

2015 Cottage Grove Transportation System Plan: Volume I



December 2015

Cottage Grove

Transportation System Plan

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City of Cottage Grove

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Volume 2 Contents

Volume 2 of the Cottage Grove Transportation System Plan includes all background memoranda, meeting summaries, and technical data that were the basis for developing the Cottage Grove Transportation System Plan.

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The Context

The Setting

The City of Cottage Grove is located along Interstate 5 (I-5) in central western Oregon. Cottage Grove offers small town charm with convenient access to the Eugene-Springfield Metropolitan Area, approximately 20 miles to the north. Located in southern Lane County, the City has affordable housing, a strong school system, a supportive government, and numerous public parks, trails, and attractions. The attractiveness of the community is evident by the population growing approximately 15 percent from 8,445 in 2000 to 9,686 in 2010, according to the U.S. Census.

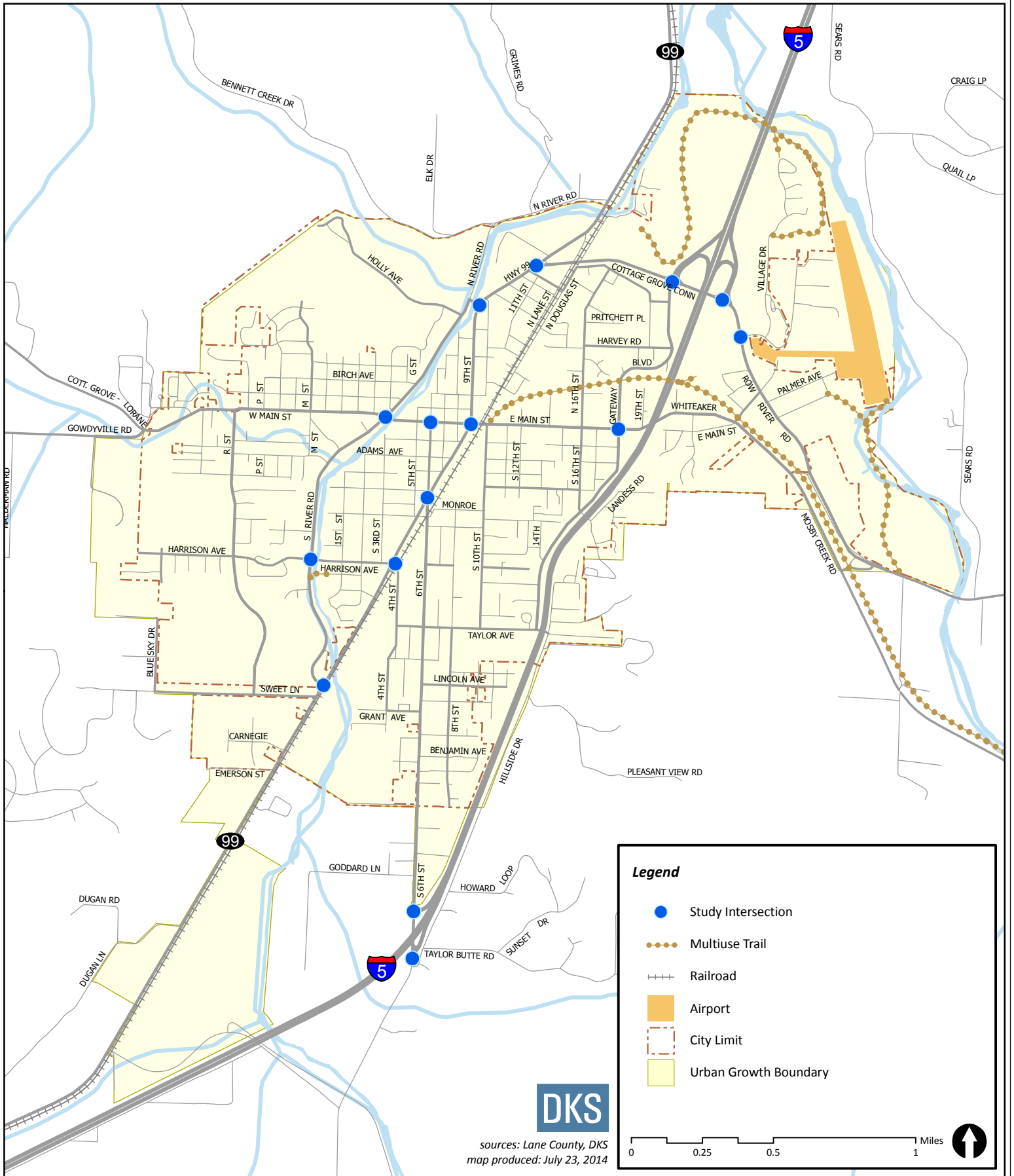
Cottage Grove has twice been honored as an “All American City” and is known as the “Covered Bridge Capital of Oregon.” Downtown has many shops and restaurants and is designated as a National Historic District. The Cottage Theatre, the Speedway, the Rodeo and two community golf courses offer activities for residents and visitors alike.

The City is oriented around the downtown historic district. A grid network of streets is crossed by the Goshen Divide Highway (OR 99), the principal north-south arterial through the center of town, and I-5, the primary connection to areas outside of the City. Main Street serves as the major east-west route and the Cottage Grove Connector provides access between I-5 and OR 99 in northern Cottage Grove. Figure 1 shows the roadway network of the City, along with the fifteen TSP study intersections.

The location of Cottage Grove provides many opportunities for recreational activities. The City lies at the confluence of the Row River and the Coast Fork Willamette River, with Dorena Lake and Cottage Grove Lake nearby. The renowned Row River Trail and Covered Bridges Scenic Bikeway connect these natural areas with the attractions of the City.



FIGURE 1 Study Area



Legend

- Study Intersection
- ⋯ Multiuse Trail
- Railroad
- Airport
- City Limit
- Urban Growth Boundary

0 0.25 0.5 1 Miles



sources: Lane County, DKS
map produced: July 23, 2014

The Context

The Challenge

The role of the Transportation System Plan (TSP) is to guide how the long-range transportation needs of the community will be addressed. As Cottage Grove grows to accommodate new residents, visitors, and businesses, the City faces a challenge to preserve and improve the transportation network that people and commerce rely upon. The TSP must provide for the expected future growth and address the current issues in the transportation system. Significant changes have occurred in Cottage Grove since the adoption of the 2008 TSP.

- The Urban Growth Boundary expanded to the southwest to include approximately 241 acres of primarily industrial and commercial lands on both sides of OR 99 and along S. 6th Street.
- Overall expectations of growth were revised based on the 2009 Economic Opportunities Analysis.¹
- New information became available regarding traffic safety (crash history) and traffic volumes.
- Traffic volumes decreased by an estimated 10 to 30 percent in Cottage Grove between 2006 and 2014, despite the growth in population.

These changes have resulted in a shift in focus for projects included in the TSP. This TSP update will prioritize community investments that:

- Increase safety for everyone using the roads.
- Improve walking and biking connections throughout the city to make active transportation more convenient, direct, and comfortable.
- Accommodate anticipated growth and provide connectivity in the new Urban Growth Boundary expansion area.
- Support a vibrant Historic Downtown Cottage Grove.
- Enhance popular recreational opportunities on trails and in parks around Cottage Grove.

The TSP focuses on making travel safer and more convenient for Cottage Grove residents, businesses, and visitors.

For more information about traveler characteristics and a detailed description of the transportation system in Cottage Grove, see the Existing Conditions Evaluation in TSP Volume II (Section F).

¹ *City of Cottage Grove Economic Opportunities Analysis, Final Draft Report*, Winterbrook Planning with ECONorthwest, March 21, 2009.

The Context

Cottage Grove in 2035

To determine needed investments for the city's transportation system, the project team reviewed current travel conditions and forecasted future growth and travel trends through 2035. Today, Cottage Grove is home to less than 10,000 people and provides approximately 3,700 jobs. By 2035, the Cottage Grove urban growth boundary (UGB) is expected to include approximately 13,500 people and 4,900 jobs.

Cottage Grove will add about 3,700 people and 1,200 jobs by 2035.

Table 1: Land Use Control Totals (Cottage Grove UGB Total)

Land Use Category	2014	2035	Growth
Population	9,864	13,542 ²	3,688 (37%)
Households	3,963	5,446	1,483 (37%)
Employment	3,727	4,916	1,189 (32%)

Assumptions related to land use development are included in The Future Forecast Methods & Assumptions (TSP Volume II, Section G).

The expected growth locations reflect land use designations in the comprehensive plan and the availability of developable land. The largest employment and household growth is clustered in specific areas:

- In the southwest, significant employment growth is expected along OR 99 between the UGB and E. Harrison Avenue
- In the north, significant employment increases are expected on either side of Row River Road and near the Cottage Grove Connector at OR 99.
- In the west, household growth is expected to be most significant in the areas west of S. R Street and west of N. River Road.

² The Portland State University Population Research Center revised the 2035 population forecast for Cottage Grove to 13,482 in June 2015. The TSP analyses were based on the previously adopted forecast of 13,542. The relatively small change in population forecast does not affect the TSP findings.

The Context

The Purpose of the TSP

The Transportation System Plan prepares Cottage Grove for accommodating travel in the best manner possible through 2035. The TSP's long-term view allows it to guide city actions in developing and maintaining acceptable transportation network performance more efficiently than a piecemeal or unorganized approach.

As the transportation element of the city's Comprehensive Plan, the TSP embodies the community's vision for an equitable, efficient, and financially stable transportation system. The TSP outlines strategies and projects that are important for protecting and enhancing the quality of life in Cottage Grove through the next 20 years. The TSP is a collection of current data, future forecasts, project ideas, decisions, and standards in a single document. The City, Lane County, private developers, and state 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 city would like to implement, but cannot reasonably expect to fund during the next 20 years.

The State of Oregon requires a TSP to integrate the City's transportation investment plans into the statewide transportation system. The plan attempts to balance the needs of walking, bicycling, driving, transit, and freight. The TSP reflects community values and protects what makes Cottage Grove a great place to call home, do business, and visit.

The Cottage Grove TSP update is the result of collaboration between City staff, various public agencies, key stakeholders, the community, and consultants. The Project Management Team (PMT) guided the process of updating the TSP and included staff from the City of Cottage Grove, Lane County, ODOT, and the consultant team. Throughout this process, the PMT took time to understand multiple points of view, obtain fresh ideas, and encourage broad participation, as it collected and analyzed data and developed possible solutions.

The larger planning context is presented in the Background Document Review (TSP Volume II, Section C), which includes applicable statewide plans, local studies, and regulations that guide the TSP.

Local plans and documents considered in the TSP include:

- Main Street Refinement Plan (2015)
- 2037 Vision and Action Plan (2008)
- Economic Opportunities Analysis (2009)
- Downtown Revitalization and Refinement Plan (2005)
- Development Code
- Comprehensive Plan
- Downtown Historic District Design Guidelines

The Process

Public Involvement Process

Conversations with Cottage Grove's citizens and business representatives were vitally important to the TSP update process.

Public input was received through the Community Advisory Committee, stakeholder interviews, a project website, and community events. The Community Advisory Committee (CAC) engaged directly with the PMT throughout the update, reviewing and commenting on technical memoranda and meeting with the project team at four key stages during the project. The CAC helped to identify agreement on project issues and alternatives, and included voices from a broad range of community groups and governmental agencies, including key technical staff, residents, emergency service providers, transit service providers, advocates, and business interests.

Additional insight came from a series of stakeholder interviews with individuals from additional Cottage Grove interest groups such as local property owners, transit service providers, and emergency service providers. These individuals helped identify key concerns that helped to guide the issues, needs, and solutions. They were also consulted to review the analysis results and discuss the recommended solutions.

The project website (www.cottagegrovetsp.org), developed and regularly maintained by the PMT, provided an opportunity to share project information with the community. Interactive comment maps allowed the public to give their thoughts on transportation issues in Cottage Grove and to explore possible solutions.

The PMT also held three community events to engage the public at critical stages of the update. Each TSP Open Houses gave residents and the broader community an opportunity to learn more about the project, review analysis results, provide ideas for solutions, and express their thoughts on priorities to improve the transportation system. The community events occurred on the following dates:

- Open House #1 – December 16, 2014
Project Overview, Needs, and Potential Solutions
- Open House #2 – April 28, 2015
Identify Priorities
- Open House #3 – October 6, 2015
Review Draft TSP

The Public Involvement Plan (TSP Volume II, Section B) identified strategies for community engagement and stakeholder feedback early in the TSP Update



The Process

TSP Development Process

The public involvement process was ongoing and occurred throughout the TSP update, as illustrated in Figure 2. Each memorandum generated through the TSP update process was posted for PMT review, revised, and then distributed to a wider audience via the project website. Input from the CAC, stakeholders, and public was incorporated into the final memoranda. TSP Volume II presents each of these memoranda, which serve as the basis of the content presented in the TSP.

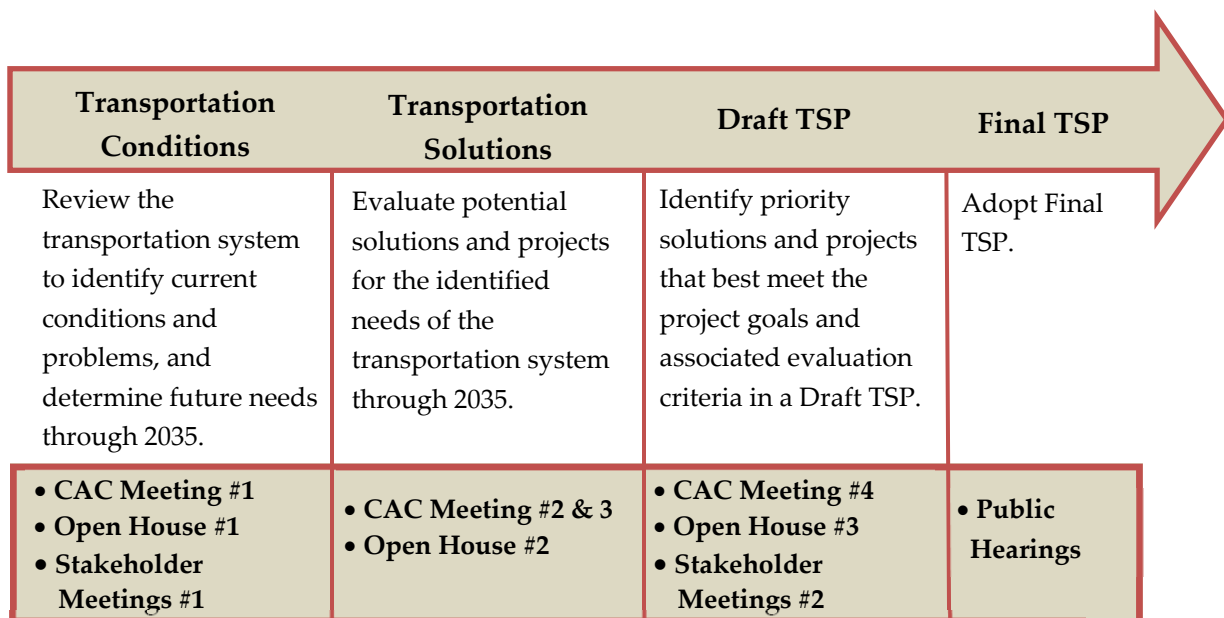


Figure 2: The TSP Process



Centennial Bridge

The Vision

The vision for the 2015 Cottage Grove TSP is embodied by goals, objectives, and policies that reflect the community's values and priorities. The goals, objectives, and policies integrate ideas from the previous TSP with more recent plans.

The goals, objectives, and policies provide a guide for the City's future actions.

Transportation Goals, Objectives, and Policies

The four transportation goals are guiding statements that set local priorities for TSP implementation by describing the desired result. Twelve objectives provide manageable stepping stones for achieving the goals. Policies, forty five in total, set out specific actions that will be taken to achieve the goals and objectives of the TSP.

Goals

- Goal 1: Enhance the Cottage Grove area's quality of life and competitive economic advantage by providing a transportation system that is:
 - Accessible,
 - Efficient,
 - Equitable,
 - Interconnected,
 - Safe,
 - Balanced,
 - Efficient,
 - Environmentally responsible,
 - Financially stable,
 - Sustainable.
- Goal 2: Develop a cost-effective transportation system that meets the needs of all people and businesses, and that serves the existing and future arrangement of land uses to the consensus of all jurisdictions involved.
- Goal 3: Develop a cost-effective transportation system plan that is based on informed citizen input, professional review, and technical analysis.
- Goal 4: Develop an integrated transportation and land use system that helps implement statewide transportation goals, statewide administrative rules, and the Cottage Grove Comprehensive Plan.

Minor changes were made to the Goals, Objectives, and Policies from the previous TSP, as illustrated in the TSP Comparison and Determination of Needs (TSP Volume II, Section I).

The Vision

Objectives

- Objective 1: Provide an interconnected regional transportation system, which ensures ease of transfer between modes of travel and appropriate access for all potential users to all areas of the city, region, state, and nation.
- Objective 2: Provide a balanced transportation system that gives people realistic choices or options other than driving alone in an automobile.
- Objective 3: Provide for efficient movement of goods and services.
- Objective 4: Provide an environmentally responsible transportation system.
- Objective 5: Provide a safe transportation system.
- Objective 6: Provide support for sustainable development by designing and developing a transportation and land use system that integrates residential, retail, and employment land uses.
- Objective 7: Make streets as “unobtrusive” to the community as possible.
- Objective 8: Require developments to address on- and off-site transportation system impacts.
- Objective 9: Provide opportunities for public involvement in transportation system decisions and respond to community needs and neighborhood impacts.
- Objective 10: Coordinate among agencies to facilitate efficient planning, design, maintenance, and operation of the transportation system.
- Objective 11: Ensure a financially stable, economically viable, and cost-effective transportation system.
- Objective 12: Make full use of existing roadways by reducing motor vehicle demand during peak use periods and increasing operational efficiency.

The Objectives were used to define evaluation criteria that guided project prioritization during the TSP update process.



The Vision

Policies

Overall

- Policy 1: Develop a well-connected transportation system across all modes and locations in the city.
- Policy 2: Consider the impact of all land use decisions on the existing and planned transportation facilities.
- Policy 3: Protect the function of existing and planned transportation systems as identified in the Street Plan, Bicycle Plan and Pedestrian Plan through application of appropriate land use regulations.
- Policy 4: Develop a street network that provides connections to and from activity centers such as schools, commercial areas, parks, and employment centers.
- Policy 5: Develop a street network that accommodates the safe and efficient movement of emergency service vehicles.
- Policy 6: Consider the level of community interest and support in evaluating and prioritizing street improvement projects within the existing street system.
- Policy 7: Coordinate with ODOT and/or Lane County on roadway projects impacting land uses outside of city limits or roadways outside of City jurisdiction.
- Policy 8: Consider funding and likelihood of timely construction in evaluating and prioritizing transportation improvement projects.

Standards

- Policy 9: Consider the degree to which proposed transportation system improvements support community development plans and land use designations when evaluating projects, solutions or strategies.
- Policy 10: Consider economic development potential (the extent to which the project relieves congestion and provides land use access to under-utilized and undeveloped urban lands) in evaluating and prioritizing transportation system improvements.
- Policy 11: Consider the following primary criteria in evaluating and prioritizing transportation improvement projects – safety, connectivity, access, average daily traffic, physical condition of street, street geometrics, and capacity/congestion (level of service).

The Vision

- Policy 12: Utilize access management spacing standards on all new and/or improved arterial and collector streets to improve safety and promote efficient through street movement.
- Policy 13: Design streets that minimize impacts to topography and natural resources, such as streams, wetlands, and wildlife corridors.
- Policy 14: Consider commercial, industrial, and recreational transportation needs in decisions about access management and in construction or reconstruction of roadways.
- Policy 15: Prohibit land development from encroaching on setbacks required for potential street expansion.
- Policy 16: Develop a street system and infrastructure that, where appropriate, conveys and treats stormwater runoff.
- Policy 17: Require the dedication of additional street right-of-way at the time of land development or land division to ensure adequate street widths.
- Policy 18: Comply with Americans with Disabilities Act (ADA) standards when installing new (or reconstructing) transportation facilities, including sidewalks.³

Multi-Modal

- Policy 19: Plan and develop a network of streets, accessways, and other facilities including bikeways, sidewalks, and safe street crossings, to promote safe and convenient bicycle and pedestrian circulation within the community.
- Policy 20: Maintain bikeways and pedestrian accessways (including sidewalks) at the same priority as motor vehicle facilities.
- Policy 21: Consider multi-modal contributions and linkages in evaluating and prioritizing street improvement projects.
- Policy 22: Connect bikeways and pedestrian accessways with local and regional travel routes.
- Policy 23: Foster the design and construction of bikeways and pedestrian accessways to minimize potential conflicts between transportation modes.
- Policy 24: Consider opportunities for promoting interconnections between road, rail, and air freight transportation facilities.
- Policy 25: Encourage demand management programs, such as carpooling and park-and-ride facilities, to reduce single-occupancy auto trips to and from Eugene-Springfield.

³ Policy 18 was added after Technical Memo 8 (Volume II, Section I) was completed, resulting in renumbering of subsequent policies.

The Vision

Pedestrian

- Policy 26: Design new streets and crossings to meet the needs of pedestrians and encourage walking as a transportation mode.
- Policy 27: Develop a pedestrian network by focusing on direct, convenient, and safe pedestrian travel within and between residential areas, schools, parks, and shopping and working areas within the urban area.
- Policy 28: Install sidewalks and/or pedestrian trails of suitable surfacing on all future local streets. Reconstructed and new collectors and arterials shall include sidewalks. Pedestrian facilities may be installed on or off-street to facilitate walking between significant activity areas.
- Policy 29: Develop a downtown streetscape enhancement program to install curb extensions, crosswalk pavers, benches, pedestrian-scaled lighting, and bicycle parking racks.
- Policy 30: Consider the potential to establish or maintain accessways, paths or trails prior to the vacation of any public easement or right-of-way.

Bicycle

- Policy 31: Ensure consistency with the policies in the most current Bikeway Master Plan.
- Policy 32: Require adequate bicycle parking in schools, parks, churches, existing shopping and working areas, and other destination areas to encourage increased use of bicycles.
- Policy 33: Include bicycle facilities such as bike lanes or dedicated bikeways in the planning, design, and construction of all new and/or reconstructed collectors and arterial roads. The Oregon Bicycle and Pedestrian Design Guide's Urban/Suburban Recommended Separation Matrix shall be used in making decisions regarding the need and design for appropriate bicycle facilities.
- Policy 34: Require provision of bicycle parking facilities with new commercial and industrial development and multi-family residential development.

The Vision

Transit

- Policy 35: Develop a cost effective accessible transit program that meets the needs of all potential and identified users.
- Policy 36: Support provision of basic mobility services for the elderly and people with special needs.
- Policy 37: Provide and support improvements such as sidewalk and bicycle connections, shelters, and benches to complement transit service and encourage higher levels of transit use.⁴
- Policy 38: All new development shall be referred to transit service providers for review and comment to determine if new transit stops are appropriate and can reasonably be provided as part of the new development.

Rail

- Policy 39: Increase economic opportunities by having a viable and competitive rail system.
- Policy 40: Strengthen the retention of local rail services.
- Policy 41: Protect abandoned rail right-of-ways for alternative or future use.
- Policy 42: Integrate rail freight considerations into land use planning process.
- Policy 43: Consider adequate rail freight access for planned and existing development in the zoning of adjacent property.
- Policy 44: Consult with freight rail service providers and the Oregon Department of Transportation Rail Division as appropriate, in the review of new development or other decisions that may impact freight rail lines or rail crossings.

Air

- Policy 45: The function of existing or planned general use airports shall be protected through the application of appropriate and compatible land use designations.
- Policy 46: Incompatible land uses shall be prohibited on the lands adjacent to the airport. Approved uses shall be required to provide an environment that will not be adversely impacted by and will be compatible with the airport and its operations.

⁴ Policy 37 was added after Technical Memo 8 (Volume II, Section I) was completed, resulting in renumbering of subsequent policies.

The Needs

Cottage Grove has many opportunities to improve the connectivity and safety of the transportation network. Additionally, new growth areas will require new connections and infrastructure as they develop. Smart investments must be made to preserve, protect, and better connect the infrastructure in place.

Constraints and Challenges

There are limited crossing opportunities along I-5, OR 99, and the Siskiyou Line railroad track that runs parallel to OR 99 for much of the City. Roadways with high-speed travel, such as portions of OR 99, are not only challenging to cross by any mode, but can also be unpleasant for pedestrians and people on bikes who feel unsafe moving in close proximity to passing vehicles.

Natural features such as waterways and hills also create barriers to choosing active travel. The city is generally flat, but travel options are limited in hilly areas around Mount David, McFarland Butte, and east of I-5 near Hillside Drive. The Coast Fork Willamette River also serves as a barrier, limiting east/west connectivity within the City.



W. Main Street at River Road

The Needs

Safety

The updated safety analysis identifies three roadway segments that have a high collision history:

- OR 99: Between the Cottage Grove Connector and the Woodson Bridge
- Row River Road: Between I-5 NB Ramps and Currin Connector
- E. Main Street: Between OR 99 and Gateway Boulevard

Further safety consideration is also warranted along the Cottage Grove Connector because of the 2010 pedestrian fatality that occurred near the railroad overcrossing. The intersection at the I-5 SB Ramps/N. Gateway Boulevard at Cottage Grove Connector/Row River Road also had a high critical crash rate that warrants further consideration.

The segment of OR 99 between the Cottage Grove Connector and the Woodson Bridge has a significantly higher crash rate than all other roadway segments analyzed. A crash along this segment resulted in a fatality when a pedestrian was struck attempting to cross near Geer Avenue in October 2013. Traffic data indicates that at least half of motor vehicles exceed the posted speed limit along this segment.

Detailed analysis of crash history data in Cottage Grove is included in the Existing Conditions Evaluation (TSP Volume II, Section F).



Crosswalk on OR 99 near Geer Avenue

Motor Vehicle Needs

Safe and efficient motor vehicle transportation is critical for maintaining the economic vitality of Cottage Grove. Many employers in the area depend on convenient roadway access, especially to connect to customers outside of the City via I-5. Other employers need mobility to be maintained to efficiently meet business needs. Many residents of Cottage Grove also rely on convenient travel to reach employment opportunities inside and outside of the City.

The TSP update examined automobile needs in six critical categories:

- Traffic Mobility
- Infrastructure Maintenance
- Safety
- Connectivity
- Access
- Roadway Design

Detailed technical analysis of motor vehicle traffic operations, identification of applicable mobility standards, and an inventory of the existing roadway facilities in Cottage Grove is included in the Existing Conditions Evaluation (TSP Volume II, Section F).

Traffic Mobility

Existing traffic volumes have decreased since the previous TSP at 12 of the 13 study intersections examined in the TSP. Compared to the previous analysis (2006), traffic volumes in 2014 were estimated to be 10 to 30 percent lower. Lower traffic volumes may reflect the effects of the economic downturn and changes in travel behavior.

Despite lower traffic volumes, congestion relative to free-flow conditions does occur in Cottage Grove. Congestion is currently most significant at the City's three highest traffic intersections: OR 99 at E. Main Street, Gateway Boulevard at E. Main Street, and the I-5 SB Ramps/N. Gateway Boulevard at Cottage Grove Connector/Row River Road. However, all study intersections meet applicable mobility standards for peak hour demand under existing conditions.

By 2035, the transportation network will need to serve increased demands. A traffic forecasting tool was developed specifically to support the Cottage Grove TSP Update. This tool not only ensures that future traffic forecasts reflect the best available information, but also enables a more comprehensive analysis of potential TSP alternatives.

The Needs

The overall number of p.m. peak hour trips is estimated to increase by 37% in 2035, reflecting the overall growth expected for households and employment. The traffic growth is not expected to occur uniformly throughout the city. Some areas are already developed and others are expected to have more opportunity to add jobs or new housing, especially the UGB expansion areas. Growth outside the city is also expected to affect traffic patterns.

The updated forecasts were analyzed to determine how well intersections would perform in 2035. The results show that all of the study intersections will continue to meet mobility standards through the 2035 planning horizon, despite increased traveler delay during peak hour travel conditions.

Infrastructure Maintenance

The condition of pavement, curbs, and other transportation infrastructure affects the comfort of all travelers but can also impact safety. Collision risk may be heightened when roadway markings are unclear or when loose or uneven pavement exacerbates slippery conditions. People walking or using bikes may be particularly sensitive to uneven pavement or poor striping.

The TSP does not prescribe maintenance strategies or priorities. The condition of pavement in Cottage Grove is monitored by each of the agencies that have jurisdiction of roadways in the city: ODOT, Lane County, and the City of Cottage Grove.



S. 6th Street at OR 99

The Needs

Roadway Connectivity

The ability to travel between different parts of the city conveniently and efficiently is an important part of transportation system planning. Poorly connected street networks can create out-of-direction travel, reduce access to services, increase emergency response time, discourage active transportation, and create congestion where traffic is funneled to one location.

The following connectivity issues were identified for roadways in Cottage Grove:

- Limited crossing opportunities exist along I-5, the Coast Fork Willamette River, and the Siskiyou Line railroad track that runs parallel to OR 99 for much of the City.
- Lack of east/west connections in the south part of Cottage Grove limit travel options and development potential. There are no connections from OR 99 east to S. 6th Street between Latham Road and E. Harrison Avenue/S. 4th Street, a distance of approximately two miles on OR 99. S. Gateway Boulevard does not extend south of Taylor Avenue, limiting north/south connectivity in the area as well. As the southern areas of the UGB develop with new housing and/or employment, the need to provide connectivity for this area will be heightened.
- Local street connectivity can be improved in several areas including neighborhoods along S. 6th Street (south of Taylor Avenue) and west of River Road. This is most important where significant new development is expected to occur.
- Extended blockage of at-grade railroad crossings due to trains stopping for durations that can exceed 30 minutes have been reported by residents. When these crossings are blocked, connectivity is severely restricted and delays can be significant. Public railroad crossings may not be blocked for longer than 15 minutes between 10 p.m. and 6 a.m., with 10 minute limits between 6 a.m. and 10 p.m., except for continuously moving trains. In addition to increased enforcement by the ODOT Rail Division, additional grade-separated crossings would also mitigate the effects of blocked crossings.



The Needs

Roadway Access

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.

The amount of driveways along several stretches of OR 99 exceed the recommended number of approaches based on ODOT standards. While the high number of driveways improves access, it also reduces mobility for the highway through the corridor and introduces potential conflicts that compromise safety. The segment of OR 99 between the Cottage Grove Connector and the Woodson Bridge, where a pedestrian fatality occurred in 2013, is one of the locations where access spacing standards are exceeded.

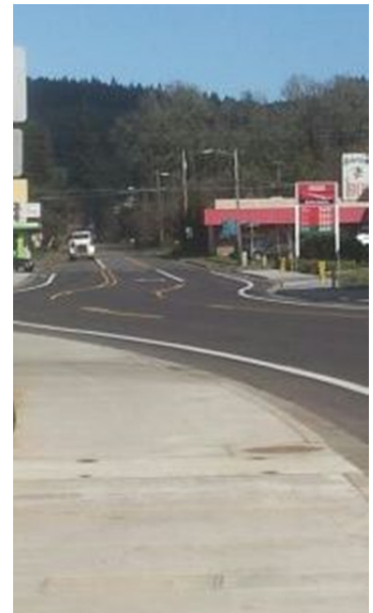
As redevelopment occurs and connectivity improvements are considered, access management strategies may be pursued to reduce driveway conflicts along OR 99, as well as other roadways throughout the City.

Roadway Design

The transportation system plan identifies design standards to support the community vision and goals related to further development of the Downtown Historic District. The prominent issue is the redesign of Main Street.⁵

Roadway design standards defined later in the TSP and in the Development Code have been updated to be consistent. This consistency provides clarity to support potential development opportunities and help to ensure consistency in roadway design throughout the City.

Access spacing on OR 99 and Main Street is detailed in the Existing Conditions Evaluation (TSP Volume II, Section F), along with the applicable access spacing standards for roadways in Cottage Grove.



⁵ The Main Street Refinement Plan (adopted April 13, 2015) identifies a preferred design for the corridor.

Transit Needs

Transit service is provided in Cottage Grove by the Lane Transit District (LTD) and South Lane Wheels (SLW). LTD provides fixed route bus service between Cottage Grove and Eugene. South Lane Wheels provides both a deviated schedule route service and demand responsive service to transportation disadvantaged residents and the general public. Transit routes and stop locations are shown in Figure 3.

Most Cottage Grove residents live within $\frac{1}{4}$ mile walking distance from a bus stop. However, transit coverage is limited in the southern part of the UGB, where significant future development is expected. While biking can increase access to transit for people living or working in locations that are further from bus stops, gaps in the existing bicycle network and a lack of bicycle parking near stops limits the attractiveness of biking to transit.

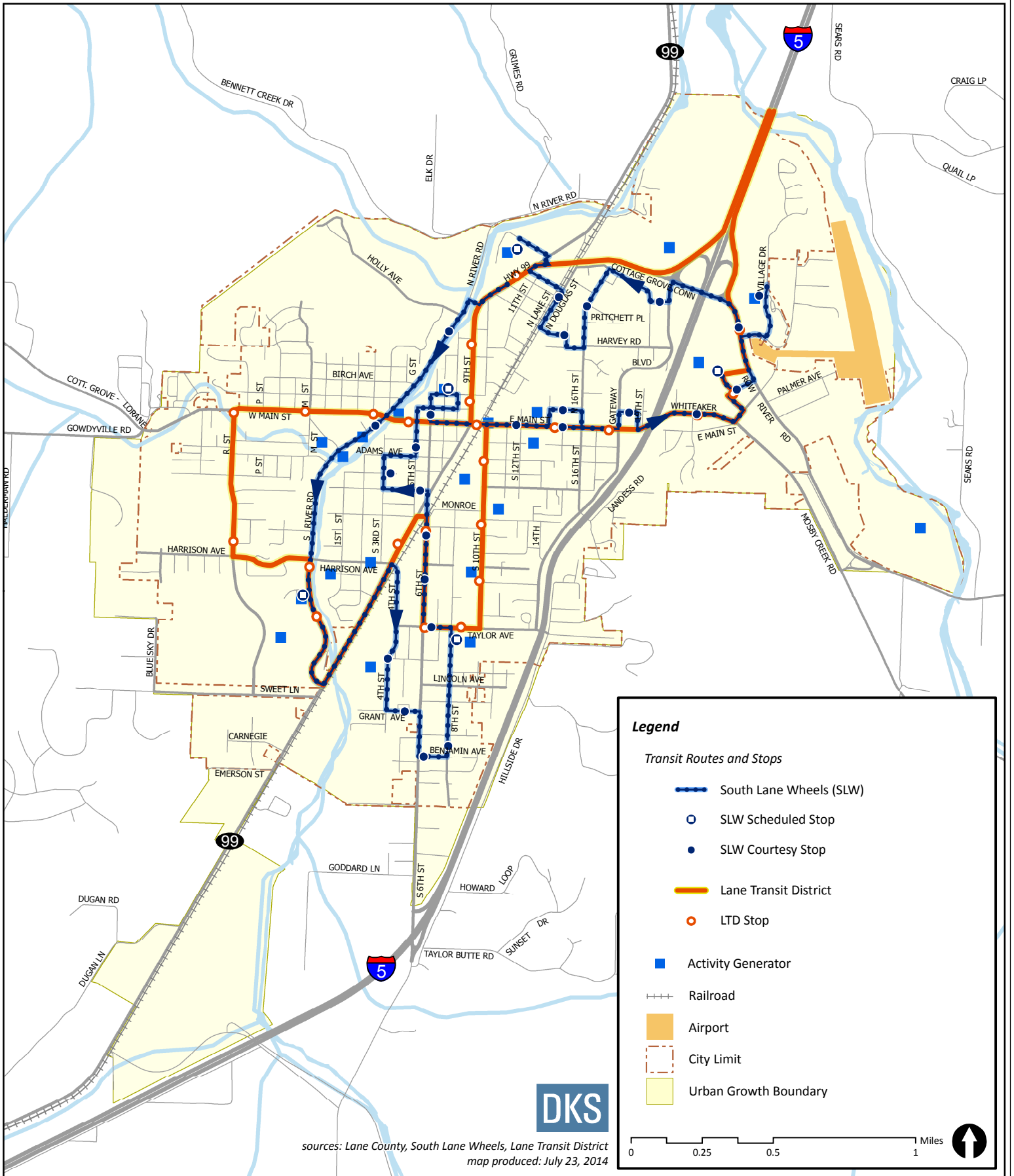
The availability of safe and direct roadway crossing opportunities is another factor that could limit access to transit. Bus stops throughout the City could benefit from enhanced crossings that would increase the general pedestrian friendliness of the roadway and trail network.

Transit needs that may be addressed by South Lane Wheels and Lane Transit District include:

- Limited number of bus stops with shelters and other amenities: Given the rainy climate in western Oregon, additional sheltered bus stops and route schedules on signs would increase the comfort of existing riders and encourage others to take transit.
- Transit frequency: While current service headways are adequate for a community of the size of Cottage Grove, increased frequency may increase ridership in the community.
- Transit service in growth areas: Areas of the city that are expected to develop significantly should incorporate transit amenities and ensure pedestrian and bicycle connectivity in preparation for future transit service.



FIGURE 3 Transit Routes



Walking Needs

Cottage Grove is generally compact and walkable around downtown with many well-connected and continuous sidewalks. The pedestrian system is illustrated in Figure 4. Trails and paths highlight some of the natural resources and historical attractions that the community has to offer and provide comfortable connections that enhance the sidewalk system. Many of the arterial and collector streets within the city provide sidewalks that allow residents to walk between neighborhoods and commercial areas.

However, significant gaps in the pedestrian system exist, particularly near the UGB, and significant barriers remain to provide safe, consistent, and direct connections throughout the City. Locations with sidewalk gaps, indirect connections or crossings, and faded crosswalk paint can discourage pedestrian travel. Significant needs for the pedestrian network include:

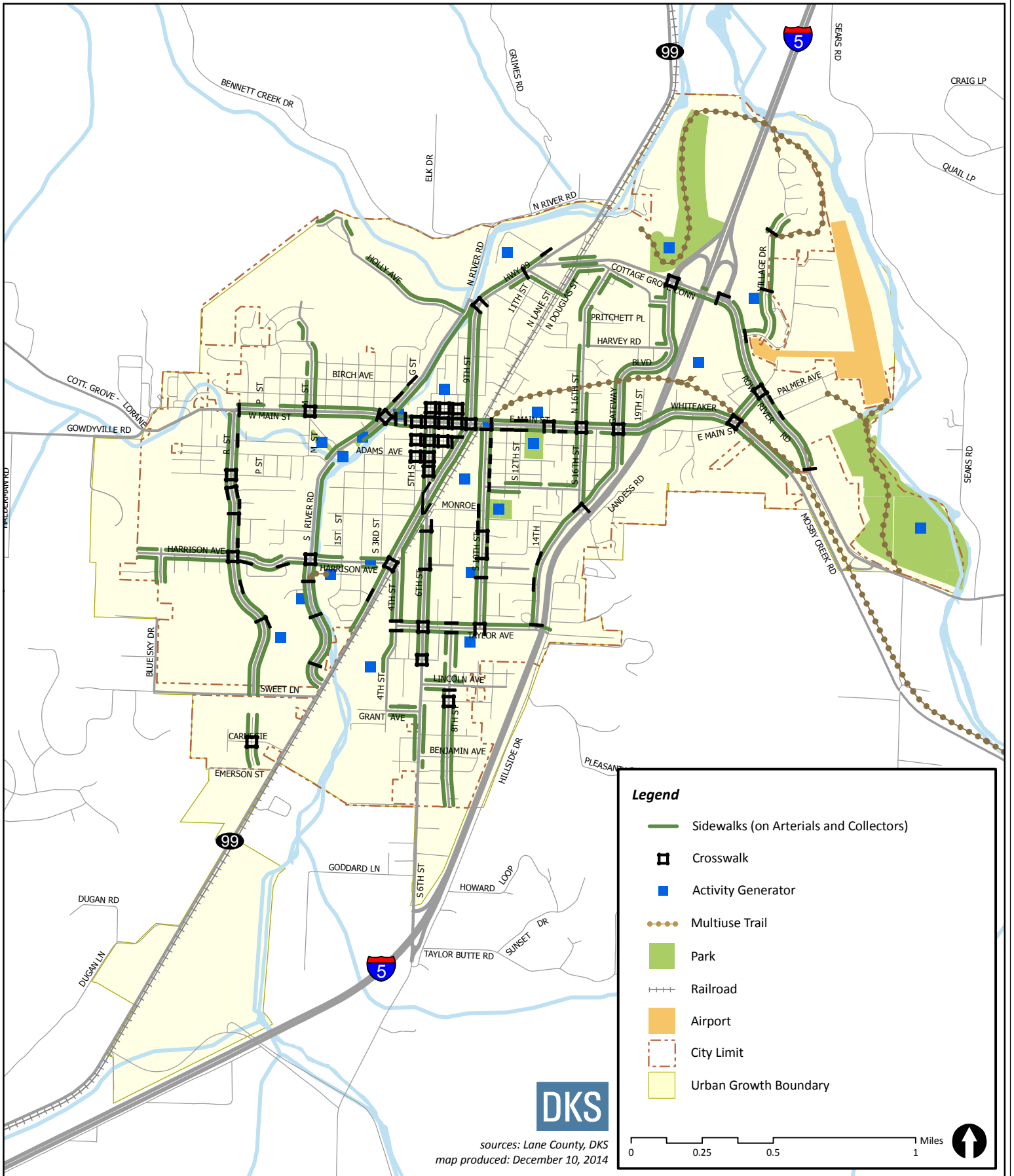
- Limited crossing opportunities along OR 99 north of the Woodson Bridge and south of S. 4th Street/E. Harrison Avenue. These areas also tend to have higher speed traffic, making crossings more unpleasant for pedestrians.
- Reexamine the location and design of the pedestrian crossing on OR 99 near Geer Avenue due to the recent pedestrian fatality.
- Inadequate sidewalks on the Cottage Grove Connector, a key east/west route through the city, limit pedestrian travel opportunities between OR 99 and N. Gateway Boulevard.
- Limited crossing opportunities on Row River Road between Thornton Road/Airport Road and the I-5 NB ramps.
- Poor pedestrian facility connectivity between residential areas south of Taylor Avenue and activity generators to the north, particular near Lincoln Middle School.
- Frequent driveways along OR 99 and E. Main Street that lead to potential conflicts with motor vehicles.
- Poor pedestrian connectivity to the expansion areas near the southern UGB.
- Significant sidewalk gaps on arterial and collector streets include E. Harrison Avenue (between S. 1st and S. 3rd Street) and S. River Road (between W. Harrison Avenue and W. Girard Avenue).












Transportation System Plan

FIGURE 4

Pedestrian Facilities

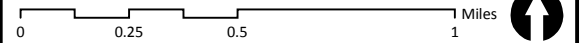


Legend

-  Sidewalks (on Arterials and Collectors)
-  Crosswalk
-  Activity Generator
-  Multiuse Trail
-  Park
-  Railroad
-  Airport
-  City Limit
-  Urban Growth Boundary

DKS

sources: Lane County, DKS
map produced: December 10, 2014



Biking Needs

High quality bicycle facilities that are safe, comfortable, and well-connected encourage residents and visitors in Cottage Grove to make healthy and active transportation choices. Bicycle trips typically cover distances that are longer than pedestrian trips and can reduce roadway congestion. Cottage Grove's bicycling network, shown in Figure 5, consists of shared roadways, shoulder bikeways, bike lanes, and shared-use paths.

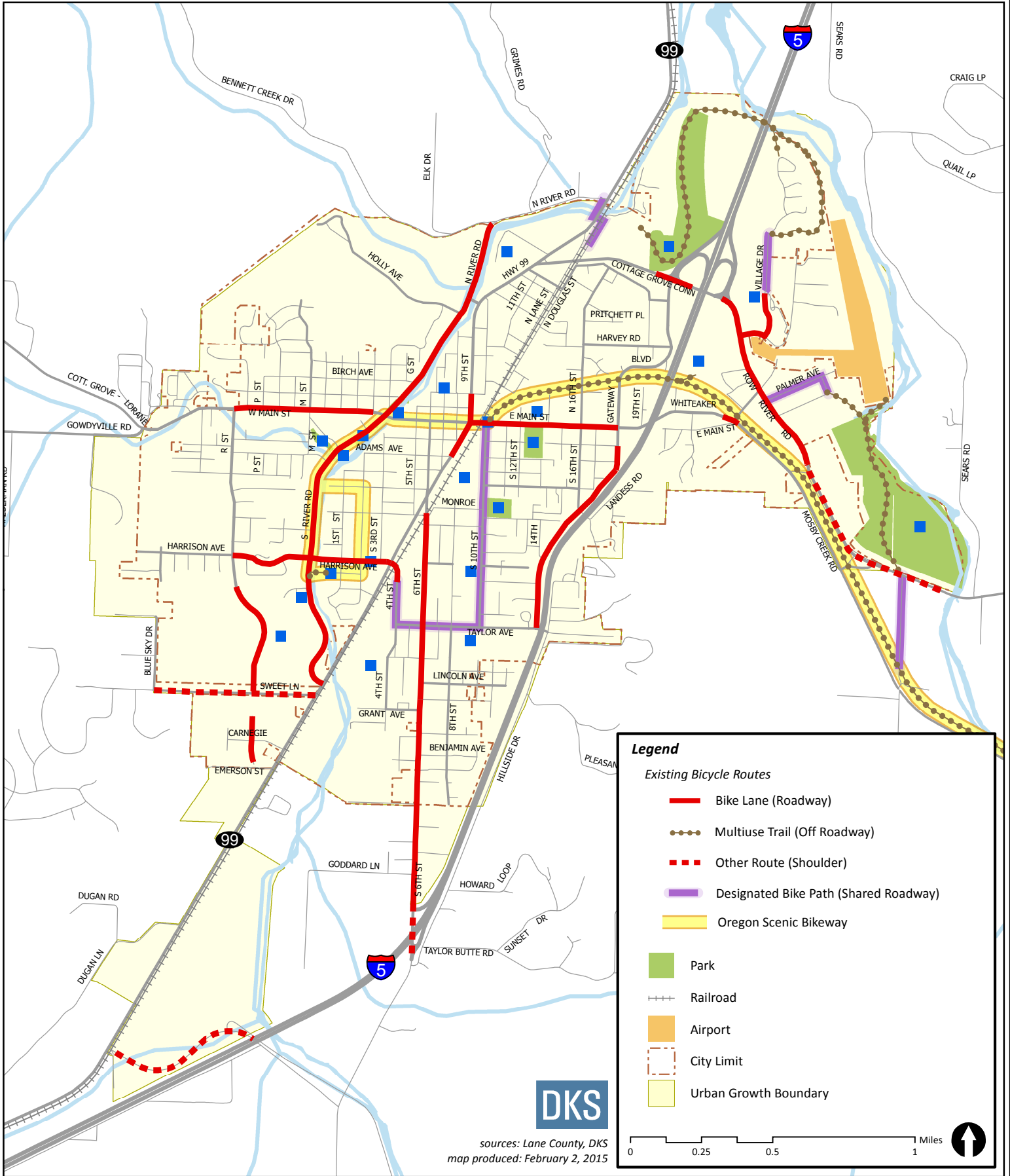
Much of the city is comfortable for bike travel because of the relatively short distances between destinations in the city and the network of bike lanes and shared roadways with low traffic volumes and speeds. Most local roadways in the city are considered shared roadways, but do not have signs or pavement markings. However, a loop bike route is designated that provides connections between several area attractions including the Row River Trail, North Regional Park, the Covered Bridge Scenic Bikeway, downtown, and Trailhead Park. The loop route utilizes multi-use trails, bike lanes, and shoulder bikeways and key connections of the loop are made via designated bike paths on shared roadways.

Inconsistent facilities and barriers to travel can inhibit the attractiveness of potential travel by bicycle. Significant gaps in the transportation network for bicycle trips include:

- Lack of consistent bike lanes across key arterial roadways such as OR 99, Main Street, Gateway Boulevard, and the Cottage Grove Connector.
- The Woodson Bridge provides a key crossing between OR 99 and N. River Road, but can be difficult to navigate by bike due to motor vehicle queuing and a lack of dedicated bike lanes.
- Poor bicycle system connectivity to the expansion areas near the southern UGB.
- Safe and comfortable roadway crossings, particularly along the Row River Trail.
- Limited bicycle parking.



FIGURE 5 Bicycle Facilities



Freight Needs

Efficient truck movement plays a vital role in the economical movement of raw materials and finished products.

The designation of through truck routes provides for efficient freight movement, while maintaining neighborhood livability, public safety, and minimizing maintenance costs of the roadway system.

The only designated route through Cottage Grove is I-5. OR 99 through Cottage Grove is not classified by ODOT as a freight route, or a truck route by the federal government. Heavy vehicle volumes and percentages of the traffic stream were collected and analyzed as part of the traffic operations analysis.

Community concerns have been raised about the presence of heavy vehicles along OR 99 and Main Street. However, no alternative freight routes have been designated in the TSP. Roadway design standards will be implemented as opportunities arise, to support efficient freight movement within the City and minimize impacts to neighborhoods.

Other Modes



Although automobiles, transit, walking, biking, and freight are the primary modes of transportation for the public in Cottage Grove, the TSP update also looked at the needs of rail, air, waterway, and pipeline transportation modes.

No significant needs have been identified for rail, air, waterway, and pipelines in Cottage Grove.

E. Main Street Railroad Crossing

The Investments

Cottage Grove must make strategic investment decisions to implement a set of transportation improvements that meet identified needs through 2035.

Current Funding

The City receives approximately \$850,000 annually (in 2014 dollars) to maintain, operate, and improve the transportation system. The City relies on three primary revenue sources to fund transportation expenses:

- State Highway Fund distributions,
- the local fuel tax, and
- Transportation System Development Charges (SDCs).

State Highway Fund

The State Highway Fund includes revenues from the state motor vehicle fuel tax, vehicle registration fees, and truck weight-mile fees, as well as Federal funds. A portion of the State Highway Trust Fund monies are allocated on a per capita basis to local cities including Cottage Grove. By statute, the money may be used for any road-related purpose, including walking, biking, bridge, street, signal, and safety improvements. State law requires that a minimum of one percent of the State gas tax and vehicle registration funds received be set aside for construction and maintenance of walking and bicycling facilities.

Local Gas Tax

Cottage Grove has a local city gas tax of three cents per gallon. The tax provides a significant portion of transportation revenues in the City and is funded in part by non-residents, such as those who stop for gas while traveling along I-5.

Transportation SDC

System development charges (SDCs) are fees collected from new development and used as a funding source for all capacity-adding projects for the transportation system. The funds collected can be used to construct or improve roadways impacted by applicable development. The SDC is collected from new development based on transportation impacts and is a one-time fee.

Transportation funding is limited, so a fiscally responsible approach to enhancing and maintaining the transportation system is imperative.



The Investments

Current Expenditures

The City spends approximately \$840,000 annually (in 2014 dollars) to maintain, operate, and improve the transportation system. The expenditures incurred include:

- Street maintenance,
- Street sweeping,
- Capital improvements and purchases,
- SDC-related buildings and improvements,
- Departmental and contractual services, and
- Administrative costs.

Capital improvement expenditures may include projects that expand the existing transportation system (e.g., new transportation facilities or intersection improvements) or maintain it (e.g., repaving or purchasing maintenance equipment).

Project-Specific Funding

In addition to the recurring sources of revenues described previously, Cottage Grove may expect to receive project-specific funding through federal or state programs. This type of external funding is not received annually, but is often relied upon to complete critical transportation improvements.

While a specific funding source has not been determined, it is reasonably likely that some grant or aid programs will make funding available through the TSP horizon year of 2035. A conservative estimate for the next 20 years is \$4 million in project-specific funding from external sources.⁶

⁶ The estimated funding available through 2035 does not constitute an obligation or commitment of funding from ODOT or any other public agency. The State has not committed any future funding for projects in Cottage Grove. This funding estimate is based on assuming that Cottage Grove will receive a reasonable share of the state/federal funding projected to be available over the 20-year planning horizon and based on ODOT sustaining their current revenue structure. The estimate 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 the range of this estimate.

Most of the funding received for transportation is needed to maintain and operate existing infrastructure.

The Investments

Funding Forecast

Over the last five years, transportation-related revenues (approximately \$850 thousand per year) have slightly exceeded transportation-related expenditures (approximately \$840 thousand per year) to maintain and operate the transportation system in Cottage Grove. The historical funding and expenditures are used together with assumptions about growth to estimate the available funding for transportation projects through 2035.

Revenue Forecast

Current revenue sources are expected to provide about \$26 million through 2035. Although there is no index for cost inflation, the revenue sources based on gas taxes should increase in proportion to the City's population growth.

Expenditure Forecast

City expenditures for maintenance, operations and management of the transportation system are expected to exceed \$15 million through 2035 (based on expenditures over the past five years⁷). Transportation projects that improve the current transportation system are not included in this estimate.

Estimated Project Funding

Cottage Grove is expected to have about \$11.5 million available to fund transportation projects and strategies through 2035. The overall funding estimate should be considered a planning level estimate based on historical revenues and costs related to construction, operation, and maintenance of the existing transportation system.

A detailed breakdown of the expected revenue sources and estimated maintenance expenses is included in the Transportation Funding Review & Forecast (TSP Volume II, Section E).

⁷ It is important to note that the current spending on maintenance and preservation activities has not kept up with the desired quality for infrastructure. To address deferred maintenance and future needs, maintenance costs may be higher than the historical spending indicates.

The TSP must identify a list of TSP solutions that falls within a reasonable range of funding available to the City.

Planning level cost estimates for projects reflect initial assumptions about how the estimated project cost could be shared by public agencies and private development, as appropriate. The project lists do not reflect any commitment of funding by ODOT, Lane County, or the City of Cottage Grove.

This section of the TSP presents the recommended transportation system improvements to address the transportation needs and deficiencies identified in Cottage Grove. These solutions improve facilities and services for all modes of transportation. The solutions were identified by the project team and refined based on input from Community Advisory Committee meetings, stakeholder interviews, and community events.

Prioritizing Investments

The estimated cost to public agencies to construct all projects identified in the TSP is nearly \$31 million⁸, which exceeds available funding estimate of \$11.5 million. As a result, recommended transportation improvements are divided into two categories:

- **Financially Constrained** - These projects have been prioritized and are considered to be reasonably likely to be funded, based on planning level project costs estimates and the overall available funding forecast for Cottage Grove.
- **Illustrative** - These projects have been identified to address transportations system needs, but have not been prioritized. These projects are not expected to be constructed before 2035, unless additional transportation funding sources become available.

Higher than expected grant funding, development, or ODOT funding may contribute to more revenues than estimated. Conversely, lower revenues or higher than expected expenses would result in fewer projects being constructed than are identified. If additional funding sources are identified, the Financially Constrained solutions list may be expanded to include more projects from the Illustrative solutions list.

⁸ This estimate does not including expected construction costs covered by private development. The total cost of all recommended projects is nearly \$50 million. Private development is expected to cover approximately \$19 million of the estimated costs while public agencies would be expected to cover the remaining \$31 million. The identified share to be funded by private developers may change based on the applicable development code requirements at the time of the land development application and the City's priorities for assisting with funding a given improvement.

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All proposed projects were compared using the previously described evaluation criteria to objectively consider the project’s ability to address TSP objectives. Along with guidance from the PMT, CAC, Stakeholders, and public, the projects were prioritized to identify a financially constrained plan for Cottage Grove.

The process to identify, evaluate, and prioritize TSP solutions happened over a series of months. The initial list of projects was identified in the Solution Evaluation and Initial Recommendation memo (TSP Volume II, Section J) and was refined through public involvement in the Final Recommended Solutions memo (TSP Volume II, Section L).

Transportation Strategies

Some transportation strategies can enhance the performance of the transportation system without adding new capacity, by applying Transportation System Management (“TSM”) and Transportation Demand Management (“TDM”) improvements. These solutions are often more cost effective than physically expanding the roadway system. Emphasis is placed on improving safety, reducing traffic conflicts, reducing drive-alone motor vehicle demand, and encouraging more efficient usage of the existing transportation system.

Transportation System Management (TSM)

Transportation System Management (TSM) focuses on low cost strategies to enhance operational performance of the transportation system. TSM strategies include traffic control improvements, traffic signal coordination, traffic calming, access management, local street connectivity, and intelligent transportation systems (ITS).

Coordination of railroad operations is an important TSM strategy in Cottage Grove. Due to the limited number of grade-separated railroad crossings in Cottage Grove, railroad operations can cause significant delays to travelers. City coordination with ODOT and railroad operators should be pursued to ensure that delays caused at blocked crossings are minimized.

Additional details about project selection and the prioritization process are included in the Solution Evaluation and Initial Recommendation memo (Volume II, Section J), and Final Recommended Solutions memo (Volume II, Section L).

Intelligent Transportation Systems (ITS)

ITS involves the application of advanced technologies and proven management techniques to relieve congestion, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. System efficiency is achieved by providing additional information to travelers, system operators, and the infrastructure itself.

Although no mobility deficiencies have been identified through the planning horizon, the transportation system in Cottage Grove could benefit from ITS infrastructure as traffic volumes and congestion increase. Before future investments are made along I-5, OR 99, and the Cottage Grove Connector, designs should be reviewed with City and ODOT staff to determine if communications or other ITS infrastructure should be addressed as part of the street design/construction.

ITS projects to consider in the future may include:

- Transit signal priority
- Signal coordination and optimization
- Traffic monitoring and surveillance
- Information availability
- Incident management

Transportation Demand Management (TDM)

Transportation Demand Management (TDM) is the general term used to describe actions that remove single occupant motor vehicle trips from the roadway network during peak travel demand periods. Providing attractive alternatives to driving alone will help change travel behavior to better accommodate the expected growth in travel demand identified for Cottage Grove.

Opportunities to expand transportation demand management and other measures in Cottage Grove include:

- Developing requirements for secure long-term bicycle parking for significant places of employment, park and ride facilities and other major transit stops, and multi-family residential uses.



The Plan

- Supporting alternative vehicle types by identifying potential electric vehicle plug-in stations and developing implementing code provisions.
- Encouraging/supporting rideshare/vanpool to major employers in Lane County and Eugene (e.g., University of Oregon, Downtown Eugene, etc.) for employees living in Cottage Grove.
- Improving street connectivity.
- Investing in pedestrian/bicycle facilities.
- Establishing site development standards that require pedestrian and bicycle access through sites and connections to adjacent sties and transportation facilities.
- Improving amenities and access for transit stops. Actions could include; instituting site design requirements allowing redevelopment of parking areas for transit amenities, requiring safe and direct pedestrian connections to transit, and permitting transit-supportive uses outright in commercial and institutional zones.



Pedestrians Waiting to Cross OR 99

Financially Constrained Solutions

Financially Constrained projects have been prioritized and are considered to be reasonably likely to be funded by 2035.

Project evaluation and planning level cost estimates for each project are identified in the Final Recommended Solutions memo (TSP Volume II, Section L).

The recommended list of Financially Constrained solutions for Cottage Grove is identified in Table 2 and illustrated in Figure 6. The timing of projects depends on growth and development with Cottage Grove. However, the projects are categorized into short-term (0-5 years), medium-term (5-10 years), and long-term (10-20 years) to reflect the overall TSP prioritization. The estimated total cost of the Financially Constrained solutions is \$11.2 million, slightly less than the estimate of total funds available (\$11.5 million).

This TSP, including the project lists, does not have any legal or regulatory effect on land or transportation facilities that the City does not own. Although evaluation and proposed improvements of non-City facilities are included, the TSP does not obligate its governmental partners to take any action or construct any projects. Without additional action by the governmental entity that owns the subject facility or land (e.g., Lane County, ODOT) any project that involves a non-City facility is merely a recommendation. Jurisdictional transfers may be considered as part of the implementation of proposed transportation projects.

All proposed street extensions in this plan that enhance connectivity show conceptual alignments. The plan has not analyzed these alignments for hydrologic, topographic, or other geological constraints, which could require substantial modification, nor has it determined all potential right-of-way needs or fully accessed impacts to adjacent properties. Detailed surveys need to precede final street alignments for these improvements.

The roadway, bicycle, and pedestrian facilities depicted are identified to provide a reasonable cost estimate for planning purposes. The actual design elements for any facility are subject to change, and will ultimately be determined through a preliminary and final design process. All project design elements on state facilities are subject to ODOT approval. All project design elements on City facilities are subject to approval by the Cottage Grove City Engineer.

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Table 2: Financially Constrained Solutions

Project ID	Name	Description	Estimated Cost to Public (\$ 2015 Dollars)	Priority
R2	OR 99 Conversion*	Convert 4-lane section to 3-lanes with bike lanes from Cottage Grove Connector to Woodson Bridge	\$ 80,000	Short-term
R3	Main St. Refinement Plan	Streetscape Plan	\$ 4,000,000 ⁹	Short-term
P23	OR 99 Crosswalk Improvements at Geer Ave.*	Improve crossing safety with changes to signing and/or pedestrian-activated warning (cost estimate assumes Rectangular Rapid Flash Beacon) **	\$ 45,000	Short-term
P24	Row River Rd. Crosswalk Improvements near Jim Wright Way*	Provide pedestrian crossing opportunity near Jim Wright Way (cost estimate assumes Pedestrian Hybrid Beacon) [Project location TBD]	\$ 60,000	Short-term
B1	S. R St. Bike Lanes	Restripe S. R St. to include bike lanes along entire duration south of W. Main St.	\$ 60,000	Short-term
R12a	Cottage Grove Connector Bridge Widening* [Design]	Widen to standard, include sidewalks and bicycle lanes – Design Only	\$ 875,000	Medium-term
R13	E. Main St. Access Improvements	Modify access from OR 99 to Gateway Blvd. (e.g., consolidate driveways)	\$ 35,000	Medium-term
R14	OR 99 Access Improvements*	Modify access from Cottage Grove Connector to Woodson Bridge (e.g., consolidate driveways)	\$ 60,000	Medium-term
R16	Cottage Grove Lorane Highway Modernization	Bicycle and pedestrian facilities on the Cottage Grove – Lorane Highway from the city limit to Gowdyville Rd. (total cost \$90,000). [County Project 70]	\$ 90,000	Medium-term
I1a	OR 99 at Cottage Grove Connector Improvements* - [Design]	Roundabout (or other intersection improvement) including pedestrian crossings – Design Only	\$ 325,000	Medium-term
T3	Eastern Trail Connection	Multi-use trail connection between Jim Wright Way and E. Palmer Ave., located east of Row River Rd.	\$ 150,000	Medium-term
T4	Currin Connector Trail Crossing	Modify Row River Trail crossing to better align with intersection near Mosby Creek Rd. and Currin Connector	\$ 70,000	Medium-term
P2	Cottage Grove Connector Sidewalks*	Construct Sidewalks on Connector between OR 99 and I-5 Southbound Ramp (excluding bridge related costs) ¹⁰	\$ 480,000	Medium-term

⁹ The total cost of the Main Street Refinement Plan was estimated to be between \$8.0M and \$9.3M. The costs for the project are expected to come partially from transportation funding and partially from other urban renewal and/or community development sources.

¹⁰ The project would likely be constructed in coordination with improvements to the Cottage Grove Connector Bridge (Project R12),

The Plan

Table 2: Financially Constrained Solutions (continued)

Project ID	Name	Description	Estimated Cost to Public (\$ 2015 Dollars)	Priority
P4	E. Harrison Ave. Sidewalks (East)	Construct missing sidewalk segments E. Harrison Ave. from OR 99 to S. 1st St.	\$ 42,500	Medium-term
P22b	Sweet Ln. Sidewalks	Construct sidewalk from S. R St. to OR 99	\$ 175,000	Medium-term
P25	OR 99 Sidewalk Infill*	Construct missing sidewalk segments between Woodson Pl. and Lord Ave.	\$ 100,000	Medium-term
P28	OR 99 Sidewalk Ramps	Complete ADA-complaint pedestrian ramps at roadway intersections on OR 99, between the Cottage Grove Connector and the Woodson Bridge	\$ 140,000	Medium-term
B10	Bicycle Parking	Install bicycle parking (various locations)	\$ 65,000	Medium-term
B12	Woodson Bridge Bicycle Crossing Treatment	Add bicycle signing and striping treatments to support bicycle travel on Woodson Bridge	\$ 5,000	Medium-term
B15	E. Whiteaker Ave. Bike Route	Designate and sign E. Whiteaker Ave. as a bike route from N. River Rd. via Centennial Bridge to OR 99/E. Main St. intersection	\$ 35,000	Medium-term
R7	S. R St. Extension	Complete S. R St. from Sweet Ln. to OR 99 including sidewalks and bike lanes	\$ 700,000	Long-term
R8	Gates Rd. Extension	Extension to complete Gates Rd. from Gowdyville Rd. to W. Harrison Ave. including sidewalks and bike lanes	\$ 755,000	Long-term
R9	Blue Sky Dr. Extension	Extension from W. Harrison Ave. to Sweet Ln. including sidewalks	***	Long-term
R10	Lincoln Ave. Extension	Extension from east end to S. Gateway Blvd. extension including sidewalks	***	Long-term
R23	N. M St. Extension	Extension to Holly Ave. including sidewalks	***	Long-term
R24	S. 4th St. Extension	Extension south to Cleveland Ave. Extension including sidewalks	***	Long-term
I1b	OR 99 at Cottage Grove Connector Improvements* [Construction]	Roundabout (or other intersection improvement) including pedestrian crossings – Construction & Administration	\$ 1,195,000	Long-term
P1	OR 99 Sidewalks (North)*	Construct sidewalks on OR 99 between the Cottage Grove Connector and N. River Rd.	\$ 500,000	Long-term
P3	N. M St. Sidewalks	Construct missing sidewalk segments on N. M St. from Chestnut Ave. to Holly Ave.	***	Long-term
P7	S. River Rd. Sidewalks	Repair substandard sections and fill-in missing sections of sidewalk along S. River Rd. between Nellis Pl. and W. Harrison Ave.	\$ 180,000	Long-term
P9	E. Chamberlain Ave. Sidewalks	Construct missing sidewalk segments from OR 99 to N. Douglas Ave.	\$ 50,000	Long-term
P10	S. 6th St. Sidewalks	Construct missing sidewalk segments from Fillmore Ave. to south UGB	\$ 400,000	Long-term

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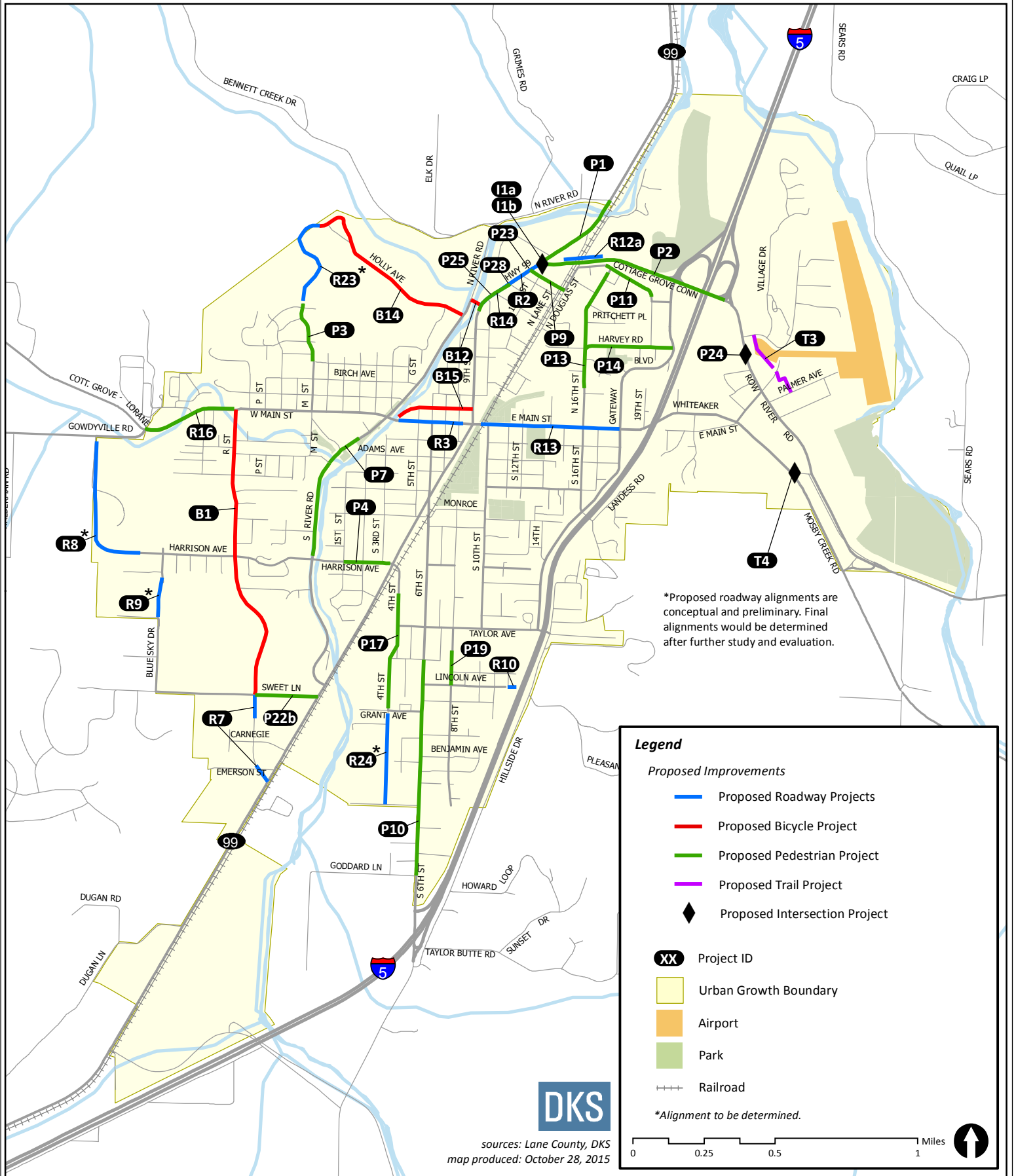
Table 2: Financially Constrained Solutions (continued)

Project ID	Name	Description	Estimated Cost to Public (\$ 2015 Dollars)	Priority
P11	Ostander Ln. Sidewalks	Construct missing sidewalk segments from Douglas Ave. to Oswald Ave.	\$ 75,000	Long-term
P13	N. 16th St. Sidewalks	Construct missing sidewalk segments from Ostrander Ln. to Row River Trail	\$ 87,500	Long-term
P14	Harvey Rd. Sidewalks	Construct missing sidewalk segments from N. 16th St. to N. Gateway Blvd.	\$ 125,000	Long-term
P17	S. 4th St. Sidewalks	Construct missing sidewalk segments from Grant Ave. through Taylor Ave.	\$ 187,500	Long-term
P19	S. 8th St. Sidewalks	Construct missing sidewalk segments from Taylor Ave. to Lincoln Ave.	\$ 32,500	Long-term
B14	Holly Ave. Bike Route	Designate and sign Holly Ave. as a bike route	\$ 20,000	Long-term
Grand Total			\$ 11,200,000	

* ODOT agency review and engineering design approval would be required prior to construction of any improvement at these locations.

**Appropriate crossing treatment may be dependent on roadway conversion to three motor vehicle lanes (Project R2).

***Assumed to be fully funded by private development, with no significant public agency funding contribution.



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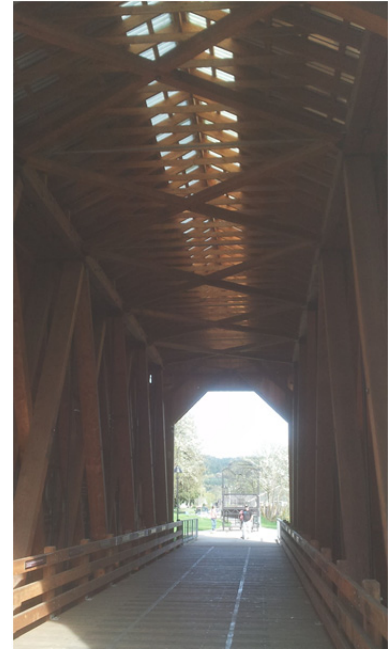
Illustrative Projects

This section details the illustrative transportation improvement projects that have been identified through the needs analysis and public involvement process. These projects are supported by the community but are not included in the list of Financially Constrained solutions. These projects are not likely to be funded through the 2035 planning horizon without enhanced or new transportation funding streams. Illustrative projects are presented here categorized by mode.

Multi-modal Roadway Projects

Illustrative roadway projects are listed below in Table 3, and Figure 7 shows all recommended roadway projects on the Illustrative and Financially Constrained lists. Roadway projects include roadway extensions or modernization projects. Proposed roadway modernizations are intended to bring existing substandard roadways up to current City, County or ODOT design standards, providing improvements for multiple modes of travel. Several of the projects on Lane County jurisdiction roadways are carried forward from the Lane County TSP.

The primary purpose of proposed roadway extensions is to improve connectivity throughout the City. The proposed roadway extensions will reduce out-of-direction travel and create key connections for people riding bicycles or walking. Some of the roadway extension projects are dependent on development and/or redevelopment of existing properties. Funding for new roadways (or extensions) is typically required as a condition of approval for new development along or near the proposed roadway alignment. All proposed roadway alignments illustrated in Figure 7 should be considered preliminary and conceptual.

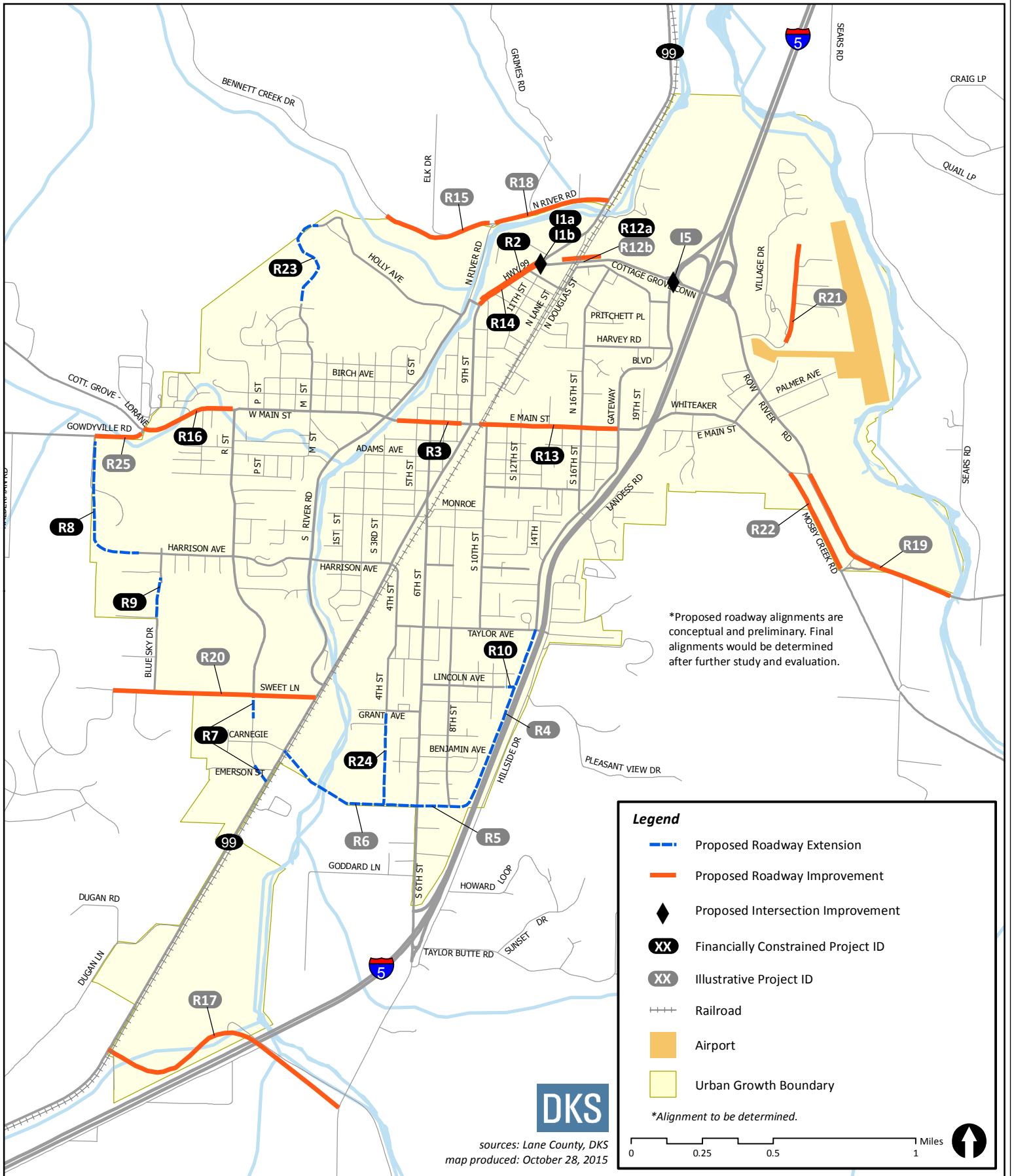


The Plan

Table 3: Illustrative Multi-Modal Roadway Projects

Project ID	Name	Description	Purpose	Estimated Cost to Public (\$ 2015 Dollars)
R4	S. Gateway Blvd. Extension	Extension from Taylor Ave. to Cleveland Ave. including sidewalks and bike lanes	Connectivity	\$ 3,200,000
R5	Cleveland Ave. Extension (East)	Extension from S. Gateway Blvd. Extension to S. 6th St. including sidewalks and bike lanes	Connectivity	\$ 260,000
R6	Cleveland Ave. Extension (West)*/**	Extension from west end to OR 99/S. R St. or OR 99/Carnegie Ln. including sidewalks and bike lanes (alignment to be determined)	Connectivity	\$ 4,000,000
R12b	Cottage Grove Connector Bridge Widening* [Construction]	Widen to standard, include sidewalks and bicycle lanes – Construction & Administration	Safety/ Access	\$ 2,870,000
R15	Bennett Creek Rd. Modernization	Widening and guardrail upgrade on Bennett Creek Rd. between N. River Rd. and the bridge at the UGB. [County Project 71]	Safety/ Standards	\$ 270,000
R17	Latham Rd. Modernization*	Bicycle and pedestrian facilities on Latham Rd. between OR 99 and London Rd. [County Project 69]	Safety/ Standards	\$ 66,667
R18	N. River Rd. Modernization*	Upgrade on N. River Rd. between OR 99 and Bennett Creek Rd. [County Project 68]	Safety/ Standards	\$ 430,000
R19	Row River Rd. Modernization	Upgrade to a three-lane facility with bike lanes on Row River Rd. between the Row River and City Limits. [County Project 67]	Safety/ Standards	\$ 720,000
R20	Sweet Ln. Modernization*	Upgrade of Sweet Ln. to urban standards from OR 99 to Talemna Dr. (total cost \$570,000). [County Project 65]	Safety/ Standards	\$ 456,000
R21	Thornton Rd. Modernization	Addition of curb, gutter and sidewalks to Thornton Ln. from Row River Rd. to ECM gate. [County Project 64]	Safety/ Standards	\$ 176,000
R22	Mosby Creek Rd. Modernization	Rural modernization for Mosby Creek Rd. east of the Currin Connector. [County Project 94]	Connectivity	\$ 200,000
R25	Gowdyville Rd. Modernization	Build up to standards including pedestrian and bicycle facilities from Gates Rd. to Cottage Grove - Lorane Hwy.	Connectivity	\$ 450,000
I5	I-5 SB Ramp/N. Gateway Blvd. Intersection Improvements*	Safety Improvements (e.g., signing and striping) near the intersection of I-5 SB Ramp/N. Gateway Blvd. at Row River Rd./Cottage Grove Connector	Safety	\$ 60,000

* ODOT agency review and engineering design approval would be required prior to construction of any improvement at this location.



** Any proposed project that alters an at-grade railroad crossing will require coordination with ODOT Rail. ODOT agency review and engineering design approval would be required prior to construction of any improvement at this location. The proposed railroad crossing (for project R6) would likely require closure of the existing crossing at Rachel Way and an access road for existing land uses near Rachel Way.

Transit Projects

No transit-specific projects are identified in the TSP. Any transit project would be implemented by Lane Transit District, South Lane Wheels, and other relevant agencies. Each transit service provider has their own guidelines for transit stops and amenities. The city will support transit services through its development of pedestrian and bicycle facilities that provide access to transit.

Trail Projects

Illustrative trail projects are listed below in Table 4. The projects providing missing links in the existing trail network in Cottage Grove and/or address potentially unsafe crossing locations. Figure 8 includes all recommended trail projects on the Illustrative and Financially Constrained lists.

Table 4: Illustrative Trail Projects

Project ID	Name	Description	Purpose	Estimated Cost to Public (\$ 2015 Dollars)
T1	Woodson Bridge	New bicycle/pedestrian bridge adjacent to existing bridge	Connectivity	\$ 350,000
T2	Northern Trail Connection	Multiuse trail connection from N. River Rd. to North Regional Park	Connectivity	\$ 700,000

Pedestrian Projects

Illustrative pedestrian improvements are listed below in Table 5 and Table 6. Figure 8 shows all recommended pedestrian projects on the Illustrative and Financially Constrained lists. The projects listed in these tables are separated from other pedestrian improvements included as part of multimodal roadway improvements (in Table 3) because of their pedestrian focus.

The Plan

Table 5 includes modernization projects that would construct sidewalks along existing roadways that do not currently provide dedicated pedestrian facilities. Also shown in Table 5 are pedestrian connection projects that identify new pedestrian facilities to provide better pedestrian access between key activity centers in Cottage Grove.

Table 5: Illustrative Pedestrian Projects – Modernizations & Connections

Project ID	Name	Description	Purpose	Estimated Cost to Public (\$ 2015 Dollars)
P5	OR 99 Sidewalks (South)*	Construct missing sidewalk segments on OR 99 from Taylor Place to South UGB	Access	\$ 920,000
P8	Connector Alternative Pedestrian Route	Way-finding to identify alternative pedestrian route to Cottage Grove Connector	Connectivity	\$ 10,000
P21	Blue Sky Dr. Sidewalks	Construct sidewalk from Sweet Ln. to Extension	Access	\$ 175,000
P22a	Sweet Ln. Sidewalks	Construct sidewalk from Blue Sky Dr. to S. R St.	Access	\$ 150,000
P27	E. Harrison Ave. Pedestrian Connection**	Provide pedestrian facilities to connect between S. 10th Ave. and S. Gateway Blvd.	Connectivity	\$ 160,000

* ODOT agency review and engineering design approval would be required prior to construction of any improvement at this location.

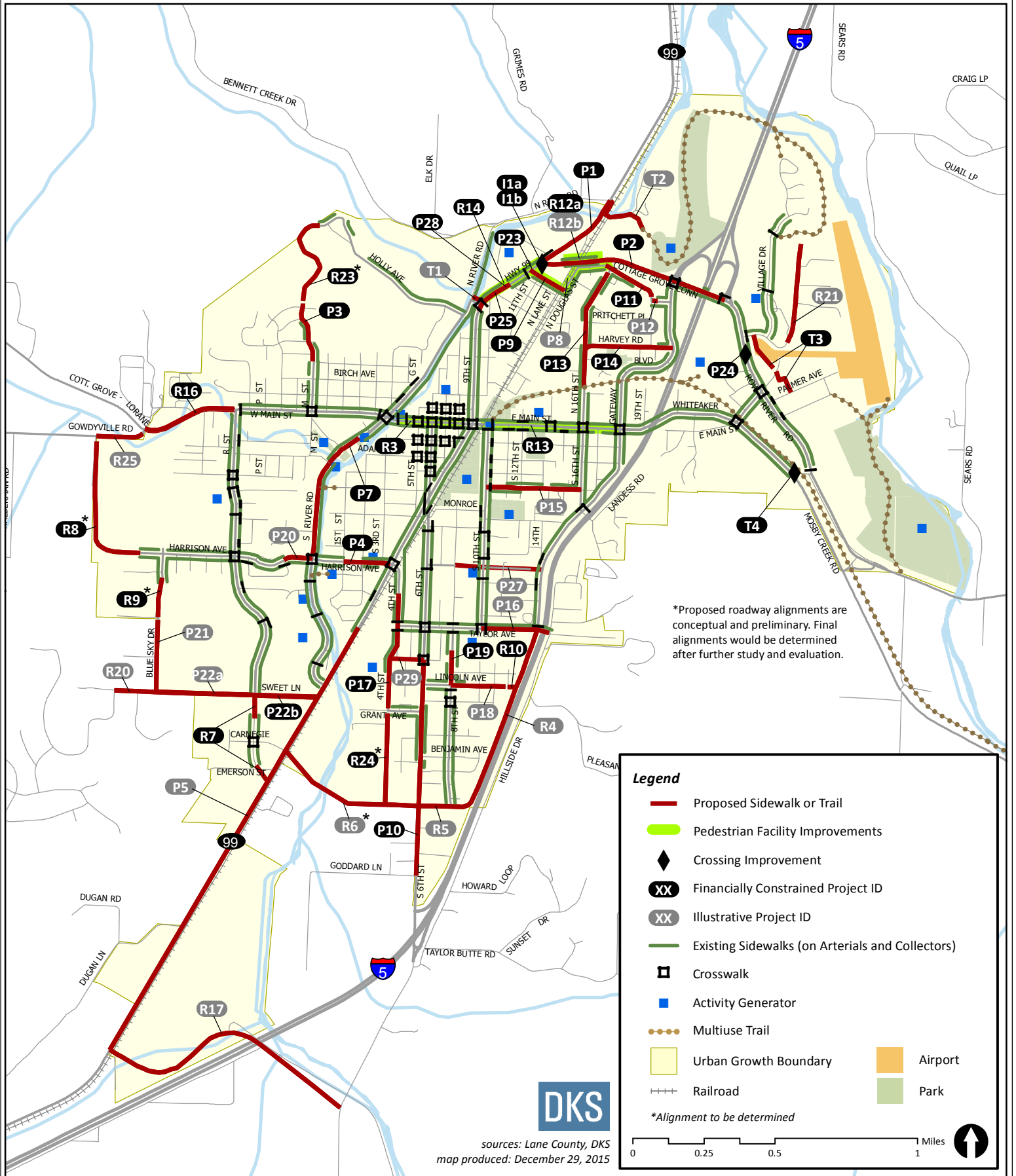
**The proposed project would be constructed in coordination with the planned redevelopment of the Harrison Elementary School site.

The Plan

Sidewalk infill projects are summarized in Table 6 and shown in Figure 8. These projects were identified based on gaps identified in the pedestrian network. Filling in sidewalk gaps is particularly dependent on development unless the City creates a dedicated funding program to incrementally construct sidewalk infill projects. Implementation of these projects will lead to a more comprehensive and connected pedestrian network in Cottage Grove.

Table 6: Illustrative Pedestrian Projects – Sidewalk Infill

Project ID	Name	Description	Purpose	Estimated Cost to Public (\$ 2015 Dollars)
P12	Oswald West Ave. Sidewalks	Construct missing sidewalk segments from N. 19th St. to N. Gateway Blvd.	Access	\$ 12,500
P15	E. Madison Ave. Sidewalks	Construct missing sidewalk segments from S. 10th St. to S. 16th St.	Access	\$ 100,000
P16	Taylor Ave. Sidewalks	Construct missing sidewalk segments from S. 10th St. to Hillside Drive (does not include bridge replacement costs)	Access	\$ 75,000
P18	Lincoln Ave. Sidewalks	Construct missing sidewalk segments from S. 8th St. to east end	Access	\$ 125,000
P20	W. Harrison Ave. Sidewalks	Construct missing sidewalk segments from Edison Ave. to S. River Rd.	Access	\$ 22,500
P29	Fillmore Ave. Sidewalks	Construct missing sidewalk segments from S. 4 th St. to S. 6 th St.	Access	\$ 15,000



Bicycle Projects

Illustrative bicycle projects are listed below in Table 7 and Table 8. Figure 9 shows all recommended bicycle projects on the Illustrative and Financially Constrained lists. Bicycle projects are divided into new bike lanes (Table 7) and enhanced connections (Table 8). Other bicycle improvements included as part of multimodal roadway improvement (in Table 3) are also included in Figure 9.

Table 7 summarizes modernization projects that include dedicated bike lanes on existing roadways. The projects require either roadway widening or restriping. Table 8 identifies projects that enhance bicycle connectivity in Cottage Grove. These projects range from signing and striping for shared routes, way-finding signs for designated bicycle routes, and bicycle parking. While potential treatments are identified in Table 8, a range of bicycle treatments are possible and specific treatments will be determined as projects are refined.

Options and guidelines for walking and bicycling treatments are provided in Transportation Standards (TSP Volume II, Section K).



Bike Lane Striping

The Plan

Table 7: Illustrative Bicycle Projects – Bike Lanes

Project ID	Name	Description	Purpose	Estimated Cost to Public (\$ 2015 Dollars)
B2	OR 99 Bike Lanes (North)*	Widen and restripe OR 99 to include bike lanes from Cottage Grove Connector to north UGB	Access	\$ 850,000
B4	E. Whiteaker St. Bike Lanes	Widen to add bike lanes along E. Whiteaker St. from Gateway Blvd. to Thornton Rd./Row River Trail	Access	\$ 320,000
B5	N. M St. Bike Lanes	Stripe bike lanes on N. M St. north of W. Main St.	Access	\$ 30,000
B6	Cottage Grove Connector Bike Lanes*	Complete bike lanes on Cottage Grove Connector from OR 99 to I-5 northbound ramps (excludes bridge related costs) ¹¹	Access	\$ 600,000
B7	W. Harrison Ave. Bike Lanes	Restripe W. Harrison Ave. west of S. R St. to include bike lanes	Access	\$ 25,000
B8	Thornton Rd. Bike Lanes	Widen to add bike lanes on Thornton Rd. between Mosby Creek Rd. and Row River Rd.	Access	\$ 150,000
B9	OR 99 Bike Facility (South)*	Widen for bike lanes and/or construct multiuse trail on OR 99 from S. 8th St. to south UGB	Access	\$ 1,500,000

* ODOT agency review and engineering design approval would be required prior to construction of any improvement at this location.

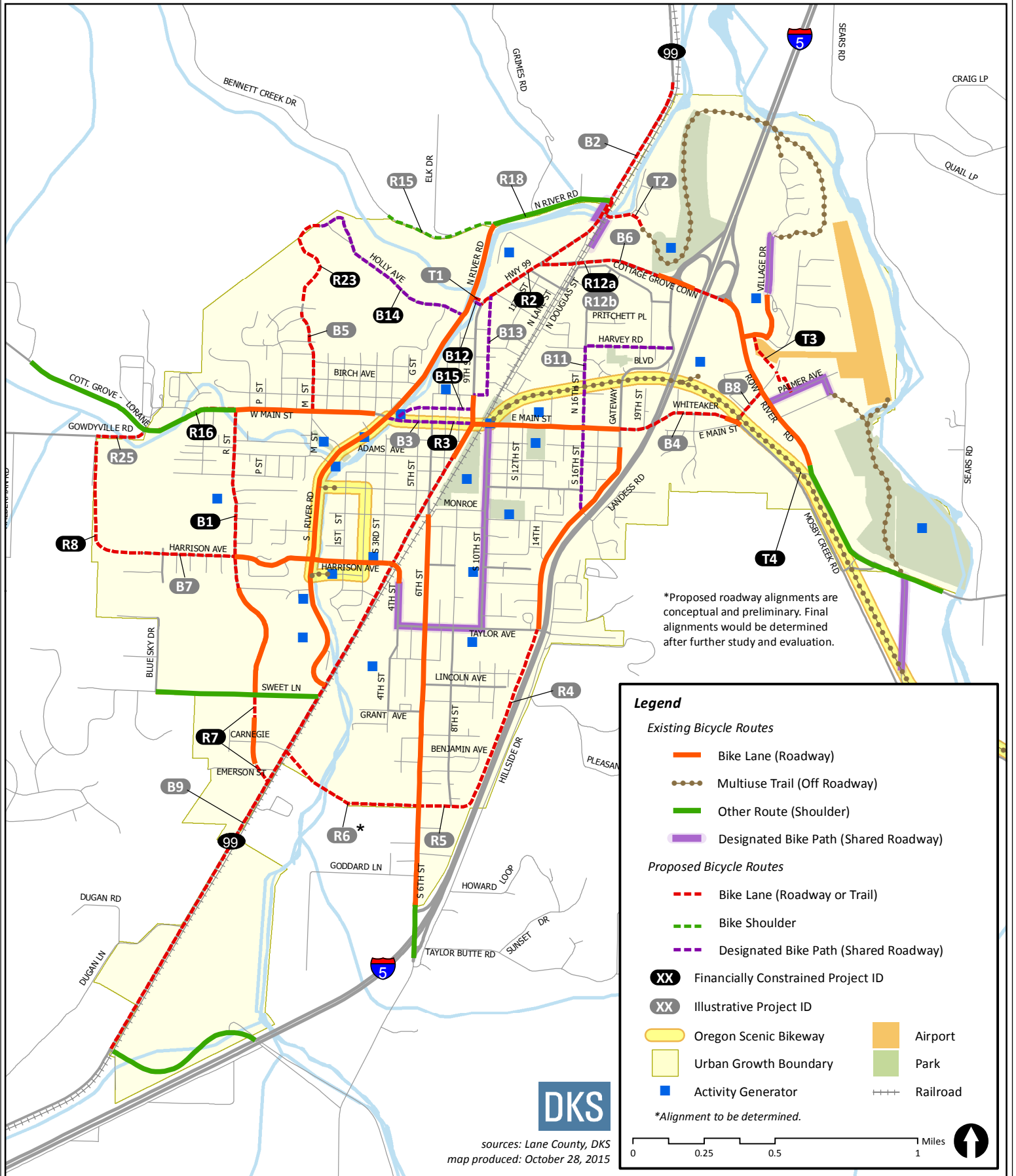
¹¹ The project would likely be constructed in coordination with improvements to the Cottage Grove Connector Bridge (Project R12),

The Plan

Table 8: Illustrative Bicycle Projects – Connections

Project ID	Name	Description	Purpose	Estimated Cost to Public (\$ 2015 Dollars)
B3	E. Main St. Bicycle Shared Route	Signing and striping to promote bicycle usage on E. Main St. between OR 99 and River Rd.	Access	\$ 25,000
B11	Gateway Blvd. Alternative Bicycle Route	Add signing and striping to designate recommended bicycle routes between Harvey Rd. and 16th St. Signage would direct travelers off of Gateway Blvd. and onto 16th St. and Harvey Rd. shared roadways.	Access	\$ 35,000
B13	OR 99 Alternative Bicycle Route*	Add signing and striping to designate alternative bicycle routes between Woodson Bridge and Gibbs Ave. Signage would direct travelers to optional routes off of OR 99: northbound travelers to N. 10th St. shared roadway and southbound travelers to N. River Road bike lanes.	Access	\$ 30,000

* ODOT agency review and engineering design approval would be required prior to construction of any improvement at this location.

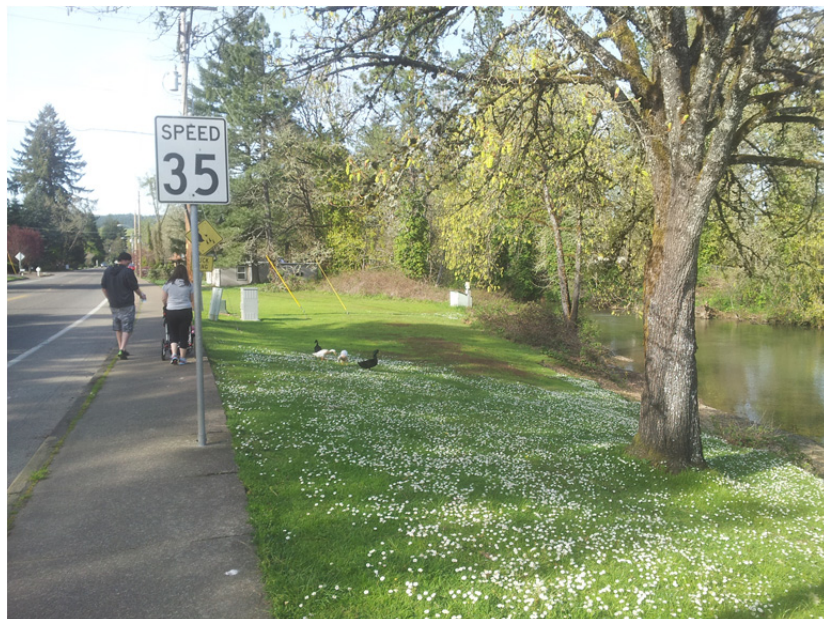


Local Street Connectivity

Providing a well-connected roadway network can enhance accessibility for various travel modes, improve emergency response times, and balance traffic levels on existing roadways by better dispersing traffic.

Much of the local street network in Cottage Grove forms a grid network. However, there are a number of locations where roadways are not well connected, especially where limited by barriers such as rivers, railroad tracks, or incomplete development. Topography, environmental conditions, and other barriers (e.g. interstate freeway, railroad tracks) limit the level of potential connectivity in several areas of Cottage Grove.

Figure 10 shows the conceptual Local Street Connectivity Plan for Cottage Grove. The arrows shown in the figures represent conceptual connections that illustrate the general direction for the placement of future connections. The identified alignments are not specific and will be determined upon development review. Neighborhood traffic management measures may be considered when constructing new roadway connections.

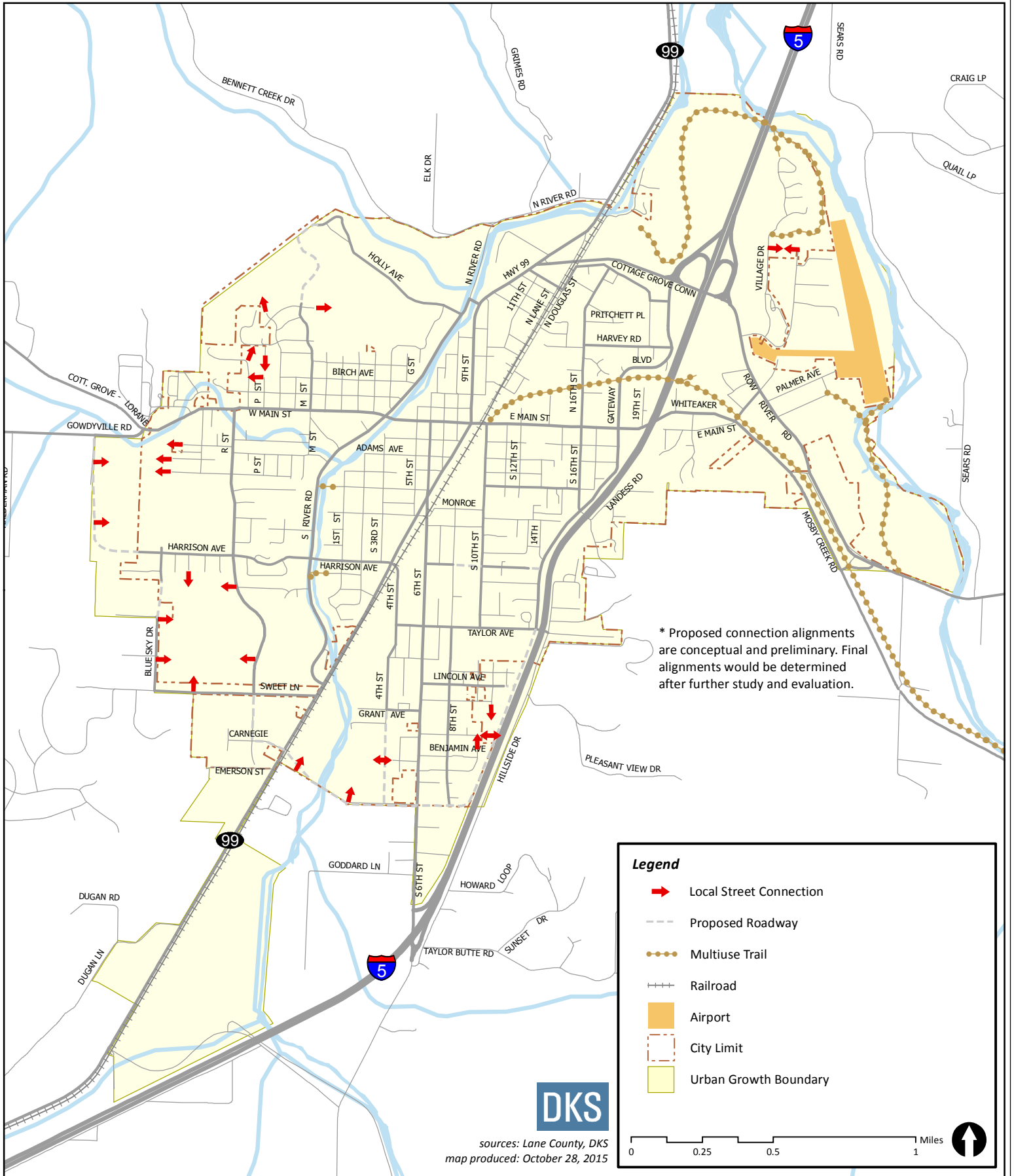


S. River Road Sidewalk

Transportation System Plan

FIGURE 10

Local Street Connections



The Standards

The TSP sets standards and regulations to ensure future development or redevelopment of property is consistent with the city's transportation vision and goals.

Multi-Modal Street System

A multi-modal street system is a hierarchy of streets organized by functional classification and jurisdiction. These classifications reflect a scale and design appropriate to the transportation function provided and adjacent properties and land uses. Each street classification balances the needs of all travel modes, including pedestrians, bicyclists, transit riders, and motorists. The multi-modal street classification system allows variation in design elements in a manner that is sensitive to the context and character and constraints of the surrounding property.

Jurisdiction

Roadways in Cottage Grove are under the jurisdiction of the City, Lane County or ODOT. Each responsible jurisdiction sets various standards for the roadways to maintain the appropriate level of performance, provide access, and accommodate a variety of users. Figure 11 shows the jurisdiction of all roadways in Cottage Grove.



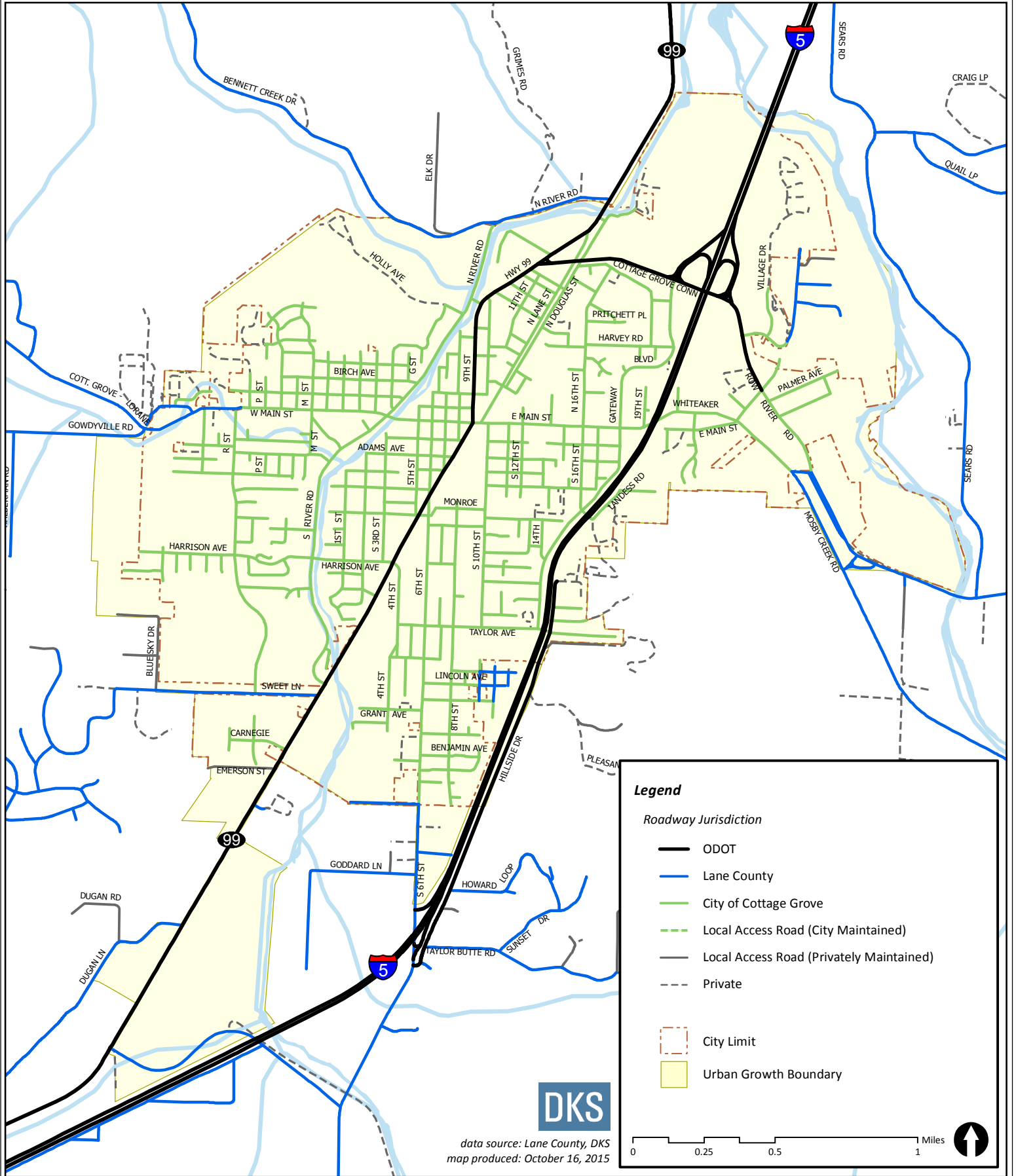
Roadway Striping on OR 99



Transportation System Plan

FIGURE 11

Roadway Jurisdiction



data source: Lane County, DKS
map produced: October 16, 2015



The Standards

Functional Classification

Roadways are typically classified based on the level of usage and type of vehicular travel they are intended to serve. The Cottage Grove functional classification system (as shown in Figure 12) is consistent with Lane County designations and the previous TSP.

Additional explanation of the functional classification system is provided in the Transportation Standards Memorandum (TSP Volume II, Section K).

- **Interstate Highways** are limited access state roadways that serve high volumes of motor vehicle traffic and are primarily utilized for longer distance regional or statewide trips.
- **Principal Arterials** are roadways intended to move traffic through Cottage Grove. These roadways generally experience higher traffic volumes and often connect to locations outside of the city or act as corridors connecting many parts of the city. The character and speed of these roads varies with the level of urbanization.
- **Minor Arterials** are roadways intended to serve through traffic and local traffic traveling to and from principal arterial roadways. These roadways provide efficient through movement for regional or local traffic. Arterials and major collector facilities are required by state law to provide bicycle facilities.¹²
- **Collectors** are roadways that typically connect neighborhoods and major activity generators to minor arterial roadways. These roadways provide efficient through movement across town for local traffic. Posted speeds on collector roadways generally range between 25 and 35 miles per hour.
- **Local Streets** provide more direct access to residences in Cottage Grove. These roadways are often lined with residences and are designed to serve lower volumes of traffic with a statutory speed limit of 20 or 25 miles per hour.



The function of roadways also depends on speed limits and traffic controls. Figure 13 shows speed limits on Cottage Grove roadways and traffic controls at study intersections.

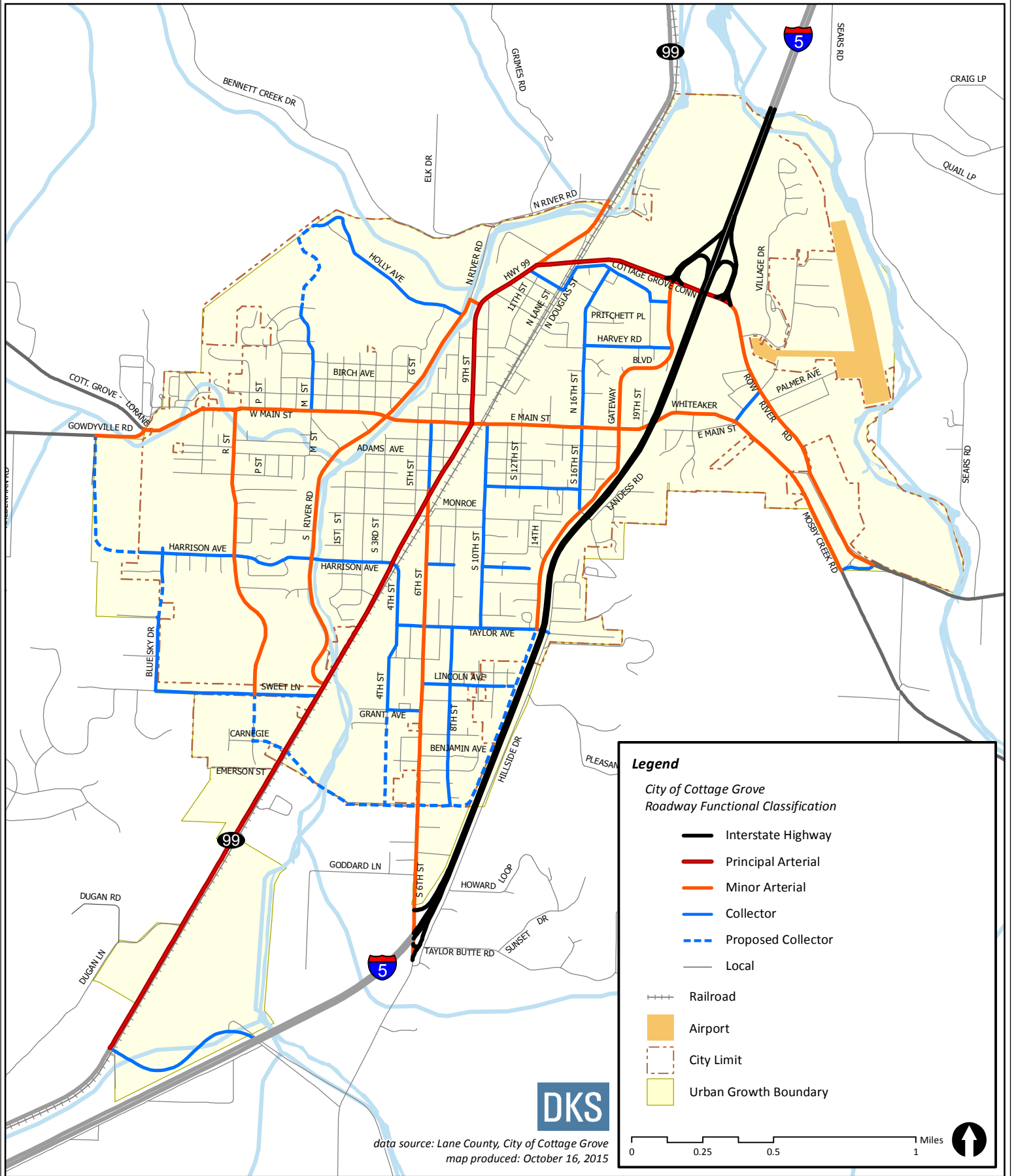
¹² Transportation Planning Rule, OAR 660-012-0045 (3)(b)(B).



Transportation System Plan

FIGURE 12

Roadway Functional Class



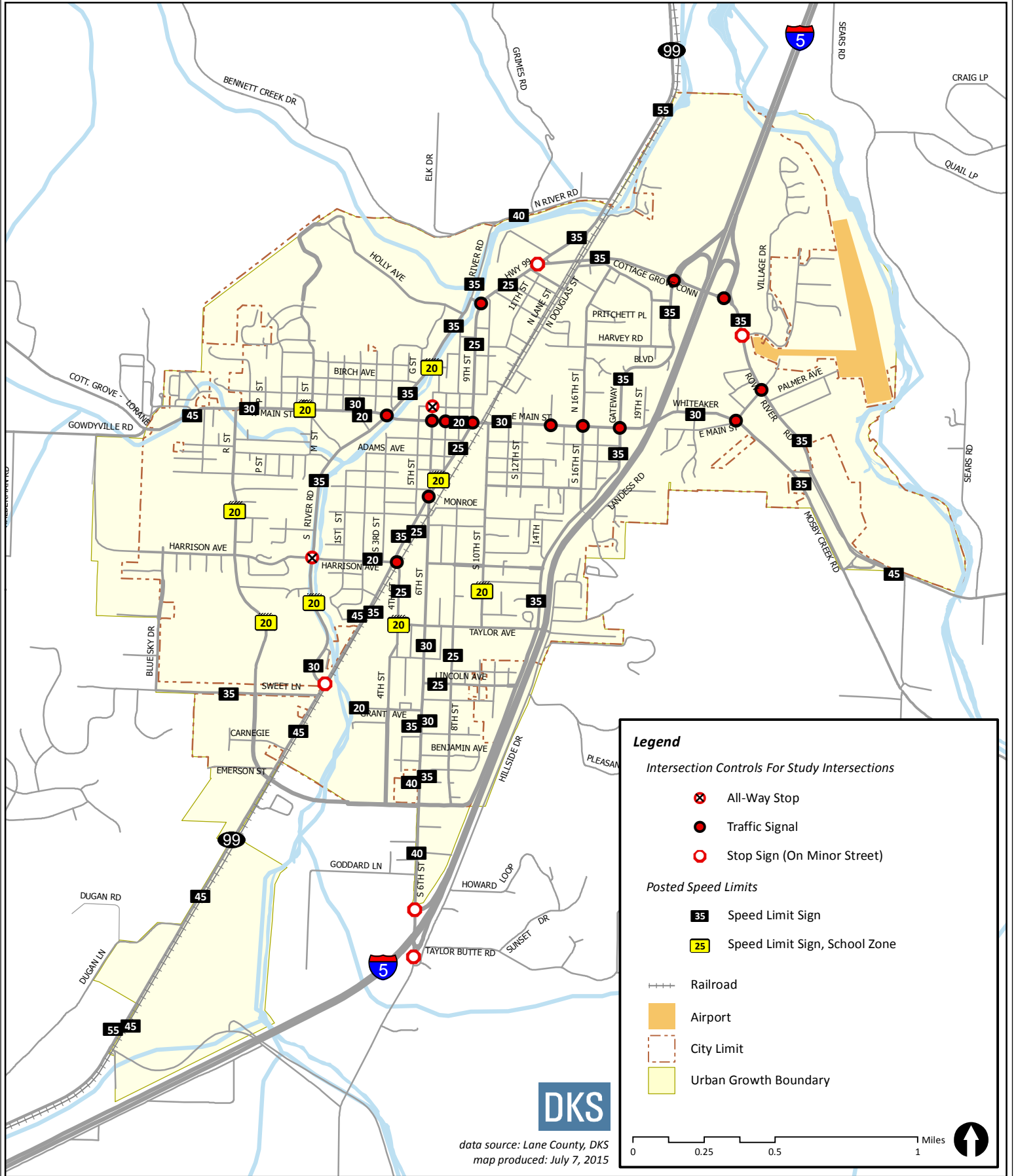
data source: Lane County, City of Cottage Grove
 map produced: October 16, 2015



Transportation System Plan

FIGURE 13

Posted Speeds and Traffic Controls



The Standards

Access Spacing Standards

Proper access spacing balances efficient, safe, and timely travel with access to individual destinations. Adequate spacing between accesses (driveways and streets) reduces congestion, collision rates, and the need for additional motor vehicle capacity.

The standards shown in Table 9 define minimum and maximum street intersection and minimum private access spacing standards for streets under the jurisdiction of the City. Streets not complying with these standards could be improved with access management strategies that include shared access points, access restrictions (through the use of a median or channelization islands) or closing access. New streets or redeveloping properties must comply with these standards, to the extent practical (as determined by the City). Residential driveway access to collector streets should be provided only if alternative access is not feasible.

Table 9: Access Spacing Standards (feet) for City Roadways

	Arterial	Collector	Local Street
Maximum*	1,000	400	400
Minimum	600**	200***	-

Note: Spacing is generally measured between roadway centerlines.

* Where a street connection in conformance with the maximum block length standard is impracticable, a pedestrian/bicycle accessway shall be provided in lieu of the street connection, unless the connection is impractical due to existing development, topography, or environmental constraints.¹³

**Arterials located where existing block spacing is approximately 400 feet (such as in downtown) would be exempt from the 600 foot standard and instead be subject to a 400 foot minimum spacing.

***Or one per residential lot, if no alternate access is feasible.

Policy statements in the Lane County TSP and requirements in the Lane County Land Use and Development Code guide access management on County-owned arterials and collectors in urban areas. The Oregon Highway Plan sets access spacing standards for state highways.

ODOT and County spacing standards as of 2015 are listed in the Transportation Standards Memorandum (TSP Volume II, Section K).

¹³ City of Cottage Grove Development Code, 3.4.100 – Transportation Standards.

The Standards

Design Types of Streets

The design of Cottage Grove's streets requires attention to many elements of the public right-of-way and how the street interacts with the adjacent properties. Cross-sections of streets include the right of way, paved width, vehicle travel lanes, medians, center turn lanes, bike lanes, parking, planter strips, and sidewalks. The design of these roadway elements varies based on the functional classification and street type.

Table 10 describes the recommended cross-sections for city minor arterials, collectors and local streets in Cottage Grove. These are illustrated in Figure 14, Figure 15, and Figure 16. The design standards provide clear guidance for future development while also allowing for a degree of flexibility to fit with surrounding land uses and practical constraints.

No cross-section is provided for principal arterials because OR 99 and the Cottage Grove Connector are the only roadways with that proposed functional classification. Since these roadways are under Oregon Department of Transportation (ODOT) jurisdiction, they are subject to design standards in ODOT's Highway Design Manual.

Additional details about the design types and information about how the standards were updated from the previous TSP are included in the Transportation Standards Memorandum (TSP Volume II, Section K).

City street standards and classifications may not be consistent with Lane County standards. For roadway construction projects on county facilities within the City's UGB, where proposed cross-section standards vary from the Lane County Road Design Standards, a Deviation or a Variance will be required.

The Standards

Table 10: City Street Design Standards

Functional Classification	Street Type	Right-of-Way	Paved Width (Curb-to-Curb)	Travel Lane	Median/Center Turn Lane*	Bike Lane	Parking	Planter Strip	Sidewalks
Minor Arterial	3-Lane	72' – 110'	46' – 62'	11'	12'	6'	8' (Optional)	7' – 12'	6' – 12'
	2-Lane	60' – 98'	34' – 50'	11'	None	6'	8' (Optional)	7' – 12'	6' – 12'
Collector	Parking Both Sides	62' – 88'	48'	10'	None	6'***	8'	7' – 8'	6' – 12'
	Parking One Side	54' – 80'	40'	10'	None	6'***	8'	7' – 8'	6' – 12'
	No Parking	48' – 74'	34'	11'	None	6'***	None	7' – 8'	6' – 12'
Local***	Parking Both Sides	52' – 72'	32'	18'	None	None	7'	4' – 12'	6' – 8'
	Parking One Side	48' – 68'	28'	20'	None	None	8'	4' – 12'	6' – 8'
	No Parking	40' – 60'	20'	20'	None	None	None	4' – 12'	6' – 8'

*Turn pockets may be provided at intersections, as warranted for safety or traffic demand.

**Bike lanes may be excluded from Collector roadway cross-section in low-volume and low-speed environments, upon approval of the City Engineer.

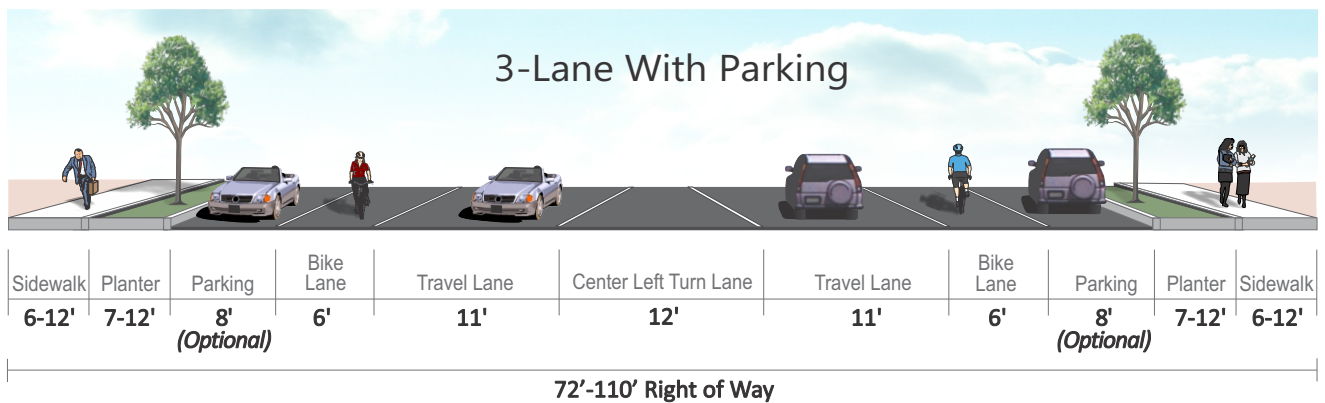
***Collector standard may apply for local roadways that serve exclusively commercial or industrial zones, upon approval of the City Engineer.

Note: For Lane County urban arterial and urban collector facilities, the sidewalk width required is 5-feet, the planter strip width required is 6-feet and the bike lane width required is 5.5 feet. Any change from these standards would require approval of a Deviation or a Variance, per Chapter 15 of the Lane Code.

Principal Arterials

The City does not have jurisdiction over any roadways classified as Principal Arterial. Therefore, ODOT's design standards would apply to OR99 and the Cottage Grove Connector. See the ODOT Highway Design Manual, 2012.

Minor Arterials

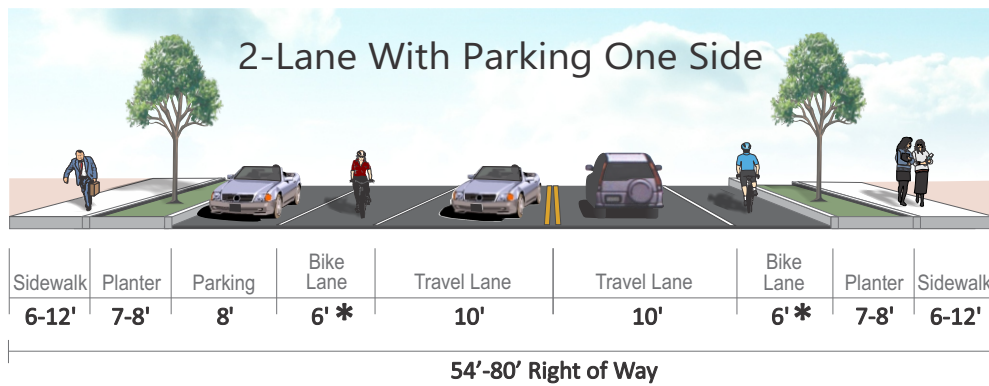
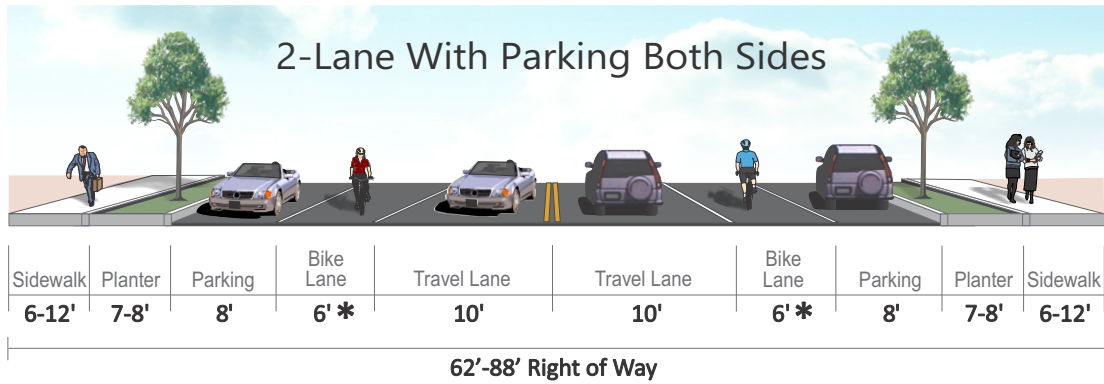


DKS

Figure 14

**Roadway Cross-Sections
Arterials**

Collectors



* May be excluded in low-volume and low-speed environments upon approval of the City Engineer.

Local Streets



The Standards

Mobility Standards

Mobility targets for intersections in Cottage Grove provide a quantifiable measure to evaluate the existing transportation system and assess the impacts of new development. They are an important tool to require construction of improvements that sustain the transportation system as growth and development occur. ODOT, Lane County, and the City of Cottage Grove each define mobility standards that apply to roadways under their jurisdiction.

At intersections under City of Cottage Grove jurisdiction, peak hour traffic operations must meet the following mobility standards:

- **Signalized intersections:** Maximum volume-to-capacity (v/c) ratio of 0.90.
- **Unsignalized intersections:** Minimum level of service of “E” for worst movement on the minor street approach.

All-way stop controlled intersections and roundabouts are considered unsignalized intersections. For analysis purposes, the minimum level of service of “E” would apply to the overall intersection for all-way stop controlled intersections and to the critical approach for roundabouts.

For intersections controlled by other jurisdictions (e.g., Lane County or ODOT), the mobility standards for that jurisdiction must be met in addition to the city’s mobility standard. At multi-jurisdictional intersections, the more restrictive standard applies, such that all jurisdictional standards are met.

Freight Routes and Restrictions

Within Cottage Grove, I-5 is classified as a NHS Federal Truck Route and an Oregon Freight Route. It is also on the National Highway System (NHS). OR 99 is classified by ODOT as a District Highway and it is also on the National Highway System (NHS). However, OR 99 is not classified as a freight or truck route.

No truck routes are designated on city streets. Unless otherwise posted, trucks are allowed on all city streets.

Mobility standards for Lane County and ODOT facilities in Cottage Grove, as of 2015, are included in the Transportation Standards Memorandum (TSP Volume II, Section K).



The Standards

Local Street Spacing

Developments that construct new streets, or street extensions, must provide a proposed street system that:

- Provides full street connections with spacing of no more than 400 feet between connections except where prevented by barriers such as topography, other environmental conditions, existing development, or existing legal arrangements.
- Space local street connections at least 200 feet apart except where intersections are designed to support public spaces such as parks or other neighborhood amenities.
- Provides bike and pedestrian access ways in lieu of streets where maximum block length standards are not feasible.
- Limits use of cul-de-sacs and other closed-end street systems to situations where barriers prevent full street connections.
- Limits length of cul-de-sacs to 400 feet.
- Includes pedestrian connections from the end of any stub end street that results in a cul-de-sac.

To protect existing neighborhoods from potential traffic impacts of extending stub end streets, new roadway connections should consider incorporating neighborhood traffic management into their design and construction. All stub streets should have signs indicating the potential for future connectivity



The Standards

Walking and Biking Treatments

A network of walking and biking facilities is envisioned to connect major destinations and neighborhoods in Cottage Grove. While sidewalks and dedicated bike lanes are the most common pedestrian and bicycle facilities, a number of options are available to enhance the pedestrian and bicycle experience.

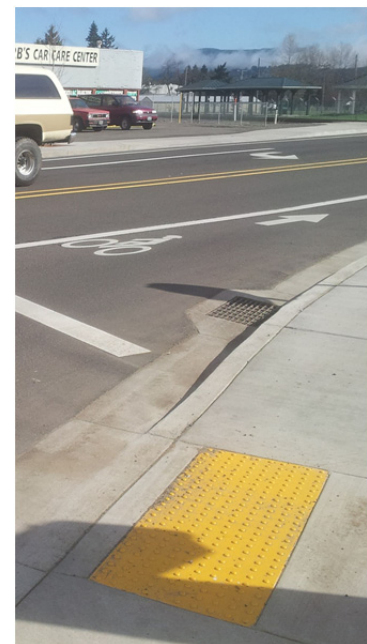
Potential facilities and treatments for bicycles in Cottage Grove include:

- Shared Lane Marking/Sharrow
- Shoulder Bikeway
- Standard Bike Lane
- Bike Boulevard
- Buffered Bike Lane
- Shared Use Path/Trail
- Bicycle Wayfinding
- Bicycle Parking

Potential facilities and treatments for pedestrians in Cottage Grove include:

- Marked Crosswalk at Uncontrolled Intersection
- Active When Present Crossing
- Signalized Pedestrian Crossing
- Sidewalk
- Shared Use Path/Trail
- Widened Shoulder (Path or Trail)

Design guidelines for bicycle and pedestrian facilities are included in the Transportation Standards Memorandum (TSP Volume II, Section K).



The Standards

TSM/ITS Coordination

I-5 and OR 99 are regional roadways that could benefit from transportation system management (TSM) infrastructure. Before future investments are made along these state routes, the Cottage Grove Connector, or interchange ramps, designs should be reviewed with City and ODOT staff to determine if communications or other Intelligent Transportation System (ITS) infrastructure should be addressed as part of the street design/construction.



Traffic Impact Study Guidelines

The City or other road authority with jurisdiction may require a Traffic Impact Study (TIS) or Transportation Impact Analysis (TIA) as part of an application for development, a change in use, or a change in access. TIS/TIA requirements are established in the City's Development Code (4.1.900 Traffic Impact Studies).

Transit Standards

The City of Cottage Grove supports transit services provided by Lane Transit District and South Lane Wheels through roadway design standards that require bicycle and pedestrian facilities. Each transit service provides their own guidelines for transit stops and amenities. As roadway projects are constructed and land development occurs, pedestrian and bicycle facilities will provide improved access to transit.

The Standards

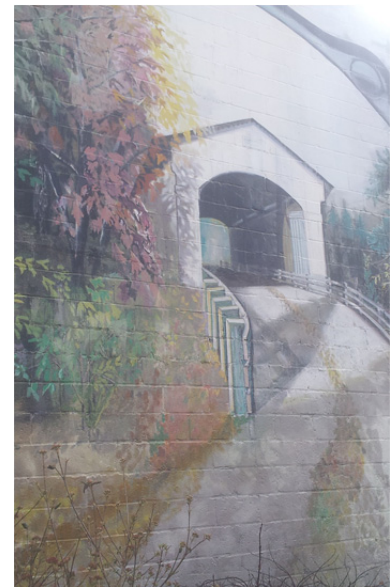
Neighborhood Traffic Management Tools

Neighborhood Traffic Management (NTM), or traffic calming, refers to street design techniques used to promote safe, slow streets (primarily in residential and mixed-use areas). These tools are intended to mitigate the impacts of traffic on neighborhoods and business districts where a greater balance between safety and mobility is needed. They are not intended to create significant reductions to vehicle capacity. Physical traffic calming techniques include:

- Narrowing the street by providing curb extensions or bulb-outs, or mid-block pedestrian refuge islands.
- Deflecting the vehicle path vertically by installing speed humps, speed tables, or raised intersections.
- Deflecting the vehicle path horizontally with roundabouts or mini-roundabouts.

Traffic calming measures must balance the need to manage vehicle speeds and volumes with the need to maintain mobility, circulation, and function for service providers (e.g., emergency response). Any traffic calming project should include coordination with staff from emergency response agencies, to ensure public safety is not compromised.

Table 11 lists common traffic calming applications and suggests which devices may be appropriate along various streets in the city. NTM tools are generally applicable to local streets, but may also be applied in limited cases on collector streets. NTM tools are generally not applied on arterials. However, applications on Main Street may be considered to support the historic downtown.¹⁴



¹⁴ The Main Street Refinement Plan (adopted April 13, 2015) identifies a preferred design for the corridor.

The Standards

Table 11: Traffic Calming Measures by Street Functional Classification

Traffic Calming Measure	Is Measure Appropriate and Supported?	
	Collector	Local Street
Narrowing travel lanes	Yes	Calming measures are generally supported on local streets that have typical connectivity (more than two accesses)
Placing buildings, street trees, on-street parking, and landscaping next to the street	Yes	
Curb Extensions* or Bulbouts*	Yes	
Roundabouts**	Yes	
Mini-Roundabouts	Yes	
Medians and Pedestrian Islands	Yes	
Pavement Texture***	Yes	
Speed Hump or Speed Table	No	
Raised Intersection or Crosswalk	No	
Speed Cushion (provides emergency pass-through with no vertical deflection)	No	
Choker (Curb extension located at mid-block or intersection corner adjacent to parking)*	Yes	
Traffic Circle**	No	
Diverter (with emergency vehicle pass through)	Yes	

*Only supported where poles or other obstructions do not interfere with 20 foot clearances for vehicles.

**Only supported with minimum inside radius of 28 feet.

***Only supported where texturing would not obstruct emergency medical vehicle services.

Notes:

Any traffic calming project should include coordination with staff from emergency response agencies, to ensure public safety is not compromised. All traffic calming measures must meet applicable South Lane County Fire and Rescue guidelines and requirements.

Traffic calming is generally not applied on principal or minor arterials.

The Outcomes

The Improved Transportation System

The financially constrained investments identified in the TSP will improve the performance of the transportation system in Cottage Grove. The following list highlights key outcomes expected by 2035:

- **Improved Safety:** Several projects have been identified to reduce travel conflicts, especially along OR 99 between the Cottage Grove Connector and the Woodson Bridge.
- **Expanded Active Transportation Network:** A number of multi-modal connections, safer roadway crossings, as well as specific bicycle and pedestrian facility enhancements, are identified.
- **New Connections to Support Growth in the South UGB Expansion Area:** The proposed extensions of Cleveland Avenue, S. R Street and S. 4th Street will provide direct connections for all modes in the south part of the City and reduce the need for out-of-direction travel between OR 99 and S. 6th Street.
- **Support Historic Downtown:** The TSP supports implementation of the Main Street Refinement Plan and the E. Whiteaker Avenue Bike Route.
- **Enhance Recreational Opportunities and Trails and Park Connections:** Two new bike routes (Holly Avenue and East Whiteaker) are identified in addition to a new trail segment and improved roadway crossing in east Cottage Grove.



E. Main Street at OR 99

The Outcomes

Potential Additional Funding

The City may wish to consider expanding its funding sources in order to support construction of additional desired improvements (i.e., Illustrative Projects) within the TSP planning horizons. Potential sources of funding include:

More information on potential funding sources is included in the Funding Review & Forecast (TSP Volume II, Section E).

- **Transportation Utility Fees:** A per month usage fee, similar to other utilities.
- **Local Gas Tax:** Seasonal increases may generate additional revenue from visitors and I-5 through travelers.
- **Local Hotel/Lodging Tax:** A portion of the tax may be dedicated to transportation projects.
- **General Fund Revenues:** Divert funds from other City programs
- **Local Improvement Districts:** Area-specific improvements that benefit property owners within the district.
- **Debt Financing:** Borrowing to spread the burden of cost between current and future users.

Without additional or new funding sources, the City will continue to seek grant opportunities to fund transportation improvements.

Technology Advancements

The impacts of technology on vehicles, facilities, and travel behavior are unknown, but significant change can be expected to occur over the next 20 years. Potential drivers of change include: travel costs (e.g., energy/fuel), shared-use mobility, electric-assist bicycles, autonomous or “connected” vehicles, and “smart” infrastructure.

By focusing on providing for safe multimodal connections that increase travel choices within the City, the Cottage Grove TSP is flexible and adaptable to support future developments and technological innovation. The City will continue to monitor opportunities arising from innovations in transportation technology and anticipate their impact on investment priorities.