities for shared access, access locations should minimize adverse impacts on intersection operations. Specific access designs and turning movement restrictions may be required to minimize adverse effects on intersection operations, such as an access with right-in and right-out turning movements only.

Priority Level #2:

Minimize Access Points: Allow only one access point for each parcel or parcels under the same ownership. When a property has frontage on two or more roadways, provide access from the roadway with the lower functional classification. More than one access may be granted if it can be determined that it will not negatively affect the safety and efficiency of the roadway within the planning horizon and that the additional access(es) are reasonably necessary for circulation.

Access Alignments: When feasible, road approaches should be lined up with approaches on the opposite side of the roadway to minimize left turn conflicts.

Shared Access: The use of a shared access point for adjacent property owners is encouraged. Costs incurred by property owners in the creation of a shared access point may be eligible for SDC credits as a financial incentive to help maintain the capacity of the street. Jackson County Roads would determine the value for any credits.

Priority Level #3

Access Spacing: The County's access spacing standards vary depending on the functional classification and purpose of a given roadway. Tables 8-10 provide the recommended minimum

access spacing standards for all driveways and private roads on the applicable facilities. These standards apply to new development or redevelopment. Existing accesses are allowed to remain as long as the land use does not change and no safety problem is posed. As a result, access management implementation within an existing developed area is generally viewed as a long-term process in which the desired access spacing to a street evolves over time as new development or redevelopment occurs.

The recommended spacing may be reduced when approved by Jackson County Roads. Reductions in the recommended spacing will consider site specific issues including but not limited to: no other public road access is possible, adverse impacts to access management priorities levels #1 or #2, topographic constraints, and sight distance constraints.

Access Spacing Variances

Access spacing variances may be provided to parcels whose street frontage, topography, or location would otherwise preclude issuance of a construction permit and would either have no reasonable access or cannot obtain reasonable alternate access to the public road system. The variance can carry a condition that the access may be closed at such time that reasonable access becomes available to a local public street. The approval condition might also require a given land owner to work in cooperation with adjacent land owners to provide either joint access points, front and rear cross-over easements, or a rear access upon future redevelopment.

The requirements for obtaining a deviation from ODOT's minimum spacing standards are documented in OAR 734-051-3050. For streets under the County's jurisdiction, the County may reduce the access spacing standards at the discretion of the Department Director if the following conditions exist:

- Joint access driveways and cross access easements are provided in accordance with the standards;
- The site plan incorporates a unified access and circulation system in accordance with the standards;
- The property owner enters into a written agreement with the County that pre-existing connections on the site will be closed and eliminated after construction of each side of the joint use driveway; and/or,
- The proposed access plan for redevelopment properties moves in the direction of the spacing standards.

The Department Director may modify or waive the access spacing standards for streets under the County's jurisdiction where the physical site characteristics or layout of abutting properties would make development of a unified or shared access and circulation system impractical, subject to the following considerations:

- Unless modified, application of the access standard will result in the degradation of operational and safety integrity of the transportation system.

- The granting of the variance shall meet the purpose and intent of these standards and shall not be considered until every feasible option for meeting access standards is explored.
- Applicants for variance from these standards must provide proof of unique or special conditions that make strict application of the standards impractical. Applicants shall include proof that:
 - Indirect or restricted access cannot be obtained;
 - No engineering or construction solutions can be applied to mitigate the condition; and,
 - No alternative access is available from a road with a lower functional classification than the primary roadway.
- No variance shall be granted where such hardship is self-created.

Access Management Measures

From an operational perspective, access management measures limit the number of redundant access points along roadways. This enhances roadway capacity and benefits circulation. Enforcement of the access spacing standards should be complemented with provision of alternative access points. Purchasing right-of-way and closing driveways without a parallel road system and/or other local access could seriously affect the viability of the impacted properties. Thus, if an access management approach is taken, alternative access should be developed to avoid “land-locking” a given property.

As part of every land use action, the County should evaluate the potential need for conditioning a given development proposal with the following items in order to maintain and/or improve traffic operations and safety along the arterial and collector roadways.

- Provision of crossover easements on all compatible parcels (considering topography, access, and land use) to facilitate future access between adjoining parcels.
- Right-of-way dedications to facilitate the future planned roadway system in the vicinity of proposed developments.
- Half-street improvements (sidewalks, curb and gutter, bike lanes/paths, and/or travel lanes) along site frontages that do not have full build-out improvements in place at the time of development.

Exhibit 4 illustrates the application of cross-over easements and conditional accesses over time to achieve access management objectives. The individual steps are described in Table 11. As illustrated in the exhibit and supporting table, by using these guidelines, all driveways can eventually move in the overall direction of the access spacing standards as development and redevelopment occur along a given street.

Exhibit 4: Proposed Access Management Strategy

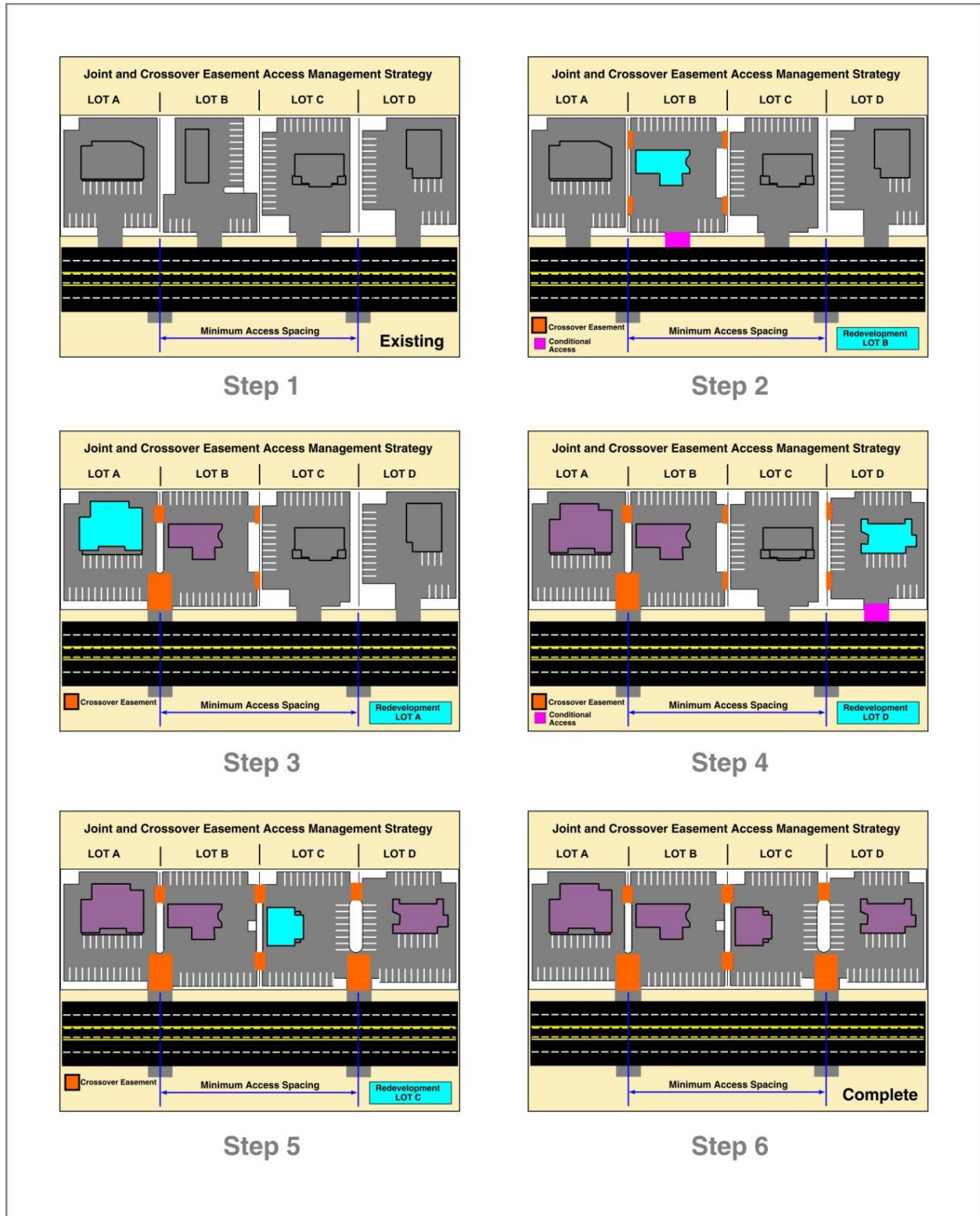


Table 11: Example of Crossover Easement/Indenture/Consolidation

Step	Process
1	EXISTING – Currently Lots A, B, C, and D have site-access driveways that neither meet the access spacing criteria of 500 feet nor align with driveways or access points on the opposite side of the highway. Under these conditions motorists are into situations of potential conflict (conflicting left turns) with opposing traffic. Additionally, the number of side-street (or site-access driveway) intersections decreases the operation and safety of the highway
2	REDEVELOPMENT OF LOT B – At the time that Lot B redevelops, the County would review the proposed site plan and make recommendations to ensure that the site could promote future crossover or consolidated access. Next, the County would issue conditions for the development to provide crossover easements with Lots A and C, and would grant a conditional access to the lot. After evaluating the land use action, ODOT/County would determine that LOT B does not have either alternative access, nor can an access point be aligned with an opposing access point, nor can the available lot frontage provide an access point that meets the access spacing criteria set forth for segment of highway.
3	REDEVELOPMENT OF LOT A – At the time Lot A redevelops, the County/ODOT would undertake the same review process as with the redevelopment of LOT B (see Step 2); however, under this scenario ODOT and the County would use the previously obtained cross-over easement at Lot B consolidate the access points of Lots A and B. ODOT/County would then relocate the conditional access of Lot B to align with the opposing access point and provide an efficient access to both Lots A and B. The consolidation of site-access driveways for Lots A and B will not only reduce the number of driveways accessing the highway, but will also eliminate the conflicting left-turn movements the highway by the alignment with the opposing access point.
4	REDEVELOPMENT OF LOT D – The redevelopment of Lot D will be handled in same manner as the redevelopment of Lot B (see Step 2)
5	REDEVELOPMENT OF LOT C – The redevelopment of Lot C will be reviewed once again to ensure that the site will accommodate crossover and/or consolidated access. Using the crossover agreements with Lots B and D, Lot C would share a consolidated access point with Lot D and will also have alternative frontage access the shared site-access driveway of Lots A and B. By using the crossover agreement and conditional access process, the County and ODOT will be able to eliminate another access point and provide the alignment with the opposing access points.
6	COMPLETE – After Lots A, B, C, and D redevelop over time, the number of access points will be reduced and aligned, and the remaining access points will meet the access spacing standard.

Traffic Operations Standards

As stated in the TSP’s Goals and Policies section, the County is committed to providing a safe, convenient, and economical transportation system. The TSP includes performance standards that set a maximum volume-to-capacity (v/c) ratio of 0.85 outside the MPO area and a v/c ratio of 0.95 inside the MPO for all County-maintained intersections during a weekday peak hour. Traffic operations standards balance the need for convenient and safe operations for all transportation modes against the need to efficiently use public investment in the transportation system. Performance standards also provide a baseline to assess the need for future transportation improvements to accommodate new development.

There are two standard ways of measuring facility performance: Level of Service (LOS) and the volume to capacity ratio (v/c). LOS measures delay, whereas v/c measures the amount of roadway capacity being used. The two measurements often correlate; intersections approaching capacity with a v/c ratio near 1.0 are likely to have a poor LOS (long delays). However, depending on how the operations are measured, a particular intersection may meet one performance measurement but not the other. The County has chosen to employ the v/c measurement standard for a couple of reasons. The v/c measurement is employed by ODOT. This will result in consistent traffic analysis between the County

and ODOT, simplifying coordination. The v/c ratio is also conceptually simpler, which makes application of the standards somewhat easier in a public hearing format.

At intersections where one or more approaches is maintained by a city or ODOT, the more restrictive of the County's or other agency's performance standards will be applied. For signalized intersections, the v/c ratio is based on overall intersection operations. For unsignalized intersections, the v/c ratio is based on the critical movement. All intersection operations analysis will follow the methodology described in the most recent edition of the Highway Capacity Manual (HCM).

The County has adopted a lower v/c ratio outside the MPO boundary so that transportation system standards will not encourage development to cause urban traffic patterns in rural areas. The higher v/c in the MPO will allow high capitalization of the public investment on urban facilities. A v/c of 0.95 in the MPO area will allow for a modest level of congestion at peak hours within the MPO area. While acceptance of modest congestion may inconvenience some motorists, this inconvenience can actually encourage an efficient transportation system. For example, some congestion encourages the use of public transportation and flexible work schedules, maximizing the use of public transportation investments over time.

Roadway Projects

Jackson County will undertake three main categories of roadway projects over the course of the planning horizon: Roadway Betterment and Maintenance Projects, Roadway Planning Projects, and Roadway Improvements Projects. Roadway Betterment and Maintenance Projects are local in scale and usually make improvements that are not detectable on a systemic level at project completion. Roadway Planning Projects address system needs or system goals that require detailed and specific studies that are too extensive for inclusion in the initial system plan. Corollaries to Planning Projects are Long-term potential corridor designations. These corridors are identified through a transportation planning process that anticipates the corridor will provide critical long-term connectivity, but for which construction projects are not anticipated to be necessary within the planning horizon. Roadway Improvement Projects are systemic in scale and usually provide noticeable systemic improvements at project completion. Other project types included with the roadway projects are freight route projects, bridge and culvert projects, intersection projects, and safety projects.

Roadway Betterment and Maintenance Projects

Since individual Roadway Betterment and Maintenance Projects are too small to have significant measurable impacts on the system, these projects are not detailed in the TSP project list. However, Roadway Betterment and Maintenance Projects constitute a significant portion of County expenditures on the transportation system. These projects are critical to the overall health of the system.

Generally, Roadway Betterment and Maintenance Projects do not significantly alter the horizontal alignment, vertical alignment, or the cross section of a roadbed for a large segment of the road. The following are examples (not an all-inclusive list) of Roadway Betterment and Maintenance Projects that are too small in scale and/or localized to be included as Roadway Improvement Projects in the TSP.

- Chip sealing and pavement overlays.
- Channelization projects and minor realignment projects, as defined in OAR 660-12-0065, at unsignalized intersections.
- Bridge replacements where the existing bridge is consistent with the functional classification design standards for the applicable road segment; minor localized road realignments that would normally be associated with this type of bridge replacement.
- Accessory Transportation Improvements, as defined in OAR 660-12-0065.

While Roadway Betterment and Maintenance Projects may be too small for inclusion in the TSP, transportation projects, particularly those on resource zoned lands, should be coordinated with Jackson County Development Services to determine whether any land use review is required for impacts to farm and forest land.

Planning Projects and Long-term Potential Corridors

The Planning Projects address system needs or system goals that require detailed and specific studies that are too extensive for the TSP. Planning projects are one of the most challenging types of transportation projects because the outcome is uncertain. For example, the planning projects identified in this plan are presented in the roadway system section, but the outcome of a planning project may result in a solution that is not a roadway solution at all. Some planning projects are very costly and never make it through the final adoption process. This high degree of uncertainty limits available funding sources. There are some funding opportunities for planning projects in Oregon because of the prominence of statewide planning and the coordination between DLCD and ODOT.

While opportunities for external funding for planning projects may be limited, successfully competing for State and Federal capital improvement funding is often dependent on submitting projects that have completed the local planning process. If the local planning process has developed a broad base of community support, then the project will be even more competitive in Federal and State applications. Thus, the long-term outlook for the County's transportation system will depend on the effective management and allocation of transportation planning resources to complete the planning projects, so that capital construction project funding can be procured.

This section identifies the transportation planning projects that are recommended over the next twenty years. This section also includes Long-Term Potential (LTP) corridors. These are corridors that have been identified through a TSP process and have been determined to be a critical corridor for a potential future transportation connection.

1. OR 62 Bypass

The OR 62 Bypass will provide a new four-lane access-controlled expressway from I-5 to OR 62 north of White City. The need for this facility has been identified in multiple previous planning documents to address congestion around the southern terminus of OR. Most of the planning for the new expressway is now complete; however, construction began in 2016. Also, only cursory planning work has been done

on the northernmost extension of the expressway from Corey Road to Dutton Road (Unit 3). A review and analysis of land use impacts near the expressway should also be conducted to identify land-use protection measures that may be necessary to assure available capacity for through traffic is not consumed by new local traffic. A project is included below for the segment of the OR 62 Bypass from Corey Road to Dutton Road (Unit 3).

2. Jacksonville Bypass Refinement Plan

The City of Jacksonville has identified the long-term need for an arterial connector around the north and west sides of the city to reduce through traffic – particularly truck traffic – through the City’s historic downtown area. This refinement plan would need to carefully balance Statewide Planning Goals 3, 5 and 12. Any effective solution that would reduce truck traffic in downtown Jacksonville is likely to be very expensive. If a road project were developed from the planning project and significant federal funds were going to be spent on its construction, then a draft EIS would need to be completed. The plan should include an access management plan to control access to the facility, and to preserve rural lands adjacent to the connector in any areas outside the Jacksonville UGB. If the outcome of the planning project does not result in a construction project, it should result in a long-term potential corridor designation. See Policies 4.3.3-C and 4.2.1-M in Section 4.

3. OR 62 Refinement Plan

Completion of the OR 62 Bypass is expected to have a significant impact on traffic volumes along the old segment of OR 62 from Medford to White City. This refinement plan would identify potential improvements to OR 62, including access management, streetscape enhancements, pedestrian crossing treatments, sidewalk and bicycle facility improvements, and transit needs. The plan should also consider local traffic needs as well as the potential to reduce the number of travel lanes. A project is included below for the refinement plan. This plan should be jointly prepared by City of Medford and Jackson County.

4. South Stage Road Extension

The City of Medford has identified the long-term need for a connection of South Stage Road across the freeway to North Phoenix Road. From a connectivity standpoint, an arterial in this area would provide a well-spaced connection across I-5 and Bear Creek between the South Medford Interchange and the Fern Valley Interchange. The ongoing development in southeast Medford and northeast Phoenix is going to continually increase the need for an additional connection in this area. While construction of any facility is not expected to be necessary within the planning horizon, preservation and recognition of this connection is important now to protect what is likely to be a critical connection some time in the future. This corridor overlay is established pursuant to TSP Policy 4.2.1-M and a project is included below for the potential future extension.

Roadway Projects

The Roadway Improvement Projects are intended to address the transportation system needs identified during the TSP process. These projects provide improvements to existing roadways, new roadway

connections, and redesign intersections to address existing and future operations problems. Many of the projects are included in the draft 2015-2018 Statewide Transportation Improvement Program (STIP), draft 2015-2018 Metropolitan Transportation Improvement Program (MTIP), and/or the County's Capital Improvement Program (CIP).

Roadway Improvements

The roadway improvement projects developed for the Jackson County TSP are summarized in Table 13 and shown in Figure 13. These projects are intended to address existing and project future transportation system needs for motor vehicles as well as all other modes of transportation that depend on the roadway system for travel, such as freight vehicles, pedestrians, and bicyclists. The projects evaluated as part of the TSP update were combined with other projects identified in previous planning documents to provide a comprehensive list of roadway improvements for the Jackson County TSP. The roadway improvement projects include:

- Upgrading roadways in rural areas to provide two or more travel lanes and shoulders;
- Widening roadways in urban areas to provide two or more travel lanes, bike lanes, and sidewalks;
- Constructing new roadways in the rural and urban areas, and;
- Developing design plans for new roadways and refinement plans for existing roadways throughout the County.

Table 13 summarizes the roadway improvements projects included in the TSP update. The projects are organized into Financially Constrained (Tier 1), Unconstrained (Tier 2), and Unconstrained (Tier 3) projects. Projects in Incorporated Areas and Projects on ODOT Facilities are provided in subsequent sections of the TSP.

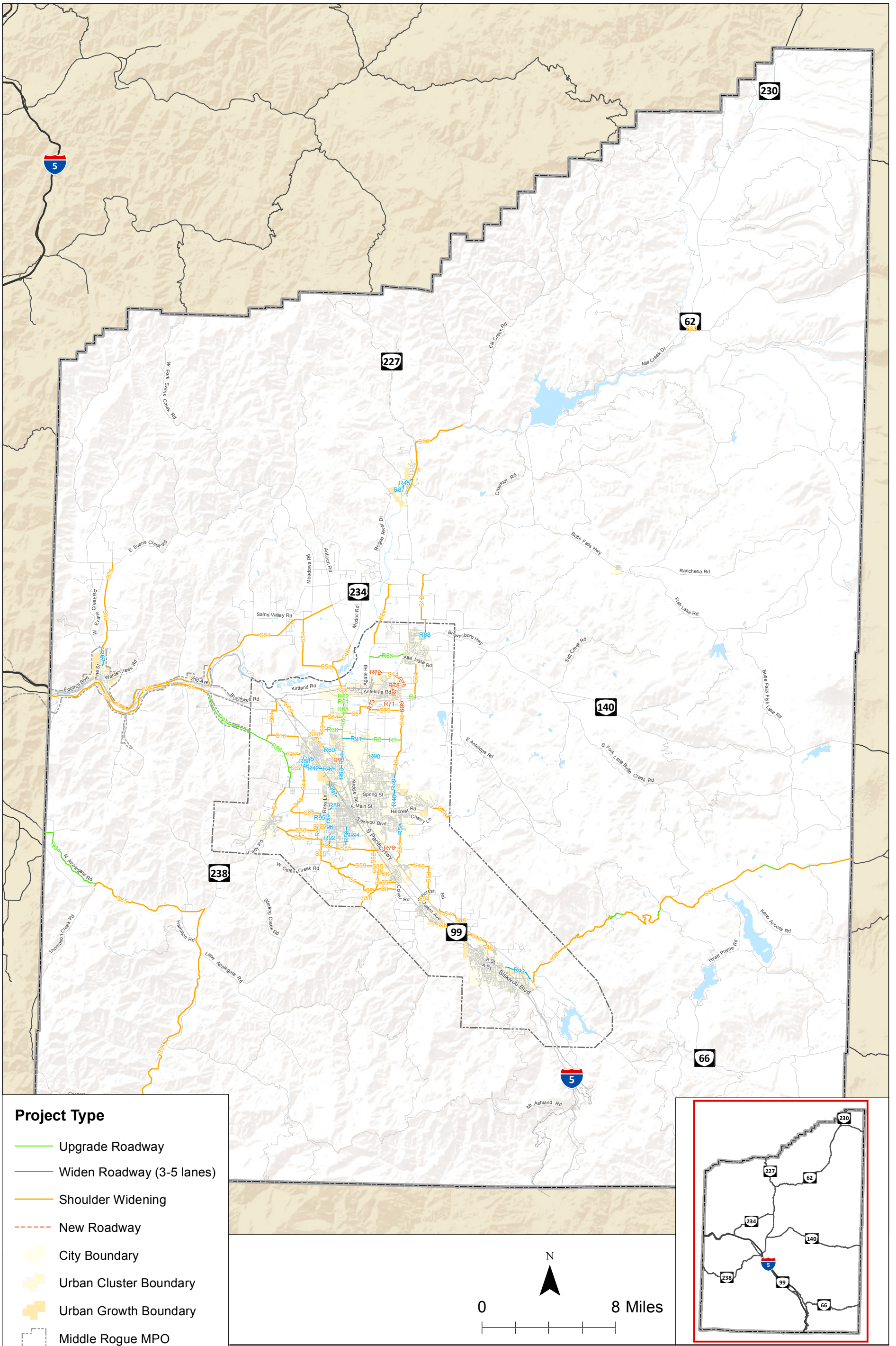
Table 12: Roadway Improvements Projects

Map ID	Location	Project Type	Project Description	Priority (Timeframe)	Cost (\$1,000)
R1	E Vilas Road from McLoughlin Drive to Foothill Road	Upgrade	Improve to 2-lane rural major collector standard	Tier 1 (Mid-term)	\$1,780
R2	E Vilas Road from east Medford City limits to McLouglin Drive	Upgrade	Improve to 2-lane rural major collector standard	Tier 1 (Long-term)	\$1,815
R3	Hull Road from Stewart Avenue to S Stage Road	Upgrade	Improve to 2-lane rural major collector standard	Tier 2	\$1,195
R4	Antelope Road from Kershaw Road to Bigham Brown Road	Upgrade	Improve to 2-lane rural major collector standard	Tier 2	\$430
R25	Old Stage Road from MPO limit to I-5	Upgrade	Improve to 2-lane rural major collector with 4-foot shoulders consistent with Old Stage Road Plan	Tier 1 (Long-term)	\$5,625
R26	Old Stage Road from Ross Lane to MPO limit	Upgrade	Improve to 2-lane rural major collector with 4-foot shoulders consistent with Old Stage Road Plan	Tier 1 (Long-term)	\$4,610
R34	North Applegate Road from OR 238 to County Line	Upgrade	Improve to 2-lane rural minor collector standard	Tier 3	\$8,430

R36	Wilson Road from Upton Road to Table Rock Road	Upgrade	Improve to 2-lane rural minor collector standard	Tier 1 (Long-term)	\$1,680
R42	Beall Lane from Front Street (OR 99) to Hanley Road	Widen	Widen to 3-lane urban major collector standard	Tier 3	\$3,660
R46	Hanley Road from W Pine Street to Beall lane	Widen	Widen to 3-lane urban minor arterial standard	Tier 3	\$1,410
R54	Table Rock Road from Bear Creek Greenway to Pine Street-Biddle Road	Widen	Widen to 3-lane urban minor arterial standard with sidewalks and bike lanes from Bear Creek Greenway to Airport Road and to 5-lane urban minor arterial standard from Airport Road to Biddle Road	Tier 1 (Near-term)	\$225 ¹
R59	Lozier Lane from Stewart Avenue to W Main Street	Widen	Widen to 2-lane urban minor collector standard	Tier 1 (Near-term)	\$345 ³
R60	Peninger Road from Pine Street to Expo Park	Widen	Widen to 2-lane urban minor collector standard	Tier 2	\$1,105
R61	Table Rock Road from Elmhurst Street to Mosquito Lane	Widen	Widen to 5-lane rural arterial standard	Tier 2	\$2,480
R62	Table Rock Road from Mosquito Lane to Antelope Road	Widen	Widen to 4-lane rural arterial standard	Tier 1 (Mid-term)	\$470
R65	Table Rock Road from Gregory Road to Elmhurst Street	Widen	Widen to 5-lane rural arterial standard	Tier 2	\$1,550
R66	Table Rock Road from north Medford City limits to Gregory Road	Widen	Widen to 5-lane rural arterial standard	Tier 2	\$4,635
R67	E Evans Creek Road from Rogue River City limits to Rogue River High School	Widen	Widen to 3-lane urban major collector standard	Tier 2	\$4,090
R68 ¹	Jacksonville Arterial Connector from North of City of Jacksonville to Pair-a-Dice Ranch Road	Refinement Plan	Refinement plan & draft EIS for rural arterial, state land use goals exception	Tier 3	\$50
R69	Foothill Road from Corey Road to Atlantic Avenue	New Roadway	New 2-lane rural major collector	Tier 1 (Near-term)	\$2,500
R70	E Stage Road from E Stage Road Terminus to N Phoenix Road	New Roadway	New 2-lane rural arterial over I-5	Tier 3	\$3,800
R71	Lakeview Drive from Lakeview Drive terminus to Merry Lane	New Roadway	New 2-lane rural minor collector	Tier 3	\$3,400
R72	West Dutton Road from Terminus to Agate Road	New Roadway	New 3-lane urban industrial collector	Tier 3	\$3,190
R73	Crater Lake Avenue from Corey Road to Gramercy Drive	New Roadway	New 2-lane urban minor collector	Tier 1 (Long-term)	\$0 ²
R75	Atlantic Avenue from Cole Drive to East Dutton Road	New Roadway	New 3-lane urban major collector	Tier 2	\$1,295
R76	Airport Road from Table Rock Road to Federal Way	New Roadway	New 2-lane urban minor collector	Tier 2	\$1,340
R77	Wilson Way from Wilson Way terminus to Avenue G	New Roadway	New 2-lane urban minor collector	Tier 3	\$175
R78	Wilson Way from Avenue G to Falcon Street	New Roadway	New 2-lane urban minor collector	Tier 3	\$635
R86	Nick Young Road from Agate Road to Eagle Point City limits	Upgrade	Improve to 2-lane rural major collector standard	Tier 2	\$3,575
S1	Old Stage Road from Jacksonville City limits to Ross Lane	Shoulders	Install 4-foot shoulders consistent with the Old Stage Road Corridor Plan	Tier 2	\$1,470
S4	Coleman Creek Road from Pioneer Road to Houston Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$1,360
S5	Gregory Road from Table Rock Road to Agate Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$2,805

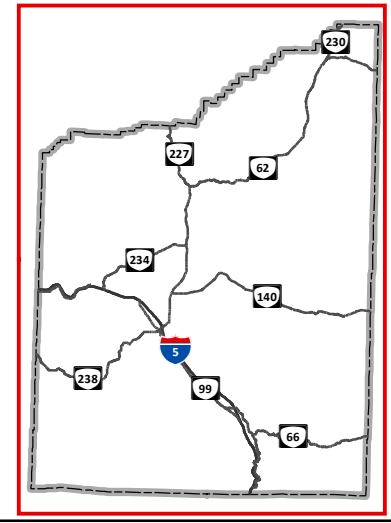
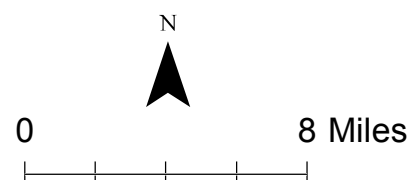
S6	Old Stage Road from I-5 to roadway terminus	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$3,110
S7	Pioneer Road from Coleman Creek Road to Dark Hollow Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$825
S8	Pioneer Road from Colver Road to Coleman Creek Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$1,415
S9	Pioneer Road from Dark Hollow Road to Griffin Creek Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$5,075
S10	Scenic Avenue from Old Stage Road to Grant Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$3,470
S11	West Valley View Road from Suncrest to S Valley View Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 2	\$2,305
S12	Reese Creek Road from Butte Falls Highway to Eagle Point City limits	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$4,520
S13	Eagle Mill Road from S Valley View Road to Oak Street	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 2	\$2,290
S14	East Dutton Road from OR 62 to Atlantic Avenue Extension	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$1,880
S15	Fern Valley Road from Phoenix City Limits to Payne Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$1,485
S16	Modoc Road from Table Rock Road to Antioch Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$2,295
S18	Peninger Road from Expo Park to Upton Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 2	\$1,140
S19	Stewart Avenue from Hull Road to Oak Grove Road	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 2	\$190
S20	Stewart Avenue from Oak Grove Road to west Medford UGB	Shoulders	Install 5-foot shoulders consistent with rural minor collector standards	Tier 3	\$100
S22	Agate Road from Linn Road to OR 234	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$5,255
S23	Arnold Lane from S Stage Road to Bellinger Lane	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$800
S24	Gibbon Road from Upton Road to Table Rock Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$2,000
S25	Griffin Creek Road from S Stage Road to Pioneer Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$1,150
S26	Houston Road from Phoenix City limits to Coleman Creek Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$805
S27	Taylor Road from Old Stage Road to Grant Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$1,475
S31	Applegate Road from OR 238 to Carberry Creek Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$24,420
S32	Beall Lane from Hanley Road to Old Stage Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$955
S33	Bellinger Lane from Hull Road to S Stage Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$2,330
S34	Bigham Brown Road from Antelope Road to Alta Vista Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$2,665
S35	Carpenter Hill Road from Coleman Creek Road to Voorhies Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$320
S36	Coleman Creek Road from Houston Road to Carpenter Hill Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$385

S37	Dead Indian Memorial Road from MPO limits to County line	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$30,975
S38	E Evans Creek Road from Minthorne Road to Queens Branch Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$1,475
S39	E Evans Creek Road from Rogue River High School to Minthorne Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$4,390
S42	Foothill Road from Coker Butte Road to Corey Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 1 (Mid-term)	\$4,095
S43	Foothill Road from Delta Waters to Coker Butte Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 1 (Mid-term)	\$1,220
S44	Hanley Road from Beall Lane to Rossanley Drive (OR 238)	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$1,375
S46	Oak Street from Eagle Mill Road to Nevada Street	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$480
S49	S Valley View Road from I-5 to West Valley View Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$530
S50	Table Rock Road from Kirtland Road to Wheeler Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$3,915
S51	Table Rock Road from Wheeler Road to OR 234	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$2,080
S52	Voorhies Road from Carpenter Hill Road to S Stage Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$1,180
S53	Payne Road from Fern Valley Road to Suncrest Road	Shoulders	Install 7-foot shoulders consistent with rural arterial standards	Tier 3	\$3,130
S54	S Stage Road from OR 99 to Jacksonville	Shoulders	Install 7-foot shoulders consistent with rural arterial standards	Tier 3	\$7,050
S55	Kings Highway from S Stage Road to Medford UGB	Shoulders	Install 7-foot shoulders consistent with rural arterial standards	Tier 2	\$375
S56	N Phoenix Road from Phoenix City limits to Medford City Limits	Shoulders	Install 7-foot shoulders consistent with rural arterial standards	Tier 2	\$1,865
S57	Camp Baker Road from Coleman Creek Road to Colver Road	Shoulders	Install 4-foot shoulders consistent with rural local C standards	Tier 3	\$1,740
S58	Coleman Creek Road from MPO limits to Pioneer Road	Shoulders	Install 4-foot shoulders consistent with rural local C standards	Tier 3	\$2,875
S59	Carpenter Hill Road from Voorhies Road to Pioneer Road	Shoulders	Install 4-foot shoulders consistent with rural local C standards	Tier 3	\$3,285
S60	Hillcrest Road from Medford City limits to MPO limits	Shoulders	Install 4-foot shoulders consistent with rural local C standards	Tier 3	\$2,485
S61	Tolo Road from Scenic Avenue to Blackwell Road	Shoulders	Install 4-foot shoulders consistent with rural local C standards	Tier 3	\$3,450
S63	Blackwell Road from Kirtland Road to Seven Oaks Interchange	Shoulders	Widen shoulders consistent with ODOT standards	Tier 3	\$1,490
S78	N River Road from Rogue River City limits to Twin Bridges Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$2,995
S90	Dead Indian Memorial Road from OR 66 to MPO Limits	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 3	\$5,195
S91	Upton Road from Old Upton Road to Gibbon Road	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$2,385
S92	N River Road from Twin Bridges Road to OR 99	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	Tier 2	\$3,890
Total Tier 1 Project Cost					\$24,365
Total Tier 2 Project Cost					\$80,520
Total Tier 3 Project Cost					\$132,830
Total Cost					\$237,715



Project Type

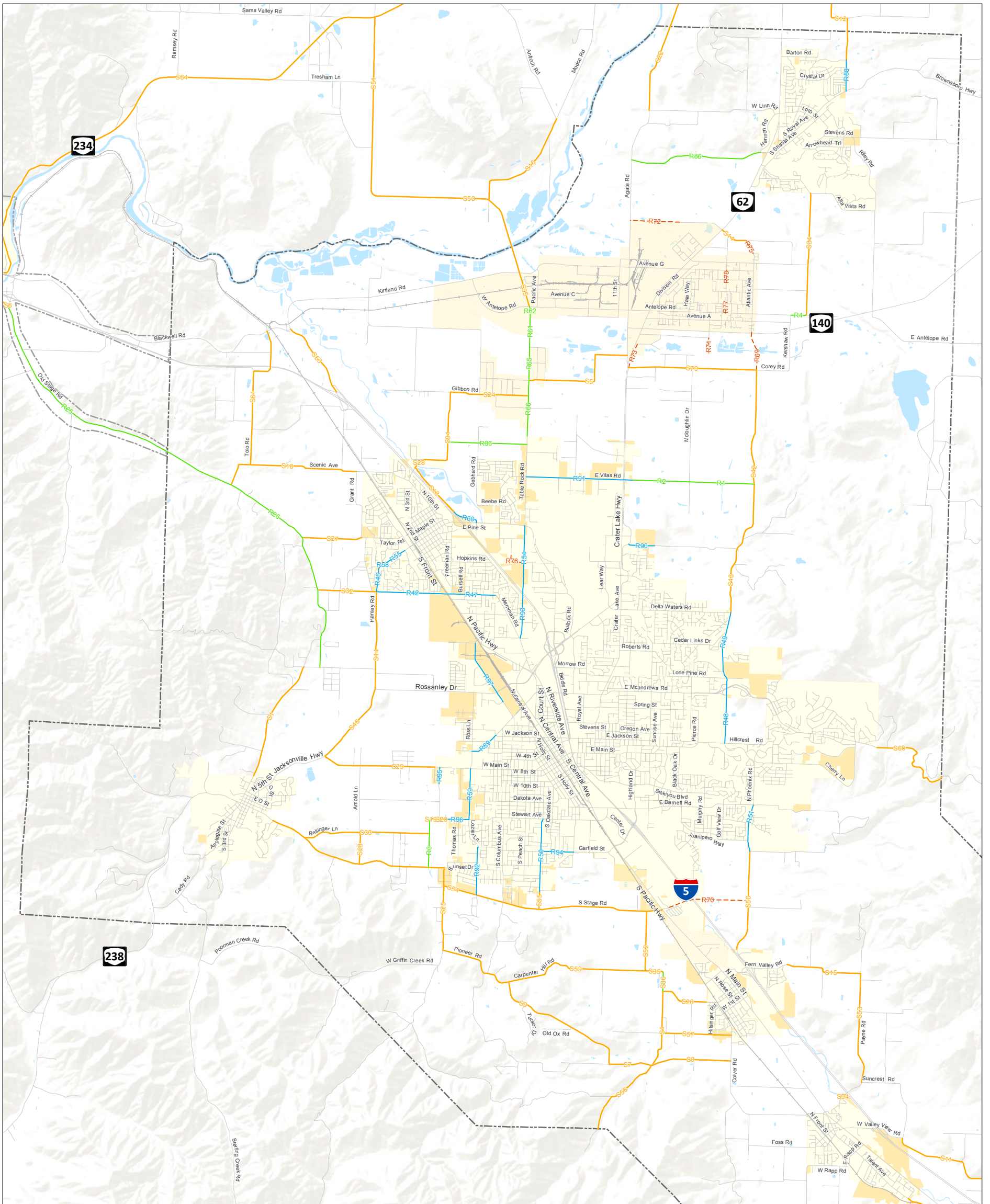
- Upgrade Roadway
- Widen Roadway (3-5 lanes)
- Shoulder Widening
- - - New Roadway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Roadway Projects
Jackson County, OR**

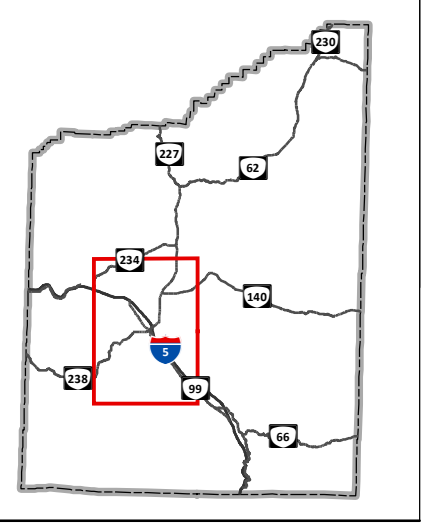
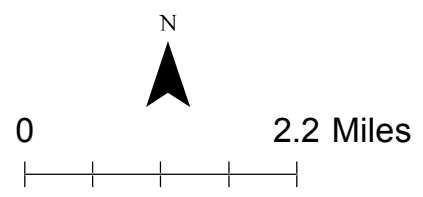
**Figure
13A**

H:\proj\18018 - Jackson County TSP Update\13_Roadway Projects.mxd - mball - 4:38 PM 5/10/2016



Project Type

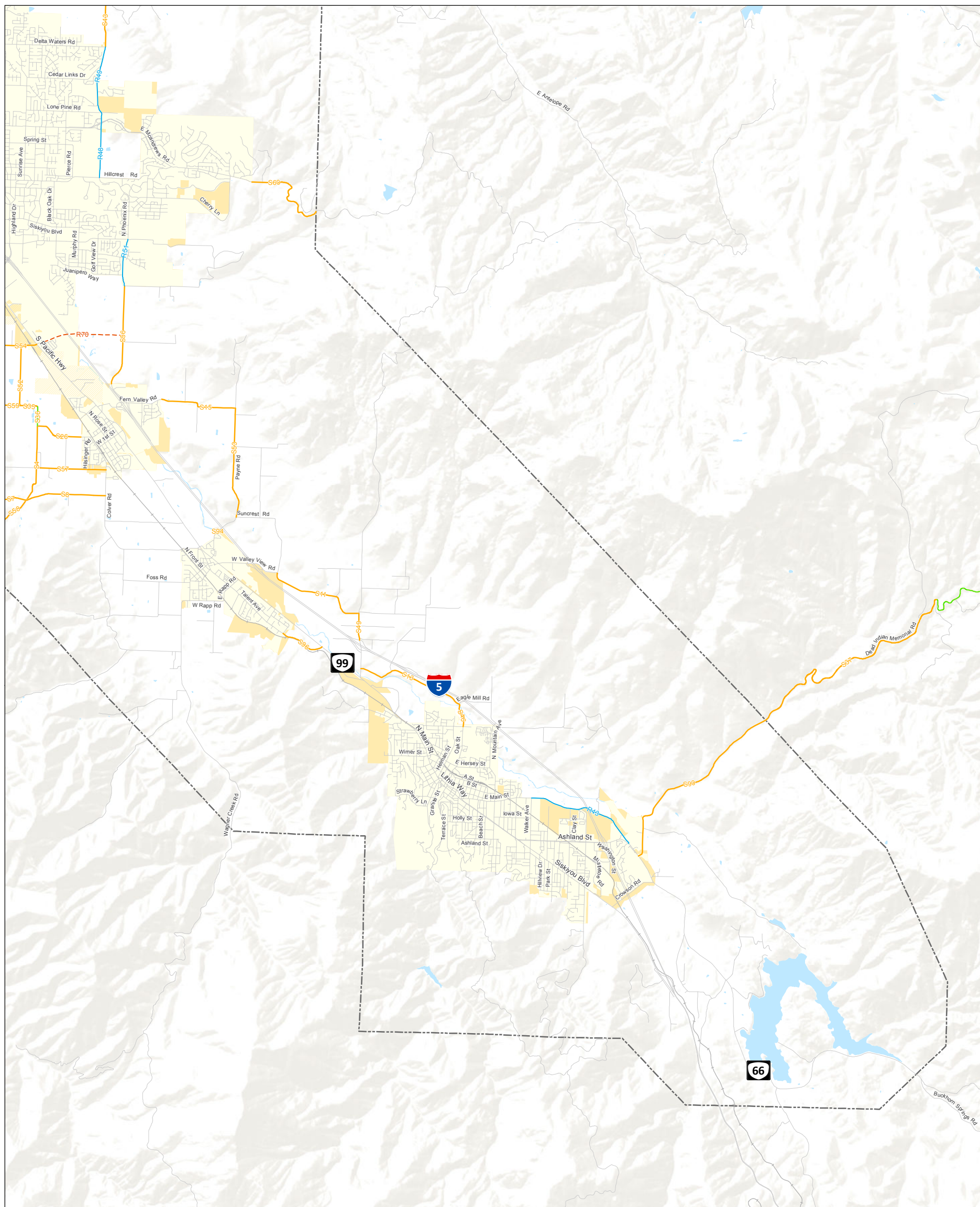
- Upgrade Roadway
- Widen Roadway (3-5 lanes)
- Shoulder Widening
- - - New Roadway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Roadway Projects
Jackson County, OR**

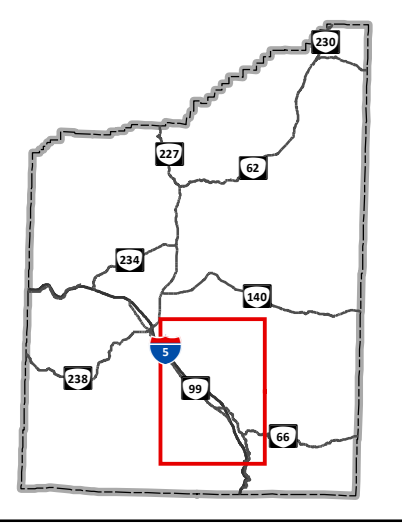
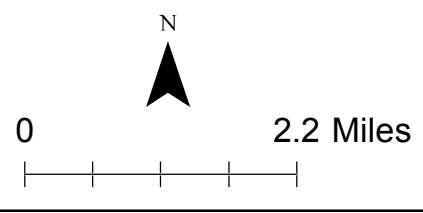
Figure
13B

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Project Type

- Upgrade Roadway
- Widen Roadway (3-5 lanes)
- Shoulder Widening
- New Roadway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Roadway Projects
Jackson County, OR**

**Figure
13C**

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Freight Route Improvements

The County’s freight routes are shown in Figure 14 along with ODOT’s freight routes and the National Highway System’s freight routes and intermodal connections. The County’s freight routes were selected based on their use by the freight community to access various land uses within the County and their ability to augment and support the ODOT and NHS freight network. The designation of these routes will ensure that the County plans for and provides alternative routes that minimize out-of-direction travel and regulatory restrictions for efficient freight movement. The designation will not impact the physical or operational characteristics of the roadway; however, the County’s Roadway Design Standards will need to be updated following adoption of the TSP to include new standards for facilities with the freight route designation to ensure that the roadways are built to support freight traffic.

The freight improvement projects developed for the Jackson County TSP are summarized in Table 14 and shown in Figure 15. These projects are intended to address the transportation system needs identified in the RVMPO Freight Study. The freight improvements projects include:

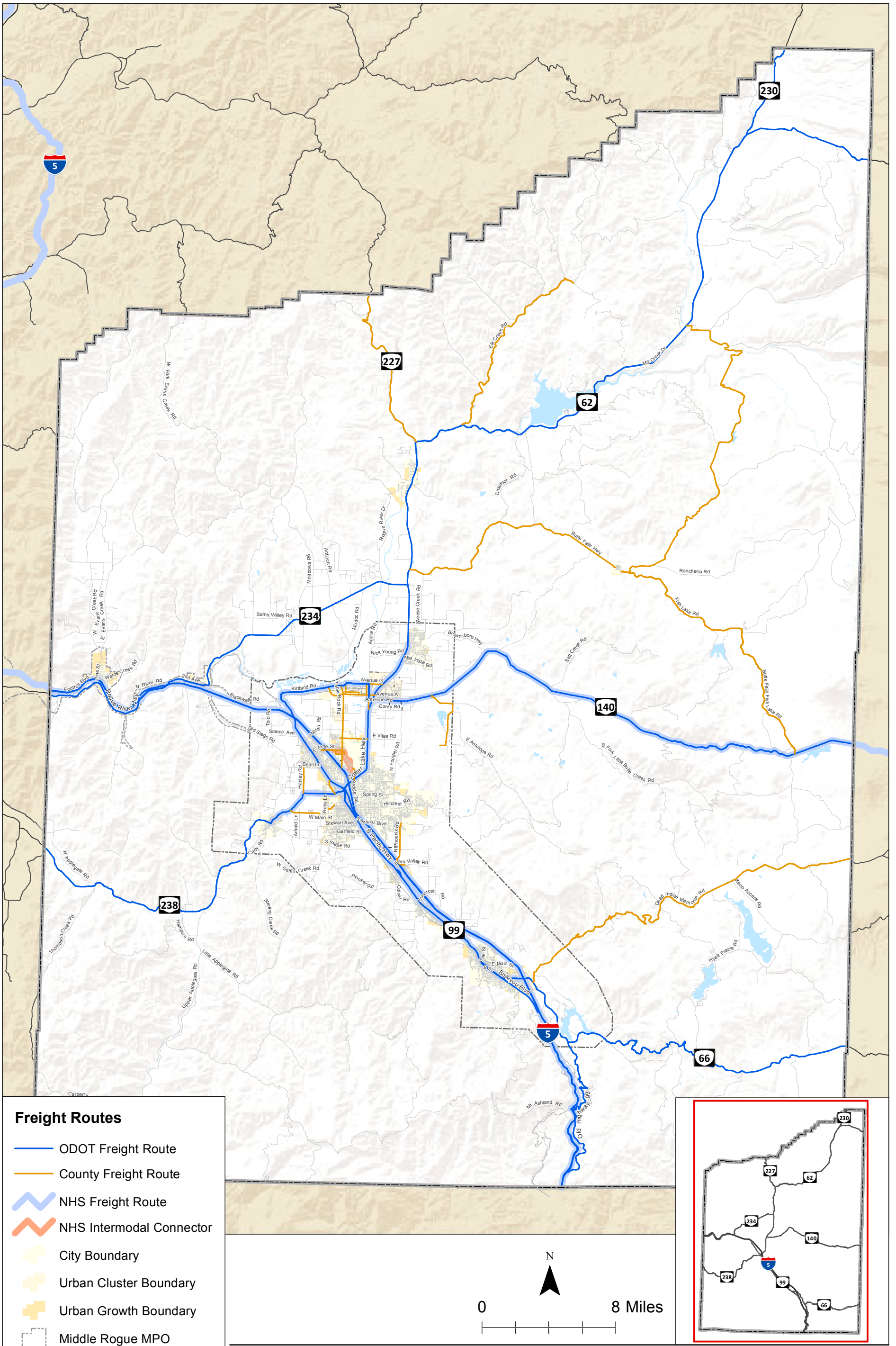
- Intersection improvements at specific locations, and;
- Segment improvements along specific roadways

Table 14 summarizes the freight improvements projects included in the TSP update. As shown, all of the freight improvement projects are addressed by roadway and intersection improvement projects and therefore, no priorities or projects costs area shown.

Table 13: Freight Route Projects

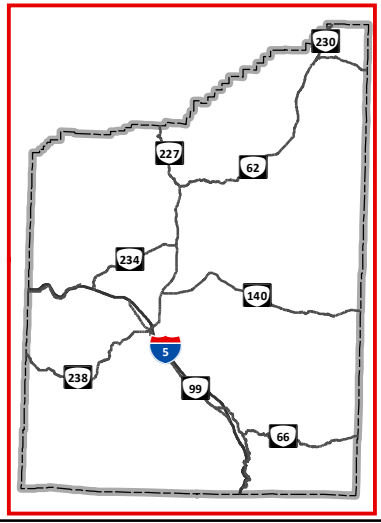
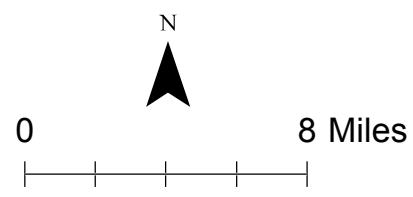
Map ID	Location	Project Type	Project Description	Priority (Timeframe)	Cost (\$1,000)
F4	Table Rock Road/Vilas Road	Intersection Improvement	Improve intersection to accommodate heavy vehicles - See Intersection Project I3	N/A	\$0 ¹
F6	E Vilas Road from Haul Road to Crater Lake Avenue	Segment Improvement	Improve segment to accommodate heavy vehicles - See Roadway Improvement Project R91	N/A	\$0 ¹
F8	Table Rock Road from Wilson Road to Antelope Road	Segment Improvement	Improve segment to accommodate heavy vehicles - See Roadway Improvement Projects R61, R62, R65, and R66	N/A	\$0 ¹
F10	Airway Drive/E Vilas Road	Intersection Improvement	Install a traffic signal when warranted	Tier 3	\$250
F13	Table Rock/Airport Road	Intersection Improvement	Improve intersection to accommodate heavy vehicles - See Roadway Improvement Project R54 and R76	N/A	\$0 ¹
F15	Table Rock Road from Bear Creek Greenway to Pine Street-Biddle Road	Segment Improvement	Improve segment to accommodate heavy vehicles - See Roadway Improvement Project R54	N/A	\$0 ¹
Total Tier 1 Project Cost					\$0
Total Tier 2 Project Cost					\$0
Total Tier 3 Project Cost					\$250
Total Cost					\$250

1. The cost associated with this improvement is included in another project – See project description for additional information.



Freight Routes

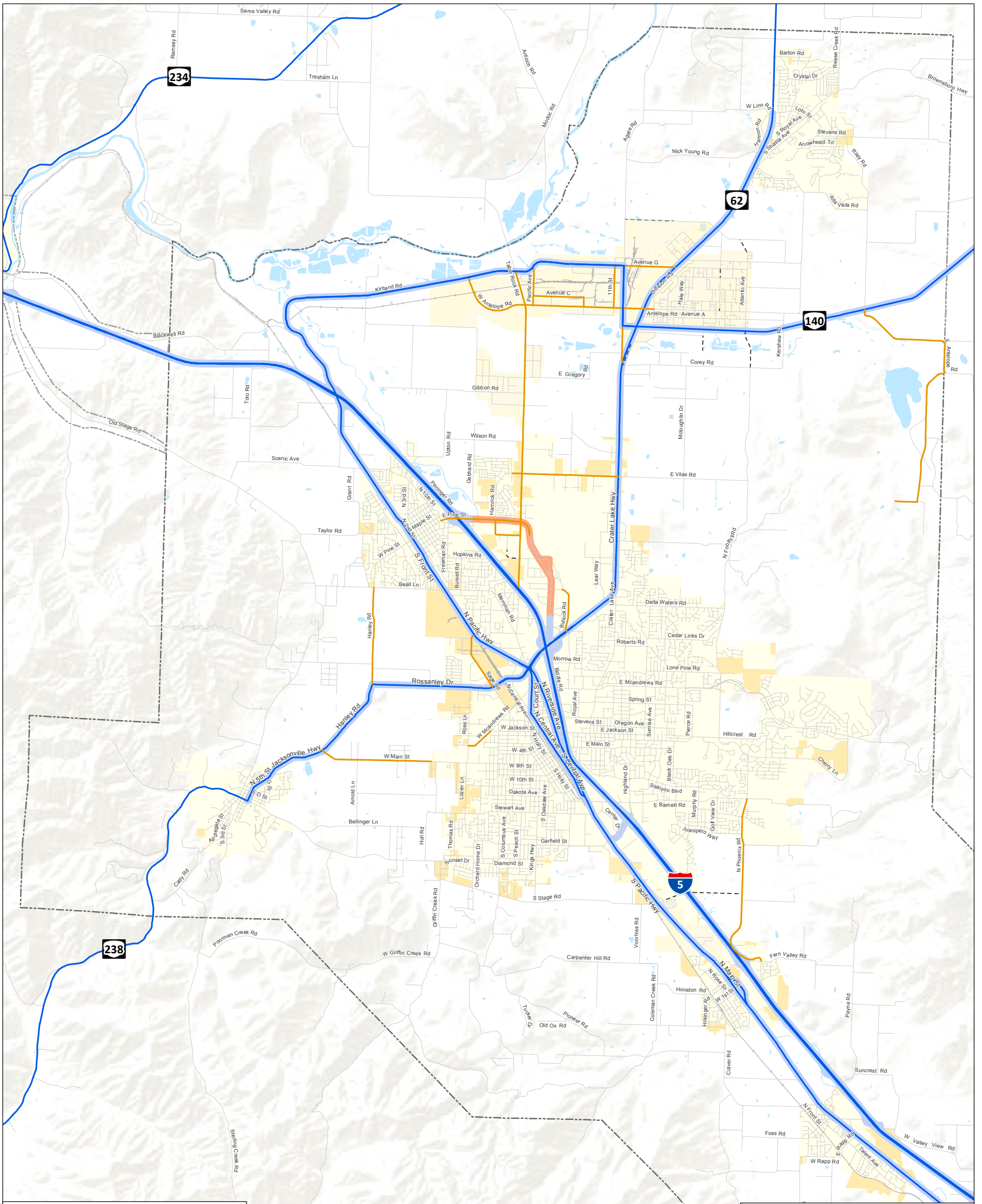
- ODOT Freight Route
- County Freight Route
- NHS Freight Route
- NHS Intermodal Connector
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Freight Route Designations
Jackson County, OR**

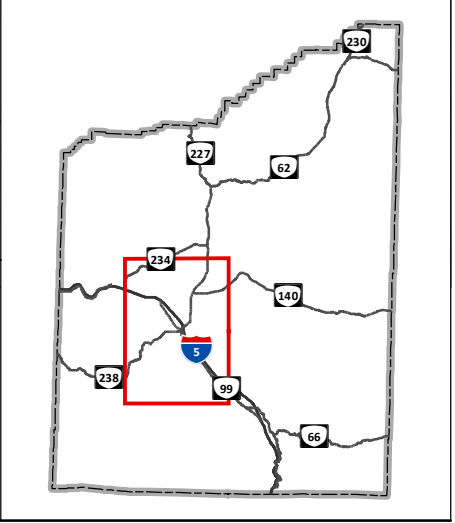
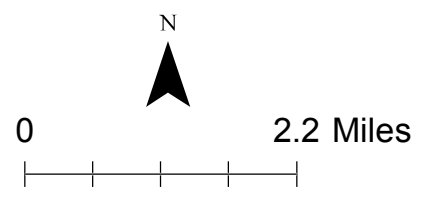
**Figure
14A**

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Freight Routes

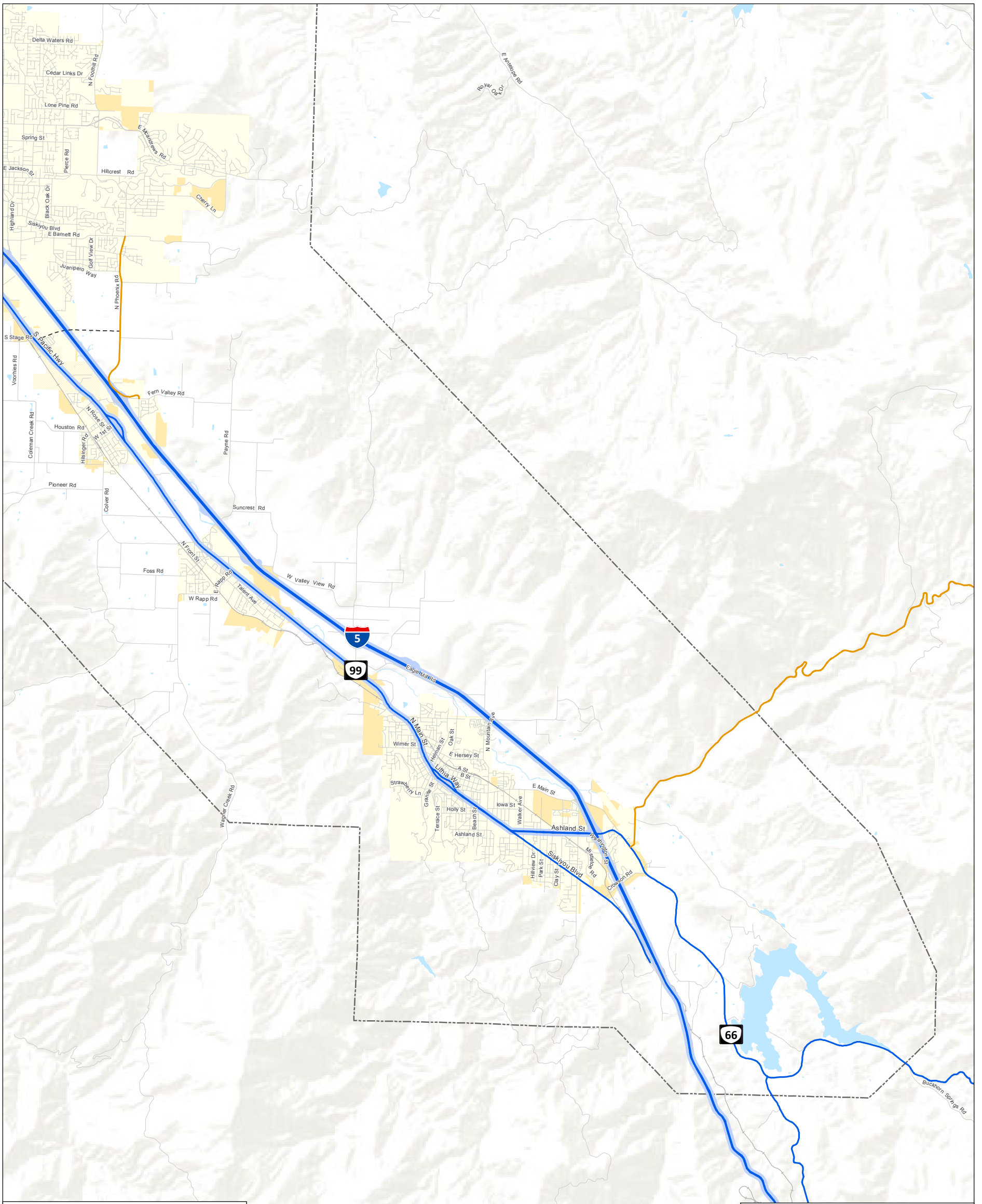
- ODOT Freight Route
- County Freight Route
- NHS Freight Route
- NHS Intermodal Connector
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Freight Route Designations
Jackson County, OR**

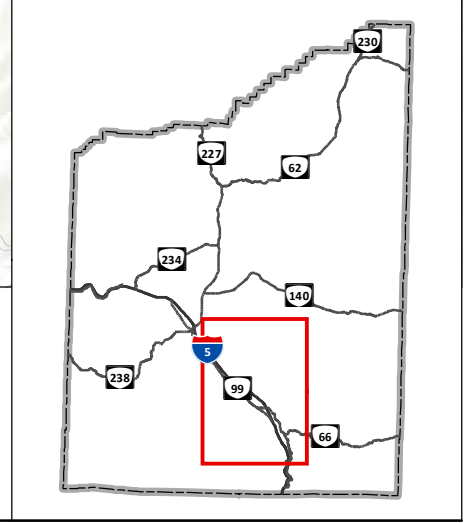
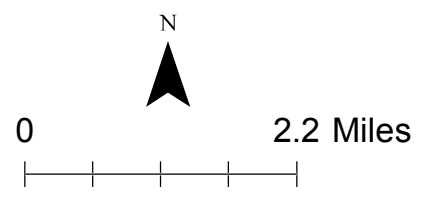
**Figure
14B**

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Freight Routes

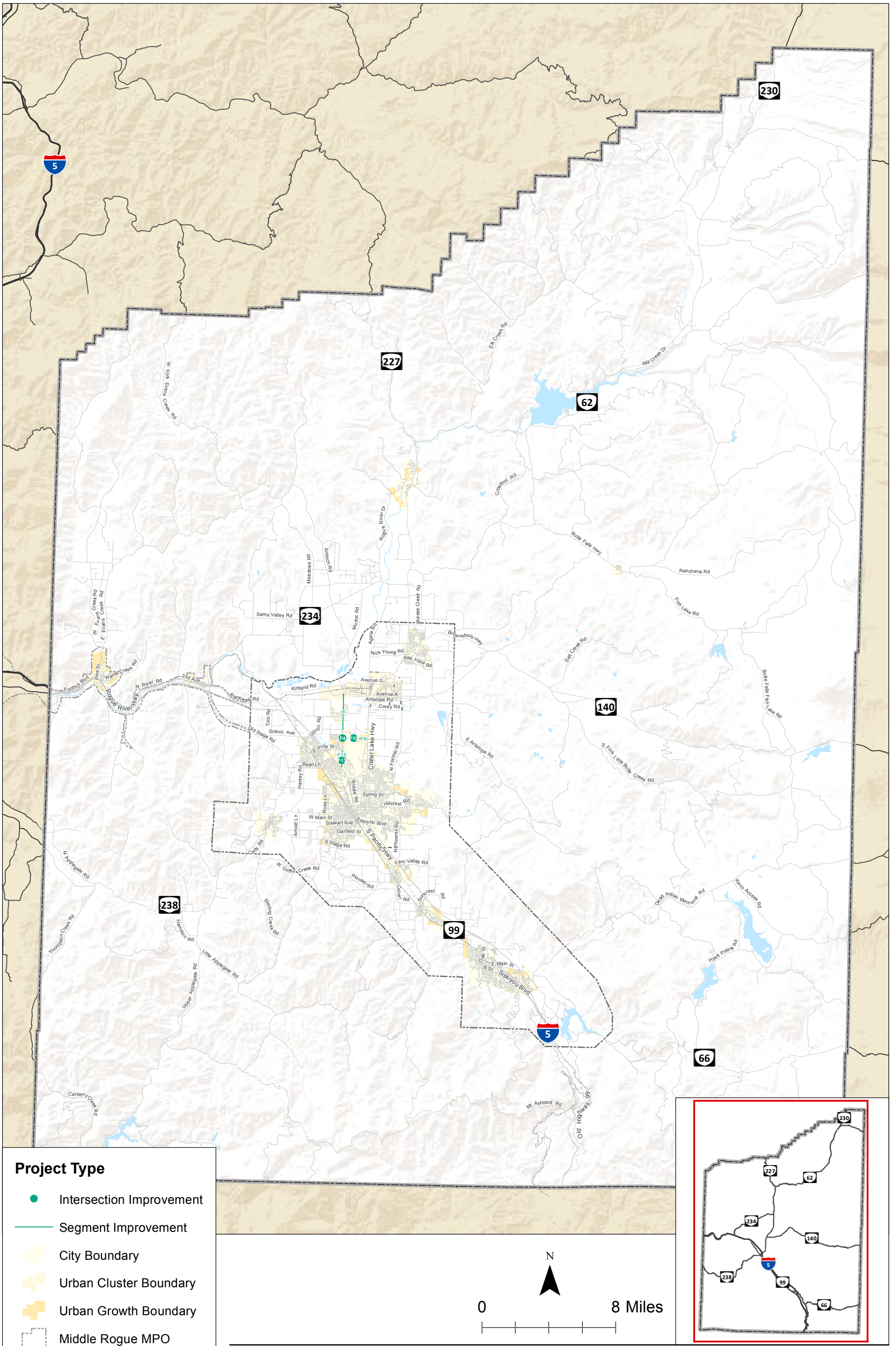
- ODOT Freight Route
- County Freight Route
- NHS Freight Route
- NHS Intermodal Connector
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



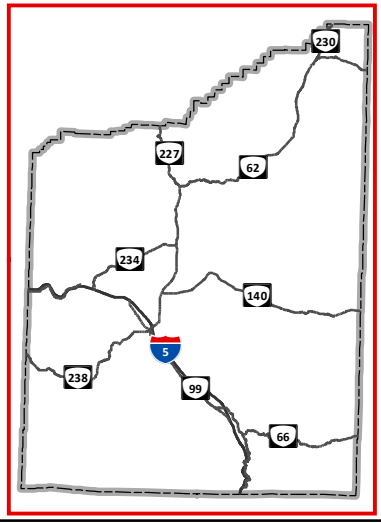
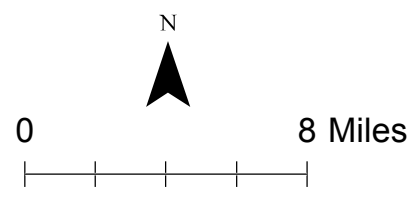
**Freight Route Designations
Jackson County, OR**

**Figure
14C**

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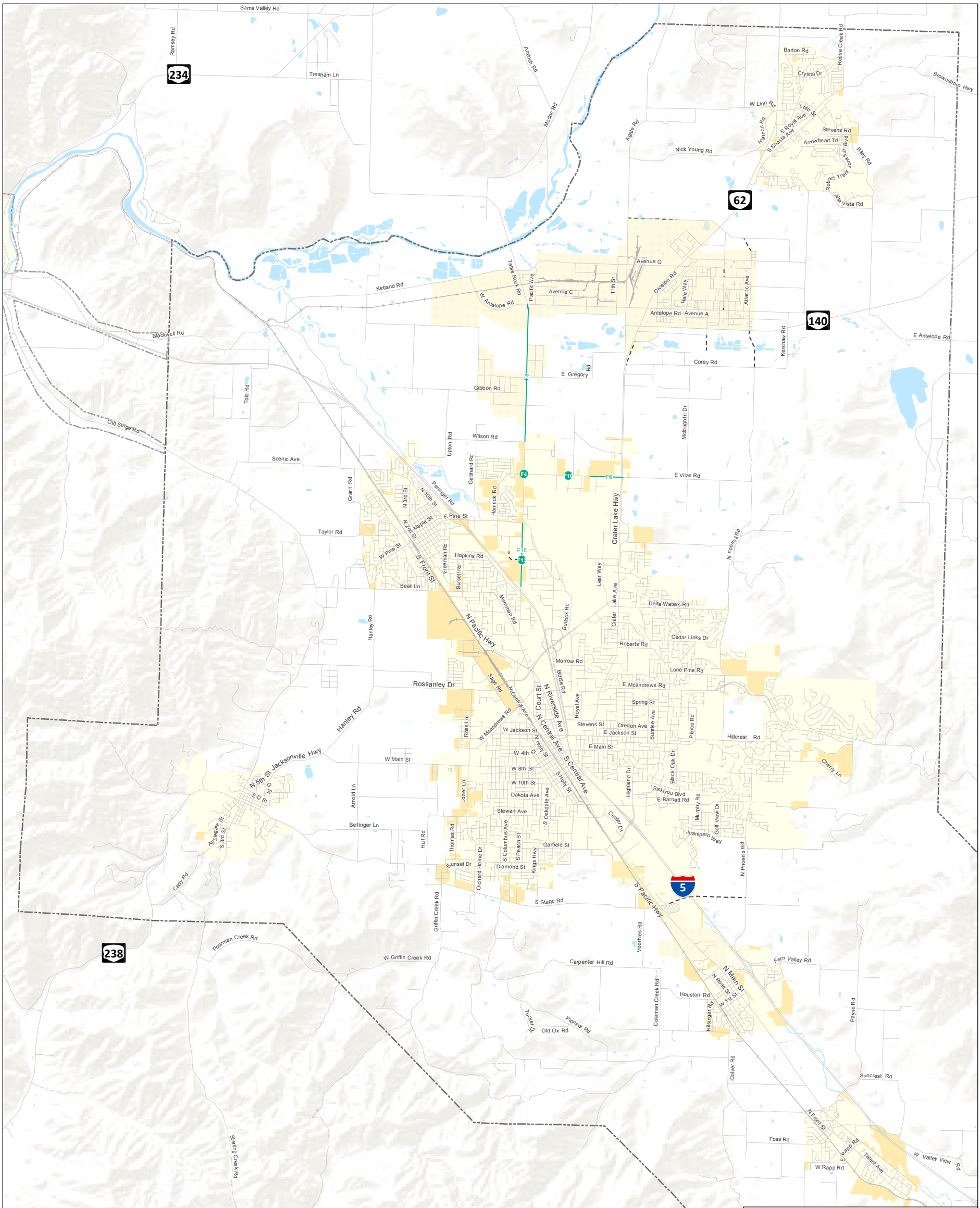
- Project Type**
- Intersection Improvement
 - Segment Improvement
 - City Boundary
 - Urban Cluster Boundary
 - Urban Growth Boundary
 - Middle Rogue MPO
 - Rogue Valley MPO
 - County Boundary



**Freight Projects
Jackson County, OR**

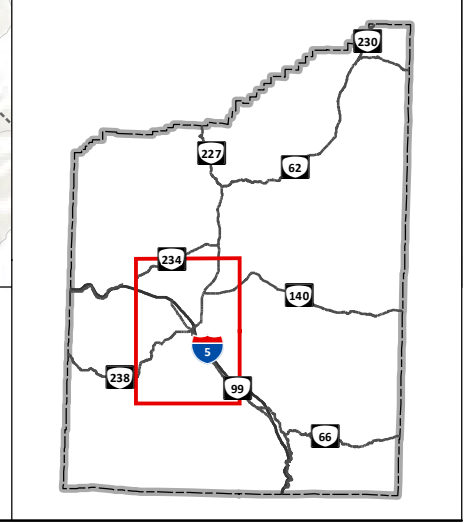
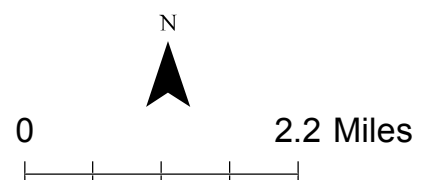
**Figure
15A**

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Project Type

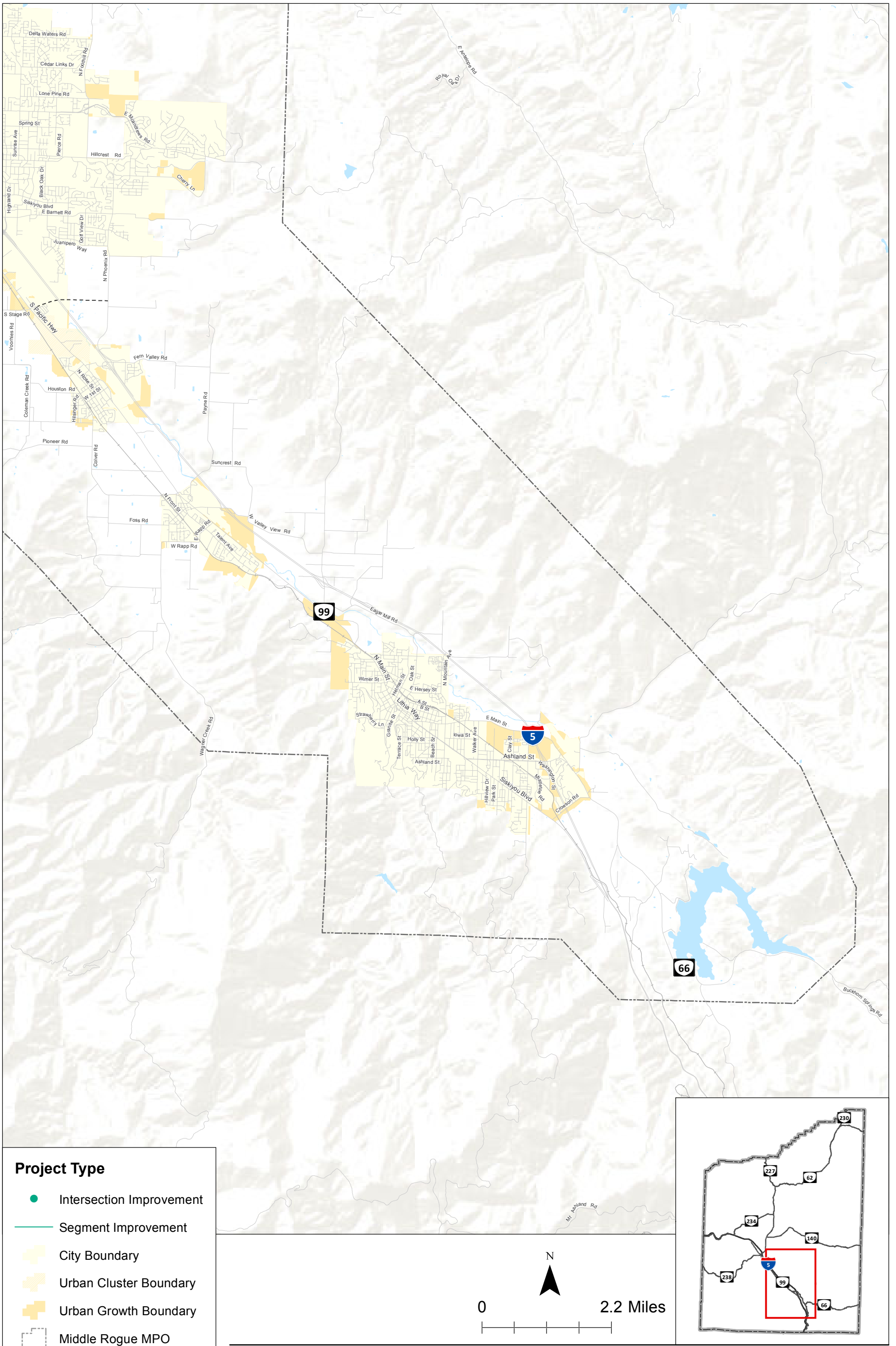
- Intersection Improvement
- Segment Improvement
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Freight Projects
Jackson County, OR**

**Figure
15B**

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Project Type

- Intersection Improvement
- Segment Improvement
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

**Freight Projects
Jackson County, OR**

**Figure
15C**

H:\profile18018 - Jackson County TSP Updates\GIS\Draft TSP\15_Freight\Projects.mxd - bommerville - 4:03 PM 5/5/2016

Bridge and Culvert Improvements

The bridge and culvert improvement projects developed for the Jackson County TSP are summarized in Table 15 and shown in Figure 16. These projects are intended to address existing transportation system needs identified by Jackson County and ODOT. The bridge and culvert improvements include:

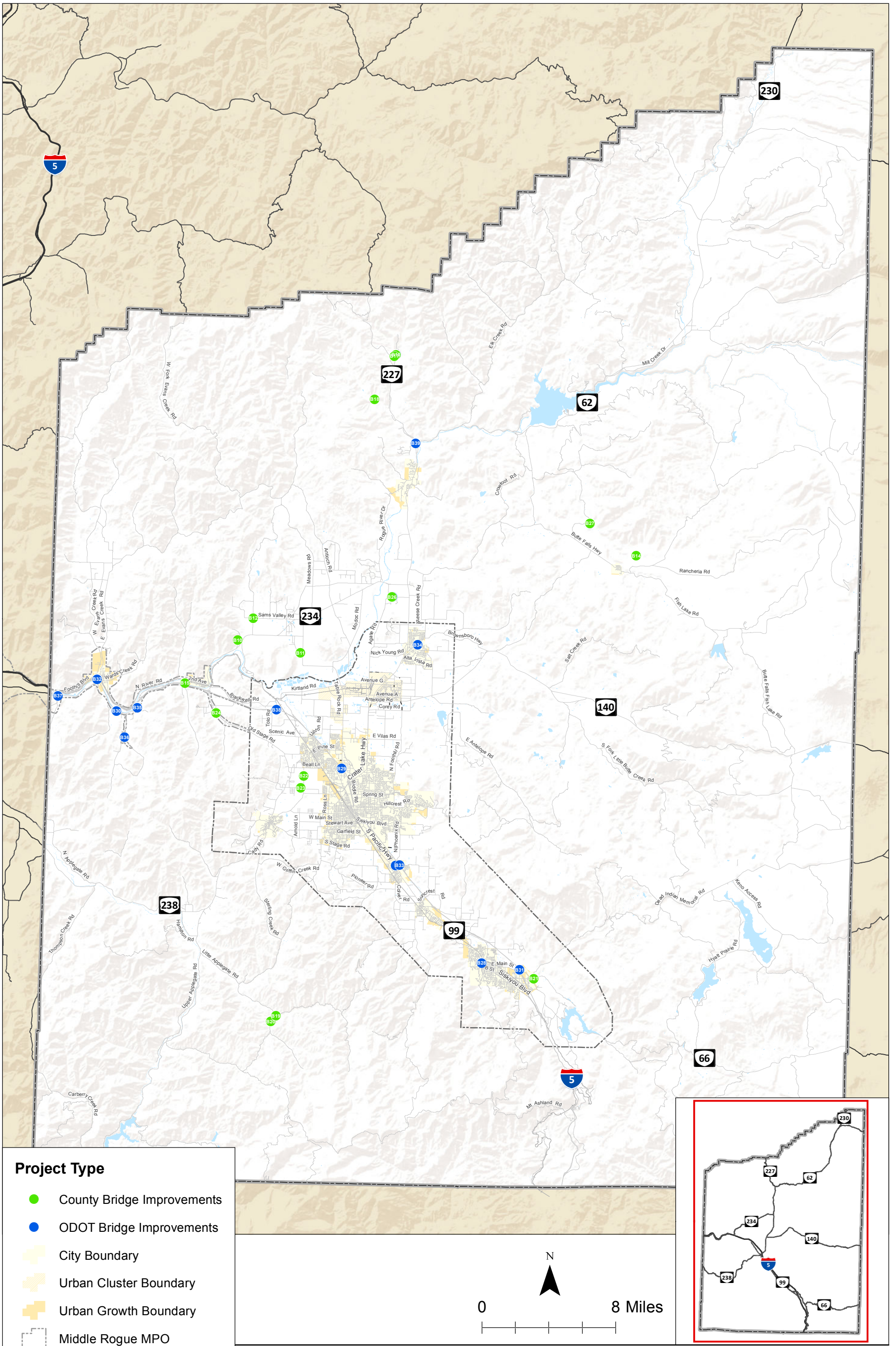
- Removing or abandoning existing bridge structures – the bridge located along Sams Creek Loop road is an example of a bridge that is no longer needed and will be abandoned once it deteriorates.
- Replacing existing bridge structures
- Improve existing bridge structures
- Replacing existing culverts

Table 15 summarizes the bridge and culvert improvement projects included in the TSP update. The projects are not shown with a timeframe/priority or cost given that a majority of these projects are addressed as part of ongoing maintenance of the transportation system. However, the County plans to set aside up to \$2,000,000 over the next 20 year period to address the need for bridge and culvert improvements throughout the County.

Cost estimates for the bridge and culvert improvements are not provided. Project costs will be addressed on an individual bases and funded primarily through federal grants and ongoing maintenance of County roads.

Table 14: Bridge & Culverts Projects

Map ID	Location	Project Type	Project Description
B10	Sams Creek Bridge on Sams Creek Road (Bridge #701)	Bridge	Remove structure
B11	Snider Creek Bridge at Wheeler Road (Bridge #360)	Bridge	Replace Glue Lam Bridge
B12	Sams Creek Bridge on Ramsey Road (Bridge #651)	Bridge	Replace Timber Bridge
B13	Trails Creek Bridge at Elder Mill Road (Bridge #640)	Bridge	Replace Glue Lam Bridge
B14	NF Big Butte Creek Bridge at Fredenburg Road (Bridge #265)	Bridge	Replace Timber Bridge HBP
B15	Galls Creek Bridge at Lampman Road (Bridge #807)	Bridge	Replace Pony Truss HBP
B16 ¹	Dodge Road (#703)	Bridge	Replace Box Culvert for Capacity
B17	Trail Creek Bridge at Swingle Road (Bridge #545)	Bridge	Replace Glue Lam Bridge
B18	WF Trail Creek Bridge at WF Trail Creek Road (Bridge #642)	Bridge	Replace Glue Lam Bridge
B19	Little Applegate River Bridge at Yale Creek Road (Bridge #501)	Bridge	Replace Glue Lam Bridge
B20	Yale Creek Bridge at Yale Creek Road (Bridge #502)	Bridge	Replace Glue Lam Bridge



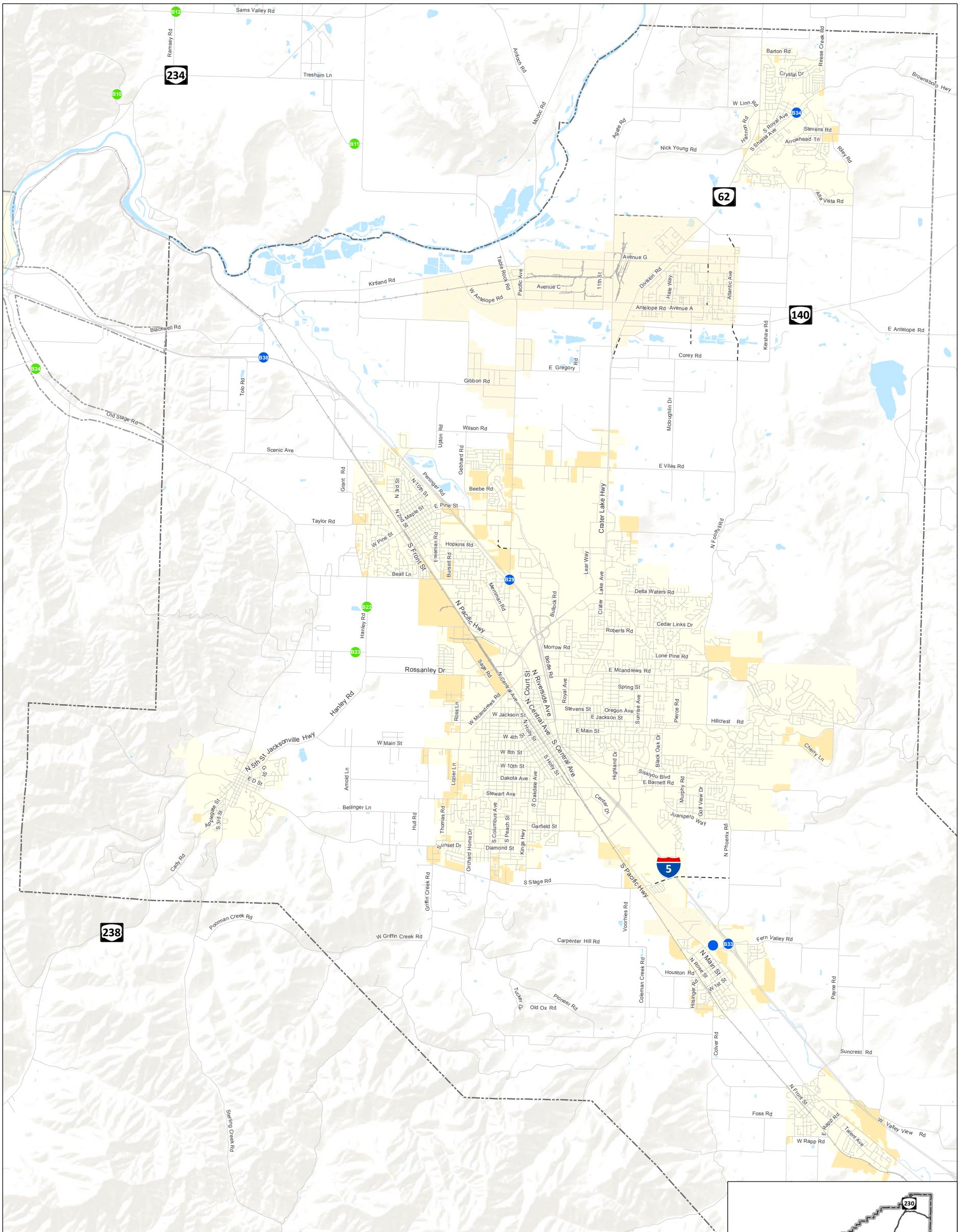
Project Type

- County Bridge Improvements
- ODOT Bridge Improvements
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

**Bridge and Culvert Projects
Jackson County, OR**

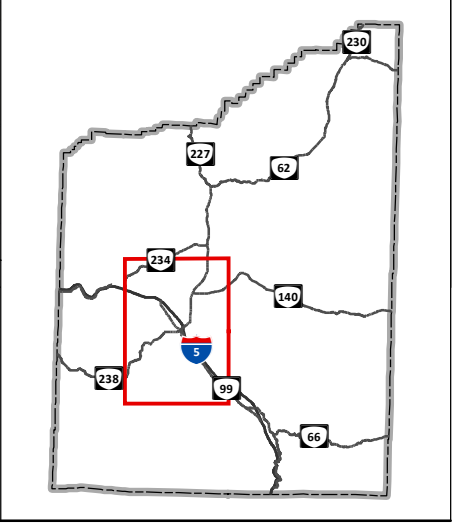
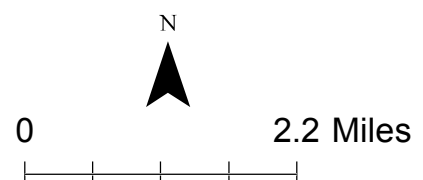
**Figure
16A**

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Project Type

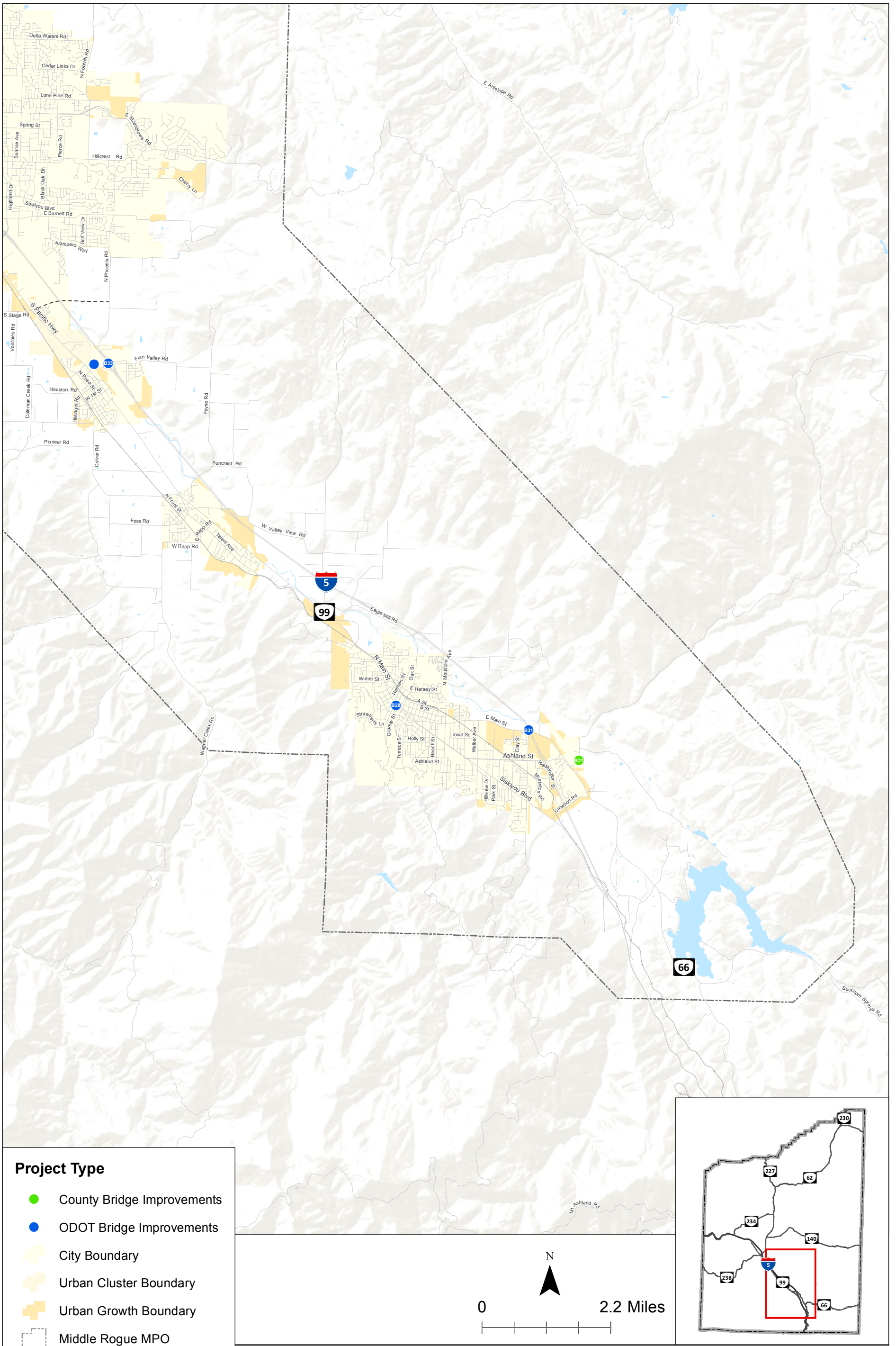
- County Bridge Improvements
- ODOT Bridge Improvements
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Bridge and Culvert Projects
Jackson County, OR**

**Figure
16B**

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Project Type

- County Bridge Improvements
- ODOT Bridge Improvements
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



0 2.2 Miles

**Bridge and Culvert Projects
Jackson County, OR**

**Figure
16C**

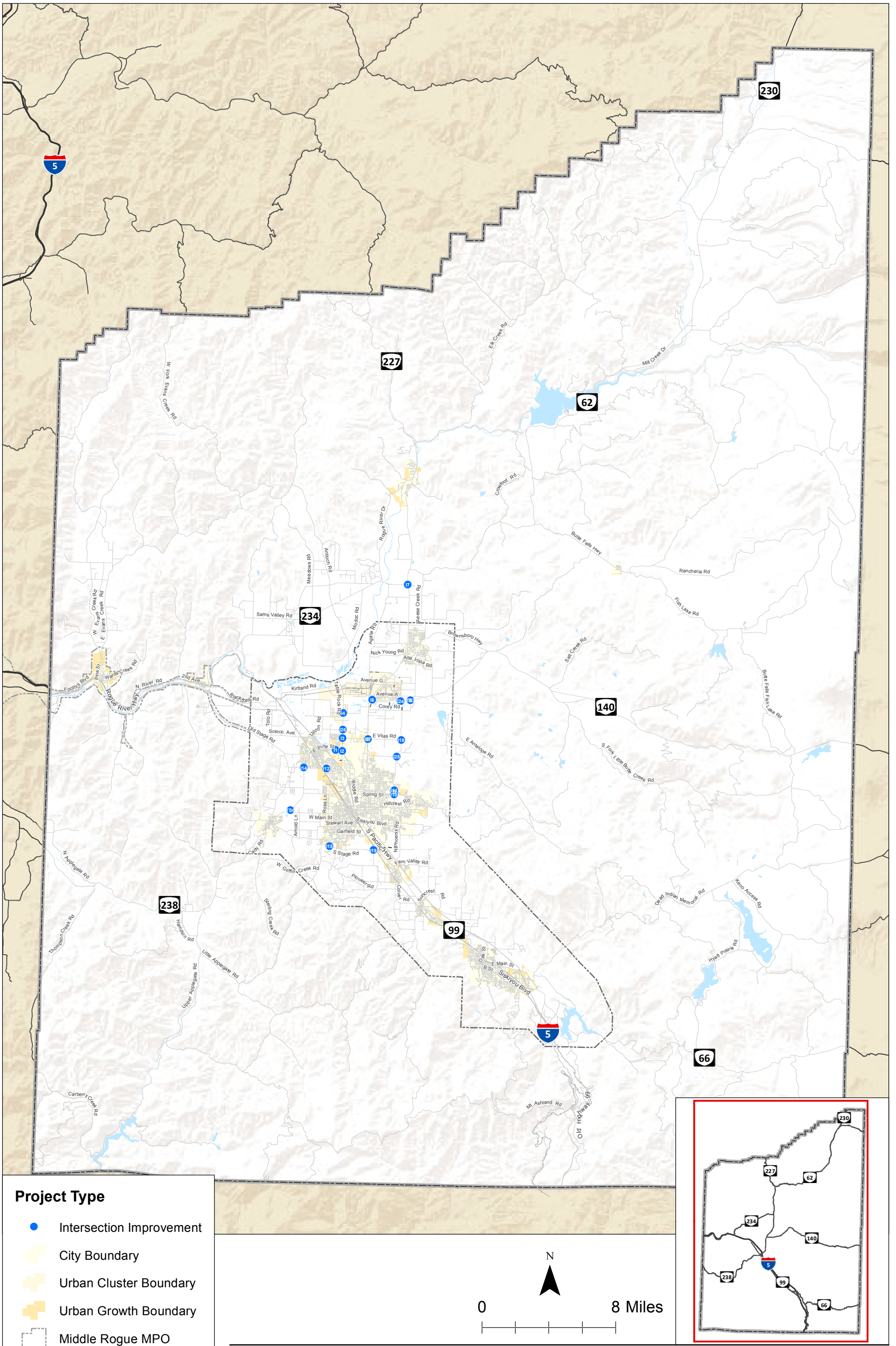
H:\proj\18018 - Jackson County TSP Update\Draft TSP\16_Bridge and Culvert Projects.mxd - mbell - 4:47 PM 5/10/2016

Map ID	Location	Project Type	Project Description
B21	Neil Creek Bridge at Dead Indian Memorial Road (Bridge #36B)	Bridge	Replace Concrete Slab Bridge HBP
B22	Jackson Creek Bridge at Hanley Road (Bridge #114)	Bridge	Replace triple RCBC for fish passage
B23	Jackson Creek Bridge at Ross Lane (Bridge #130)	Bridge	Replace triple RCBC for fish passage
B24	Kane Creek Bridge at Old Stage Road (Bridge #120)	Bridge	Replace CIP Slab Bridge HBP
B26	Hog Creek Bridge at Mountain View Drive (#180)	Bridge	Improve Bridge
B27	Big Butte Creek Bridge at Cobleigh Road (#655)	Bridge	Improve Bridge
B28	Ashland Creek Bridge at OR 99 (MP 19.0)	Bridge	Improve Bridge
B29	Bear Creek Bridge and Table Rock Road Bridge at I-5 (MP 0)	Bridge	Improve Bridge
B30	Birdseye Creek Bridge at OR 99 (MP10.8)	Bridge	Improve Bridge
B31	E Main Street Bridge at I-5 (MP 0)	Bridge	Improve Bridge
B32	Evans Creek Bridge at I-5 (MP 49.0)	Bridge	Improve Bridge
B33	Fern Valley Road Bridge at I-5 (MP24.4)	Bridge	Improve Bridge
B34	Little Butte Creek Bridge at Eagle Point – Main Street (MP0.33)	Bridge	Improve Bridge
B35	Miller Gulch Bridge at OR 99 (MP12.2)	Bridge	Improve Bridge
B36	Right Fork Roots Creek Bridge at OR 99	Bridge	Improve Bridge
B37	Savage Creek Bridge at OR 99 (MP 6.05)	Bridge	Improve Bridge
B38	Tolo Road Bridge at I-5 (MP 0)	Bridge	Improve Bridge
B39	Trail Creek Bridge at OR 62 (MP 22.3)	Bridge	Improve Bridge
B40 ¹	Sardine Creek Road at Sardine Creek	Culvert	Replace 72" culvert w/bridge for rust and fish passage
B41 ¹	E Evans Creek Road at Ramsey Creek	Culvert	Replace 96" culvert w/bridge for rust and fish passage

1. Not show on Bridge and Culvert Improvements map. Confirm location with Jackson County Roads.

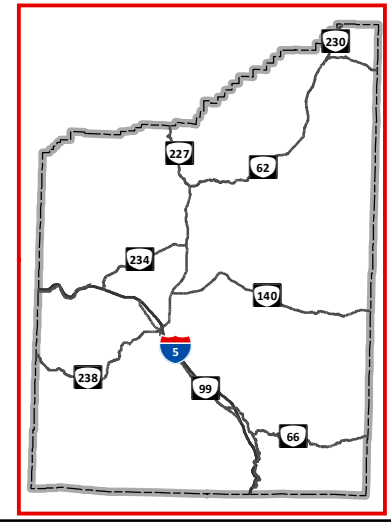
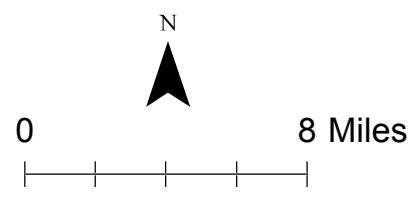
Intersection Improvements

The intersection improvement projects developed for the Jackson County TSP are summarized in Table 16 and shown in Figure 17. These projects are intended to address existing and projected future traffic operations and safety issues at several key intersections located throughout the County. The projects evaluated as part of the TSP update were combined with other projects identified in previous planning documents to provide a comprehensive list of intersection improvements for the Jackson County TSP. The intersection improvement projects include:



Project Type

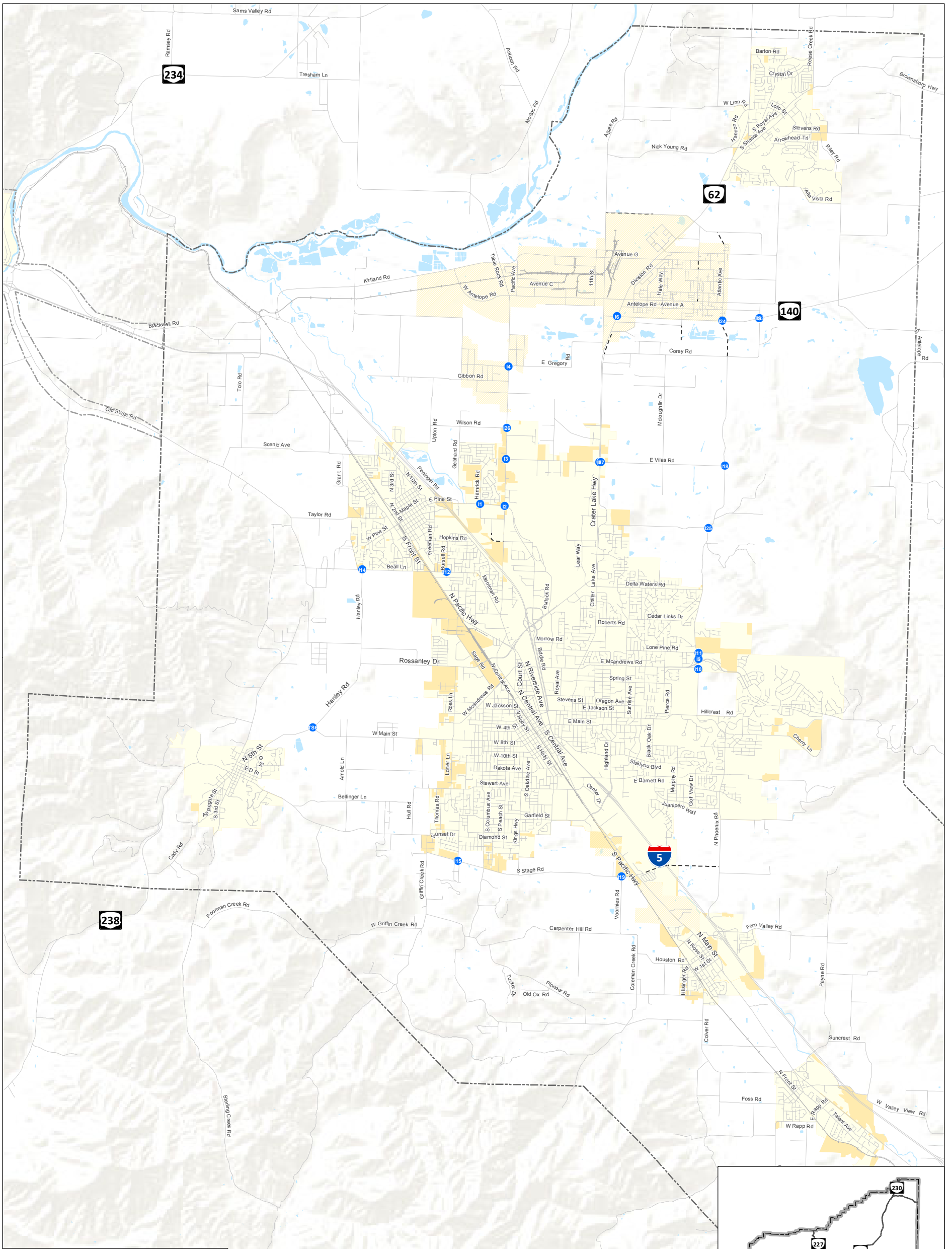
- Intersection Improvement
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Intersection Projects
Jackson County, OR**

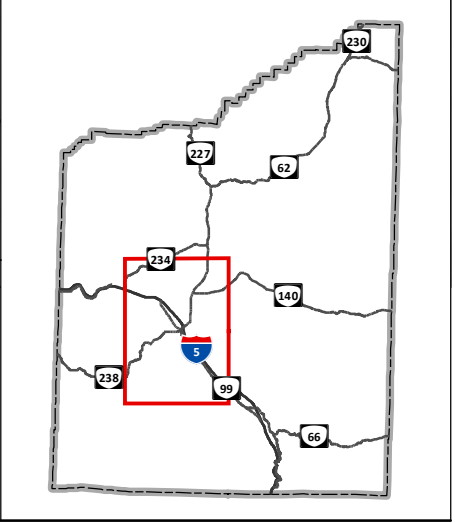
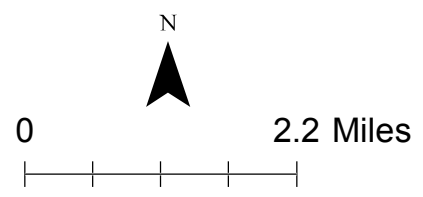
**Figure
17A**

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Project Type

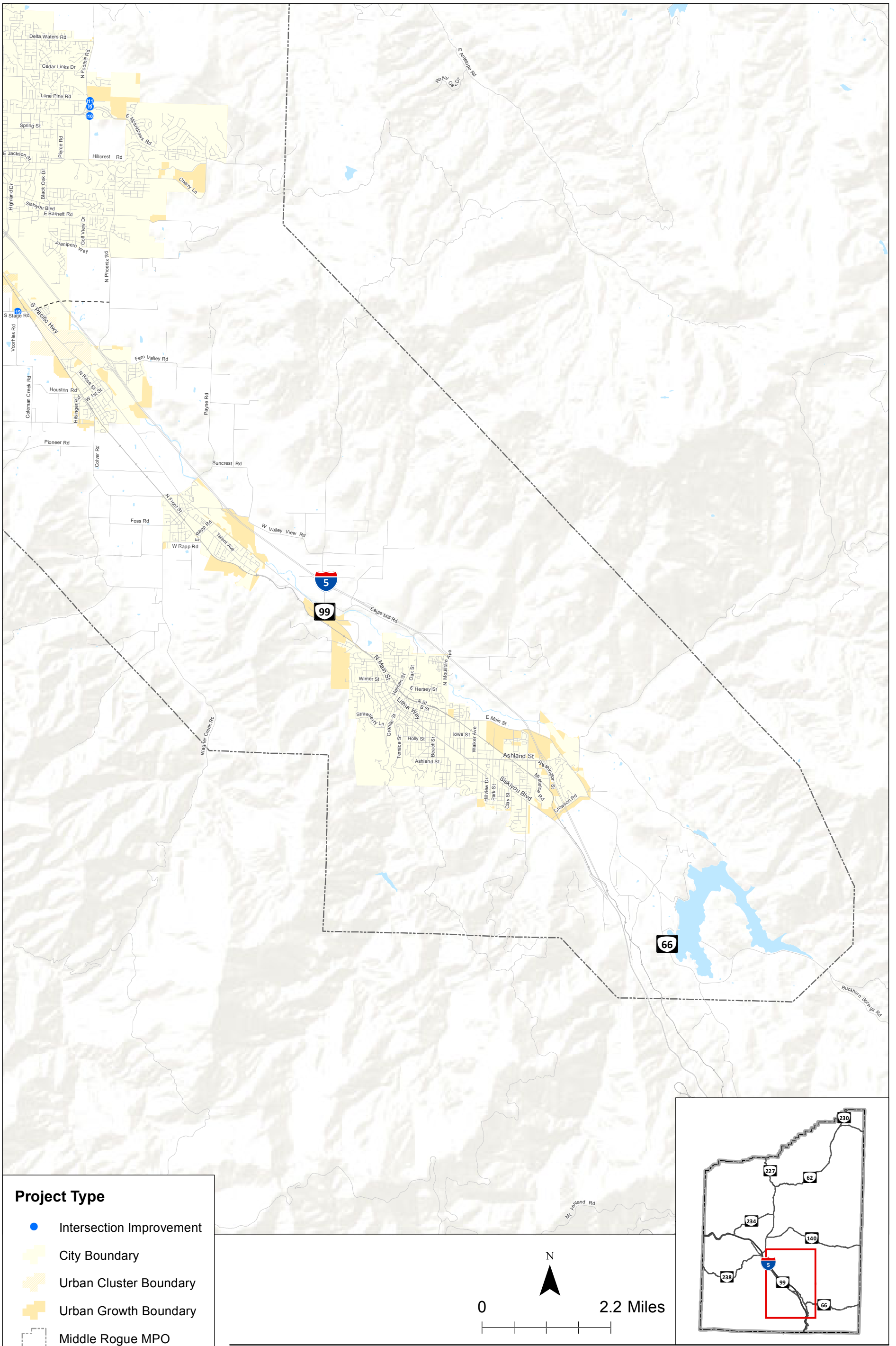
- Intersection Improvement
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Intersection Projects
Jackson County, OR**

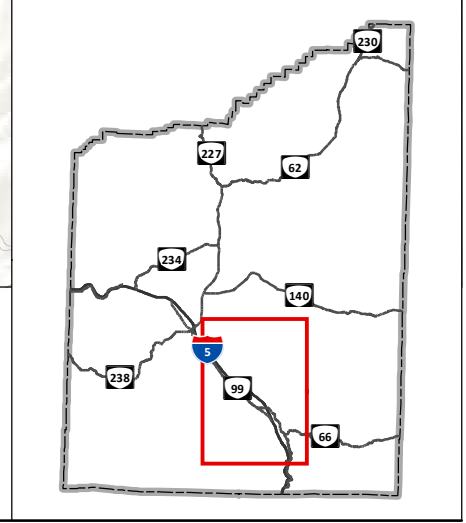
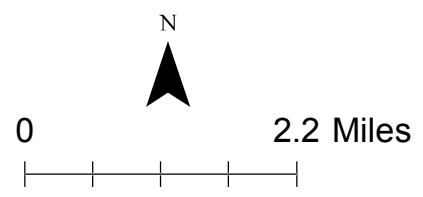
**Figure
17B**

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Project Type

- Intersection Improvement
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Intersection Projects
Jackson County, OR**

**Figure
17C**

H:\profile\18018 - Jackson County TSP Updates\GIS\Draft TSP17_Intersection Projects.mxd - J:\somerville - 4:04 PM 5/5/2016

- Monitoring the intersection to determine if the projected deficiencies are realized or if planned improvements mitigate the issue.
- Adding separate left- and/or right turn lanes to provide separation between slowed or stopped vehicles and/or to increase the capacity of a particular movement (*Dual left or right-turn lanes also frequently require two receiving lanes*).
- Optimizing the signal timing/phasing at signalized intersection to increase the capacity of a particular movement.
- Install a traffic signal when warranted
- Reconfigure the intersection to improve operations, such as a roundabout

Table 16 summarizes the intersection improvement projects included in the TSP update. The projects are organized into Financially Constrained (Tier 1), Unconstrained (Tier 2), and Unconstrained (Tier 3) projects. Projects in Incorporated Areas and Projects on ODOT Facilities are provided in subsequent sections of the TSP.

Table 15: Intersection Projects

Map ID	Location	Project Type	Project Description	Priority (Timeframe)	Cost (\$1,000)
I2	Table Rock Road/Biddle Road	Reconfigure	Widen the south leg of Table Rock Road to a five-lane cross section and optimize the signal timing/phasing	Tier 1 (Near-term)	\$0 ³
I3	Table Rock Road/Vilas Road	Monitor/ Turn Lane	Monitor traffic operations at the intersection following construction of the OR 62 Bypass. If issues persist, install a second separate left-turn lane and a separate right-turn lane at the westbound approach and optimize the signal timing/phasing	Tier 1 (Long-term)	\$1,000
I4	Table Rock Road/Gregory Road	Traffic signal/ Roundabout	Install a traffic signal or roundabout when warranted	Tier 1 (Near-term)	\$250
I12	Bursell Road/Beall Lane	Traffic signal/ Roundabout	Install a traffic signal or roundabout when warranted	Tier 3	\$250
I14	Beall Lane at Hanley Road	Traffic signal/ Roundabout	Install a traffic signal or roundabout when warranted	Tier 3	\$250
I15	S Stage Road at Orchard Home Road	Turn Lane	Install a separate left-turn lane at the southbound approach	Tier 2	\$215
I18	Foothill Road/East Vilas Road	Turn Lane	Install a separate left-turn lane at the northbound approach	Tier 1 (Long-term)	\$215
I19	S Stage Road at Voorhies Road	Turn Lane	Install a separate left-turn lane at the northbound approach	Tier 3	\$150
I25	Foothill Road/Coker Butte Road	Turn Lane	Install a separate left-turn lane at the northbound approach and right turn taper at the southbound approach	Tier 1 (Long-term)	\$350
I26	Table Rock Road/Wilson Road	Traffic signal/ Roundabout	Install a traffic signal or roundabout when warranted	Tier 2	\$350
Total Tier 1 Project Cost					\$1,815
Total Tier 2 Project Cost					\$565
Total Tier 3 Project Cost					\$650
Total Cost					\$3,030

1. Project is already fully funded by the ODOT.

Traffic Safety Improvements

The traffic safety improvement projects developed for the Jackson County TSP are summarized in Table 17 and shown in Figure 18. Additional traffic safety improvements are summarized in the Projects in Incorporated Areas and Projects on ODOT facilities tables provided below. These projects are intended to address existing and projected future traffic safety issues at several key intersections located throughout Jackson County. It should be noted that many of the roadway, pedestrian and bicycle improvement projects identified in other sections of the TSP will also improve safety along County roads. The traffic safety improvement projects include:

- Implementing specific safety improvements at key intersections.
- Implementing specific safety improvements along key roadway segments.
- Implementing systemic safety improvements throughout the county, including wider shoulders, wider clear zones, center and shoulder rumble strips, guard rails, speed limit signs, speed warning signs, reduced speed warning signs, chevrons, and reconstructing the roadway to improved sight distance.

Table 17 summarizes the traffic safety improvement projects include in the TSP update. As shown, several of the intersection improvement projects are addressed by roadway and intersection improvement projects and therefore, no priorities or projects costs area shown.

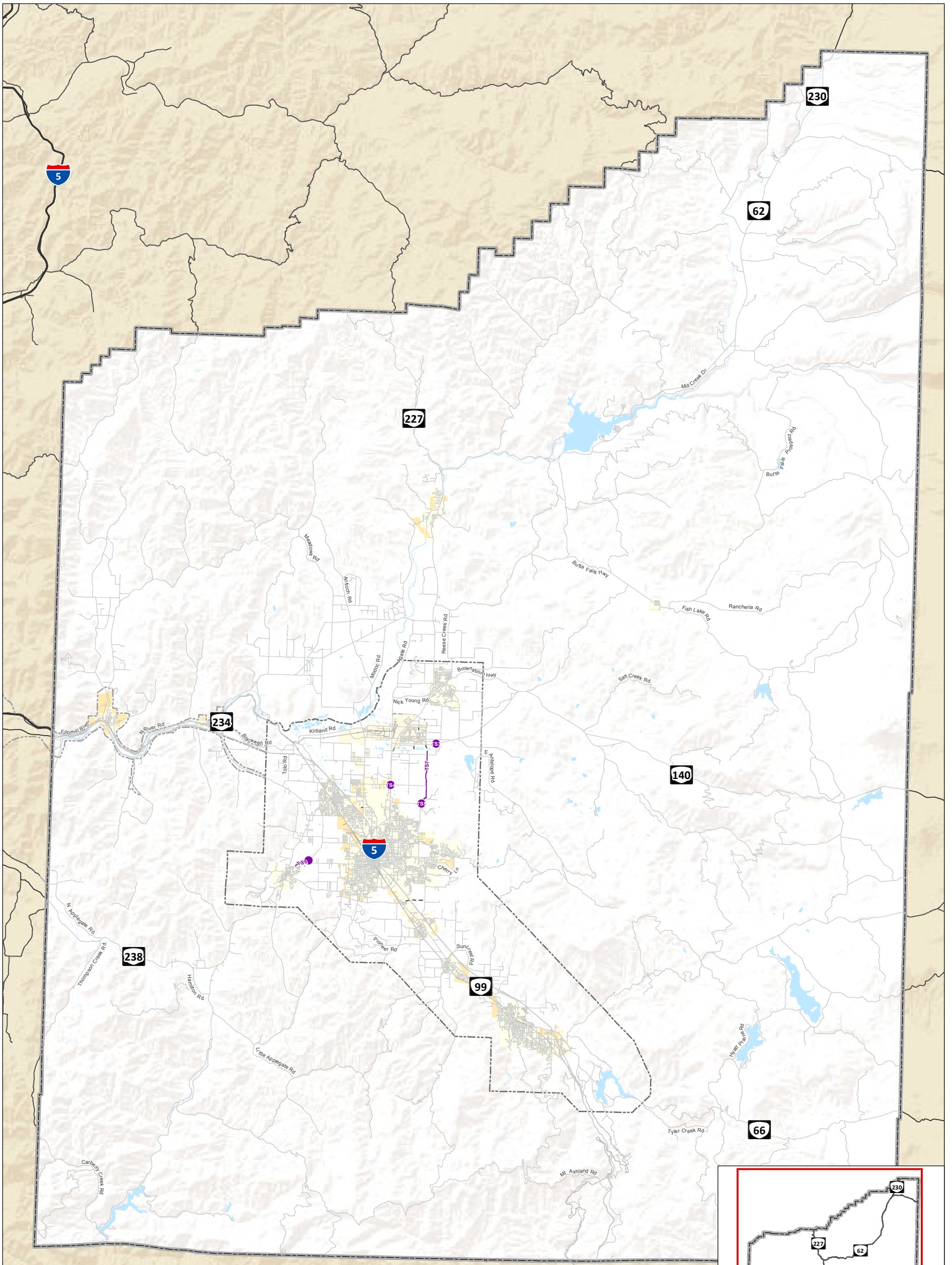
Table 16: Traffic Safety Projects

ID	Location		Project Description
TS5	Foothill Road/Coker Butte Road	Intersection Improvement	No additional safety improvements have been identified – See Intersection Improvement Project I25
TS7	Foothill Road from Coker Butte Road to Corey Road	Segment Improvement	Widen Foothill Road to provide separate left-turn lanes at intersections, wider travel lanes, and wider shoulder along this segment – See Bicycle and Pedestrian Project S42 and Intersection Projects I18 and I25

While specific projects have not been developed to address systemic safety issues, the County will continue to monitor the issues using ODOT’s ARTS methodology and address the issues through their annual set-aside for traffic safety.

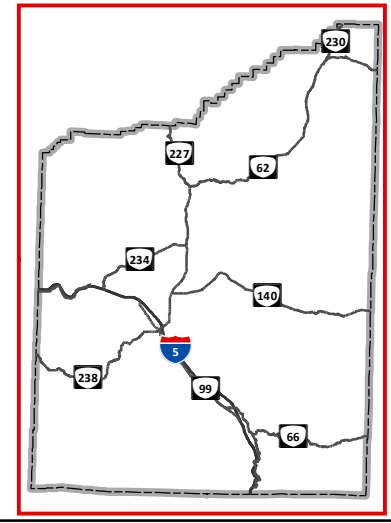
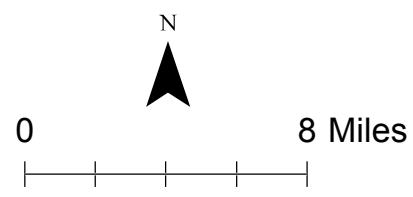
PUBLIC TRANSPORTATION PLAN

Although Jackson County does not provide public transportation services, the County can provide policies and facilities that support the provision and usage of transit service. Transit service provides mobility to County residents who do not have access to automobiles, and provides an alternative to driving for those who do.



Project Type

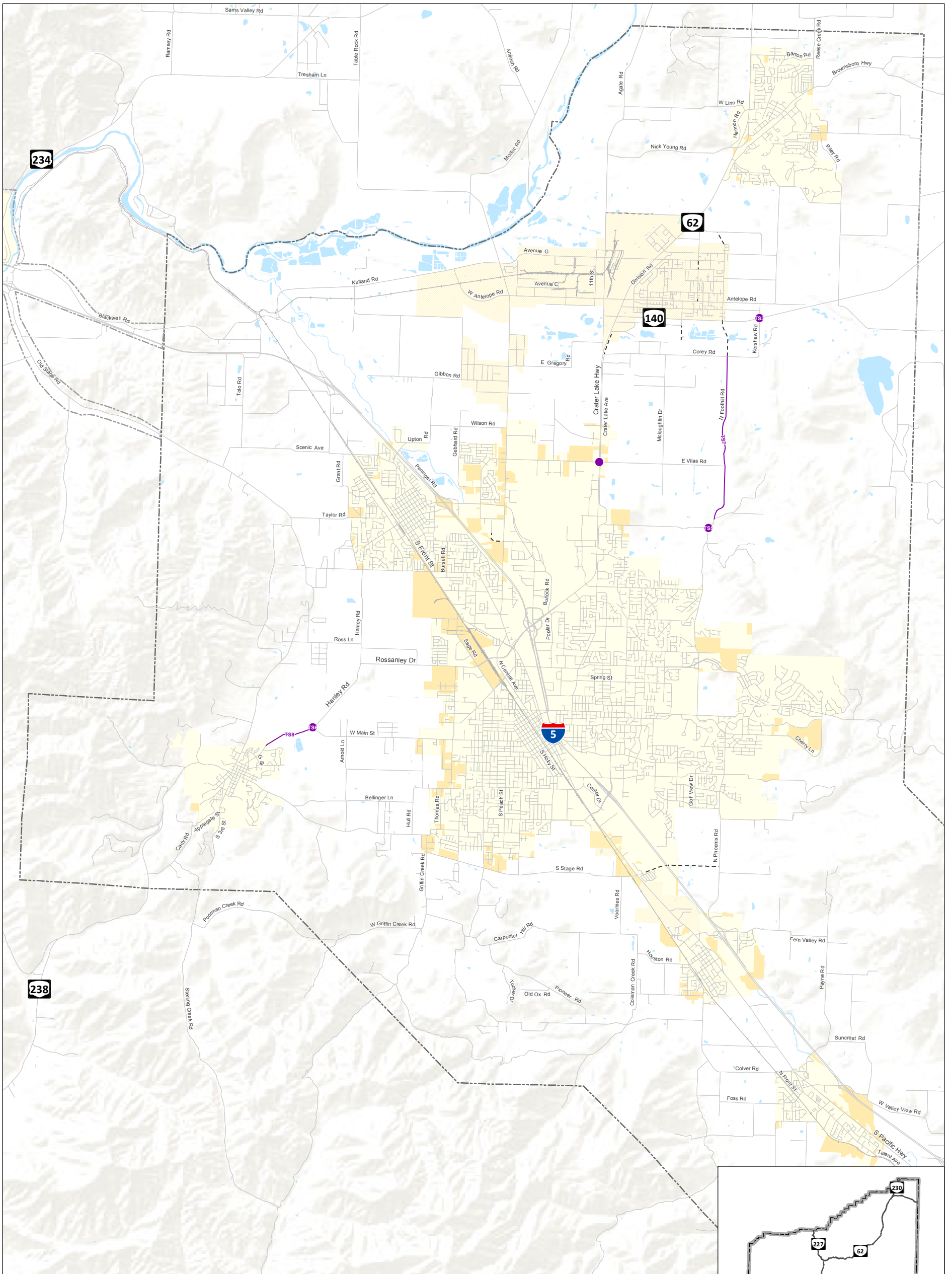
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary



**Traffic Safety Projects
Jackson County, OR**

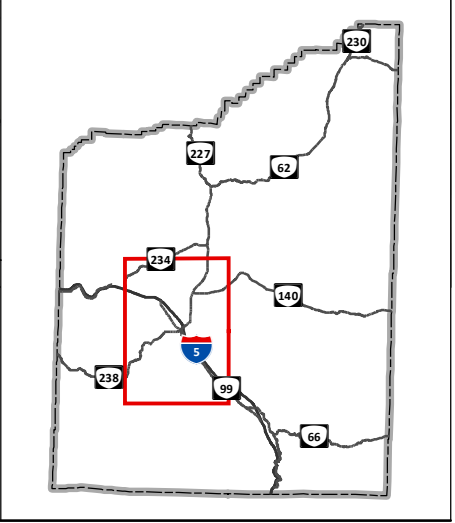
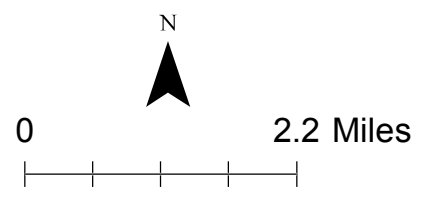
**Figure
18A**

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Project Type

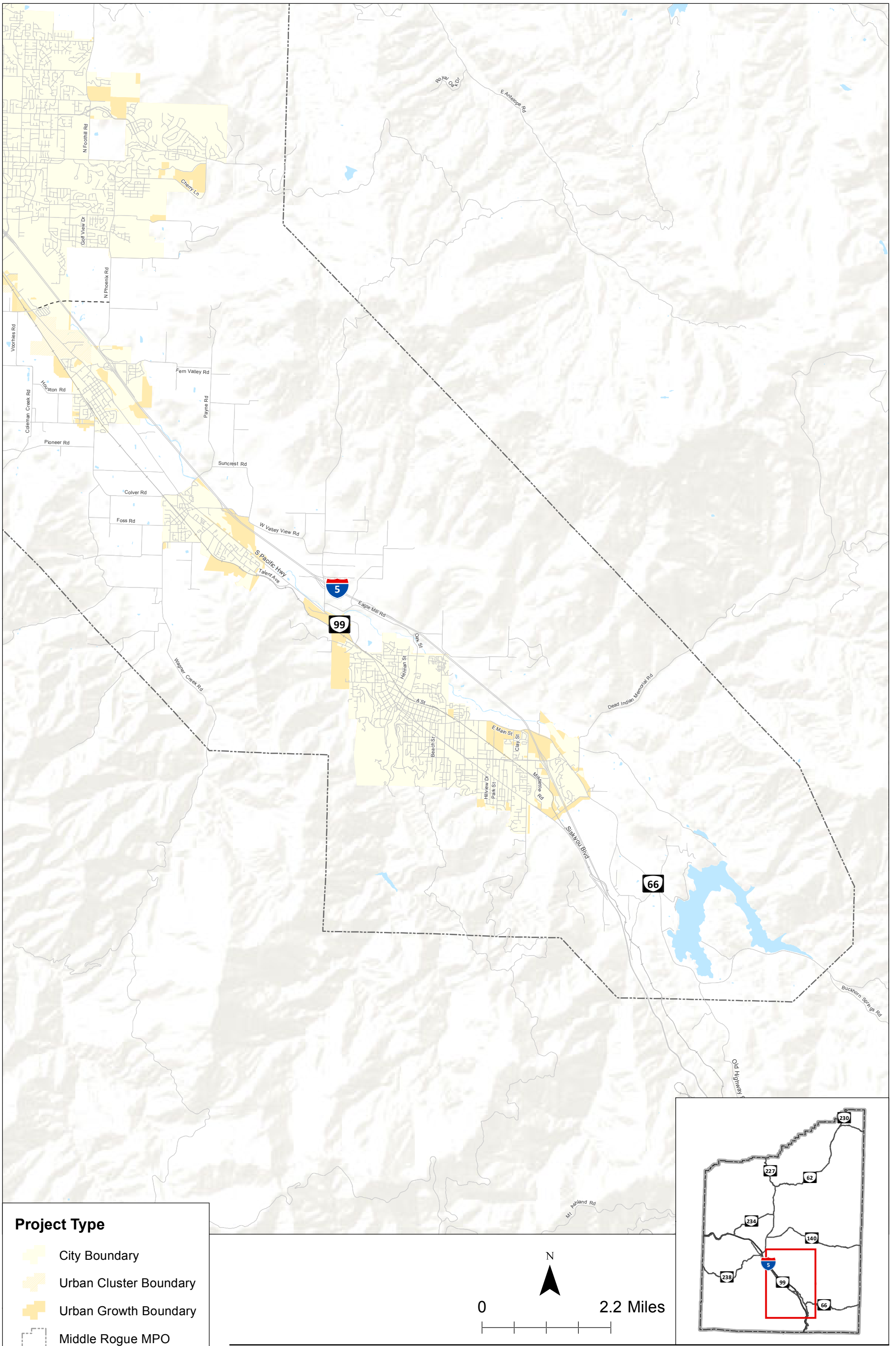
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary









Traffic Safety Projects
Jackson County, OR

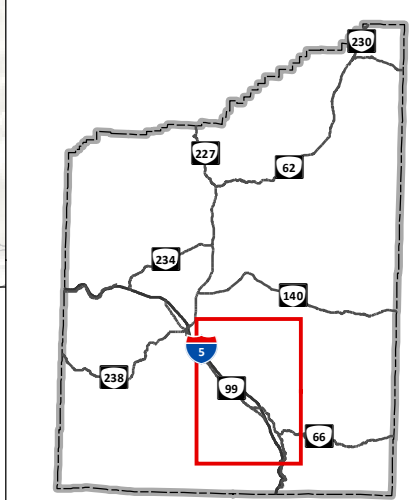
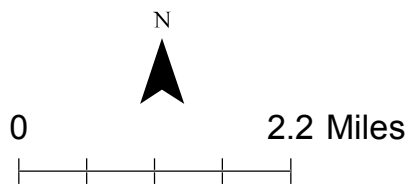
Figure
18B

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Project Type

-  City Boundary
-  Urban Cluster Boundary
-  Urban Growth Boundary
-  Middle Rogue MPO
-  Rogue Valley MPO
-  County Boundary



**Traffic Safety Projects
Jackson County, OR**

**Figure
18C**

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Public transportation service within Jackson County includes fixed-route service operated by the Rogue Valley Transportation District (RVTD) and specialized transportation for users such as senior citizens and persons with disabilities. RVTD also organizes car pools and van pools between Ashland, Medford, and Grants Pass. In addition, ODOT provides PUC licenses to private companies and charter service providers. Intercity transit service is provided by Greyhound and by Amtrak Thruway bus service, which provides connections to Amtrak stations for passengers using rail for part of their trip.

Several of the projects identified under the roadway element and the bicycle and pedestrian element will improve access to the public transportation network. These projects include bringing the roadways up to standard and installing shoulders in the rural areas and bike lanes and sidewalks in the urban areas. Jackson County should work with RVTD and RVCOG to identify opportunities to improve stop amenities and install bus pullouts and pedestrian crossings as applicable along the following roadway segments that are currently served by public transportation:

- W Main Street from Renault Avenue to Hanley Road
- Antelope Road from OR 62 to Atlantic Avenue
- Atlantic Avenue from Antelope Road to Avenue G
- Avenue G from Atlantic Avenue to OR 62
- OR 99 from Tolman Creek Road to Steward Avenue
- OR 238 from W Main Street to Jacksonville City Center
- OR 62 from Coker Butte Road to Avenue H
- Antelope Road from Table Rock Road to OR 62
- Table Rock Road from Antelope Road to Kirtland Road
- Kirtland Road from Table Rock Road to Pacific Avenue
- Pacific Avenue from Avenue G to Antelope Road
- Leigh Way from OR 62 to Agate Avenue
- Agate Avenue from Leigh Way to Antelope Road

BICYCLE AND PEDESTRIAN PLAN

Pedestrian and bicycle modes serve a variety of needs, including relatively short trips to major attractors, recreational trips and circulation, and access to transit (generally for walking trips under ¼ mile to bus stops). Bicycle travel can be a viable commuting option, particularly where supported by facilities such as bicycle lanes or paved shoulders, secure bicycle parking, work-place showers, and bus-mounted bicycle racks. Walking is also a viable choice for commute trips for people who live near their work.

The Jackson County Bicycle Master Plan, with direction from the Bike Committee, identifies specific needs and planned projects in the County. Additionally, ODOT's Bicycle and Pedestrian Plan sets criteria for bicycle and pedestrian facilities according to roadway classification, area type (rural or urban) and daily traffic volumes. It should be noted that the ODOT Bicycle and Pedestrian Plan generally recommends minimum shoulder widths of four feet or more, depending on traffic volumes and a road's functional classification. However, available inventory data do not provide specific roadway shoulder widths, but only the presence or absence of a minimum three-foot shoulder. For the Jackson County TSP, all facilities that were previously identified in the Bicycle Master Plan and have not been improved were identified as needing improvement. Also, any facilities with less than a 3-foot shoulder and projected ADT above 3,000 for the year 2023 were considered deficient and identified as needing improvement.

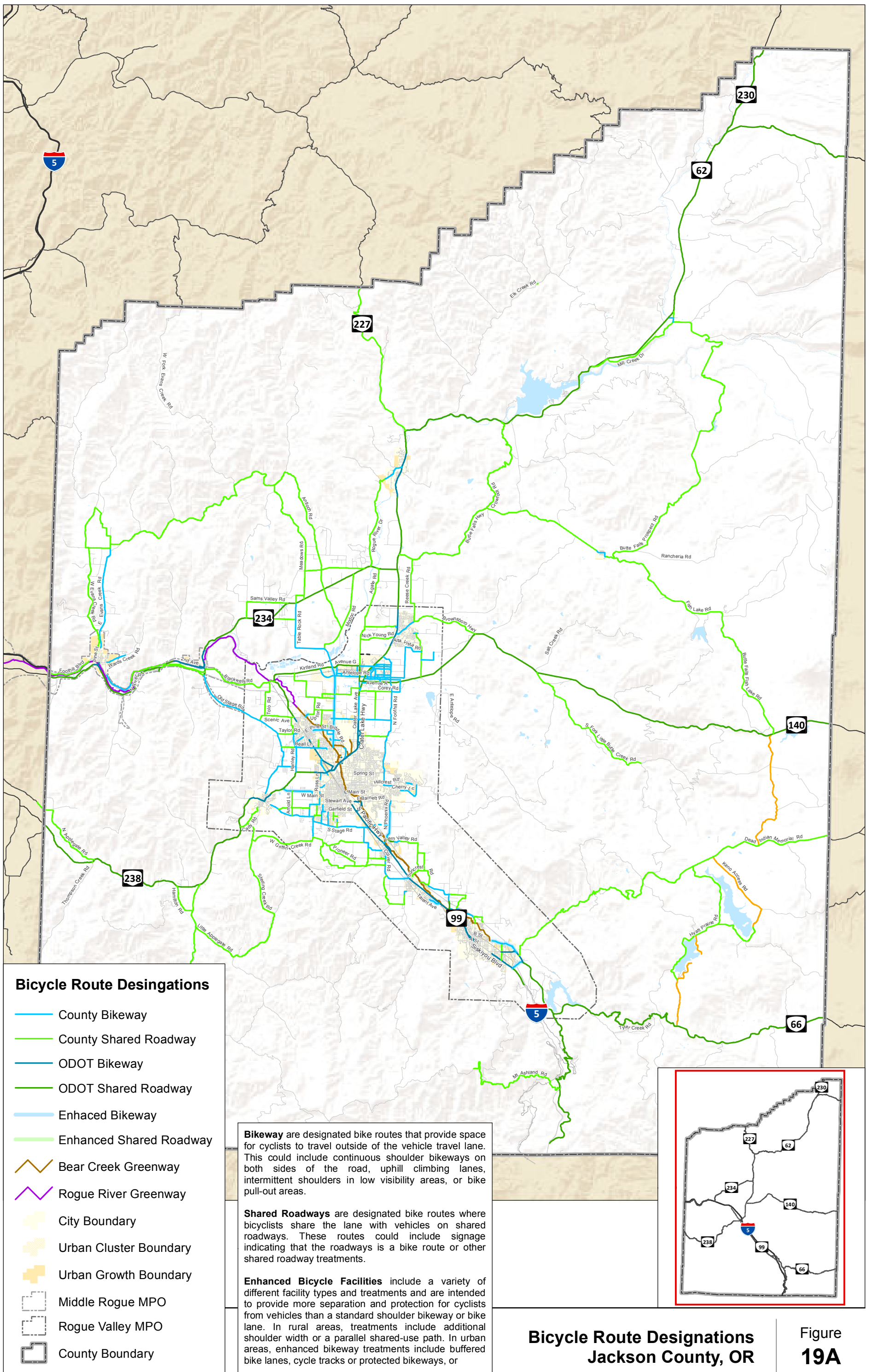
Sidewalks on County roadways and state highways are generally limited to incorporated areas, such as along Highway 99 in Ashland and Medford. However, sections of Highway 99 in Phoenix do not have sidewalks. Sidewalks would be considered desirable in these locations due to the presence of residential neighborhoods and public transit service; however, right-of-way constraints have, to date, precluded the development of sidewalks in those areas.

Many of the County's collector and arterial streets have paved shoulders, which serve both pedestrian and bicycle modes. The White City Urban Unincorporated Community is an exception to this general rule, where a more comprehensive network of sidewalks is being constructed using urban renewal funds, primarily in the residential area east of Highway 62. The TSP's Background Document depicts the locations where adequate pedestrian and bicycle facilities currently exist, and locations where improvements are needed.

Bicycle Route Designations

The Bicycle Route Designation map is shown in Figure 19. This map illustrates the bicycle route designations for all County and ODOT facilities. The designations help define the type of bicycle treatments planned for each roadway. The designations are described below.

- **Non-Designated Routes** are roads without bicycle facilities that are not signed or designated bicycle routes; however, bicycles may still use these routes.
- **Shared Roadways** are roads without bicycle lanes or shoulders that are designated bicycle routes. This designation may influence how the County signs, maintains, or makes other decisions with regard to these facilities. Shared Roadways are most commonly acceptable along roadways where the average daily traffic (ADT) is less than 400 vehicles per day in rural areas and 3,000 vehicles per day in urban areas or where vehicular travel speeds and volumes allow cyclists to comfortably and conveniently "share the road" with motorists. In rural areas, "Share the Road" or "Bikes in Road" signs can be used to remind drivers to watch for bicyclists on roadways without on-street bicycle lanes. In urban areas, shared-lane pavement markings, or sharrows, can be used. Sharrows remind motorists of the presence of bicycles and indicate to cyclists where to safely ride within the roadway.



Bicycle Route Designations

- County Bikeway
- County Shared Roadway
- ODOT Bikeway
- ODOT Shared Roadway
- Enhanced Bikeway
- Enhanced Shared Roadway
- Bear Creek Greenway
- Rogue River Greenway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

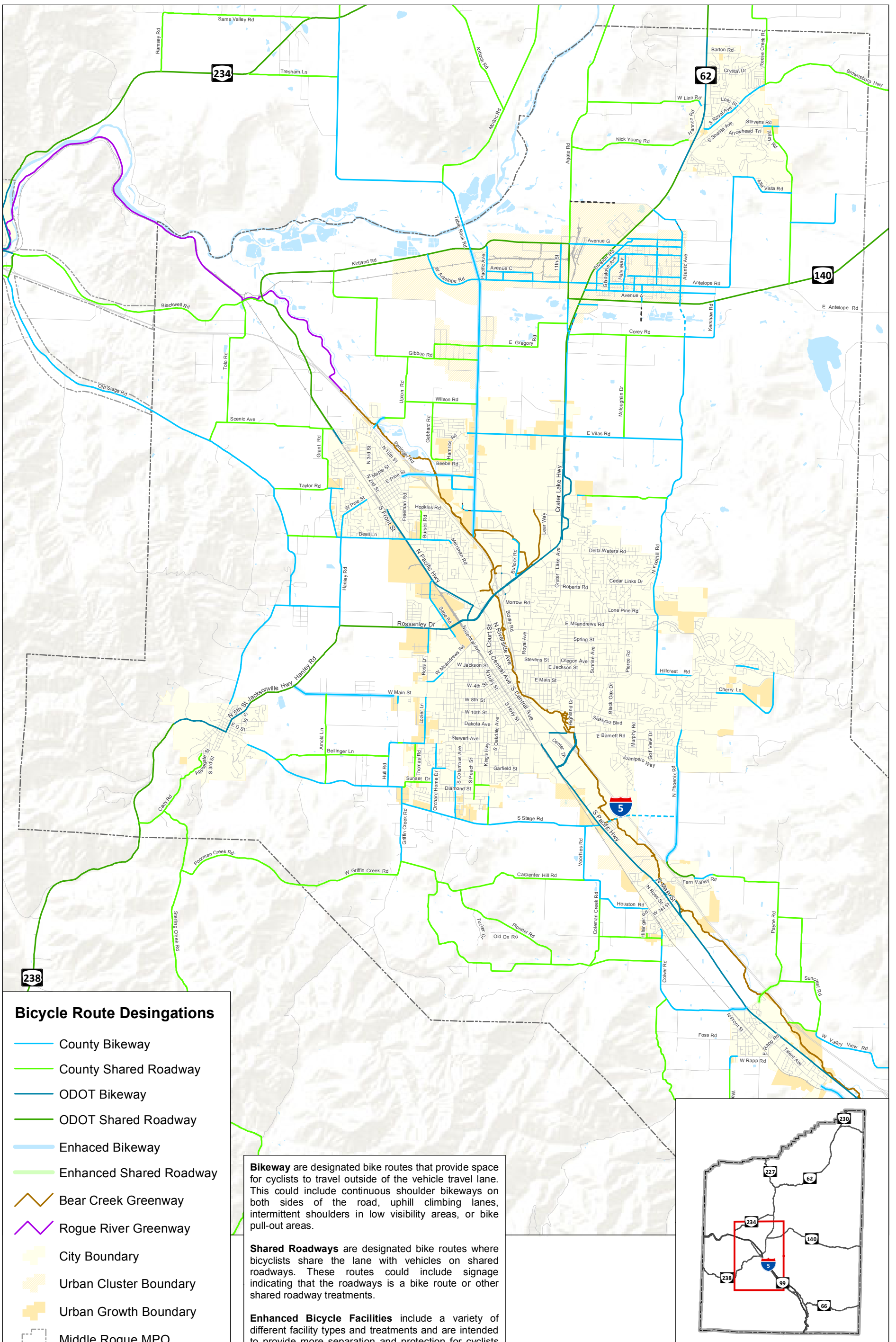
Bikeway are designated bike routes that provide space for cyclists to travel outside of the vehicle travel lane. This could include continuous shoulder bikeways on both sides of the road, uphill climbing lanes, intermittent shoulders in low visibility areas, or bike pull-out areas.

Shared Roadways are designated bike routes where bicyclists share the lane with vehicles on shared roadways. These routes could include signage indicating that the roadway is a bike route or other shared roadway treatments.

Enhanced Bicycle Facilities include a variety of different facility types and treatments and are intended to provide more separation and protection for cyclists from vehicles than a standard shoulder bikeway or bike lane. In rural areas, treatments include additional shoulder width or a parallel shared-use path. In urban areas, enhanced bikeway treatments include buffered bike lanes, cycle tracks or protected bikeways, or

**Bicycle Route Designations
Jackson County, OR**

**Figure
19A**



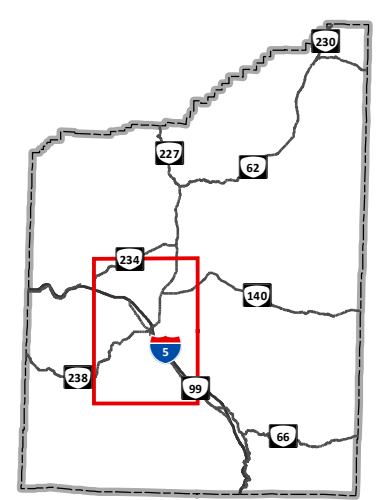
Bicycle Route Designations

- County Bikeway
- County Shared Roadway
- ODOT Bikeway
- ODOT Shared Roadway
- Enhanced Bikeway
- Enhanced Shared Roadway
- Bear Creek Greenway
- Rogue River Greenway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

Bikeway are designated bike routes that provide space for cyclists to travel outside of the vehicle travel lane. This could include continuous shoulder bikeways on both sides of the road, uphill climbing lanes, intermittent shoulders in low visibility areas, or bike pull-out areas.

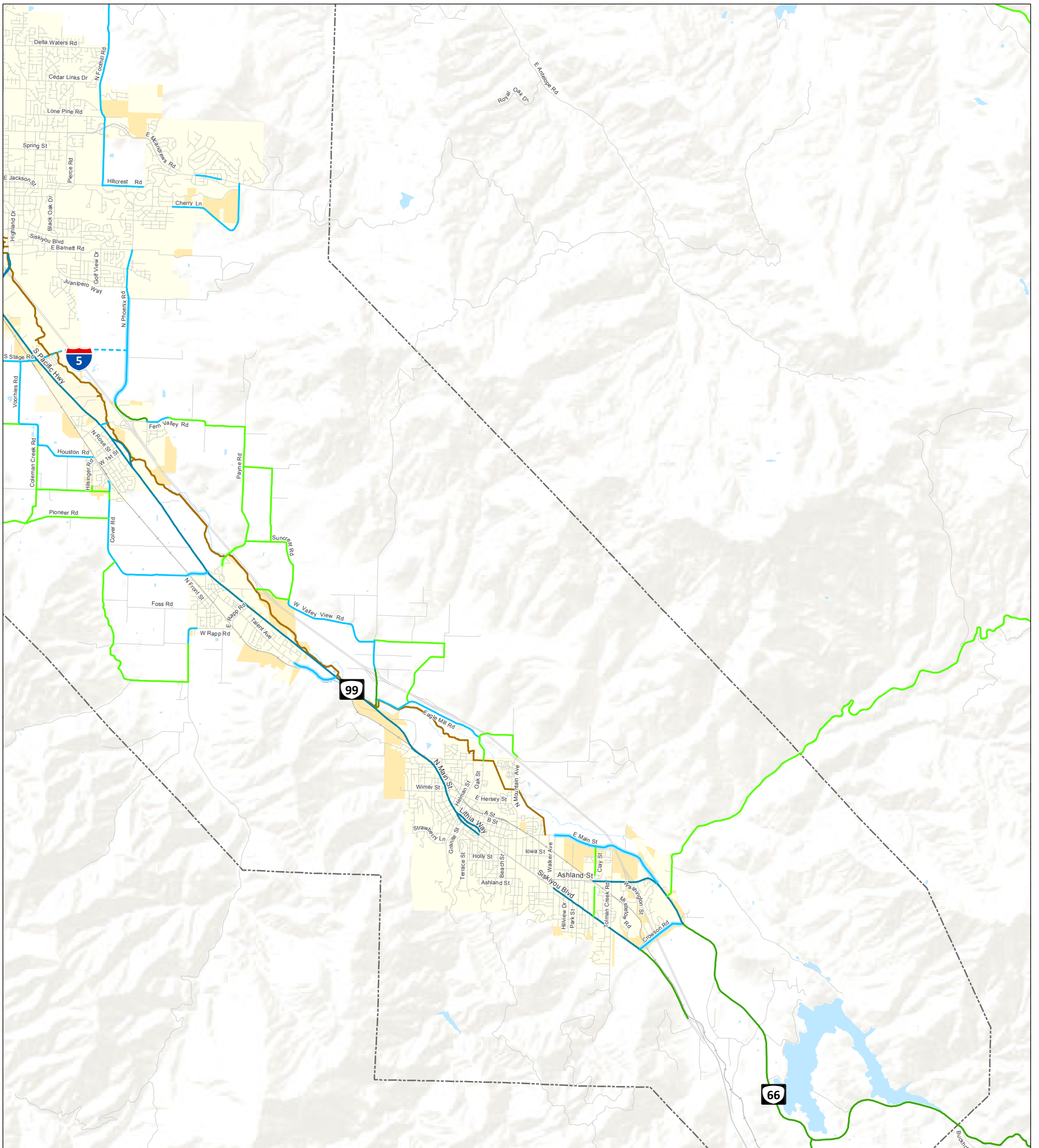
Shared Roadways are designated bike routes where bicyclists share the lane with vehicles on shared roadways. These routes could include signage indicating that the roadways is a bike route or other shared roadway treatments.

Enhanced Bicycle Facilities include a variety of different facility types and treatments and are intended to provide more separation and protection for cyclists from vehicles than a standard shoulder bikeway or bike lane. In rural areas, treatments include additional shoulder width or a parallel shared-use path. In urban areas, enhanced bikeway treatments include buffered bike lanes, cycle tracks or protected bikeways, or



**Bicycle Route Designations
Jackson County, OR**

**Figure
19B**



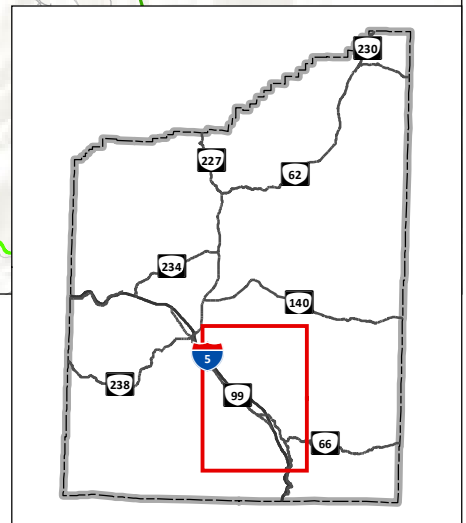
Bicycle Route Designations

- County Bikeway
- County Shared Roadway
- ODOT Bikeway
- ODOT Shared Roadway
- Enhanced Bikeway
- Enhanced Shared Roadway
- Bear Creek Greenway
- Rogue River Greenway
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

Bikeway are designated bike routes that provide space for cyclists to travel outside of the vehicle travel lane. This could include continuous shoulder bikeways on both sides of the road, uphill climbing lanes, intermittent shoulders in low visibility areas, or bike pull-out areas.

Shared Roadways are designated bike routes where bicyclists share the lane with vehicles on shared roadways. These routes could include signage indicating that the roadways is a bike route or other shared roadway treatments.

Enhanced Bicycle Facilities include a variety of different facility types and treatments and are intended to provide more separation and protection for cyclists from vehicles than a standard shoulder bikeway or bike lane. In rural areas, treatments include additional shoulder width or a parallel shared-use path. In urban areas, enhanced bikeway treatments include buffered bike lanes, cycle tracks or protected bikeways, or



**Bicycle Route Designations
Jackson County, OR**

**Figure
19C**

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- **Bikeways** include both shoulder bikeways in rural areas and bike lanes in urban areas. Jackson County’s current roadway standards require 4-foot shoulders along rural local streets (Local Street C), 5-foot shoulders along rural minor collectors, and 6-foot shoulders along rural major collectors and arterials. Shoulder bikeway designated routes should provide space for cyclists to travel outside of the vehicle travel lane where warranted. This could include continuous shoulder bikeways on both sides of the roadway ranging from 3-foot to 6-foot wide, depending upon the rural character of the area, but could also include uphill climbing lanes only, intermittent shoulders in low visibility areas, or bike pull-out areas. Shoulder bikeway designated routes typically have higher speeds and traffic volumes than routes where a shared roadway designation would be appropriate in both directions for the entire length of the roadway.
- **Enhanced Bikeways** include a variety of different facility types and treatments and are intended to provide more separation and protection for cyclists from vehicles than a standard shoulder bikeway or bike lane. In rural areas, treatments include additional shoulder width or a parallel shared-use path. In urban areas, enhanced bikeway treatments include buffered bike lanes, cycle tracks or protected bikeways, or parallel shared-use path.
 - **Buffered bike lanes** are on-street lanes that include a physical separation (“buffer”) between the bike lane and the vehicle traffic lane and/or the vehicle parking lane. Buffered bike lanes can be particularly helpful on streets with high vehicle speeds, high vehicle volumes, or relatively frequent parking turnover.
 - **Cycle tracks (or protected bikeways)** are exclusive bikeways separated from vehicle travel lanes, parking lanes and sidewalks. Cycle tracks can be one- or two-way and can be at the street level, sidewalk level, or somewhere in between. If at the street level, cycle tracks can be separated from the vehicle travel lane by raised medians, on-street parking, or bollards. If at the sidewalk level, a curb or median separates them from the vehicle travel lane, while different pavement color/texture separates the cycle track from the sidewalk. By separating cyclists from motor vehicles, cycle tracks can offer a higher level of security than bike lanes and are attractive to a wider spectrum of the public.
 - **Shared-use paths** are separated from the roadway by an open space or barrier. Shared-use paths are typically used by pedestrians and bicyclists as two-way facilities. Such paths can also be constructed on alignments separate from roadways to create more direct routes between destinations and also serve as elements of a recreational trail system.

Projects to complete the bicycle network and meet the needs of bicyclists and pedestrians in rural and urban areas are described below.

Bicycle and Pedestrian Improvements in Rural Areas

Bicycle and pedestrian needs within the rural areas are primarily addressed through the addition of shoulders or shared-use pavement markings or signs. Rural areas where concentrations of pedestrian activity warrant the use of enhanced bicycle and pedestrian facilities include Prospect, Foots Creek, Ruch, and Wimer.

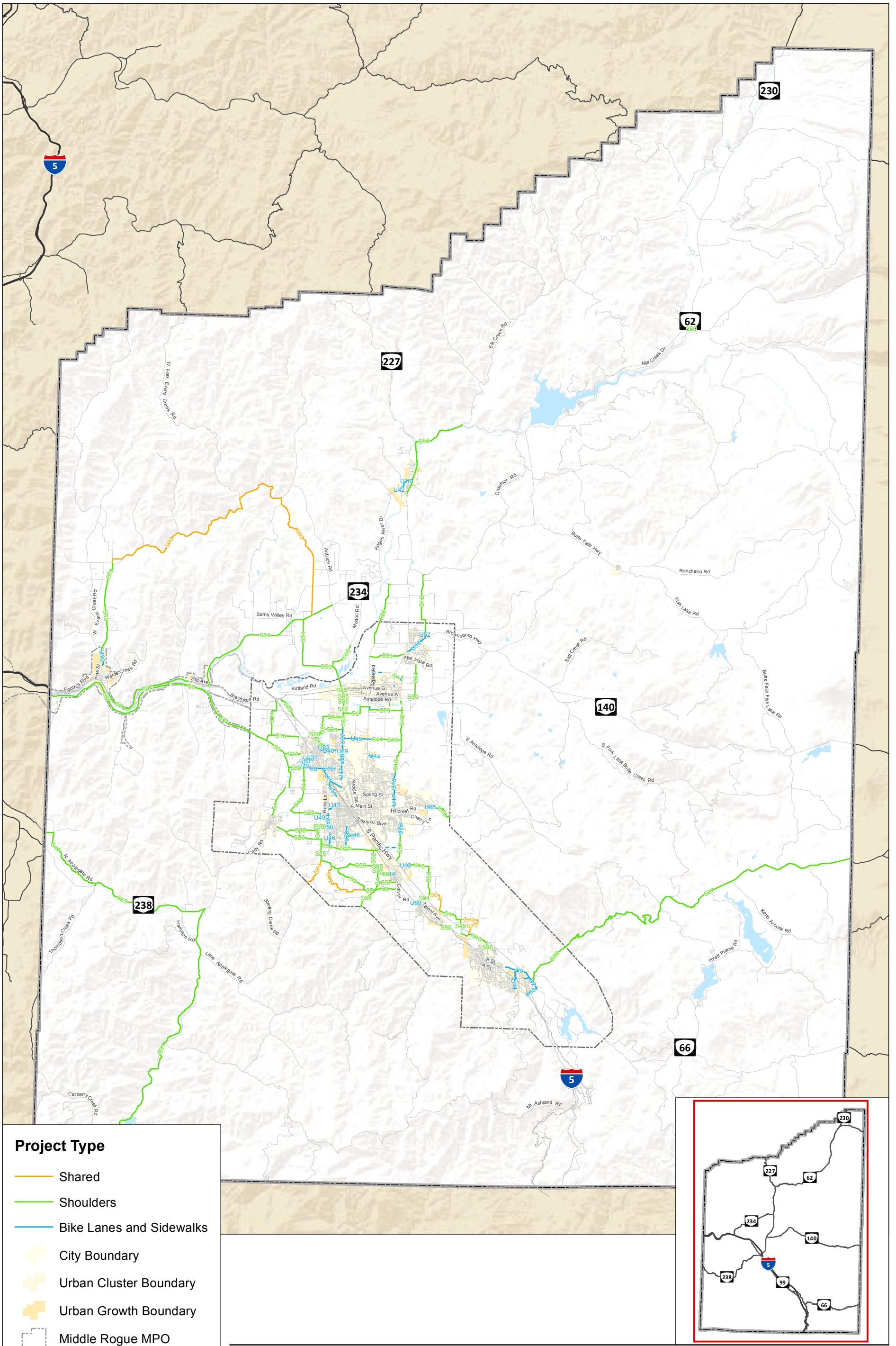
The bicycle and pedestrian improvement projects in rural areas are summarized in Table 18 and shown in Figure 20. Many rural shoulder projects identified in the roadway section (Table 13) of the TSP are also shown on Figure 20. Together, these projects are intended to address existing deficiencies in the pedestrian and bicycle systems in the rural areas. The projects evaluated as part of the TSP update were combined with other projects identified in previous planning documents to provide a comprehensive list of bicycle and pedestrian improvements for the Jackson County TSP. The bicycle and pedestrian improvement projects in *rural* areas include:

- Installing shared roadway pavement markings and signs along both sides of the roadway
- Installing shoulders along one or both sides of the roadways
- Installing enhanced bicycle and pedestrian facilities, such as wide shoulders and shared-use paths – See the Bicycle and Pedestrian Toolkit for additional information.

Table 18 summarizes the bicycle and pedestrian improvement projects in *rural* areas included in the TSP update. The projects are organized into Financially Constrained (Tier 1), Unconstrained (Tier 2), and Unconstrained (Tier 3) projects. Projects in Incorporated Areas and Projects on ODOT Facilities are provided in subsequent sections of the TSP.

Table 17: Bicycle and Pedestrian Projects in Rural Areas

Map ID	Location	Project Type	Project Description	Priority (Timeframe)	Cost (\$1,000)
S28	Upton Road from Peninger Road to Old Upton Road	Enhanced Shoulders	Install enhanced bike and pedestrian facilities – See the Bicycle and Pedestrian Toolkit for additional information	Tier 2	\$335
S29	W Main Street from Renault Avenue to Hanley Road (OR 238)	Enhanced Shoulders	Install enhanced bike and pedestrian facilities – See the Bicycle and Pedestrian Toolkit for additional information	Tier 2	\$1,815
S68	Meadows Road from E Evans Creek Road to OR 234	Shared Use	Install shared-use signs along both sides of the roadway	Tier 3	\$10,595
S69	Suncrest Road from Payne Road to West Valley View Road	Shared Use	Install shared-use signs along both sides of the roadway	Tier 3	\$2,380
S70	East Valley View Road from S Valley View Road to Butler Creek Road	Shared Use	Install shared-use signs along both sides of the roadway	Tier 3	\$1,640
S71	Butler Creek Road from E Valley View Road to Eagle Mill Road	Shared Use	Install shared-use signs along both sides of the roadway	Tier 3	\$1,720
S72	Dark Hollow Road from Pioneer Road (north) to Pioneer Road (south)	Shared Use	Install shared-use signs along both sides of the roadway	Tier 3	\$4,895
S73	E Evans Creek Road from Queens Branch Road to Meadows Road	Shared Use	Install shared-use signs along both sides of the roadway	Tier 3	\$24,435



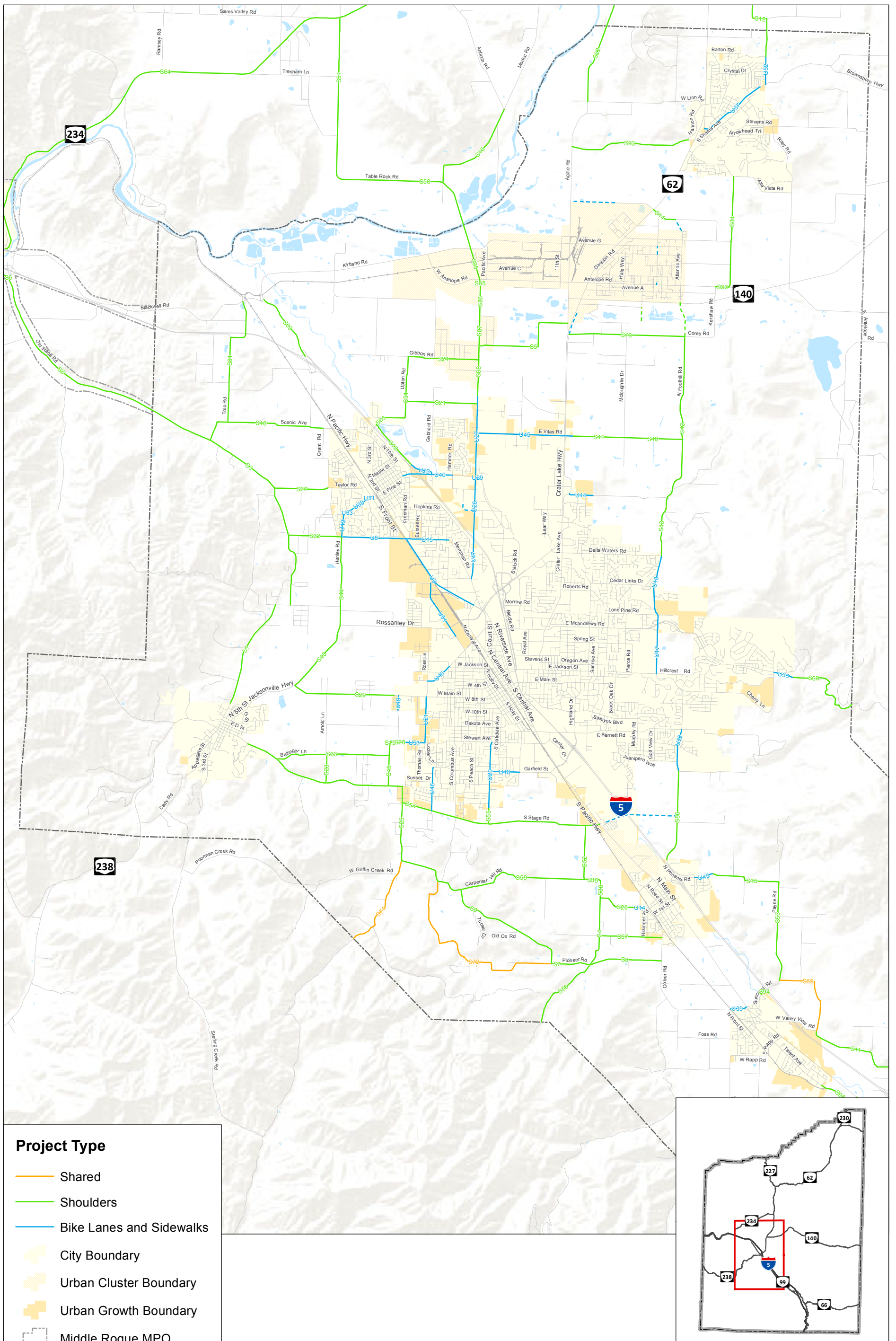
Project Type

- Shared
- Shoulders
- Bike Lanes and Sidewalks
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

**Bicycle and Pedestrian Projects
Jackson County, OR**

**Figure
20A**

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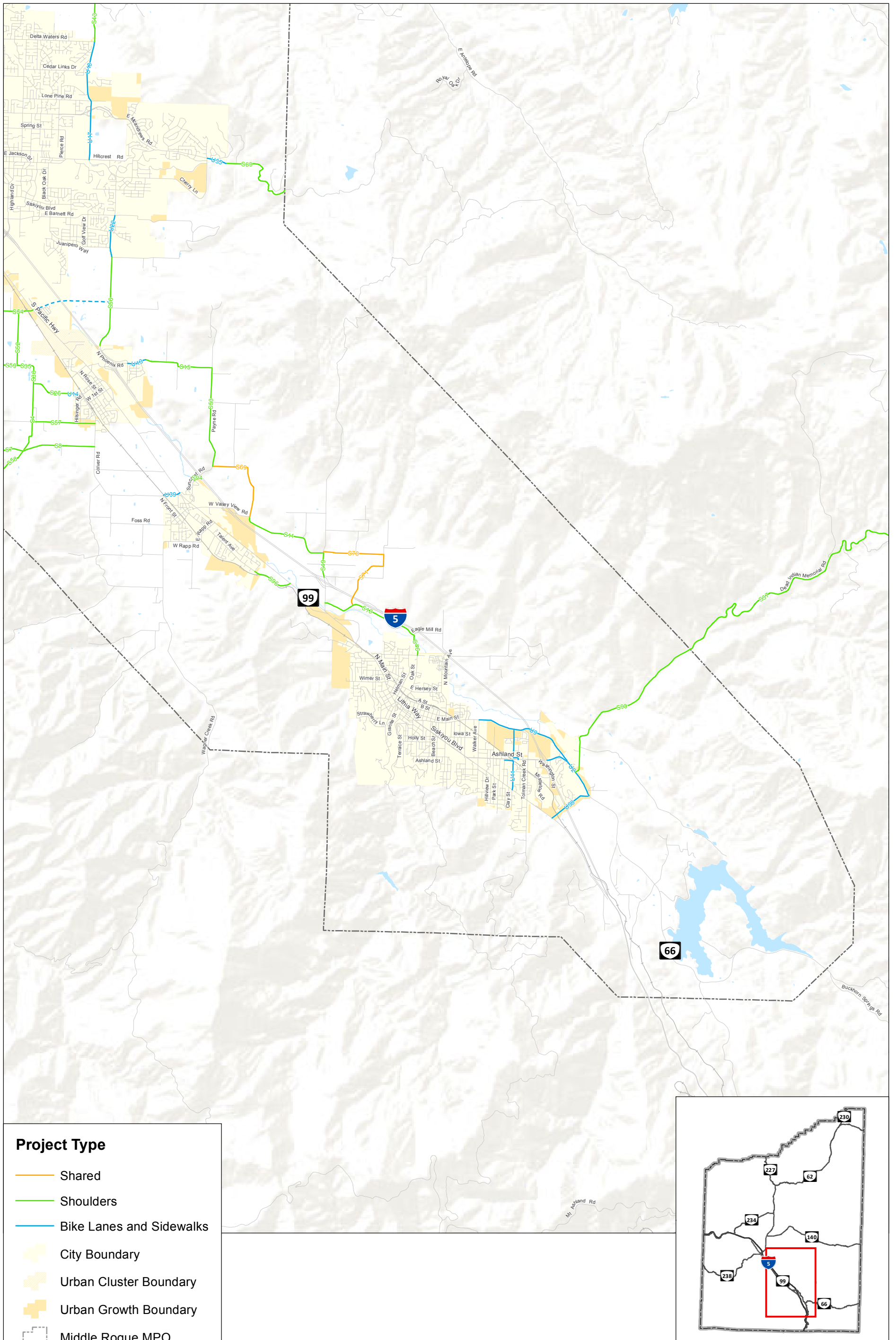


Project Type

- Shared
- Shoulders
- Bike Lanes and Sidewalks
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

**Bicycle and Pedestrian Projects
Jackson County, OR**

**Figure
20B**



Project Type

- Shared
- Shoulders
- Bike Lanes and Sidewalks
- City Boundary
- Urban Cluster Boundary
- Urban Growth Boundary
- Middle Rogue MPO
- Rogue Valley MPO
- County Boundary

**Bicycle and Pedestrian Projects
Jackson County, OR**

**Figure
20C**

Map ID	Location	Project Type	Project Description	Priority (Timeframe)	Cost (\$1,000)
S74	Griffin Creek Road from Pioneer Road to MPO limits	Shared Use	Install shared-use signs along both sides of the roadway	Tier 3	\$1,560
S79	Corey Road from OR 62 to Foothill Road	Shared Use	Install shared-use signs along both sides of the roadway	Tier 2	\$520
S80 ¹	Mill Creek Road from Butte Falls-Prospect Road to 1 st Street	Enhanced Shoulders	Install an enhanced shoulder on one or two sides of the roadway – See the Bicycle and Pedestrian Toolkit for additional information	Tier 3	\$70
S82 ¹	Foots Creek Road from approximately ¼ mile south of Rogue River Highway (OR 99) to Rogue River Highway (OR 99)	Enhanced Shoulders	Install an enhanced shoulder on one or two sides of the roadway – See the Bicycle and Pedestrian Toolkit for additional information	Tier 3	\$65
S83 ¹	Upper Applegate Road from approximately ½ mile south of OR 238 to OR 238	Enhanced Shoulders	Install an enhanced shoulder on one or two sides of the roadway – See the Bicycle and Pedestrian Toolkit for additional information	Tier 3	\$130
S84 ¹	E Evans Creek Road from approximately ¼ mile west of Covered Bridge Road to ¼ mile east of Covered Bridge Road	Enhanced Shoulders	Install an enhanced shoulder on one or two sides of the roadway – See the Bicycle and Pedestrian Toolkit for additional information	Tier 3	\$130
S94	Suncrust Road from Bear Creek Greenway (west) to Bear Creek Greenway (east)	Enhanced Shoulders	Install enhanced bike and pedestrian facilities – See the Bicycle and Pedestrian Toolkit for additional information	Tier 2	\$80
S95	Table Rock Road from Antelope Road to Kirtland Road	Enhanced Shoulders	Install enhanced bike and pedestrian facilities – See the Bicycle and Pedestrian Toolkit for additional information	Tier 2	\$360
S96	Talent Avenue from Alpine Way to OR 99	Enhanced Shoulders	Install enhanced bike and pedestrian facilities – See the Bicycle and Pedestrian Toolkit for additional information	Tier 2	\$855
Total Tier 1 Project Cost					\$0
Total Tier 2 Project Cost					\$3,965
Total Tier 3 Project Cost					\$47,620
Total Cost					\$51,585

1. Not show on Pedestrian and Bicycle Improvements map. Confirm location with Jackson County Roads.

Bicycle and Pedestrian Improvements in Urban Areas

Bicycle and pedestrian needs within urban areas are primarily addressed through the addition of on-street bike lanes and sidewalks. The bicycle and pedestrian improvement projects in urban areas are summarized in Table 19 and shown in Figure 20. Additional projects included in the roadway section of the TSP that includes bike lanes and sidewalks (see Table 13) are also shown in Figure 20. The alternatives developed as part of the TSP update were combined with other alternatives identified in the County’s current TSP, the RVMPO RTP, and several corridor studies. As shown in Table 19, several of the alternatives are included in the STIP, the MTIP, or the County CIP.

The alternatives for bicycle and pedestrian improvements in the *urban* areas include:

- Installing shared roadway pavement markings and signs along both sides of the roadway
- Installing bike lanes and sidewalks along both sides of the roadways consistent with Jackson County and ODOT standards
- Installing buffered bike lanes, cycle tracks, or multi-use paths

Table 19 summarizes the bicycle and pedestrian improvement projects in *urban* areas included in the TSP update. The projects are organized into Financially Constrained (Tier 1), Unconstrained (Tier 2), and Unconstrained (Tier 3) projects. Projects in Incorporated Areas and Projects on ODOT Facilities are provided in subsequent sections of the TSP.

Table 18: Bicycle and Pedestrian Projects in Urban Areas

Map ID	Location	Project Type	Project Description	Priority (Timeframe)	Cos (\$1,000)
U13	Fern Valley Road from N Phoenix Road to Phoenix City Limits	Bike Lanes and Sidewalks	Install bike lanes and sidewalks consistent with urban major collector standards	Tier 2	\$1,075
U27	Table Rock Road from Biddle Road to north Medford City limits	Bike Lanes and Sidewalks	Install enhanced bicycle and pedestrian facilities	Tier 1 (Long-term)	\$850
U29	Biddle Road from Table Rock Road to 500' east	Bike Lanes and Sidewalks	Install bike lanes and sidewalks consistent with urban minor arterial standards	Tier 3	\$285
U35	Hillcrest Road from Cherry Lane to Medford City limits	Bike Lanes and Sidewalks	Install sidewalks consistent with urban local standards	Tier 2	\$890
U38	Crowson Road from Siskiyou Boulevard to OR 66	Bike Lanes and Sidewalks	Install enhanced bike and pedestrian facilities	Tier 2	\$1,990
U39	Colver Road from west Talent City limits to OR 99	Bike Lanes and Sidewalks	Install enhanced bike and pedestrian facilities	Tier 2	\$410
U40	E Pine Street from 10 th Street to Hamrick Road	Bike Lanes and Sidewalks	Install enhanced bike and pedestrian facilities	Tier 2	\$1,875
Total Tier 1 Project Cost					\$850
Total Tier 2 Project Cost					\$6,240
Total Tier 3 Project Cost					\$285
Total Cost					\$7,375

Greenway Improvements

The following describes recommendations and projects for the Bear Creek Greenway and the Rogue River Greenway.

Bear Creek Greenway

The Bear Creek Greenway is an 18-mile paved multi-use path that links the cities of Ashland, Talent, Phoenix, Medford and Central Point; it is continuous from the Ashland Dog Park to Pine Street in Central Point. The Bear Creek Greenway Management Plan was prepared by RVCOG in collaboration with the Bear Creek Valley Foundation, Jackson County, RVMPO, ODOT, and the Cities of Ashland, Talent, Phoenix, Medford, and Central Point. The plan includes recommendations for the following operations:

- Public safety, emergency services, litter and vandalism control - This category includes recommendations for patrolling the Greenway, minimizing vandalism, and controlling the amount of litter.

- Surface management – This category includes recommendations for keeping the trail in good repair and free of surface hazards. It also includes shoulder and root damage repair, patching, resurfacing, and addressing drainage problems to extend the life of the asphalt.
- Vegetation management – This category includes recommendations for all the activities required to keep the trail open and free of vegetation hazards such as tree limbs, overgrowth, or hazard trees. It also covers maintenance of vegetation that could cause a safety problem, such as overgrown blackberry patches that obstruct line of sight or provide hiding places for potential assailants.
- Natural resources protection - This category includes recommendations for protecting natural resources while conducting maintenance activities, as well as a discussion of ways to intentionally enhancing natural resources.

The plan categorizes operations into essential or potential activities, recommends frequency, identifies preferred equipment and training needed, and approximates cost (in 2005\$). The plan also identifies capital improvements – including interpretive signs, information kiosks, off-street parking at trailheads, restrooms, drinking fountains, and benches – for the Greenway, and documents public feedback received regarding these improvements. However, these are identified only as potential improvements, with no cost estimates for the improvements or assignment of responsibility for the improvements.

Additional improvements for the Bear Creek Greenway that are not included in any other previous planning documents are summarized in Table 16.

Rogue River Greenway

The Rogue River Greenway is a planned multi-use path that will add 30 miles of path to the greenway system, connecting with the Bear Creek Greenway in Central Point and extending along the Rogue River to Grants Pass. The path will pass through Gold Hill and Rogue River. The path will provide commuting opportunities as well as access to areas for hiking, fishing, rafting, cycling, equestrian, whitewater, and wildlife viewing. Currently, only three sections are built – through Gold Hill, Gold Hill to Del Rio, and Depot Street Bridge through Valley of the Rogue State Park. Table 20 summarizes the remaining sections.

Table 19: Greenway Improvement Projects

Map ID	Location	Project Type	Project Description
G1	Bear Creek Greenway extension to ODOT Airport Path	Shared-use Path	Design and construct an extension of the Bear Creek Greenway from Table Rock Road to the planned ODOT Airport path
G2	Bear Creek Greenway extension to Immigrant Lake	Shared-use Path	Design and construct an extension of the Bear Creek Greenway to Emigrant Lake
G3	Bear Creek Greenway extension to Jacksonville	Shared-use Path	Design and construct an extension of the Bear Creek Greenway to Jacksonville
G4	Bear Creek Greenway extension to Eagle Point	Shared-use Path	Design and construct an extension of the Bear Creek Greenway to Eagle Point

G5	Rogue River Greenway from Dean Creek Trailhead to Kirtland Road	Shared-use Path/ Enhanced Shoulder/ Advisory Shoulder	Design and construct the Rogue River Greenway from the Dean Creek Trailhead to Kirtland Road
G6	Rogue River Greenway from Kirtland Tunnel to Gold Hill	Shared-use Path / Enhanced Shoulder/ Advisory Shoulder	Design and construct the Rogue River Greenway from the Kirtland Tunnel to Gold Hill
G7	Rogue River Greenway from Gold Hill to Rogue River	Shared-use Path	Design and construct the Rogue River Greenway from Gold Hill to Rogue River
G8	Rogue River Greenway from Rogue River to Grants Pass	Shared-use Path	Design and construct the Rogue River Greenway from Rogue River to Grants Pass

This segment may include on-street alignments of the Rogue River Greenway. See the Toolkit for On-street alignments options for creating low stress facilities.

PROJECTS IN INCORPORATED AREAS

The Projects in Incorporated Areas project list shown in Table 21 identifies needed transportation system improvements on County facilities located within incorporated areas. As shown, the list includes a mix of roadway, pedestrian, bicycle, and intersection projects. The projects are organized based on their locations within the incorporated areas. The County will only participate in these projects if they are part of a jurisdictional transfer agreement, and if the City or a third party agrees to cover at least half of the project cost and County funds are available to cover the remaining cost – See Policy 4.3.1.R.

Table 20: Projects in Incorporated Areas

ID	Location	Project Type	Project Description	Cost (1,000)
Ashland				
U41	Clay Street from Siskiyou Street to E Main Street	Bike Lanes and Sidewalks	Install bike lanes and sidewalks consistent with urban minor collector standard	\$2,660
R43	E Main Street from Walker Road to OR 66	Widen	Widen to 3-lane urban major collector standard	\$6,170
Central; Point				
I1	Hamrick Road/E Pine Street-Biddle Road	Monitor/ Turn Lane	Monitor traffic operations at the intersection following the completion of the Gebhard extension and potential heavy vehicle restrictions along Hamrick Road. If issues persist, install a second left-turn lane at the eastbound approach and optimize the signal timing/phasing	\$950
R47	Beall Lane from Merriman Road to Front Street (OR 99)	Widen	Widen to 3-lane urban minor arterial standard	\$3,005
U31	W Pine Street from Haskell Street to Glenn Way	Bike Lanes and Sidewalks	Install bike lanes and sidewalks consistent with urban minor arterial standards	\$165
R55	W Pine Street from Glenn Way to Vincent Avenue	Widen	Widen to 3-lane urban minor arterial standard	\$1,265
R58	W Pine Street from Vincent Avenue to Hanley Road	Widen	Widen to 3-lane urban minor arterial standard	\$485
Eagle Point				
U37	Royal Avenue from Brownsborro Highway to Eagle Point City limits	Bike Lanes and Sidewalks	Install bike lanes and sidewalks consistent with urban major collector standard	\$5,255
R88	Reese Creek Road from north Eagle Point City limits to Brownsboro Highway	Widen	Widen to 2-lane urban minor collector standard	\$715
Shady Cove				

ID	Location	Project Type	Project Description	Cost (1,000)
R87	Rogue River Drive from the Rogue River City limits to Walnut Lane	Widen	Widen to 3-lane urban major collector standard	\$2,140
R45	Rogue River Drive from Walnut Lane to OR 62	Widen	Widen to 3-lane urban major collector standard	\$3,660
Medford				
I9	Foothill Road/McAndrew Road WB Ramp	Traffic signal/ Roundabout	Widen Foothill Road to provide a center two-way left-turn lane and install a traffic signal or roundabout when warranted	\$350
I10	Foothill Road/McAndrew Road EB Ramp	Traffic signal/ Roundabout	Widen Foothill Road to provide a center two-way left-turn lane and install a traffic signal or roundabout when warranted	\$350
I11	Foothill Road/Lone Pine Road	Turn Lane	Install a separate left-turn lane at the northbound approach	\$150
I27	Crater Lake Avenue/E Vilsa Road	Traffic signal/ Reconfigure	Realign Crater Lake Avenue and install a traffic signal when warranted	\$1,500
R48	Foothill Road from Hillcrest Road to McAndrews EB Ramp	Widen	Widen to 3-lane urban minor arterial standard	\$3,230
R49	Foothill Road from McAndrews EB Ramp to Delta Waters Road	Widen	Widen to 3-lane urban minor arterial standard	\$5,600
R50	Kings Highway from Medford UGB to Stewart Avenue	Widen	Widen to 3-lane urban minor arterial standard	\$5,295
R51	N Phoenix Road from Medford City limits to Barnett Road	Widen	Widen to 3-lane urban minor arterial standard	\$1,350
R89	McAndrews Road from Ross Lane to Jackson Street	Widen	Widen to 3-lane urban minor arterial standard	\$1,155
R90	Coker Butte Road from Crater Lake Avenue to east Medford UGB	Widen	Widen to 5-lane urban major arterial standard	\$2,615
R91	Vilas Road from Table Rock Road to east Medford UGB	Widen	Widen to 5-lane urban major arterial standard	\$7,805
R92	Orchard Home Drive from Cunningham Avenue to S Stage Road	Widen	Widen to 2-lane urban minor collector standard	\$2,570
R93	Table Rock Road from Merriman to Lone Pine Creek Bridge	Widen	Widen to 3-lane urban minor arterial standard	\$2,885
R94	Garfield Street from Kings Highway to Holly Street	Widen	Widen to 2-lane urban minor collector standard	\$1,360
R95	Oak Grove Road from Medford UGB to W Main Street	Widen	Widen to 2-lane urban minor collector standard	\$360
R96	Stewart Avenue from west Medford UGB to Lozier Lane	Widen	Widen to 3-lane urban minor arterial standard	\$1,355
R97	Sage Road from Posse Lane to Ehrman Way	Widen	Widen to 3-lane urban major collector standard	\$3,245
Total Cost				\$47,115

PROJECTS ON ODOT FACILITIES

The Projects on ODOT Facilities project list shown in Table 22 identifies the transportation system improvement projects along ODOT facilities that were evaluated as part of the TSP update. These projects are largely not identified in the existing Interchange Area Management Plans (IAMP) or the Corridor Plans. As shown, the list includes a mix of roadway and intersection projects along ODOT

facilities. The projects are organized based on the outcome of the prioritization process from highest priority score to lowest priority score based on the County's transportation system plan goals.

Table 21: Projects on ODOT Facilities (Non-IAMP/Corridor Plan Projects)

Map ID	Location	Type	Description	Cost (1,000)
S81 ¹	Rogue River Highway (OR 99) from approximately ¼ mile west of Footh Creek Road to ¼ mile east of Footh Creek Road	Shoulders	Install an enhanced shoulder on one or two sides of the roadway	\$130
S67	OR 99 from County limits to Gold Hill	Shoulders	Widen shoulders consistent with ODOT standards	\$11,155
I8	OR 62/Vilas Road	Monitor	Monitor traffic operations at the intersection following construction of the OR 62 Bypass to determine if the turning movements are as high as projected	\$150
S66	OR 62 from Maple Drive to Elk Creek Road	Shoulders	Widen shoulders consistent with ODOT standards	\$8,400
I7	OR 62/OR 234-Del Isle Way	Turn Lane	Restripe the north leg of the intersection to allow two-stage left-turn movements from OR 234 to OR 62.	\$150
S64	OR 234 from Antioch Road to 4th Avenue (Gold Hill)	Shoulders	Widen shoulders consistent with ODOT standards	\$15,845
I6	OR 62/OR 140-Leigh Way	Monitor/Reconfigure	Monitor traffic operations at the intersection following completion of STIP Project #17471. If issues persist widen OR 62 to 7 lanes from south of OR 140 to Antelope Road	\$150
I5	Kershaw Road/OR 140	Monitor/Restrict Movements	Monitor traffic operations at the intersection following construction of the Foothill Road extension to OR 140. If Issues persist, restrict left and through movements from Kershaw Road	\$50
S65	OR 238 from Upper Applegate Road to Thompson Creek Road	Shoulders	Widen shoulders consistent with ODOT standards	\$10,050
I24	OR 140/Foothill Road-Atlantic Avenue	Traffic signal/Roundabout	Install a traffic signal or roundabout when warranted	\$250
S48	OR 238 from Rossanley Drive to W Main Street	Shoulders	Install 6-foot shoulders consistent with rural major collector standards	\$2,890
TS3	Kershaw Road/OR 140	Intersection Improvement	Install an intersection collision avoidance system. These systems warn motorists along the main line to watch for entering traffic on the minor street when flashing	\$50
TS6	Hanley Road (OR 238)/W Main Street	Intersection Improvement	Reconfigure the intersection as a three-way stop. Install a traffic signal when warrants are met.	\$50
TS8	Hanley Road (OR 238) from Rossanley Drive to Jacksonville City Limits	Segment Improvement	Provide drivers with more warning and feedback on approach to the curves. Treatments include guardrails, shoulder rumble strips, and chevrons and other curve warning signage	\$50
TS10 ¹	OR 99/Rogue Valley Road	Intersection Improvement	Convert Elm Street to right in right out on both sides of highway, install median barrier, no work at Table Rock Road at this time.	\$50
TS11 ¹	OR 99/Rogue Valley Road	Intersection Improvement	Extend RED clearance	\$5
R81 ¹	OR 62 Bypass from Delta Waters to Vilas	New Roadway	Unit 3: new 4-lane expressway	\$10,500
U2	OR 66 from I-5 to Crowson Road	Bike Lanes and Sidewalks	Install bike lanes and sidewalks consistent with ODOT standards	\$1,975

U3	OR 99 from Table Rock Road to Beall Lane	Bike Lanes and Sidewalks	Install bike lanes and sidewalks consistent with ODOT standards	\$3,695
Total Cost				\$65,595

1. Not show in Roadway Improvements map. Confirm location with Jackson County Roads.

All remaining roadway and intersection projects along ODOT facilities that are identified in an IAMP or Corridor Plan are summarized in *Attachment B*.

AIR, WATER RAIL, AND PIPELINE PLAN

The following describes identified needs and planned improvements related to the air, water, rail, and pipeline modes. Projects with a relationship to the Jackson County TSP are identified.

Air Plan

Of the 23 air transportation facilities in Jackson County, only four are open to the public. These are Rogue Valley International-Medford Airport, Ashland Municipal-Sumner Parker Field, Pinehurst State Airport, and Prospect State Airport.

The Rogue Valley International-Medford Airport is by far the busiest airport in the County. Its service area extends into northwest California, with commercial scheduled service provided by America West, Horizon Air, United Airlines and United Express. The Airport Master Plan forecasts an annual growth rate of 2.5% in enplanements-per-capita. The Master Plan also outlines a capital improvement program of \$35,597,000 for the next 20 years, including, among other items:

- Constructing a new interchange at Biddle Road (\$2,000,000), and
- Re-aligning 1,200 feet of Milligan Way (\$100,000).

The Oregon Aviation Plan identifies various needs at public airports. Technical Memorandum #1 in Volume II of the TSP provides details of these needs at the public airports in Jackson County. The plan sets system-level program priorities and targets resources on a core system of airports. Seventy airports are included in the statewide core system, including all four public airports in Jackson County.

No other County plans or projects have been identified for the air system within Jackson County; however, several projects are identified under the roadway element and the bicycle and pedestrian element that will improve access to the Rogue Valley International Airport

Water Plan

Rogue River runs through Jackson County and does not serve as a major water transportation route. No County plans or projects have been identified for the water system within Jackson County; however, several projects are identified under the roadway element and the bicycle and pedestrian element that will improve access to the water system facilities within Jackson County, which are primarily used for recreational purposes.

Rail Plan

Rail service in Jackson County is provided by the Central Oregon & Pacific Railroad (CORP), a short-line operator that serves the I-5 corridor, connecting with the Union Pacific Railroad in Black Butte, California and at the Springfield Junction near Eugene, Oregon. Most of the traffic originating in Jackson County heads south to California over one of the most rugged rail lines in the western part of the United States, according to the 2001 Oregon Rail Plan. The portion of the line south from Ashland to Black Butte has no weight restrictions; however, tunnels both north and south of the Rogue Valley are inadequately sized to accommodate large containers. The dimensional restrictions in the Siskiyou Mountains prevent Jackson County shippers from opening markets to California.

CORP track is maintained to FRA Class 1 and 2 conditions. Class 1 limits freight trains to 10 mph and passenger trains to 15 mph, and Class 2 limits freight trains to 25 mph and passenger trains to 30 mph. The 1992 Oregon Transportation Plan calls for maintaining track in at least Class 2 condition whenever the upgrading can be done with a favorable cost-benefit ratio.

The White City Terminal Railroad (WCTR) operates in an industrial park at White City. The major commodities moved by WCTR are chemicals and wood products. WCTR is in FRA excepted track status (lower than Class 1, with a maximum freight speed of 10 mph and restrictions on use), except for certain tracks, which are used to carry hazardous materials, which are maintained in Class 1 condition.

The Oregon Rail Plan surveyed shippers and all of the state's short line railroads. According to the responses, shippers prefer a standard freight car gross weight of 286,000 pounds, compared to a 263,000-pound car. To accommodate heavy cars, most short-line railroads would need to rehabilitate their tracks and facilities. The Central Oregon & Pacific Railroad identified funding needs of \$6 million for cross-tie renewal, surface, and line improvements to accommodate the heavier cars. Tunnel improvements needs for the CORP to accommodate double-stacks are currently unknown; the 2001 Oregon Rail Plan reports that the BNSF estimated an average of slightly more than \$1 million per tunnel for clearance improvements on its line to accommodate double-back containers.

The TSP identifies a CORP Line Rehabilitation Economic Analysis study to evaluate the potential economic benefits of public investment in improvements to accommodate heavier rail cars and double-stacked containers. This study would provide a more precise estimate of improvement costs than the planning-level estimate provided in the Oregon Rail Plan, would estimate potential usage of the improved line by shippers, and would estimate the economic benefits that would result, leading to recommendations on whether and how to proceed. Past freight mobility studies have identified the desire among shippers for such improvements. Funding for the study could be pursued through the Oregon Economic and Community Development Department (from lottery dollars), and the County might also wish to consider partnering with Josephine and Siskiyou Counties, which could also benefit from railroad improvements.

Pipeline Plan

The private utilities providing natural gas and electricity to the County identified no long-term needs with their transmission systems. No other County plans or projects have been identified for the pipeline system within Jackson County.

Section 6 Transportation Financing Plan

TRANSPORTATION FINANCING PLAN

This section identifies and summarizes existing and potential future funding sources available for implementing the Jackson County Transportation System Plan (TSP). The funding information provides context for evaluating projects and defining priorities that will allow the County to utilize all available funding opportunities and maximize current resources to preserve and improve current infrastructure.

Current and Historical Funding Sources

Key funding sources that have contributed to transportation improvement projects within Jackson County over the last several years include the Surface Transportation Program, system development charges (SDCs), the County's Road Fund, and federal grants.

Surface Transportation Program

The Surface Transportation Program (STP) provides flexible funding that may be used by states and localities, such as Jackson County, for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. Jackson County currently receives an average of \$550,000 each year in STP funds. Every year the county dedicates \$25,000 to spend on small safety projects. Every other year the County spends the remaining \$525,000 on their pavement overlay program. The balance, approximately \$525,000 every other year, is spent on capital improvement projects identified in the TSP.

System Development Charges

System Development Charges (SDC) are fees assessed on development for impacts created to public infrastructure. All revenue is dedicated to transportation capital improvement projects designed to accommodate growth. The County can offer SDC credits to developers that provide public improvements beyond the required street frontage, including those that can be constructed by the private sector at a lower cost. For example, an SDC credit might be given for providing end-of-trip bike facilities within the new development. Jackson County currently receives an average of \$290,000 each year in SDC funds.

General Road Fund

The County's General Road Fund revenues are primarily funded through the State gas tax and vehicle registration fees, which are projected to flatten (less than inflation). The expenditures of the General Road Fund are restricted for construction, reconstruction, improvement, repair, maintenance, operation, use and policing of public highways, roads and streets within the County. The County currently receives an average of \$12,000,000 each year in revenues for the General Road Fund, of which \$100,000 is earmarked for capital improvement projects identified in the TSP. The rest is used for road maintenance and administration.

Federal Grants

In addition to STP funds, Jackson County currently receives an average of \$750,000 each year in federal grants, such as the Congestion Mitigation and Air Quality (CMAQ) program. Additional information on these programs is provided below.

The current annual average transportation funding sources, expenditures, and budget for capital improvements are summarized in Table 23.

Table 22: Current Transportation Funding Sources

Funding Source	Annual Average
Surface Transportation Program (STP)	\$550,000
System Development Charges (SDC)	\$290,000
General Road Fund	\$12,000,000
Federal Grant Funds	\$750,000
SubTotal	\$13,590,000
Pavement Overlay Program	(\$262,500) ¹
Maintenance and Administration	(\$11,900,000)
Total Capital Budget	\$1,427,500

1. The average annual amount spent on the County's pavement overlay program is $\$550,000 - \$25,000 / 2 = \$262,500$.

Based on the information shown in Table 23, Jackson County has an average of \$1,427,500 available each year for capital projects identified in the TSP, including \$25,000 earmarked for safety improvements.

Other Revenue Sources

Jackson County has historically benefited from a number of other revenue sources, such as transportation improvement grants and other miscellaneous programs administered by the Oregon Department of Transportation (ODOT) and the Federal Highway Administration (FHWA). Although they shouldn't be considered consistent and reliable funding sources, they have contributed (or will contribute) to several major projects currently identified in the County's Capital Improvement Plan (CIP). These other revenue sources include:

- ODOT's Statewide Transportation Improvement Program (STIP),
- FHWA's Congestion Mitigation and Air Quality (CMAQ) program,
- ODOT's Bicycle and Pedestrian Grant Program (This particular program ended as a standalone solicitation process in 2012. Grants now distributed through the ODOT STIP "Enhance" process), and
- The Bear Creek and Rogue River Greenway Foundations.

Additional information on these revenue sources as well as additional potential revenue sources is included in *Attachment C*.

Funding Forecast

Table 24 below summarizes the average annual and future forecasted funds potentially available for capital transportation projects in Jackson County. It does not include funding for either the Bear Creek or Rogue River Greenways.

Table 23: Funding Forecast

Revenue Source	Average Annual	5-Year Forecast	10-Year Forecast	20-Year Forecast
Surface Transportation Program (STP) ¹	\$287,500	\$1,437,500	\$2,875,000	\$5,750,000
System Development Charges (SDC)	\$290,000	\$1,450,000	\$2,900,000	\$5,800,000
Road Fund	\$100,000	\$500,000	\$1,000,000	\$2,000,000
Federal Grant Funds	\$750,000	\$3,750,000	\$7,500,000	\$15,000,000
Total	\$1,428,000	\$7,138,000	\$14,750,000	\$28,550,000

1 Excludes \$550,000 dedicated to pavement overlays every other year.

Based on the information shown in Table 24, Jackson County anticipates approximately \$28,550,000 available for transportation improvement projects on County facilities available over the next 20 years, of which \$500,000 (\$25,000 per year for 20 years) is earmarked for small safety projects. The County intends to preserve approximately \$2,400,000 of those funds as matching funds for projects on County facilities in incorporated areas and for match to federal funds for bridges and culverts.

In addition to the funds shown in Table 24, the County currently has \$7,660,000 to improve Table Rock Road from the Bear Creek Greenway to Biddle Road (R54). The overall project cost is \$7,885,000; therefore, \$225,000 must still be provided from the 20 year funding resource as indicated below. The County also currently has \$7,155,000 to improve Lozier Lane from Stewart Avenue to West Main Street (R59). The overall project cost is \$7,500,000; therefore, \$345,000 must still be provided from the 20 year funding resource as indicated below.

Additional information on the current and potential future funding sources is provided in *Attachment C*. Table 25 provides a brief summary of each of the sources described in *Attachment C* and their applicability to the TSP update.

Table 24: Funding Source Overview

Source	Program	Roadway (All Modes)	TDM	Bike/Pedestrian	Transit	Congestion Reduction	Safety	Infrastructure	Non-Infrastructure (Engineering or Programs)	Air/Rail/Marine
Federal	CMAQ	x	x	x	x	X		x	x	
	HSIP	x					X	x	x	
	TAP			x	x			x	x	
State	ARTS	x					X	x	x	
	ConnectOregon			x	x			x		x
	STIP (Fix-It)	x						x		
	STIP (Enhance)	x		x	x			x	x	
	TGM	x	x	x	x	X	X		x	
Local	EID	x		x		X	X	x		
	Local Bond Measure	x		x	x	X	X	x	x	
	Fuel Tax/Registration Fee	x				X		x		
	LID	x		x				x		
	Road District	x						x		

Note: See Attachment C for a description of acronyms.

Table 26 summarizes the total cost of the Financially Constrained (Tier 1) Project List for the Jackson County TSP update along with the Unconstrained (Tier 2) and Unconstrained (Tier 3) Project Lists.

Table 25: Total County Project Cost

Project List	Priority	Cost (\$1,000)
Financially Constrained (Tier 1) Project List	Near-Term	\$3,320
	Medium-Term	\$7,700
	Long-Term	\$16,145
Subtotal Total		\$27,165
Unconstrained (Tier 2) Project List		\$88,915
Unconstrained (Tier 3) Project List		\$181,635
Total		\$297,715
Available Funds		\$28,550
Funding Gap		\$269,165

As shown in Table 26, the total cost of the Financially Constrained (Tier 1) project list is \$27,165,000, while the total cost of all transportation improvements (Tier 1, Tier 2, and Tier 3) is \$297,715,000. While funding is anticipated to be adequate for the Tier 1 – Financially Constrained projects, the full TSP improvement project list has a funding gap of approximately \$269,165,000 to fully implement.

Project prospectus sheets for the Tier 1 projects are included in *Attachment D*.

Section 7 Transportation Planning Rule
Compliance

TRANSPORTATION PLANNING RULE COMPLIANCE

In 1991, the Oregon Transportation Planning Rule (TPR) was adopted to implement State Planning Goal 12, Transportation Planning. The Transportation Planning Rule requires all jurisdictions to complete a Transportation System Plan, including policies and ordinances to implement that plan.

The applicable portion of the Transportation Planning Rule is found in OAR Section 660-12-045, Implementation of the Transportation System Plan. In summary, the Transportation Planning Rule requires that local governments revise their land use regulations to implement the Transportation System Plan (TSP) in the following manner:

- Amend land use regulations to reflect and implement the Transportation System Plan.
- Clearly identify which transportation facilities, services, and improvements are allowed outright, and which will be conditionally permitted or permitted through other procedures.
- Adopt land use or subdivision ordinance measures, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions, to include the following topics:
 - access management and control;
 - protection of public use airports;
 - coordinated review of land use decisions potentially affecting transportation facilities;
 - conditions to minimize development impacts to transportation facilities;
 - regulations to provide notice to public agencies providing transportation facilities and services of land use applications that potentially affect transportation facilities;
 - regulations assuring that amendments to land use applications, densities, and design standards are consistent with the Transportation System Plan.
- Adopt land use or subdivision regulations for urban areas and rural communities to provide safe and convenient pedestrian and bicycle circulation and bicycle parking, and to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel.
- Establish street standards that minimize pavement width and total right-of-way.

Technical memorandum #8 provides a preliminary draft of changes to the Jackson County Land Development Ordinance (LDO) that will likely be needed to fully implement the updated TSP and comply with the TPR. These draft changes are intended to provide staff, Planning Commission, and Board of Commissioners with a preliminary look at the suggested modifications to the LDO that may be recommended for adoption as part of the TSP planning process. The 2003 Recommended Jackson County Land Development Ordinance was the basis of this review.