



# AGENDA CHECKLIST

## AGENDA INFORMATION TO BE SUBMITTED TO THE BOARD OFFICE:

**One Title Memo**  
(See APM CH.1, Sec. 2)

**Agenda Packet**  
One Original Hard Copy plus  
One copy e-mailed to Lane County Agenda Review mailbox

**Material Due**  
Due by 12 pm Wednesday preceding the week it will be **approved for inclusion** on the agenda.

AGENDA TITLE:

DEPARTMENT

CONTACT

EXT

PRESENTER

EXT

AGENDA DATE:

### THIS ITEM WILL INVOLVE:

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Consent Calendar         | <input type="checkbox"/> Report                          | <input type="checkbox"/> Appointments    | <input type="checkbox"/> Committee Reports |
| <input type="checkbox"/> ORDER/Resolution         | <input type="checkbox"/> Discussion & Action             | <input type="checkbox"/> Discussion Only |  |
| <input type="checkbox"/> Ordinance/Public Hearing | <input type="checkbox"/> 1st Reading                     | <input type="checkbox"/> 2nd Reading     | <input type="checkbox"/> 3rd Reading       |
| Public Comment Anticipated?                       | <input type="checkbox"/> Yes <input type="checkbox"/> No | Estimated Time                           | _____                                      |

**NOTE: DEPARTMENT MANAGER MUST SIGN OFF BEFORE SUBMITTING TO BOARD OFFICE**

Department Manager: \_\_\_\_\_ Date \_\_\_\_\_

Legal Staff-Review by: \_\_\_\_\_ Date \_\_\_\_\_

Management Staff- \_\_\_\_\_ Date \_\_\_\_\_

Review by: \_\_\_\_\_

Human Resources- \_\_\_\_\_ Date \_\_\_\_\_

Review by (if required): \_\_\_\_\_

- Yes  No      File Note Attached?
- Yes  No      Information for Agenda Setting Committee Only?

## AGENDA COVER MEMORANDUM



Memorandum Date: July 18, 2019  
First Reading Date: July 30, 2019  
Second Reading/Public Hearing Date: August 20, 2019

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**TO:** Lane County Board of Commissioners

**DEPARTMENT:** Public Works Department/Engineering and Construction Services

**PRESENTED BY:** Becky Taylor, Senior Transportation Planner

**AGENDA ITEM TITLE:** ORDINANCE NO. PA 1379/ In the Matter of Co-Adopting the Creswell Transportation System Plan (TSP) for Application Within the Urbanizable Area Outside the City Limits, but Within the Urban Growth Boundary; and Adopting Savings and Severability Clause; and Co-Adopting Transportation Policies to Implement the Updated TSP Goals as Text Amendments to the Comprehensive Plan (Applicant: City of Creswell)

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### I. MOTIONS

1. July 30, 2019: Move to approve the first reading of Ordinance No. PA 1379 and to set the second reading and public hearing for August 20, 2019 at 1:30 PM in the Lane County Public Service Building, 125 E. 8<sup>th</sup> Ave, Eugene, Oregon.
2. August 20, 2019: Alternative motions after public hearing:
  - A. Move to approve Ordinance No. PA 1379 as presented; or
  - B. Move to set a third reading and to direct staff to revise Ordinance No. PA 1379 as directed by the Board and to return with revised Ordinance for the Board's consideration and action; or
  - C. Move to deny Ordinance No. PA 1379.

### II. AGENDA ITEM SUMMARY

The City of Creswell (City) requests the Board of Commissioners (Board) co-adopt the Creswell Transportation System Plan (TSP) and Transportation Policies as amendments to the Creswell Comprehensive Plan and to the Lane County Rural Comprehensive Plan for application within the urbanizable area outside the Creswell City Limits, but within the Creswell City Urban Growth Boundary (UGB). The TSP and Transportation Policies are included as Exhibit A to the attached draft ordinance.

Ordinance No. PA 1379  
Creswell Transportation System Plan

First Reading Date: July 30, 2019  
Second Reading/Public Hearing Date: August 20, 2019

### **III. BACKGROUND/IMPLICATIONS OF ACTION**

#### **A. Board Action and Other History**

On April 8, 2019, the Creswell City Council adopted an update to the City's TSP for consistency with the City's Comprehensive Plan and amended the Comprehensive Plan with Transportation Policies to implement the updated TSP Goals. The Lane County Planning Commission (LCPC) conducted a public hearing on June 4, 2019. No public testimony was received. The LCPC unanimously recommended the Board co-adopt the TSP and Transportation Policies as presented.

#### **B. Policy Issues**

Pursuant to Oregon Administrative Rules (OAR 660-012), cities and counties are required to adopt regional and local TSP as part of their comprehensive plans [OAR 660-012-0015(2)], and within their planning jurisdiction [OAR 660-012-0015(2)]. As cities adopt their own comprehensive plans they effectively become part of the County Rural Comprehensive Plan (RCP). By extension, this includes the Transportation Element of the comprehensive plan, known as a TSP.

Amendments to those city plans require co-adoption by Lane County as an amendment to the RCP. The applicable approval criteria contained in Lane Code 16.400 Rural Comprehensive Plan Amendment. Findings of compliance with the applicable approval criteria are provided in Exhibit B to the attached draft ordinance. The County's co-adoption of City TSP and Transportation Policies is for applicability within the area between the city limits and urban growth boundary.

#### **C. Board Goals**

Co-adoption of the Creswell TSP and Transportation Policies supports Lane County's Strategic Plan and directly implements the strategy to "Support existing partnerships and foster new partnerships and collaborations to improve health and safety in our communities" by aligning transportation policies and projects. Consistent with Priority 1 - Safe and Healthy County, the TSP includes infrastructure projects to improve the safety of roadways and to support walking and biking. The multi-modal focus of the TSP supports Priority 2 – Vibrant Communities, as an efficient and convenient transportation system is essential to a strong, diverse, and sustainable economy. Co-adoption of the TSP fulfills Priority 3 – Infrastructure, as a blueprint to "build and maintain resilient infrastructure for today and future generations." The TSP addresses existing conditions and future needs over a 20-year planning horizon.

#### **D. Financial and/or Resource Considerations**

Upon adoption, the City TSP and Transportation Policies will not have any legal or regulatory effect on Lane County transportation facilities within the Creswell UGB. Lane County facilities must comply with the Lane County TSP and applicable Lane County rules, regulations, and standards.

The City TSP recommends transportation improvements on several Lane County facilities, as listed in Attachment 1. The TSP does not commit or obligate Lane County to take any action or construct any recommended transportation improvements. Lane County staff supports the recommended improvements; however, project funding will need to be sought for each of these projects. Identifying project needs through the TSP helps the City and County coordinate and prioritize infrastructure investments. Many grant funding sources for transportation improvements require the projects to be identified in a TSP.

#### **E. Health Implications**

Co-adoption of the City TSP and Transportation Policies supports public health by providing everyone with safe, efficient, affordable, convenient and reliable mobility options including public transit, walking, carpooling and biking. The TSP describes projects that address transportation needs of all users, including for people who walk, bike, drive or ride public transit. As such, co-adoption of the City TSP has a positive health implication.

#### **F. Analysis**

The City TSP and Transportation Policies are required to be co-adopted by Lane County to apply within the urbanizable area outside the Creswell City Limits, but within its UGB. Co-adoption is subject to the applicable approval criteria contained in Lane Code 16.400 and the Transportation Planning Rule at OAR 660-012. Findings of compliance with these approval criteria are attached.

#### **G. Alternatives/Options**

- Option 1. Approve Ordinance No. PA 1379 as presented; or
- Option 2. Direct staff to revise Ordinance No. PA 1379 and to return with revised Ordinance for the Board's consideration and action; or
- Option 3. Deny Ordinance No. PA 1379.

### **IV. RECOMMENDATION**

Staff recommends Option 1.

### **V. TIMING/IMPLEMENTATION**

On July 30, 2019, the Board will conduct a first reading for Ordinance No. PA 1379. On August 20, 2019, the Board will conduct a second reading and public hearing prior to issuing a decision. If approved by the Board, Ordinance No. PA 1379 will become effective 30 days following enactment.

## **VI. FOLLOW-UP**

Should the Board choose Option 2, staff will revise Ordinance No. 1379 as directed and return for approval of the revised ordinance on a date certain set by the Board.

## **VII. ATTACHMENTS**

Creswell TSP Project List on County Roads

Ordinance No. PA 1379

Exhibit A Creswell TSP and Transportation Policies

Exhibit B Findings of Compliance with Applicable Approval Criteria

Crewell TSP - Lane County-Related Projects

Project Information					Cost/Funding Estimates							Prioritization		
Project #	Project Name	Project Description	Project Purpose	Source	Estimated Project Cost - Total	Estimated Project Cost - Public Agency	Estimated Project Cost - Private/Development	Estimated Project Cost - City Share	% Funded by Private/Development	% Funded by ODOT/County/Other Govt.	% Funded by City	Initial Priority	Rationale	Initial Financial Status (FC or Aspirational)
<b>Roadway Projects</b>														
R1	Cobalt Ln. Extension (west)	Construct Cobalt Ln. as major collector extension to OR 99 (N Mill St.). Project would include new rail crossing.	Connectivity	1998 TSP	\$1,670,000	\$167,000	\$1,503,000	\$167,000	90%		10%	Medium	eval score	Aspirational
R3	Melton Rd. Extension	Construct Melton Rd. as major collector extension to Dale Kuni Rd.	Connectivity	New Project	\$7,020,000	\$5,616,000	\$1,404,000	\$5,616,000	20%		80%	Low	eval score, potential wetland impact	Aspirational
R8	Kings Row Extension (west)	Construct Kings Row as minor collector extension connecting S 9th St. and S 10th St.	Connectivity	New Project	\$1,005,000	\$100,500	\$904,500	\$100,500	90%		10%	Low	eval score, development-driven	Financially Constrained
R10	Gateway Enhancements	Signage and other landscaping treatments to various gateway areas. Including OR 99 north/south entrances, Oregon Ave. west entrance, and Cloverdale Rd. east entrance.	Enhancement	1998 TSP	\$50,000	\$50,000	\$0	\$50,000			100%	Low	eval score	Aspirational
<b>Intersection Projects</b>														
I4	OR 222 (Cloverdale Rd.)/Emerald Pkwy. Intersection Improvements	Intersection Improvement. (Evaluated as construction of additional southbound left turn lane and Cloverdale Rd. widening to extend center turn lane to the east to allow for two-stage left turns).	Safety & Mobility	New Project	\$75,000	\$75,000	\$0	\$37,500		50%	50%	Low	eval score; dependent on future growth	Financially Constrained
I6	Ziniker Ln. Realignment	Ziniker Ln. realignment with Emerald Pkwy. intersection. Project to be considered in conjunction with development proposals south of OR 222 (Cloverdale Rd.). Integrate with proposed intersection improvement [Project I4].	Safety & Mobility	New Project	\$760,000	\$152,000	\$608,000	\$152,000	80%		20%	Low	eval score; dependent on future growth	Aspirational
I8	Harvey Rd./OR 99 Intersection Improvements	Intersection improvement project located outside of UGB.	Safety & Mobility	1998 TSP/ LC TSP	\$300,000	\$300,000	\$0	\$0		100%		Low	eval score	Aspirational
<b>Multi-Modal Projects</b>														
MM4	OR 99 (N Mill St.) Modernization-Urban	Upgrade to arterial standards from Oregon Ave. to North UGB. Project to include transition from urban to rural cross-section.	Connectivity & Safety	LC TSP/1998 TSP	\$9,310,000	\$6,517,000	\$2,793,000	\$931,000	30%	60%	10%	High	eval score; high cost but key roadway	Partially Financially Constrained
MM4i	OR 99 (N Mill St.) Modernization-Urban interim	Design project to assess actual dimensions/costs of the OR 99 Modernization project.		New Project	\$500,000	\$500,000						High		
MM6	OR 222 Cloverdale Rd. Modernization	Upgrade to arterial standards Ziniker Ln. to East UGB. Project to include transition from urban to rural cross-section.	Connectivity & Safety	1998 TSP	\$3,810,000	\$1,524,000	\$2,286,000	\$762,000	60%	20%	20%	High	eval score	Aspirational
MM9	Niblock Ln. Modernization (west)	Upgrade to major collector standards West terminus to Harvey Rd.	Connectivity & Safety	1998 TSP	\$2,335,000	\$467,000	\$1,868,000	\$467,000	80%		20%	High	bump to high; SRTS	Aspirational
MM10	Niblock Ln. Modernization (east)	Upgrade to minor collector standards Harvey Rd. to Grassland St.	Connectivity & Safety	New Project	\$875,000	\$175,000	\$700,000	\$175,000	80%		20%	Medium	eval score	Aspirational
MM11	S Mill St. Modernization	Upgrade to minor collector standards OR 99 (S Front St.) to Oregon Ave.	Connectivity & Safety	1998 TSP	\$2,905,000	\$1,452,500	\$1,452,500	\$1,452,500	50%		50%	Medium	eval score	Aspirational
MM12	Melton Rd. Modernization	Upgrade sections in UGB to major collector standards Garden Lake Park to North terminus.	Connectivity & Safety	New Project	\$2,910,000	\$2,910,000	\$0	\$2,910,000			100%	Medium	eval score	Aspirational
MM13	Dale Kuni Rd. Bridge Modernization	Reconstruct to widen bridge over Mill Creek to major collector standards.	Connectivity & Safety	New Project	\$6,950,000	\$6,950,000	\$0	\$6,950,000			100%	Low	high cost with need depending on MM15	Aspirational
MM14	Dale Kuni Rd. Modernization	Construct/complete west frontage from Old Dale Kuni Rd. to OR 222 (Cloverdale Rd.) to major collector standards.	Connectivity & Safety	New Project	\$1,530,000	\$0	\$1,530,000	\$0	100%			Medium	eval score	Aspirational
MM15	Dale Kuni Rd. Modernization (Outside UGB)	Construct to minor collector standards from OR 99 (N Mill St. to Creswell UGB) with 11' travel lanes and 4' shoulders on both sides. Integrate systemic safety measures (Outside UGB).	Connectivity & Safety	LC TSP	\$2,500,000	\$2,500,000	\$0	\$0		100%		Low	eval score	Aspirational

Crewell TSP - Lane County-Related Projects

Project Information					Cost/Funding Estimates							Prioritization		
Project #	Project Name	Project Description	Project Purpose	Source	Estimated Project Cost - Total	Estimated Project Cost - Public Agency	Estimated Project Cost - Private/Development	Estimated Project Cost - City Share	% Funded by Private/Development	% Funded by ODOT/County/Other Govt.	% Funded by City	Initial Priority	Rationale	Initial Financial Status (FC or Aspirational)
MM16	Harvey Rd. Modernization (Outside UGB)	Construct to minor collector standards from OR 99 (N Mill St. to Creswell UGB) with two 11' travel lanes and 4' shoulders on both sides. Integrate systematic safety measures (Outside UGB).*	Connectivity & Safety	LC TSP	\$1,300,000	\$1,300,000	\$0	\$0		100%		Low	eval score	Aspirational
MM17	Camas Swale Rd. Modernization	Upgrade to arterial standards West UGB to 10th St.	Connectivity & Safety	New Project	\$830,000	\$415,000	\$415,000	\$415,000	50%		50%	Medium	bump to medium, development-driven, edge of City with need on one side of street	Aspirational
MM19	Martin Road Modernization	Upgrade to minor collector standards OR 99 (N Mill St. ) to East terminus.	Connectivity & Safety	New Project	\$1,145,000	\$229,000	\$916,000	\$229,000	80%		20%	Medium	eval score	Financially Constrained
MM20	OR 99 (N Mill St.) Modernization - Rural	Upgrade to arterial standards North UGB to Peebles Rd. (in Goshen). Project to include transition from urban to rural cross-section.	Connectivity & Standards	LC TSP	\$7,000,000	\$7,000,000					100%	High	eval score	Financially Constrained
MM20i	Design Project Assessment - for OR 99 (N Mill St.) Modernization (Rural)	Design project to assess actual dimensions/costs of the OR 99 Modernization project.		New Project	\$500,000	\$500,000						High		
<b>Multi-use Path Projects</b>														
MT4	Cherry Ln. Multi-Use Path	Multi-use path connecting N 6th St. to Creswell High School.	Access	New Project	\$100,000	\$100,000	\$0	\$100,000			100%	High	eval score; effective connection, SRTS, low cost	Financially Constrained
MT6	Leah Ln. Multi-Use Path	Multi-use path connecting Leah Lane to the east side of Creswell High School Parking Lot.	Access	New project	\$245,000	\$49,000	\$196,000	\$49,000	80%		20%	Low	bump to low; parallel routes available, development driven	Aspirational
MT9	NW School District Multi-Use Path	Multi-use path connecting Niblock Ln. to A St. along the west edge of the school district property (including Creslane Elementary School and Creswell High School).	Access	New project	\$1,895,000	\$1,895,000	\$0	\$1,895,000			100%	High	bump to high; key SRTS	Aspirational
<b>Pedestrian Projects</b>														
P3	Harvey Rd./Cobalt Ln. Intersection Pedestrian Improvements	Pedestrian improvements including marked crosswalks and ADA compliance.	Access & Safety	New Project	\$20,000	\$20,000	\$0	\$20,000			100%	High	eval score, low cost	Financially Constrained
P4	Harvey Rd./Niblock Ln. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings in support of Safe Routes to School.	School Access & Safety	New Project	\$25,000	\$25,000	\$0	\$25,000			100%	High	eval score, low cost	Financially Constrained
P15	Morse Ave. Sidewalks	Construct/complete sidewalks from Harvey Rd. to N 6th St.	School Access & Safety	New Project	\$205,000	\$205,000	\$0	\$205,000			100%	High	eval score	Aspirational
P20	Morse Ave./7th St. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings in support of Safe Routes to School.	School Access & Safety	New Project	\$20,000	\$20,000	\$0	\$20,000			100%	High	eval score, low cost	Aspirational
<b>Bicycle Projects</b>														
B8	Miscellaneous Bicycle Safety Improvements	System repairs including installing bicycle-proof storm drain gates, rubberized pads at railroad crossing, and other safety improvements.	Safety	1998 TSP	\$50,000	\$50,000	\$0	\$50,000			100%	Medium	eval score	Aspirational

BEFORE THE BOARD OF COMMISSIONERS OF LANE COUNTY, OREGON

ORDINANCE NO. PA 1379

IN THE MATTER OF CO-ADOPTING THE CITY OF CRESWELL TRANSPORTATION SYSTEM PLAN (TSP) FOR APPLICATION WITHIN THE URBANIZABLE AREA OUTSIDE THE CITY LIMITS, BUT WITHIN THE URBAN GROWTH BOUNDARY; AND ADOPTING SAVINGS AND SEVERABILITY CLAUSES; AND CO-ADOPTING TRANSPORTATION POLICIES TO IMPLEMENT THE UPDATED TSP GOALS AS TEXT AMENDMENTS TO THE COMPREHENSIVE PLAN. (APPLICANT: CITY OF CRESWELL)

**WHEREAS**, Oregon Administrative Rules (OAR) Section 660, Division 12, specifies the requirements of the Oregon Transportation Planning Rule that requires cities and counties to prepare and adopt local transportation system plans for lands within their planning jurisdiction as part of their comprehensive plans [OAR 660-12-015(3) & (4)]; and

**WHEREAS**, the Creswell Transportation System Plan (TSP) is a comprehensive 20-year plan to guide transportation investments within the City of Creswell Urban Growth Boundary; and

**WHEREAS**, the Creswell City Council adopted the Creswell TSP Update and the implementing Transportation Policies on April 8, 2019; and

**WHEREAS**, the City of Creswell requested Lane County co-adopt the Creswell TSP and the Transportation Policies as amendments to the Creswell Comprehensive Plan and Lane County Rural Comprehensive Plan for application within the urbanizable area outside the City Limits, but within the Urban Growth Boundary; and

**WHEREAS**, the Lane County Planning Commission conducted a public hearing on June 4, 2018, and provided a recommendation to the Board of County Commissioners to approve the Creswell TSP and Transportation Policies as presented;

**WHEREAS**, substantial evidence exists in the record indicating that the proposal meets the applicable requirements of the Lane Code Chapter 16 and the Transportation Planning Rule at OAR 660-012; and

**WHEREAS**, the Board of County Commissioners conducted a first reading of this Ordinance on July 30, 2019, conducted a second reading and public hearing on this Ordinance on August 20, 2019, and is now ready to take action.

**NOW, THEREFORE**, the Board of County Commissioners **Ordains** as follows:

1. Amendments to the Creswell Comprehensive Plan and Lane County Rural Comprehensive Plan with the Creswell Transportation System Plan and the Transportation Policies as shown in Exhibit 'A' are hereby co-adopted.
2. The prior policies repealed or changed by this Ordinance remain in full force and effect to authorize prosecution of persons in violation thereof prior to the effective date of this Ordinance.



3. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

**FURTHER**, although not part of this Ordinance, the Board of County Commissioners adopts findings as set forth in Exhibit 'B' attached and incorporated by this reference, in support of this action.

**ENACTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_  
Pete Sorenson, Chair, Lane County Board of Commissioners

\_\_\_\_\_  
Recording Secretary for this Meeting of the Board

APPROVED AS TO FORM

Date \_\_\_\_\_ Lane County

\_\_\_\_\_  
OFFICE OF LEGAL COUNSEL

CRESWELL  
CITY HALL

CITY OF CRESWELL

# TRANSPORTATION SYSTEM PLAN

**VOLUME 1**  
APRIL 2019



# ACKNOWLEDGMENTS

## CITY OF CRESWELL

*Madeline Philips, Planner*

*Cliff Bellew, Public Works Director*

## OREGON DEPARTMENT OF TRANSPORTATION

*Bill Johnston, Transportation Planner*

## LANE COUNTY

*Becky Taylor, Transportation Planner*

## DKS ASSOCIATES

*Carl Springer, Principal in Charge*

*Mat Dolata, Project Manager*

*Kamilah Buker, Transportation Engineering Associate*

## ANGELO PLANNING GROUP

*Darci Rudzinski, Urban Planner*

*Andrew Parish, Urban Planner*

## PROJECT ADVISORY COMMITTEE (PAC)

*Becky Taylor, Lane County*

*Bill Johnston, ODOT*

*Bill Spencer, Citizen/Business Owner*

*Christina McDaniel-Wilson, ODOT*

*Cliff Bellow, City of Creswell*

*Danny Solesbee, South Lane Fire & Rescue*

*David Christopher, City of Creswell*

*Denny Muchmore, Westech Engineering*

*Ed Gunderson, City of Creswell*

*Gary Mounce, City of Creswell*

*Hart Migdal, Lane Transit District*

*John Wooten, South Lane Fire & Rescue*

*Madeline Phillips, City of Creswell*

*Michael DeHart, City of Creswell*

*Michelle Amberg, City of Creswell*

*Paige Portwood, City of Creswell*

*Patrick Wyngard, DLCD*

*Richard Zettervall City Council/Mayor*

*Ruth Linoz, South Lane Wheels*

*Sarah Hanson, Creswell School District*

*Scott Denham, Lane County*

*Shelley Humble, City of Creswell*

*Su Liudahl, Creswell Library*

*A special acknowledgment goes out to the Creswell residents, property owners, and stakeholders who attended community meetings and/or submitted comments, and to the Oregon Department of Transportation, which financed the project and provided invaluable staff support.*

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# TSP ROADMAP

## CONTEXT

The Context describes the City of Creswell and its existing transportation system. Current and potential issues are outlined and funding constraints are described.

## VISION

The Vision establishes the community's vision, goals, and objectives for the city's transportation system.

## THE PLAN

The Plan outlines the lists of financially constrained and aspirational projects identified to be achieve the community's vision for the transportation system.

## THE STANDARD

The Standards outline the requirements that the system must meet in order to fulfill the goals and objectives identified by the community.



# 1

## CONTEXT

# PURPOSE

A Transportation System Plan (TSP) is a long-range plan that sets the vision for a community's transportation system for the next 20 years and beyond. This Plan was developed with community and stakeholder input as their response to current and future transportation system's needs and opportunities, and anticipated funding.

## IMPORTANCE OF A TSP

The TSP strives to align future multimodal transportation investments with the Creswell community goals, objectives, and priorities that were articulated during the plan update process. The TSP is the City's primary tool for implementing transportation investments that address community needs and lays out the improvements required to reasonably serve expected local and regional growth.

This TSP establishes a new 2017 baseline condition and identifies transportation strategies and improvements that will be necessary to address existing system deficiencies and to support growth through the year 2040.

## HOW THE TSP WILL BE USED

The Creswell TSP is the guiding document for identifying the type, location and priority of transportation improvements in the community. The TSP includes improving multimodal connectivity by modernizing and extending existing City streets, improving crossing opportunities, and providing multi-use paths. The TSP also identifies needs and suggested solutions on Lane County and ODOT transportation facilities that are critical to effectively serving the transportation needs of the community.

The TSP will be used in a variety of ways, including:

- Identifying high priority transportation investments
- Providing background information to assist grant applications to supplement City funding
- Serving as the basis for the facility standards applied for new or upgraded transportation system improvements
- Demonstrating that the City understands the resources required to build and maintain a transportation system capable of supporting expected growth
- Providing guidelines for reviewing proposed land development applications
- Visualizing the long-term transportation system expansions and opportunities anticipated as growth occurs

The core of the TSP development process is to imagine a transportation system that can serve planned growth in a way that is consistent with community policies and values. The primary work products of the TSP are a new multimodal project list and design standards that set the priority and type of improvements that the community desires. There are two types of improvements, upgrades to existing facilities and new facilities on vacant or undeveloped land. The Public Works Department will use this information to apply for State and federal grant funding and to prioritize their capital improvement list for City facilities.

# REGULATORY FRAMEWORK

The Creswell TSP must be consistent with other policy and planning documents governing the geographic area.

## REQUIREMENTS OF A TSP

A TSP is required by the State of Oregon Transportation Planning Rule (TPR). Oregon Administrative Rule 660-012-0015 defines the primary elements of a TSP. The TPR requires that a city TSP includes the following components:

- 1 Comprehensive understanding of the existing multimodal transportation system that serves the city and how well that system performs its expected function today
- 2 Reasonable basis for estimating how the city and the surrounding region might grow in its population and employment over the next 20 or more years
- 3 Evaluation of how the expected growth could change system performance
- 4 Goals, policies and transportation system improvements that address community multimodal transportation needs
- 5 Understanding of the on-going funding required to build and maintain the transportation system as the city grows

The Creswell TSP must also be consistent with transportation elements of the Lane County TSP and relevant ODOT plans and policies including

the Oregon Transportation Plan and its modal and topic plans.

## HOW THE TSP FITS WITH LOCAL PLANS

The Creswell TSP responds to growth forecasts made for the plan horizon year, 2040, which are based on the City's adopted Comprehensive Plan. The pace of growth varies year to year, and if the overall population and employment growth falls below the 2040 forecast then the associated transportation system improvement needs may be deferred.

The TSP is intended to be coordinated with other transportation plans that explore specific modes in more detail. These plans are likely to include upcoming updates to the Creswell Airport Master Plan, Lane Transit District service plan for routes serving Creswell, and Safe Routes to School (SRTS) plans for schools in Creswell.

The changes in transportation design standards require coordination and updates, as appropriate, to the City's Land Development Code and Engineering Design Standards to ensure future improvements are consistent with the TSP. This includes street cross-section dimensions and the required street right-of-way, provisions for pedestrians, bicycles, and motor vehicles, as well as spacing standards for cross streets and driveways that access City streets.

## HOW THE TSP FITS WITHIN THE REGION AND STATE

The Creswell TSP designations and policies must be consistent with regional and State planning documents for this area. The State highways and regional routes are maintained by either ODOT or Lane County. State facilities are not explicitly subject to the design standards or policies of the City. Lane County's policy is to apply City standards within the Urban Growth Boundary (UGB). The City's plan recognizes regional routes and the role they play in serving the community.

## EXPECTED GROWTH

Future land use changes within Creswell's urban growth boundary (UGB) will create new travel demands that are likely to impact the existing transportation system. How the expected growth translates to new trips on the transportation network is a key factor in transportation system planning.



### PLANNING HORIZON

The planning horizon for this TSP update is the year 2040. This represents an estimated level of community growth as much as a period of time. The TSP must address a specified level of growth expected to come at some point in the future, and it is difficult to predict whether that will occur before or after 2040. The TSP recognizes the uncertainty inherent to assumptions about land use development and community growth.

The future growth scenario reflected in the TSP is one potential outcome for the planning horizon. It is used to assess the needs of the transportation system and for evaluating the impacts of alternative facility improvement and management strategies. The future growth scenario is based on the adopted Comprehensive Plan and population growth identified for Lane County.

### POPULATION AND GROWTH

The population of Creswell is expected to increase from about 5,400 in 2017 to 7,900 in 2040, representing a 45 percent increase. Countywide growth is expected to be somewhat less, averaging 30 to 35 percent for that same period. While the 2040 population forecast is not directly used to forecast traffic volumes, it does offer a general guide for reasonable expectations related to community growth.

## ANTICIPATED FUNDING

Over the next 20 plus years, the anticipated funding for transportation improvements is about \$8.5 million, which includes both City and State funding sources. The City's two primary revenue sources for transportation funding are distributions from the State Highway Fund and Transportation System

Development Charges (SDCs). Total revenues from current city sources are expected to be \$7.4 million and total expenditures for maintenance and operations would be \$3.8 million. The breakdown of available funding by type is summarized in Table 1.

**Table 1. Estimated Transportation Funding through 2040 (2017 Dollars)**

Expected Funds for City Capital Improvements	Funding Type	Amount Through 2040
Total Expenditures for Maintenance and Operations		<b>\$3,770,000</b>
Total Revenue by Source and Type		
State Highway Fund Distribution (99% of total distribution)	Unrestricted	\$6,500,000
Bikeway/Walkway (1% of State Highway Fund Distribution)	Bikeway / Walkway	\$64,000
System Development Charges (SDCs)	Capacity Projects	\$400,000
Fund Balance – Street	Unrestricted	\$930,000
Fund Balance – SDC	Capacity Projects	\$320,000
Fund Balance – Bicycle & Footpath	Bikeway / Walkway	\$56,000
Miscellaneous Revenue	Unrestricted	\$410,000
External Project-Related Funding Estimate (from ODOT)	Unrestricted	\$3,600,000
Urban Renewal Contribution	Urban Area	\$2,175,000
<b>Total Revenue</b>		<b>\$14,455,000</b>
<b>Total Available for Project Funds (Revenues – Expenditures)</b>		<b>\$10,685,000</b>





# 2

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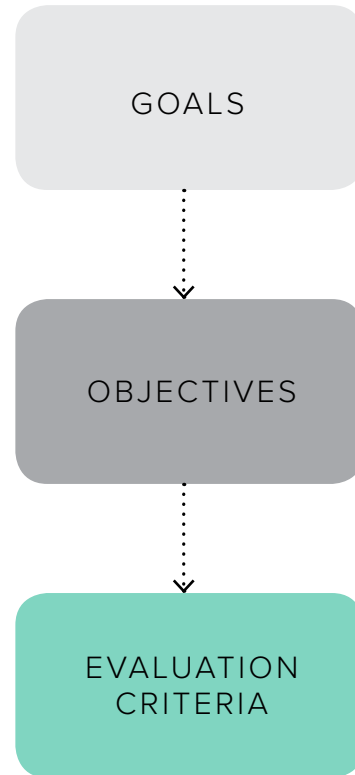
## GOALS

## PLANNING APPROACH

The TSP's goals and objectives are defined in this section, along with the evaluation criteria used to help select and prioritize solutions.

The community's goals and objectives were used as a framework to select and prioritize transportation solutions that align with Creswell's values. Goals are somewhat general in nature and should be challenging but not unreasonable. Each goal must be supported by more finite objectives. In contrast to goals, objectives should be specific and measurable. Providing a targeted time period can help with objective prioritization and achievement, where feasible.

The solutions recommended through the TSP must be consistent with the goals and objectives. To accomplish this, measurable evaluation criteria that are based on the goals and objectives are developed as part of the process to screen and prioritize TSP actions.



# GOALS & OBJECTIVES

The TSP goals and objectives are identified below.

## GOAL 1 SAFETY & EFFICIENCY

### OBJECTIVES:

- Provide a safe and efficient transportation system for all users (e.g., age, mobility, income, geography, transportation disadvantaged).
- Minimize traffic-related fatalities and serious injury collisions.
- Improve pedestrian and bicycle safety.
- Evaluate and potentially reduce traffic volumes and vehicle speeds on roadways near schools.
- Improve cross-town (both north-south and east-west) circulation and connectivity for all modes.
- Develop street functional classifications to ensure streets are able to serve their intended purpose.
- Improve local street connectivity to reduce out-of-direction travel for all modes and users.
- Preserve the function of transportation facilities critical for regional access for first responders, emergency operations center locations and evacuation/lifeline routes).
- Improve traffic operations of key intersections to reduce congestion and safety risks during peak hours.
- Consider intersection and mid-block crossing improvements that enhance pedestrian safety and visibility.
- Coordinate mutually beneficial improvements for the rail system.

**GOAL 2 TRANSPORTATION BALANCE (INCREASE USE OF NON-AUTOMOTIVE MODES)****OBJECTIVES:**

- Provide more safe and convenient options for bicycling, walking, paratransit, carpooling, and public transportation.
- Improve pedestrian and bicycle circulation within and between major activity generators such as neighborhoods, parks, schools, and commercial centers.
- Provide for a balanced transportation system that offers legitimate mobility choices for all users.
- Educate users to expand knowledge of transportation options.
- Designate bike routes through Creswell and support users with wayfinding
- Ensure connections to the existing pedestrian system (e.g., sidewalks and crosswalks that are ADA compliant) are provided with new developments.
- Continuously improve existing transportation facilities to meet applicable City of Creswell and Americans with Disabilities Act (ADA) standards.
- Develop, enhance, and support higher level of transit usage, including provision of amenities (e.g., sidewalk and bicycle connections, shelters, benches) beyond transit provider services.
- Explore opportunities to expand transit coverage (e.g., in north and east Creswell)
- Consider transportation demand management measures that could reduce peak hour vehicle demand.

**GOAL 3 ECONOMIC DEVELOPMENT & REGIONAL LINKS****OBJECTIVES:**

- Identify and preserve alignments for future street locations, especially to support future development and service commercially- and industrially-zoned land (e.g., along OR 99, Oregon Avenue, Mill Street).
- Improve access to industrial and other employment land, including the former Mill site.
- Improve regional links (e.g., connections to I-5) that offer accessibility to employment opportunities for residents and convenient access to services for rural population.
- Promote visitor attractions (e.g., National Forest, Hobby Field Airport, and wine country) on I-5.
- Provide visitor amenities (e.g., gateway welcome areas near I-5, overnight parking for truck operators).
- Utilize technology to promote transportation system solutions (e.g., integration with fiber availability, dynamic traffic signal controls).

**GOAL 4 NEIGHBORHOODS & LIVABILITY****OBJECTIVES:**

- Provide design guidance for complete streets for all users.
- Minimize collisions involving vulnerable users (e.g., elderly, children, pedestrians, and cyclists).
- Support provision of appropriate lighting conditions for safe travel.
- Promote safe design of local streets that allows for children at play.
- Promote safe routes to school with complete pedestrian and bicycle facilities and designate safe pickup points on school bus routes.
- Promote access to parks, schools, and community resources by completing street connections (prioritize access for more dense housing).
- Improve bicycle and pedestrian access to Garden Lake Park.
- Provide traffic calming tools for neighborhood streets with safety or livability issues.

**GOAL 5 INTERMODAL COMPATIBILITY****OBJECTIVES:**

- Minimize conflicts and facilitate compatibility and connections between transportation modes.
- Improve connections between the Hobby Field Airport and City amenities (Emerald Valley Golf Course, downtown).
- Improve pedestrian facilities to the Hobby Field Airport (possible foot path using old road alignment).
- Design streets on bus routes to support transit services.
- Enhance bicycle and pedestrian facilities on highways.
- Improve the pedestrian and bicycle environment in downtown
- Promote and improve park & ride (e.g., bus to work).
- Provide for safe railroad crossings for all users.

**GOAL 6 FINANCIAL SUSTAINABILITY****OBJECTIVES:**

- Identify a financially constrained Transportation System Plan including a prioritized projects list.
- Coordinate transportation projects, policy issues, and development actions with all affected government agencies in the area, including Lane County and the Oregon Department of Transportation.
- Align City facility needs with available funding opportunities.
- Prepare projects for State Transportation Improvement Program (STIP) funding opportunities.
- Prepare Hobby Field Airport projects for various funding opportunities including Connect Oregon.
- Develop funding strategies to acquire additional right-of-way for industrial access.
- Establish a consensus vision for state highways in Creswell.
- Identify a fundable redesign for OR 99 and Oregon Avenue corridor.
- Consider long-term maintenance needs and costs.
- Preserve and maintain the existing transportation system assets to extend their useful life.
- Minimize negative effects of transportation on the social, economic, and natural environment.
- Support technology applications that improve travel mobility and safety with less financial and environmental impact than traditional infrastructure projects.



## EVALUATION CRITERIA

Project oriented evaluation criteria were developed to measure of Creswell's transportation goals and objectives. Each criterion was scored for a given candidate project solution to assess its positive, negative or neutral impacts for each case. A value of +1, 0 or -1 was applied, as appropriate. More details about the criterion and the applicable measures of effectiveness are shown in Table 2.

This evaluation helps to identify how likely proposed TSP solutions are to support the TSP goal areas and achieve the stated objectives. The scoring was used to inform the selection and initial prioritization of TSP projects. This approach assists the community in making decisions about investments and resources. After this TSP is adopted, the City can continue to use selected performance measures drawn from the evaluation criteria to periodically monitor plan outcomes over time.



Table 2. Project Oriented Evaluation Criteria and Scoring

Goals / Measure of Effectiveness
<p><b>GOAL 1. SAFETY &amp; EFFICIENCY</b></p> <p><b>Safety</b> – Improves safety for all users of the transportation system</p> <p><b>Emergency Response</b> – Improves a route used for emergency response or evacuation</p> <p><b>Mobility &amp; Efficiency</b> – Reduce travel time, distance traveled, and/or travel-related costs</p>
<p><b>GOAL 2. TRANSPORTATION BALANCE (INCREASE USE OF NON-AUTOMOTIVE MODES)</b></p> <p><b>Multimodal</b> – Considers the multi-purpose nature of street right of way for all modes (pedestrian, bicycle, transit, truck and auto use) and utilities</p> <p><b>Transit</b> – Supports transit service reliability, frequency, or coverage in Creswell. Promotes transit as a viable alternative to the single occupant vehicle</p> <p><b>Active Transportation Facilities</b> – Improve bicycle and pedestrian facilities and/or connections</p> <p><b>ADA Improvement Component</b> – Reduce barriers for transit, pedestrian, and bicycle travel</p>
<p><b>GOAL 3. ECONOMIC DEVELOPMENT AND REGIONAL LINKS</b></p> <p><b>Regional Access</b> – Improves access to the region, state and nation</p> <p><b>Connectivity</b> – Improves multi-modal transportation system connections in the city or to/from the Eugene-Springfield Metro area</p> <p><b>Intelligent Transportation</b> – Applies technology to reduce travel delay or improve system efficiency (e.g., traffic signal coordination, traveler information)</p> <p><b>Visitor Attractions and Amenities</b> – Promotes visitor attractions and/or provides visitor amenities</p> <p><b>Movement of Goods</b> – Improves freight access/connectivity</p>
<p><b>GOAL 4. NEIGHBORHOODS &amp; LIVABILITY</b></p> <p><b>Vulnerable User Safety</b> – Improves safety for pedestrian and/or bicyclists</p> <p><b>Neighborhood Circulation &amp; Access</b> – Provide circulation and connectivity in and out of the neighborhoods, particularly for pedestrian, bicycle and transit access</p> <p><b>Livability</b> – Enhances the livability of Creswell by respecting surrounding uses, features, and amenities</p>
<p><b>GOAL 5. INTERMODAL COMPATIBILITY</b></p> <p><b>Compatibility</b> – Minimizes conflicts and facilitates compatibility and connections between transportation modes</p> <p><b>Improved Crossings</b> – Improves roadway crossing opportunities, especially at railroad crossings</p> <p><b>Airport Connectivity</b> – Improves multimodal connections from the airport to City amenities</p>
<p><b>GOAL 6. FINANCIAL SUSTAINABILITY</b></p> <p><b>Cost Effectiveness</b> – Assumed project benefits exceed project costs and potential funding sources are reasonably likely to be identified</p> <p><b>Coordination</b> – Coordinates with other jurisdiction's plans and policies, (including adjacent cities, counties, or ODOT)</p> <p><b>Maintenance</b> – Preserves or maintains the functionality of existing transportation system facilities. Positive impact on maintenance costs</p> <p><b>Environment</b> – Minimizes impact to the natural environment</p>



# 3

## PROCESS

# PROJECT ROLES & RESPONSIBILITIES

Support for the TSP was built through an inclusive and transparent process designed to be viewed as credible by the community and stakeholders. The TSP technical analysis was conducted through an iterative work-feedback process between the project team, advisory committee, City staff and the public. Public outreach was conducted throughout the TSP development process to ensure local knowledge and community values are reflected in the TSP.

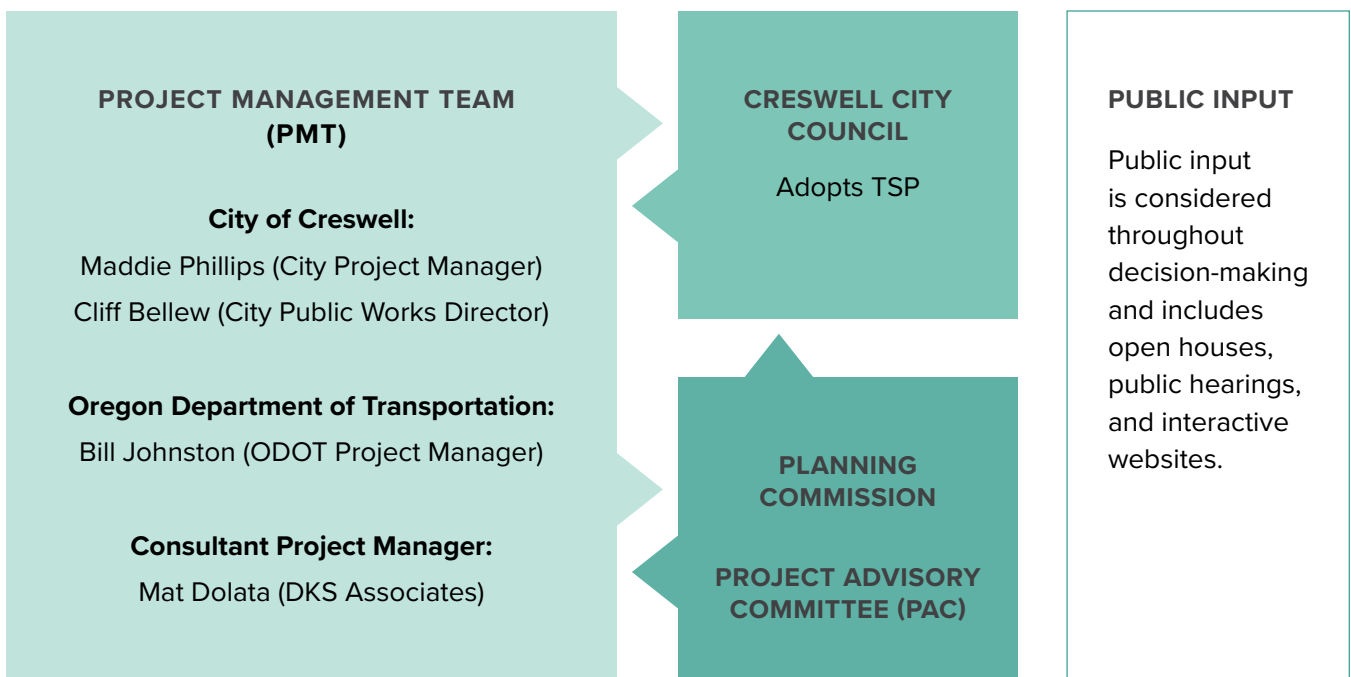
The decision-making structure for the TSP established clear roles and responsibilities throughout the project, which are illustrated in the diagram below (Figure 1).

The City Council made all final decisions for the TSP update. The Project Management Team (PMT) made recommendations to the City Council based on technical analysis and stakeholder input. The Project Advisory Committee (PAC) and the

Planning Commission reviewed TSP materials and offered community-based recommendations to the PMT and City Council. The PAC was the primary recommendation body for the project team and met three times throughout the project at key milestones. The PAC also provided regulatory reviews of work products to strengthen coordination between the TSP update and other related planning efforts in the region.

PAC members also acted as liaisons to the community to help inform constituents about the process and encourage their participation in community outreach events and meetings. Agency technical staff representatives provided oversight and assistance with interagency coordination, assuring consistency between overlapping plans. The PAC represented a range of interest groups as noted in the TSP acknowledgements.

**Figure 1. Roles and Responsibilities**



# COMMUNITY ENGAGEMENT

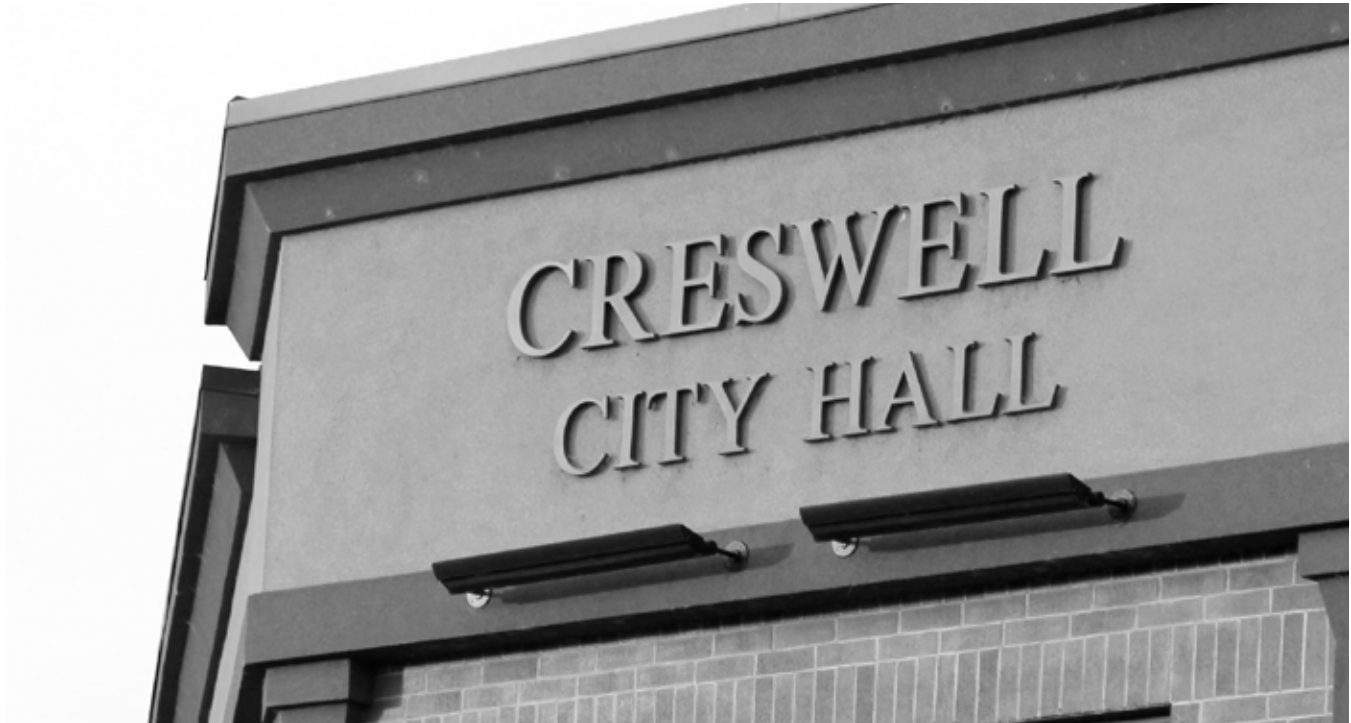
The public involvement shared information and gathered input on the needs and issues of the stakeholders in Creswell and the surrounding area. The project’s public involvement and communication goals were to:

- Communicate complete, accurate, understandable, and timely information.
- Actively seek public input throughout the project and engage a broad and diverse audience.
- Provide meaningful public involvement opportunities and demonstrate how input has influenced the process.
- Seek participation of potentially affected and/or interested individuals, neighborhoods, businesses, and organizations.
- Comply with Civil Rights Act of 1964 Title VI requirements. Title VI and its implementing regulations provide that no person shall be subjected to discrimination on the basis of race, color or national origin under any program or activity that receives federal financial assistance.
- Ensure that the public involvement process is consistent with applicable state and federal laws and requirements, and is sensitive to local policies, goals, and objectives.

The TSP engagement emphasized electronic/virtual engagement strategies and used in-person meetings to supplement the web-based outreach. The approach was intended to bring a larger and more inclusive set of participants into the TSP update planning process. Targeted outreach occurred in three phases as shown in Figure 2.

**Figure 2. Public Involvement Phases**

PHASE 1	PHASE 2	PHASE 3
EVALUATING SYSTEM, DETERMINING NEED	DETERMINING SOLUTIONS, SELECTION OF ALTERNATIVES	DRAFT/FINAL REPORT
<ul style="list-style-type: none"> <li>• Education &amp; Project Overview in the Online Open House event</li> <li>• Online map, multiple choice classification of issues and concerns</li> </ul>	<ul style="list-style-type: none"> <li>• Joint Planning Commission/City Council Work Session</li> <li>• Pamphlet publication summarizing progress in Creswell Chronicle</li> </ul>	<ul style="list-style-type: none"> <li>• City-wide mailing</li> <li>• Draft TSP Overview in the Online Open House event</li> <li>• Joint Planning Commission/City Council Work Session</li> <li>• Adoption Hearings</li> </ul>



### ONLINE COMMUNITY EVENTS

Two online community events were conducted for this project. The events were hosted on-line using web-based narrative, graphic, and interactive tools. The first event occurred in February - March 2018 between identifying needs and developing preliminary solutions for the TSP. The second event was held in January – February 2019 once the draft TSP was ready for public review.

### JOINT PLANNING COMMISSION/ CITY COUNCIL WORK SESSIONS

Two work sessions were conducted for this project to summarize project status and receive input from the City Council and Planning Commission. The work sessions were conducted in July 2018, before development of the Draft TSP (end of Phase 2), and in March 2019, prior to adoption of the TSP (Phase 3).

### ADDITIONAL COMMUNITY OUTREACH

City staff facilitated additional outreach meetings with key stakeholders and local community groups throughout the process. Project information was shared via the Creswell Chronicle as well.

# TECHNICAL DEVELOPMENT

Technical analysis for the TSP Update was performed by the project team. The analysis followed a process illustrated in Figure 3.

**Figure 3. Technical Development Process**



The work of the TSP update was documented through a series of Technical Memoranda that were reviewed and refined by the PAC and Planning Commission. They were also available for the public to review.

The Technical Memoranda capture the development of the technical elements of the TSP and provide additional details and analysis that are not included in the TSP Report (Volume 1) chapters. Please refer to the TSP Technical Appendix (Volume 2) for further details, including the specific Technical Memoranda listed below.

- Technical Memorandum #1 – Public and Stakeholder Involvement Strategy (PSIS)
- Technical Memorandum #2 – Background Document Review and Summary
- Technical Memorandum #3 – Regulatory Review
- Technical Memorandum #4 – Goals, Objectives and Criteria
- Technical Memorandum #5 – Potential Transportation Funding Review
- Technical Memorandum #6 – Evaluate Existing Conditions
- Technical Memorandum #7 – Future Forecasts
- Technical Memorandum #8 – Future Transportation Conditions and Needs
- Technical Memorandum #9 – Solutions Evaluation (and Addendum)
- Technical Memorandum #10 – Transportation Standards
- Technical Memorandum #12 - Regulatory Review



# 4

## NEEDS



## CRESWELL OVERVIEW

The City of Creswell, incorporated in 1909, is located in the Willamette Valley in central western Oregon. Creswell began as a farming community and has grown into a charming small town that is home to about 5,400 people. The City is located along Interstate 5 (I-5) 10 miles south of the Eugene-Springfield Metropolitan Area.

Creswell is nearby Oregon Wine Country and a two-hour drive from the Oregon Coast, making it a serene getaway for tourists. Creswell offers diverse attractions and convenient access to recreation opportunities including hiking, alpaca farms, covered bridges, farmer's markets in the summer, ranches, or wine tasting. Creswell also plays host to the notable Emerald Valley Golf Club where the University of Oregon Ducks play. The City recently celebrated

been honored as a "Tree-City USA" for the past seven years (since 2011).

Historically, Creswell's economy was centered around a wood veneer mill. Today, employment industries in and around Creswell are more varied, including education, manufacturing, retail trade, health services, agriculture, and timber processing. Creswell provides services and amenities to surrounding rural and agricultural lands, aided by proximity to I-5, OR 99 and the Central Oregon and Pacific (CORP) rail line. These transportation facilities, along with proximity to Eugene-Springfield, make Creswell attractive to residents and businesses that want small-town character while having convenient access to urban employment, amenities, and services.

## TRAVEL ACTIVITY

Land use influence on the transportation system is a key factor in transportation system planning. The amount of land to be developed, the types of land uses, and their proximity to each other directly affect demands on the transportation system. As land uses change there may be a shift in how the transportation system is utilized.

### KEY ACTIVITY CENTERS

One of first steps in planning for an effective transportation system is gaining an understanding of the key destinations that people want to travel to.

Key destinations, referred to as “activity generators,” are categorized as employment, shopping, school, civic buildings, recreation, and entertainment locations. Activity generators are mapped in Figure 4 along with the city limits and urban growth boundary (UGB).

Shopping and entertainment opportunities are generally in the downtown commercial area focused along the Oregon Avenue/Cloverdale Road/OR 222 Corridor. Most civic buildings are located downtown along West Oregon Avenue including the Lane County Sheriff’s Substation and City Hall located on the corner of South 1st Street. The Creswell Community Center is located on the adjacent corner of the block at the South 1st Street/C Street intersection. The Creswell City Library is located on the corner of West Oregon Avenue and North 1st Street. The City Post Office is located east of Hwy 99 (North Mill Street), about a block north of Oregon Avenue. The largest industrial area is the former mill

site, located near the central south part of the city just west of I-5.

Creswell Municipal Airport - Hobby Field, located east of I-5 on 102 acres northeast of downtown within city limits, is a public, General Aviation, non-towered airport, owned and operated by the City of Creswell. Hobby Field serves many private planes, experimental aircraft activities, a sky diving company, and a flight school.

The largest concentrations of homes in Creswell are located on the west side of the City (west of I-5 and the railroad tracks). Other residential areas are located to the east edge of the City, north of Cloverdale Road. The public elementary, middle, and high schools are all located near each other in the western part of the city. The city owns and maintains two parks, Holt Park and Garden Lake Park. Holt Park is located in the city center while Garden Lake Park is located just east of I-5.

Much of the traffic in Creswell during the weekday peak periods is employment travel. According to the U.S. Census Bureau data<sup>1</sup>, approximately 2,000 Creswell residents travel to jobs in other cities on a typical day, while approximately 250 residents stay in Creswell for work. At the same time, approximately 1,000 employees from other cities and surrounding rural areas travel to Creswell for work.

<sup>1</sup> United States Census Bureau. OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2015 All Jobs. Accessed October 2017.

**Table 3. Creswell Employment Patterns (2015)**

City of Origin/ Destination	Where are Creswell Residents Employed	Where Creswell Workers Live	Approximate Distance from Creswell
Eugene	36%	17%	10 - 25 miles
Springfield	16%	9%	10 - 25 miles
Creswell	11%	20%	-
Cottage Grove	3%	5%	10 miles
Portland	2%	<1%	> 50 miles
Salem	2%	<1%	> 50 miles
All Other Locations	30%	48%	-

Source: US Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2015 Primary Jobs. Accessed September 2017.

Table 3 shows where Creswell residents and employees work and live. As shown, only about eleven percent of Creswell residents work in Creswell, while more than half work in Eugene or Springfield. A significant number of residents travel to employment locations that are at least 10 miles outside of the city. Considering the most common locations associated with Creswell employment, the majority of commuting residents travel northbound in the morning and southbound in the afternoon. The opposite would be true for the majority of the employees coming to Creswell.

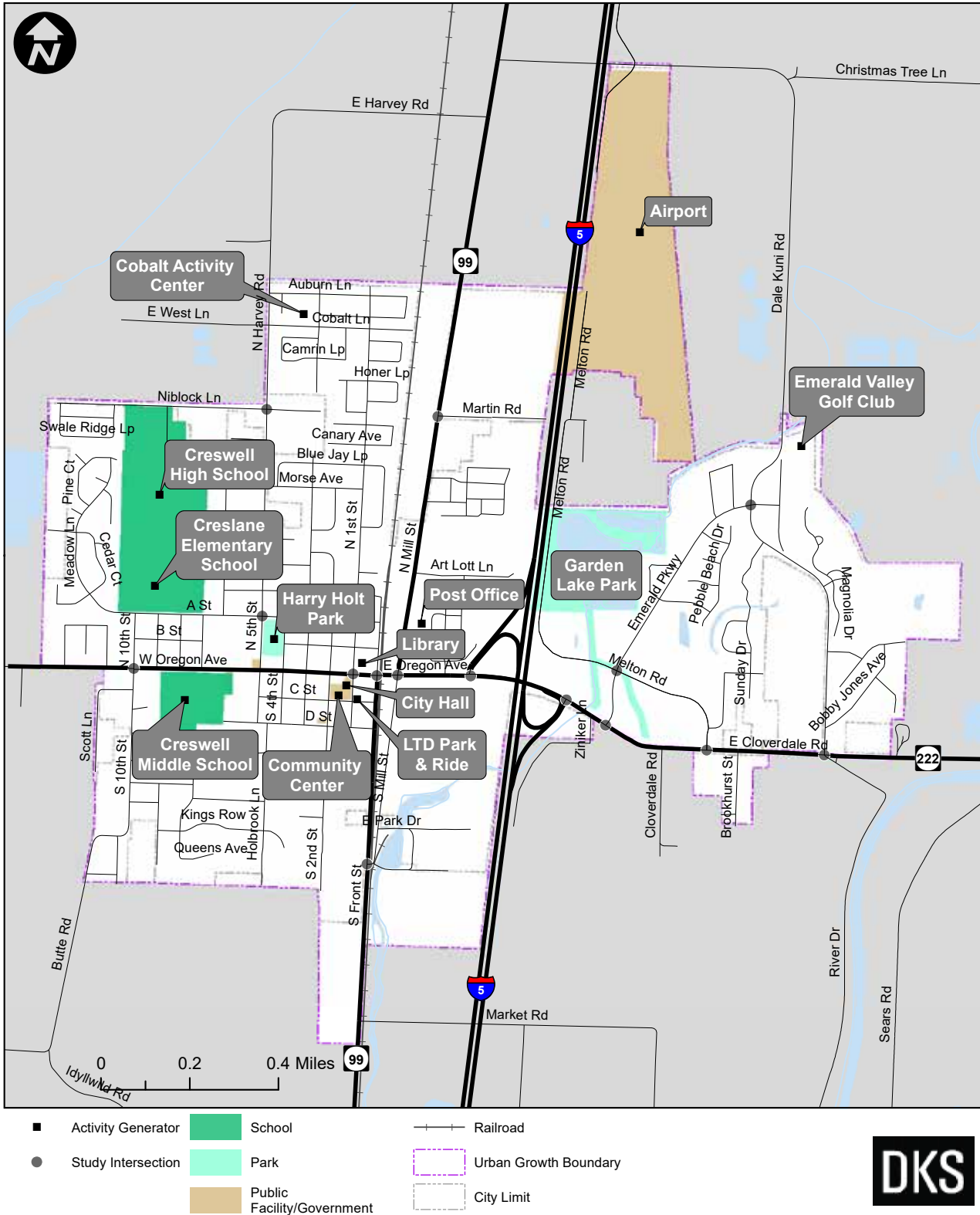
The commute travel modes choices for the region<sup>2</sup> show that single occupant vehicle share is higher in Creswell than other nearby communities. On average, almost 80 percent of Creswell residents

commuted to work using single occupant motor vehicles between the years of 2011 and 2015.<sup>3</sup> This result is most likely an indicator of the current jobs and housing balance and the availability of safe and convenient travel options in Creswell when compared to Eugene, Springfield, and Cottage Grove. As these aspects of the community change over time through development and implementation of this TSP update, it is expected that the travel mode choices will respond accordingly. Approximately 11 percent of Creswell residents walked, biked, rode public transportation, or worked from home. Although a relatively high percentage of employees rode transit, the mode share for walking or biking is low in comparison to other communities.

2 Although the U.S. Census Bureau is a valuable source of information for work-related commute patterns in Creswell, it is important to note that the data do not fully represent the transportation modes used for other activities. These other trip types include travel for school trips, recreation, and shopping.

3 United States Census Bureau. 2011-2015 American Community Survey 5-Year Estimates. Accessed June 2017.

Figure 4. Activity Generators Within Creswell



**Table 4. Commuter Mode Share in Creswell and Nearby Cities**

Transportation Mode	Percent of Commuters			
	Creswell	Eugene	Springfield	Cottage Grove
Walked	2%	8%	3%	9%
Biked / Other	<1%	9%	3%	2%
Public Transportation	6%	4%	5%	2%
Motor Vehicle – Single Occupant	80%	65%	73%	68%
Motor Vehicle – Carpool	9%	9%	14%	14%
Worked at Home	3%	6%	3%	6%

Note: Data for workers over 16 years of age

Source: Table DP03, American Community Survey 5-Year Estimates, 2011-2015

## TRANSPORTATION PERFORMANCE ISSUES



The characteristics of the current transportation system in Creswell are measured against the four general areas of safety, connectivity, access, and mobility. The following sections highlight current transportation system characteristics. Specific system needs by mode are identified at the end of this chapter. For more details about these topics, please refer to Volume 2 (Technical Memorandum #6 Evaluating Existing Conditions).

### SAFETY

Safety describes the ability to travel without injury. Over the past five years, key safety factors have included the following list:

- Creswell has around 30 crashes a year on average.
- The three most common driver errors are rear-end collisions, improper turns, and leaving the road and hitting a fixed object
- Pedestrians and bicyclers were involved in six crashes, which resulted in minor to moderate injuries. Two of the bicycle crashes occurred at OR 99 and Oregon Avenue (Mill Street and Front Street).
- Three intersections have crash rates that should be monitored. These are at Emerald Parkway and Dale Kuni Road, OR 222 (Cloverdale Road) and Dale Kuni Road, W Oregon Avenue and 1st Street.
- A high number of rear-end crashes occurred near the OR 222 (Oregon Avenue)/OR 99 (Front Street) and OR 222 (Oregon Avenue)/OR 99 (Mill Street) intersections and a high number of turn-related crashes at the intersection of OR 222 (Cloverdale Road)/I-5 Southbound Ramp terminal.

## ACCESS

Access describes inclusive design that allows people of all ages and abilities to comfortably reach their destinations using all modes.

- There is a lack of continuous pedestrian and bicycle routes that provide low-stress connections to schools, parks, and other activity generators.
- Within Creswell, there are limited routes to access key activity generators in the community. For example, Garden Lake Park and the Airport are accessed exclusively via Melton Road.
- Missing sidewalks segments create uncomfortable walking conditions, particularly along major streets with high-speed vehicle traffic.
- Access to the downtown commercial zone beyond Oregon Avenue is limited by the lack of designated crossing opportunities and moderate to high-stress pedestrian facilities.
- Bicycle facilities on the Oregon Avenue/ Cloverdale Road/OR 222 Corridor are inconsistent, abruptly end, or have gaps resulting in high-stress travel segments for cyclists. The lack of consistency from origin to destination discourage alternatives to driving.
- There are no designated bike routes or marked shared use paths in Creswell.
- Fixed route transit service to/from the Eugene-Springfield Metro provided by LTD is limited to four stops in the central area of the city. There are no stops located on the east side of the city. Service is limited to direct service to Downtown Eugene (north) and Cottage Grove stops (south).
- There is a need for improved and contiguous bicycle and pedestrian access to transit stops, particularly via low-stress routes.

## CONNECTIVITY

Connectivity describes the availability of facilities are services that offer legitimate choices to travel or move goods.

- East-west street connectivity is limited by I-5, OR 99 and the railroad running north-south through the center of the city. The limited number of crossings is a barrier to multimodal connectivity and first responders in Creswell.
- Garden Lake Park and the Airport lack connections beyond Melton Road to the rest of the community.
- There is a need for multi-modal connections to the Airport to support the Airport vision, including the proposed Emergency Operations Center.
- The two existing at-grade railroad crossings in Creswell do not fully serve pedestrian and bicycle needs.
- Local street connectivity is needed to support direct connections to existing and future residential and commercial areas.
- Existing and future roadway standards and strategies should be identified to provide appropriate balance between safety, efficiency, travel time, and access to individual properties to support the future community vision for roadways within Creswell.

## MOBILITY

Mobility describes the ability to efficiently move people and goods. The 2040 traffic conditions during peak hours are expected to fall below targets at four of the study intersections on state facilities. One intersection on city facilities will be congested during peak hours and should be evaluated for possible capacity improvements.

- OR 222 (Cloverdale Road) at I-5 Southbound Ramps – This location will have slightly more delay in the PM peak hour than is desired by ODOT mobility targets. (the future Volume-to-Capacity Ratio of 0.85 is above the 0.80 target)
  - OR 222 (Oregon Avenue) at OR 99 (Front Street) – The eastbound approach to this intersection will have very significant delays during peak hours, which can spill back and congest adjacent blocks downtown.
  - OR 222 (Cloverdale Road) at I-5 Northbound Ramps – The existing approach and intersection controls, STOP sign for the off-ramp movements, will not be able to serve long-range traffic demands. Expected delays from the off-ramp will be significant.
  - OR 222 (Cloverdale Road) at Emerald Parkway – The southbound approach from Emerald Parkway will have significant delays during peak hours.
  - Melton Road at Emerald Parkway – The westbound approach will have significant delays with existing geometry and controls.
  - Railroad operations impact motor vehicle traffic and inhibit many residents from making trips using alternate modes. Operations between road facilities/authorities and the railroad would require better coordination.
-



## SYSTEM NEEDS

The following section summarizes the multimodal system needs identified for existing conditions analysis along with the needs anticipated for 2040 future conditions. These issues will need to be considered when evaluating the impact of potential solutions in upcoming phases of the TSP.

### PEDESTRIAN NEEDS

Key transportation system needs for people who walk include:

- Additional east-west street connectivity for crossing I-5, OR 99 and the railroad.
- Sidewalks on missing segments along arterials including: OR 222 (Emerald Parkway to East UGB), OR 99 (S Front Street), and OR 99 (N Mill Street).
- Sidewalks on missing segments along major and minor collectors.
- Improved crossing opportunities and pedestrian facilities (e.g., ADA compliant ramps) connecting to/through the downtown commercial zone (beyond Oregon Avenue).
- Improved crossings opportunities across OR 99 (S Front Street and N Mill Street) and OR 222 (Oregon Avenue and Cloverdale Road), particularly at the intersection of OR 99 (Front Street) at OR 222 (Oregon Avenue).
- Marked crosswalks near transit stops and sidewalks on missing segments near the transit stops.
- Improved crossing opportunities and completed missing sidewalk segments on N 5th Street/N Harvey Road and across Oregon Avenue to enhance neighborhood access (“safe routes”) to schools and the Cobalt Activity Center.
- Improved pedestrian access to Garden Lake Park and the Airport by completing and enhancing sidewalks along Melton Road and/or providing a separated pedestrian facility connection across Interstate 5.
- Improved pedestrian access to industrial and commercial land along N Mill Street (OR 99), S Mill Street, and S Front Street (OR 99).
- Marked crosswalks at the intersections of Melton Road and Dale Kuni Road along Emerald Parkway.
- Completed sidewalks in residential areas with missing segments, particularly along routes (“safe routes”) to school.
- Well-maintained sidewalks and improved pedestrian facilities where needed to meet ADA requirements.
- Shared use paths for walking and bicycling.
- A designated low-stress pedestrian network that provides safe connections to schools, parks, and other activity generators.
- Reduce crossing distances where possible to lower stress to increase pedestrian safety.
- Strategies for providing safe inter-community pedestrian connections.
- Consideration for pedestrian connections as future development occurs.

### BICYCLE NEEDS

Key transportation system needs for people riding bikes include:

- Additional east-west street connectivity for crossing I-5, OR 99 and the railroad.
- Appropriate bicycle facilities for travel adjacent to higher speed vehicle traffic on segments of OR 99 and OR 222.
- Appropriate bicycle facilities for travel adjacent to higher speed vehicle traffic and industrial traffic (N. Harvey Road, and S. 10th Street).
- Consistent bicycle facilities on OR 99 and the Oregon Avenue/Cloverdale Road/OR 222 corridors.
- Improved bicycle facilities that connect residential areas to schools to provide “safe routes to school”.
- Bicycle facilities connecting residential areas to the downtown commercial zone and transit stops.
- Improved crossing opportunities for bikes at the intersection of OR 99 (Front Street) at OR 222 (Oregon Avenue).
- Improved bicycle access to Garden Lake Park and the Airport on Melton Road and/or new bicycle connections.
- Improved bicycle access to commercial and industrial land along N Mill Street (OR 99) and S Mill Street.
- Shared use paths for walking and bicycling.
- A low-stress bicycle network that provides safe connections to schools, parks, and other activity generators.

- Strategies for providing safe inter-community bicycle connections.
- Consideration for bicycle connections as future development occurs.

### TRANSIT NEEDS

Key transportation system needs for people using transit include:

- Consider increasing the number of fixed route bus stops to better serve future land uses beyond the downtown commercial zone, particularly east of I-5 and residential neighborhoods toward the north end of the City.
- Additional bus stop amenities such as shelters, benches, and bike parking.
- Improved bicycle and pedestrian access to transit stops, particularly via low-stress routes.
- Monitor needs for expanded transit service to support expected growth and development.

### AIR NEEDS

Key transportation system needs for people who fly include:

- Support recommendations from the Airport Master Plan.
- Improved multi-modal connections to the Airport to support the Airport vision, including the proposed Emergency Operations Center.

## MOTOR VEHICLE NEEDS

Key transportation system needs for drivers include:

- Additional east-west street connectivity for crossing I-5, OR 99 and the railroad that improves access for first responders.
- Improved local street connectivity to support direct connections for existing and future development.
- Address congestion and queuing at the OR 99/OR 222 crossing or “jog” between Front Street and Mill Street at the railroad crossing and address the identified mobility deficiency at OR 222 (Oregon Avenue)/OR 99 (Front Street) intersection.
- Address the future mobility deficiencies identified at the OR 222 (Cloverdale Road) intersections at the I-5 ramp terminals (northbound and southbound ramp intersections).
- Address the future mobility deficiency identified at the OR 222 (Cloverdale Road) and Emerald Parkway intersection.
- Address traffic congestion identified at the Melton Road and Emerald Parkway intersection.
- Address access spacing on segments of OR 99 and OR 222 that do not meet current standards, in a manner that supports the future vision of the community.
- Identify roadway standards for design and operations in a manner that balances multi-modal needs consistent with the TSP goals and objectives.
- Monitor overall crashes at Dale Kuni Road/ Emerald Parkway, Dale Kuni Road/OR 222(W Cloverdale Road), and W Oregon Avenue/1st Street intersections.

## Other Strategies

- Monitor rear-end crashes near the OR 222/OR 99 (Front Street) and OR 222/OR 99 (Mill Street) intersections.
- Monitor turn-related crashes at the intersection of OR 222/I-5 Southbound Ramp Terminal.
- Strategies for providing safe inter-community connections via OR 99 and OR 222.
- Support alternative vehicle types by identifying potential electric vehicle plug-in stations and developing implementation code provisions.

## OTHER MODES

Key transportation system opportunities for other modes in Creswell include:

- Consider Transportation System Management and Operations strategies to provide opportunities for improved safety and mobility.
- Consider opportunities to relocate at-grade rail crossing or provide grade-separated crossings.<sup>1</sup>
- Work with railroad operators to determine future need and location of the rail siding (“side track”) including consideration of relocation to Goshen (regionally-significant industrial area).

No other needs were identified for freight, water, rail, pipeline or parking through the TSP update.

<sup>1</sup> Existing state and federal regulations and policies governing rail crossings are complex and somewhat restrictive. Relocating an existing crossing may be challenging.



# 5

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## STRATEGIES

# TRANSPORTATION SYSTEM MANAGEMENT & OPERATIONS

This chapter presents the strategies that can help address Creswell's present and future transportation challenges in the most cost effective manner. These strategies include system management, demand management, preparing for Smarter Mobility, and encouraging a shift to active transportation modes of travel. Chapters 6 and 7 provide the recommended transportation standards and lists of multimodal improvement projects that will be implemented along with the strategies described in this section.

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Analysis of Creswell's transportation network reveals that the interaction between several modes of travel and classes of roadway can be supported and enhanced by Transportation System Management and Operations. Transportation System Management (TSM) focuses on low cost strategies to enhance operational performance of the transportation system. TSM strategies aim to maximize urban mobility through better management of the coordinated multi-modal transportation system. TSM strategies include traffic control improvements, traffic signal coordination, traffic calming, access management, and local street connectivity. Typically, the traveling public feel the most tangible benefits from traffic signal system improvements.

Coordination of railroad operations is an important TSM strategy in Creswell. Due to the limited number of grade-separated railroad crossings in Creswell, railroad operations can cause significant delays to travelers. Additional east-west connectivity needed will likely require constructing new at-grade or grade-separated crossings. Given policy-related

challenges to incorporate additional at-grade crossings, consideration should be made for potential relocation/closure of existing at-grade crossings in exchange for separated grade options. City coordination with ODOT and Central Oregon and Pacific Rail (CORP) to minimize delays caused at blocked crossings should be pursued.

## ACCESS MANAGEMENT

Creswell experiences congestion and safety-related challenges due to the number and frequency of access points on roadways. Access management is a broad set of techniques that balance the need to provide efficient, safe, and timely travel with the ability to allow access to individual destinations. Access management may be considered a type of Transportation System Management (TSM). Proper implementation of access management techniques will improve safety, reduce congestion, and potentially lessen the need to invest in capacity-adding roadway projects.

Access management is applied in Creswell through access spacing standards that define minimum street and private access (driveway) spacing for roadways under the jurisdiction of the City. In practice, access management is generally applied through redevelopment or project opportunities such as roadway construction. New streets or redeveloping properties must comply with these standards, to the extent practical (as determined by the City). Within developed areas of the city, streets not complying with these standards can be improved using

strategies such as shared access points, access restrictions (through the use of a median or channelization islands), closures, or relocation of access points.

### LOCAL STREET CONNECTIVITY

Creswell has activity generator areas with limited access due to poor local street connectivity. Through better connected local streets, Creswell can reduce out-of-direction travel for motorists, longer public safety response times, and traffic volume imbalances that impact residents. Solutions for these issues often include projects to widen roads, construct traffic signals, and/or add turn lanes. By providing connectivity between neighborhoods, the need for these kinds of projects can be lessened and out-of-direction travel can be reduced. Improving connectivity can enhance accessibility for all travel modes and balance traffic levels on existing roadways by better dispersing traffic.

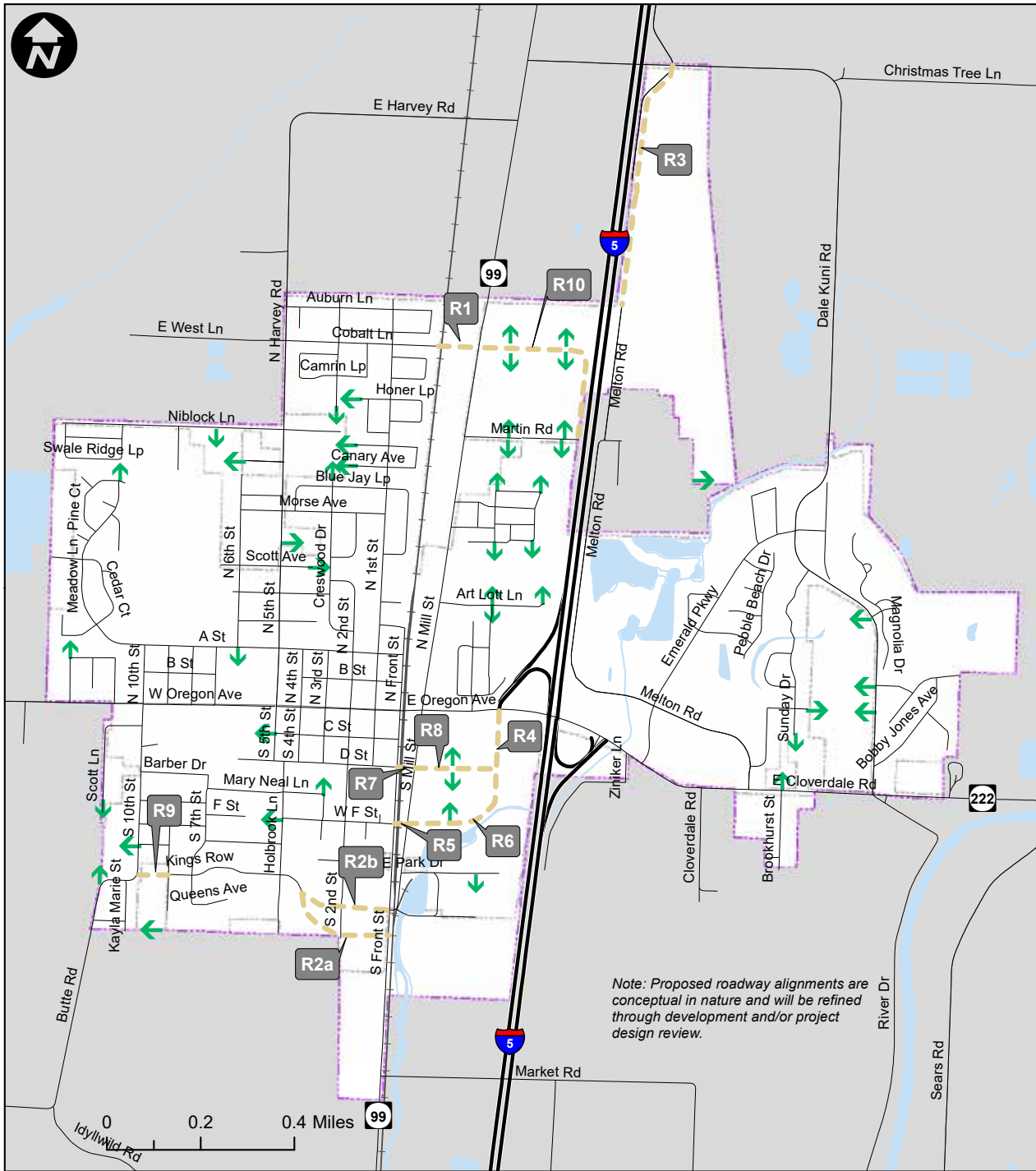
Much of the local street network in Creswell is fairly well connected in a grid network. However, there are a number of locations where roadways are not well connected, especially where limited by barriers such as railroad tracks or incomplete development. Topography, environmental conditions, and other barriers (e.g., I-5) limit the level of potential connectivity in several areas of Creswell.

Local street connectivity standards are addressed in Technical Memorandum #10 (Transportation Standards). Figure 5 shows the conceptual Local Street Connectivity Plan for Creswell. The arrows shown represent conceptual local street connections that illustrate the general direction and location for beneficial future connections.

The identified alignments of connections are not specific; they will be determined through the development review process. These proposed connections are aimed at improving connectivity for all modes of transportation and reducing potential neighborhood traffic impacts by better balancing traffic flows on existing streets.

The distinction between these local street connections and collector street roadway extension projects also shown in Figure 5 is delineated by functional class of the roadway and the general level of dependence on development. Generally, local street connections would be fully dependent on redevelopment of properties on or near the lines shown. Some connections may not be feasible without development support and/or property acquisition. Collector street extension projects generally provide for broader connectivity benefits (beyond immediate local access) and are more likely to be City-led, though many could still be fully or partially funded or constructed through development opportunities.

Figure 5. Local Street Connectivity Map



Local Street Connection Opportunities

- New Local Street Connection Direction
- Proposed Collector Roadway Extension
- Railroad
- Urban Growth Boundary
- City Limit



### TRAFFIC CONTROL IMPROVEMENTS

Creswell faces considerable challenges at the “Jog” of Oregon Avenue/Highway 99. Analysis indicates that improvements to traffic control at this location could substantially reduce congestion and travel time and enhance safety for all modes. Project I1 (Table 13) calls for intersection (and segment) improvements at (and between) the two Oregon Ave. intersections – at OR 99 (Mill St.) and OR 99 (Front St.). The package of improvements includes connected/dual traffic signals at both intersections, redesign for bicycle/pedestrian crossings, and additional turning space for freight truck movements. Consideration will need to be made to coordinate signal operations with the rail crossing operations. The design of these improvements will need to consider the operation of the rail crossing between the two intersections.

Approval is needed from ODOT for traffic control changes on State facilities. The typical ODOT signal spacing policy refers a distance of at least ½ mile between signals unless an engineering investigation demonstrates another distance would be appropriate. For this case, the two adjacent intersections would operate with a single traffic signal controller, which is a unique case. For proposed signals on Lane County facilities, approval is required from Lane County prior to installation.

### TRANSPORTATION DEMAND MANAGEMENT

Creswell experiences peak congestion due to single-occupant trips during peak demand times. Transportation Demand Management (TDM), methods that aim to remove single occupant motor vehicle trips from the roadway network during peak travel demand periods, could provide one avenue for reducing pressure on key facilities. Changing a users’ travel behavior and providing alternative choices will help accommodate the expected growth in travel demand identified for Creswell.

Generally, TDM focuses on reducing vehicle miles traveled for large employers by promoting active and shared modes of travel. Research has shown that a comprehensive set of complementary policies implemented over a large geographic area can affect the number of vehicle miles traveled to/from that area.<sup>1</sup> In order for TDM measures to be effective, strategies should go beyond the low-cost, uncontroversial measures commonly used such as carpooling, transportation coordinators/associations, priority parking spaces, etc.

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1 The Potential for Land Use Demand Management Policies to Reduce Automobile Trips, ODOT, by ECO Northwest, June 1992.



Effective TDM measures include parking strategies (limiting or increasing supply in strategic locations), improved services for alternative modes of travel, and market-based incentives to encourage travel behavior changes. However, TDM includes a wide variety of actions that are specifically tailored to the individual needs of an area. Effective TDM strategies include:

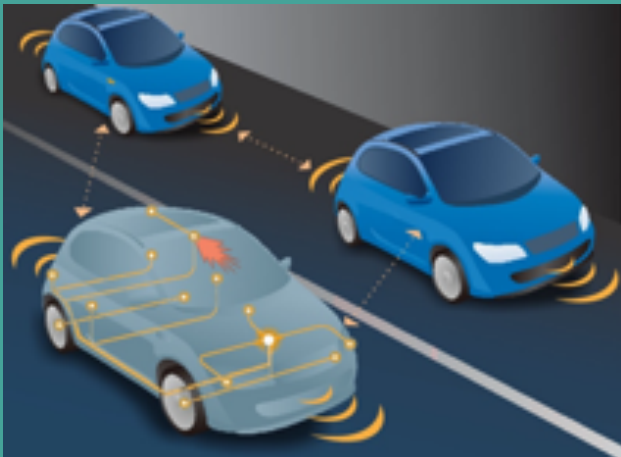
- Encouraging/supporting rideshare/vanpool to major employers in Lane County and Eugene (e.g., University of Oregon, Downtown Eugene, etc.) for employees living in Creswell.
- Establishing site development standards that require pedestrian and bicycle access through sites and connections to adjacent sites and transportation facilities, to the extent the development impacts existing access.
- 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.
- Improving street connectivity to support direct connections between residential areas and activity centers.
- Investing in pedestrian/bicycle facilities.

Opportunities to expand transportation demand management and other measures in Creswell include implementing requirements for long-term bicycle parking for places of employment above a certain size, park and ride facilities, major transit stops, and multi-family residential developments. Other land uses, especially activity generators, should be required to provide short-term bike parking, and encouraged to implement the long-term options. Long-term bicycle parking options include:

- Individual lockers for one or two bicycles
  - Racks in an enclosed, lockable room
  - Racks in an area that is monitored by security cameras or guards (within 100 feet)
  - Racks or lockers in an area always visible to employees
-

## PREPARING FOR SMART MOBILITY

Emerging transportation technologies will shape roads, communities, and daily lives for generations. Vehicles are becoming more connected, automated, shared, and electric. While the timing of when these advances will occur is uncertain, they will have significant impacts on how a community plans, designs, builds, and uses the transportation system. Below are some important emerging transportation technology terms and definitions that provide the basis for the impacts, policies and action items discussed in the following sections.



**Connected vehicles (CVs)** will enable communications between vehicles, infrastructure, and other road users. This means that vehicles will be able to assist human drivers and prevent crashes while making the system operate more smoothly.

**Automated vehicles (AVs)** will, to varying degrees, take over driving functions and allow travelers to focus their attention on other matters. Vehicles with combined automated functions like lane keeping and adaptive cruise control exist

today. In the future, more sophisticated sensing and programming technology will allow vehicles to operate with little to no operator oversight.

**Shared vehicles (SVs)** allow ride-hailing companies to offer customers access to vehicles through cell phone applications. Ride-hailing applications give on-demand transportation with comparable convenience to car ownership without the hassle of maintenance and parking. Examples of shared vehicles include companies like Uber and Lyft.

**Electric Vehicles (EVs)** have been on the road for decades and are becoming more economically feasible as the production costs of batteries decline and vehicle fuel prices increase.

Many of these technologies will not be exclusive of the others and it is important to think of the host of implications that arise from the combination of them. These vehicles are referred to as connected, automated, shared, and electric (CASE) vehicles.

## IMPACTS OF CASE VEHICLES

### *Congestion and Road Capacity*

There are several competing forces that will unfold as connected, automated, and shared vehicles are deployed. It is difficult to predict how these vehicles will influence congestion and road capacity.

- AVs will provide a more relaxing or productive ride experience and people may have less resistance to longer commutes.
- Shared AVs are projected to have lower fuel and operating costs, making them less expensive on a per mile basis than private vehicle ownership. This may increase demand for auto-based travel in the future.
- CV technology will allow vehicles to operate safely with closer following distance, less unnecessary braking, and better coordinated traffic control. This will increase road capacity in the long run when CVs and AVs comprise most of the public and private fleet of vehicles.
- In the near term, since AVs make up a fraction of the fleet of vehicles, road capacity could decrease as AVs will operate more slowly and cautiously than regular vehicles.
- A new class of traffic – zero-occupant vehicles – will increase traffic congestion. These could include AVs making deliveries or shared AVs

circulating around the city and traveling to their next rider.

- Roadways may need to be redesigned or better maintained to accommodate the needs of automated driving systems. For instance, striping may need to be wider and more consistently maintained to ensure the vehicle's sensors can recognize it.

These points raise questions about the degree to which CASE vehicles will impact road capacity and congestion. The development and use of the technologies should be monitored closely.

### *Transit*

AVs could become cost competitive with transit and reduce transit ridership as riders prefer a more convenient alternative. However, transit will remain the most efficient way to move high volumes of people through constricted urban environments. AVs will not eliminate congestion and as discussed above, could exacerbate it – especially in the early phases of AV adoption. In addition, shared AVs may not serve all sectors of a community so many will still require access to transit to meet their daily needs.

### ***Parking***

Because AVs will be able to park themselves, travelers will elect to get dropped off at their destination while their vehicle finds parking or its next passenger. Shared AVs will have an even greater impact on parking because parking next to the destination will no longer be a priority for the traveling public. This means that parking may be over-supplied in some areas and new opportunities to reconfigure land use will emerge. Outstanding questions related to parking include:

- How does vehicle ownership impact parking behavior?
- What portion of the AV fleet will be shared?
- How far out of the downtown area will AVs be able to park while remaining convenient and readily available?

### ***Curb Space***

In addition to parking impacts, the ability to be dropped off at the destination will create more potential for conflicts in the right-of-way between vehicles that are dropping passengers off or picking them up, vehicles moving through traffic, and vehicles parked on the street. This issue is already occurring in many urban areas with ride-hailing companies, where popular destinations are experiencing significant double-parking issues.

AVs will also be used to deliver packages and food. This may mean that delivery vehicles need to be accommodated in new portions of the right-of-way. For instance, if the AV parks at the curb in a neighborhood and smaller robots are used to deliver packages from door to door, new conflicts will arise between vehicles, pedestrians, robots, and bicyclists.

### ***Electric Vehicle Charging***

To accommodate a future where electric vehicles are the majority of the vehicle fleet, additional charging infrastructure will be required. Cities, electric utilities, regions, and states will need to work together to create enough reliable electricity supply to fulfill the increased electrical demand.

### ***Creswell Mobility Hub***

The existing transit stop and park and ride lot located on the northeast corner of C Street and S 1st Street currently serves as a key intermodal connection in Creswell. It offers a place where people can make local connections to access LTD's intercity transit service. The bus stop amenities include a covered bench with adjacent bike rack, trash receptacle, posted route schedule information, and sidewalk to the park and ride lot. This is the highest ridership bus stop in Creswell, as identified in the existing conditions analysis.

Given proximity to downtown activity centers and the high share of intercity commuter traffic in Creswell (particularly between Eugene/Springfield) this location represents a unique opportunity to enhance the comfort and effectiveness of intermodal and first/last mile transit connections. Supporting transit, shared-ride, and active transportation solutions would help reduce congestion on Oregon Avenue and make progress towards many other TSP goals and objectives. More opportunities for transfers between new and different modes of travel may arise in the future, as technology is expected to drive significant changes to transportation modes and travel behavior within the TSP planning horizon.

The northeast corner at the intersection of C Street and 1st Street should be considered as Creswell's "mobility hub". This would support the existing services and amenities but also help pursue future opportunities to enhance connections and amenities at the mobility hub. Use of the Creswell mobility hub can be encouraged by developing low-stress bicycle and pedestrian connections that provide access for all people including seniors and people with disabilities. Specific enhancements at this location have not been identified in the TSP, but in the future may include:

- Enhanced bicycle storage (sheltered & secure storage)
- Wayfinding information (including to proposed Bicycle Boulevards and other low-stress routes)
- Loading/waiting areas for shared-mobility options (e.g., carpool, taxis, para-transit, transportation network companies)
- Electric vehicle charging
- Real-time transit arrival data
- Additional user amenities (benches, wi-fi, food carts, landscaping, etc.)



# 6

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## STANDARDS

# ROADWAY FUNCTIONAL CLASSIFICATION SYSTEM

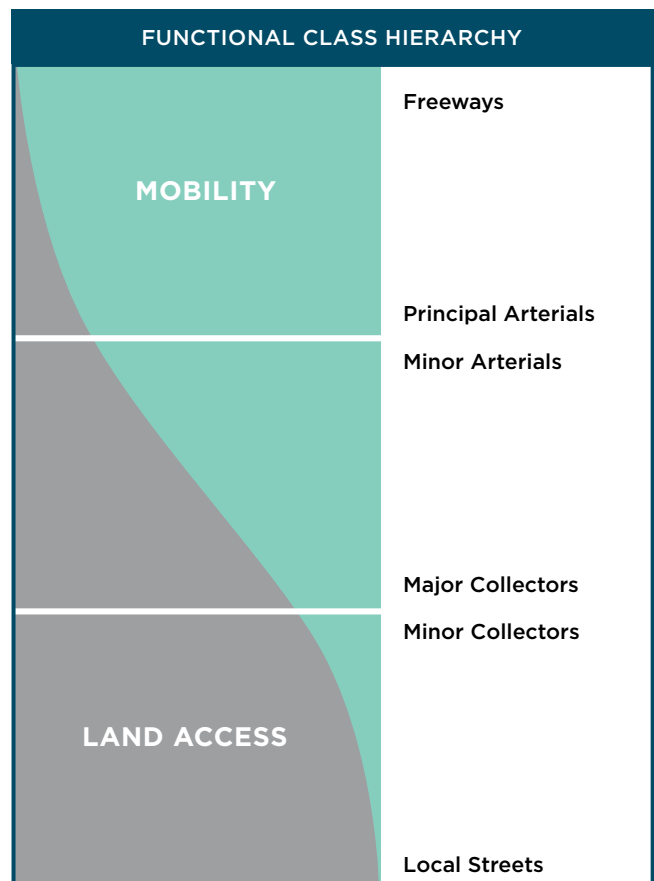
Creswell applies transportation standards and regulations to the construction of new transportation facilities and to the operation of all facilities ensure the system functions as intended and investments are used efficiently. These standards enable consistent future actions that reflect the goals of the City for a safe and efficient transportation system.

Avenue/Cloverdale Road/OR 222 Corridor is the only continuous east-west connection between downtown and areas east of I-5. For these reasons, it is necessary to manage the existing roadways to support efficient traffic routing and multi-modal connections throughout the Creswell transportation network.

Roadways are classified in order to balance land use access with mobility requirements. Regional facilities have longer trips, higher vehicles speeds, and few land access opportunities. Local streets, on the other hand, carry much lower vehicle volumes at lower travel speeds, and a much higher need for direct land access. The street functional classification system recognizes that streets do not act independently of one another but rather, they form a network that is designed to serve local and regional travel needs.

The functional classification of roadways in Creswell are consistent with the prior Creswell, and recently adopted Lane County, functional classification systems.<sup>1,2</sup> Road classes proposed for Creswell are interstate highway, arterials, major and minor collectors, and local streets.

Creswell roadways parallel to I-5 and OR 99 are fairly well connected and generally follow a grid pattern where it is practical. However, the limited east-west connections across the railroad tracks and I-5 limit connectivity through the city. The Oregon



1 Creswell Development Code Article 3 – Community Design Standards.

2 Lane County Transportation System Plan, September 2017.

The updated functional classification system for Creswell is described below and shown in Figure 6.

- **Interstate Freeways** are limited access state roadways that serve high volumes of motor vehicle traffic and are primarily utilized for longer distance regional or statewide trips.
- **Arterials** are roadways intended to move traffic through Creswell and connect to locations outside of the city. These roadways generally experience higher traffic volumes and act as corridors connecting many parts of the city. Posted speed limits on these roadways vary in Creswell. Generally, arterials have higher speeds posted in less urbanized areas and lower speeds in areas where there are more driveways, more pedestrian activity, and often have more intersection congestion (such as downtown). Typical average daily traffic (ADT) on arterials can exceed 8,000 vehicles per day. The arterial roadways in Creswell are state highways (OR 99 and OR 222) and Oregon Avenue.
- **Major Collectors** are roadways intended to serve through traffic and local traffic traveling to and from arterials. These roadways provide efficient through movement for regional or local traffic. Typical ADT on major collectors is around 3,000 to 8,000 vehicles per day. Arterials and major collector facilities constructed through new development are required by state law to provide bicycle facilities.<sup>1</sup> Separate bicycle facilities may be considered. As with Arterials, posted speeds on major collectors vary depending on the surrounding environment.
- **Minor Collectors** are roadways that typically connect neighborhoods and major activity

generators to minor arterial roadways. These roadways provide efficient through movement for local traffic. Typical ADT on minor collectors is around 1,500 to 3,000 vehicles per day. Posted speeds on minor collector roadways generally range between 25 and 30 miles per hour.

- **Local Streets** provide more direct access to residence and business in Creswell. These roadways are designed to serve lower volumes of traffic with a statutory speed limit of 20 or 25 miles per hour. Typical ADT on local streets is less than 1,500 vehicles per day.

The updates to the functional class better reflect intended roadway usage and spacing standards. See Table 5 for a complete list.

<sup>1</sup> Transportation Planning Rule, OAR 660-012-0045 (3)(b)(B).



**Table 5. Street Functional Classification Updates**

Roadway Segment	Existing Functional Classification	Updated Functional Classification
Martin Road (N Mill Street to East Terminus)	Local Street	Minor Collector
Art Lott Lane (N Mill Street to East Terminus)	Local Street	Minor Collector
Meadow Lane (A Street/N 10th Street to Cedar Court)	Local Street	Minor Collector
F Street (Holbrook Lane to S Front Street)	Local Street	Minor Collector
Kings Row (S 9th Street to Holbrook Lane)	Local Street	Minor Collector
N 10th Street (Oregon Avenue to A Street)	Local Street	Minor Collector
S 2nd Street (Oregon Avenue to South Terminus)	Local Street	Minor Collector
Melton Road (OR 222 to Dale Kuni Road)	Minor Collector	Major Collector
D Street (S 5th Street to East Terminus)	Minor Collector	Major Collector
I-5 & Ramps	Freeway	Interstate

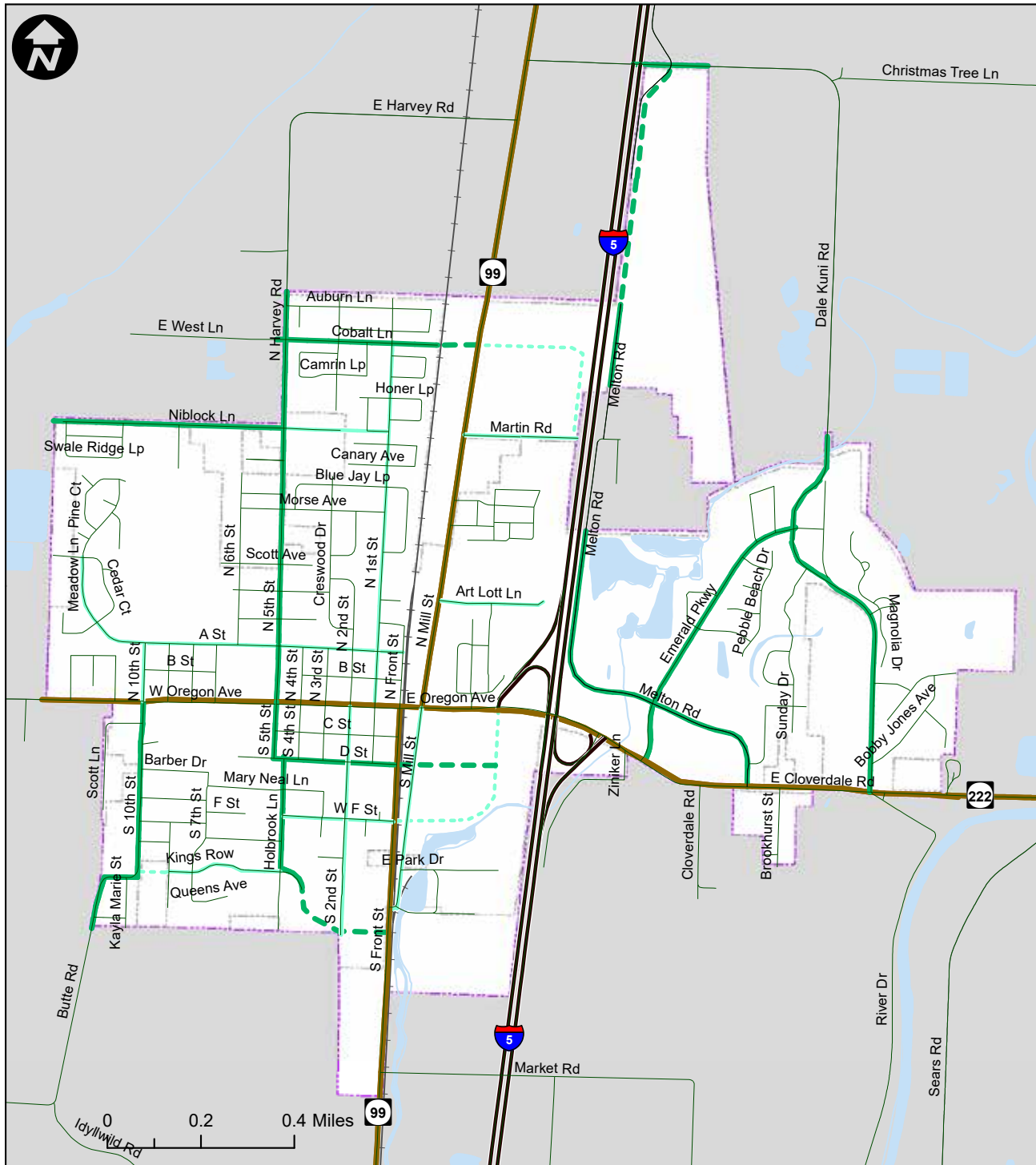
ODOT and Lane County also classify roadways in Creswell under their jurisdiction. A map of roadway jurisdictions is included in the Figure 7. Roadways under ODOT jurisdiction include the roadways that the city classified as Interstate (I-5), and Arterial (OR 99 and OR 222).

## TRUCK ROUTE DESIGNATIONS

Within Creswell, I-5 is classified as a NHS Federal Truck Route and an Oregon Freight Route. It is also on the National Highway System (NHS). These classifications indicate that truck/freight traffic is a priority on this route. OR 99 is classified by ODOT as a District Highway and it is also on the NHS. However, it is not classified as a freight or truck route. Lane County also does not designate OR 99 through Creswell as a County Designated Freight Resource Route.

No truck routes are designated on city streets. Unless otherwise posted, trucks are allowed on all city streets. Trucks in Creswell generally use arterials. No need for freight route designations was identified as no alternative designations for rerouting trucks within Creswell have been identified.

Figure 6. Functional Classification System

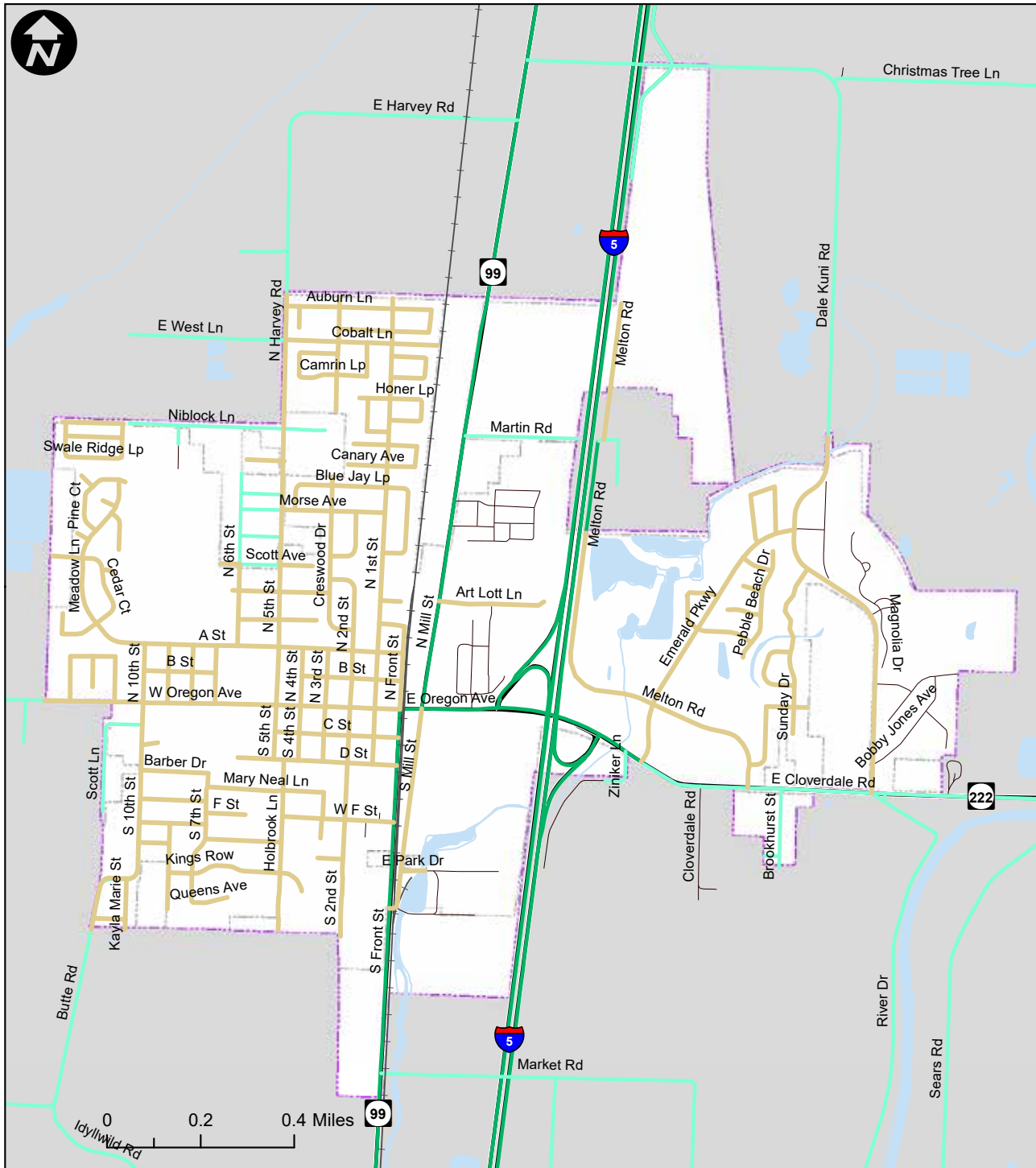


Proposed Functional Classification (Dashed Lines Indicate Future Roads)

- Interstate
- Arterial
- Major Collector
- Minor Collector
- Local Street
- Railroad
- Urban Growth Boundary
- City Limit



Figure 7. Roadway Jurisdiction Map



Road Jurisdiction

- City
- County
- State
- Private or Unclassified
- City Limit
- Urban Growth Boundary
- |  Railroad



## LOCAL EVACUATION ROUTES

I-5 is identified as a statewide Tier 1 lifeline Route through the Oregon Highway Plan (OHP). OHP Goal 1, Policy 1E designates statewide routes for emergency response in the event of an earthquake, categorized as Tier 1, 2, and 3. The routes identified as Tier 1 are considered to be the most significant and necessary to ensure a functioning statewide transportation network. A functioning Tier 1 lifeline system provides traffic flow through the state and to each region.

Lane County designates OR 99 through Creswell as a County Emergency Transportation Route. These routes are intended to facilitate the movement of response resources during a major regional emergency or disaster.

Local lifeline routes identified in this TSP are critical facilities for making high-priority connections for the City. These include connections to the water plant

and wastewater plant that are critical to bring utilities back online after an emergency event, Creswell High School (mass care and shelter facility), and the City's water tanks on Creswell Butte. Additionally, should the secondary Emergency Operations Center be required, access to the Airport on Melton Road (via Emerald Parkway) would be a high priority as well. Local lifeline routes defined by the City include:

- Camas Swale Road /Oregon Avenue / Cloverdale Road (OR 222)
- N Harvey Road / N 5th Street / S 5th Street
- Holbrook Lane
- Melton Road
- Emerald Parkway (Cloverdale Road to Melton Road)

## ROADWAY CROSS-SECTION STANDARDS

Roadway design standards provide a uniform system for roadway characteristics. The characteristics are specified to support the intended uses outlined in the functional classification system. The roadway design standards will be implemented as redevelopment occurs and transportation improvements are implemented.

Existing roadways in Creswell were constructed with design characteristics to meet the function and demand for that facility at the time of its development. The design of a roadway can vary from segment to

segment depending on when it was constructed, adjacent land uses, responsible jurisdiction, and historic demand. To support reasonable transitions between roadway segments constructed at different times and recognizing that right-of-way width may be constrained, City Staff may allow exceptions to the cross-section standards when new roadway segments are constructed.

Creswell Public Works Design Standards and the Creswell Development Code provide planning and design standards for transportation facilities, including

several design alternatives for arterials, collectors, and local streets. These standards identify required widths for right-of-way, lanes, parking, sidewalks, and planting strips.

The updated roadway design standards are shown in Table 6. The standards correspond with the updated functional classification system. This will provide clear guidance for future development while also allowing for a degree of flexibility to fit with surrounding land use context and practical constraints. Significant changes to the current standards include:

- The two arterial standards (Boulevard and Avenue) have been consolidated.
- Collectors are differentiated into Minor and Major classifications to match the proposed functional classification system. The difference is the inclusion of bicycle lanes, which are required on major collectors and optional on minor collectors.
- Minimum bike lane widths were increased from five to six feet for rider safety and comfort.
- Cross-sections including diagonal parking have been removed for safety. Existing locations of diagonal parking can remain, but new roadways

would require an exception to the proposed standards to construct diagonal parking.

- Arterial cross-section options have been added for constrained environments (e.g., S Front Street is constrained by the railroad), the downtown commercial area, and rural transition areas. These options offer design flexibility to provide for pedestrian and bicycle facilities appropriate to the land use context.

Figures 8 through 11 provide cross-section illustrations for arterials, major collectors, and minor collectors, respectively. The relevant sections of the Public Works Design Standards and the Creswell Development Code will be updated to incorporate the proposed changes to roadway standards, consistent with final updated TSP recommendations. The technical appendix details how the proposed changes will be applied to the current standards

Roadways under ODOT jurisdiction are subject to design standards in ODOT's Highway Design Manual. Figure 8 illustrates proposed concept cross-sections for arterials such as OR 99, an ODOT facility.

**Table 6. City Street Design Standards**

Street Type	Right-of-Way Width	Curb-to-Curb Paved Width	Within Curb-to-Curb Area				Planting Strips or Tree Wells ***	Side-walks	Standard Drawing
			Motor Vehicle Travel Lanes	Median/Center Turn Lane	Bike Lanes/	On-Street Parking**			
<b>Arterials<sup>1</sup></b>									
3-Lane (Typical)	75'-115'	48'	12'	12'	2 at 6'	8' lanes/ None	6'-12'	6'-12'	204A <sup>4</sup>
2-Lane (Typical)	63'-103'	36'	12'	None	2 at 6'	8' lanes/ None	6'-12'	6'-12'	204C <sup>4</sup>
2-Lane Side-Path (Constrained)	42.5-50.5'	24-32'	12'	None	8' Shoulder <sup>5</sup>	None	2' Raised Median	10' multi-use path <sup>5</sup>	NA
2-Lane Side-Path (Rural Transition)	42-50'	36-44'	12'	None	8' Shoulder <sup>5</sup> 12' Shoulder <sup>5</sup>	None	None	None	NA
2-Lane Paved Shoulder (Rural Transition)	48'	42'	12'	None	9' Shoulders <sup>6</sup>	None	None	None	NA
Downtown Commercial	81'	52'	12'	None	2 at 6'	8'	7'-12'	5'-12'	NA
<b>Major Collectors</b>									
Residential (Parking One or Both Sides)	66'-77'	39'-46'	10'		2 at 6'	7' lanes	7'-8'	5'-6' <sup>2</sup>	203 <sup>4</sup> & 203A <sup>4</sup>
Residential (No Parking) <sup>7</sup>	61'-65'	34'	11'		2 at 6'	None	7'-8'	5'-6' <sup>2</sup>	203B <sup>4</sup>
Commercial/Industrial <sup>8</sup>	69'-93'	40'-50'	10'-11' <sup>9</sup>		2 at 6'	8' lanes	7'-8'	6'-12' <sup>3</sup>	201 <sup>4</sup> , 201A <sup>4</sup> , 202 <sup>4</sup> , & 202A <sup>4</sup>
<b>Minor Collectors</b>									
Residential (Parking One or Both Sides)	54'-65'	27'-34'	10'		None *	7' lanes	7'-8'	5'-6' <sup>2</sup>	203 <sup>4</sup> & 203A <sup>4</sup>
Residential (No Parking) <sup>7</sup>	49'-53'	22'	11'		None *	None	7'-8'	5'-6' <sup>2</sup>	203B <sup>4</sup>
Commercial/Industrial <sup>8</sup>	57'-81'	28'-38'	10'-11' <sup>9</sup>		None *	8' lanes	7'-8'	6'-12' <sup>3</sup>	201 <sup>4</sup> , 201A <sup>4</sup> , 202 <sup>4</sup> , & 202A <sup>4</sup>

Street Type	Right-of-Way Width	Curb-to-Curb Paved Width	Within Curb-to-Curb Area				Planting Strips or Tree Wells ***	Side-walks	Standard Drawing
			Motor Vehicle Travel Lanes	Median/Center Turn Lane	Bike Lanes/	On-Street Parking**			
<b>Local Streets</b>									
Residential (Parking One or Both Sides)	53'-57'	32'	9'		None	7' lanes	5'-6'	5'-6' <sup>2</sup>	200
Residential (No Parking) <sup>7</sup>	43'-47'	22'	11'		None	None	5'-6'	5'-6' <sup>2</sup>	NA
Downtown Commercial <sup>8</sup>	61' Downtown	40'	11'		None	9' lanes	4'	5'-6' <sup>2</sup>	NA

**Notes:**

- Most arterials in Creswell are located on ODOT facilities and therefore, design standards are subject to ODOT approval.
- Width and/or configuration listed may be modified by ODOT or Lane County wherein each has jurisdiction.
- Standard drawings can be found in the Creswell Public Works Design Standards Appendix A – Standard Detail Drawings.
- Curbs are 6" for all cross-sections (included in ROW width).
- ODOT requires a minimum of one foot of ROW behind the sidewalk (included in ROW width for arterials).
- On state facilities, design exceptions may be required to achieve the preferred dimensional standards shown in this table and in the associated figures (cross-sections). ODOT is more likely to approve design exceptions in a geometrically-constrained area. Additional explanation is provided in the section titled Application to ODOT Roadways (pg. 59).

\* Bike lanes are required on arterials and major collectors as designated in the TSP Functional Classification Map. Bike lanes are generally not required on minor collectors, but may be included for consistency and connectivity at the discretion of City staff

\*\* Parking is typically required on both sides for all collector and local streets except where specially approved by the City. If a variance is granted for parking on one side only, one curb to be painted and signed for no parking at time of street construction.

\*\*\* Planter strips should generally be designed at the maximum width, except where reduced widths would help in the protection of significant trees, wetlands, or other sensitive lands. The planter strip may be waived and sidewalks installed curb-tight to protect sensitive lands. On streets with reduced trip counts, reduced paved-width, and/or low travel speeds, planter strip may be waived and sidewalks installed curb-tight to encourage compact development.

<sup>1</sup> Optional. Parking is generally not included on Arterials beyond downtown commercial areas (e.g., Oregon Avenue) or where otherwise specially approved by the City.

<sup>2</sup> Minimum sidewalk width is 6' except where constrained, a 5' minimum is allowed. Wider sidewalks (up to 12') are allowed for consistency (e.g. adjacent to commercial zones) at the discretion of the city.

<sup>3</sup> Minimum sidewalk width is 6' with a maximum of 12' to be designed/constructed at the discretion of the city.

<sup>4</sup> Drawings 201, 201A, 202, 202A, 203, 203A, 203B, 204A, and 204C cross-sections widths need to be updated per the addition of wider travel lanes and bike lanes. (201: 36' changed to 36' - 50', 201A: 28' changed to 28' - 42', 202: 36' changed to 36' – 50', 202A: 28' changed to 28' – 42', 203: 44' changed to 34' - 46', 203A: 37' changed to 27'- 39', 203B: 32' changed to 22' – 34', 204A: 46' changed to 48', and 204C: 34' changed to 36'. [See Appendix for Standard Drawings]

<sup>5</sup> 10' foot multi-use path to be provided on one side for bicycle and pedestrian travel. Multi-use path to be physically separated (via curb or raised median treatment) in urban areas or 2-foot striped buffer in rural transition areas. 8-foot paved shoulder to be provided, as available, opposite multi-use path.

<sup>6</sup> Paved shoulder to include 7' travel space and 2' buffer on both sides.

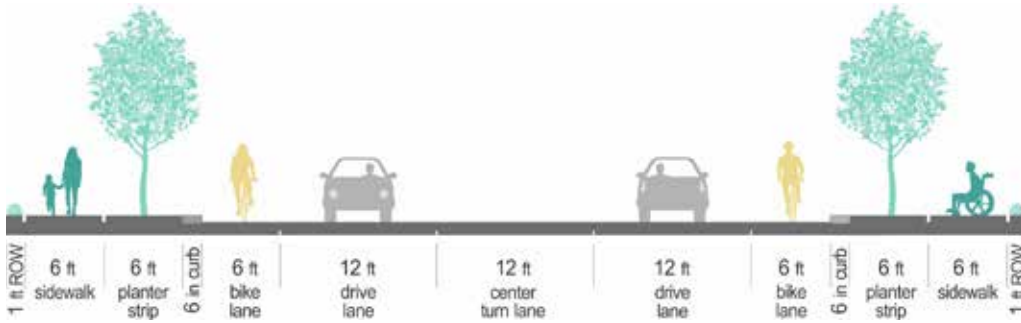
<sup>7</sup> For reference, the minimum clear widths required for fire apparatus access roads (fire lanes) under the Oregon Fire Code (OFC) may take precedence in some situations (20' fire lane width required where there are no fire hydrants, 26' fire lane width required for street with fire hydrants, per OFC 503 & OFC App. D). Fire lanes up to 26 feet wide shall have fire-lane/no parking signs posted on both sides, while fire lanes wider than 26 feet (but less than 32 feet) shall be posted on one side (OFC D103.6.1&2).

<sup>8</sup> Commercial or Industrial design standards may be applied at the City's discretion based on land use designations and/or specific development characteristics.

<sup>9</sup> 11' motor vehicle lanes may be applied in Industrial areas at the City's discretion based on land use designations and/or specific development characteristics.

Figure 8a. Arterial Street Design Standards – Urban

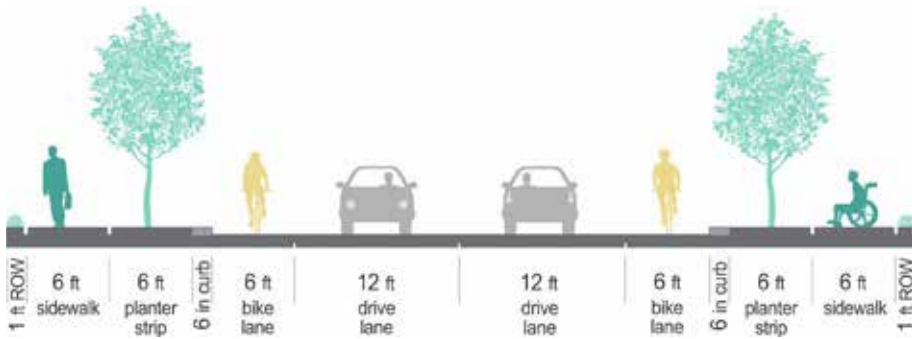
3-Lane Arterial



ODOT requires a minimum of one foot of ROW behind the sidewalk.

A design exception from ODOT will be required for a 12-foot median. The standard is 16 feet. It may be challenging obtaining a design exception for a center turn lane less than 14 feet.

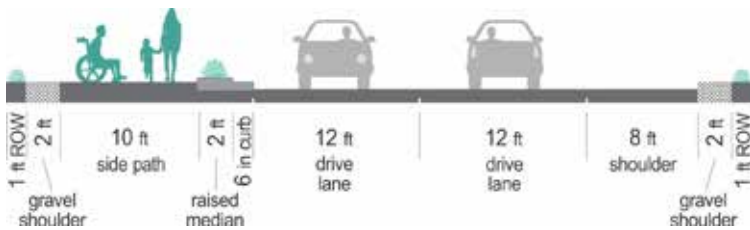
2-Lane Arterial



ODOT requires a minimum of one foot of ROW behind the sidewalk.

A design exception from ODOT will be required to not include a 16-foot median.

2-Lane Side-Path - for Constrained Environment (e.g., S Front Street)



ODOT requires a minimum of one foot of ROW behind the sidewalk.

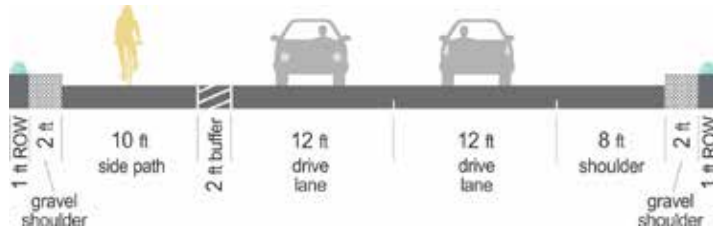
Alternative options for the raised median include planter strips or other physical barriers.

Side-Path can be located on either side of the roadway.



Figure 8b. Arterial Street Design Standards – Rural Transition

2-Lane Side-Path - for Rural Transition

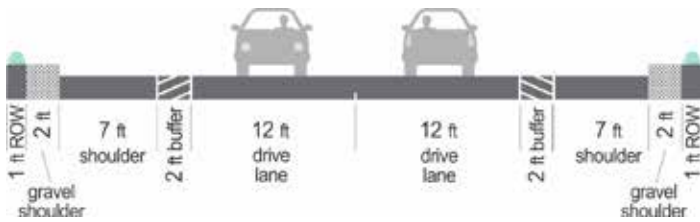


ODOT requires a minimum of one foot of ROW behind the sidewalk.

Alternative options for the buffer include: rumble strips or physical barriers.

Side-Path can be located on either side of the roadway.

2-Lane Paved Shoulder - for Rural Transition



ODOT requires a minimum of one foot of ROW behind the sidewalk.

Figure 8c. Arterial Street Design Standards – Downtown Commercial Standard

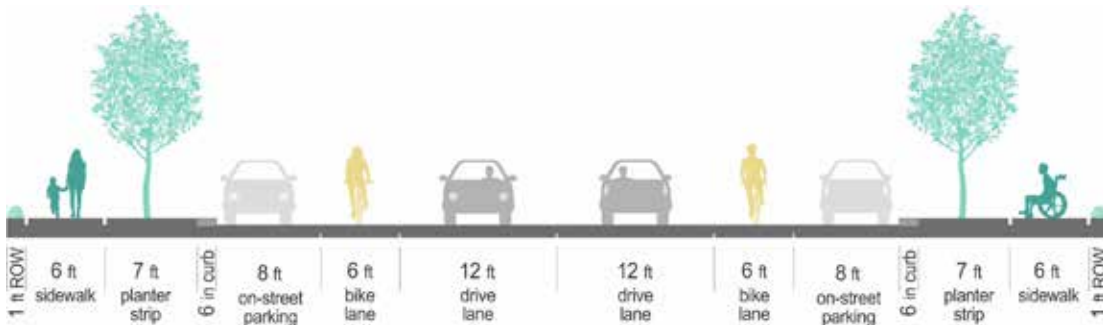
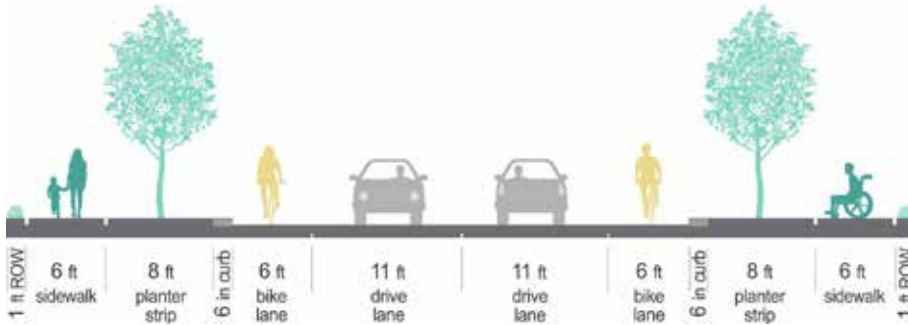
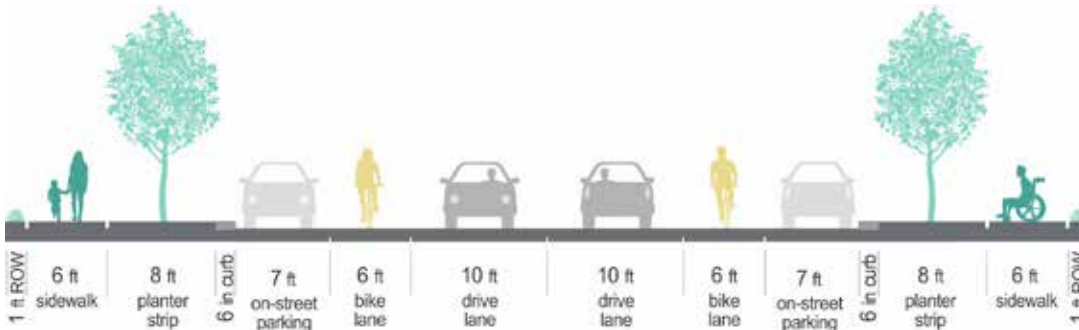


Figure 9. Major Collector Street Design Standards

Major Collector – Residential (No Parking)



Major Collector - Residential (Parking on one or both sides)



Major Collector – Commercial (Parking on one or both sides)

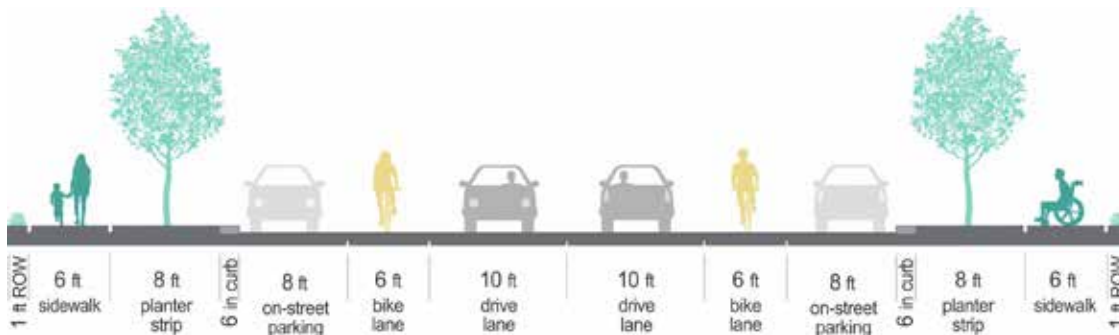
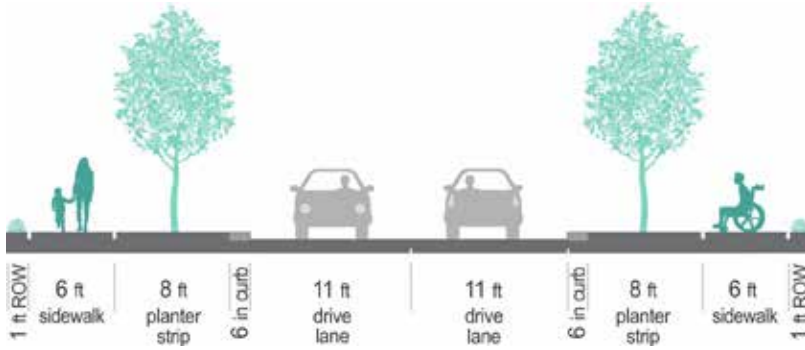
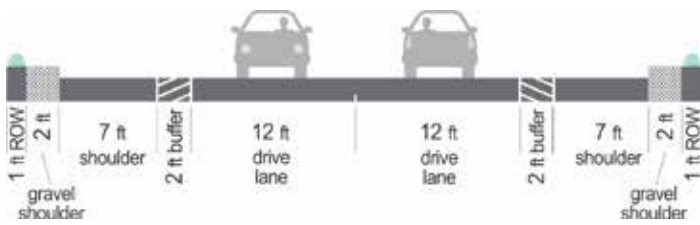


Figure 10. Minor Collector Street Design Standards

Residential (No Parking)



Residential (Parking on one or both sides)



Commercial/Industrial (Parking on one or both sides)

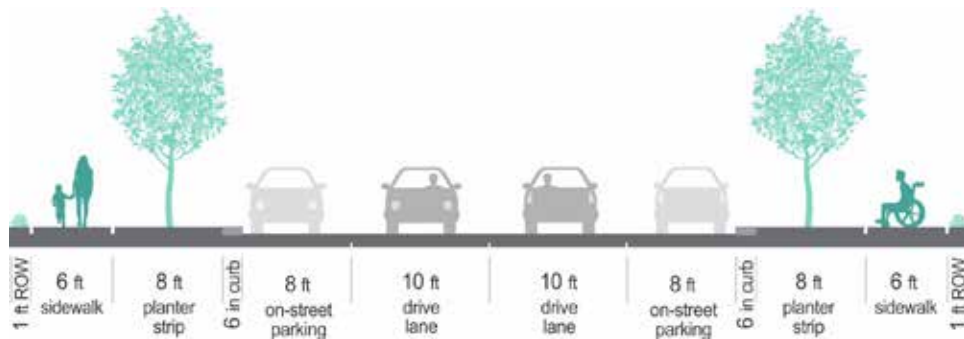
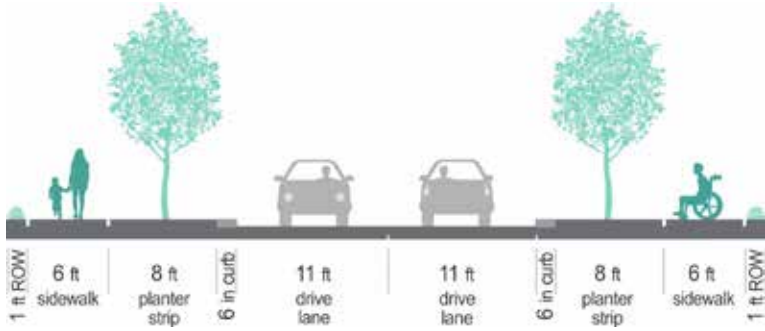
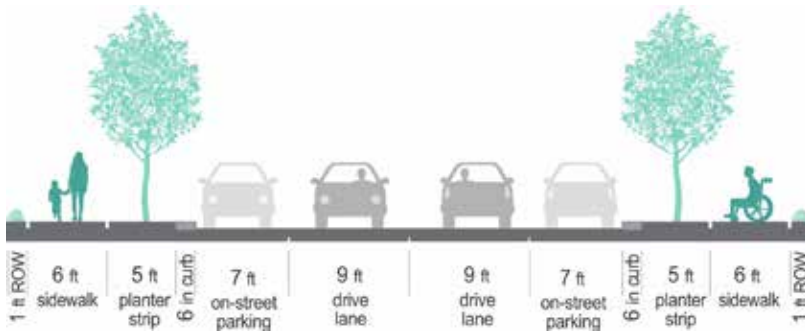


Figure 11. Local Street Design Standards

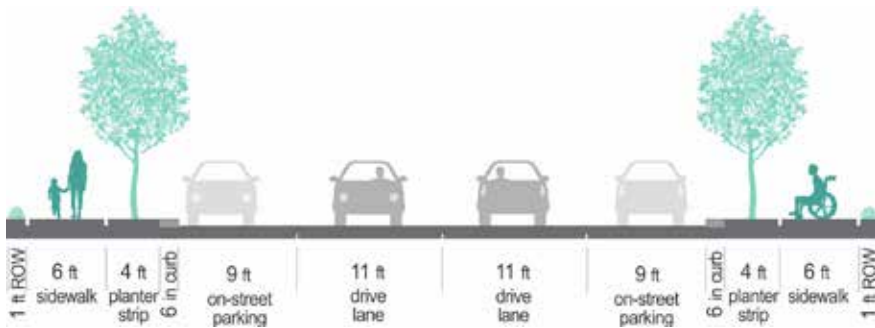
Residential (No Parking)



Residential (Parking on one or both sides)



Downtown Commercial (Parking on one or both sides)



### **Application to ODOT Roadways**

OR 99 and OR 222 are under Oregon Department of Transportation's (ODOT) jurisdiction and are subject to design standards in ODOT's Highway Design Manual. Modifications or exemptions may be considered as part of new projects on state highways. Coordination between ODOT, Lane County, and City staff would likely be needed wherever exemptions to ODOT design standards are proposed.

Cross-sections are identified for arterials in three categories: typical (urban), constrained (urban) and rural transition. Where typical arterial cross-section standards cannot be met (due to lack of right-of-way, etc.) the constrained arterial cross-section may be applied. The only case in Creswell where ROW is constrained on a state facility is on S Front Street adjacent to the railroad tracks. Two rural transition cross-sections are defined. These are suggested to be applied outside of the City Limits and adjacent to the UGB. The rural transition standards also reflect the City's preferred cross sections for intercity rural travel on Camas Swale Road/Oregon Avenue, OR 222/Cloverdale Road, OR 99/N Mill Street, and OR 99/S Front Street.

### **Application to Lane County Roadways**

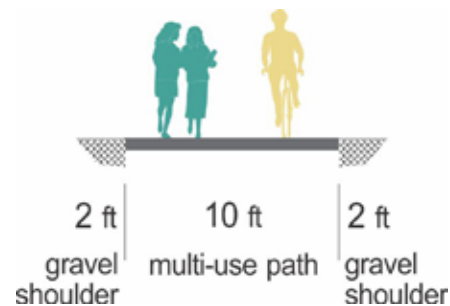
Although City street standards and classifications differ from Lane County standards, Lane County defers to City standards within the Urban Growth Boundary (UGB). The Lane County TSP states that for "improvements to a transportation facility within an urban growth boundary, the City TSP and applicable road design standards will apply."<sup>1</sup>

As shown in Figure 7, all or portions of several significant roadways within the Creswell Urban Growth Boundary are under Lane County jurisdiction. These roadways (within the UGB) include Niblock Lane, Martin Road, Scott Lane, Cherry Lane, Morse Ave (N 6th Street to Harvey Road), Hillegas Avenue (N 6th St. to Harvey Road), Scott Avenue (N 6th Street to Harvey Road), and the northern portion of N 6th Street (North of Scott Avenue).

### **STANDARD MULTI-USE PATH CROSS-SECTION**

A multi-use path is an off-roadway facility that provides for pedestrian and bicycle travel. Multi-use paths are often located near parks, natural areas, and residential designated green spaces. According to the Creswell Development Code<sup>2</sup>, multi-use paths should be concrete or asphalt and at least 10 feet wide. In natural areas surfaces such as gravel or bark chip may be considered as alternatives to paving. Figure 12 shows a typical cross-section for a multi-use path.

**Figure 12. Multi-Use Path Design Standards**



<sup>1</sup> Lane County Transportation System Plan Volume 1, September 2017. Policy 8-a(iii).

<sup>2</sup> Creswell Development Code, 3.1.300 Pedestrian Access and Circulation, B. Walkway Design and Construction, 3. Walkway Width and Surface.

## WALKING AND BIKING TREATMENT GUIDELINES

A network of walking and biking facilities is envisioned to connect major destinations and neighborhoods in Creswell. 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. The Creswell Development Code<sup>1</sup> states that bicycle right-of-way and street section requirements are based on anticipated level of use. Furthermore, as development occurs, the functional

classification of the roadway will guide the pedestrian and bicycle design.

It should be noted that bicycle and pedestrian enhancements along state highways must be approved by ODOT. Specific designs on highway crossing treatments are to be determined at the time of project development and are subject to ODOT engineering studies and approval by the Regional Traffic Engineer and/or State Roadway/Traffic Engineer.

## ACCESS MANAGEMENT STANDARDS

Creswell experiences congestion delay and additional safety concerns in areas of the community that have developed with more frequent driveway access points. Road access points are often managed to balance the need to provide safe, efficient, and timely travel with the ability to access individual destinations. Implementation of access management standards can improve safety, reduce congestion, and potentially lessen the need to invest in capacity-adding roadway projects.

Access management is applied in Creswell through access spacing standards. The standards shown in Table 7 define minimum distances between street intersections or private accesses (driveways) for streets under the jurisdiction of the City. City access spacing standards apply for roadways under City jurisdiction, as shown in Figure 7.

Within developed areas of the city, streets not complying with these standards can be improved with strategies that include shared access points<sup>2</sup>, access restrictions (through the use of a median or channelization islands) or closed access points. New streets or redeveloping properties must comply with these standards, to the extent practical (as determined by the City). Residential access to arterial or major collector streets should be provided only if alternate access is not feasible.

Varying spacing requirements by posted roadway speed recognizes the longer reaction time needed for safe vehicle operations at higher speeds. Updated standards for arterials and major collectors based on posted speeds are included in Table 7.

<sup>1</sup> Creswell Development Code, 3.4.100 Transportation Standards, F. Minimum Rights-of-Way and Street Sections.

<sup>2</sup> Development Code Section 3.1.200.J addresses requirements for Joint and Cross Access related to land divisions.

**Table 7. Creswell Access Spacing Standards for City Roadways**

Roadway Type	Posted Speed	Current Minimum Distance	Updated Minimum Distance
Arterial	35 mph or more	150 feet	300 feet
	30 mph or less	150 feet	200 feet
Major Collector	35 mph or more	75 feet	200 feet
	30 mph or less	75 feet	100 feet
Minor Collector	Any	50 feet	50 feet
Local Street	Any	25 feet	25 feet

The updated City standards would better align arterial standards with ODOT standards for OR 99 and OR 222. However, differences remain. In comparison to ODOT access spacing standards for

OR 99 and OR 222, the existing and proposed City standards for arterials allow more frequent (closer spacing) for accesses.

## MOBILITY STANDARDS

The City of Creswell does not have adopted mobility standards. City of Creswell mobility standards will be established consistent with Lane County standards:

- Signalized intersections: Minimum level of service of “E” and maximum volume-to-capacity (v/c) ratio of 0.85.
- Unsignalized intersections: Minimum level of service of “E” and maximum v/c ratio of 0.95 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”

and maximum v/c ratio of 0.95 will apply to the overall intersection for all-way stop controlled intersections and to the critical approach for roundabouts.

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

## LOCAL STREET CONNECTIVITY

Local Street connectivity is critical to growing an efficient and effective street network in Creswell. Local street connectivity concepts are presented in Figure 5 (p. 37). As development occurs, the identified local street connections should be made where feasible, unless prevented by barriers. Proposed alignments are conceptual, as constructed alignments will be determined through development review and project design.

Examples of barriers may include I-5, railroad tracks, existing land uses or natural barriers such as topography and wetlands. Determination of when barriers may be considered significant enough to preclude local street connections from being constructed will be made by City staff through the development review process.

The suggested connections aim to minimize neighborhood traffic impacts by encouraging balanced traffic flows on neighborhood routes and providing more direct travel options for all modes. Proposed local street connections can incorporate neighborhood traffic management into their design and construction as needed, to protect existing neighborhoods from potential traffic impacts of extending temporarily-stubbed streets. All stub streets should have posted notice signs indicating that the road way is intended to be extended with new development to enable future connectivity (Temporarily closed).

Additionally, new development that include new streets or street extensions, should meet the following connectivity guidelines:

- Provide full street connections between connections except where prevented by barriers.
- Provide bicycle and pedestrian access ways except where prevented by barriers.
- Limit use of cul-de-sacs and other closed-end street systems to situations where barriers prevent full street connections.
- Include street cross-sections demonstrating dimensions of ROW improvements, with streets designed for posted or expected speed limits.
- Provide for efficient neighborhood circulation for existing and potential developments on adjacent properties.





## NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

Neighborhood Traffic Management (NTM), or traffic calming, refers to street design techniques used to promote safe, slow streets. These treatments are primarily applied in residential and mixed-use areas where vulnerable users, such as children, may be present. These tools are intended to mitigate the impacts of traffic on neighborhoods and business districts where greater safety is prioritized over mobility. 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

Figure 13 includes a visual summary of common neighborhood traffic management strategies. Appropriate treatments may depend on the character of the surrounding area, costs, and local preference.

**Figure 13. Example Images of Traffic Management Tools**

**Chicanes**



*www.pedbikeimages.org/Dan Burden*

**Chokers**



*www.pedbikeimages.org/Dan Burden*

**Curb Extensions**



*www.pedbikeimages.org/Carl Sundstrom*

**Diverter**



*www.pedbikeimages.org/Adam Fukushima*

**Median Islands**



*www.pedbikeimages.org/Dan Burden*

**Raised Crosswalks**



*www.pedbikeimages.org/Tom Harned*

**Speed Cushions**



*NACTO Urban Street Design Guide*

**Speed Hump**



*www.pedbikeimages.org/Dan Burden*

**Traffic Circles**



*www.pedbikeimages.org/Carl Sundstrom*

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 8 lists common traffic calming applications and suggests which devices may be appropriate along

various streets in the city. Additional design details for the toolbox of potential NTM measures are included in the Technical Appendix for reference. NTM tools are generally applicable to local streets and minor collectors but may also be applied in limited cases on major collector streets. NTM tools are generally not applied on arterials unless part of an overall district design or in conjunction with safety programs such as Safe Routes to School.

**Table 8. Traffic Calming Measures by Street Functional Classification**

Traffic Calming Application	Use by Function Classification				Impact	
	Arterials*	Major Collectors	Minor Collectors	Local Streets	Speed Reduction	Traffic Diversion
Chicanes			•	•	•	•
Chokers			•	•	•	•
Curb Extensions	•	•	•	•	•	
Diverters (with emergency vehicle pass-through)			•	•		•
Median Islands	•	•	•	•	•	
Raised Crosswalks			•	•	•	•
Speed Cushions (with emergency vehicle pass-through)		•	•	•	•	•
Speed Hump		•	•	•	•	•
Traffic Circles		•	•	•	•	•

\*ODOT traffic approval would be required for any design treatments applied to facilities under state jurisdiction.

The City of Creswell currently does not have a formal neighborhood traffic management program. If such a program were desired to help respond to future issues, suggested elements include: identifying a

formalized process for concerned citizens to follow, and a required traffic impact study to assess impacts to local streets (e.g., where traffic volumes could exceed the 1,500 vehicles per day.)



# 7

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## IMPROVEMENTS



This Transportation System Plan takes a network-wide multi-modal approach to identifying transportation system solutions. In the past, most transportation planning efforts were focused on projects that expand streets and intersections to improve motor vehicle travel time. Many of these efforts resulted in unintended consequences such as creating significant barriers to walking and biking and detracting from the livability, health, safety, and fiscal well-being of the community.

With several mobility deficiencies identified through 2040, the Creswell TSP Update is oriented towards a complementary approach of identifying intersection operations improvements alongside multi-modal connections that provide safe access for all travelers. This approach helps to encourage multiple travel options, increase street connectivity, balance travel demand, and promote a more sustainable transportation system.

Many projects identified in the TSP update have been carried forward from the 1998 TSP. In the development of this System Plan, the base year performance was updated to 2017, and several projects were completed or otherwise addressed through new transportation infrastructure.

New solutions have been added to address the broader community multimodal goals, objectives, and needs identified in this System Plan. Most are oriented towards improving the function of the existing system without major roadway widening projects. Solutions are aimed at managing travel demand, providing multi-modal connectivity, and creating more options for safe travel in the community. Other projects have been identified based on project team recommendations and input received in Project Advisory Committee meetings, stakeholder interviews, and community events. Nearby projects from the Lane County TSP<sup>1</sup> are included as well.

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<sup>1</sup> Lane County Transportation System Plan Volume 1, September 2017.

## EVALUATION

Evaluation criteria are identified to objectively consider the effectiveness of alternative solutions and strategies addressing the goals and objectives presented in Chapter 2. These project-level criteria provide a point-based rating method used to create a consistent and objective framework for evaluating the large number of capital projects. The evaluations are not prescriptive but are intended to help guide initial prioritization of solutions and development of a financially constrained list.

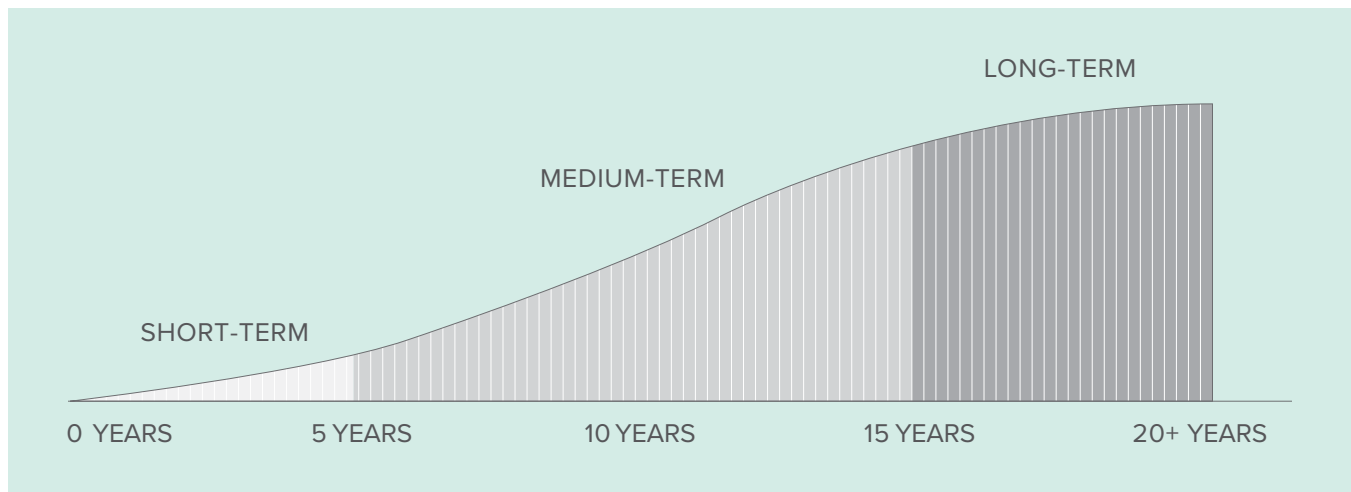
A complete list of the evaluation criteria and scoring results for the proposed projects are included in Volume 2. Scores for projects were grouped as high, medium or low. Within some modal categories, particularly walking and biking, scores were very similar due to the nature of the evaluation criteria.

## PRIORITIZING SOLUTIONS

Prioritization is informed by the results of the solutions evaluation described above, project team judgment about effectiveness relative to estimated cost, and input received from City staff, Project Advisory Committee meetings, stakeholder interviews, and community events. The initial list of solutions was refined through further community engagement.

The timing of a project's implementation depends on growth and development with Creswell. However, projects are categorized generally in terms of short-term (0-5 years), medium-term (5-15 years), and long-term (15 or more years) to reflect the overall TSP prioritization and current City staff expectations related to project timing. The project timing also incorporates proposed interim solutions.

### PROJECT CATEGORIZATION



## PLANNED TRANSPORTATION SYSTEM

Tables 9 through 13 and Figures 14 through 17 describe the recommended solutions for Creswell's transportation system through the year 2040. Solutions are presented in five categories (order does not imply priority):

1. Multi-modal (has benefits for auto, pedestrian, and bicycle modes)
2. Motor Vehicle Mobility (has benefits for motor vehicles only)
3. Pedestrian (has benefits people walking only)
4. Bicycle (has benefits for people bicycling only)

Each solution is assigned a primary funding source and responsible lead agency for planning purposes, however, these designations do not create any obligation for funding. A few important comments about each funding source:

- **City projects** – the City's transportation SDC fee program provides funding for projects that expand the system to provide additional capacity and cannot be used to address current maintenance and/or operational needs. The City also earns miscellaneous revenue received from various sources and interest revenue from balances held in Street Fund, Bicycle & Footpath Fund, and SDC fund.
- **State projects** – the City can use the project information to apply for grants or other funding mechanisms to fund these projects. The State requires the City to submit and compete for funding within their Transportation Improvement

Planning process, through which the State may opt to allocate discretionary funds in the future.

- **Lane County projects** – the City highlights projects under County jurisdiction it views as important over the planned 2040 horizon, some (but not all) of which are included in the County's Transportation System Plan. Ultimately, project prioritization of these projects will require coordination with the County to proceed.

The City can, however, choose to use its funds to help support State or County projects thus expediting the timeline on those projects the City would like prioritized. "Private development" projects will likely be built in coordination with land use actions and future development.

## ALTERNATIVES FOR THE OR 99 JOG

Several alternatives were evaluated to address operational and safety issues at, and between, the two adjacent intersections on OR 99 at Mill Street and at Front Street, referred to as the OR 99 Jog. These alternatives included installing connected (dual) traffic signals at the Front Street and Mill Street intersections, reclassifying OR 99 to S Mill Street (to allow relaxed standards), transferring jurisdiction to the city, constructing a new OR 99 Jog along the proposed extension of D Street, and turn prohibitions at the Front Street intersections. None of these alternatives by themselves would address all the deficiencies.

The preferred solution is a multi-phase strategy to address mobility, safety, and connectivity needs that were identified. Note that the preferred solution is conceptual. Additional analysis, refinement, public involvement, and approval by ODOT, will be required during a future design development process.

The strategy includes the following projects (see conceptual configurations below):

- Interim improvements at the Oregon Avenue/OR 99 (Front Street) intersection [Project I1i] to include pedestrian crossing improvements and turn prohibitions for northbound left, northbound through, and eastbound left movements.
- Improving multimodal east-west connectivity parallel to Oregon Avenue (Cobalt Lane, D Street, F Street, and Kings Row) through roadway extensions [Projects R1-R12], especially those that will reduce demand on Oregon Avenue. Roadway extensions that include new at-grade

rail crossings would need to be coordinated with corresponding relocations of existing at-grade rail crossings (potentially at Harvey Lane and or S Mill Street<sup>1</sup>).

- Constructing a new traffic signal at Oregon Avenue/OR 99 (Front Street) and replacing the existing traffic signal at Oregon Avenue/OR 99 (Mill Street) intersections [Project I1j]. The two traffic signals would run on the same controller as the traffic signal at Mill Street, effectively running as one traffic signal. This coordination is critical to manage traffic during train crossings, and to keep vehicles flowing safely and efficiently. In addition, intersection improvements for safe pedestrian and bicycle crossings and truck turn movements should be constructed in conjunction with the traffic signal improvements.

Appropriate signage would be needed to route vehicles traveling through downtown Creswell.

Overall the project team recommends the strategy above to improve intersection safety and provide opportunity for short-term improvements.

<sup>1</sup> Existing at-grade crossings could be replaced by grade-separated crossing and or closures/relocations to new crossings.



Figure 14. Existing Conditions



Figure 15. Interim Improvements

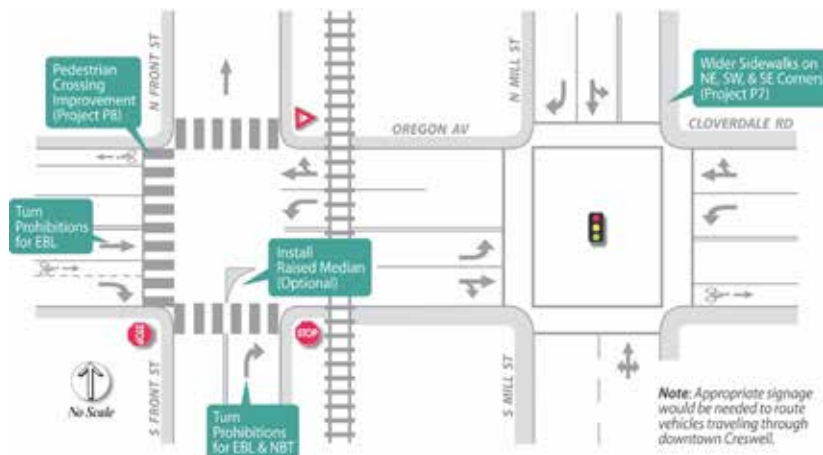


Figure 16. Full Future Build



*Note: The Existing curb extension on the NW corner of the Front St. intersection is not shown in these diagrams. It would need to be removed in order to implement the proposed solutions.*

## MULTI-MODAL PROJECT LIST

A set of multi-modal projects are listed below in Tables 9 through 12 and illustrated in Figures 14 through 17. Multi-modal projects were classified as roadway modernizations (Table 9), roadway extensions (Table 10), roadway enhancements (Table 11), and multi-use paths (Table 12).

The 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. All multi-modal roadway projects would include sidewalks and/or bicycle facilities consistent with standard roadway cross-sections.

**Table 9. Roadway Modernization Projects**

Project ID	Name	Description	Priority	Related Projects
MM1	S 5th St. Modernization	Upgrade to major collector standards Oregon Ave. A St. to D St. [As of 2018, improvements under construction north of Oregon Ave.].	Medium	P17
MM2	D St. Modernization	Upgrade to major collector standards S 5th St. to OR 99 (S Front St.).	Medium	R5b
MM3	A St. Modernization	Upgrade to minor collector standards N 4th St. to N Front St. Project to include bike lanes for continuity.	High	-
MM4	OR 99 (N Mill St.) Modernization - Urban*	Upgrade to arterial standards Oregon Ave. to North UGB. Project to include transition from urban to rural cross-section.	High	MM5ii, MM11, MM20, R1, R9, P7, I1, I1i, I1ii
MM4i	Design Project Assessment - OR 99 (N Mill St.) Modernization	Design project to assess actual dimensions/costs of the OR 99 Modernization project.	High	MM4
MM5	OR 99 (S Front St.) Modernization*	Upgrade to arterial standards Oregon Ave. to South UGB. Proposed cross-section would provide sidewalk on west side and shoulder on east side. Project to include transition from urban to rural cross-section.	High	MM5i, P8, I1, I1i, I7
MM5i (Interim)	OR 99 (S Front St.) Interim Modernization*	Apply temporary treatment for access management and separated bicycle and pedestrian environment on west side from Oregon Ave. to South UGB. Treatment to provide physical barrier (e.g., planter, traffic separator, delineator post).	High	MM5, MM5ii, P8, I1, I1i, I1ii, I7
MM5ii	Design Project Assessment - OR 99 (S Front St.) Modernization	Design project to assess actual dimensions/costs of the OR 99 Modernization project.	High	MM5, MM5i
MM6	OR 222 (Cloverdale Rd.) Modernization*	Upgrade to arterial standards Ziniker Ln. to East UGB. Project to include transition from urban to rural cross-section.	High	I4, I6
MM7	Kings Row Modernization	Upgrade to minor collector standards Holbrook Ln. to proposed extension [Project R2].	Low	R2a, R2b, I7
MM8	S 10th St. Modernization	Upgrade to major collector standards Oregon Ave. to South UGB.	High	P6

Project ID	Name	Description	Priority	Related Projects
MM9	Niblock Ln. Modernization (west)	Upgrade to major collector standards West terminus to Harvey Rd.	High	MM10, P4
MM10	Niblock Ln. Modernization (east)	Upgrade to minor collector standards Harvey Rd. to Grassland St.	Medium	MM9, P4
MM11	S Mill St. Modernization	Upgrade to minor collector standards OR 99 (S Front St.) to Oregon Ave.	Medium	MM4, MM20, R2b, P7, I1, I1i
MM12	Melton Rd. Modernization**	Upgrade sections in UGB to major collector standards Garden Lake Park to North terminus.*	Medium	R3, MT1, P12
MM13	Dale Kuni Rd. Bridge Modernization**	Reconstruct to widen bridge over Hill Creek to major collector standards.	Low	-
MM14	Dale Kuni Rd. Modernization	Construct/complete west frontage from Old Dale Kuni Rd. to OR 222 (Cloverdale Rd.) to major collector standards.	Medium	-
MM15	Dale Kuni Rd. Modernization (Outside UGB)**	Construct to minor collector standards OR 99 (N Mill St. to Creswell UGB) with 11' travel lanes and 4' shoulders on both sides. Integrate systemic safety measures (Outside UGB).*	Low	-
MM16	Harvey Rd. Modernization (Outside UGB)**	Construct to minor collector standards OR 99 (N Mill St. to Creswell UGB) with two 11' travel lanes and 4' shoulders on both sides. Integrate systemic safety measures (Outside UGB).*	Low	-
MM17	Camas Swale Rd. Modernization**	Upgrade to arterial standards West UGB to 10th St.	Medium	P6
MM18	Art Lott Lane Modernization	Upgrade to minor collector standards OR 99 (N Mill St.) to East terminus.	Medium	-
MM19	Martin Road Modernization**	Upgrade to minor collector standards OR 99 (N Mill St.) to East terminus.	Medium	-
MM20	OR 99 (N Mill St.) Modernization - Rural*	Upgrade to arterial standards North UGB to Peebles Rd. (in Goshen). Project to include transition from urban to rural cross-section.	High	MM4, I9
MM20i	Design Project Assessment - for OR 99 (N Mill St.) Modernization (Rural)	Design project to assess actual dimensions/costs of the OR 99 Modernization project.	High	MM20
MM21	N 10th St. Modernization	Upgrade to minor collector standards Oregon Ave. to A St. Project to include bike lanes for continuity. This project is an alternative for [Project B1].	Medium	P6, P19, B1
MM22	S 2nd St. Modernization	Upgrade to minor collector standards Oregon Ave. to South terminus. Integrate with bicycle boulevard treatment [Project B7].	High	B7
MM23	Creswell Mobility Hub Enhancements	Provide on-site improvements to enhance intermodal connections between transit/shared-ride services, and all other modes at the C St./S 1st St. bus stop and park and ride.	Medium	P11

\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

\*\*Improvements for portions of Camas Swale Road, Melton Road, Dale Kuni Road and Harvey Road located outside of the city limits would be subject to state review and need to be coordinated with Lane County.

## PLANNED ROADWAY EXTENSIONS/ENHANCEMENTS

Roadway extensions are identified in Table 10 and illustrated in Figures 14 and 15. The 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 as discussed in Chapter 5. Construction (or funding) of new roadways (or extensions) are typically required as conditions of approval for new development along or near the proposed roadway alignment.

It is important to note that new roadways should be aligned with existing street intersections when

constructed, per the Creswell Public Works Design Standards. Alignments shown on maps within this document are conceptual. Final alignments will be dependent on approved development plans by the roadway jurisdiction at the time of construction.

Several of the roadway extensions will include new railroad crossings. New rail crossings are generally achieved as part of an overall reduction in total number of at-grade crossings. Therefore, new rail crossings may be viewed as alternatives that are advanced as development and other funding opportunities arise in the future.

**Table 10. Roadway Extension Projects**

Project ID	Name	Description	Priority	Related Projects
R1	Cobalt Ln. Extension (west)*	Construct Cobalt Ln. as major collector extension to OR 99 (N Mill St.). Project would include new rail crossing.**	Medium	MM4, R9
R2a	Kings Row Extension (east) [Alignment Alternative A]*	Construct Kings Row as major collector extension to OR 99 (S Front St.). Alignment at South terminus of S 2nd St.	Medium	MM7
R2b	Kings Row Extension (east) [Alignment Alternative B]*	Construct Kings Row as major collector extension to OR 99 (S Front St.). Alignment at S Mill St Intersection.	High	MM7, MM11, I7
R3	Melton Rd. Extension	Construct Melton Rd. as major collector extension to Dale Kuni Rd from Garden Lake Park.	Low	MM12
R4	New Roadway 1*	Construct new roadway as minor collector [commercial] from the existing commercial driveway at the I-5 SB Ramps terminus to proposed Extension of F St. [Project R6].	High	R5a, R5b, R6, R7, I5
R5a	F St. Extension 1*	Construct F St. as minor collector extension from OR 99 (S Front St.) to S Mill St. Project would include new rail crossing.** Alternative to new crossing at D St. [Project R5b].	Medium	R4, R6
R5b	D St. Extension 1*	Construct D St. as major collector extension from OR 99 (S Front St.) to S Mill St. Project would include new rail crossing.** Alternative to new crossing at F St. [Project R5a].	Medium	MM2, R4, R7

Project ID	Name	Description	Priority	Related Projects
R6	F St. Extension 2	Construct F St. as minor collector extension S Mill St. to New Roadway 1 [Project R4].	Low	R4, R5a
R7	D St. Extension 2	Construct D St. as major collector extension S Mill St. to New Roadway 1 [Project R4].	Low	R4, R5b
R8	Kings Row Extension (west)	Construct Kings Row as minor collector extension connecting S 9th St. and S 10th St.	Low	-
R9	Cobalt Ln. Extension (east)*	Construct Cobalt Lane as a minor collector from OR 99 [Project R1] to Martin Rd. east terminus.	Medium	R1

\*New intersection access on ODOT jurisdiction state highways require review and approval by ODOT.

\*\*New at-grade rail-crossings require coordination with ODOT rail and railroad operators and typically necessitate relocating or eliminating at-grade crossings at other locations.

One further roadway project was identified in the 1998 TSP can be seen in Table 11 below. This project is would support economic development opportunities.

**Table 11. Roadway Enhancement Projects**

Project ID	Name	Description	Priority	Related Projects
R10	Gateway Enhancements*	Signage and other landscaping treatments to various gateway areas. Including OR 99 north/south entrances, Oregon Ave. west entrance, and Cloverdale Rd. east entrance.	Low	-

\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

## PLANNED MULTI-USE NETWORK

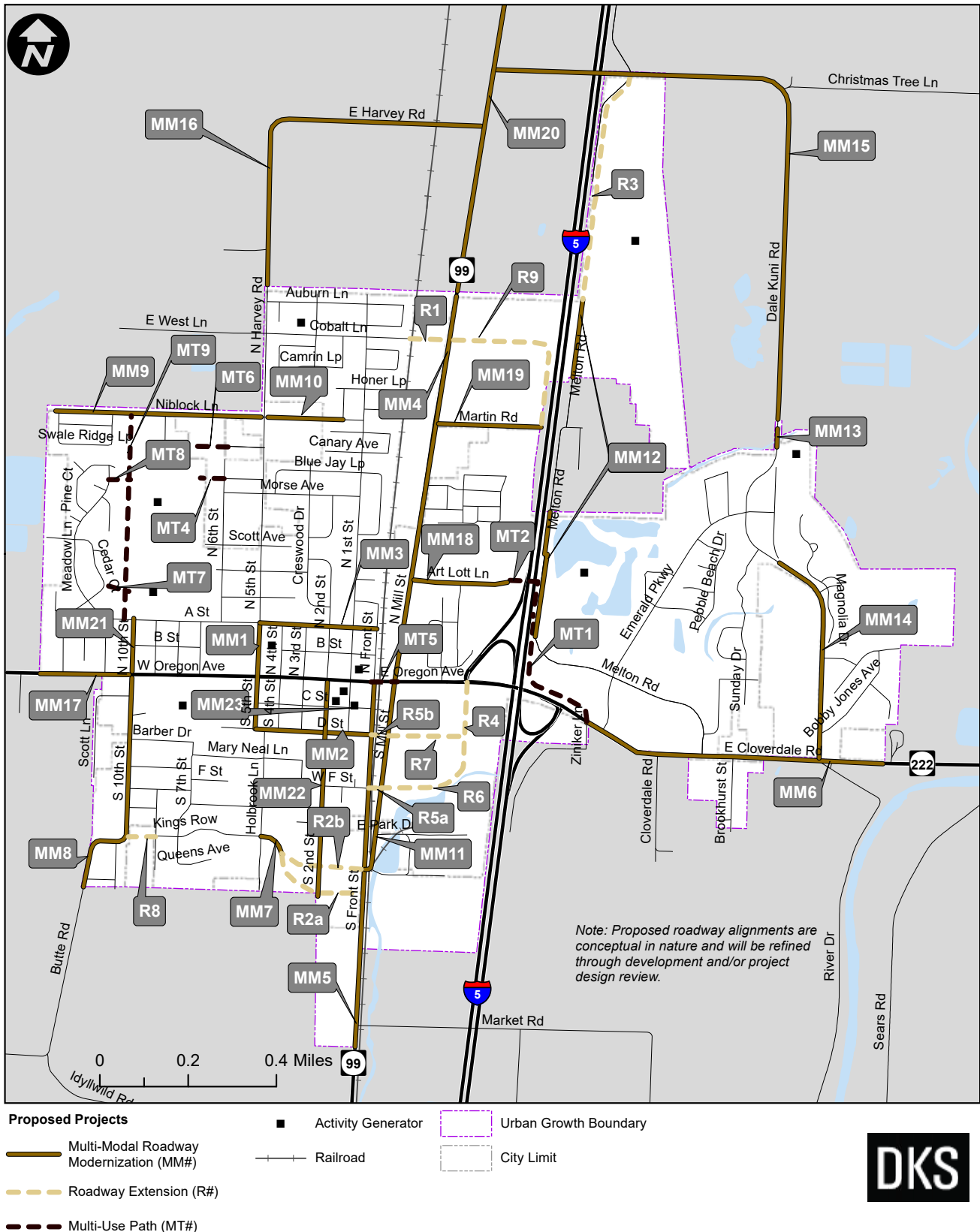
Multi-use path projects are listed below in Table 12 and were illustrated in Figures 14, 16, and 17. The projects providing missing links in the bicycle and pedestrian network in Creswell.

**Table 12. Multi-Use Path Projects**

Project ID	Name	Description	Priority	Related Projects
MT1	Frontage Rd. Multi-Use Path	Multi-use path connecting OR 222 (Cloverdale R.) near I-5 NB ramp terminus to Melton Rd. utilizing former alignment of Melton Rd. Project to be constructed in coordination with proposed crossing at Melton Rd. [Project P12].	Low	MT2, P12
MT2	Art Lott Ln. Multi-Use Path	Multi-use path connecting Art Lott Ln. to Garden Lake Park. Project to include construction of a crossing across I-5. Project to be constructed to connect to proposed Project MT1 and Project P12 crossing.	Medium	MT1, P12
MT4	Cherry Ln. Multi-Use Path	Multi-use path connecting N 6th St. to Creswell High School.	High	-
MT5	Oregon Ave. Multi-Use Path*	Multi-use path connecting Front St. to Mill St. across rail-crossing. Path to provide separation from roadway vehicles. Integrate with intersection improvements [Project I1].	Medium	P7, P8, B4, I1, I1i
MT6	Leah Ln. Multi-Use Path	Multi-use path connecting Leah Ln. to east side of Creswell High School Parking Lot.	Low	-
MT7	Cedar Ct. Multi-Use Path	Multi-use path connecting Cedar Ct. to Creslane Elementary School.	Medium	MT9
MT8	Meadow Ln. Multi-Use Path	Multi-use path connecting Meadow Ln. to the School District Property.	High	MT9
MT9	NW School District Multi-Use Path	Multi-use path connecting Niblock Ln. to A St. along the west edge of the school district property (including Creslane Elementary School and Creswell High School).	High	MT7, MT8

\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

Figure 17. Multimodal Projects



## PLANNED MOTOR VEHICLE MOBILITY IMPROVEMENTS

This section identifies potential solutions to address the motor vehicle mobility needs and deficiencies identified for 2040 future conditions. Potential intersection improvements are identified below

(Table 13) and illustrated in Figure 15. Detailed traffic analysis of potential solutions and OR 99 Jog alternatives is included as an addendum to the memorandum.

**Table 13. Mobility Projects**

Project ID	Name	Description	Priority	Related Projects
I1	Oregon Ave./OR 99 "Jog" Intersection Improvements <sup>1*</sup>	Intersection/segment Improvements at Oregon Ave. intersections at OR 99 (Mill St.) and OR 99 (Front St.) and rail crossing. (Evaluated as connected/dual traffic signals at both intersections). Improvements to include redesign for bicycle/pedestrian crossings and truck turn movements.	High	MM4, MM5ii, MM11, I1i, I1ii, P7, B4
I1i	Oregon Ave./OR 99 (Front St.) Interim Intersection Improvements*	Oregon Ave./OR 99 (Front St.) intersection improvements including pedestrian crossing improvements on south leg and turn prohibitions for northbound left, northbound through, and eastbound left movements. Project provides interim improvements to integrate with long-term strategy for proposed OR 99 Jog improvements [Project I1].	High	MM5, MM5ii, I1, I1ii, P8, B4
I1ii	Design Project Assessment - for OR 99 (Jog) Intersection Improvements	Design project to assess actual dimensions/costs of the OR 99 Jog project.	High	I1, I1i
I2	OR 222 (Cloverdale Rd.)/ I-5 NB ramps Intersection Improvement*	Intersection Improvement. (Evaluated as widening of the I-5 NB ramp to construct an additional NB right turn lane).	Medium	MT1, P9, B2,
I3	Emerald Pkwy./ Melton Rd. Intersection Improvement	Improve by converting to All-Way stop control.	Medium	P10
I4	OR 222 (Cloverdale Rd.)/ Emerald Pkwy. Intersection Improvement*	Intersection Improvement. (Evaluated as construction of additional southbound left turn lane and Cloverdale Rd. widening to extend center turn lane to the east to allow for two-stage left turns).	Low	MM6, MT1, I6
I5	OR 222 (Cloverdale Rd.)/ I-5 SB ramps Intersection* Improvement	Intersection Improvement. (Evaluated as construction of additional northbound right and southbound left turn lanes).	Low	R4, R5, R6, B5
I6	Ziniker Ln. Realignment*	Ziniker Ln. realignment with Emerald Pkwy. intersection. Project to be considered in conjunction with development proposals south of OR 222 (Cloverdale Rd.). Integrate with proposed intersection improvement [Project I4].	Low	MM6, MT1, I4
I7	S Mill St./ OR 99 (S Front St.) Intersection Improvement*	Construct grade separated crossing over the railroad. Integrate with proposed OR 99 Jog improvements [Project I1].	Low	MM5, R2b
I8	Harvey Rd./ OR 99*	Intersection improvement. Project is located outside of UGB.	Low	MM16, MM20

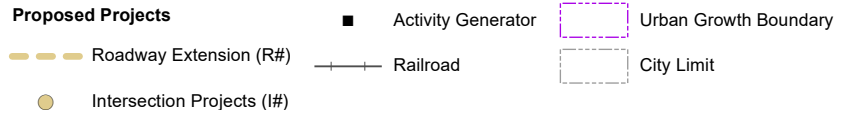
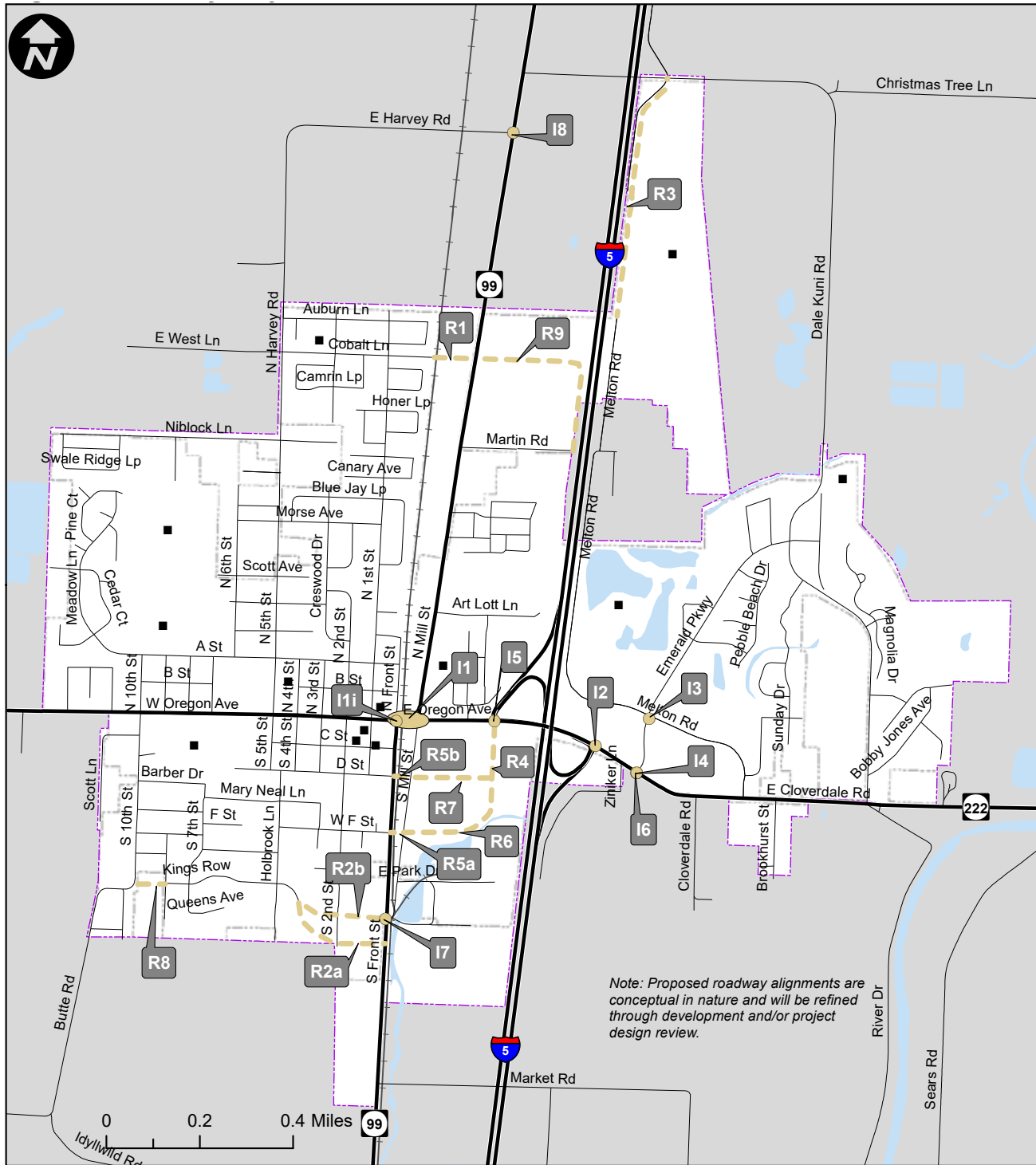
\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

<sup>1</sup> Alternatives for this solution are discussed below.

Note: All project on State Highways (OR 99, OR 222, and I-5 ramps) require ODOT review and approval to be constructed.



Figure 18. Mobility Projects



## PLANNED PEDESTRIAN NETWORK

Pedestrian improvements are listed below and illustrated in Figure 16. These projects are split to identify new or infill sidewalk projects (Table 14) and crossing enhancements (Table 15). The projects listed are in addition to pedestrian improvements included as part of multi-modal improvements (in Table 9 through 12) because of their pedestrian focus.

Projects in Table 14 would construct sidewalks along existing roadways to provide better pedestrian access between key activity centers in Creswell. While many local streets have incomplete sidewalk networks, sidewalk infill projects were identified

to address key gaps in the pedestrian network (arterial or collector roadways or critical segments on local streets). 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 Creswell. The project locations and extents are illustrated in Figure 16. Additional sidewalk projects may be identified through Safe Routes to School analysis.

**Table 14. Sidewalk Projects**

Project ID	Name	Description	Priority	Related Projects
P1	C St. Sidewalks	Construct/complete sidewalks from 5th St. to OR 99 (S Front St.) <sup>1</sup>	High	P11
P2	F St. Sidewalks	Construct/complete sidewalks from Holbrook Ln. to OR 99 (S Front St.).	Medium	-
P13	Barber Dr. Sidewalks	Construct/complete sidewalks from S 7th St. to S 10th St.	High	-
P14	7th St. Sidewalks	Construct/complete sidewalks from Barber Dr. to Mary Neal Ln.	High	-
P15	Morse Ave. Sidewalks	Construct/complete sidewalks from Harvey Rd. to N 6th St.	High	P20

\*The extents of the TSP projects have been modified (e.g. extended or shorten due to partial completion).

Pedestrian crossing enhancement projects in Table 15 would improve locations that may be challenging or uncomfortable to cross due to lack of designated

crossings, high traffic volume and/or high vehicle speeds. The crossing project locations are illustrated in Figure 16.

<sup>1</sup> Although C Street is classified as a local street, this sidewalk is included in the TSP project list because of its importance for downtown pedestrian connectivity and access to transit.

Table 15. Pedestrian Crossing Enhancement Projects

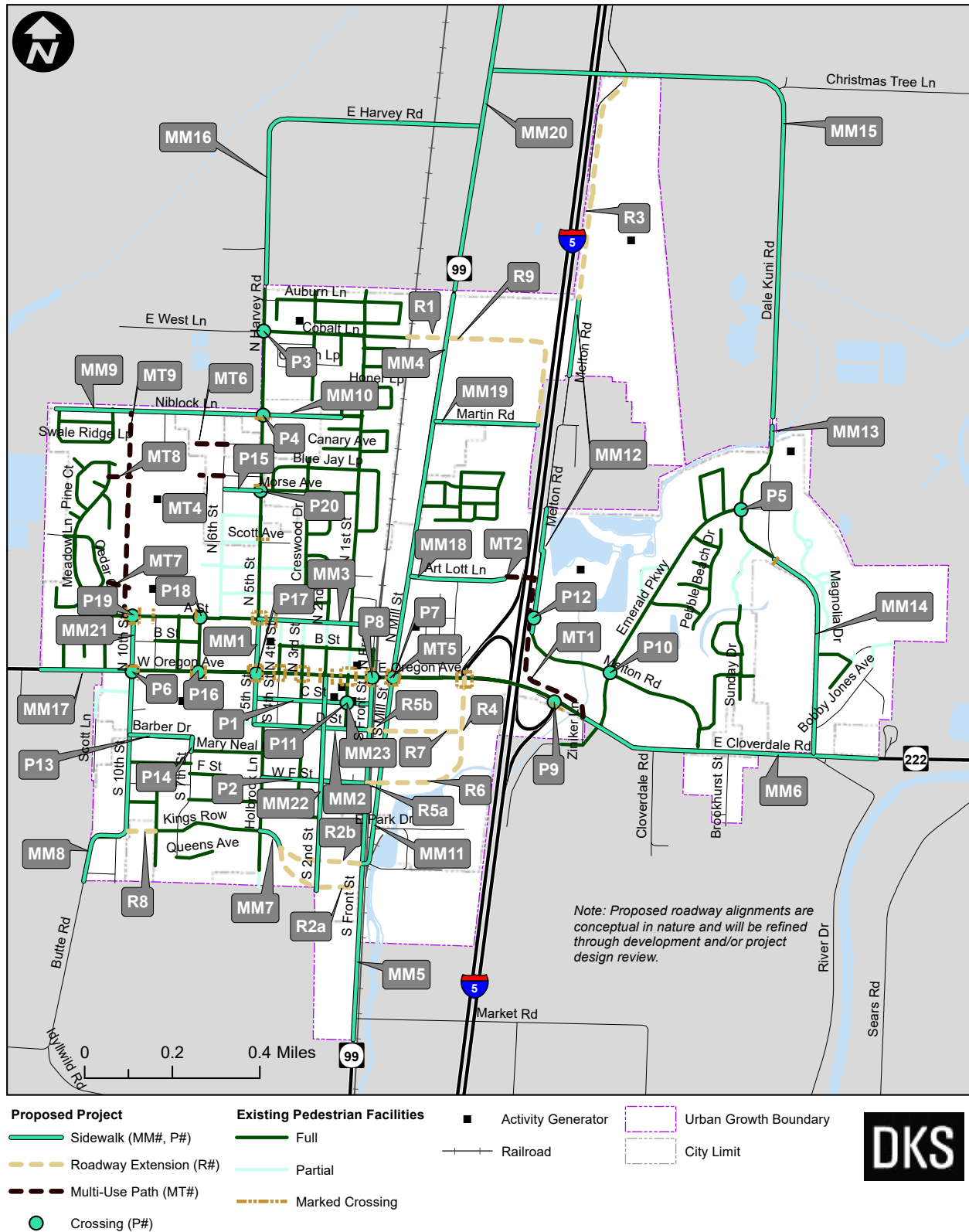
Project ID	Name	Description	Priority	Related Projects
P3	Harvey Rd./ Cobalt Ln. Intersection Pedestrian Improvements	Pedestrian improvements including marked crosswalks and ADA compliance.	High	-
P4	Harvey Rd./ Niblock Ln. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings in support of Safe Routes to School.	High	MM9, MM10
P5	Dale Kuni Rd./ Emerald Parkway Intersection Pedestrian Improvements	Pedestrian improvements including marked crosswalks and ADA compliance.	High	-
P6	Oregon Ave./10th St. Intersection Pedestrian Improvements	Pedestrian improvements may include, but not limited to, marked crosswalks and ADA compliance. Integrate with proposed sidewalks on S 10th St. project [Project MM8].	High	MM8, MM17, MM21, B1
P7	Oregon Ave./Mill St. Intersection Pedestrian Improvements**/**	Pedestrian improvements may include, but not limited to, wider sidewalks on northeast, southwest, southeast corners and ADA compliance. Project may be interim improvement or integrated with proposed improvements for motor vehicle mobility [Project I1].	Medium	MM4, MM11, MT5, I1, I1i
P8	Oregon Ave./Front St. Intersection Pedestrian Improvements**/**	Pedestrian improvements may include, but not limited to, higher visibility crosswalks and ADA compliance. Project may be interim improvement or integrated with proposed improvements for motor vehicle mobility [Projects I1 or I8].	High	MM5, MT5, P8, I1, I1i
P9	OR 222 (Cloverdale Road)/I-5 NB Ramps Intersection Pedestrian Improvements**/**	Pedestrian crossing improvements may include, but not limited to, marked crosswalks, median refuge, and ADA compliance. Project may be interim improvement or integrated with proposed improvements for motor vehicle mobility [Project I2].	Medium	B9, I2
P10	Melton Rd./Emerald Pkwy. Intersection Pedestrian Improvements*	Pedestrian crossing improvements including marked crosswalks, warning signage, and ADA compliance. Integrate with proposed improvements for motor vehicle mobility [Project I3].	High	I3
P11	C St./1st St. Intersection Pedestrian Improvements	Pedestrian crossing improvements near transit stop including marked crosswalks, warning signage, and ADA compliance. Integrate with proposed sidewalks on C St. [Project P1].	High	P1
P12	Garden Lake Park Intersection Pedestrian Improvements	Pedestrian crossing improvements on Melton Rd. including a marked crosswalk and warning signage.	High	MM12, MT1
P16	Oregon Ave./7th St. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings in support of Safe Routes to School.	High	B2

Project ID	Name	Description	Priority	Related Projects
P17	Oregon Ave./5th St. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings and provide ADA compliance in support of Safe Routes to School. Integrate with proposed sidewalks on S 5th St. project [Project MM1].	High	MM1, B2
P18	A St./7th St. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings and provide ADA compliance in support of Safe Routes to School.	High	-
P19	A St./10th St. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings and provide ADA compliance in support of Safe Routes to School.	High	MM21, MT9
P20	Morse Ave./7th St. Intersection Pedestrian Improvements	Pedestrian improvements to enhance crossings in support of Safe Routes to School.	High	P15

\* Improvements to be coordinated with proposed motor vehicle mobility intersection improvements.

\*\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

Figure 19. Pedestrian Projects



## PLANNED BICYCLE NETWORK

Bicycle projects are illustrated in Figure 17 and listed below. Bicycle projects are divided into new bike lanes (Table 16) and enhanced connections (Table

17). Other bicycle improvements included as part of roadway modernization improvements are also illustrated in Figure 14.

**Table 16. Proposed Bicycle Lane Projects**

Project ID	Name	Description	Priority	Related Projects
<b>B1</b>	N 10th St. Bike Lanes	Provide bike lanes from A St. to Oregon Ave. Project would require modifying existing on-street parking. This project is an alternative for [Project MM21].	Medium	MM21, P6
<b>B2</b>	Oregon Ave. Bike Lanes	Provide bike lanes from 10th St. to 3rd St. Project would require restriping, modifying diagonal parking to parallel parking between 4th St. and 3rd St., and removing on-street parking between 5th St. and 4th St.	High	P17
<b>B3</b>	Holbrook Ln. Bike Lanes	Provide bike lanes from D St. to Kings Row. Project would require modifying on-street parking.	Medium	-
<b>B4</b>	OR 99 Jog (Oregon Ave.) Bike Lanes*/**	Provide bike lanes from Front St. to Mill St. Project depends on widening or removing a motor vehicle lane. Integrate with proposed improvements for motor vehicle mobility [Project I1].	Low	MT5, P7, P8, I1, I1i
<b>B5</b>	OR 222 (Cloverdale Rd.) Bike Lane Buffers*/ **	Restripe OR 222 from OR 99 (N Mill St.) to I-5 NB Ramps to include buffers for bike lanes. Project requires restriping for narrower motor vehicle lanes.	Low	MM6, P9, B9

\* Improvements to be coordinated with proposed motor vehicle mobility intersection improvements.

\*\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

Table 17 identifies projects that enhance bicycle connectivity in Creswell. These projects range from signing and striping for shared routes, way-

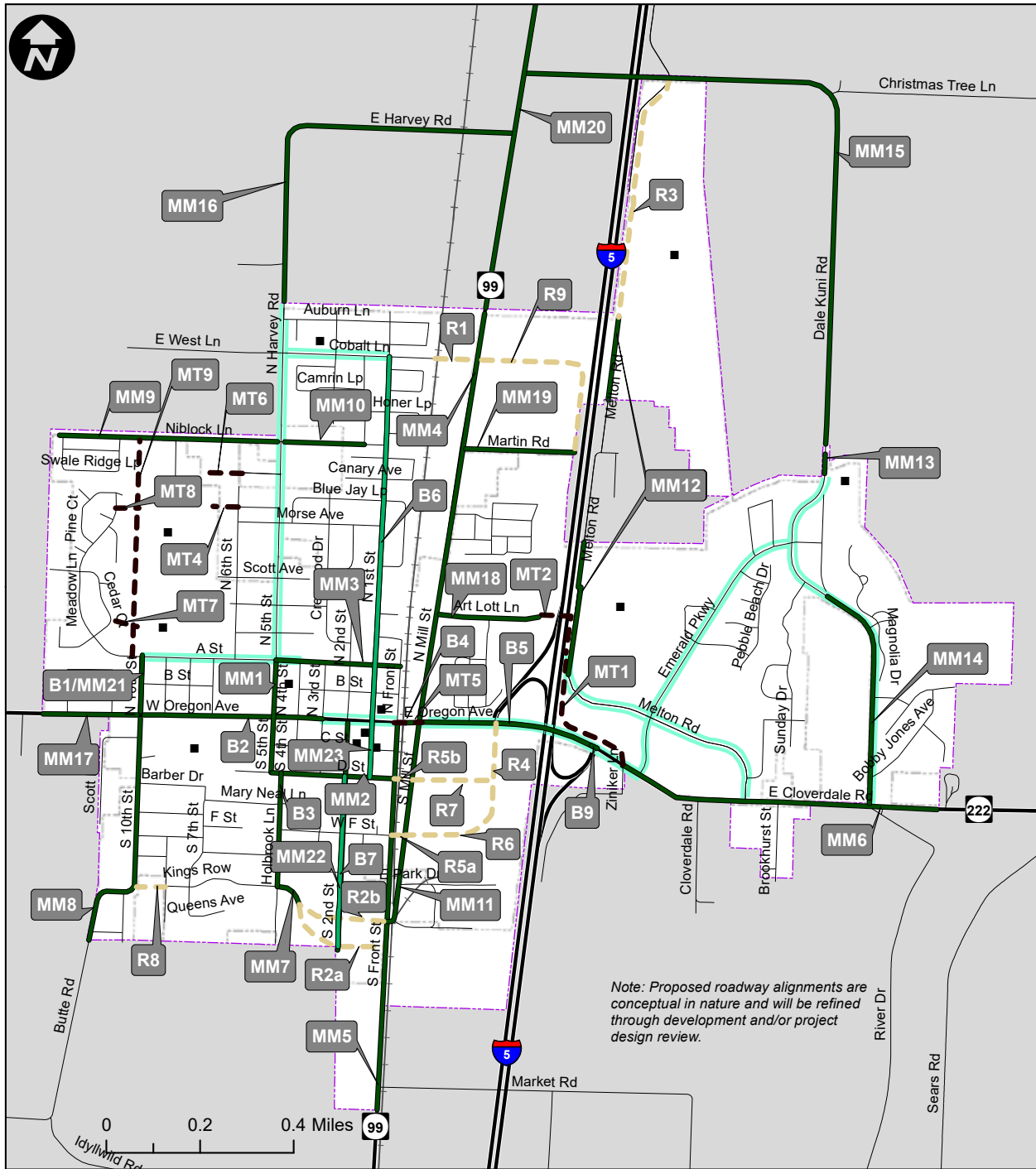
finding signs for designated bicycle routes and bicycle parking.

**Table 17. Bicycle Connection Projects**

Project ID	Name	Description	Priority	Related Projects
B6	N 1st St. Bike Boulevard	Bike Boulevard designation from Cobalt Ln. to D St. Design treatments may include striping (sharrows), wayfinding signage, and traffic calming (e.g. chicanes).	High	P11
B7	S 2nd St. Bike Boulevard	Bike Boulevard designation from D St. to South terminus. Design treatments may include striping (sharrows), wayfinding signage, and traffic calming (e.g. chicanes). Integrate with modernization improvements [Project MM22].	High	MM22, R2
B8	Miscellaneous Bicycle Safety Improvements	System repairs including installing bicycle-proof storm drain gates, rubberized pads at railroad crossing, and other safety enhancements.	Medium	-
B9	OR 222 (Cloverdale Rd.)/ I-5 NB ramps Intersection Bicycle Improvement*	This may include, but is not limited to, revising pavement markings to provide a continuous stripe and green paint to differentiate the bike lane from the travel lane. Project may be implemented as interim improvement and/or integrated with proposed improvements for motor vehicle mobility [Project I2] and/or pedestrian crossing improvements [Project P9].	Low	MM6, MT1, B2, P9, I2

\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

Figure 20. Bicycle Projects







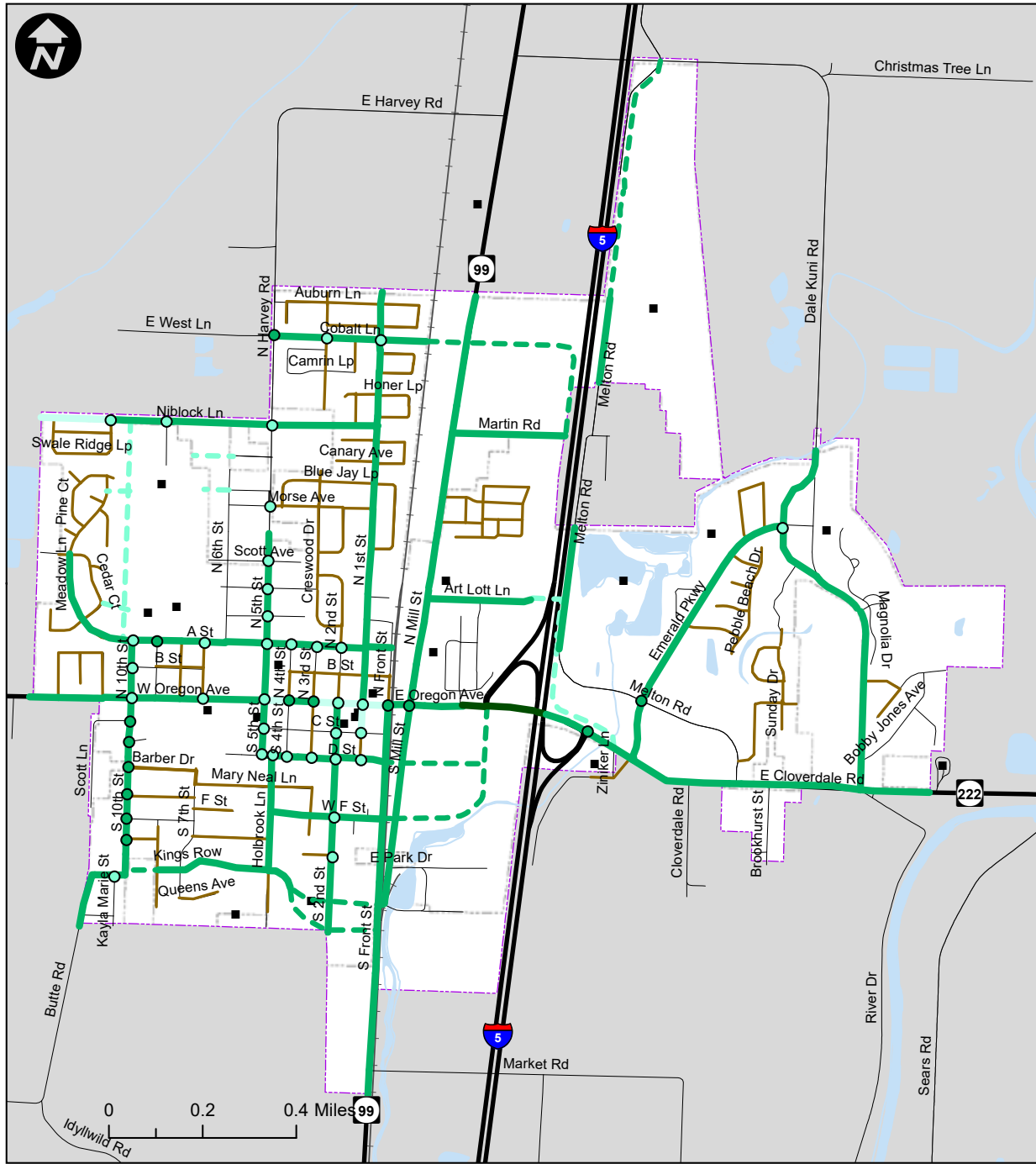
## LOW-STRESS NETWORK

The multi-modal, bicycle, and pedestrian projects identified in the TSP would significantly improve the bicycle and pedestrian facilities available for all travelers in Creswell. Candidate bicycle and pedestrian projects were developed in response to a level of traffic stress evaluation performed on arterials and collectors under existing conditions. The analysis rates the perceived stress of traveling on bicycle and pedestrian facilities along these roadways.

The level of traffic stress analysis was repeated with the proposed TSP projects in place to identify future

low stress networks for bicycle and pedestrian travel. The low-stress networks include facilities that were rated as low or lowest stress, new multi-use paths, new multimodal roadways extensions, and local streets. These networks define a community vision for safe connections for people who walk or ride bikes to schools, parks, and other activity generators. The low-stress networks that would result from the TSP projects are illustrated in Figures 18 (Pedestrian Low-Stress Network) and Figure 19 (Bicycle Low-Stress Network).

Figure 21. Low-Stress Pedestrian Network



**Pedestrian Level of Traffic Stress**

**Intersection Stress**

- Lowest
- Low

**Segment Stress**

- Lowest
- Low
- Moderate

**Future Segment Stress**

- - - Lowest
- - - Low

**Local Streets**

- Local Street with Sidewalk

■ Activity Generators

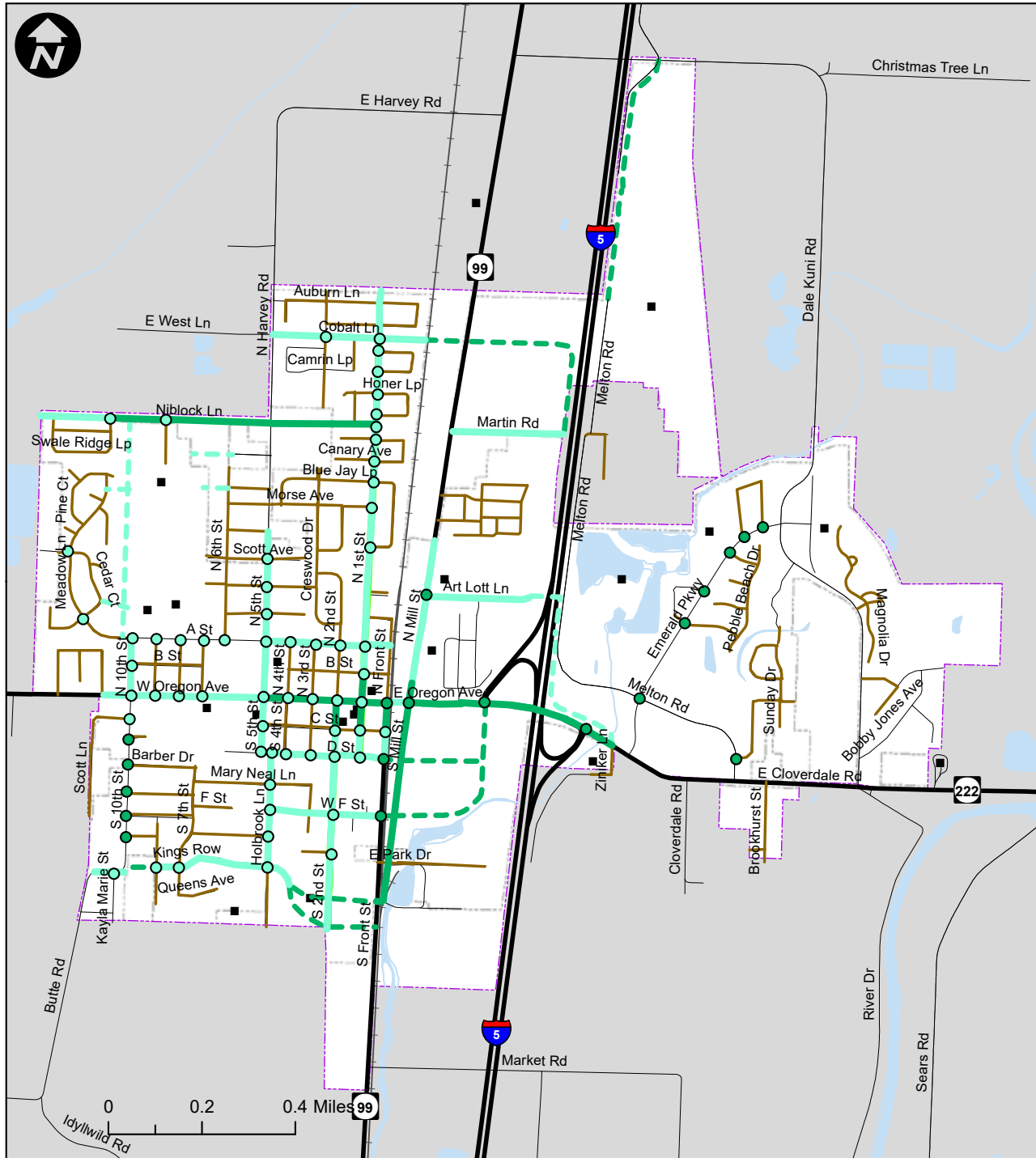
— Railroad

▭ Urban Growth Boundary

▭ City Limit



Figure 22. Low-Stress Bicycle Network



**Bicycle Level of Traffic Stress**

**Intersection Stress**

- Lowest
- Low

**Segment Stress**

- Lowest
- Low

**Future Segment Stress**

- - - Lowest
- - - Low

**Local Street**

- Shared Local Street

■ Activity Generators

— Railroad

— Urban Growth Boundary

— City Limit



## TRANSIT PROJECTS

Transit use in Creswell is generally either locally-oriented (within Creswell or nearby areas) or commuter oriented (to/from Eugene, Springfield and other parts of Lane County). Based on employment data and projected workforce trends, there is an opportunity for increased transit ridership between Creswell and Eugene-Springfield with increased transit service frequency and expanded hours of operation.

No transit service projects are identified as part of the TSP. Any transit service project would involve coordination with 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 through its development of pedestrian and bicycle facilities that provide access to transit, development of the C Street/S 1st Street transit stop and park and ride as a “mobility hub.”

## AIR PROJECTS

The City of Creswell has prepared an Airport Master Plan<sup>1</sup> consistent with FAA requirements. The TSP reinforces support for the Airport Master Plan findings. The TSP also supports access to the Airport through enhanced multimodal connectivity to the airport.

The multi-modal projects that directly support Airport access include Melton Road modernization [Project MM12], Melton Road Extension to Dale Kuni Road [Project R3], and multi-use paths [Projects MT1 and MT2]. In addition to these projects, the master plan identifies a series of recommendations to address the needs of the Creswell Municipal Airport.

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<sup>1</sup> Creswell Municipal Airport - Hobby Field Airport Master Plan, Century West Engineering Corporation, 2007.



8

PRIORITIES



Chapter 7 presented the comprehensive system plan of multimodal project to meet the transportation system needs for the community as it grows. This section identifies the subset of the master plan solutions that have the highest priorities for implementation. These High Priority projects were flagged by the project team and the community as having the greatest value to Creswell as it grows and develops. In addition, a separate technical assessment was made to identify a baseline group of projects that could be funded with current resources. These projects are referred to as the Financially Constrained Solutions List.

Other projects not included in these two lists that were presented in the system plan list of Chapter 7 are considered as Aspirational Projects. An Aspirational Project may be constructed within the planning horizon but is considered dependent on new/outside funding sources. Although these projects are not expected to be prioritized for implementation at this time, they are considered recommended projects consistent with the TSP goals and objectives, planned beyond the 2040 planning horizon.

## HIGH PRIORITY SOLUTIONS & STRATEGIES

The highest value transportation solutions for Creswell are summarized in the Tables 17 and 18. They are listed in numerical order and are not indicative of a priority ranking. These projects rose to the top of the prioritization process based on the evaluation criteria developed to measure alignment with the community's transportation goals and objectives, as well as input from the public and the PMT and PAC.

Resource availability, relationship to systemic infrastructure upgrades, and responsiveness to constantly changing community utilization of transportation facilities must be balanced to prioritize investments in Creswell's capital improvements. Projects are itemized through this transportation planning process based on best available information. As the City seeks opportunities and resources to facilitate project completion, priorities such as the following may move the timeline of certain projects accordingly:

- **Economic Development.** Imminent opportunity driven by private development may advance prioritization of projects. Though a project may not be of highest priority to the City as a whole under the existing use of property, investment and development of a property within its zoning designation may cause a project to become a high priority due to the opportunity for economic multipliers. Examples of this include projects that enhance or create job growth within Creswell, activate employment land, and/or facilitate access to previously underutilized property (R4, R5, R7, MM4, MM5).
- **State Facilities.** Though state facilities are integral to Creswell's success in many ways, funding of these projects is subject to Statewide and/or Federal competition and may not be as certain as City street funding. Further, the scope and scale of projects on State facilities is subject to standards set by the Oregon Department of Transportation.

Should the City be so fortunate to obtain outside funding from State or Federal sources, these projects may be advanced ahead of others. Examples of these projects include Highway 99 (N. Mill St/ Oregon Ave/S. Front St intersections and alignments) improvements, as well as Highway 222 (Cloverdale Road). Note: Highway 222 has been included in HB2017 for transfer to Lane County; Improvements associated with that transfer would move this project off the Aspirational list to higher priority for the City (MM6, I4).

- **Infrastructure Upgrades.** Road projects are one leg of an efficiency triangle for capital investments: water and sewer facility upgrades typically are timed to align with road improvements wherever possible. Water and sewer facility improvements may increase the priority of a roadway improvement (MM2, MM3, MM4).
- **Facility Utilization Changes/Lifespan.** Facilities that are considered incomplete by contemporary standards due to the lack of pedestrian or bicycle facilities or due to safety concerns exacerbated by volume of use by any mode may advance priority of a project. Changes in intensity of use of a facility and/or the sunset of a facility's "useable lifespan" may require bringing a project forward in priority. Examples of these projects include crossing safety improvements for Safe Routes to School (P3, P4, P6, P13, P14, P15, P16, P17, P18, P19, P20, B6, B7).

The tables are broken out by the lead agency. Although many transportation projects will require inter-agency coordination, the identified lead agency is expected to be responsible for project development, design, and construction. Tables 17 and 18 show the list of High Priority Solutions led by the City, Lane County, and the State, respectively. Figure 19 illustrates the location of the High Priority solutions.

Table 18. High Priority City Led Solutions

Project ID	Name	Estimated Total Cost	Primary Funding
R4	New Roadway 1*	\$6,950,000	City/Developer
R6	F Street Extension	\$1,135,000	City/Developer
MM2	D Street Modernization	\$1,465,000	City
MM3	A St. Modernization	\$770,000	City
MM5i (interim)	OR 99 (S Front St.) Interim Modernization*	\$100,000	City/ODOT
MM5ii	Design Project Assessment - for OR 99 (S Front St.) Modernization	\$10,000	City/ODOT
MM6	OR 222 (Cloverdale Rd.) Modernization*	\$9,310,000	City/ODOT/Developer
MM8	S 10th St. Modernization	\$2,620,000	City/Developer
MM9	Niblock Ln. Modernization (west)	\$1,145,000	County/Developer
MM22	S 2nd St. Modernization	\$2,410,000	City
MT4	Cherry Ln. Multi-Use Path	\$50,000	City
MT8	Meadow Ln. Multi-Use Path	\$20,000	City/ODOT
MT9	NW School District Multi-Use Path	\$25,000	City
P1	C St. Sidewalks	\$25,000	City
P3	Harvey Rd./ Cobalt Ln. Intersection Pedestrian Improvements	\$25,000	City
P4	Harvey Rd./ Niblock Ln. Intersection Pedestrian Improvements	\$50,000	City
P5	Dale Kuni Rd./ Emerald Parkway Intersection Pedestrian Improvements	\$50,000	City/Developer
P6	Oregon Ave./10th St. Intersection Pedestrian Improvements	\$20,000	City
P8	Oregon Ave./Front St. Intersection Pedestrian Improvements**	\$25,000	City/ODOT
P10	Melton Rd./Emerald Pkwy. Intersection Pedestrian Improvements*	\$35,000	City/Developer
P11	C St./1st St. Intersection Pedestrian Improvements	\$60,000	City
P12	Garden Lake Park Intersection Pedestrian Improvements	\$25,000	City
P13	Barber Dr. Sidewalks	\$350,000	City
P14	7th St. Sidewalks	\$95,000	City
P15	Morse Ave. Sidewalks	\$205,000	City
P16	Oregon Ave./7th St. Intersection Pedestrian Improvements	\$20,000	City
P17	Oregon Ave./5th St. Intersection Pedestrian Improvements	\$25,000	City
P18	A St./7th St. Intersection Pedestrian Improvements	\$25,000	City
P19	A St./10th St. Intersection Pedestrian Improvements Pedestrian Improvements	\$25,000	City
P20	Morse Ave./5th St. Intersection Pedestrian Improvements	\$20,000	City
B2	Oregon Ave. Bike Lanes	\$35,000	City
B6	N 1st St. Bike Boulevard	\$60,000	City
B7	S 2nd St. Bike Boulevard	\$25,000	City

\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

\*\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

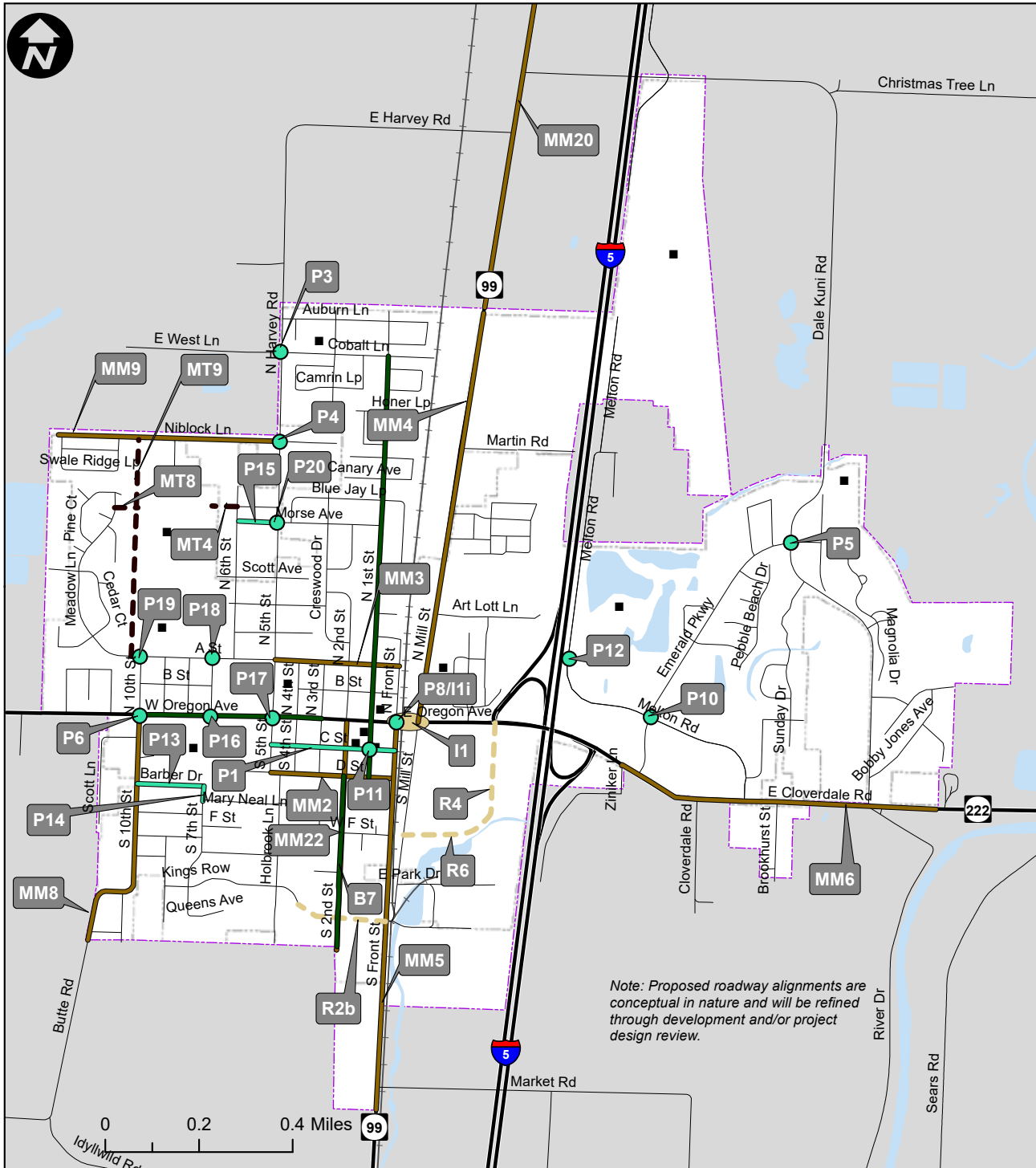


**Table 19. High Priority ODOT Led Solutions**

Project ID	Name	Estimated Total Cost	Primary Funding
<b>I1</b>	Oregon Ave./OR 99 "Jog" Intersection Improvements*	\$2,190,000	ODOT/City
<b>I1i</b>	Oregon Ave./OR 99 (Front St.) Interim Intersection Improvements*	\$50,000	ODOT
<b>I1ii</b>	Design Project Assessment - for OR 99 (Jog) Intersection Improvements	\$500,000	City/ODOT
<b>MM4i</b>	Design Project Assessment - for OR 99 (N Mill St.) Modernization	\$500,000	City/ODOT
<b>MM5</b>	OR 99 (S Front St.) Modernization*	\$75,000	ODOT/City/Developer
<b>MM20i</b>	Design Project Assessment - for OR 99 (N Mill St.) Modernization (Rural)	\$7,000,000	City/ODOT

\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.

Figure 23. High Priority Projects



- |   |                            |                    |                       |
|---|----------------------------|--------------------|-----------------------|
| <b>Proposed Projects</b>                | Bicycle Facility (B#)      | Activity Generator | Urban Growth Boundary |
| Multi-Modal Roadway Modernization (MM#) | Sidewalk (P#)              | Railroad           | City Limit            |
| Roadway Extension (R#)                  | Crossing (P#)              |                    |                       |
| Multi-Use Path (MT#)                    | Intersection Projects (I#) |                    |                       |



## FINANCIALLY CONSTRAINED PROJECT LISTS

Transportation capital projects were divided into two lists based on likelihood of being funded through current funding sources. The initial Financially Constrained Projects List was developed to identify the projects and/or programs that could be considered most likely to be implemented with funding anticipated through 2040. This project list is shown in Table 20 and reflects the projects that are “reasonably likely to be funded” through 2040. While informed by the prioritization described above, this list reflects constraints of existing funding sources. The total amount of funding available for TSP projects is estimated to be approximately \$10.7 million. The total amount public agency share of project costs on the financially constrained list is just over \$9.6 million.

It should be noted that the City is not required to implement projects as identified in the above timeframe. Nor is the City required to complete the High Priority or Financially Constrained projects first. Priorities may change over time and unexpected opportunities may arise to fund particular projects. The City is free to pursue any of these opportunities at any time. The purpose of the Financially Constrained project list is to establish reasonable expectations for the level of improvements that will occur with existing funding sources and give the City initial direction on where funds may be allocated. The project list also serves to identify baseline future year roadway network assumptions when evaluating potential changes in land use designations (for Transportation Planning Rule compliance).

**Table 20. Financially Constrained Projects**

Project ID	Name	Lead Agency	Estimated Total Cost	Estimated Private/Development Cost	Estimated ODOT/County Cost	Estimated City Cost
<b>MM2</b>	D Street Modernization	City	\$1,465,000	\$0	\$0	\$1,465,000
<b>MM3</b>	A St. Modernization	City	\$770,000	\$0	\$0	\$770,000
<b>MM4i</b>	Design Project Assessment - for OR 99 (N Mill St.) Modernization	ODOT	\$500,000	\$0	\$450,000	\$50,000
<b>MM5i (interim)</b>	OR 99 (S Front St.) Interim Modernization**	ODOT	\$110,000	\$0	\$55,000	\$55,000
<b>MM5ii</b>	Design Project Assessment - for OR 99 (S Front St.) Modernization	ODOT	\$10,000	\$0	\$5,000	\$5,000
<b>MM19</b>	Martin Rd. Modernization	County	\$1,145,000	\$916,000	\$0	\$229,000

Project ID	Name	Lead Agency	Estimated Total Cost	Estimated Private/ Development Cost	Estimated ODOT/County Cost	Estimated City Cost
MM20i	Design Project Assessment - for OR 99 (N Mill St.) Modernization (Rural)	ODOT	\$500,000	\$0	\$450,000	\$50,000
R4	New Roadway 1	City	\$6,950,000	\$5,560,000	\$0	\$1,390,000
R6	F Street Extension	City	\$1,135,000	\$1,021,500	\$0	\$113,500
R9	Cobalt Ln. Extension (east)	City	\$6,950,000	\$6,255,000	\$0	\$695,000
I1	Oregon Ave./ OR 99 "Jog" Intersection Improvements**	ODOT	\$2,190,000	\$0	\$1,970,000	\$220,000
I1i	Oregon Ave./ OR 99 (Front St.) Interim Intersection Improvements**	ODOT	\$50,000	\$0	\$50,000	\$0
I1ii	Design Project Assessment - for OR 99 (Jog) Intersection Improvements	ODOT	\$500,000	\$0	\$450,000	\$50,000
I2	OR 222 (Cloverdale Rd.)/I-5 NB ramps Intersection Improvement**	ODOT	\$180,000	\$0	\$162,000	\$18,000
I3	Emerald Pkwy./ Melton Rd. Intersection Improvement	City	\$10,000	\$10,000	\$0	\$0
I4	OR 222 (Cloverdale Rd.)/ Emerald Pkwy. Intersection Improvement**	City	\$75,000	\$0	\$37,500	\$37,500
I5	OR 222 (Cloverdale Rd.)/I-5 SB Ramps Intersection Improvements**	ODOT	\$420,000	\$84,000	\$294,000	\$42,000
MT4	Cherry Ln. Multi-Use Path	City	\$100,000	\$0	\$0	\$100,000
MT8	Meadow Ln. Multi-Use Path	City	\$50,000	\$0	\$25,000	\$25,000
P3	Harvey Rd./Cobalt Ln. Intersection Pedestrian Improvements	City	\$20,000	\$0	\$0	\$20,000

Project ID	Name	Lead Agency	Estimated Total Cost	Estimated Private/Development Cost	Estimated ODOT/County Cost	Estimated City Cost
P4	Harvey Rd./ Niblock Ln. Intersection Pedestrian Improvements	City	\$25,000	\$0	\$0	\$25,000
P5	Dale Kuni Rd./ Emerald Pkwy. Intersection Pedestrian Improvements	City	\$25,000	\$12,500	\$0	\$12,500
P6	Oregon Ave./10th St. Intersection Pedestrian Improvements	ODOT	\$25,000	\$0	\$0	\$25,000
P7	Oregon Ave./Mill St. Intersection Pedestrian Improvements**	ODOT	\$50,000	\$0	\$25,000	\$25,000
P8	Oregon Ave./ Front St. Intersection Pedestrian Improvements**	ODOT	\$50,000	\$0	\$25,000	\$25,000
P16	Oregon Ave./7th St. Intersection Pedestrian Improvements	City	\$20,000	\$0	\$0	\$20,000
P17	Oregon Ave./5th St. Intersection Pedestrian Improvements	City	\$25,000	\$0	\$0	\$25,000
B2	Oregon Ave. Bike Lanes	City	\$35,000	\$0	\$0	\$35,000
B6	N 1st St. Bike Boulevard	City	\$60,000	\$0	\$0	\$60,000
B7	S 2nd St. Bike Boulevard	City	\$25,000	\$0	\$0	\$25,000
<b>Total Cost</b>			<b>\$23,470,000</b>	<b>\$13,859,000</b>	<b>\$3,998,500</b>	<b>\$5,612,500</b>

\*Remaining amount expected to be funded through private development.

\*\*Improvements for state highways (ODOT jurisdiction) require review and approval by ODOT.



# 9

## OUTCOMES

## FUTURE SYSTEM PERFORMANCE

The projects in this System Plan, upon construction, will significantly improve transportation to and through Creswell for all modes of travel, and will provide the transportation system described in the community's vision statement. Planned new streets will enhance connectivity and ensure that efficient travel routes are provided when future development

occurs. The greatest source of recurring congestion for Creswell residents is at the Oregon Avenue intersections at OR 99 (Mill St.) and OR 99 (Front St.) and the CORP rail crossing. Continued cooperation with regional partners to secure funding and advance improvements at those intersections is a top priority.

### AFFORDABLE TRAVEL OPTIONS BY TRANSIT

A more useful transit system, along with user-friendly investments such as bus stop amenities, promote increased ridership and provide affordable means to travel between cities and access a wider range of services.

### SAFE ROUTES TO SCHOOLS AND ACTIVE LIFESTYLES

The network of active transportation facilities; including bike lanes, sidewalks, and several new shared-use paths; provide comfortable non-motorized travel access across town and to regional attractions beyond the UGB. Integration with regional active transportation networks and improved access to local parks and other activity generators in Creswell provide new opportunities for healthy living. Sidewalk infill, enhanced street crossings, and dedicated bicycle create safer routes between neighborhoods and schools. Improved local street connectivity shortens travel routes through neighborhoods, making walking and biking trips easier.

### SAFER STREETS

More street lighting, enhanced highway crossings, and a complete network of separate sidewalks, bike lanes, and shared-use paths across the city reduce risks for people walking and biking.

It is worth noting that while the two key elements of the TSP goals related to environmental stewardship and community equity were not measure quantitatively, they were considered qualitatively during the development and evaluation of solutions.

## FUNDING OPPORTUNITIES

About \$10.7 million is expected to be available from State and City resources to fund TSP projects, which total over \$120 million. This funding gap is very significant, and limits the City's ability to implement key transportation improvements. The total public agency share of project costs on the Financially Constrained Project list is just under \$11.8 million. The total public agency share of projects cost for the high, medium, and low priority projects are, as follows:

- High Priority Total Estimated Cost: \$42,365,000
- Medium Priority Total Estimated Cost: \$34,422,000
- Low Priority Total Estimated Cost: \$43,680,00

Beyond the recurring sources of revenues and maintenance-related expenditures described previously, Creswell may expect to receive project-specific funding through federal or state programs or through local development exactions. These types of external funding are not received annually but are often relied upon to complete critical transportation improvements, particularly for the type of system enhancement projects that will be identified for the TSP update.

No dedicated external funding sources have been committed for transportation improvement projects in Creswell. The City will need to specifically request or apply for these funds and, in many cases, coordinate efforts with ODOT to realize them. With the updated TSP, the City will be better prepared to pursue these funding opportunities. Various project-specific funding sources and mechanisms that can be used to fund projects are described below.

The City may require developer contributions (also known as exactions) in specific instances. These contributions refer to roadway and/or intersection improvements that are partially or fully funded or

built by developers as conditions of development approval. Typically, all developers are required to improve the roadways along their frontage upon site redevelopment. In addition, when a site develops or redevelops, the developer may be required to provide off-site improvements depending upon the expected level of traffic generation and the resulting impacts to the transportation system.

### SUPPLEMENTAL FUNDING SOURCES

The City may consider additional funding sources to accelerate the implementation of the TSP projects. Several options are noted below:

- The City has a transportation SDC fee program in place to fund system improvements that add capacity to facilities to support growth. It is recommended that the City re-evaluate the rate to include high-priority projects from the TSP. The existing transportation SDC rate is among the lowest in Lane County.
- The City could consider a city or regional fuel tax with its local partners to generate additional transportation revenues.
- These targeted funding districts can generate funding for a specific geographic area of the city, with the consent and cooperation of a majority of local property owners. Other Oregon cities regularly use this type of funding to advance gap filling sidewalk projects, and roadway modernization projects.
- Local Improvement Districts may be critical to the reconstruction of local streets. Creswell may consider developing a more streamlined program to implement LIDs, particularly to address local streets that do not meet City Standards.



**FINDINGS OF COMPLIANCE WITH LANE CODE CRITERIA  
LC 16.400 RURAL COMPREHENSIVE PLAN AMENDMENTS**

The City of Creswell adopted an updated Transportation System Plan (TSP) on April 8, 2019 and requests co-adoption by the Lane County Board of Commissioners (Board). The County Rural Comprehensive Plan includes all of the comprehensive plans adopted by the 12 cities within Lane County. Each city adopts, as part of its comprehensive plan, its own transportation element or TSP. The Lane County TSP is a special purpose plan and a component of the Lane County Rural Comprehensive Plan. Because the cities' TSPs effectively become part of the county's Rural Comprehensive Plan, TSPs need to be co-adopted by the County. The process for co-adoption of the Creswell Transportation System Plan Update is through a Lane County Rural Comprehensive Plan (RCP) amendment.

The procedures for amending the RCP are at Lane Code 16.400(6). These procedures require the Planning Commission to hold a public hearing and make a recommendation to the Board of County Commissioners. The record before the Planning Commission is also forwarded to the Board along with the recommendation. This amendment does not include an exception to Statewide Planning Goals. As required by the approval criteria, findings of compliance with Statewide Planning Goals are provided below.

**APPROVAL CRITERIA AND FINDINGS:**

The relevant approval criteria for this action are provided below in **bold** with findings and conclusions provided in regular text.

**LC 16.400(6)(iii) The Board may amend or supplement the Rural Comprehensive Plan upon making the following findings:**

- (aa) **For Major and Minor Amendments as defined in LC 16.400(8)(a) below, the Plan component or amendment meets all applicable requirements of local and state law, including Statewide Planning Goals and Oregon Administrative Rules.**
- (bb) **For Major and Minor Amendments as defined in LC 16.400(8)(a) below, the Plan amendment or component is:**
  - (i-i) **necessary to correct an identified error in the application of the Plan; or**
  - (ii-ii) **necessary to fulfill an identified public or community need for the intended result of the component or amendment; or**
  - (iii-iii) **necessary to comply with the mandate of local, state or federal policy or law;**  
**or**
  - (iv-iv) **necessary to provide for the implementation of adopted Plan policy or elements; or**
  - (v-v) **otherwise deemed by the Board, for reasons briefly set forth in its decision, to be desirable, appropriate or proper.**

**FINDING:** The proposal (TSP) is a major amendment as defined in Lane Code because it is not limited to a Plan Diagram amendment (minor amendment). Consistent with the above criteria, the amendment is necessary for the following reasons:

## EXHIBIT B to Ordinance No. PA 1379

- It is necessary for Lane County to co-adopt the Creswell TSP in order for that document to have jurisdiction over transportation-related actions outside of the city limits but inside the Creswell Urban Growth Boundary;
- Lane County has jurisdiction over several roads within the city; and
- Lane County is required to co-adopt the Creswell TSP as a facility plan and component of the RCP to provide for a connected, safe and efficient transportation network.

The TSP is consistent with all applicable requirements of local and state law including Statewide Planning Goals and Oregon Administrative Rules as discussed in the following findings.

**Goal 1 - Citizen Involvement: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.**

**FINDING:** The proposal is consistent with Statewide Planning Goal 1 because the process used to develop and adopt this amendment provided the opportunity for citizens to be involved in all phases of the planning process, as follows

- The TSP was guided by a Project Advisory Committee representing agencies, partners, stakeholders, and local business interests.
- The City of Creswell engaged the public in a variety of online and print media and in-person opportunities to share information and receive feedback.
- On March 21, 2019, the Creswell Planning Commission held a public hearing regarding the proposed amendments and voted to recommend Council adoption of the TSP.
- On April 8, 2019, the Creswell City Council held a public hearing and took testimony on this matter, taking said testimony into consideration in making its decision, which was to approve the TSP.
- On June 5, 2019 Lane County Planning Commission held a public hearing and received no public comment. Notice of the hearing was provided: in the *Register-Guard* on May 14; and in the *Creswell Chronicle* on May 16 and May 24.

The Creswell TSP update constitutes a plan amendment subject to the public notification and hearing processes and provisions of Lane Code. As described above, the public involvement requirements have been met and opportunity for public involvement has been afforded at each phase of the process. The amendment is therefore consistent with statewide planning Goal 1.

**Goal 2 - Land Use Planning: To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.**

**FINDING:** The Rural Comprehensive Plan was acknowledged by the Land Conservation and Development Commission (LCDC) as complying with Statewide Planning Goals. LC 16.400, adopted and acknowledged by LCDC, specifies the means by which the RCP may be amended. Notice of the public hearing and pending Creswell TSP co-adoption was mailed to the Oregon Department of Land Conservation and Development (DLCD) on April 29, 2019. The co-adoption process follows the procedures outlined in Lane Code and these findings provide an adequate factual basis for action. The City's adoption process was made pursuant to the procedures outlined in Goal 12 and OAR 660-011 for public facilities. The

amendment therefore conforms to the established land use planning process and framework consistent with Goal 2.

**Goal 3 – Agricultural Land: To preserve and maintain agricultural lands**

**Goal 4 – Forest Lands: To conserve forest lands by maintaining the forest land base and to protect the state’s forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.**

**FINDING:** Goals 3 and 4 require counties to inventory agricultural lands and to maintain and preserve them through EFU zoning. Because the TSP is relevant to facilities within the acknowledged Urban Growth Boundary of the City of Creswell, Goals 3 and 4 are not applicable.

**Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources: To conserve open space and protect natural and scenic resources.**

**FINDING:** TSP projects were developed with consideration of impacts to open space, scenic and historic areas, and natural resources. Most of projects within the TSP are adjacent to or within the right of way of existing transportation facilities, with few potential impacts outside of existing right-of-way. There are a several proposed multi-use paths and potential future roadway extension projects that will be subject to natural resource review prior to construction, which will include an analysis of minimizing and mitigating impacts. Therefore, Goal 5 has been adequately addressed.

**Goal 6 - Air, Water and Land Resources Quality: To maintain and improve the quality of the air, water and land resources of the state.**

**FINDING:** The TSP contains goals, objectives and projects that encourage the use of alternative transportation methods. The TSP includes multi-modal projects to reduce reliance on the single occupant vehicle to mitigate future impacts and improve air quality within the City. Most of projects within the TSP are adjacent to or within the right of way of existing transportation facilities, with few potential impacts outside of existing right-of-way. There are a several proposed multi-use paths and potential future roadway extension projects that will be subject to natural resource review prior to construction, which will include an analysis of minimizing and mitigating impacts. Therefore, Goal 6 has been adequately addressed.

**Goal 7 - Area Subject to Natural Disasters and Hazards: To protect life and property from natural disasters and hazards.**

**FINDING:** Goal 7 requires that jurisdictions apply appropriate safeguards when planning development in areas that are subject to natural hazards. The primary hazard for Creswell is the floodplain. The TSP project maps show the transportation system relative to waterways and few, if any, proposed

improvement projects are near a waterway. Nevertheless, prior to construction of any transportation improvements, compliance with applicable floodplain development standards will be required. Therefore, Goal 7 has been properly addressed.

**Goal 8 - Recreational Needs: To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.**

**FINDING:** The TSP identifies and includes pedestrian and bicycle projects that connect residential areas to recreational destinations such as parks and open spaces. Therefore, Goal 8 has been addressed.

**Goal 9 -Economic Development: To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.**

**FINDING:** The TSP reinforces the City's road network with transportation projects that provide access to commercial and industrial facilities and employment sites. Adopting the TSP will ensure that transportation improvements will be available to support the planned uses in the City's employment areas, consistent with other local economic development goals stated within the Comprehensive Plan.

**Goal 10 - Housing: To provide for the housing needs of citizens of the state.**

**FINDING:** The TSP bolsters the livability of Creswell's residential areas by including appropriate access, street, bicycle and pedestrian facilities to serve current and future residential developments. Therefore, Goal 10 has been addressed.

**Goal 11 - Public Facilities and Services: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.**

**FINDING:** This TSP serves as the transportation element of a Public Facilities Plan. Per OAR 660-011-0010(1), this Public Facility Plan must include the following:

**(a) An inventory and general assessment of the condition of all the significant public facility systems which support the land uses designated in the acknowledged comprehensive plan.**

**FINDING:** The TSP includes an inventory and general assessment of significant transportation facilities.

**(b) A list of the significant public facility projects which are to support the land uses designated in the acknowledged comprehensive plan.**

**FINDING:** The TSP includes a list of significant public facility transportation projects of all modes that support the land uses designated in the acknowledged comprehensive plan.

**(c) Rough cost estimates of each public facility project.**

**FINDING:** Rough cost estimates for each project identified is included in the TSP.

**(d) Maps or written description of each public facility project's general location or service area.**

**FINDING:** Maps and written descriptions are provided for each transportation project identified.

**(e) Policy statement(s) or urban growth management agreement identifying the provider of each public facility system. If there is more than one provider with the authority to provide the system within the area covered by the public facility plan, then the provider of each project shall be designated.**

**FINDING:** Policy statements are provided identifying each provider of each public facility transportation element.

**(f) An estimate of when each facility project will be needed.**

**FINDING:** The TSP identifies the transportation facility projects needed for the 20-year planning horizon.

**(g) A discussion of the City's existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of each public facility project or system.**

**FINDING:** A discussion on existing and proposed funding mechanisms for these transportation projects is provided in the TSP. With this information, the City of Creswell can adequately plan for or develop timely, orderly and efficient arrangements of transportation facilities over the planning horizon (next 20 years). Therefore, the proposed amendments comply with Goal 11.

**Goal 12 - Transportation: To provide and encourage a safe, convenient and economic transportation system.**

**FINDING:** Goal 12 encourages the provision of a safe, convenient and economic transportation system. This goal also implements provisions of other statewide planning goals related to transportation planning in order to plan and develop transportation facilities and services in coordination with urban and rural development (OAR 660-012-0000(1)). This TSP considers all modes of transportation, including mass transit, rail, vehicular, bicycle and pedestrian, and air. It is designed to emphasize the importance of a multi-modal transportation network; minimize adverse social, economic and environmental impacts and costs; conserve energy through the use and enhancement of existing facilities and right-of-ways; meet the needs of transportation disadvantaged by improving transportation services and multi-modal access; facilitate the flow of goods and services so as to strengthen the local and regional economy; and conform with and bolster local and regional comprehensive land use plans and planning efforts.

Goal 12 is further implemented through the Transportation Planning Rule (TPR) of Oregon Administrative Rules (OAR). Finds of compliance with these rules is as follows:

**Oregon Administrative Rules (OAR 660-012) – Transportation Planning Rule**

**660-012-0015(3), Preparation and Coordination of Transportation System Plans - Cities and counties shall prepare, adopt and amend local TSPs for lands within their planning jurisdiction in compliance with this division:**

**(a) Local TSPs shall establish a system of transportation facilities and services adequate to meet identified local transportation needs and shall be consistent with regional TSPs and adopted elements of the state TSP.**

**FINDING:** The TSP is consistent with this criterion because the system of transportation facilities and services identified are adequate to meet local transportation needs, are consistent with existing regional TSPs (Lane County's TSP) and adopted elements of the state TSP (the Oregon Transportation Plan, OTP).

**(b) Where the Regional TSP or elements of the State TSP have not been adopted, the city or county shall coordinate the preparation of the local TSP with the regional transportation planning body and ODOT to assure that regional and state transportation needs are accommodated.**

**FINDING:** The proposal is consistent with this criterion because development of the TSP was coordinated with Lane County and ODOT.

**Section 660-012-0015(4) Cities and counties shall adopt regional and local TSPs required by this division as part of their comprehensive plans. Transportation financing programs required by OAR 660-012-0040 may be adopted as a supporting document to the comprehensive plan.**

**FINDING:** The TSP is consistent with this criterion because it is adopted as part of the City's comprehensive plan and will be co-adopted by Lane County.

**Section 660-012-0015(5). The preparation of TSPs shall be coordinated with affected state and federal agencies, local governments, special districts, and private providers of transportation services.**

**FINDING:** The TSP was prepared in coordination with affected state and federal agencies, local governments, special districts and private providers of transportation services.

**Section 660-012-0016(1). Coordination with Federally-Required Regional Transportation Plans in Metropolitan Areas- In metropolitan areas, local governments shall prepare, adopt, amend and update transportation system plans required by this division in coordination with regional transportation plans (RTPs) prepared by MPOs required by federal law.**

**FINDING:** The criterion is not applicable as the City of Creswell is neither in a metropolitan area nor in a Metropolitan Planning Organization (MPO).

**Section 660-012-0020(1). Coordinated Network of Transportation Facilities, of the TPR requires TSPs to establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs.**

**FINDING:** The TSP complies with this criterion because it includes a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs.

**Section 660-012-0020(2)(a). Determination of Transportation Needs, of the TPR requires TSPs to include a determination of transportation needs as provided in 660-012-0030.**

**FINDING:** The TSP is consistent with this criterion as demonstrated in the findings for 660-012-0030, which are hereby incorporated into this finding by this reference.

**Section 660-012-0020(2)(b). Road Plan of the TPR requires a plan that includes a system of arterials and collectors and standards for the layout of local streets and other important non-collector street connections.**

**FINDING:** The TSP is consistent with this requirement as it contains street classification maps and standards for the City. The TSP includes a system of arterials, collectors, and local streets.

**Section 660-012-0020(2)(c). Public Transportation Plan of the TPR requires an inventory and assessment of public transportation services including services for the transportation disadvantaged.**

**FINDING:** The TSP is consistent with this criterion because it includes an inventory and assessment of public transportation services including those for the transportation marginalized or disadvantaged.

**Section 660-012-0020(2)(d). Pedestrian Plan of the TPR requires a plan for a network of pedestrian routes throughout the planning area.**

**FINDING:** The TSP is consistent with this requirement because it includes a pedestrian plan for the entire planning area.

**Section 660-012-0020(2)(e). Air, Rail, Water, and Pipeline Transportation Plan, of the TPR requires TSPs to identify where major facilities are located or planned within the planning area.**

**FINDING:** The TSP identifies where major facilities are located within the Creswell UGB. Creswell owns and operates an airport, which has its own master plan. The TSP includes improved multi-modal connections to the airport. The TSP also identifies where the railroad is located, generally parallel to OR 99 which runs through the heart of the City. The TSP identifies where transportation improvements are needed to improve the safety and access across the railroad. There are no navigable waterways or pipelines within the Creswell urban growth boundary. Based on these findings, this criterion is met.

**Section 660-012-0020(2)(f). Transportation System Management, of the TPR requires TSPs to address travel demand with measures which may include traffic signal improvements, traffic control devices, channelization, access management, ramp metering, and restriping for HOV lanes.**

**FINDING:** The TSP addresses Transportation System Management. The TSP is supportive of this policy because it includes policies and goals that call for giving preference to transportation improvements that use existing roadway capacity efficiently and improve the safety of the system; supports using access management in situations where needed to ensure the safe and efficient operation of higher-speed, heavily traveled streets; and includes projects, programs, and strategies to make the system more efficient and safe without additional capacity increases.

**Section 660-012-0020(2)(g). A parking plan in MPO areas as provided in OAR 660-012- 0045(5)(c).**

**FINDING:** This criterion is not applicable as the planning area is not within an MPO.

**Section 660-012-0020(2)(h). Policies and land use regulations for implementing the TSP as provided in OAR 660-012-0045.**

**FINDING:** The proposal is consistent with this criterion as the Comprehensive Plan and Creswell Development Code include TSP implementation measures.

**Section 660-012-0020(3)(a) Requires an inventory, assessment of capacity, and conditions for the street system.**

**FINDING:** The TSP meets this requirement because it includes an inventory and assessment of capacity and conditions for the street system.

**Section 660-012-0020(3)(b). A system of planned transportation facilities, services and major improvements. The system shall include a description of the type of functional classification of planned facilities and services and their planned capacities and performance standards.**

**FINDING:** The TSP meets this requirement because it includes maps and project descriptions for major transportation improvements, including their planned capacities and level of service performance standards.

**Section 660-012-0020(3)(c). A description of the location of planned facilities, services and major improvements, establishing the general corridor within which the facilities, services or improvements may be sited. This shall include a map showing the general location of proposed transportation improvements, a description of facility parameters such as minimum and maximum road right of way width and the number and size of lanes, and any other additional description that is appropriate.**



**FINDING:** The TSP is consistent with this criterion because the TSP includes a description/map of the location of planned facilities and major improvements, and its street standards provide a description of facility parameters such as minimum and maximum road right-of-way width, number and size of lanes, and other relevant design standards.

**Section 660-012-0020(3)(d). Identification of the provider of each transportation facility or service.**

**FINDING:** The TSP is consistent with this criterion because the plan text identifies providers of each transportation facility or service.

**Section 660-012-0025(2). Complying with Statewide Goals. The TPR requires findings of compliance with applicable statewide planning goals.**

**FINDING:** The TSP is consistent with this requirement because statewide planning goal findings of compliance are included in this report.

**Section 660-012-0025(2). Complying with Comprehensive Plan. The TPR requires findings of compliance with applicable acknowledged comprehensive plan policies.**

**FINDING:** The TSP is consistent with this requirement because the proposal is consistent with applicable acknowledged comprehensive plan policies and is the transportation element of the City's Comprehensive Plan. The proposed TSP implements and provides a transportation system that evenly distributes traffic throughout the community, minimizes impacts to residential streets, identifies arterials; is interconnected, safe, convenient, accessible, environmentally responsible, and considers neighborhood impacts.

**Section 660-012-0030(1)(a). Determination of Transportation Needs. The TRP requires TSPs to identify state, regional and local transportation needs relevant to the planning area and the scale of the transportation network being planned.**

**FINDING:** The TSP meets this requirement because it identifies state, regional, and local transportation needs relevant to the Creswell UGB and bases needs on projections of future travel demand.

**Section 660-012-0030(1)(b). Determination of Transportation Needs. The TPR requires TSPs to identify the needs of the transportation disadvantaged.**

**FINDING:** The TSP is consistent with this provision because the needs of the transportation disadvantaged were identified and factored into the project evaluation framework.

**Section 660-012-0030(1)(c). Determination of Transportation Needs. The TPR requires TSPs to identify the needs for movement of goods and services to**

**support industrial and commercial development pursuant to OAR chapter 660, division 9 and Goal 9 (Economic Development).**

**FINDING:** The TSP meets this requirement because the TSP identifies facilities to meet the needs for the movement of goods and services to support industrial and commercial development as described in the aforementioned response to Statewide Goal 9, incorporated herein by reference.

**Section 660-012-0030(2). Counties or MPO's preparing regional TSP's shall rely on the analysis of state transportation needs in adopted elements of the state TSP. Local governments preparing local TSP's shall rely on the analyses of state and regional transportation needs in adopted elements of the state TSP and adopted regional TSP's.**

**FINDING:** The TSP is consistent with this provision because it is a local TSP and the analyses of state and regional transportation needs as adopted in elements of the state TSP and adopted Lane County TSP were considered in the analyses.

**Section 660-012-0030(3)(a). Determination of Transportation Needs. The TPR requires TSPs to use 20-year population and employment forecasts in determining state, regional, and local needs. Population and employment forecasts and distributions are consistent with the acknowledged comprehensive plan, including those policies that implement Goal 14.**

**FINDING:** The TSP update is consistent with this requirement because 20-year state adopted certified population was used, and employment forecasts consistent with the Creswell Comprehensive Plan that implements Goal 14, were applied in all transportation component analyses (vehicle, bicycle, pedestrian and transit).

**Section 660-012-0030(3)(b). Determination of Transportation Needs. The TPR requires TSPs to include, as part of their determination of needs, measures to reduce reliance on the automobile.**

**FINDING:** The TSP is consistent with this requirement because measures to reduce reliance on the automobile such as increasing bicycle and pedestrian facilities are included in the TSP.

**Section 660-012-0035(1). Evaluation and Selection of Transportation System Alternatives. The TSP shall be based upon evaluation of potential impacts of system alternatives that can reasonably be expected to meet the identified transportation needs in a safe manner and at a reasonable cost with available technology. The following shall be evaluated as components of system alternatives: (a) Improvements to existing facilities or services; (b) New facilities and services, including different modes or combinations of modes that could reasonably meet identified transportation needs; (c) Transportation System management measures; (d) Demand management measures; and (e) A no-build system alternative required by the National Environmental Policy Act of 1969 or other laws.**

**FINDING:** The TSP is consistent with this requirement because alternatives which could reasonably be expected to meet identified transportation needs in a safe manner and at a reasonable cost with available technology were considered in the development of the preferred alternative/proposed TSP. Evaluation of alternatives included the following components: improvements to existing facilities or services; new facilities and services including different modes or combination of modes; transportation system management measures; transportation demand management measures; and a no-build system alternative which was found to not meet the identified transportation needs.

**Section 660-012-0035(3)(a). The following standards shall be used to evaluate and select alternatives: The transportation system shall support urban and rural development by providing types and levels of transportation facilities and services appropriate to serve the land uses identified in the acknowledged comprehensive plan;**

**(3)(b) The transportation system shall be consistent with state and federal standards for protection of air, land and water quality including the State Implementation Plan under the Federal Clean Air Act and the State Water Quality Management Plan;**

**(3)(c) The transportation system shall minimize adverse economic, social, environmental and energy consequences;**

**(3)(d) The transportation system shall minimize conflicts and facilitate connections between modes of transportation; and**

**(3)(e) The transportation system shall avoid principal reliance on any one mode of transportation by increasing transportation choices to reduce principal reliance on the automobile. In MPO areas this shall be accomplished by selecting transportation alternatives which meet the requirements in section (4) of this rule.**

**FINDING:** The TSP is consistent with this requirement because the above criteria were used to evaluate alternatives and select a preferred alternative. The MPO requirement is not applicable as the planning area is not within an MPO.

**Section 660-012-0035(5). MPO areas shall adopt standards to demonstrate progress towards increasing transportation choices and reducing automobile reliance as provided for in this rule.**

**FINDING:** This criterion is not applicable as the planning area is not in an MPO.

Based on the above findings, Goal 12 is met.

**Goal 13 - Energy Conservation: Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.**

**FINDING:** Goal 13 requires land and uses developed on the land to be managed and controlled to maximize the conservation of all forms of energy, based upon sound economic principles. Energy consequences of the Transportation System Plan have been considered. The recommended projects and stated policies within the TSP support a balanced transportation system that encourages walking, bicycling, and public transit trips that reduce the need for single-occupant vehicles. Therefore, Goal 13 has been adequately addressed.

**Goal 14 - Urbanization: To provide for an orderly and efficient transition from rural to urban land use.**

**FINDING:** The TSP supports efficient and orderly development in Creswell by providing a multimodal transportation system within the Urban Growth Boundary. The TSP does not affect or change the existing UGB. Therefore, Goal 14 has been adequately addressed.

**Goals 15 – 19 Willamette River Greenway; Estuary Resources; Coastal Shore lands; Beaches and Dunes; and Ocean Resources**

**FINDING:** These goals do not apply because these resources are not present within the bounds of Creswell's UGB.

**CONCLUSION:**

Based upon the preceding findings, it is concluded that co-adoption of the Creswell TSP is consistent with the requirements set forth in the applicable approval criteria. Therefore, the evidence and findings support adoption of the proposal.

## Statewide Goal 12: Transportation

*To provide and encourage a safe, convenient and economic transportation system.*

*A transportation plan shall*

- 1. consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian;*
- 2. (2) be based upon an inventory of local, regional and state transportation needs;*
- 3. (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes;*
- 4. (4) avoid principal reliance upon any one mode of transportation;*
- 5. (5) minimize adverse social, economic and environmental impacts and costs;*
- 6. (6) conserve energy;*
- 7. (7) meet the needs of the transportation disadvantaged by improving transportation services;*
- 8. (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and*
- 9. (9) conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility.*

### Creswell Transportation Goals

- |           |  |
|-----------|--|
| GOAL 12-1 | <b>Safety &amp; Efficiency.</b> Provide a safe and efficient transportation system for all users that improves circulation and connectivity while minimizing injuries and fatalities.  |
| GOAL 12-2 | <b>Transportation Balance.</b> Provide for a balanced transportation system that offers legitimate mobility choices for all users, including for bicycling, walking, paratransit, carpooling, and public transportation.   |
| GOAL 12-3 | <b>Economic Development &amp; Regional Links.</b> Maintain and improve access to industrial and other employment land, including regional links (e.g., connections to I-5) that offer access to employment opportunities for residents and convenient access to services for the rural population. |
| GOAL 12-4 | <b>Neighborhoods &amp; Livability.</b> Provide complete, aesthetically pleasing, streets for all users, including vulnerable users such as children, the elderly, pedestrians, and cyclists.   |
| GOAL 12-5 | <b>Intermodal Compatibility.</b> Minimize conflicts and facilitate compatibility and connections between transportation modes.   |
| GOAL 12-6 | <b>Financial Sustainability.</b> Create a financially feasible transportation system that considers long-term costs and minimizes negative effects of transportation on the social, economic, and natural environment.   |

### Creswell Transportation Objectives

- 1. Safety & Efficiency**
  - a. Endeavor to minimize traffic-related fatalities and serious injury collisions by improving pedestrian and safety.
  - b. Seek to enhance pedestrian safety and visibility by implementing intersection and mid-block crossing improvements, consistent with the adopted Transportation System Plan.

- c. Coordinate closely with ODOT rail and railroad operators to locate new railroad crossings associated with roadway extensions desired by the community and to identify the potential relocation of existing at-grade crossings.
- d. All streets, bicycle, and pedestrian facilities shall connect to other existing and planned future facilities outside the development. Cul-de-sacs and other dead end street types shall be discouraged except where topography, natural features, or land development patterns preclude street connectivity. A multi-use path connecting the end of the cul-de-sac to other streets or activity areas shall be encouraged.

**2. Transportation Balance (Increase Use of Non-Automotive Modes)**

- a. Strive for safe and convenient options for bicycling, walking, paratransit, carpooling, and public transportation.
- b. Seek to educate users to expand knowledge of transportation options, such as rideshare/vanpool programs and facilities for connected, automated, shared, and electric vehicles.
- c. Seek to improve designated bike routes through Creswell and support users with wayfinding.
- d. Maintenance and repair of bikeways and pedestrian ways shall be given equal priority to the maintenance and repair of automobile facilities.
- e. Strive to enhance, and support a higher level of transit usage, including provision of transit-supportive facilities and amenities (e.g., sidewalk and bicycle connections, shelters, benches).
- f. Continue to work with regional transit provider(s) to explore opportunities to expand transit coverage (e.g., in north and east Creswell).
- g. Consider transportation demand management (TDM) measures, such as encouraging the development of infrastructure for electric and autonomous vehicles and enhancing park and ride usage, that could reduce peak hour vehicle demand.

**3. Economic Development & Regional Links**

- a. Promote visitor attractions (e.g., National Forest, Hobby Field Airport, and wine country) on I-5, including providing visitor amenities.
- b. Utilize technology to promote transportation system solutions (e.g., integration with fiber availability, dynamic traffic signal controls).
- c. Bicycle facilities shall be designed for both internal circulation and to provide linkages to regional travel.

**4. Neighborhoods & Livability**

- a. Seek to minimize collisions involving vulnerable users (e.g., elderly, children, pedestrians, and cyclists) through design of complete streets for all users.
- b. Support provision of appropriate lighting conditions for safe travel.
- c. Promote safe design of local streets that allows for children at play.

- d. Promote safe routes to school with complete pedestrian and bicycle facilities and designated safe pickup points on school bus routes.
- e. Promote access to parks, schools, and community resources by completing street connections and prioritizing access for more dense housing.
- f. City gateways, entranceways, and other key roadways shall be identified and improved with beautification and scenic amenities. Aesthetic improvements may include street design, landscaping, lighting, utility lines, park strips, noise abatement, transit amenities, etc.

**5. Intermodal Compatibility**

- a. Seek opportunities to promote and improve park & ride facilities (e.g., bus to work).
- b. Coordinate with ODOT rail and railroad operators to enhance safety at railroad crossings for all users.
- c. Preserve the function of the Creswell Airport through appropriate land use designations to assure future land uses are compatible with continued operation of the airport.

**6. Financial Sustainability**

- a. Establish a consensus vision for state highways in Creswell.
- b. Support a multi-phase strategy to address mobility, safety, and connectivity needs identified on Oregon Avenue/OR 99 between Mill Street and Front Street as identified in the adopted Transportation system plan.
- c. The City shall prepare Hobby Field Airport projects for various funding opportunities including through Connect Oregon.

**Creswell Transportation Policies**

**1. Public Streets: General**

- (a) The City shall encourage the improvements of sub-standard City streets through a City Urban Growth Area Storm drainage study and master plan.
- (b) The City shall require dedication of necessary rights-of-way and the provisions of required street improvements adjacent to property in conjunction with its development or redevelopment.
- (c) The City shall continue to administer a joint City-State Improvement agreement to provide a “typical section” for upgrading of the Goshen-Divide Highway within the City of Creswell.

**2. Safety & Efficiency**

- a. The City shall implement circulation and access patterns to and around schools that are safe for pedestrians and bicyclists, as well as people in cars and arriving by bus.
- b. The City shall utilize functional classifications to ensure streets are able to serve their intended purpose.
- c. The City shall implement the Local Street Connectivity Plan in the adopted Transportation System Plan to improve local street connectivity to reduce out-of-direction travel for all modes and users by requiring local street connectivity as part of the development.

- d. The City shall preserve the function of transportation facilities critical for regional access for first responders, emergency operations center locations and evacuation/lifeline routes.
- e. The City shall improve traffic operations of key intersections, as identified in the adopted Transportation System Plan, to reduce congestion and safety risks during peak hours.

### **3. Transportation Balance (Increase Use of Non-Automotive Modes)**

- a. The City shall require and will seek to improve pedestrian and bicycle circulation within and between major activity generators such as neighborhoods, parks, schools, and commercial centers.
- b. The City shall ensure connections to the existing pedestrian system (e.g., sidewalks and crosswalks that are ADA compliant) are provided with new developments.
- c. The City shall improve existing transportation facilities to meet applicable City of Creswell and ADA standards.

### **4. Economic Development & Regional Links**

- a. The City shall identify and preserve alignments for future street locations and identified off-street transportation facilities, to support future development and service commercially- and industrially-zoned land.
- b. The City shall improve access to industrial and other employment land, including the former Mill site.
- c. The City shall improve regional links for all modes that support accessibility to employment opportunities for residents and convenient access to services for the surrounding rural population.

### **5. Neighborhoods & Livability**

- a. The City shall prioritize improvements to bicycle and pedestrian access to Garden Lake Park.
- b. The City and developers shall protect residential neighborhoods from excessive through traffic and travel speeds. When required, the application of traffic calming measures will be proportional to the identified need and appropriate for the facility on which it is located, based on street functional classification.

### **6. Intermodal Compatibility**

- a. The City shall improve connections between the Hobby Field Airport and City amenities (Emerald Valley Golf Course, downtown), including improving pedestrian facilities to the Hobby Field Airport.
- b. The City shall design streets on bus routes to support transit services.
- c. The City shall work with property owners, developers, and ODOT to provide and enhance bicycle and pedestrian facilities on highways and in downtown.



## **7. Financial Sustainability**

- a. The City shall coordinate transportation projects, policy issues, and development actions with all affected government agencies in the area, including Lane County, the Oregon Department of Transportation, and Special Districts.
- b. The City shall align facility needs with available funding opportunities through the financially constrained Transportation System Plan projects list and will participate in updates of the ODOT State Transportation Improvement Program (STIP) and Lane County Capital Improvement Program (CIP) to promote the inclusion of Creswell projects identified.
- c. The City shall develop funding strategies to acquire additional right-of-way for access to industrially-zoned property.
- d. The City shall preserve and maintain the existing transportation system assets to extend their useful life.
- e. The City shall minimize negative effects of transportation on the social, economic, and natural environment, including by supporting technology applications that improve travel mobility and environmental impact than traditional infrastructure projects.
- f. The City shall consider long-term maintenance needs and costs in transportation decisions.