

2018 Linn County Transportation System Plan: Volume 1



April 2018

Linn County Transportation System Plan

Prepared for:

Linn County

Oregon Department of Transportation

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A special acknowledgement goes out to the Linn County residents, property owners, and visitors who attended community workshops or submitted comments, and to the Oregon Department of Transportation, which financed the project and provided invaluable staff support.

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Volume 2 Contents

The contents of Volume 2 represent an iterative process in the development of the TSP. Refinements to various plan elements occurred throughout the process as new information was obtained. In all cases, the contents of Volume 1 supersede those in Volume 2.

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The Context

Located in Oregon’s Central Willamette Valley, Linn County is home to several cities, including portions of Albany, Brownsville, Gates, Halsey, Harrisburg, Idanha, Lebanon, Lyons, Mill City, Millersburg, Scio, Sodaville, Sweet Home, Tangent and Waterloo (see Figure 1).

The county provides a convenient location for both commuters and recreational activities, with residents in the west part of the county generally within a one-hour drive of the Salem, Eugene and Corvallis-Albany areas, and residents near the eastern county line generally within a one-hour drive of the Cascade Mountain range and its abundance of recreational activities.

The major transportation routes through the county include Stayton-Scio Road, Diamond Hill Drive, Brewster Road, Seven Mile Lane, Oakville Road, Peoria Road and several highways (e.g. Interstate 5, US 20, OR 22, OR 34, OR 99E, OR 126, OR 164, OR 226 and OR 228). Interstate 5 (I-5) runs through the western portion of the county, connecting the county to Eugene, Salem and the Portland metropolitan area. US 20 and OR 22 run east-to-west through the county, connecting the eastern part of the county with I-5. Stayton-Scio Road and Diamond Hill Drive are county facilities, providing connections between OR 226 and OR 22, and I-5 and OR 99E, respectively.

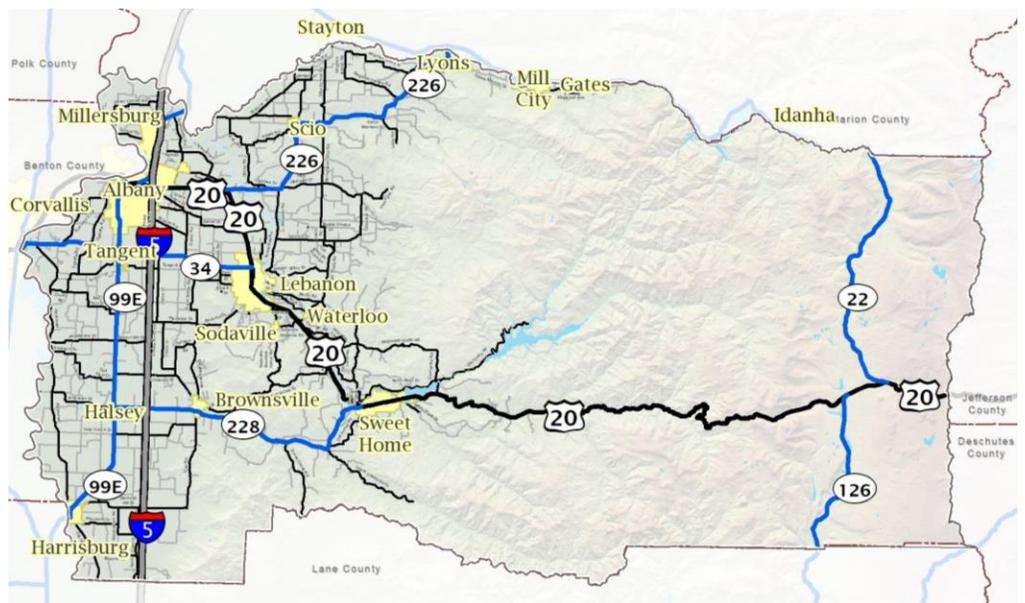


Figure 1: Linn County

The Challenge

Linn County, along with many other agencies throughout Oregon, face the challenge of addressing aging transportation infrastructure with escalating maintenance costs and very little funding. The county must balance its investments to ensure that it can develop and maintain the transportation system adequately to serve the county and everyone who travels in it. To address this challenge, the county maintains an up to date Transportation System Plan (TSP).

Engaging Seniors, Non-English Speakers, and Low Income Populations

As part of the outreach to engage citizens and stakeholders in the TSP project, the county made special efforts to involve seniors, minority and low income groups (For more information on the public involvement plan for the TSP, see Volume 2, Section B).

According to the 2010 Census, over 90 percent of the population of Linn County is Caucasian and nearly ten percent of the population is of Hispanic or Latino origin. Additionally, nearly 20 percent of individuals within Linn County were below the poverty line in 2013, which is above average for Oregon.

Given the considerable size of the Hispanic or Latino community in Linn County, written materials and translation service were available in Spanish upon request.

To assist those that cannot drive, and help engage senior citizens, community workshops were held at locations accessible via transit, walking or biking when feasible. Materials on the project website were downloadable; hard copies of project documents were available upon request for those without internet access.

Project advertisements were posted in locations where senior citizens and Hispanic or Latino community members in the county were likely to see them.

The Transportation System Plan

The 2018 TSP prepares Linn County for accommodating traffic within the county in the best manner possible through 2040. The TSP's big picture view allows it to guide the county in developing and maintaining acceptable transportation network performance more efficiently than a piecemeal or unorganized approach.

As part of the transportation element of the county's Comprehensive Plan, the TSP embodies the community's vision for an efficient, safe, and diverse transportation system. The TSP attempts to balance the needs of walking, bicycling, driving, transit and freight with strategies and projects that are important for protecting and enhancing the quality of life in Linn County through the next 20 years. The TSP is a collection of current inventory, forecasts, past and current project ideas, decisions, and standards housed in a single document. The county, local cities, private developers, and state (e.g., Oregon Department of Transportation) or federal agencies all have a role in implementing elements of the TSP.

By setting priorities for available and anticipated funds in the 20-year planning period, the TSP provides a foundation for budgeting, grant writing, and requiring public improvements of private development. It also identifies and advocates for the projects and services that the county would like to implement, but cannot reasonably expect to fund during the next 20 years.

This plan is primarily intended to serve areas of the county outside of the urban growth boundaries of Albany, Brownsville, Gates, Halsey, Harrisburg, Idanha, Lebanon, Lyons, Mill City, Millersburg, Scio, Sodaville, Sweet Home, Tangent and Waterloo. Many of these cities have their own TSPs, however the county plan does apply to any streets under the county's jurisdiction within these cities.

The State of Oregon requires a TSP to integrate the county's transportation investment plans (including projects along state

highways) into the statewide transportation system. The Oregon Department of Transportation (ODOT) typically relies on local agencies to identify needed investments along state highways within their planning area. This plan identifies needed investments along I-5, US 20, OR 22, OR 34, OR 99E, OR 126, OR 164, OR 226 and OR 228 in Linn County.

The Process

The Linn County TSP is the result of a collaboration among various public agencies, key stakeholders, the community, and the project team of county staff, ODOT, and consultants. Throughout this process, the project team took time to understand multiple points of view, obtain fresh ideas, and encourage broad participation, as it collected and analyzed data and possible solutions. The project timeline and key meetings are illustrated in Figure 2.

The Project Advisory Committee (PAC), comprised of agency technical staff reviewed and commented on each memorandum and met with the project team at key stages during the project. This group helped the project team find agreement on project issues and alternatives. The project team met with the PAC three times, and held two meetings with the Board of Commissioners (For a summary of the meetings, see Volume 2, Section B). The team held two community workshops at key stages, and interviewed seven local stakeholders to give residents an opportunity to learn more about the project and express their thoughts on how to improve the transportation system (For a summary of the stakeholder interviews, see Volume 2, Section B).

Goals and Objectives	Transportation Conditions	Transportation Solutions	Draft TSP	Final TSP 
Develop project goals, objectives and evaluation criteria.	Review the transportation system to identify current conditions and problems, and determine future needs through 2040.	Identify and evaluate solutions and projects for the identified needs of the transportation system through 2040.	Incorporate the solutions and projects that best meet the project goals and associated evaluation criteria into a Draft TSP.	Adopt Final TSP.
<ul style="list-style-type: none"> • PAC Meeting #1 • Stakeholder Interviews 	<ul style="list-style-type: none"> • PAC Meeting #2 • Public Event #1 and #2 	<ul style="list-style-type: none"> • PAC Meeting #3 		<ul style="list-style-type: none"> • Public Hearings

Figure 2: The TSP Process

The Public Review Process

The five-stage process in Figure 2 included a series of technical memoranda that discussed specific topics ranging from existing conditions to funding assumptions to transportation solutions. The project website (www.LinnCountyTSP.org) linked to each memorandum, giving the community opportunity to provide feedback and keep up to date with the project.

The PAC reviewed and commented on each memorandum and worked with the project team to find agreement on issues and alternatives. The project team revised the draft memoranda based on the feedback from the PAC, the public, and the Board of Commissioners. These memoranda, as revised, ultimately became part of the Draft TSP. Public hearings with the Planning Commission and Board of Commissioners on the Draft TSP led to the adoption of the 2018 Linn County Transportation System Plan on March 6, 2018. This process is illustrated in Figure 3.

Throughout the planning effort, the project website linked to all project news, documents, and meeting notices. The website allowed residents to comment about the transportation system and identify locations of problems and opportunities for improvement.

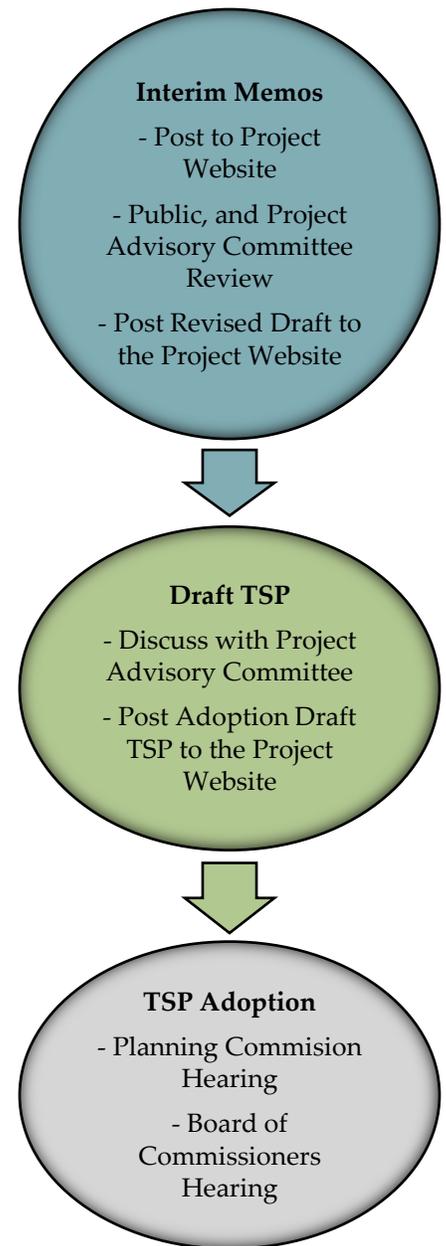


Figure 3: Public Review Process

The Framework

Linn County's vision for the transportation system guides the everyday work of planning, maintaining, and improving the network toward the ideal network for the County. Through the planning process, public servants and citizens come together to define and refine future transportation concepts.

The PAC, in initial discussions, expressed desire for a diverse transportation system that accommodates residents in a safe, and affordable way (See Volume 2, Section E).

Transportation Vision Statement

The vision statement provides direction for the future of the transportation system in Linn County.

All transportation modes flow smoothly and safely to and throughout the county, meeting the needs of residents, businesses, visitors, and people of all physical and financial conditions. Existing transportation assets are protected and complemented with multi-modal improvements.

The vision statement and eight goals describe the desires of the community with regard to its transportation system.

TSP Goals

The eight transportation goals set priorities for transportation solutions and plan implementation. Objectives provide manageable stepping-stones for achieving the TSP's vision and goals.

■ **Goal 1: Mobility - Provide for efficient motor vehicle travel to and through the county.**

Objective 1a: Develop a program to systematically implement improvements that enhance mobility at designated high-priority locations.

Objective 1b: Adopt a standard for mobility to help maintain an adequate level of motor vehicle travel efficiency and by which land use proposals can be evaluated. State and city mobility standards will be supported on facilities under the respective jurisdiction.

Objective 1c: Identify opportunities to reduce the use of state highways for local trips.

Objective 1d: Establish and maintain a functional classification system that provides a plan for system purpose and design.

Objective 1e: Manage access to highways, arterials, and collectors where practical to improve safety, and to reduce congestion and conflicting travel patterns. Support consolidated and shared access points.

Objective 1f: Prioritize paving gravel roads that meet the county's criteria.

■ **Goal 2: Active Transportation - Increase the convenience and availability of pedestrian and bicycle modes.**

Objective 2a: Identify improvements (e.g., street lighting, bike parking) that complement pedestrian and bicycle facilities such as sidewalks and bike lanes and that encourage more use of these facilities.

Objective 2b: Improve walking and biking connections to county amenities.

Objective 2c: Enhance way finding signage for those walking and biking, directing them to bus stops, and key routes and destinations.

Objective 2d: Promote walking, bicycling, and sharing the road through public information and programming.

Objective 2e: Identify necessary changes to the land development code to ensure connectivity between compatible land uses for pedestrian and bicycle trips.

Objective 2f: Support rails-to-trails program when opportunities arise.

■ **Goal 3: Transit - Provide transit service and amenities that encourage a higher level of ridership.**

Objective 3a: Identify locations for designated park-and-ride lots.

Objective 3b: Locate transit stops in locations that are safe and convenient for users.

Objective 3c: Identify areas that support additional transit services, and coordinate with transit providers to improve the coverage, quality and frequency of services

Objective 3d: Identify improvements (e.g., sidewalk and bicycle connections, shelters, benches) that complement transit facilities such as bus stops and that encourage higher usage of transit.

Objective 3e: Coordinate countywide transit services, facilities, and improvements with local jurisdictions.

Objective 3f: Encourage and support carpooling, vanpooling, shared mobility, telecommuting and staggered work shifts as alternatives for reducing congestion.

Objective 3g: Support statewide and regional transit opportunities, including high-speed rail and passenger rail.

■ **Goal 4: Access for All - Provide an equitable, balanced and connected multi-modal transportation system.**

Objective 4a: Ensure that the transportation system provides equitable access to underserved and vulnerable populations (e.g. those who cannot obtain their own transportation due to a disability, age, or income).

Objective 4b: Identify new or improved transportation connections to enhance system efficiency.

Objective 4c: Ensure that existing and planned pedestrian throughways are clear of obstacles and obstructions (e.g., utility poles).

Objective 4d: Provide connections for all modes that meet applicable county and Americans with Disabilities Act (ADA) standards.

Objective 4e: Provide for multi-modal circulation internally on site and externally to adjacent land use and existing and planned multi-modal facilities.

Objective 4f: Support connectivity between the various communities within the county and nearby (e.g. Harrisburg and Mill City).

Objective 4g: Facilitate intermodal connectivity for automobile, air, rail, bicycling and pedestrian access.

■ **Goal 5: Safety - Enhance the safety of residents.**

Objective 5a: Identify improvements to address high collision locations and improve safety for walking, biking and driving trips in the county.

Objective 5b: Enhance existing highway crossings for walking and biking users.

Objective 5c: Identify deficient locations in the county where enhanced street crossings for walking and biking users are needed.

Objective 5d: Identify investments needed along Seismic Lifeline Routes.

Objective 5e: Improve the visibility of transportation users in constrained areas, such as on hills and blind curves.

Objective 5f: Install amenities at signalized pedestrian crossings to improve safety of underserved and vulnerable populations (e.g., chirpers, tactile crossings).

Objective 5g: Identify programs that encourage walking and bicycling, and educate regarding good traffic behavior and consideration for all users.

Objective 5h: Prioritize projects that improve safety for all users and identify opportunities for including system management solutions.

Objective 5i: Identify routes that should be restricted to transport of hazardous materials, consistent with Federal Motor Carrier Safety Regulations.

■ **Goal 6: Sustainability - Foster a sustainable transportation system.**

Objective 6a: Develop and support reasonable alternative mobility targets for motor vehicles that align with economic and physical limitations on state highways and County streets where necessary.

Objective 6b: Minimize impacts to the scenic, natural and cultural resources in the county.

- Objective 6c: Support alternative vehicle types by identifying potential electric vehicle plug-in stations and developing implementing code provisions.
- Objective 6d: Maintain the existing transportation system assets to preserve their intended function and maintain their useful life.
- Objective 6e: Identify opportunities to improve travel reliability with system management solutions.
- Objective 6f: Identify stable and diverse revenue sources for transportation investments to meet the needs of the county.
- Objective 6g: Consider costs and benefits when identifying project solutions and prioritizing public investments.
- Objective 6h: Identify new and creative funding sources to leverage high priority transportation projects.
- Objective 6i: Utilize transparency when determining transportation system investments.
- Objective 6j: Support travel options that allow individuals to reduce single-occupant vehicle trips
- Objective 6k: Support and encourage transportation system management (TSM) and transportation demand management (TDM) solutions to congestion
- Objective 6l: Implement access management strategies to preserve capacity on the roadway system.
- Objective 6m: Establish and maintain a traffic monitoring program on all County-owned arterial and collector roadways (e.g. traffic counts, crash data, pavement condition).

■ **Goal 7: Economy - Ensure the transportation system supports a prosperous and competitive economy.**

Objective 7a: Improve the freight system efficiency, access, capacity and reliability.

Objective 7b: Identify transportation improvements that will enhance access to employment.

Objective 7c: Increase the distribution of travel information to maximize the reliability and effectiveness of highways.

Objective 7d: Adequately services the needs of agricultural and forest enterprises.

■ **Goal 8: Coordination - Coordinate with local and state agencies and transportation plans.**

Objective 8a: Coordinate with the Linn County Parks and Recreation Master Plan regarding trail guidelines and connections between parks, recreation areas, and trails.

Objective 8b: Develop TSP policy and municipal code language to implement the TSP update.

Objective 8c: Meet the requirements of the Oregon Transportation Planning Rule.

Objective 8d: Coordinate with the Oregon Transportation Plan and associated modal plans.

Objective 8e: Coordinate regional project development and implementation with local jurisdictions (e.g., evacuation routes, countywide transit, and jurisdictional transfer of roadways).

Objective 8f: Coordinate with local agency Transportation System Plans and Public Transportation Plans.

Objective 8g: Coordinate the development of transportation facilities with other elements of the Comprehensive Plan policies.

Objective 8h: Encourage preservation of rail right-of-way for both rail and other transportation mode (e.g. rails-to-trails) uses.

Objective 8i: Coordinate with ODOT to encourage improvements on state facilities in Linn County (in particular, additional lanes on I-5 north of OR 34 and redesign of the OR 34/OR 34 Bypass) to address safety, mobility and economic concerns.

The Trends

To determine needed investments for the county's transportation system, the project team reviewed current travel conditions and forecasted future growth and travel trends through 2040 (see Volume 2, Section F, G, and H for more information).

Linn County in 2040

Today, Linn County is home to 121,000 residents and about 38,000 jobs. Between now and 2040, population growth likely will increase about one percent per year and employment growth about two percent per year. Urban areas are expected to accommodate much of the population and employment growth. By 2040, Linn County will have about 156,000 residents, a 30 percent increase from 2015, and about 94,000 jobs, a 45 percent increase from 2015. With more people and jobs in Linn County and increased highway through traffic, the transportation network will face growing demand through 2040.

The population projections were based on the CALM Model which was used to develop this Transportation System Plan. However, population growth during the past 2 years has occurred at a faster pace than the above projected growth. Therefore, adjustments to the plan may need to be made in the near future. One example is that the population of the City of Millersburg has doubled in the past 3 years. Another example is the impact of the new medical center and Veteran's Center, in combination with families and businesses moving to the City of Lebanon. This has resulted in a record level of housing developments in 2016 and 2017 for Linn County.

More Travel

More residents and jobs adds more highway through traffic. The roadway network in 2040 must accommodate hundreds of additional motor vehicle trips during the evening peak hour.

Today, the Linn County roadway network generally is able to handle the evening peak hour motor vehicle trips; however, they likely will increase up to 35 percent along US 20, OR 34 and I-5 by the end of 2040. Much of the increased travel will begin or end in major residential and/or employment growth areas in urbanized parts of the county. Other roadways are expected to experience less significant traffic increases, particularly through the rural areas of the county.

More Congestion

An increase in motor vehicle travel leads to an increase in congestion. Travel activity, as reflected by evening peak hour motor vehicle trips beginning or ending in Linn County, is expected to increase significantly through 2040, especially along US 20, OR 34 and I-5. Through trips (trips that neither begin nor end in Linn County) also are likely to increase through 2040, due to increased tourism activity and growth in Oregon generally. Figure 4 shows that the most congested locations will be along OR 34 between Corvallis and Lebanon, US 20 between Albany and Lebanon, OR 164 between Millersburg and Jefferson and portions of OR 22 / US 20 without passing lanes between Marion County and Jefferson County (see TSP Volume 2, Sections F and H).

Increased congestion will also be experienced on a number of County Roads including portions of Peoria Road, Denny School Road, Airport Drive and 7 Mile Lane.

Safety Concerns

Figure 5 shows the location of reported collisions in Linn County over the five-year period between 2009 and 2014. There are also locations of unreported vehicle crashes that have been identified by Linn County due to damaged guardrails and roadside structures. Although the vast majority of travelers on Linn County's roadways arrive safely, there is great opportunity to reduce the over 550 annual vehicle crashes in the county. Several locations on state highways and county roadways, have been identified as high collision locations. US 20 and OR 34 are

prominent examples, but intersections and tight curves throughout the county have their share of dangers. Figure 5 visually summarizes the results of multiple evaluation lenses used to identify opportunities to improve roadway safety for all road users. With growing traffic volumes, these problematic areas likely will persist, and may even become progressively worse (see TSP Volume 2, Sections F and H).

The safety and seismic resiliency of travel across substandard bridges is also of concern to the county. Current bridge locations and conditions can be seen later in Figure 17. ODOT has recently completed an initial seismic evaluation in 2017 of Linn County Bridges and has identified additional bridges that are seismically deficient and will need to be replaced or improved. A resiliency plan is presently in process of being development by ODOT and Linn County Road Department.

Addressing Declining Corridor Health

An increase in congestion along roadways is expected to lead to a decline in the “health” of these corridors. Corridor health is a concept based on measuring the performance of the roadway in five evaluation categories—safety, road geometry, traffic operations, pavement condition, and access spacing—which align with the goals and objectives of the TSP. The measurements are combined to provide a picture of the ability of the corridor to operate successfully—or its overall health. Scores from the corridor health analysis were weighted by placing more value on safety, roadway geometry and traffic operations and less on pavement condition and access spacing (for more information on the Corridor Health Tool, see TSP Volume 2, Section F and H).

Table 1 and Figure 6 show the 2040 corridor health scores using a “good, fair, poor” scoring system. Through implementation of previously planned projects, Linn County will reduce the number of “poor” segments in 2040 – and continued smart investment can move even more miles of roadway into the “good” category.

Table I: Corridor Health

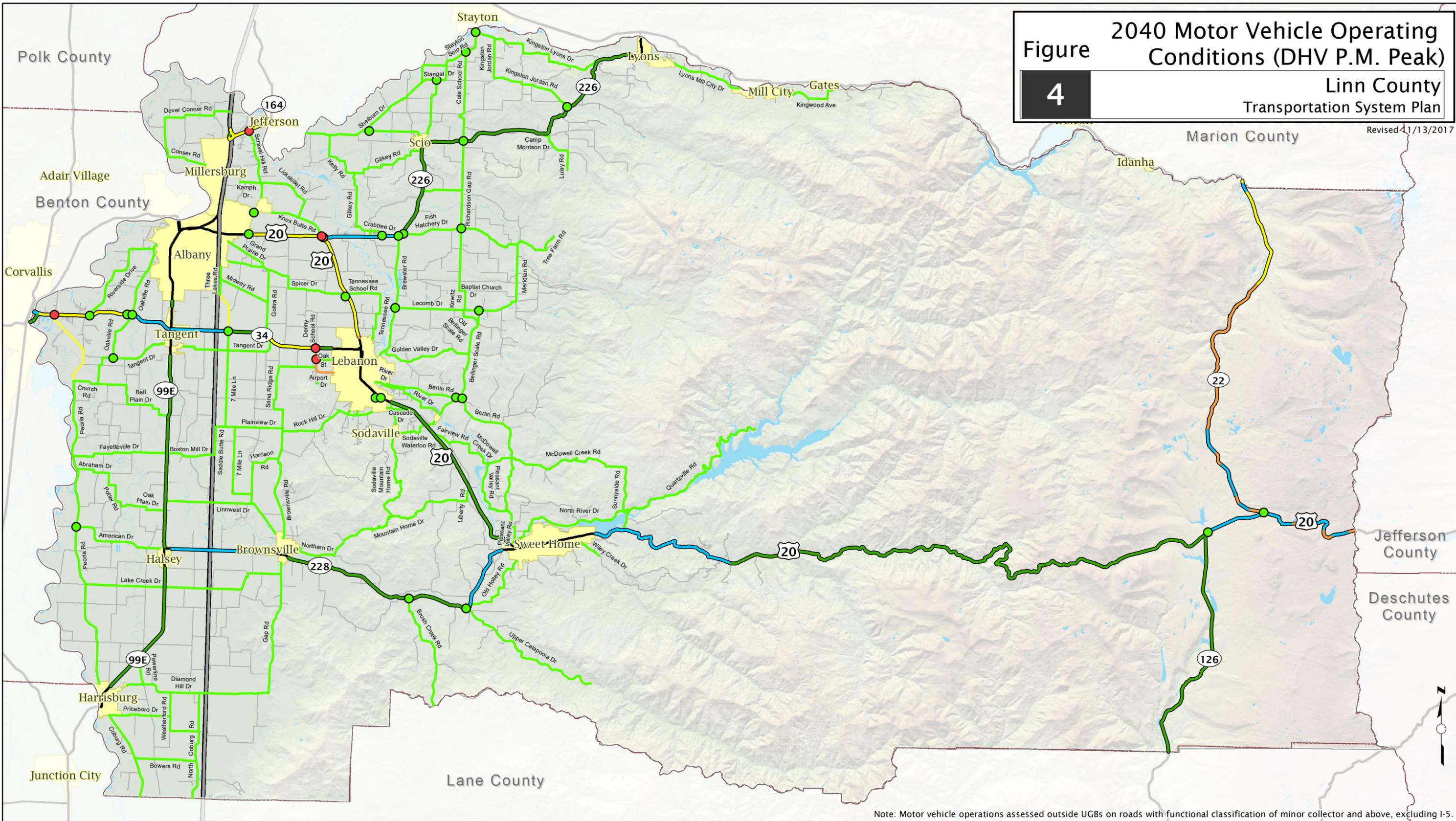
Corridor Health Rating (Miles of Roadway)

Year	Good	Fair	Poor
Linn County Roadways			
2015	93 miles	229 miles	99 miles
2040	107 miles	222 miles	92 miles
State Highways (ODOT)			
2015	50 miles	36 miles	95 miles
2040	41 miles	46 miles	95 miles

Note: See Figure 6 for the location of these roadway segments

Figure 4 2040 Motor Vehicle Operating Conditions (DHV P.M. Peak)
Linn County
 Transportation System Plan

Revised 4/1/13/2017



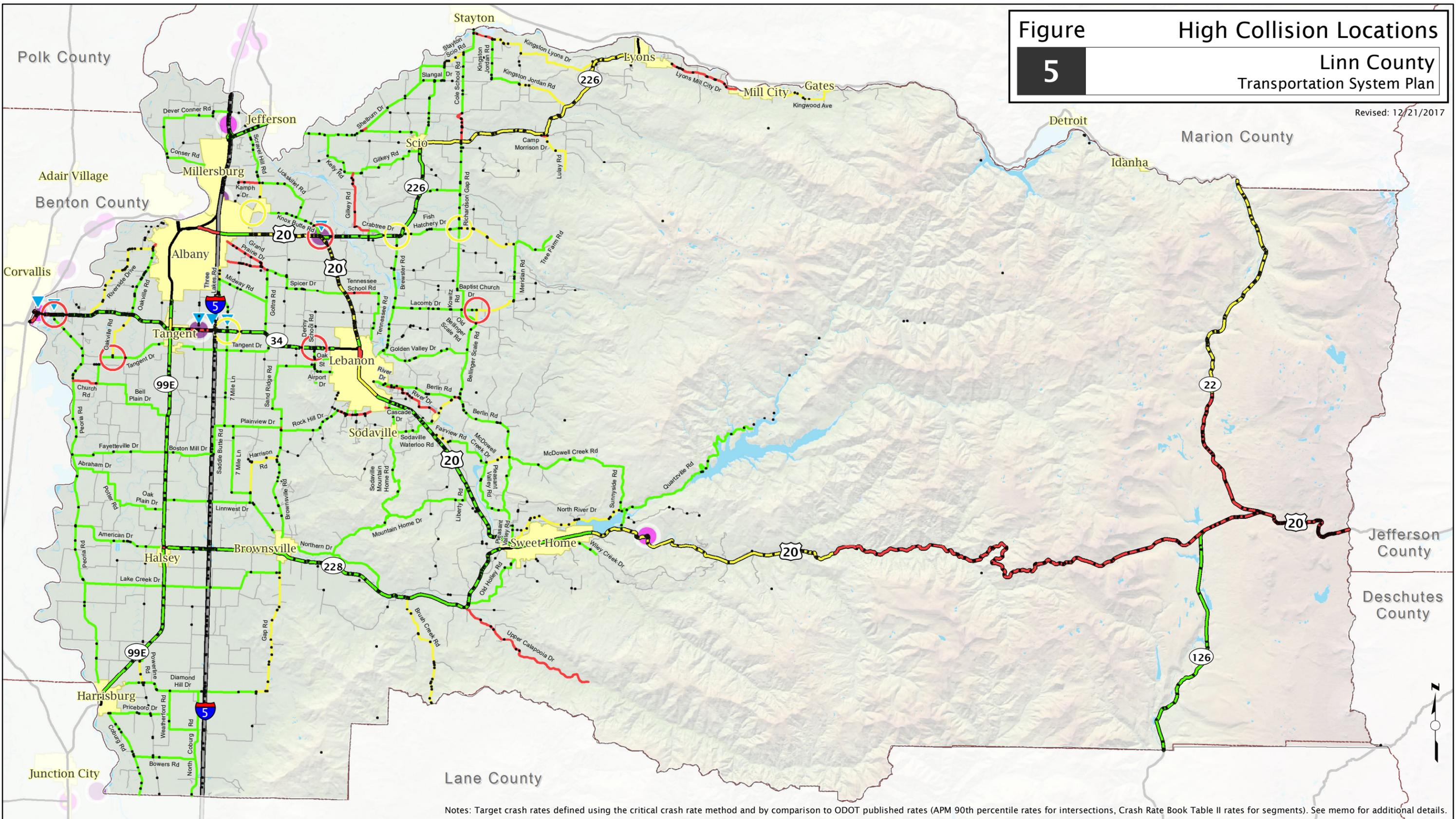
Note: Motor vehicle operations assessed outside UGBs on roads with functional classification of minor collector and above, excluding I-5.

Legend		P.M. Peak Hour Operations	
	LOS D (Segments)		Does Not Meet Mobility Targets (Study Intersections)
	LOS C (Segments)		Meets Mobility Targets (Study Intersections)
	LOS B (Segments)		Interstate
	LOS A (Segments)		State Highways
	ODOT County Jurisdiction		County Arterials and Collectors
			County Local Roads
			Water
			Urban Growth Boundary



Figure 5 High Collision Locations
Linn County
 Transportation System Plan

Revised: 12/21/2017



Notes: Target crash rates defined using the critical crash rate method and by comparison to ODOT published rates (APM 90th percentile rates for intersections, Crash Rate Book Table II rates for segments). See memo for additional details.

Legend

High Collision Locations

Roadway Segments

- Over 150% Target Crash Rate
- 100%-150% Target Crash Rate
- Below Target Crash Rate

Study Intersections

- Over 150% Target Crash Rate
- 100%-150% Target Crash Rate

- SPIS 2014 Top 5% Location
- SPIS 2014 Top 10% Location
- ▼ All Roads Transportation Safety (ARTS) Program Location

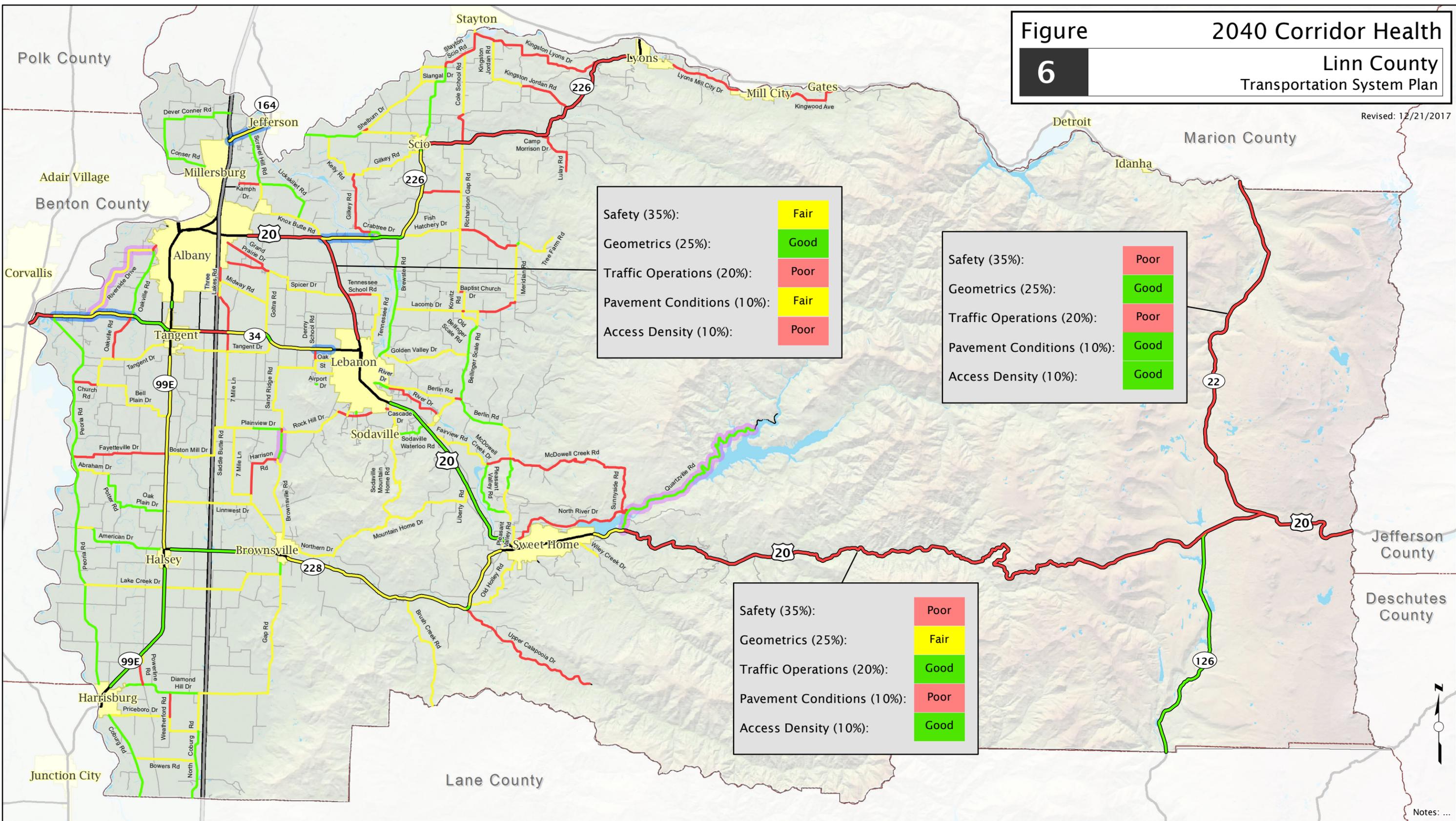
- Collision Location (2009 to 2014)
- Interstate (not analyzed)
- County Local Roads (not analyzed)

- Water
- Urban Growth Boundary



Figure 6 2040 Corridor Health
Linn County
Transportation System Plan

Revised: 12/21/2017



Legend

Overall Corridor Health Assessment

- Red line: Poor (score less than 70)
- Yellow line: Fair (score 70-85)
- Green line: Good (score of 85 or higher)

ODOT County Jurisdiction

- Blue line: Segments with a reduction in overall Corridor Health assessment from Existing Conditions
- Purple line: Segments where planned projects improve the overall Corridor Health assessment from Existing Conditions

Roadways Not Evaluated

- Thick grey line: Interstate
- Thin grey line: State Highways in UGBs
- Dashed grey line: County Local Roads

- Blue square: Water
- Yellow square: Urban Growth Boundary



Notes: ...

The Investments

Linn County must make investment decisions to implement a set of transportation improvements that meet identified needs through 2040. Transportation funding is limited, so a fiscally responsible approach to enhancing and maintaining the transportation system is imperative.

Developing the TSP Investments

Linn County’s approach to developing the TSP emphasized investments in cost-effective solutions for the transportation system. A four-tiered process (Figure 7) considered alternatives from highest to lowest priority until identifying a viable solution. This process allowed the county to maximize use of available funds, minimize impacts to the natural and built environments, and balance investments across all modes of travel (see Volume 2, Section I and K for more information).

The TSP used measurable evaluation criteria (see Volume 2, Section E) based on the goals and objectives (developed in coordination with the Project Advisory Committee) to screen and prioritize transportation solutions (Figure 8). Projects deemed to contribute more towards achieving the transportation goals of Linn County ranked higher and the plan assigned higher priority

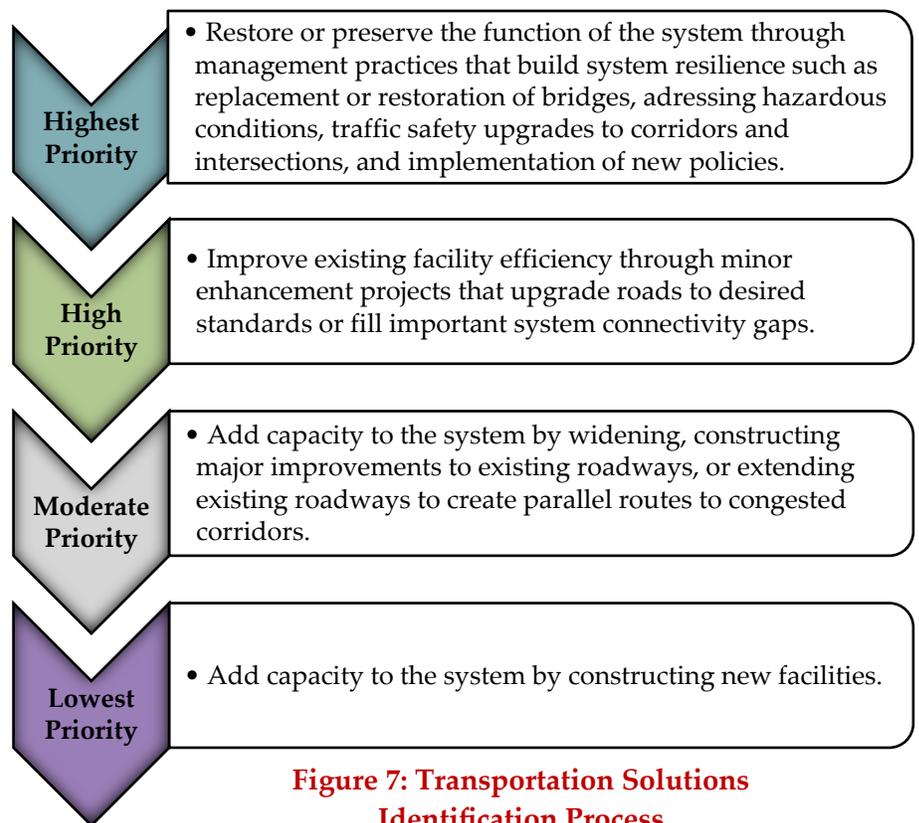


Figure 7: Transportation Solutions Identification Process

to their implementation. Solutions recommended in the TSP, consequently, are consistent with the goals and objectives.

Transportation Investments

The investments are allocated to two funding buckets. The first is the Constrained Projects, or those projects that the county believes are reasonably likely to be funded during the 20-year planning horizon based on the constrained funding threshold established through county and ODOT funding analysis. The second bucket is the Aspirational Projects, which include all identified projects for improving Linn County's transportation system, regardless of their primary funding source and priority. In contrast to constrained projects, they are not reasonably likely to be funded during the 20-year planning horizon, but do address an identified problem and are supported by the county and ODOT. It is recognized that Linn County supports and would like to implement all of the projects identified in both of the project lists.

The full list of constrained and aspirational projects, shown in Table 2 on page 31, includes those proposed in previous plans and studies as well as those added through the TSP planning process (this includes projects from the 2015-2018 and 2019-2021 State Transportation Improvement Plan). The full list includes 323 projects, totaling an estimated \$693 million worth of investments (see Volume 2, Section I and K for more information on the development of the TSP project list).

The TSP's multi-modal, network-wide approach to identifying transportation system solutions assigns the projects to one of several categories:

- **Pedestrian and Bicycle** projects include an integrated network of roadway shoulders, shared-use paths and pedestrian roadway crossings to facilitate safe and convenient travel countywide. Linn County identified 65 pedestrian and bicycle projects that, as originally proposed, would cost an estimated \$196.8 million to complete.

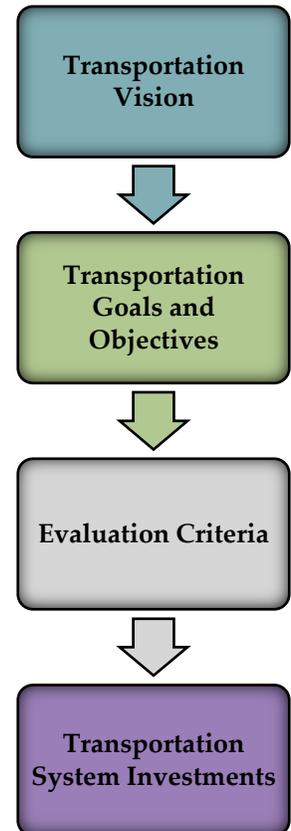


Figure 8: Reflecting the Vision in the Plan

The aspirational project list combines a number of pedestrian and bicycle projects with bridge projects, corridor improvements, and rural modernization projects. However, the county may seek to development some pedestrian and bicycle projects separately from associated roadway projects for a variety of reasons:

- 1) Pedestrian and bicycle projects are generally less expensive and have less impact than roadway widening projects and most can be accomplished within the existing right-of-way.
- 2) Construction of pedestrian and bicycle projects can be done in smaller phases or combined with a related maintenance activity like a pavement rehabilitation job.
- 3) Pedestrian and bicycle projects are generally non-controversial in nature and provide clear safety benefits to the more vulnerable users of the transportation system.

- **Bridge** projects would improve or replace those that are weight restricted or substandard in the county. Linn County identified 63 bridge/culvert improvement projects that, as originally proposed, would cost an estimated \$212.3 million to complete. The bridges in Linn County are evaluated at least once every two years by inspection and engineering review. Based on this ongoing review this list is subject to change.
- **Corridor Improvement** projects would enhance mobility and safety along roadways throughout the county. Linn County identified 17 projects to improve roadways that, as originally proposed, would cost an estimated \$149.3 million to complete.
- **Rural Modernization** projects would improve roadways outside of urban areas to meet cross-section and design standards. Linn County identified 8 projects to improve rural roadways that, as originally proposed, would cost an estimated \$11.0 million to complete.
- **Spot Improvement** projects would address safety and operational needs at intersections and other spot locations throughout the county. Linn County identified 64 projects to

improve spot locations that, as originally proposed, would cost an estimated \$108.0 million to complete.

- **System Management** projects to encourage more efficient usage of the transportation system. A total of 12 projects were identified that would cost an estimated \$12.5 million.
- **Systemic Safety** projects would improve safety throughout the county. Linn County identified 94 projects to improve systemic safety at intersections and along roadways that, as originally proposed, would cost an estimated \$3.0 million to complete.

Funding Gap

The county has insufficient local funds to complete the \$303.0 million total cost of the 177 identified county-funded transportation system projects.

The county uses three general funding sources for transportation, including funds from:

- **The Surface Transportation Program (STP).** Federal Highway Trust Funds are received from federal motor vehicle fuel tax and truck-related weight-mile charges. The six-year Federal Transportation Authorization Act allocates funds through various programs. Federal Highway Trust Funds from the STP flow to the states that use them primarily for safety, highway, and bridge projects. Linn County receives a portion of these funds based partially upon rural roadway mileage and population. Linn County typically exchanges these funds with the state for more flexible funds without the constraints of federal requirements.
- **The State Highway Trust Fund.** The State Highway Trust Fund makes distributions from the state motor vehicle fuel tax, vehicle registration and title fees, driver license fees, and truck weight-mile taxes. Cities and counties receive a share of State Highway Trust Fund monies based on registered vehicles, and by statute may use the money for any road-

related purpose, including walking, biking, bridge, street, signal, and safety improvements.

The state gas tax funds previously have failed to keep up with cost increases and inflation. With increased fuel efficiency of vehicles and the State's emphasis on reducing vehicle miles traveled, the real revenue collected gradually has eroded over time. In an effort to offset the relative decline in contribution of state funds, the 2009 legislature passed the Oregon Jobs and Transportation Act (Oregon House Bill 2001). It increases transportation-related fees including the state gas tax and vehicle registration fees as a fixed amount at the time a vehicle is registered with the Department of Motor Vehicles. Vehicle registration fees in Oregon increased from \$27 to \$43 per vehicle per year for passenger cars, with similar increases for other vehicle types. The gas tax in Oregon increased on January 1, 2011 by six cents, to 30 cents per gallon, the first increase in the state gas tax since 1993.

- **Federal Forest Payments.** Linn County receives federal forest revenue from logging activities in the county. This revenue may vary depending on the amount of timber harvests each year. It is also dependent on allocation of funds at the state, federal and county levels.

The State of Oregon recently passed a transportation funding package in June 2017 that will provide additional funding for transportation improvements in Linn County. This TSP does not include this funding in consideration of the plan and completion of projects.

Maintaining and operating existing roadways requires more revenue than the county currently can generate for transportation uses. Due to funding constraints, the county has recently been drawing down the road fund, which could result in deferring needed roadway maintenance and repair work. These costs will continue to increase over time, leaving no local street funds to spend on locally-funded improvements over the next 20 years. Unless Linn County develops additional revenue streams, very few of the \$303.0 million worth of needed improvements (spread

out over 177 projects) on the county roadway system will be completed.

Historical precedent indicates that there is a high likelihood for the county to receive additional revenue beyond the sources identified above, in the form of competitive state and federal transportation grants. For this reason, the county will assume up to \$60 million in additional revenue is possible.

The TSP has identified over \$305 million worth of needed investments (spread out over 123 projects) along state highways. ODOT has indicated that only \$15 to \$20 million in discretionary state and/or federal funds, beyond what is currently programmed in the Statewide Transportation Improvement Program, may be available to invest in Linn County over the next 20 years¹ for system modernization and enhancement.

The TSP has identified 23 projects estimated at \$83.9 million for which other agencies would be the primary source of funding, such as the County Parks and Recreation department, local cities in Benton County, the Albany Area MPO, the Oregon Cascades West COG, or Marion County. These are suggestions only, and in no way commit other agencies to funding the projects. (for more information on the funding assumptions utilized for the TSP, see Volume 2, Section D).

¹ The State has not committed any future funding for projects in Linn County. This assumption is for long-range planning purposes only. This estimate is based on assuming that Linn County will receive a reasonable share of the state/federal funding projected to be available over the 20-year planning horizon in Region 2 and based on ODOT sustaining their current revenue structure. It is used to illustrate the degree of financial constraints faced by ODOT as of the writing of this document. Actual funding through state and federal sources may be higher or lower than this estimate, which does not include projects that the federal Highway Safety Improvement Program (HSIP) could fund.

The Priorities

Without additional funding sources, the county has no funding to cover the costs of projects for which it will be the primary source of funding over the next 20 years. The state might contribute \$15 to \$20 million for investments along state highways. The TSP sets priorities for spending anticipated funds and identifies projects that would be possible with additional funding.

Prioritizing Investments

Prioritization of transportation system improvements will be made primarily based on those projects presently designated for state and federal funding as indicated by the STIP. The remaining desired transportation system projects are split by the TSP into improvement packages.

- **Package 1** is financially constrained, meaning it includes an estimate of how the county would use the \$15 to \$20 million in revenue from various state and/or federal sources. It also includes projects with identified funding outside of the TSP revenue forecast, including those currently programmed in the STIP.
- **Package 2** includes other high priority projects and relies on \$60 million of additional funding that would be available if the county opted to add a new funding source, such as those described on page 88.
- **Packages 3 and 4** are comprised of the aspirational projects, those remaining projects that likely would not have county or state funding by 2040. Package 3 includes projects of the next highest priority should additional funding be obtained beyond that in Packages 1 and 2. Package 4 includes all remaining projects not included in the other packages.

The TSP evaluated and compared all proposed projects using the eight TSP goals (detailed in the “Vision” section of the TSP). The

scores were totaled for each project and used to solicit feedback from the Project Management Team and Project Advisory Committee. The input eventually led to a revised list of high priority transportation investments that focused on improving safety along roadways, and maintaining and preserving the transportation system. Based on a project's contribution to achieving the transportation goals of Linn County, the process assigned each transportation solution a priority with the revised methodology.

The county has discretion to implement the projects in a different order than is reflected in Table 2. Future circumstances could allow or require the county to fund projects not on the financially constrained project list to address an unanticipated transportation need or take advantage of an unexpected opportunity.

The Financially Constrained Plan

The financially constrained plan identifies the transportation solutions that the county prioritizes for funding and implementation by 2040, presented in Table 2 and Figures 9, 10, 11, 12, 13, 14 and 15.

ODOT has projected that the county could receive \$15 to \$20 million from various state and/or federal sources over the next 20 years. Based on current needs, Table 2 and Figures 9, 10, 11, 12, 13, 14 and 15 show how the county would use the state funds. The projects are illustrative only and ODOT does not give them higher priority than any other state highway project in the county's list. The county may modify and adapt the list within the limits of the financial constraint threshold, as it currently exists or as it may evolve, to advance any supported project along state highways in response to any opportunity or issue that may arise during the planning horizon.

Projects currently programmed in the STIP are also included in the financially constrained plan (see Table 2).

None of the county-funded transportation system projects are included in the financially constrained plan since the county has no local funds to complete the projects over the next 20 years.

The Aspirational Plan

The aspirational transportation system identifies valuable solutions that may not have funding by 2040, unless additional sources become available. Some of the projects require city funding and resources beyond what is available in the time frame of this plan. Others are contingent upon grants, development, or redevelopment. Some of the aspirational projects in Table 2 and in Figures 9, 10, 11, 12, 13, 14 and 15 have designations of Package 2 or Package 3, indicating their potential priority should the county develop new sources of funding.

Financially Constrained and Aspirational Projects

The following pages include the financially constrained and aspirational projects in chart form and on accompanying maps. Improvement Package 1, Financially Constrained Plan totals the \$15 to \$20 million expected to be available through various state and/or federal sources. Improvement Package 2 relies on \$60 million of additional funding that would be available only if the county added a new funding source, such as those described on page 88. Improvement Package 3 relies on additional funding that would be available only if the county added a second new funding source, such as those described on page 88. Improvement Package 4, Aspirational Plan, includes projects with costs that exceed the likely level of available funding through 2040.

The projects listed in Table 2 are grouped by type of project. The project identification numbers in the first column indicate the type of project. The Project IDs are coded as follows:

- “PB” is a Pedestrian and Bicycle project

- “BR” is a Bridge project
- “CI” is a Corridor Improvement project
- “RM” is a Rural Modernization project
- “SI” is a Spot Improvement project
- “SM” is a System Management project
- “SS” is a Systemic Safety project

The project design elements depicted are identified for the purpose of creating a reasonable cost estimate for planning purposes.

The actual design elements for any project are subject to change and will ultimately be determined through a preliminary and final design process, and are subject to county and/or ODOT approval.

Table 2a: Financially Constrained and Aspirational Project List					
Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
Bicycle and Pedestrian Projects – Linn County					
BP-02	SW Broadway St. - Mill City Urban Street Improvements	Improve Broadway St. in Mill City (1st to 6th) to urban standards, including lighting. Linn County has agreed to a three year plan for improvements	\$4,020,600	County	4
BP-15	City of Scio - Crosswalk Safety Evaluation and Improvements at N. 1st St. and Main. (Scio)	Evaluate crosswalk for safety improvements and implement.	\$75,000	County	4
BP-17	City of Scio - Crosswalk Safety Evaluation and Improvements at SW 4th Ave. School Crossing (Scio)	Evaluate crosswalk for safety improvements and implement.	\$75,000	County	4
BP-18	City of Scio - Scio High School Pedestrian Path and School Crosswalk Safety Improvements (Scio)	Pedestrian and bicycle access and safety improvements to access Scio High School.	\$75,000	County	4
BP-19	Tangent Dr. / Blackberry Ln. - Systemic Intersection Safety Improvements (Tangent)	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements. Evaluate intersection for Enhanced Signing Treatments.	\$15,000	County	3

Table 2a: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BP-21	Berlin Rd. - Shoulder Improvements (Lebanon)	Improve shoulders along Berlin Rd, from Brewster Rd. to Waterloo Rd., providing safe bike access along the east bank of the South Santiam River.	\$3,415,000	County	4
BP-22	Boston Mill Rd. / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulders or multiuse paths) on I-5 crossing on Boston Mill Dr. serving Shedd, Brownsville, Lebanon, and Sodaville. Will require bridge widening or new multimodal bridge(s).	\$4,310,000	County	4
BP-23	Diamond Hill Dr. / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulders or multiuse paths) on I-5 crossing on Diamond Hill Dr. serving Harrisburg and Brownsville. Will require bridge widening or new multimodal bridge(s).	\$5,750,000	County	4
BP-24	Lake Creek Rd. / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulders or multiuse paths) on I-5 crossing on Lake Creek Rd. serving Halsey and Brownsville. Will require bridge widening or new multimodal bridge(s).	\$5,030,000	County	4
BP-25	Linn W Dr. / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulders or multiuse paths) on I-5 crossing on Linn W Dr. serving Shedd and Brownsville. Will require bridge widening or new multimodal bridge(s).	\$2,875,000	County	4
BP-29	Seven Mile Ln. / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulders or multiuse paths) on I-5 crossing, which will require bridge widening or new multimodal bridge.	\$3,595,000	County	4
BP-30	Tangent Dr. / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulders or multiuse paths) on I-5 crossing on Tangent Dr. serving Tangent, Lebanon, and Sodaville. Will require bridge widening or new multimodal bridge(s).	\$3,595,000	County	4
BP-31	Clover Ridge Rd. - Truax Creek Bridge Replacement (County Bridge ID 320-0.82, State Bridge ID 12749)	Widen and replace Clover Ridge Rd. bridge over Traux Creek to include sidewalks and bike lanes and stormwater treatment. Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,350,000	County	2

Table 2a: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BP-32	Mill City - 1st Ave. Bridge over North Santiam River Maintenance and Improvements (County Bridge ID 006-745, State Bridge ID 02058)	Bridge maintenance and improvements, including pedestrian improvements.	\$2,766,000	County	2
BP-33	Mill City - Wall St. Pedestrian Bridge over North Santiam River Improvements	Pedestrian bridge maintenance and improvements.	\$2,600,100	County	2
BP-34	Crowfoot Rd. - Corridor Improvement Project (Lebanon)	Corridor safety project on Crowfoot Rd. from Highway 20 to S. Main Rd. Includes bicycle and pedestrian facilities and connections to nearby school.	\$1,375,000	County	4
BP-35	Goldfish Farm Rd. - Urban Improvement	Urban improvements to Gold Fish Farm Rd.	\$3,465,000	County	4
BP-37	Kirk Avenue - Urban Upgrades (Brownsville)	Urban streetscape upgrade for Kirk Avenue. Design TBD in consultation with City officials.	\$3,000,000	County	4
BP-40	NW 4th Avenue - Urban Upgrades (Scio)	NW 4th (Jefferson-Scio Drive) Curb, Gutter, Storm & Sidewalks between Main St. and Clayton Pl.	\$955,000	County	4
BP-42	City of Scio - Sidewalk Repair and Infill (Scio)	Repair or replace any current sidewalks that are below County standards inside Scio city limits on N Main St., NE 4th St.	\$865,000	County	2
BP-43	Scravel Hill Rd. - Urban Upgrade (Albany)	Urban Upgrade. Coordinate with City of Albany on project implementation (per Albany TSP)	\$200,000	County	4
BP-45	Washburn St. (aka. Gap Rd.) - Urban Upgrade (Brownsville)	Urban streetscape upgrade for Washburn St. (aka. Gap Road) focused on traffic calming and improving bicycle and pedestrian facilities. Design to be determined in consultation with City of Brownsville, construction likely to be development-driven.	\$1,430,000	County	4
BP-46	Tangent Dr. - Urban Corridor Improvements (Tangent)	Add curb, gutter, sidewalk from OR 99E to City Limits	\$1,200,000	County	4
BP-47	Maintenance Procedures - Bike Friendly Chip Seal	When chip seal is used, use smaller size rocks and ensure the treatment extends fully through shoulders, preferably at least 6 feet everywhere.	\$10,000	County	3

Table 2a: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BP-48	Maintenance Procedures - More frequent roadway sweeping with bike priority route plan	Provide more frequent roadway sweepings, and identify a set of priority bike routes for maintenance.	\$10,000	County	3
BP-50	Queen Ave. - ADA Transition Requirements	Curb, gutter, sidewalk, and ADA improvements on Queen Ave. to Riverside Dr.	\$1,500,000	County	4
BP-51	Seven Mile Ln. - Shoulder Improvements East	Improve shoulders to provide bike-friendly width on Seven Mile Lane, I-5 Overpass to Brownsville.	\$12,735,000	County	4
BP-52	Brownsville Rd. - Corridor Improvement Project	Improvements to Brownsville Rd. including widen lanes and provide paved shoulders to design standards.	\$2,400,000	County	4
BP-53	East County Freight and Recreational Route Designation and Improvements	Improve shoulders and crossings, and widen roadway where necessary, to provide safe corridor for bicycles, pedestrians, and freight connecting Stayton, Scio, Lacombe, and Waterloo. Conceptual route includes: Stayton-Scio Rd., OR 226, Richardson Gap Rd., Fish Hatchery Dr., Meridian Rd., Lacombe Dr, Bellinger Scale Rd.	\$21,305,000	County	3
BP-54	Gap Rd. / Diamond Hill Rd. - Shoulder Improvements	Improve shoulders to provide safe bike access to scenic route.	\$3,905,000	County	4
BP-55	Mt. Home Dr. - Road Surface Improvement	Pave Mt. Home Dr. between Sodaville Mountain Home Rd. and Northern Dr. to allow bicycle travel between Sweet Home and Brownsville without using OR 228.	\$3,450,000	County	2
BP-56	North River Dr. approaching Quartzville Rd. - Shoulder and Alignment Improvement	Improve roadway for all users (bikes, peds, recreational vehicles, etc.) by providing improved shoulders and realignment to reduce horizontal and vertical curves. Funding has been obtained and design is in progress.	\$2,968,000	Federal (FLAP)	1
BP-57	Riverside Dr. - Widening and Improvement (Phase I and Phase II)	Road improvements to Riverside Drive, including widening shoulders, lanes, curves and enhanced curve warning signs.	\$4,800,000	County	4
BP-58	City of Scio - Shoulder Improvements on County Roads (Scio)	Incorporate wide shoulders inside Scio city limits, with fog lines, where possible on N Main St. and NW/NE 4th St.	\$500,000	County	4

Table 2a: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BP-59	Tangent Dr. - Rural Corridor Improvements	Widen and repave Tangent Dr. where needed to provide multiuse shoulders. Project extends from Tangent City Limits west to Peoria Rd. and east to OR 34. (West of Tangent City Limits follows Oakville Rd. and Harvest Dr.)	\$7,375,000	County	4
BP-61	Waterloo Rd. - Roadway and Shoulder Improvements	Widen shoulders and travel lanes as needed between City of Waterloo and Berlin Rd. to improve safety and capacity of popular freight and bicycle route. Apply systemic safety improvements at intersection with Plagman Dr.	\$1,770,000	County	4
BP-62	Crowfoot Rd. / Cascade Dr. - Intersection Safety Improvements (Lebanon)	Intersection improvement to reduce vehicle conflict points and provide safe bicycle and pedestrian access to nearby school, such as a roundabout. Implement in collaboration with City of Lebanon.	\$2,395,000	County	4
BP-63	Hume St. - Urban Improvements (Brownsville)	Improve Hume St. to urban standards	\$70,000	County	4
BP-64	Waterloo Rd. / Berlin Rd. - Intersection Realignment	Realign intersection to traditional stop-controlled "T" geometry. Improve sight distance with vegetation removal and maintenance. Design should prioritize heavy bicycle traffic and accommodate freight (log trucks) traffic.	\$1,200,000	County	4
BP-66	Linn-Benton Community College (LBCC) Transit Center	Transit Center at LBCC Campus (Linn County funded portion) - including multimodal and bicycle access into the LBCC campus,	\$500,000	County	4
Bicycle and Pedestrian Projects – Other Jurisdictions					
BP-01	Bike Route - Halsey to Brownsville (Peoria Rd.) Hwy 99E	Connect and expand existing bike routes (Brownsville to Lebanon / Sweet Home and from Corvallis/Peoria)	\$1,000,000	State	4
BP-03	US 20 - Foster Lake Multi-Use Path	ODOT STIP Project 18853, Multiuse Path along US 20 from 54th Ave. to Riggs Hill Rd., expected bid letting early 2018.	\$1,805,000	State	1
BP-04	Old Salem Rd. NE - I-5 Exit 235 Undercrossing Bicycle and Pedestrian Facility Improvement (Millersburg)	Provide improved facilities (such as wider paved shoulder or multiuse path) on I-5 undercrossing at Exit 235 serving Old Salem Rd., Murder Creek Dr., Viewcrest, and Millersburg.	\$600,000	State	4

Table 2a: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BP-06	Mill City - Canyon Journey Trail Improvements	Trail improvements, including multi-modal river crossing at Kimmel Park.	\$1,405,000	City	3
BP-08	OR 22 - Recreational Bike Trail from Detroit to Mill City and Beyond	Coordinate with Marion County, creating a recreational bike trail along Highway OR 22 along Santiam River (on the Marion County side) connecting multiple cities and coordinated with the Oregon Scenic Byway.	\$6,830,000	Marion County	3
BP-09	OR 99E / N. Lake Creek Dr. - Improve Pedestrian Access (Tangent)	Pedestrian Access Improvements.	\$75,000	State	4
BP-12	Park and Recreation Master Plan - Wayfinding Signage	Wayfinding signage from County roads to park access, per Linn County Park and Recreation Master Plan	\$10,000	County Parks and Recreation	4
BP-13	Park and Recreation Master Plan - Foster Reservoir Trail	Collaborate to complete 7.5 miles of compressed gravel trail, per Linn County Park and Recreation Master Plan	\$475,000	County Parks and Recreation	4
BP-14	Park and Recreation Master Plan - Lebanon to Albany Regional Trail	Collaborate with local agencies on 10 mile multi-use trail with adjacent soft surface trail, per Linn County Park and Recreation Master Plan. Conceptual alignment to be determined.	\$1,000,000	County Parks and Recreation	3
BP-16	City of Scio - Crosswalk Safety Evaluation and Improvements at SE Ash St. and OR 226 (Scio)	Evaluate crosswalk for safety improvements and implement.	\$75,000	State	4
BP-20	US 20 through Sweet Home - Pedestrian Access Improvements	Pedestrian Access Improvements.	\$1,600,000	State	4
BP-26	OR 228 / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulders or multiuse paths) on I-5 crossing on OR 228 serving Halsey and Brownsville. Will require bridge widening or new multimodal bridge(s).	\$8,620,000	State	4
BP-27	OR 34 / I-5 Overcrossing Bicycle and Pedestrian Facility Improvement	Provide improved facilities (such as continuous wide shoulder, bike lanes, sidewalks, or multiuse paths) on I-5 crossing, approaches, and signalized interchange terminals.	\$1,035,000	State	4

Table 2a: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BP-28	OR 99E / South Tangent Dr. - Improve Pedestrian Access (Tangent) on OR 99E	Pedestrian Access Improvements.	\$2,095,000	State	3
BP-36	Grand Prairie Rd. - Urban Upgrade (Albany)	Urban Upgrade. Coordinate with City of Albany on project implementation (per Albany TSP)	\$2,260,000	City	4
BP-38	Knox Butte Rd. Widening (Albany)	Add Lane(s)/Urban Upgrade. Coordinate with City of Albany on project implementation (per Albany TSP)	\$7,690,000	City	4
BP-39	Lochner Rd. - Urban Upgrade (Albany)	Urban Upgrade. Coordinate with City of Albany on project implementation (per Albany TSP)	\$5,760,000	City	4
BP-41	OR 226 - Urban Upgrades (Scio)	Addition of Curbs, gutters, sidewalks, bike lanes and streetscape improvements on both sides of OR 226 (~3,000 ft.) where they do not currently exist within Scio city limits.	\$2,030,000	State	3
BP-44	US 20 (East of I-5) - Urban Upgrade (Albany)	Urban Upgrade. Coordinate with City of Albany on project implementation (per Albany TSP)	\$2,070,000	State	3
BP-49	OR 99E - Urban upgrade from American Dr. to South City Limit (Halsey)	Highway, curb, gutter, landscaping and utility relocation project that addresses in a comprehensive manner OR99E through downtown Halsey.	\$12,000,000	State	4
BP-60	US 20 from Quartzville Rd. to Cascadia State Park - Bike Shoulder Improvement	Improve shoulders to provide consistent bike-friendly width on US 20 from Quartzville Rd. to Cascadia State Park.	\$5,560,000	State	4
BP-65	Grand Prairie Rd. - I-5 Bridge Widening	Widen I-5 bridge to provide safe passage for Bicycles and Pedestrians	\$10,775,000	State	4
BP-67	US 20 - Systemic Bicycle Safety Improvements	Provide Systemic Bicycle Safety Improvements from M.P. 14.2 to M.P. 17.4, per ODOT Bicycle and Pedestrian Safety Implementation Plan	\$1,025,925	State	1
Estimated Cost for all Bicycle and Pedestrian Projects			\$196,845,625		

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
Bridge Projects – Linn County					
BR-01	6th St. - Storm Culvert Replacement (Scio)	Replace Storm Sewer / Culvert on SW 6th St. over Peters Ditch	\$645,000	County	2
BR-02	Bellinger Scale Rd. - Hamilton Creek Bridge Replacement (County Bridge ID 722-0.27, State Bridge ID 11974)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour. LBP funding request submitted in 2017.	\$2,680,000	State/ Federal	2
BR-03	Belts Dr. - Creek Frontage Rte. Bridge Replacement (County Bridge ID 518-4.10, State Bridge ID 8466)	Priority Bridges to be replaced based on sufficiency rating and scour	\$1,930,000	County	3
BR-04	Berlin Rd. - Hamilton Creek Bridge Replacement (County Bridge ID 20B-4.90, State Bridge ID 11964A) Funding Acquired	Priority Bridges to be replaced based on sufficiency rating, load rating, scour. Funded by Oregon STIP.	\$1,750,000	State/ Federal	1
BR-05	Berlin Rd. - McDowell Creek Bridge Replacement (County Bridge ID 728-1.72, State Bridge ID 11955A)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$3,375,000	County	3
BR-06	Boston Mill Rd. - Calapooia River Bridge Replacement (County Bridge ID 13-6.96, State Bridge ID 12287A)	Priority Bridges to be replaced based on sufficiency rating and scour	\$2,410,000	County	3
BR-07	Boston Mill Rd. - Overflow Bridge Replacement (County Bridge ID 13-5.57, State Bridge ID 13557)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour. LBP funding request submitted in 2017.	\$3,200,000	State/ Federal	3
BR-08	Boston Mill Rd. - Sodom Ditch Bridge Replacement (County Bridge ID 13-7.46, State Bridge ID 12286)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$2,410,000	County	3
BR-09	Bowers Dr. - Muddy Creek Bridge Replacement (County Bridge ID 234-3.27, State Bridge ID 12398)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour. LBP funding request submitted in 2017.	\$1,930,000	State/ Federal	3

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BR-10	Brewster Rd. - One Horse Slough 024-462 Bridge Replacement	Replace bridge #12738. Could be funded by the STIP.	\$1,560,000	State/ Federal	3
BR-11	Bush Garden Dr. - Muddy Creek Bridge Replacement (County Bridge ID 526-0.44, State Bridge ID 12492)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$870,000	County	3
BR-13	Coburg Rd. - Curtis Slough Bridge Replacement (County Bridge ID 2A-3.94, State Bridge ID 12271)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$870,000	County	3
BR-14	Cochran Creek Dr. - Cochran Creek Bridge Replacement (County Bridge ID 740-0.08, State Bridge ID 12619)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,350,000	County	3
BR-15	Cole School Rd. - Bear Creek Bridge Replacement (County Bridge ID 604-1.24, State Bridge ID 12974)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$775,000	County	3
BR-16	Cyrus Rd. - Mill Creek Bridge Replacement (County Bridge ID 653-0.88, State Bridge ID 12797A)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$2,220,000	County	3
BR-17	East Bilyeu Creek Dr. - Neal Creek Bridge Replacement (County Bridge ID 831-1.56, State Bridge ID 12951)	Priority Bridges to be replaced based on sufficiency rating and seismic issues - Sub Structure	\$1,740,000	County	2
BR-18	Falk Rd. - Spoon Creek Bridge Replacement (County Bridge ID 502-0.56, State Bridge ID 12514)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,065,000	County	3
BR-20	Fish Hatchery Dr. - Roaring River Bridge Replacement (County Bridge ID 648-6.80, State Bridge ID 12877)	Replace Bridge	\$1,400,000	County	3

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BR-21	Folsom Rd. - Mill Creek Bridge Replacement (County Bridge ID 651-0.65, State Bridge ID 12792)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour. Funded by Oregon STIP.	\$730,000	State/ Federal	1
BR-22	Fry Rd. - Oak Creek Bridge Replacement (County Bridge ID 336-0.65, State Bridge ID 12616)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$2,025,000	County	3
BR-24	Goldfish Farm Rd. - Cox Creek Bridge Replacement (County Bridge ID 328-0.36, State Bridge ID 12732A)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,740,000	County	3
BR-29	Lochner Rd. - Oak Creek Bridge Replacement (County Bridge ID 346-1.08, State Bridge ID 12412)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$2,125,000	County	3
BR-30	Lochner Rd. - Oak Creek Bridge Replacement (County Bridge ID 346-1.17, State Bridge ID 12411)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$2,510,000	County	3
BR-31	Lulay Rd. - Neal Creek Bridge Replacement (County Bridge ID 834-0.27, State Bridge ID 12902)	Priority Bridges to be replaced based on sufficiency rating and seismic issues - Super Structure	\$1,160,000	County	2
BR-32	McDowell Creek Dr. - Willow Creek Bridge Replacement (County Bridge ID 729-0.68, State Bridge ID 11950A)	Priority Bridges to be replaced based on sufficiency rating and scour.	\$1,350,000	County	3
BR-33	McQueen Dr. - Creek Bridge Replacement (County Bridge ID 756-0.74, State Bridge ID 12858)	Priority Bridges to be replaced based on sufficiency rating, load rating, and scour.	\$775,000	County	3
BR-36	Mill City - Storm Drainage Improvements	Storm drainage improvements throughout Mill City	\$3,875,000	County	4

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BR-37	Muller Dr. - Burkhart Creek Bridge Replacement (County Bridge ID 333-1.37, State Bridge ID 12718)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$775,000	County	3
BR-39	N. Waverly Dr. - Cox Creek Bridge Replacement (County Bridge ID 324-0.00, State Bridge ID 12752)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour. This bridge is a City of Millersburg Bridge. A funding request for replacement was recently prepared by Linn County Engineering and submitted by Millersburg.	\$4,050,000	State/ Federal	3
BR-40	Nicewood Dr. - Lake Creek Bridge Replacement (County Bridge ID 3-4.60, State Bridge ID 12329)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$2,895,000	County	3
BR-41	Nixon Dr. - Little Muddy Creek Overflow Bridge Replacement (County Bridge ID 223-0.37, State Bridge ID 12385)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,160,000	County	3
BR-42	Old Salem Rd. - Truax Creek Bridge Replacement (County Bridge ID 367-3.19, State Bridge ID 22C08).	Priority Bridges to be replaced based on load rating, scour, sufficiency rating and seismic issues - Super Structure. To be constructed by 10/1/18.	\$1,260,000	State/ Federal	2
BR-43	Old Santiam Highway - Creek Bridge Replacement (County Bridge ID 730-0.30, State Bridge ID 11936)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$675,000	County	3
BR-45	Peoria Rd. - Lake Creek Bridge Replacement (County Bridge ID 2-12.86, State Bridge ID 12266)	Priority Bridges to be replaced based on sufficiency rating and seismic issues - Super Structure	\$2,895,000	County	2
BR-46	Peoria Rd. - Owl Creek Slough Bridge Replacement (County Bridge ID 2-3.06, State Bridge ID 12260)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$775,000	County	3

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BR-47	Plagmann Dr. - Overflow Bridge Replacement (County Bridge ID 652-1.41, State Bridge ID 12796)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,450,000	County	3
BR-48	Powerline Rd. - Muddy Creek Bridge Replacement (County Bridge ID 218-0.15, State Bridge ID 12352)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour. Funded by Oregon STIP.	\$1,220,000	State/ Federal	1
BR-49	Quartzville Rd. - Green Peter Reservoir Bridge Replacement (County Bridge ID 912-9.40, State Bridge ID 12911)	Painted in 2015. Priority Bridges to be replaced based on sufficiency rating and seismic issues - Super Structure	\$13,495,000	County	2
BR-50	Quartzville Rd. - South Santiam River Bridge Replacement (County Bridge ID 932-0.23, State Bridge ID 93223)	Priority Bridges to be replaced based on sufficiency rating and seismic issues - Super Structure	\$7,715,000	County	2
BR-52	Red Bridge Rd. - Albany-Santiam Canal Bridge Replacement (County Bridge ID 342-2.97, State Bridge ID 12693)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$400,000	County	3
BR-53	Richardson Gap Rd. - Thomas Creek Bridge Shimane Covered Bridge Restoration (County Bridge ID 637-0.70, State Bridge ID 12965)	Priority Bridges to be rehabilitated based on sufficiency rating, load rating, scour. LBP funding request submitted in 2017. Funding for design provided by Oregon STIP.	\$1,200,000	State/ Federal	3
BR-54	Riverside Dr. - Calapooia River Bridge Replacement or Repair (County Bridge ID 1-1.00, State Bridge ID 43C30)	Priority Bridges to be replaced or HEAVILY REPAIRED based on seismic vulnerability, scour, and sufficiency rating	\$3,860,000	County	2
BR-55	Sand Ridge Rd. - Butte Creek Bridge Replacement (County Bridge ID 412-0.61, State Bridge ID 12634A)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$700,000	County	3

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BR-57	Shot Pouch Rd. - South Fork Santiam River Bridge Replacement (County Bridge ID 910-002,) Not on State bridge list	Priority Bridges Off System to be Inspected and Load Rated	\$2,000,000	County	2
BR-58	Sodaville Cut-off Dr. - Oak Creek Bridge Replacement (County Bridge ID 737-0.45, State Bridge ID 11939)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$670,000	County	3
BR-59	Stayton-Scio Dr. - N. Santiam River Overflow Bridge Replacement (County Bridge ID 601-0.28, State Bridge ID 14069)	Priority Bridges to be replaced based on sufficiency rating and seismic issues - Sub Structure	\$2,575,000	County	2
BR-60	Tangent Dr. - Lake Creek Trib. Bridge Replacement (County Bridge ID 22-0.08, State Bridge ID 12576) (Tangent)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$775,000	County	3
BR-61	Tangent Dr. - Owl Creek Bridge Replacement (County Bridge ID 122-4.14, State Bridge ID 12244A)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,440,000	County	3
BR-62	Tangent Loop - Lake Creek Bridge Replacement (County Bridge ID 402-2.50, State Bridge ID 12573)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$500,000	County	3
BR-63	Three Lakes Rd. - Albany-Santiam Canal Bridge Replacement (County Bridge ID 337-1.47, State Bridge ID 12591A)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$600,000	County	3
BR-64	Upper Berlin Dr. - Hamilton Creek Bridge Replacement (County Bridge ID 903-0.60, State Bridge ID 11958)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$1,740,000	County	3

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BR-67	Waterloo Rd. - South Santiam River Bridge Rehabilitation (County Bridge ID 721-129, State Bridge ID 02287A)	Rehabilitate bridge to remove weight restriction for popular truck route.	\$3,860,000	County	4
BR-68	Wheeler St. - Albany-Santiam Canal Bridge Replacement (County Bridge ID 702-0.04, State Bridge ID 12673)	Priority Bridges to be replaced based on sufficiency rating, load rating, scour	\$2,410,000	County	3
BR-69	White Oak Rd. - Owl Creek Bridge Replacement (County Bridge ID 118-1.31, State Bridge ID 12257A)	Priority Bridges to be replaced based on sufficiency rating and seismic issues - Super Structure	\$2,895,000	County	2
BR-70	Morrison Rd - Little Rock Creek culvert bridge project	Replace with bridge to remove barriers to safe fish passage. Funding has recently been designated by ODOT for this project as a mitigation project.	\$530,000	State	1
BR-71	Fish Passage Barriers Improvement Projects	Multiple projects. Ongoing improvement program to address Fish Passage Barriers. See appendix list for current priorities.	\$10,000,000	County	4
BR-75	Stoltz Hill Rd - Owl Creek Bridge Rehabilitation (County Bridge ID 739-083, State Bridge ID 12629)	Rehabilitate bridge on Urban Minor Collector.	\$1,000,000	County	4
Bridge Projects – Other Jurisdictions					
BR-12	Sheep Creek Bridge Repair (Bridge #02025)	Geotechnical and full repair of bridge in two phases. Funded by the Oregon STIP.	\$3,602,900	State	1
BR-26	OR 228 - Drainage and Culvert Improvement (Halsey)	Improve culverts	\$1,290,000	State	1
BR-27	OR 99E - Drainage and Culvert Improvement (Halsey)	Improve culverts	\$1,290,000	State	1
BR-28	OR 226 - Storm Outlet to Thomas Creek (Scio)	Add storm outlet on OR-226	\$1,015,000	State	1
BR-44	OR 228 - Extension to Connect OR 99E with OR 99W	Connect highways via. new bridge over Willamette, potentially toll-supported. Creates recreational and emergency route from the coast to the mountains, connecting Monroe, Greenberry, Alsea, Bellfountain, Fern, and Philomath.	\$67,670,000	State	4

Table 2b: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
BR-74	OR 99E - Willamette River Bridge Replacement in Harrisburg (MP 29.09)	Replace Willamette River Bridge in Harrisburg (MP 29.09) to remove high priority vertical pinch point identified by the ODOT Highway Over-Dimension Load Pinch Points (HOLPP) Study for Region 2 District 4. Include bicycle and pedestrian accommodations to current design recommendations.	\$13,495,000	State	3
Estimated Cost for all Bridge Projects			\$212,352,900		

Table 2c: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
Corridor Improvement Projects – Linn County					
CI-29	City of Scio - Pavement Striping Maintenance on County Roads (Scio)	Paint and repair all fog lines, parking spaces, crosswalks, and other striping through Scio on N Main St. and NW/NE 4th St.	\$60,000	County	3
CI-34	Three Lakes Rd. - Realignment (Albany)	New Road or Alignment. Coordinate with City of Albany on project implementation (per Albany TSP)	\$2,000,000	County	4
CI-39	Clover Ridge Rd. - Corridor Improvements	Improvements to Clover Ridge Road going north from Knox Butte Road to AAMPO Boundary with ODOT's closure of Century Drive	\$2,000,000	County	3
Corridor Improvement Projects – Other Jurisdictions					
CI-01	53rd Avenue Extension (Albany)	New Road or Alignment. Coordinate with City of Albany on project implementation (per Albany TSP)	\$17,990,000	City	3
CI-02	Columbus St. - Urban Upgrade (Albany)	Urban Upgrade. Coordinate with City of Albany on project implementation (per Albany TSP)	\$2,730,000	City	3
CI-04	Dogwood Avenue Extension (Albany)	New Road or Alignment. Coordinate with City of Albany on project implementation (per Albany TSP)	\$3,295,000	City	3
CI-05	Ellingson Rd. - Urban Upgrade (Albany)	Urban Upgrade. Coordinate with City of Albany on project implementation (per Albany TSP)	\$5,850,000	City	3
CI-06	Ellingson Rd. Extension (Albany)	New Road or Alignment. Coordinate with City of Albany on project implementation (per Albany TSP)	\$4,430,000	City	3
CI-07	I-5 – Delaney Rd to Albany	Project Development to add a third lane on I-5 between Delaney Road and Albany. Funded by Oregon STIP.	\$3,000,000	State	1

Table 2c: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
CI-10	I-5 - Interchange and Mainline Capacity Improvement Project from South Jefferson to US 20	Add one 12-foot travel lane in each direction to the I-5 mainline from South Jefferson to US 20. Reconfigure the existing Knox Butte and US 20 interchanges to improve their operation and to add a southbound I-5 access ramp at Knox Butte; improve connectivity between the Interchanges using auxiliary lanes on I-5. These closely spaced interchanges function as a connected system. Build new Millersburg Interchange, remove old Millersburg Interchange. Improve local roadway connections to the proposed new and improved interchanges.	\$66,820,000	State	3
CI-13	I-5 - N. Jefferson – N. Albany	1R Grind inlay to remove rutted/reveled section of I-5	\$6,980,000	State	3
CI-15	I-5 - Pavement Rehab N. Albany – Halsey	Grind & Patch Concrete Preservation	\$15,300,000	State	3
CI-16	I-5 - Pavement Rehab S. Jefferson – N. Albany (NB)	1R Grind/Inlay of NB Lanes	\$6,980,000	State	3
CI-22	Lochner-Columbus Connector (Albany)	New Road or Alignment. Coordinate with City of Albany on project implementation (per Albany TSP)	\$2,745,000	City	3
CI-23	Goldfish Farm Rd. to Scrael Hill Rd. - New East/West Collector (Albany)	New Road or Alignment. Coordinate with City of Albany on project implementation (per Albany TSP)	\$3,725,000	City	4
CI-26	OR 34 - Access Management	Access management for OR 34 (US 20 to County Line)	\$3,475,000	State	3
CI-28	Santa Maria Avenue Extension (Albany)	New Road or Alignment. Coordinate with City of Albany on project implementation (per Albany TSP)	\$1,875,000	City	4
Estimated Cost for all Corridor Improvement Projects			\$149,255,000		

Table 2d: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
Rural Modernization Projects – Linn County					
RM-01	Seven Mile Ln. - Road Improvements West	Road Widening and Drainage Improvement (Columbus to I-5 Overpass)	\$3,000,000	County	3
RM-08	Foster Dam Rd. and Parking Area - Safety and Access Improvement Project	Safety and access improvements to Foster Dam Rd. and Parking Area	\$1,500,000	County	3
RM-21	Sixth Ave. - Road Improvement (Scio)	Road improvements to Sixth Avenue in Scio	\$700,000	County	3
Rural Modernization Projects – Other Jurisdictions					
RM-13	OR 226 near Lyons - Sight Distance Improvements	Between Kingston-Lyons Dr. and Lyons, improve sight distance by providing additional shoulders and clear zone. Evaluate centerline striping for passing zone compliance.	\$3,165,000	State	3
RM-14	OR 228 / Crawfordsville Dr. (east end of Crawfordsville Dr., near Holley) - Improve Sight Distance and Provide Two-Stage Left Turn Bay	Sight distance improvement. Provide two-stage left turn bay sized for school busses exiting Crawfordsville Dr. heading toward Sweet Home.	\$120,000	State	3
RM-15	OR 228 / Crawfordsville Dr. (west end of Crawfordsville Dr., near Crawfordsville) - Improve Sight Distance	Sight distance improvement	\$60,000	State	3
RM-16	OR 228 / Northern Dr. - Improve Sight Distance	Sight distance improvement	\$60,000	State	3
RM-22	City of Sweet Home - Local Roads Shoulder Improvements	Widen shoulder pavement outside fog line on local road network in Sweet Home	\$2,395,000	City	3
RM-26	US 20 near Quartzville Rd. - Horizontal Alignment Fix	Fix Horizontal Alignment. Approx. 2 miles east of Quartzville Rd. intersection	\$955,000	State	4
Estimated Cost for all Rural Modernization Projects			\$11,000,000		

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
Spot Improvement Projects – Linn County					
SI-01	Bellinger Scale Rd / Lacomb Dr. - Intersection Safety Project	Bellinger Scale Rd and Lacomb Dr.	\$50,000	County	4
SI-03	Brewster Rd. / Mt. Hope Dr. - Hotspot Intersection Safety Improvement	Monitor impact of systemic safety improvements and consider need for additional (beyond systemic) hotspot safety improvements. Potential options include: increase sight distance through vegetation removal and maintenance, which may require hillside removal. Other project options include active beacon warning systems, two-stage left off Mt. Hope Drive, left turn lane off Brewster road.	\$60,000	County	4
SI-04	Brownsville Rd. / Washburn Heights Dr. - Intersection Safety Improvements	Improve intersection safety by addressing limited sight distance through improvements such as: remove obstacles to improve intersection sight distance, slow or alert incoming traffic on Brownsville, or realign/relocate intersection to reduce hazard.	\$60,000	County	4
SI-07	Denny School Rd. / Oak St. - Intersection Operations Project	This unsignalized intersection under County jurisdiction is forecast to exceed the mobility target (Level-of-Service D) mobility target for the Oak St. and Hayden Dr. approach critical movements. The improvement evaluation applies additional median space to allow for two-stage left turns and crossings for the eastbound and westbound movements. This would improve intersections to meet the mobility target (LOS D). Final design approval for any intersection improvement would be required by Linn County.	\$2,000,000	County	4
SI-08	Denny School Rd. / Airport Dr. - Traffic Calming	Improve horizontal curve area and implement traffic calming. Potential approaches include additional signing, transverse rumble strips, clear zone object removal.	\$50,000	County	4

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-10	Fish Hatchery Dr. / Ede Rd. - Improve Sight Distance	Improve sight distance with vegetation removal and maintenance. Potential alternative projects include realigning Ede Rd. to reduce skew; realigning Fish Hatchery Dr. to reduce horizontal curves.	\$95,000	County	4
SI-11	Fish Hatchery Dr. / Richardson Gap Rd. - Additional Hotspot Intersection Safety Improvements	Monitor for safety improvement due to recent systemic safety improvements (flashers, larger signs, rumble strips, solar powered "stop ahead" sign), and consider additional projects if needed. Additional potential improvements include: roundabout or signalization, if warranted	\$50,000	County	4
SI-12	Ford Mill Rd. / Lacombe Dr. - Intersection Realignment	Realign and reconstruct intersection to a standard stop-controlled "T" intersection. Consider dedicated left and/or right turn lanes as needed, using existing ROW if possible. Prioritize major collector route though signing.	\$70,000	County	4
SI-20	Kamph Dr. / Murder Creek Dr. / Shady Bend Rd. - Intersection Improvement	Provide enhanced advanced notification signage on all approaches and provide stop bar and fog line striping.	\$50,000	County	4
SI-21	Kirk Avenue - Improve Cemetery Access (Brownsville)	Improve access to Brownsville Pioneer Cemetery	\$60,000	County	4
SI-22	Knox Butte Rd. / Scravel Hill Rd. - Intersection Safety Project	Monitor for safety improvement due to recent advance warning signs and other systemic improvements. Possible further actions: active beacons or enhanced signage, transverse rumble strips, realign intersection, install roundabout or traffic signal.	\$200,000	County	4
SI-23	Lacombe Rd. / Bond Rd. - Intersection Safety Improvements	Realign intersection to remove skew. Improve sight distance via vertical curve flattening, or improve awareness using enhanced signing or active beacons.	\$95,000	County	4
SI-24	Miller Cemetery / Shelburn Dr. - Intersection Improvement	Change traffic control to 4-way stop.	\$15,000	County	4
SI-25	Oakville Rd / Tangent Dr. - Intersection Safety Project	Oakville Rd and Tangent Dr.	\$50,000	County	4

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-26	Old Holly Rd. (aka Alder Street) / 8th Avenue - Intersection Improvement	Intersection modification to improve sight distance.	\$60,000	County	4
SI-48	Diamond Hill Rd. / Powerline Rd. - Additional Hotspot Intersection Safety Improvements	Monitor for safety improvement due to recent systemic safety improvements, consider additional improvements if needed. Possible further improvements: additional sign and marking enhancements, realign intersection, install roundabout, install transverse rumble strips.	\$50,000	County	4
SI-49	Richardson Gap Rd. / Cole School Rd. / Ridge Dr. - Intersection Improvements	Realign intersection including full redesign and rebuild to provide improved sight distances and better turning radius for all movements, especially the north-south major collector flow.	\$1,500,000	County	4
SI-50	Ridgeway Rd. / Marks Ridge Rd. - Intersection Realignment	Realign intersection to improve sight distance and reduce conflicts, while maintaining truck-friendly geometry if needed. Potential design is an offset-T intersection, with 4-way stop control.	\$300,000	County	4
SI-52	Riverside Dr. / Oakville Rd. - Improve Sight Distance	Manage vegetation to the south and north of intersection. Note, limited ROW and vegetation are on private property.	\$42,000	County	4
SI-53	Rock Hill Dr. / South 5th St. - Intersection Improvements	Intersection Improvements based on field review of operational and safety performance.	\$50,000	County	4
SI-54	Rock Hill Dr. / South Main Rd. - Improve Sight Distance	Improve sight distance at intersection. Project options include vegetation removal or vertical curve flattening.	\$110,000	County	4
SI-55	Sandner Dr. / Kingston Jordan Dr. - Intersection Realignment and Safety Improvements	Realign intersection to remove skew. Improve driver awareness using systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements, Enhanced Signing Treatments.	\$900,000	County	4
SI-56	Sodaville Rd. / Cascade Dr. / McCraven Ln. - Additional Hotspot Intersection Safety Improvements	Monitor for impact of systemic safety improvements, and consider converting intersection to 4-way stop and realigning McCraven Ln. if safety performance does not improve.	\$480,000	County	4

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-57	Spicer Dr. / Engle Rd. - Intersection Realignment	Realign intersection, convert to stop-controlled.	\$700,000	County	4
SI-58	Spicer Dr. / Kennel Rd. - Additional Hotspot Intersection Safety Improvement	Monitor for impact of systemic safety improvements, and consider intersection realignment if safety performance does not improve.	\$1,500,000	County	4
SI-59	Steckley Rd. / Sand Ridge Rd. - Intersection Improvement	Improve driver understanding of intersection traffic control. For example, a realignment that provides a more traditional stop-controlled "T" intersection, with dedicated turn or slip lanes as needed.	\$50,000	County	4
SI-71	Walnut Dr. / Oakville Rd. - Intersection and Roadway Improvement	Improve intersection and roadway for freight and safety	\$10,000	County	4
SI-74	Slide Area Maintenance List Program	Ongoing improvement program to address slide areas. See appendix list for current priorities.	\$17,405,000	County	3
SI-75	Restricted Roads Improvements List Program	Ongoing improvement program to address geometrically access restricted roads. See appendix list for current priorities.	\$8,670,000	County	3
SI-76	Flood Closures Maintenance List Program	Ongoing improvement program to address flood closures and high-water areas. See appendix list for current priorities.	\$12,500,000	County	2
SI-77	Columbus St. - OR 34 Access Modifications	Change Columbus St. access from OR 34 to right-in-right-out and redirect other traffic to Seven Mile Ln.	\$105,000	County	4
SI-86	7 Mile Lane / Fry Rd. / Selmet Access Rd - Safety Improvement	Evaluate intersection for safety improvements including sight distance, sign and marking improvements, and realignment options.	\$60,000	County	4
SI-87	Main St / Sodaville Rd / Sodaville Mountain Home Rd - Safety Improvement	Evaluate intersection for safety improvements including sight distance, sign and marking improvements, and realignment options.	\$60,000	County	4
SI-88	Foster Dam Rd. / N. River Dr. - Safety Improvement	Evaluate intersection for safety improvements including sight distance, sign and marking improvements, and realignment options.	\$60,000	County	4
SI-89	Spicer Dr. / Grand Prairie Rd. - Safety Improvement	Evaluate intersection for safety improvements including sight distance, sign and marking improvements, and realignment options.	\$60,000	County	4

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-90	Spicer Dr. / Goltra Rd. - Safety Improvement	Evaluate intersection for safety improvements including sight distance, sign and marking improvements, and realignment options.	\$60,000	County	4
SI-91	McDowell Creek Dr. / Pleasant Valley Rd. - Safety Improvement	Evaluate intersection for safety improvements including sight distance, sign and marking improvements, and realignment options.	\$60,000	County	4
Spot Improvement Projects – Other Jurisdictions					
SI-09	Ellingson Rd. / Columbus St. /Seven Mile Lane (Albany)	Intersection Control Change. Coordinate with City of Albany on project implementation (per Albany TSP)	\$2,000,000	City	4
SI-15	Diamond Hill Dr. / I-5 Interchange - Improve Sight Distance	Sight distance improvement at I-5 interchange northbound terminal, including adjacent Belts Dr. intersection. May involve Little Muddy Creek bridge modification,	\$6,465,000	State	3
SI-16	I-5 Optimization: Add or Upgrade Traffic Cameras	I-5 from County Line to South Boundary of Albany. (MP 236.5 (upgrade) South Jefferson Interchange (new))	\$1,490,000	State	1
SI-17	I-5 Optimization: Demand Management Strategies	I-5 from County Line to South Boundary of Albany.	\$1,000,000	State	4
SI-18	I-5 Optimization: Incident Response Program	I-5 from County Line to South Boundary of Albany.	\$2,980,000	State	1
SI-19	I-5 Optimization: Ramp Metering (Exit 234 NB On-Ramp)	I-5 from County Line to South Boundary of Albany. (Exit 234 NB On-Ramp, US 20 Interchange)	\$960,000	State	1
SI-27	Old Mill Rd. - Urban Commercial Improvements (Tangent)	Improvements to roadway to accommodate commercial activity and pedestrian and bicycle access.	\$1,165,000	City	4

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-28	OR 164 / Scrael Hill Rd. - Intersection Operations Project	This unsignalized intersection is forecast to fail to meet the mobility target (v/c of 0.75) for the Scrael Hill Rd. approach northbound left turn in the future forecast. (The conceptual improvement evaluation applies a new right turn lane on Scrael Hill Rd. and a short receiving lane on OR 164. This would reduce the critical movement v/c ratio to 0.44.) Final design approval for any intersection improvement would be required by ODOT.	\$135,000	State	4
SI-29	OR 226 / Brewster Rd. - Additional Intersection Safety Improvement	Monitor outcomes from systemic safety improvements. As needed, additionally enhance driver awareness of stop sign, through improvements such as including flashers, larger signs, transverse rumble strips, and/or solar powered "stop ahead" sign	\$50,000	State	4
SI-30	OR 226 / Fish Hatchery Dr. - Additional Intersection Safety Improvements	Monitor outcomes from systemic safety improvements. As needed, additionally enhance driver awareness of stop sign, through improvements such as including flashers, larger signs, transverse rumble strips, and/or solar powered "stop ahead" sign	\$50,000	State	4
SI-32	OR 226 / Kingston Jordan Rd. - Sight Distance Improvements	Improve sight distance onto OR 226 through vegetation removal.	\$25,000	State	3
SI-33	OR 226 / McCully Mountain Rd. - Intersection Improvement (Lyons)	Improve sight distance or provide improved advance warning.	\$50,000	State	4
SI-34	OR 226 / Richardson Gap Rd. - Additional Intersection Safety Improvements	Monitor outcomes from systemic safety improvements. As needed, additionally enhance driver awareness of stop sign, through improvements such as including flashers, larger signs, transverse rumble strips, and/or solar powered "stop ahead" sign	\$50,000	State	4
SI-35	OR 228 / Fern Ridge Rd. and Rowell Hill Rd. (north end) - Shoulder and Sight Distance Improvement	Widen shoulder on OR 228 at curves near Fern Ridge Rd. / Rowell Hill Rd., remove trees west of intersection to improve sight distance.	\$160,000	State	3

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-47	OR 99E / Railroad Crossing - Railroad Crossing Improvements (Harrisburg)	Monitor driver compliance of recent improvements at railroad crossing just north of Peoria Rd. Consider additional enhancements if poor compliance or crashes continue, such as transverse rumble strips.	\$20,000	State	4
SI-60	US 20 - Lower Sunken Grade Slide Repair	Provide a permanent fix to the slide area (M.P. 55.4)	\$4,555,000	State	3
SI-61	US 20 - Sweet Home Police Department Access Improvements	Vehicle and pedestrian access improvements	\$230,000	State	4
SI-62	US 20 / Crowfoot Rd. - Intersection Improvement	Intersection improvement to reduce conflict points and consolidate access points on US 20. Implement in collaboration with City of Lebanon.	\$115,000	State	4
SI-63	US 20 / Foster Dam Rd. - Railroad Undercrossing Improvement	Improve Railroad crossing (AERR Trestle) to remove height restriction. Location was identified as a high priority pinch point in the ODOT Highway Over-Dimension Load Pinch Points (HOLPP) Study for Region 2 District 4 as critical to both everyday freight movement and disaster response services. Coordinate with results of Project BP-3 (ODOT STIP Project 18853, Multiuse Path along US 20 from 54th Ave. to Riggs Hill Rd.), expected bid letting early 2018.	\$2,995,000	State	3
SI-64	US 20 / Knox Butte Dr. - Intersection Operations Project	This unsignalized intersection is forecast to fail to meet the mobility target (v/c of 0.75) for the Knox Butte Dr. approach southbound left turn in the future forecast. (The conceptual improvement evaluation applies separated left turn and right turn lanes on Knox Butte Dr., creating a formalized median space to allow for a two-stage southbound left turn. This would reduce the critical movement v/c ratio to 0.71.) Final design approval for any intersection improvement would be required by ODOT.	\$180,000	State	3

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-66	US 20 / OR 226 - Intersection Operations Project	This unsignalized intersection is forecast to fail to meet the mobility target (v/c of 0.75) for the OR 226 approach westbound left turn in the future forecast. (The conceptual improvement evaluation applies separated left and right turn lanes on OR 226, creating a formalized median space to allow for a two-stage westbound left turn. This would reduce the critical movement v/c ratio to 0.50.) Final design approval for any intersection improvement would be required by ODOT.	\$180,000	State	3
SI-69	US 20 near OR 126 - Safety Improvement	Safety improvement between Canyon Creek Rd. and OR 126 (McKenzie Highway)	\$25,750,000	State	4
SI-70	US 20 near OR 22 - Safety Improvement	Weather-related safety improvement approximately four miles east of Santiam Junction / OR 22	\$280,000	State	4
SI-80	OR 164 / I-5 Northbound Ramps - New Traffic Signal	Install new signal, when warranted, per AAMPO RTP.	\$2,000,000	State	4
SI-81	OR 228 / Fern Ridge Rd. (south end) - Sight Distance Improvement	Improve sight distance.	\$160,000	State	4

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-82	OR 34 / Denny School Rd. - Operations Improvement	<p>This unsignalized intersection fails to meet the mobility target (v/c ratio of 0.75) for the Denny School Rd. approach northbound left turn in the existing conditions and future forecast. This intersection currently has median improvements that allow for two-stage left turns off of Denny School Road. (As the intersection does not meet preliminary signal warrants based on 2040 traffic volume forecast, a traffic signal was not considered to be an appropriate solution. The conceptual improvement evaluation applies a single lane roundabout while maintaining the bypasses for eastbound right turning and westbound through traffic. This would improve critical approach operations to a v/c ratio of 0.80 in the 30th highest hour and 0.65 in the average weekday p.m. peak hour.) Final design approval for any intersection improvement would be required by ODOT.</p>	\$2,395,000	State	4
SI-83	OR 34 / Peoria Rd. - Operations Improvement	<p>This signalized intersection fails to meet the mobility target (v/c ratio of 0.70) in the existing and future forecast conditions. Intersection improvements to meet the mobility target would require major changes to the intersection (Conceptual improvement evaluation considered widening OR 34 to include additional left turn and through lanes on OR 34, which achieves a v/c ratio of 0.67). The appropriate solutions at this intersection need to consider the larger context and vision for OR 34 between I-5 and Corvallis. Final design approval for any intersection improvement would be required by ODOT. This corridor should be considered as an area for further study through a future refinement plan.</p>	\$3,600,000	State	4

Table 2e: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SI-85	US 20 / Pleasant Valley Rd. (Sweet Home) - Additional Hotspot Intersection Safety Improvements	Monitor impact of systemic safety improvements and consider need for additional (beyond systemic) hotspot safety improvements. Potential options include: Enhanced Signing Treatment, Roundabout, Traffic Signal pending engineering investigation and warrant.	\$2,395,000	State	4
Estimated Cost for all Spot Improvement Projects			\$107,967,000		

Table 2f: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
System Management Projects – Linn County					
SM-01	1st Avenue - Mill City Post Office Safety Review	Safety review to identify improvements for all modes accessing the Mill City Post Office.	\$30,000	County	3
SM-05	Linn County - TDM Programs	Transportation Demand Management Programs (Ongoing)	\$1,480,000	County	3
SM-11	Promote Enhanced Transit Service for Small Communities in Linn County	Promote Enhanced Transit Service for Small Communities in Linn County through interagency and private/public partnerships. Opportunities include expanded fixed route service area and frequency, as well as promotion of on-demand transit or integration with transportation network companies.	\$250,000	County	3
SM-12	Regional Transit Coordination	Linn County to support improved regional transit coordination.	\$100,000	County	3
SM-18	Update Emergency Route Designations	Supplement the existing emergency routes in the existing TSP with standby routes in case the major emergency routes have a bridge failure or major crash. Bridges will need to be scour protected and seismic protected, and evaluated to see if there is a need to be on an improvement list. NOTE: ODOT Bridge Section is presently developing a Bridge Replacement List for Addressing Emergency Routes in Linn County. ODOT Bridge Section has identified 116 Bridges in Linn County that are seismic deficient. A plan to address this will be developed in the next 18 months from November 2017 to March 2019. Rough Cost Estimate to address and correct bridges is ~\$120,000,000.	\$100,000	County	2
System Management Projects – Other Jurisdictions					
SM-08	Mill City - Coordination of Paving Projects for City Overlay Work	Coordination with County to maximize maintenance efficiency.	\$100,000	City	3
SM-09	OR 34 - Road Safety Audit	Road Safety Audit for OR 34 (US 20 to County Line) to identify targeted safety countermeasures appropriate for the corridor.	\$50,000	State	3

Table 2f: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SM-13	Scenic Byway Coordination - Marys Peak to Pacific	Coordinate with upcoming designation of new "Mary's Peak to Pacific" scenic byway along Highway 34 from I-5 to Highway 101 at the coast, maximizing economic opportunity and ensuring maintenance and safety standards. Corridor management plan includes site-specific interpretive opportunities and action plan, including the establishment of interpretive Byway portal sites on the east end of the Byway.	\$100,000	State	3
SM-17	US 20 Road Safety Audit	Road Safety Audit (RSA) for US 20 (I-5 to Lebanon)	\$50,000	State	1
SM-19	Linn Benton Loop Enhancements	Support enhanced transit service between Albany and Corvallis.	\$2,000,000	Oregon Cascades West Council of Governments	3
SM-21	Transit Service between Jefferson, Millersburg and Albany	Support MPO efforts to provide transit service to Millersburg and Jefferson.	\$7,000,000	Albany Area MPO	3
SM-22	Transit Signal Priority	Support implementation of Transit Signal Priority at key intersections along transit routes. Project should consider potential locations for queue jumps.	\$1,200,000	Albany Area MPO	3
Estimated Cost for all System Management Projects			\$12,460,000		

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
Systemic Safety Projects – Linn County					
SS-001	Brewster Rd. / Griggs Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-002	Brewster Rd. / Mt. Hope Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-003	Columbus St. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Alignment Delineation, Edgeline Rumble Strips, and Enhanced Signs and Markings.	\$41,000	County	4
SS-004	Denny School Rd. / Oak St. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements, New or Upgraded Lighting	\$11,280	County	4
SS-005	Grand Prairie Dr. / Three Lakes Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-006	Grand Prairie Rd. / Waverly Dr. (Albany) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Signal and Sign Improvements, Change of Permitted and Protected Left Turn Phase to Protected Only (or Flashing Yellow Arrow), Enforcement Assisted Lights	\$8,280	County	4
SS-009	Lyons-Mill City Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Enhanced Signs and Markings, and Tree Removal	\$181,000	County	2
SS-010	Marks Ridge Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Centerline Rumble Strips.	\$25,000	County	2
SS-011	McDowell Creek Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	2
SS-012	Mt Hope Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	2
SS-013	N Main St. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	2

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-014	Oak St. / 2nd St. (Lebanon) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Enforcement Assisted Lights	\$500	County	4
SS-015	Oak St. / Fur Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	2
SS-016	Oak St. / S. 2nd St. (Lebanon) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	2
SS-017	Old Salem Rd. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	2
SS-063	Peoria Rd. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Alignment Delineation, Centerline Rumble Strips, Edgeline Rumble Strips, Signs and Markings, and Tree Removal.	\$670,280	County	4
SS-064	Powerline Rd. / Priceboro Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-065	Price Rd. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Urban Signs and Markings.	\$5,000	County	4
SS-066	Priceboro Rd. / 6th St. (Harrisburg) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-067	Queen Ave. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements to County jurisdiction portion of road (Broadway St. to Riverside Dr.) including: Edgeline Rumble Strips, Signs and Markings, and Tree Removal.	\$91,240	County	4
SS-068	River Dr. A. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	4
SS-069	Rock Hill Dr. / Brownsville Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-070	Rock Hill Dr. / Butte Creek Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-071	Rock Hill Dr. / Sand Ridge Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-072	Scravel Hill Rd. / Teddy Ave. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-073	Shelburn Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	4
SS-074	Sodaville Rd. / Cascade Dr. / McCraven Ln. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	County	4
SS-075	Spicer Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	4
SS-076	Spicer Dr. / Kennel Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements.	\$3,780	County	4
SS-077	Spring St A. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	4
SS-078	Upper Calapooia Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Signs and Markings	\$5,000	County	4
SS-100	Wiley Cr Dr. - Systemic Roadway Departure Improvements	Provide systemic roadway departure improvements including: Centerline Rumble Strips, and Signs and Markings	\$39,040	County	4
Systemic Safety Projects – Other Jurisdictions					
SS-007	I-5 - Alignment Delineation and Lighting	Provide Alignment Delineation and Lighting on I-5 at appropriate locations between M.P. 237.5 and M.P. 240.34, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$912,200	State	1

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-018	OR 126 - Centerline Rumble Strips	Provide Centerline Rumble Strips on OR 126 at appropriate locations between M.P. 5.68 and M.P. 8.52, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$7,500	State	1
SS-019	OR 126 - Edgeline Rumble Strips	Provide Edgeline Rumble Strips on OR 126 at appropriate locations between M.P. 2.84 and M.P. 9.09, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$4,500	State	4
SS-020	OR 126 - Enhanced Signing and Marking for Curves	Provide Enhanced Signing and Marking for Curves on OR 126 at appropriate locations between M.P. 6.25 and M.P. 10.23, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$7,500	State	4
SS-021	OR 164 - Shoulder Rumble Strips	Provide Shoulder Rumble Strips on OR 164 at appropriate locations between M.P. 7.95 and M.P. 8.52, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$1,500	State	4
SS-022	OR 164 / I-5 Northbound Ramps - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-023	OR 22 - Centerline Rumble Strips	Provide Centerline Rumble Strips on OR 22 at appropriate locations between M.P. 68.18 and M.P. 82.39, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$37,500	State	4
SS-024	OR 22 - Shoulder and Edgeline Rumble Strips	Provide Shoulder and Edgeline Rumble Strips on OR 22 at appropriate locations between M.P. 61.93 and M.P. 81.82, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$31,500	State	4

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-025	OR 22 - Enhanced Signing and Marking for Curves	Provide Enhanced Signing and Marking for Curves on OR 22 at appropriate locations between M.P. 67.61 and M.P. 66.48, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$22,500	State	4
SS-027	OR 226 - Shoulder and Edgeline Rumble Strips	Provide Shoulder and Edgeline Rumble Strips on OR 226 at appropriate locations between M.P. 4.55 and M.P. 24.43, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$22,500	State	4
SS-028	OR 226 - Enhanced Signing and Marking for Curves	Provide Enhanced Signing and Marking for Curves on OR 226 at appropriate locations between M.P. 10.8 and M.P. 23.3, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$10,000	State	4
SS-030	OR 226 / 1st Ave. and Main St. - Systemic Intersection Safety Improvements (Scio)	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-031	OR 226 / Brewster Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements, New or Upgraded Lighting, High Friction Surface, Traffic Calming Improvements.	\$67,560	State	4
SS-032	OR 226 / Cold Springs Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-033	OR 226 / Fish Hatchery Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-034	OR 226 / Gilkey Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements. Consider addition of transverse rumble strips or other traffic calming elements.	\$12,600	State	4
SS-035	OR 226 / Richardson Gap Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-036	OR 228 - Alignment Delineation and Lighting	Provide Alignment Delineation and Lighting on OR 228 at appropriate locations between M.P. 7.95 and M.P. 8.52, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$2,500	State	4
SS-037	OR 228 - Centerline Rumble Strips	Provide Centerline Rumble Strips on OR 228 at appropriate locations between M.P. 5.68 and M.P. 8.52, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$7,500	State	4
SS-038	OR 228 - Shoulder and Edgeline Rumble Strips	Provide Shoulder and Edgeline Rumble Strips on OR 228 at appropriate locations between M.P. 2.84 and M.P. 20.45, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$19,500	State	4
SS-039	OR 228 - Enhanced Signing and Marking for Curves	Provide Enhanced Signing and Marking for Curves on OR 228 at appropriate locations between M.P. 7.39 and M.P. 19.89, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$10,000	State	4
SS-041	OR 228 / Bush Creek Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements for the Bush Creek Rd. approach including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-042	OR 228 / I-5 Southbound Ramps - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-043	OR 34 / Denny School Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements, Enhanced Signing Treatments, High Friction Surface	\$28,880	State	4
SS-044	OR 34 / Goltra Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-045	OR 34 / I-5 Northbound Ramps - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Signal and Sign Improvements	\$4,000	State	4

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-046	OR 34 / I-5 Southbound Ramps - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Signal and Sign Improvements, Change of Permitted and Protected Left Turn Phase to Protected Only (or Flashing Yellow Arrow)	\$8,000	State	4
SS-047	OR 34 / McFarland Rd. / Looney Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-048	OR 34 / Oakville Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-049	OR 34 / Olson Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-050	OR 34 / OR 34 Bypass - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Signal and Sign Improvements. Evaluate intersection for Enhanced Signing Treatment, and advanced treatments such as actuated dilemma zone protection system.	\$9,000	State	4
SS-051	OR 34 / Peoria Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Hot Spot Improvements. Evaluate intersection for Enhanced Signing Treatment, and advanced treatments such as actuated dilemma zone protection system.	\$9,500	State	4
SS-052	OR 34 / Seven Mile Ln. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Hot Spot Improvements	\$9,000	State	4
SS-053	OR 99E - Centerline Rumble Strips	Provide Centerline Rumble Strips on OR 99E at appropriate locations between M.P. 11.36 and M.P. 14.2, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$7,500	State	4
SS-054	OR 99E - Shoulder and Edgeline Rumble Strips	Provide Shoulder and Edgeline Rumble Strips on OR 99E at appropriate locations between M.P. 7.39 and M.P. 26.7, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$13,500	State	4

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-055	OR 99E - Enhanced Signing and Marking for Curves	Provide Enhanced Signing and Marking for Curves on OR 99E at appropriate locations between M.P. 10.23 and M.P. 12.5, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$5,000	State	4
SS-057	OR 99E / Cartney Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-058	OR 99E / Fayetteville Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements. Monitor outcomes and consider Enhanced Signing Treatment	\$16,380	State	4
SS-059	OR 99E / La Salle St. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-060	OR 99E / Lake Creek Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-061	OR 99E / N. Lake Creek Dr. - Systemic Intersection Safety Improvements (Tangent)	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-062	OR 99E / OR 228 - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-079	US 20 - Alignment Delineation and Lighting	Provide Alignment Delineation and Lighting on US 20 at appropriate locations between M.P. 77.84 and M.P. 80.11, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$12,500	State	4
SS-080	US 20 - Centerline Rumble Strips	Provide Centerline Rumble Strips on US 20 at appropriate locations between M.P. 2.84 and M.P. 82.39, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$75,000	State	4

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-081	US 20 - Shoulder and Edgeline Rumble Strips	Provide Shoulder and Edgeline Rumble Strips on US 20 at appropriate locations between M.P. 2.84 and M.P. 73.86, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$84,000	State	4
SS-082	US 20 - Enhanced Signing and Marking for Curves	Provide Enhanced Signing and Marking for Curves on US 20 at appropriate locations between M.P. 25 and M.P. 80.11, per ODOT Roadway Departure Safety Implementation Plan. See appendix list for more details.	\$89,500	State	4
SS-085	US 20 / 9th Ave. (Sweet Home) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-086	US 20 / Big Lake Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-087	US 20 / Bohlken Dr. / Honey Sign Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-088	US 20 / Clark Mill Rd. (Sweet Home) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-089	US 20 / Fairview Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-090	US 20 / Gore Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-091	US 20 / Kgal Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-092	US 20 / Knox Butte Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements, Enhanced Signing Treatments, New or Upgraded Lighting, High Friction Surface	\$36,380	State	4
SS-093	US 20 / OR 22 / Santiam Junction - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4

Table 2g: Financially Constrained and Aspirational Project List

Project ID	Project Description	Project Elements*	Estimated Cost (2017 Dollars)	Primary Funding Source**	Package ***
SS-094	US 20 / OR 226 - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-095	US 20 / OR 228 - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Signal and Sign Improvements. Monitor impact and consider additional hotspot treatments if needed.	\$9,000	State	4
SS-096	US 20 / Pleasant Valley Rd. (Sweet Home) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-097	US 20 / Sodaville Rd. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-098	US 20 / Sodaville-Waterloo Dr. / Waterloo Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-099	US 20 / Spicer Dr. / Tennessee School Dr. - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements	\$3,780	State	4
SS-101	OR 34 Continuous Left Turn Lane Rumble Strips	Install rumble strips within the continuous left turn lane to address lane departure crashes	\$158,710	State	1
Estimated Cost for all Systemic Safety Projects			\$3,029,089		
Estimated Cost for all Projects			\$692,909,614		

*The project design elements depicted are identified for the purpose of creating a reasonable cost estimate for planning purposes. The actual design elements for any project are subject to change, and will ultimately be determined through a preliminary and final design process, and are subject to county and/or ODOT approval.

**Funding will come from a variety of sources. Primary funding source is based on the agency who has jurisdiction over an existing facility, or who is expected to construct a new facility.

***Improvement Package 1: Financially Constrained Plan (Totals the \$15 to \$20 million from various state and/or federal sources).

Improvement Package 2: Relies on \$60 million of additional funding that would be available if the county opted to add a new funding source, such as those described on page 88.

Improvement Package 3: Comprised of the aspirational projects, the projects of the next highest priority if the county opted to add a new funding source, such as those described on page 88.

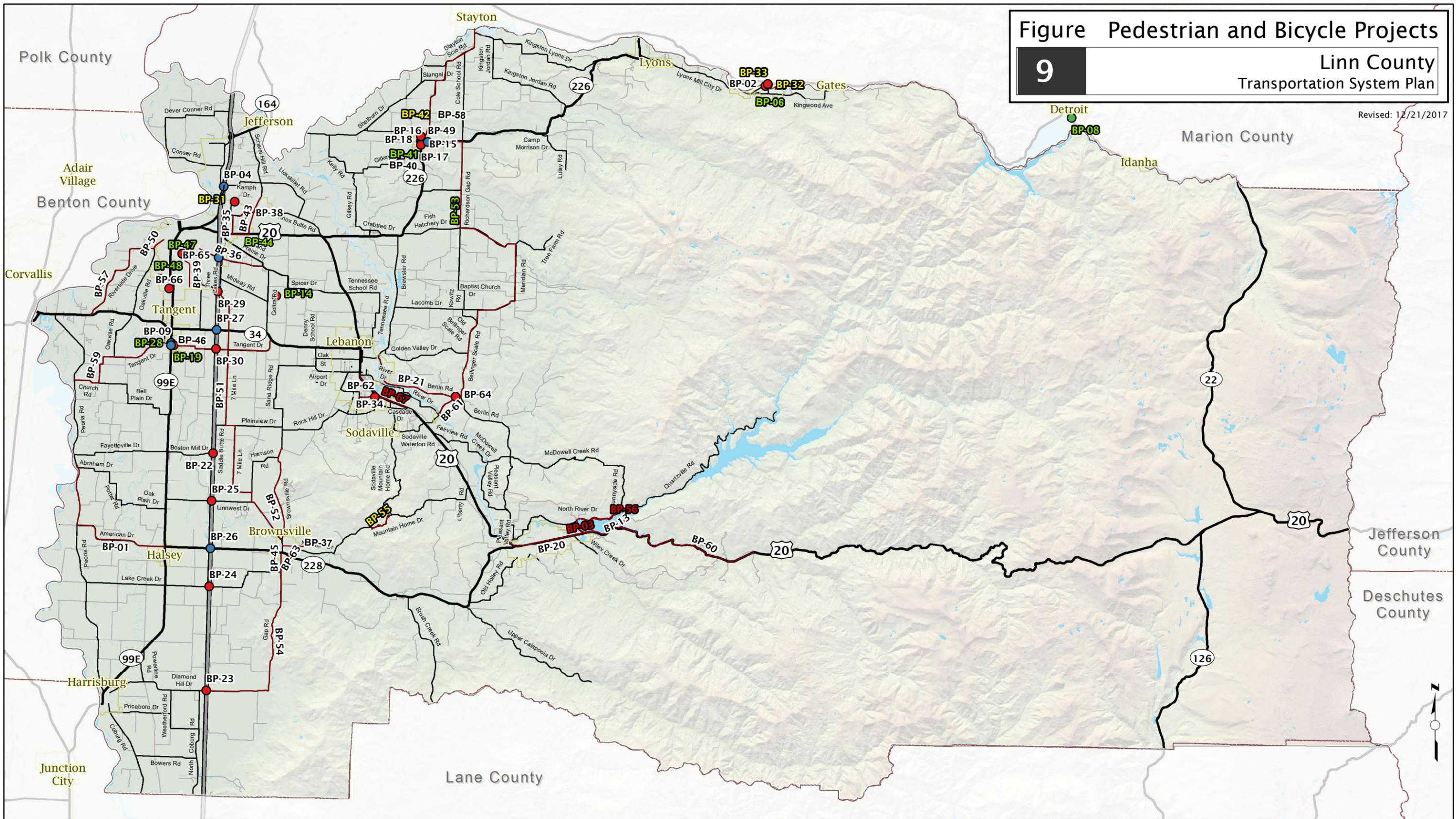
Improvement Package 4: Comprised of the aspirational projects, those remaining projects that likely would not have county or state funding by 2040.

Figure Pedestrian and Bicycle Projects

9

Linn County
Transportation System Plan

Revised: 12/21/2017



Legend

Project Primary Jurisdiction

- County
- State
- Other

- Project included in Improvement Package 1 (Financially Constrained Plan)
- Project included in Improvement Package 2

- Project included in Improvement Package 3
- Project included in Improvement Package 4

- Interstate
- State Highways
- County Local Roads
- County Local Roads

- Water
- Urban Growth Boundary

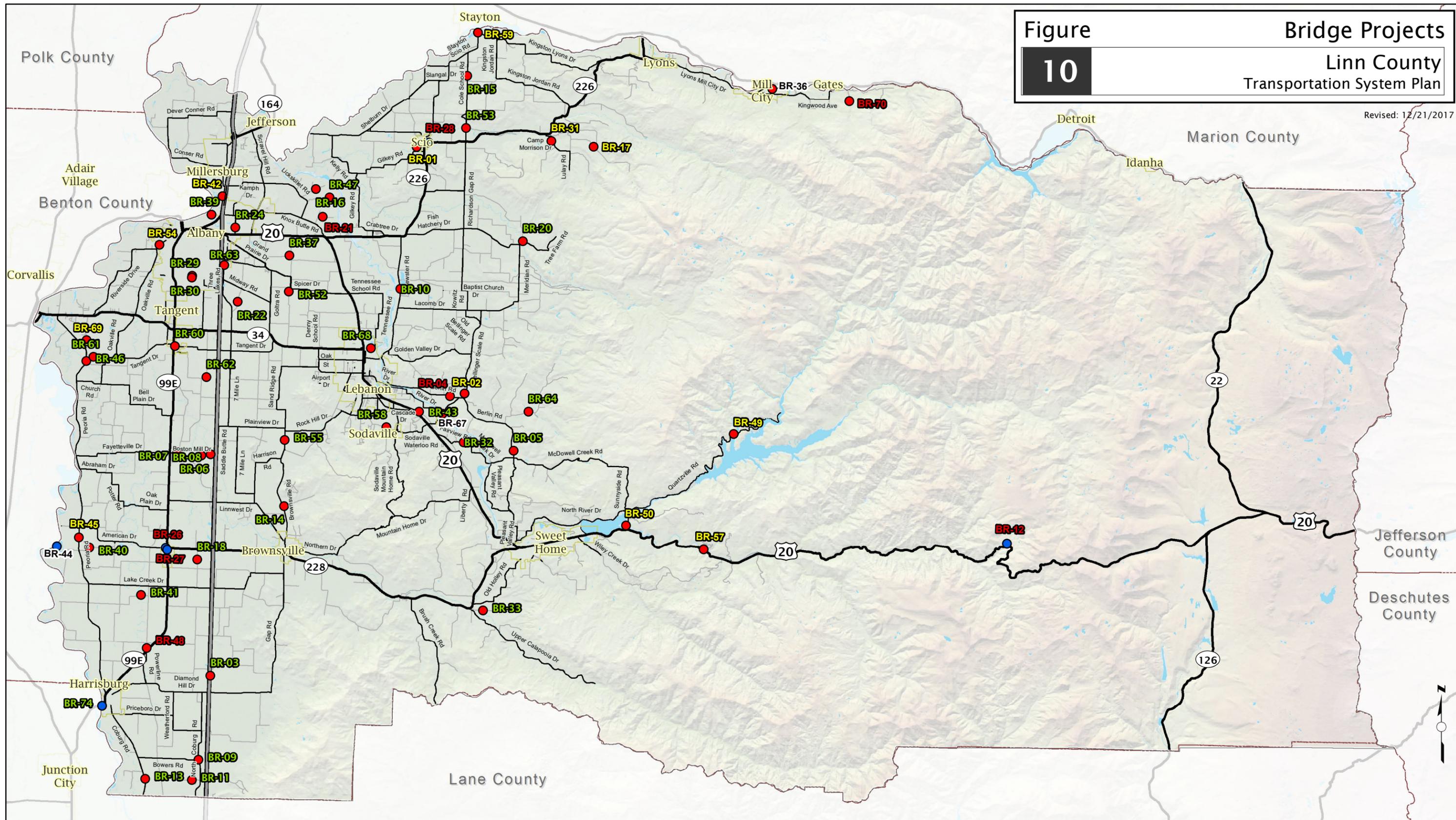


Figure

10

Bridge Projects Linn County Transportation System Plan

Revised: 12/21/2017



Legend

Project Primary Jurisdiction

- County
- State
- Other

- # Project included in Improvement Package 1 (Financially Constrained Plan)
- # Project included in Improvement Package 2

- # Project included in Improvement Package 3
- # Project included in Improvement Package 4

- Interstate
- State Highways
- County Local Roads
- County Local Roads

- Water
- Urban Growth Boundary

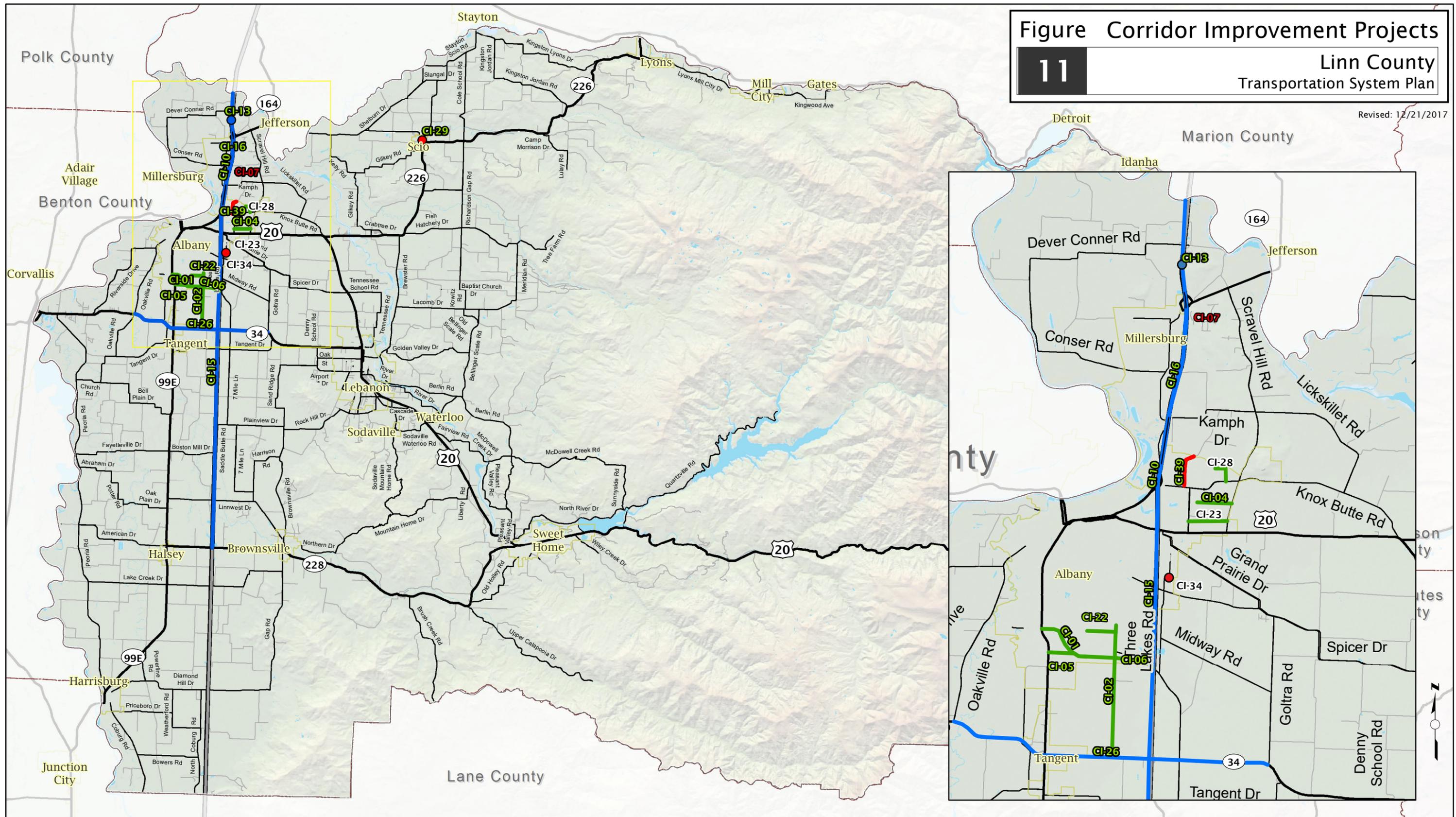


Figure Corridor Improvement Projects

11

Linn County
Transportation System Plan

Revised: 12/21/2017



Legend

Project Primary Jurisdiction

- County
- State
- Other

- Project included in Improvement Package 1 (Financially Constrained Plan)
- Project included in Improvement Package 2

- Project included in Improvement Package 3
- Project included in Improvement Package 4

- Interstate
- State Highways
- County Local Roads
- County Local Roads

- Water
- Urban Growth Boundary

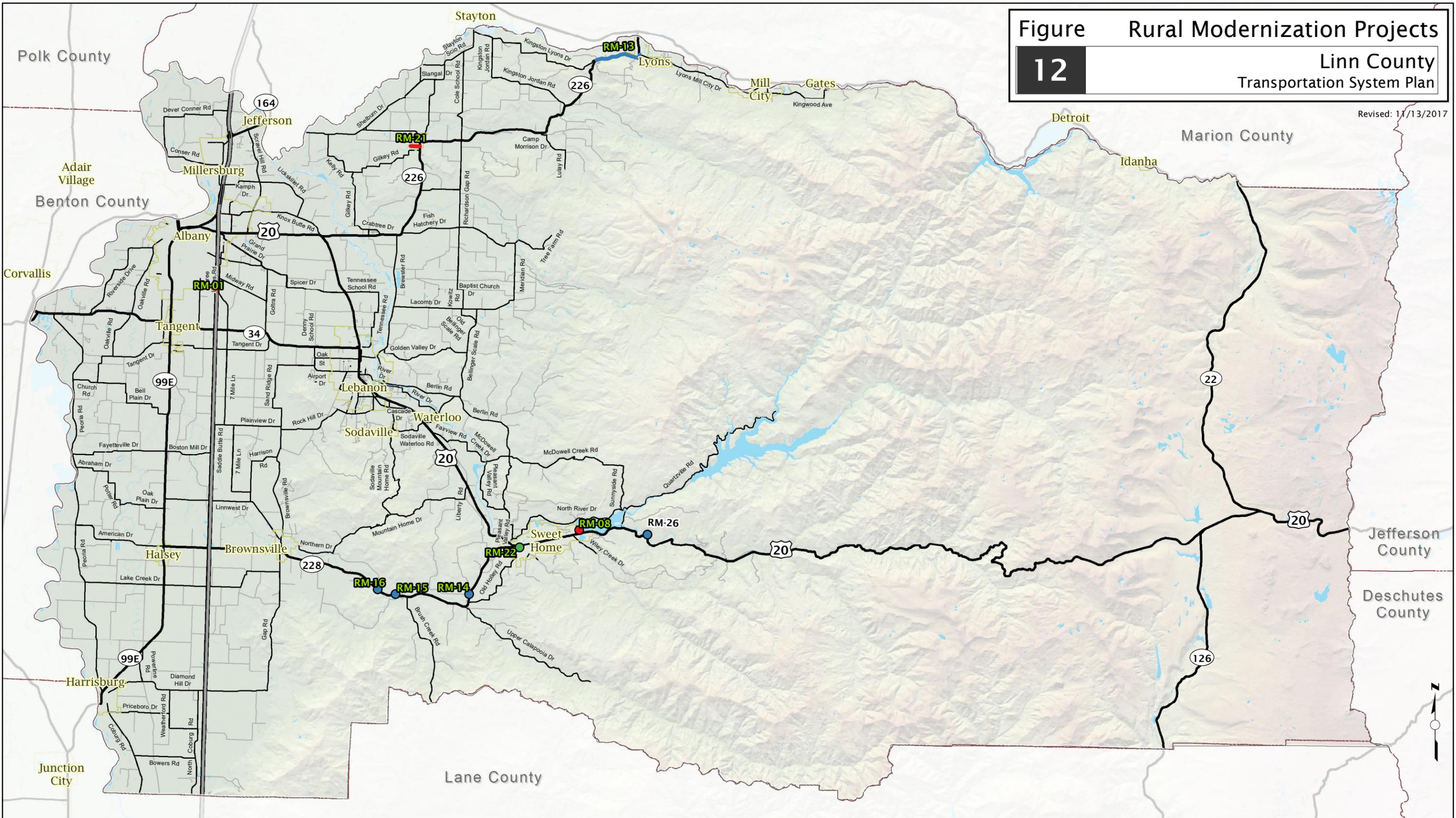


Figure Rural Modernization Projects

12

Linn County
Transportation System Plan

Revised: 11/13/2017



Legend

Project Primary Jurisdiction

- County
- State
- Other

- Project included in Improvement Package 1 (Financially Constrained Plan)
- Project included in Improvement Package 2

- Project included in Improvement Package 3
- Project included in Improvement Package 4

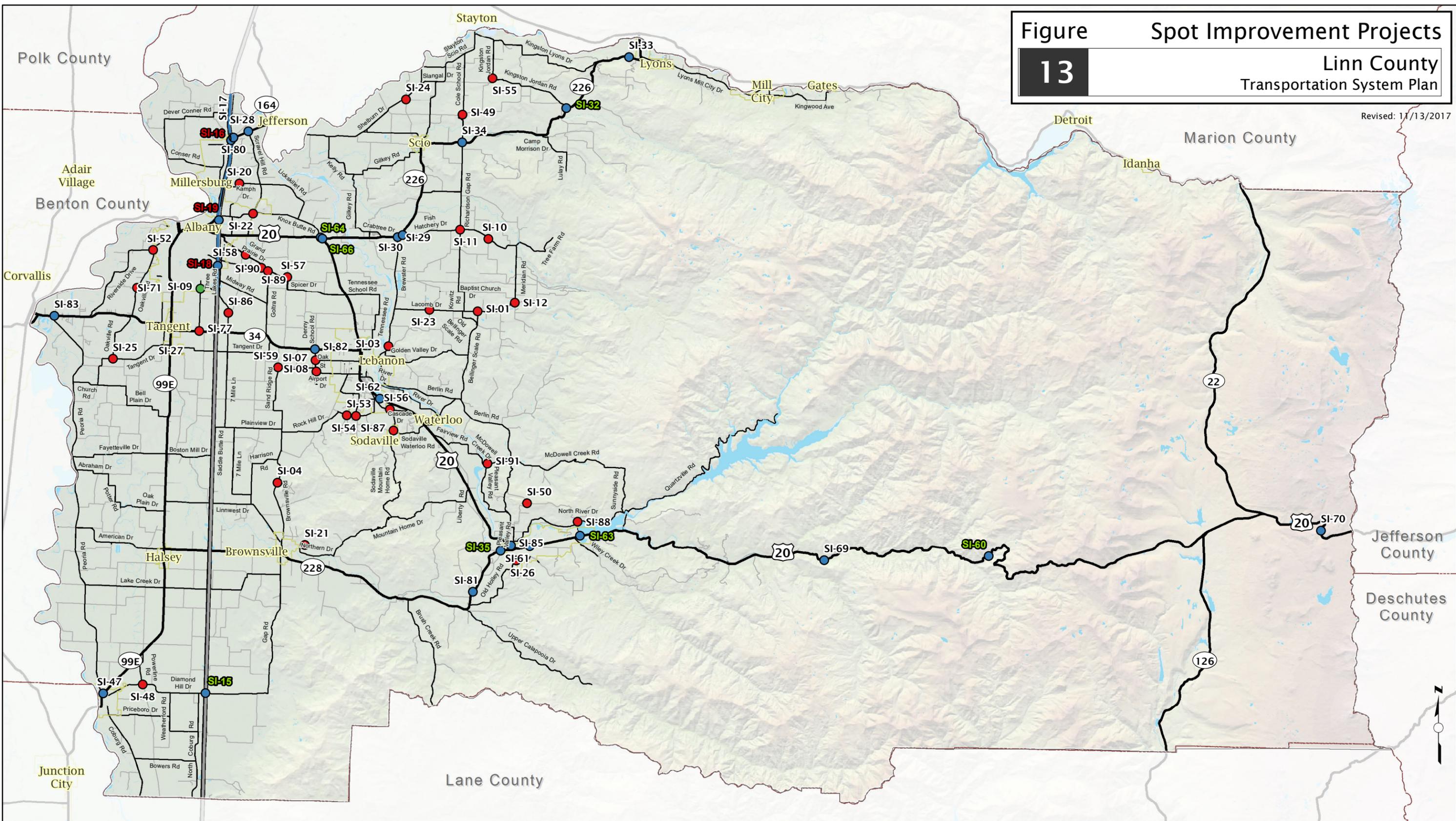
- Interstate
- State Highways
- County Local Roads
- County Local Roads

- Water
- Urban Growth Boundary



Figure 13 Spot Improvement Projects
Linn County Transportation System Plan

Revised: 11/13/2017

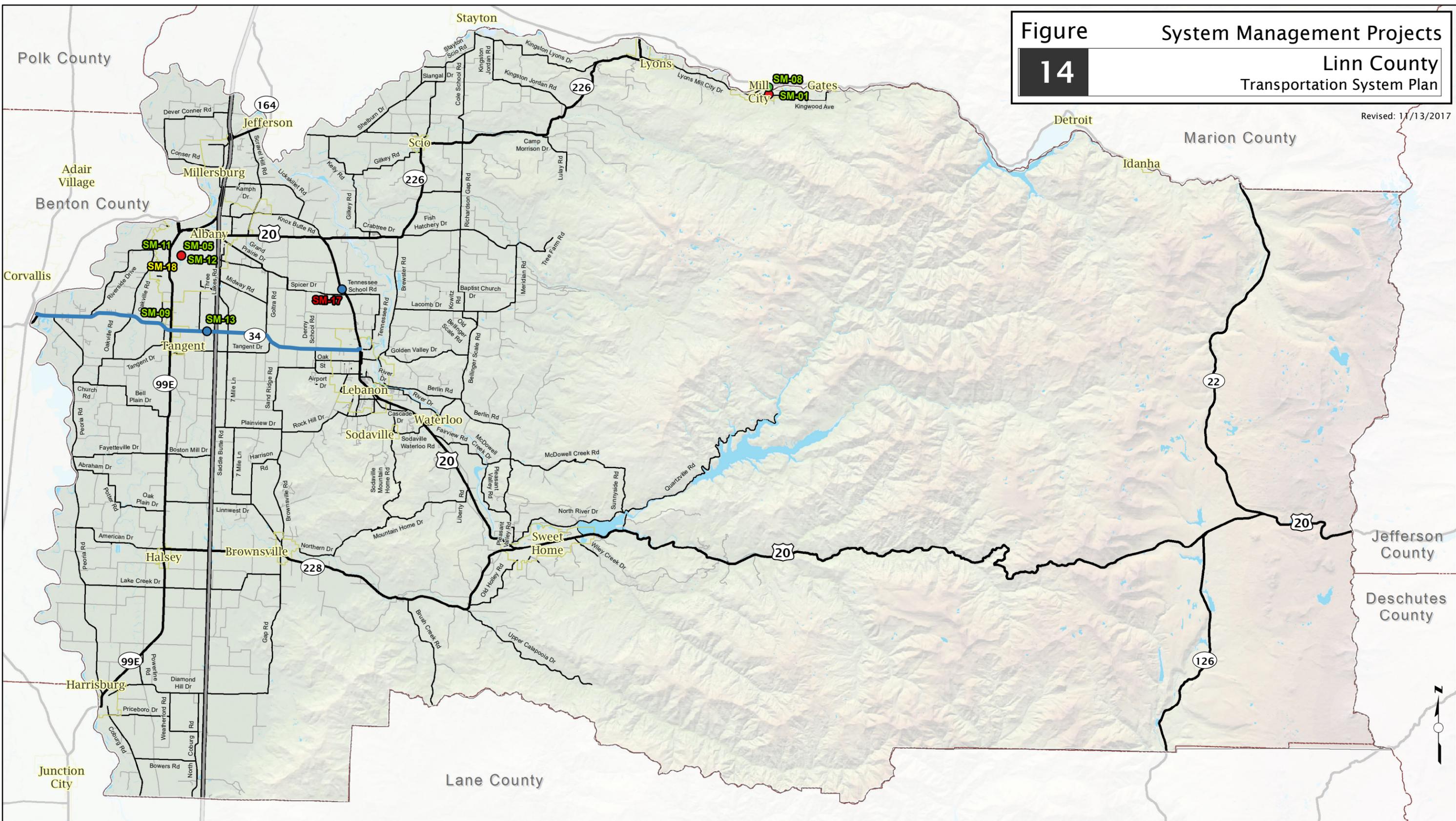


Legend		Project Primary Jurisdiction					
	County		Project included in Improvement Package 1 (Financially Constrained Plan)		Project included in Improvement Package 3		Interstate
	State		Project included in Improvement Package 2		Project included in Improvement Package 4		State Highways
	Other						County Local Roads
							County Local Roads
							Water
							Urban Growth Boundary



Figure 14 System Management Projects
Linn County
 Transportation System Plan

Revised: 11/13/2017



Legend

Project Primary Jurisdiction

- County
- State
- Other

- Project included in Improvement Package 1 (Financially Constrained Plan)
- Project included in Improvement Package 2

- Project included in Improvement Package 3
- Project included in Improvement Package 4

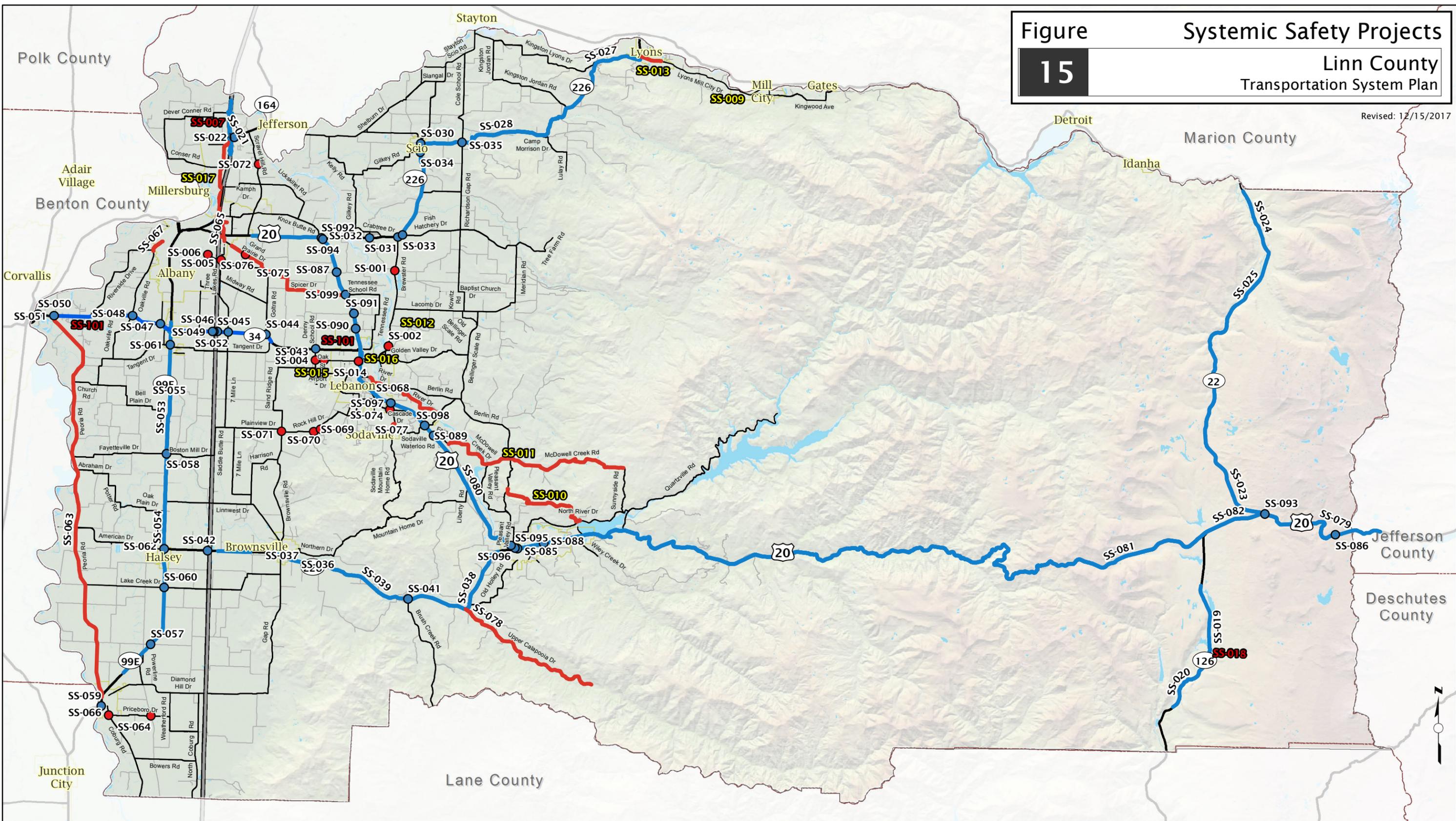
- Interstate
- State Highways
- County Local Roads
- County Local Roads

- Water
- Urban Growth Boundary



Figure 15 Systemic Safety Projects
Linn County
Transportation System Plan

Revised: 12/15/2017



Legend

Project Primary Jurisdiction

- County
- State
- Other

- Project included in Improvement Package 1 (Financially Constrained Plan)
- Project included in Improvement Package 2

- Project included in Improvement Package 3
- Project included in Improvement Package 4

- Interstate
- State Highways
- County Local Roads
- County Local Roads

- Water
- Urban Growth Boundary



The Standards

The TSP sets standards and regulations to ensure future development or redevelopment of property is consistent with the county's transportation vision and goals (see Volume 2, Sections J and N for more information).

Functional Classification

The functional classification of a roadway (shown in Figure 16) determines the level of mobility for all travel modes for anticipated level of access and usage. The functional classification system recognizes that individual roadways do not act independently of one another, but instead form a network that serves travel needs on a local and regional level. From highest to lowest intended usage, the functional classifications are: principal arterial, minor arterial, major collector, minor collector, and local roads. Roadways with higher intended usage generally limit access to adjacent property in favor of more efficient motor vehicle traffic movement (i.e., mobility). Local roadways with lower intended usage have more driveway access and intersections, and generally accommodate shorter trips to nearby destinations. The functional classifications are described below:

- **Principal Arterials** are state roadways. These roadways serve the highest volume of motor vehicle traffic and are primarily used for longer distance regional trips.
- **Minor Arterials** are intended to move traffic between principal arterials and major collector roadways. These roadways generally experience higher traffic volumes and often act as a corridor connecting many parts of the county.
- **Major Collectors** are intended to serve local traffic traveling to and from principal arterial or minor arterial roadways. These roadways provide greater accessibility to neighborhoods,

often connecting to major activity generators and providing efficient through movement for local traffic.

- **Minor Collectors** often connect the neighborhoods to the major collector roadways. These roadways serve as major neighborhood routes and generally provide more direct access to properties or driveways than arterial or major collector roadways.
- **Local Roads** provide more direct access to residences without serving through traffic. These roadways are often lined with homes and are designed to serve lower volumes of traffic.

Freight Routes

Figure 17 shows roadways designated to help ensure trucks can efficiently travel through and access major destinations in Linn County, along with current bridge locations and conditions. These routes play a vital role in the economical movement of raw materials and finished products, while maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system.

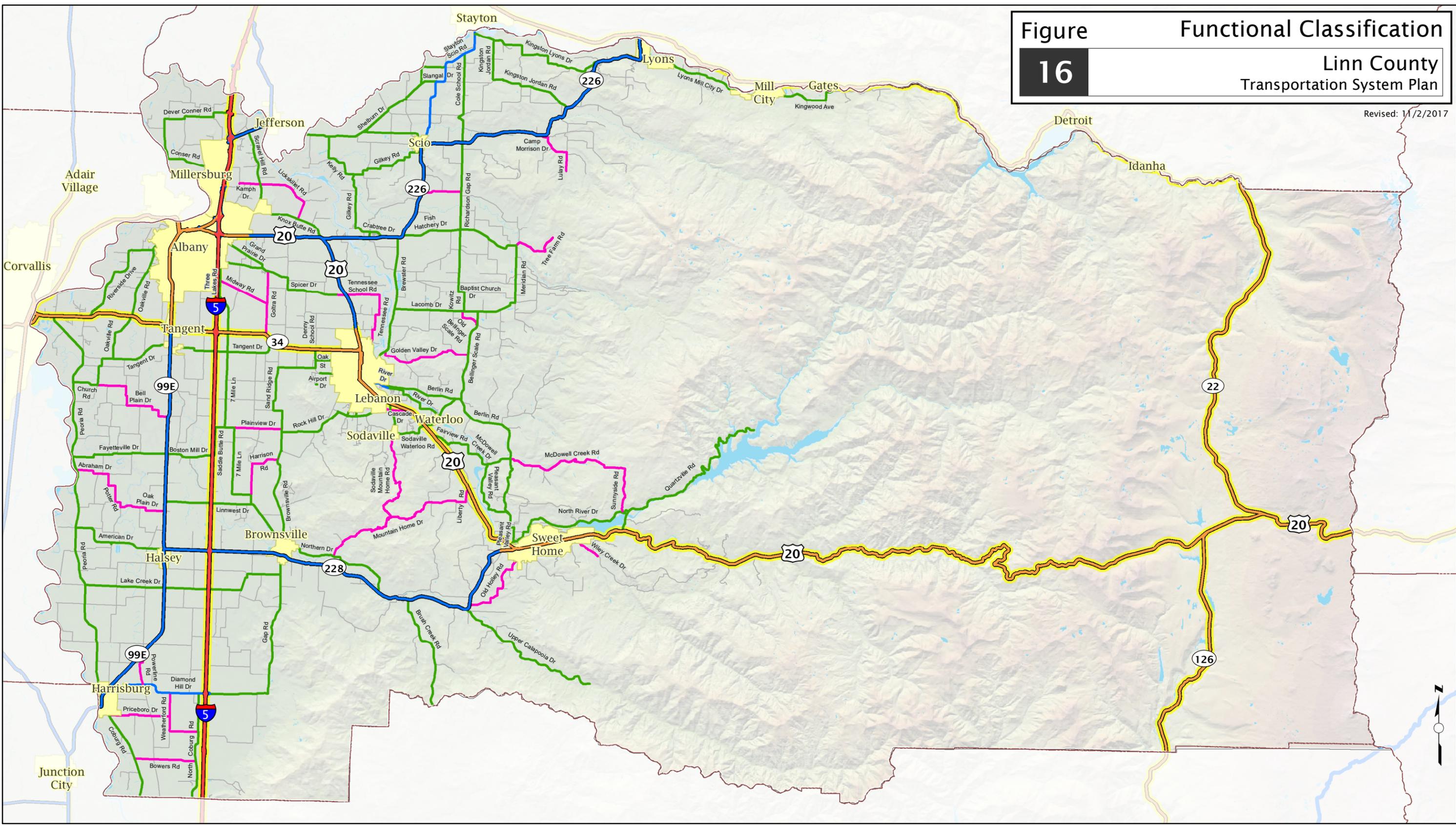
ODOT has classified I-5 and portions of US 20, OR 22, OR 34, OR 99E and OR 228 as freight routes and reduction review routes through Linn County. Reduction review routes are highways that require review with any proposed changes to determine if there will be a reduction of vehicle-carrying capacity. OR 126 is also a designated reduction review route in Linn County.

I-5, OR 22, OR 34, OR 99E and OR 126 and portions of US 20 are designated as truck routes by the federal government. Federal truck routes generally require 12-foot travel lanes.

Linn County does not have a list of designated freight routes on county facilities. Some county roadways facilitate the movement of truck freight between major destinations and state highways. These roadways serve an important role in the county roadway network and should be designed and managed to safely accommodate the movement of goods.

Figure 16 Functional Classification
Linn County Transportation System Plan

Revised: 11/2/2017



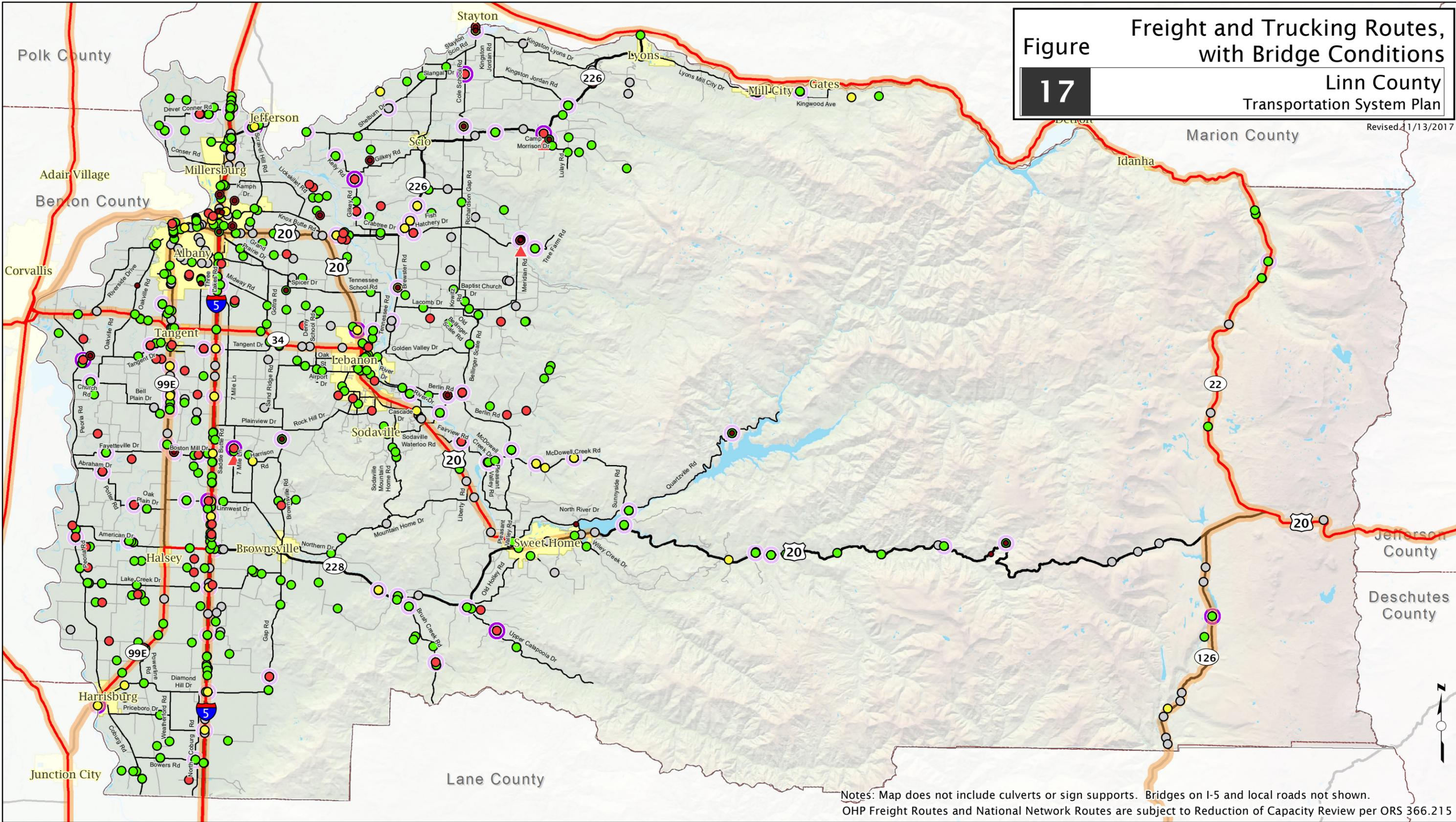
State Highway Functional Classification		County Road Functional Classification	
	Interstate		Minor Arterials
	Principal Arterials		Major Collectors
	Minor Arterials		Minor Collectors
	National Highway System (NHS) Route		Local Roads

- Water
- Urban Growth Boundary



Figure 17
Freight and Trucking Routes, with Bridge Conditions
Linn County
Transportation System Plan

Revised 11/13/2017



Notes: Map does not include culverts or sign supports. Bridges on I-5 and local roads not shown.
 OHP Freight Routes and National Network Routes are subject to Reduction of Capacity Review per ORS 366.215

Legend		Bridge Status	Sufficiency Rating	Designated Truck and Freight Routes			
●	Structurally Deficient	●	Less than 50 (eligible for FHWA replacement funding)	—	Oregon Highway Plan Freight Routes	▲	Posted Load Restriction
●	Functionally Obsolete	○	50 - 80 (eligible for FHWA rehabilitation funding)	—	National Network (Federal Truck Routes)	—	Interstate
●	Not Deficient	○	[no mark] Over 80 (not eligible for FHWA funding)	—		—	State Highways
○	Not Applicable or Unknown			—		—	County Arterials and Collectors
						—	County Local Roads
						■	Water
						■	Urban Growth Boundary



Lifeline Routes

The Oregon Highway Plan (OHP) Goal 1, Policy 1E has designated routes for emergency response in the event of an earthquake, categorized as Tier 1, 2 and 3. The routes identified as Tier 1 are considered to be the most significant and necessary to ensure a functioning statewide transportation network. A functioning Tier 1 lifeline system provides traffic flow through the state and to each region. The Tier 2 lifeline routes provide additional connectivity and redundancy to the Tier 1 lifeline system. The Tier 2 system allows for direct access to more locations and increased traffic volume capacity, and it provides alternate routes in high-population regions in the event of outages on the Tier 1 system. The Tier 3 lifeline routes provide additional connectivity and redundancy to the lifeline systems provided by Tiers 1 and 2. Interstate 5 is designated as a Tier 1 Lifeline Route, OR 22 and US 20, east of OR 22, are designated as a Tier 2 Lifeline Routes and OR 34, west of Interstate 5, is designated as a Tier 3 Lifeline Route in Linn County.

Typical Roadway Cross-section Standards

Linn County roadways are subject to the design criteria in the state's Highway Design Manual. New or reconstruction projects are subject to the ODOT 4R design standard. Maintenance projects or those that may be constrained by funding or challenging topography or environmentally sensitive, historic, or developed areas are typically subject to the ODOT 3R design standard.

State highways (Interstate 5, US 20, OR 22, OR 34, OR 99E, OR 126, OR 164, OR 226 and OR 228), the county's only interstate and principal arterials, are also subject to the design criteria in the state's Highway Design Manual.

Pedestrian and Bicycle Design Standards

The following sections detail various pedestrian and bicycle standards and treatment guidelines.

Pedestrian and Bicycle Facilities

The county roadway design standards are based on the state's Highway Design Manual. The current ODOT 4R design standard (as of October 2017) requires eight-foot paved shoulders along all roadways with average daily traffic volumes over 2,000 and six-foot paved shoulders along all roadways with average daily traffic volumes between 1,500 and 2,000. Arterial roadways with average daily traffic volumes between 400 and 1,500 require six-foot paved shoulders, while collector and local streets with these volumes require five-foot paved shoulders. Arterial roadways with average daily traffic volumes below 400 require four-foot paved shoulders, while collector and local streets with these volumes require two-foot paved shoulders. Newly constructed or reconstructed roadways should provide these accommodations to walking and biking users.

The current ODOT 3R design standard (as of October 2017) requires four-foot paved shoulders along all roadways with average daily traffic volumes over 2,000, two to three-foot paved shoulders along all roadways with average daily traffic volumes between 750 and 2,000 and two-foot paved shoulders along all roadways with average daily traffic volumes below 750. These are minimum widths for pedestrian and bicycle users that are typically provided along roadways constrained by funding or challenging topography or environmentally sensitive, historic, or developed areas.

Shared-Use Paths

Shared-use paths provide off-roadway facilities for pedestrian and bicycle travel. Depending on their location, they can serve both recreational and general travel needs. Shared-use path designs vary in surface types and widths. Hard surfaces are generally better for bicycle travel. Widths need to provide ample space for both walking and biking and should be able to accommodate maintenance vehicles.

Linn County requires that a paved shared-use path be 12 feet wide in areas with significant walking or biking demand; otherwise, it should be 10 feet wide (see Figure 18). The Roads Department Director may reduce the width of the typical paved shared-use path to a minimum of eight feet in constrained areas (e.g., steep, environmentally sensitive, historic, or previously developed areas).

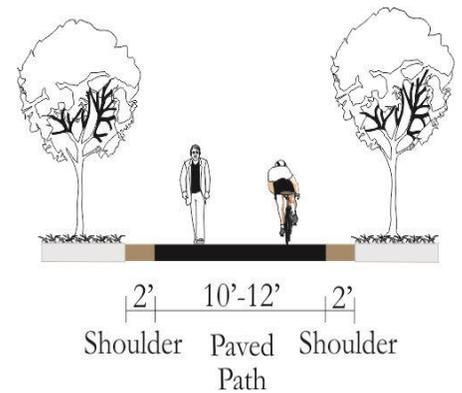


Figure 18: Design Standards for Shared-Use Paths

Roadway and Access Spacing Standards

Access management is a broad set of techniques that balance the need to provide for efficient, safe, and timely travel with the ability to allow access to individual destinations. Appropriate access management standards and techniques can reduce congestion and accident rates, and may lessen the need for construction of additional roadway capacity.

Table 3 identifies minimum public roadway intersection and minimum private access spacing standards for roadways in Linn County. New roadways or redeveloping properties must comply with these standards to the extent practical, as determined by the Roads Department Director. As the opportunity arises through redevelopment, roadways not complying with these standards could improve with strategies such as shared access points, access restrictions (through the use of a median or channelization islands), or closure of unnecessary access points, as feasible.

Local agencies may apply their adopted roadway and access spacing standards to county owned roadways within an UGB, given that they are not less restrictive than the standards identified in Table 3. Like roadway design and mobility targets, access spacing standards for state highways are determined by ODOT. ODOT spacing standards are defined in the Oregon Highway Plan, OAR 734-051, and ODOT’s Highway Design Manual.

Table 3: Roadway and Access Spacing Standards

Posted Speed or Travel Speed*	Principal Arterial	Minor Arterial	Major Collector	Minor Collector	Local Roadway
Minimum Driveway Spacing (Public Roadway to Driveway and Driveway to Driveway)					
> 55 mph		475 feet	475 feet	325 feet	100 feet
50 mph	See Oregon	475 feet	475 feet	325 feet	100 feet
40 to 45 mph	Highway	400 feet	400 feet	325 feet	100 feet
30 to 35 mph	Plan	275 feet	275 feet	220 feet	100 feet
< 25 mph		200 feet	200 feet	150 feet	100 feet

Note: all distances measured from center to center of adjacent approaches.

Mobility Targets

Mobility targets for roadways and intersections in Linn County provide a metric for assessing the impacts of new development on the existing transportation system and for identifying where capacity improvements may be needed. They are the basis for requiring improvements needed to sustain the transportation system as growth and development occur. Two methods to gauge intersection operations include volume-to-capacity (v/c) ratios and level of service (LOS).

- Volume-to-capacity (v/c) ratio:** A v/c ratio is a decimal representation (between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. The ratio is the peak hour traffic volume divided by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. A ratio approaching 1.00 indicates increased congestion and reduced performance.

- **Level of service (LOS):** LOS is a “report card” rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. LOS D and E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay is excessive and demand exceeds capacity, typically resulting in long queues and delays.

Mobility Targets for Linn County

All roadways and intersections owned by Linn County must operate at or below the following mobility targets.

- **Signalized, All-way Stop, or Roundabout Controlled Intersections:** The intersection as a whole must operate with a Level of Service (LOS) “E” or better and a volume to capacity (v/c) ratio not higher than 0.85 during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 p.m. and 6 p.m. during the spring or fall).
- **Two-way Stop and Yield Controlled Intersections:** All intersection approaches serving more than 20 vehicles during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 p.m. and 6 p.m. during the spring or fall) shall operate with a LOS “E” or better and a v/c ratio not higher than 0.90. Mobility targets do not apply to approaches at intersections serving 20 vehicles or fewer during the peak hour.
- **State-owned roadways** must comply with the mobility targets included in the Oregon Highway Plan.
- **City-owned roadways** should comply with the mobility targets included in local TSP’s, as determined by the respective agencies.

Transportation Impact Analysis (TIA) Guidelines

Linn County Transportation Impact Analysis (TIA) requirements implement Sections 660-012-0045(2)(b) and -0045(2)(e) of the State Transportation Planning Rule (TPR). These sections require the county to adopt mobility targets and a process to apply conditions to land use proposals in order to minimize impacts on and protect transportation facilities.

Volume 2, Section J and N includes the county's trigger for a Transportation Impact Analysis (TIA). In general terms, the TIA applies to developments that are presumed to have a transportation impact.

A professional engineer must prepare the TIA and must use appropriate data, methods, and standards as determined by the Roads Department Director.

The Outcomes

How will the constrained investment recommendations in the TSP improve the performance of the transportation network in Linn County? To answer this question, the TSP evaluated investment decisions and compared them to anticipated trends through 2040.

The Improved Transportation System

Linn County expects the following results from the TSP by 2040:

- **Safer Streets:** Added turn lanes, improved intersection geometrics and traffic control, and managed travel speeds will make roadways in Linn County safer.
- **Increased congestion on state highways:** While streets in 2040 will have available capacity to support growth, traffic volumes will be higher, and congestion will be worse than it is now. That said, strategic improvements will make the highways safer and more accommodating.

To the Horizon and Beyond

The 2018 Linn County TSP has not resolved all the of the county's transportation issues. The following require additional exploration:

Potential Additional Funding Sources

Based on the identified funding gap, Linn County may wish to consider expanding its funding options in order to fund more of the desired improvements in a timely manner. Other counties and cities use one or more of the following sources to fund the capital and maintenance aspects of their transportation programs. A variety of factors affect use of these sources, including the willingness of local leadership and the electorate to burden

citizens and businesses with taxes or fees, the availability of local funds the county can dedicate or divert to transportation issues from other competing county programs, and the availability of state and federal funds. The county should consider opportunities for providing or enhancing funding for the transportation improvements included in the TSP.

- **County Fuel Tax:** Twenty-two cities and two counties (including Multnomah and Washington Counties) in Oregon have adopted local fuel taxes ranging from one to five cents per gallon. The fuel distributors pay collected taxes to the jurisdictions monthly. The process for presenting such a tax to voters will need to be consistent with Oregon State law as well as the laws of the county.
- **County Vehicle Registration Fee:** The State of Oregon currently requires vehicle owners to register their vehicles and then renew their registration on a biennial basis. In addition to the State fee, Multnomah County is the only county that also has a vehicle registration fee. Vehicle registration fees for counties in Oregon can be enacted by ordinance, but if a county has a population less than 350,000 residents (like Linn County), then the ordinance requires voter approval. Under State law, 40 percent of the collected fee must go to the cities within a county, unless they agree to a different percentage.
- **County Service District for Roads:** Counties can also form service districts, which are areas within a county where it provides special services that can be financed by service or user charges, connection charges, district ad valorem taxes, bonds, local option tax levies, or any combination thereof. Voter approval would be required to form such a district, and the district would include a permanent tax rate. Incorporated cities must consent to be included within a service district, or the district boundary could be drawn to include unincorporated areas of the county only.

Counties around Oregon, including Clatsop and Washington Counties, charge up to \$4 per \$1,000 in assessed value. The funds are utilized to provide preventive maintenance and

safety improvements along public roads within the maintenance district boundaries.

- **County Property Tax Levy:** Countywide property tax levies are another funding option available to Oregon counties. Voter approval is required to enact a local option tax, and the tax may be imposed for up to five years at a time, at which time a county will need voter approval if it desires to renew the levy. The only exception is that a levy for a specific capital project may be imposed for the expected useful life of the capital project up to a maximum of 10 years. Cities have a legal right to 50 percent of any county road property tax levied within their boundaries, unless they agree to a different percentage. Cities also have the option to adopt charter amendments that exempt property within their boundaries from county road levies altogether.
- **Local Improvement District:** Local improvement districts (LIDs) can fund capital transportation projects that benefit a specific group of property owners. LIDs require owner/voter approval and a specifically defined project. Benefiting properties pay for the improvements through assessments. LID projects that benefit more than the adjacent properties can serve as match for other funds. Property owners pay fees through property tax bills over a specified number of years.
- **ODOT Statewide Transportation Improvement Program (STIP) Enhance Funding:** The Oregon Transportation Commission selects projects proposed by ODOT and local jurisdictions for STIP funding. Historically, only projects on the state highways were eligible for funding. ODOT has modified the selection process to allow funding for projects off the state system that enhance system connectivity and improve multi-modal travel options. The TSP prepares the county to apply for STIP funding.
- **ODOT Highway Safety Improvement Program (HSIP) Funding:** With significantly more funding under the HSIP and direction from the Federal Highway Administration to address safety challenges on all public roads, ODOT will

increase the amount of funding available for safety projects on local roads. ODOT will distribute safety funding to each ODOT region, which will collaborate with local governments through the All Roads Transportation Safety (ARTS) Program to select projects that can reduce fatalities and serious injuries, regardless of whether they lie on a local road or a state highway.

Technology Advancements

The TSP is a plan for conditions 20 years into the future; however, it cannot anticipate all advancements in technology or their impact on the way people travel to and within Linn County. Advancements may include alternative fuel sources that lower the cost of driving and operating transit service, connected vehicle technology that improves the safety and efficiency of roadways, proliferation of electric-assisted bicycles that take the effort out of traveling across hilly topography and expand the number of travelers who can make that choice of mode. The TSP recommends that the county continue to monitor opportunities arising from innovations in transportation technology and anticipate their impact on investment priorities.

Detailed Analysis of Physical Constraints

All proposed improvements in this plan are conceptual. The plan has not analyzed these improvements for hydrologic, topographic, or other geological constraints, which could require substantial modifications. Detailed surveys need to precede construction of these improvements.