



Oregon

Theodore R. Kulongoski, Governor

Department of Land Conservation and Development

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Salem, OR 97301-2540

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www.lcd.state.or.us



NOTICE OF ADOPTED AMENDMENT

04/08/2009

TO: Subscribers to Notice of Adopted Plan
or Land Use Regulation Amendments

FROM: Larry French, Plan Amendment Program Specialist

SUBJECT: City of Junction City Plan Amendment
DLCD File Number 001-08

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. Due to the size of amended material submitted, a complete copy has not been attached. A Copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office.

Appeal Procedures*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: Tuesday, April 21, 2009

This amendment was submitted to DLCD for review prior to adoption

If you wish to appeal, you must file a notice of intent to appeal with the Land Use Board of Appeals (LUBA) no later than 21 days from the date the decision was mailed to you by the local government. If you have questions, check with the local government to determine the appeal deadline. Copies of the notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR Chapter 661, Division 10). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

***NOTE:** THE APPEAL DEADLINE IS BASED UPON THE DATE THE DECISION WAS MAILED BY LOCAL GOVERNMENT. A DECISION MAY HAVE BEEN MAILED TO YOU ON A DIFFERENT DATE THAT IT WAS MAILED TO DLCD. AS A RESULT, YOUR APPEAL DEADLINE MAY BE EARLIER THAN THE ABOVE DATE SPECIFIED.

Cc: Kay Bork, City of Junction City
Gloria Gardiner, DLCD Urban Planning Specialist
Bill Holmstrom, DLCD Transportation Planner
Ed Moore, DLCD Regional Representative

<paa> YA/

FORM 2

DLCD

Notice of Adoption

In person electronic mailed

DATE STAMP

DEPT OF

APR 01 2009

LAND CONSERVATION AND DEVELOPMENT

For DLCD Use Only

**THIS FORM MUST BE MAILED TO DLCD
WITHIN 5 WORKING DAYS AFTER THE FINAL DECISION
PER ORS 197.610, OAR CHAPTER 660 - DIVISION 18**

Jurisdiction: **City of Junction City**

Local file number: **AMD08-01**

Date of Adoption: **3/24/2009**

Date Mailed: **3/26/2009**

Was a Notice of Proposed Amendment (Form 1) mailed to DLCD? **Yes** Date: 2/1/2008

Comprehensive Plan Text Amendment

Comprehensive Plan Map Amendment

Land Use Regulation Amendment

Zoning Map Amendment

New Land Use Regulation

Other:

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached".

TGM funded project. Adoption of a Highway 99 Refinement Plan and amendments to Transportation System Plan policies for consistency with refinement plan. No substantive policies have been amended. THE Refinmetn PLan will be a Chapter in the TSP.

Does the Adoption differ from proposal? No, no explanation is necessary

Plan Map Changed from:

to:

Zone Map Changed from:

to:

Location:

Acres Involved:

Specify Density: Previous:

New:

Applicable statewide planning goals:

1 **2** **3** **4** **5** **6** **7** **8** **9** 10 11 12 13 14 15 16 17 18 19

Was an Exception Adopted? YES NO

Did DLCD receive a Notice of Proposed Amendment...

45-days prior to first evidentiary hearing?

Yes No

If no, do the statewide planning goals apply?

Yes No

If no, did Emergency Circumstances require immediate adoption?

Yes No

DLCD FILE # 001-08(16676)

DLCD file No. _____

Please list all affected State or Federal Agencies, Local Governments or Special Districts:

Local Contact: **Kay Bork**

Phone: **(541) 998-2153** Extension:

Address: **680 Greenwood Ave**

Fax Number: **541-998-3140**

City: **Junction City**

Zip: **97448**

E-mail Address: **kbork@ci.junction-city.or.us**

ADOPTION SUBMITTAL REQUIREMENTS

This form **must be mailed** to DLCD **within 5 working days after the final decision**
per ORS 197.610, OAR Chapter 660 - Division 18.

1. Send this Form and **TWO Complete Copies** (documents and maps) of the Adopted Amendment to:

ATTENTION: PLAN AMENDMENT SPECIALIST
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
635 CAPITOL STREET NE, SUITE 150
SALEM, OREGON 97301-2540
2. **Electronic Submittals:** At least **one** hard copy must be sent by mail or in person, but you may also submit an electronic copy, by either email or FTP. You may connect to this address to FTP proposals and adoptions: **webserver.lcd.state.or.us**. To obtain our Username and password for FTP, call Mara Ulloa at 503-373-0050 extension 238, or by emailing **mara.ulloa@state.or.us**.
3. Please Note: Adopted materials must be sent to DLCD not later than **FIVE (5) working days** following the date of the final decision on the amendment.
4. Submittal of this Notice of Adoption must include the text of the amendment plus adopted findings and supplementary information.
5. The deadline to appeal will not be extended if you submit this notice of adoption within five working days of the final decision. Appeals to LUBA may be filed within **TWENTY-ONE (21) days** of the date, the Notice of Adoption is sent to DLCD.
6. In addition to sending the Notice of Adoption to DLCD, you must notify persons who participated in the local hearing and requested notice of the final decision.
7. **Need More Copies?** You can now access these forms online at **<http://www.lcd.state.or.us/>**. Please print on **8-1/2x11 green paper only**. You may also call the DLCD Office at (503) 373-0050; or Fax your request to: (503) 378-5518; or Email your request to **mara.ulloa@state.or.us** - **ATTENTION: PLAN AMENDMENT SPECIALIST**.

ORDINANCE NO. 1189

AN ORDINANCE AMENDING JUNCTION CITY'S COMPREHENSIVE PLAN TEXT, TRANSPORTATION SYSTEM PLAN TEXT AND ADOPTING THE HIGHWAY 99 REFINEMENT PLAN AS A REFINMENT TO THE CITY'S TRANSPORTATION SYSTEM PLAN.

WHEREAS, the Planning Commission initiated the Transportation System Plan Amendments in order to address capacity issues on Highway (HWY) 99 within the planning period; and

WHEREAS, the City Council authorized Lane Council of Governments to pursue a Transportation and Growth Management grant to develop a Highway 99 Refinement Plan that will maximize Highway 99's usefulness in moving traffic while maintaining a healthy functional downtown community; and

WHEREAS, the Highway 99 Refinement Plan identifies a preferred alternative Highway 99 (Ivy)/Holly Street Couplet solution; and

WHEREAS, the proposed amendments to the Comprehensive Plan and Transportation System Plan (TSP) are consistent with the applicable statewide planning goals; and

WHEREAS, the Junction City Council and Planning Commission held a joint work session January 22, 2008 to propose amendments to address policy and minor text amendments to the Transportation System Plan related to the Highway 99 Refinement Plan; and

WHEREAS, March 6, 2008 notice of a public hearing before the Planning Commission was published in the *Tri-County News April 2008*; and

WHEREAS, the Planning Commission held a public hearing on the proposed amendments on March 18, 2008 and adopted findings of fact and recommended to the City Council that the Transportation System Plan be amended as presented in the attached Exhibit A; and

WHEREAS, notice of a public hearing before the City Council was published in the *Tri-County News* February 25, 2009; and

WHEREAS, the Junction City Council held a public hearing on March 10, 2009 and took testimony on this matter at that meeting, taking said testimony into consideration in making its decision; now, therefore,

THE CITY OF JUNCTION CITY ORDAINS AS FOLLOWS:

Section 1. The Findings of Fact, attached as Exhibits A & B are hereby adopted as the basis for these amendments to the Junction City Comprehensive Plan.

Section 2. The first paragraph of the Transportation Element of the 1994 Junction City Comprehensive Plan is hereby amended as follows:

"The Junction City Transportation System Plan, adopted July 2000 and amended in 2009, as referenced herein, is the long range policy document that guides transportation planning within Junction City's Urban Growth Boundary (UGB) for the next 20 years.

The urban character of the city is highlighted by paved city streets, sidewalks, bike paths, and bus stops throughout the community. These physical improvements provide for the safe, convenient, and economical transportation of

commerce and people into, within, and away from Junction City. It is the availability of such services which has been the stimulus for changing land use patterns and growth. The advent of each new transportation mode and route has had a direct, attributable increase in the level of growth within the city."

Section 3. The City of Junction City Transportation System Plan Table of Contents is hereby amended to include the following text as follows:

"APPENDIX I: OR 99 Junction City Refinement Plan"

Section 4. The City of Junction City Transportation System Plan, Chapter 1, Section F. Plan Organization is amended to add the following text as follows:

"Appendix I: OR 99 Junction City Refinement Plan

The Highway 99 Refinement Plan proposes a (Ivy) HWY 99/Holly St couplet solution. The HWY 99 Refinement Plan shall be used for future project development."

Section 5. The City of Junction City Transportation System Plan Policies, TSP-1 is hereby amended as follows:

"TSP-1 The Mission, Goals and Policies and the Project Lists of the Transportation System Plan and adopted Refinement Plan are elements of the Junction City Comprehensive Plan. Other portions of the TSP are supporting documents of the comprehensive plan."

Section 6. The City of Junction City Transportation System Plan Policies, TSP-12 is hereby amended as follows:

"TSP -12 Freight routes and other motorized vehicles alternatives may be used as tools to minimize the impact of large and heavy vehicles in the downtown and other areas."

Section 7. The City of Junction City Transportation System Plan Policies, TSP-35 is hereby amended as follows:

"TSP-35 The city shall consider the findings of ODOT's draft Environmental Impact Statements (EIS) and Environmental Assessments (EA) as integral parts of the land use decision-making procedures. Other actions required, such as a goal exception or plan amendment, will be combined with review of the draft EIS or EA and land use approval process."

Section 8. The City of Junction City Transportation System Plan Policies, TSP-37 is hereby amended as follows:

"TSP-37 Highway 99 is a critical facility to residents of Junction City, the surrounding communities, and the state. The Highway 99 Refinement Plan, attached hereto and incorporated herein as Appendix I by this reference, proposes a HWY 99 (Ivy)/Holly Street couplet solution. The HWY 99 Refinement Plan shall be used for future project development."

Section 9. The City of Junction City Transportation System Plan, Chapter 4, Section B. Street Plan, is hereby amended as follows:

"One of the most important projects identified in this TSP is the HWY 99 Refinement Plan adopted March 10, 2009, wherein the city, county and ODOT worked with members of the community and area to build a plan that meets the needs of the city, county, and state well into the future."

Section 10. The City of Junction City Transportation System Plan, Chapter 5, Section A. Introduction, last sentence of paragraph two, is hereby amended as follows:

"The last tool consists of areas of further study, such as the completed HWY 99 Refinement Plan."

Section 11. The City of Junction City Transportation System Plan, Chapter 5, Section A, Introduction, third paragraph, is hereby amended as follows:

"The city's transportation system is currently functioning at an acceptable level of service and needs few major fixes aside from the issues and solutions identified in the HWY 99 Refinement Plan. A strategy of maintaining the existing roads, connecting those in areas of poor connectivity and identifying key road locations in developing areas, and supporting alternative modes was chosen by the CAC because it is overall the strategy that best meets the needs of the community. It is also the most likely to be supported by the community."

Section 12. The City of Junction City Transportation System Plan, Chapter 5, Section B. Financing, first paragraph, is hereby amended as follows:

"The financing plan sets out improvements to the Junction City streets, sidewalks and bike facilities and estimates their scheduling and cost. Projects are identified as to whether they are the responsibility of the City or another party, such as a developer, Lane County, etc. The HWY 99 improvements were included in 2008, based on recommendations of the Hwy 99 Refinement Plan."

Section 13. All Sections of the City's Comprehensive Plan and Transportation System Plan not amended by this ordinance remain in full force and effect.

Read in full for its first reading on the 10th day of March 2009.

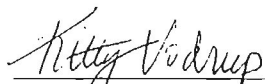
Read by title only, for its second reading this 24th of March 2009.

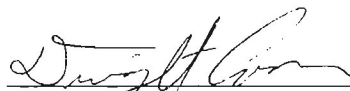
Passed by the City Council this 24th day of March 2009.

Approved by the Mayor this 24th day of March 2009.

ATTEST:

APPROVED:


Kitty Vodrup, City Recorder


Dwight Coon, Mayor

Ordinance No. 1189 - EXHIBIT A

**PLANNING COMMISSION FINDINGS OF FACT
COMPREHENSIVE PLAN AMENDMENT
TSP UPDATE/HIGHWAY 99 REFINEMENT PLAN
(CPA-08-01)**

GENERAL FINDINGS

1. The Planning Commission initiated the amendments on May 23, 2005 as authorized by Section 106 of the Zoning Ordinance and page 2 of the Comprehensive Plan.
2. The Junction City Planning Commission held a public hearing on March 18, 2008 after giving the required notice per Section 112 of the Zoning Ordinance.
3. The Junction City Planning Commission held a public hearing in accordance with Section 113 of the Zoning Ordinance and page 2 of the Comprehensive Plan and considered all material relevant to the Plan Amendment.
4. The amendments are necessary to allow the city to focus resources on appropriate solutions to key issues associated with congestion, access management, and achieving desired land use patterns through a balanced, multi-modal system that can accommodate future growth.
5. The amendments will ensure that the City is able to identify appropriate resources to build and maintain an adequate transportation system.

STATEWIDE PLANNING GOALS and PROPOSED 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.

This proposed amendment is consistent with Goal 1 through the City's public notification and hearing processes concerning quasi-judicial comprehensive plan amendment applications. The hearings procedures set forth in Ordinance No. 950 for quasi-judicial comprehensive plan amendments provide a number of opportunities for citizen involvement, specifically, the amendments have been considered at a duly noticed public hearing before the Junction City Planning Commission and will be considered at a public hearing before the Junction City Council.

The City worked with a Technical Advisory Committee and Citizen Advisory Committee developing several alternative scenarios for improving Highway 99. Two public open houses were held to gather input and individual property owner meetings were held over the course of two days.

Notice of the public hearing was posted at the city hall on the city's website, and published in the Tri-County News, a newspaper of general circulation. The above process for citizen involvement regarding this proposed amendment demonstrates consistency with Statewide Planning Goal 1.

Goal 2 - Zoning: Land Use Planning: *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.*

The TSP amendment is consistent with the provisions for quasi-judicial comprehensive plan amendments as set forth in the Junction City Comprehensive Plan. That plan is an acknowledged plan under applicable state statutes and administrative rules promulgated by the Department of Land Conservation and Development (DLCD). The proposed amendment complies with the Junction City Comprehensive Plan amendment processes as outlined in the acknowledged Comprehensive Plan, including relevant ordinances, therefore, the proposed amendment is consistent with Statewide Planning Goal 2.

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

This goal is not relevant to this plan amendment because the amendment does not involve any agricultural lands or uses.

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.*

This goal is not relevant to this plan amendment since the amendment does not include Forest Land.

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

This goal is not relevant to this plan amendment because there are no inventoried Goal 5 resources on the site; therefore this does not implicate Goal 5.

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

The TSP update does not include any changes to the treatment of the resources protected under this goal, so the goal is not relevant to this amendment.

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

This goal is not relevant to this plan amendment because the subject site does not involve any Natural Disasters or Hazardous areas.

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.

This goal does not directly bear upon the proposed plan amendment.

Goal 9 - Economic Development: 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.

The TSP update does not include any changes related to management of recreational resources, so this goal is not relevant to the amendment.

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

This goal is not relevant to the TSP Update/Plan amendment.

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.

Transportation facilities are identified as public facilities under this goal. OAR 660-011-0035(1) requires,

The public facility plan shall include rough cost estimates for those sewer, water, and transportation public facility projects identified in the facility plan . . .

The TSP update includes a project list and cost estimates for each anticipated improvement project. Other public facility projects, for example water, sewer and public transit improvements, are identified in other long range planning documents adopted separately from the TSP. The plan amendment will, therefore, not affect comprehensive plan compliance with Goal 11.

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

OAR 660-012 is the Transportation Planning Rule (TPR) that implements statewide planning Goal 12. Subsection numbers below are those found within OAR 660-012 (i.e., "-0005" refers to OAR 660-012-0005). The Planning Commission finds the TSP update complies with the TPR requirements based upon the following findings:

The current TSP adopted in 2000 has been acknowledged by DLCDC and therefore consistent with OAR 660-012.

TSP Policy states: "*TSP-37 Highway 99 is a critical facility to residents of Junction City, the surrounding communities, and the state. The model shows that if nothing is done to*

better manage traffic on the highway portions of Hwy. 99 within the city will reach capacity within the planning period. The city will work closely with ODOT to secure funding for and develop a refinement plan that will maximize Hwy. 99's usefulness in moving traffic while maintaining a healthy and functional downtown community."

The TSP Update is consistent with TSP Policy 37. The amendment will assist with congestion, access management, and achieving desired land use patterns through a balanced, multi-modal system that can accommodate future growth.

The TSP amendment is consistent the Junction City Comprehensive Plan. That plan is an acknowledged plan under applicable state statutes and administrative rules promulgated by the Department of Land Conservation and Development (DLCD) and therefore is consistent with Statewide Planning Goal 12.

Goal 13 - Energy Conservation: *This goal states: "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."*

This goal is not relevant to the proposed amendment.

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

The TSP amendment will not change any City requirements related to urbanization, so the amendment is consistent with Goal 14.

Goal 15 - Willamette River Greenway: *To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.*

This goal is not relevant to this proposed amendment because this site is not within the boundary of the Willamette River Greenway.

Goals 16-19; Estuary Resources, Coastal Shorelands, Beaches and Dunes, and Ocean Resources: *These goals are not relevant to this proposed amendment because there is no coastal, estuarine, ocean, or beach and dune resources related to the site.*

Signature: _____

Robert Nelson, Chairperson
Junction City Planning Commission

Approval Date: _____

Ordinance No. 1189 - EXHIBIT B

CITY COUNCIL FINDINGS OF FACT
COMPREHENSIVE PLAN AMENDMENT – TRANSPORTATION SYSTEM PLAN
AMENDMENT CPA-08-01

JUNCTION CITY COMPREHENSIVE PLAN

Junction City TSP Policy 1 states “The Mission, Goals and Policies and the Project Lists of the Transportation System Plan are elements of the Junction City Comprehensive Plan. Other portions of the TSP are supporting documents of the comprehensive plan.

Junction City TSP Policy 37 states: Highway 99 is a critical facility to residents of Junction City, the surrounding communities, and the state. The model shows that if nothing is done to better manage traffic on the highway portions of Hwy. 99 within the city will reach capacity within the planning period. The city will work closely with ODOT to secure funding for and develop a refinement plan that will maximize Hwy. 99’s usefulness in moving traffic while maintaining a healthy and functional downtown community.

FINDING: The Junction City Transportation System Plan is the long range policy document that guides transportation planning within Junction City’s Urban Growth Boundary for the next 20 years and was adopted as part of the Junction City Comprehensive Plan. The development of the Highway 99 Refinement Plan implements Junction City TSP Policy TSP-37. The adoption of the Refinement Plan into the City’s TSP will assist with congestion, access management, and achieving desired land use patterns through a balanced, multi-modal system that can accommodate future growth.

STATEWIDE PLANNING GOALS and PROPOSED 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: This proposed amendment is consistent with Goal 1 through the City’s public notification and hearing processes concerning quasi-judicial comprehensive plan amendment applications. The hearings procedures set forth in Ordinance No. 950 for quasi-judicial comprehensive plan amendments provide a number of opportunities for citizen involvement, specifically, the amendments have been considered at a duly noticed public hearing before the Junction City Planning Commission and will be considered at a public hearing before the Junction City Council.

FINDING: The City worked with a Technical Advisory Committee and Citizen Advisory Committee developing several alternative scenarios for improving Highway 99. Two public open houses were held to gather input and individual property owner meetings were held over the course of two days.

FINDING: Notice of the public hearing was posted at the city hall on the city’s website, and published in the Tri-County News, a newspaper of general circulation. The above process for

citizen involvement regarding this proposed amendment demonstrates consistency with Statewide Planning Goal 1.

Goal 2 - Zoning: Land Use Planning: 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 TSP amendment is consistent with the provisions for quasi-judicial comprehensive plan amendments as set forth in the Junction City Comprehensive Plan. That plan is an acknowledged plan under applicable state statutes and administrative rules promulgated by the Department of Land Conservation and Development (DLCDD). The proposed amendment complies with the Junction City Comprehensive Plan amendment processes as outlined in the acknowledged Comprehensive Plan, including relevant ordinances, therefore, the proposed amendment is consistent with Statewide Planning Goal 2.

Goal 3 - Agricultural Land: To preserve and maintain agricultural lands.

FINDING: The HWY 99 Refinement Plan identifies local improvements in addition to the preferred alternative (Ivy/Holly Couplet). The local improvement concept is partially outside the existing Urban Growth Boundary but would mostly serve urban uses. The Refinement Plan acknowledges state land use law restrictions on accommodating urban development with rural road improvements, and no new road extensions could be implemented until such time as the Junction City urban growth boundary is expanded or the City obtains an exception to State Land Use Goal 3 (Agriculture). Therefore, the proposed amendment is consistent with Statewide Planning Goal 3.

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: This goal is not relevant to this plan amendment since the amendment does not include Forest Land.

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

FINDING: This goal is not relevant to this plan amendment because there are no inventoried Goal 5 resources on the site; therefore this does not implicate Goal 5.

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 update does not include any changes to the treatment of the resources protected under this goal, so the goal is not relevant to this amendment.

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

FINDING: This goal is not relevant to this plan amendment because the subject site does not involve any Natural Disasters or Hazardous areas.

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: This goal does not directly bear upon the proposed plan amendment.

Goal 9 -Economic Development: 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 update does not include any changes related to management of recreational resources, so this goal is not relevant to the amendment.

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

FINDING: This goal is not relevant to the TSP Update/Plan amendment.

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: Transportation facilities are identified as public facilities under this goal. OAR 660-011-0035(1) requires:

The public facility plan shall include rough cost estimates for those sewer, water, and transportation public facility projects identified in the facility plan . . .

FINDING: The TSP update includes a project list and cost estimates for each anticipated improvement project. Other public facility projects, for example water, sewer and public transit improvements, are identified in other long range planning documents adopted separately from the TSP. The plan amendment will, therefore, not affect comprehensive plan compliance with Goal 11.

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

OAR 660-012 is the Transportation Planning Rule (TPR) that implements statewide planning Goal 12. Subsection numbers below are those found within OAR 660-012. The

City Council finds the TSP update complies with the TPR requirements based upon the following findings:

660-012-0015 Preparation and Coordination of Transportation System Plans

“(1) ODOT shall prepare, adopt and amend a state TSP [OTP]... The state TSP shall identify a system of transportation facilities and services adequate to meet identified state transportation needs:

(b) State transportation project plans shall be compatible with acknowledged comprehensive plans as provided for in OAR 731, Division 15. Disagreements between ODOT and affected local governments shall be resolved in the manner established in that division.”

Junction City TSP Policy 1

The Mission, Goals and Policies and the Project Lists of the Transportation System Plan are elements of the Junction City Comprehensive Plan. Other portions of the TSP are supporting documents of the comprehensive plan.

Junction City TSP Policy 37

Highway 99 is a critical facility to residents of Junction City, the surrounding communities, and the state. The model shows that if nothing is done to better manage traffic on the highway portions of Hwy. 99 within the city will reach capacity within the planning period. The city will work closely with ODOT to secure funding for and develop a refinement plan that will maximize Hwy. 99’s usefulness in moving traffic while maintaining a healthy and functional downtown community.

FINDING: The Junction City Transportation System Plan is the long range policy document that guides transportation planning within Junction City’s Urban Growth Boundary for the next 20 years and was adopted as part of the Junction City Comprehensive Plan. The development of the Highway 99 Refinement Plan implements Junction City TSP Policy TSP-37. The adoption of the Refinement Plan into the City’s TSP will assist with congestion, access management, and achieving desired land use patterns through a balanced, multi-modal system that can accommodate future growth.

FINDING: Since the HWY 99 Refinement Plan is consistent with the policies of the Junction City TSP and the TSP has been acknowledged by DLCD, the amendments are consistent with OAR 660-012.

660-012-0015 (3)(a) Local TSPs shall establish a system of transportation facilities and services adequate to meet identified local transportation needs and shall be consistent with ...adopted elements of the state TSP;

Applicable policies of the Oregon Highway Plan (OHP) are addressed below.

OHP Policy 1C: State Highway Freight System

It is the policy of the State of Oregon to balance the need for movement of goods with other uses of the highway system, and to recognize the importance of maintaining efficient through movement on major truck freight routes.

FINDING: Highway 99 is designated a Freight Route by ODOT and is designated a freight route in the City's current TSP. The Junction City HWY 99 Refinement Plan does not change the designation of HWY 99 as a freight route. Alternatives evaluated were reviewed by ODOT in order to make sure the preferred alternatives maintained efficient through movement of freight.

OHP Policy 1F: Highway Mobility Standards

It is the policy of the State of Oregon to use highway mobility standards to maintain acceptable and reliable levels of mobility on the state highway system. These standards shall be used for:

Identifying state highway mobility performance expectations for planning and plan implementation; Evaluating the impacts on state highways of amendments to transportation plans, acknowledged comprehensive plans and landuse regulations pursuant to the Transportation Planning Rule (OAR660-12-060); and Guiding operations decisions such as managing access and traffic control systems to maintain acceptable highway performance."

FINDING: The HWY 99 Refinement Plan identifies a three alternative and one preferred alternative project (Ivy/Holly couplet) which meets the states mobility standard, per table 6-1 in Chapter 6 of the HWY 99 Refinement Plan.

OHP Policy 1G: Major Improvements

It is the policy of the State of Oregon to maintain highway performance and improve safety by improving system efficiency and management before adding capacity. ODOT will work in partnership with regional and local governments to address highway performance and safety needs.

FINDING: The HWY 99 Refinement Plan includes an access management intended to preserve functionality of the existing highway system until the preferred alternative project is built. The preferred alternative includes facility improvements such as the addition of bike lanes and wider sidewalks to encourage alternative modes of transportation in addition to local street improvements to provide better access and through movement to improve the efficiency of the highway system.

OHP Policy 2D: Public Involvement

It is the policy of the State of Oregon to ensure that citizens, businesses, regional and local governments, state agencies, and tribal governments have opportunities to have input into decisions regarding proposed policies, plans, programs, and improvement projects that affect the state highway system.

FINDING: A Project Management Team (PMT) made up of ODOT, County, City staff and consultant guided the project development while a Technical Advisory Committee (TAC) provided technical overview of the project. TAC membership included the PMT, Federal Highway Administration, Transportation Planning Analysis Unit (TPAU), ODOT Access Management, Department of Land Conservation and Development (DLCD), Lane County (County), Lane Transit District, Junction City School District, railroad operators, and additional

Junction City Staff. A Citizen Advisory Committee (CAC) was also formed. The membership consisted of several diverse stakeholders including, but not limited to the Lane County Roads Advisory Committee (RAC), a "through user", adjacent property owners, bike and pedestrian users, and business owners. Four formal meetings were attended by this committee. The CAC provided important feedback throughout the development of the Refinement Plan. Consensus within the CAC was found in choosing both the broader design alternatives and, ultimately, the preferred alternative. These decisions also reflected, in large part, the TAC decisions.

The PMT also developed a public involvement program to solicit participation in transportation planning in Junction City. Draft documents were available at Junction City Hall; notices to public open houses were printed in the regional newspaper and distributed throughout the community with flyers. The City website reflected project progress, and City staff and project managers were accessible by email, phone, and written correspondence throughout the project. Significant one-on-one dialog between project managers and citizens catalyzed the relatively high public participation at open houses as well as minimal negative feedback about the chosen design alternatives and the preferred alternative. A qualitative assessment of written and verbal feedback throughout the project characterized the public outreach efforts as inclusive and fair. In particular, the one-on-one effort that DKS invested into discussions with property owners about access management issues were beneficial to the project's success.

Policy 3A: Classification and Spacing Standards

It is the policy of the State of Oregon to manage the location, spacing and type of road and street intersections and approach roads on state highways to assure the safe and efficient operation of state highways consistent with the classification of the highways.

Finding: With no dedicated funds available to construct any improvement alternative selected, the timing of implementation is unknown and may be many years away. By adopting an access management plan for the existing corridor, incremental improvements can be made in the meantime to help enhance safety and operations. To provide a basis for decision-making during the development of the access management plan, the objectives of the plan were formed with ODOT staff based on the following assumption:

"Where reasonable alternate access is available, direct highway access is to be removed. Where reasonable alternate access is not available, the objective will be to meet, or move in the direction of meeting, ODOT's adopted access management spacing standards for Regional Highways, as documented in OAR 734-051-0115, Table 2.

Finding: The TSP amendment is consistent the applicable policies of the TPR and Oregon Highway Plan and therefore is consistent with Statewide Planning Goal 12.

Goal 13 - Energy Conservation: This goal states: "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."

This goal is not relevant to the proposed amendment.

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

The TSP amendment will not change any City requirements related to urbanization, so the amendment is consistent with Goal 14.

Goal 15 - Willamette River Greenway: To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.

This goal is not relevant to this proposed amendment because this site is not within the boundary of the Willamette River Greenway.

Goals 16-19; Estuary Resources, Coastal Shorelands, Beaches and Dunes, and Ocean Resources: These goals are not relevant to this proposed amendment because there is no coastal, estuarine, ocean, or beach and dune resources related to the site.

JUNCTION CITY COUNCIL AGENDA ITEM SUMMARY



Highway 99 Refinement Plan Adoption

Meeting Date: February
Department: Planning
www.ci.junction-city.or.us

Agenda Item Number: 5
Staff Contact: Kay Bork
Contact Telephone Number: 998-4763

ISSUE STATEMENT

The Highway 99 Refinement Plan has been completed and is ready for adoption by the City Council. The adoption of the Highway 99 Refinement Plan and minor amendments to the TSP require an Amendment to the City's Comprehensive Plan. The Highway 99 Refinement plan will become an Appendix to the City's Transportation System Plan, which is the long range transportation planning document for the city and is part of the city's Comprehensive Plan.

BACKGROUND

Petra Schuetz (LCOG and project manager) presented the Highway 99 Refinement Plan at the February 10, 2009 Council meeting. Staff distributed copies of the Highway 99 Refinement Plan which included copies of the strikeout and underlined versions of the changes requested by ODOT.

The 2000 Junction City Transportation System Plan (TSP) identified Highway 99 as a critical facility to the citizens of Junction City and the highway was shown to reach capacity within the 2015 planning horizon. Policy T-37 of the TSP states that the City would secure funding to work with ODOT to develop a Highway 99 Refinement Plan that will improve capacity while maintaining a healthy functional downtown community. In 2006, the Council voted unanimously to have Lane Council of Governments secure TGM funding for a Highway 99 Refinement Plan and Transportation System Plan Update.

On January 22, 2008 a Joint Session for City Council and Planning Commission was held. It was the consensus of the City Council and Planning Commission to support and to have staff move forward with the preferred alternative of the Ivy/Holly Couplet.

On March 11, 2008 the Junction City Planning Commission held a public hearing and review of the Refinement Plan. The Commission unanimously voted to recommend to Junction City Council the adoption of the Refinement Plan.

Before the Refinement Plan went to City Council for adoption in 2008, ODOT requested text edits to the document in order to further clarify some issues. The changes by ODOT did not modify the preferred alternative as proposed and recommend for adoption.

Preferred Alternative

The Preferred Alternative in the HWY 99 Refinement Plan is the Holly/Ivy Street Couplet. The one-way northbound and southbound roadbeds would continue to the south along the Holly Street and Ivy Street alignments, respectively, through the intersections with 1st Avenue. Each one-way corridor of OR 99 would be constructed to fit within the existing 60-foot right-of-ways along Ivy Street and Holly Street, using a design speed of 30 mph (posted speed of 25 mph) and would include:

- 2 travel lanes (12 feet wide each),
- 1 bike lane (6 feet wide),
- Parallel parking on one side of the highway (8 feet wide), and
- 2 sidewalks (11 feet wide each).

Local Improvements

The Highway 99 Refinement Plan also identified necessary local improvements to be constructed with the Ivy/Holly couplet. Some of the improvements in the Plan are outside the City's Urban Growth Boundary. The Plan explicitly states that city would not pursue these local improvements until they were inside the UGB.

Pitney Lane, a local street, would be improved to collector (with shoulder) standards from OR 36 north to Bailey Lane and would be realigned from Bailey Lane north to intersect with High Pass Road opposite Oaklea Drive.

1. Prairie Road (east of OR 99) would be realigned to remove the skewed Union Pacific Railroad (UPRR) crossing, and continue north along the east side of the UPRR line. A new east-west roadway would then be constructed to connect Prairie Road to the OR 99/ OR 36 intersection, creating a "T"-intersection with Prairie Road.
2. An extension of Prairie Road north of its current intersection with OR 99 was also analyzed, primarily as a means to reduce peak hour congestion at 1st Street and OR 99 that is largely associated with traffic generated by large employers. It would address this congestion by providing an alternative way to access OR 99 and the Eugene area to and from the south without requiring the use of the OR 99 and 1st Street intersection. This extension would run north from the current intersection of Prairie and OR 99, east of the UPRR line through County lands outside of the UGB.

RELATED CITY POLICIES

The City's Transportation System Plan Policy 37 states: "TSP-37 Highway 99 is a critical facility to residents of Junction City, the surrounding communities, and the state. The model shows that if nothing is done to better manage traffic on the highway portions of Hwy. 99 within the city will reach capacity within the planning period. The city will work closely with ODOT to secure funding for and develop a refinement plan that will maximize Hwy. 99's usefulness in moving traffic while maintaining a healthy and functional downtown community."

COUNCIL OPTIONS

1. Approve the Ordinance to adopt the Highway 99 Refinement Plan and related Transportation System Plan Amendments
2. Do not approve the Ordinance to adopt the Highway 99 Refinement Plan and related Transportation System Plan Amendments.

CITY ADMINISTRATOR'S RECOMMENDATION

Approve the Ordinance to adopt the Highway 99 Refinement Plan and related Transportation System Plan Amendments

SUGGESTED MOTION

1. Make a Motion to Approve the Ordinance to adopt the Highway 99 Refinement Plan and related Transportation System Plan Amendments
2. Approve the Ordinance to adopt the Highway 99 Refinement Plan and related Transportation System Plan Amendments.

ATTACHMENTS

1. Proposed Amendments in legislative format
2. Ordinance is included in Council Packet under separate agenda item.

FOR MORE INFORMATION

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Telephone: 998-52153
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**PROPOSED
JUNCTION CITY TRANSPORTATION SYSTEM PLAN AND COMPREHENSIVE PLAN
AMENDMENTS
(CPA-08-01)**

The proposed amendments to the Transportation System Plan and Comprehensive Plan are shown with a strikeout and underline. The Section numbers, e.g. "Section 2." correspond to the adopting ordinance.

1. **Section 2.** The first paragraph of the Transportation Element of the 1994 Junction City Comprehensive Plan is hereby amended as follows:

The Junction City Transportation System Plan, adopted July 2000 and amended in 2009, as referenced herein, is the long range policy document that guides transportation planning within Junction City's Urban Growth Boundary (UGB) for the next 20 years.

The urban character of the city is highlighted by paved city streets, sidewalks, bike paths, and bus stops throughout the community. These physical improvements provide for the safe, convenient, and economical transportation of commerce and people into, within, and away from Junction City. It is the availability of such services which has been the stimulus for changing land use patterns and growth. The advent of each new transportation mode and route has had a direct, attributable increase in the level of growth within the city.

2. **Section 3.** The City of Junction City Transportation System Plan Table of Contents is hereby amended to include the following text as follows:

APPENDIX I: OR 99 Junction City Refinement Plan

3. **Section 4.** The City of Junction City Transportation System Plan, Chapter 1, Section F. Plan Organization is amended to add the following text as follows:

Appendix I: OR 99 Junction City Refinement Plan

The Highway 99 Refinement Plan proposes a (lv) HWY 99/Holly St couplet solution. The HWY 99 Refinement Plan shall be used for future project development.

4. **Section 5.** The City of Junction City Transportation System Plan Policies, TSP-1 is hereby amended as follows:

TSP-1 The Mission, Goals and Policies and the Project Lists of the Transportation System Plan and adopted Refinement Plans are elements of the Junction City Comprehensive Plan. Other portions of the TSP are supporting documents of the comprehensive plan.

5. **Section 6.** The City of Junction City Transportation System Plan Policies, TSP-12 is hereby amended as follows:

"TSP -12 ~~Truck Freight~~ routes and other motorized vehicles alternatives may be used as tools to minimize the impact of large and heavy vehicles in the downtown and other areas."

6. Section 7. The City of Junction City Transportation System Plan Policies, TSP-35 is hereby amended as follows:

"TSP-35 The city shall consider the findings of ODOT's draft Environmental Impact Statements (EIS) and Environmental Assessments (EA) as integral parts of the land use decision-making procedures. Other actions required, such as a goal exception or plan amendment, will be combined with review of the draft EA EIS or EIS EA and land use approval process."

7. Section 8. The City of Junction City Transportation System Plan Policies, TSP-37 is hereby amended as follows:

~~TSP-37 Highway 99 is a critical facility to residents of Junction City, the surrounding communities, and the state. The model shows that if nothing is done to better manage traffic on the highway portions of Hwy. 99 within the city will reach capacity within the planning period. The city will work closely with ODOT to secure funding for and develop a refinement plan that will maximize Hwy. 99's usefulness in moving traffic while maintaining a healthy and functional downtown community. The Highway 99 Refinement Plan, attached hereto and incorporated herein as Appendix I by this reference, proposes a HWY 99 (Ivy)/Holly Street couplet solution. The HWY 99 Refinement Plan shall be used for future project development.~~

8. Section 9. The City of Junction City Transportation System Plan, Chapter 4, Section B. Street Plan, is hereby amended as follows:

~~One of the most important projects identified in this TSP, deserves special attention. As Junction City's main street Hwy. 99's management is of critical importance to the future of the city. A very important project included in this TSP is the refinement plan for Hwy. 99, was the HWY 99 Refinement Plan adopted March 10, 2009, wherein the city, county and ODOT will worked with members of the community and area to build a plan that will meets the needs of the city, county and state well into the future~~

9. Section 10. The City of Junction City Transportation System Plan, Chapter 5, Section A. Introduction, last sentence of paragraph two, is hereby amended as follows:

The last tool consists of areas of further study, such as the completed HWY 99 Refinement Plan.

10. Section 11. The City of Junction City Transportation System Plan, Chapter 5, Section A, Introduction, third paragraph, is hereby amended as follows:

"The city's transportation system is currently functioning at an acceptable level of service and needs few major fixes aside from the issues and solutions identified in the HWY 99 Refinement Plan. ~~inevitable problems of Hwy 99 capacity and safety, for which a refinement plan is recommended.~~ A strategy of maintaining the existing roads, connecting those in areas of poor connectivity and identifying key road locations in

developing areas, and supporting alternative modes was chosen by the CAC because it is overall the strategy that best meets the needs of the community. It is also the most likely to be supported by the community."

11. Section 12. The City of Junction City Transportation System Plan, Chapter 5, Section B. Financing, first paragraph, is hereby amended as follows:

The financing plan sets out improvements to the Junction City streets, sidewalks and bike facilities and estimates their scheduling and cost. Projects are identified as to whether they are the responsibility of the City or another party, such as a developer, Lane County, etc. ~~One glaring omission is that The HWY 99 improvements were included in 2008 based on recommendations of the HWY 99 Refinement Plan, are not addressed, as it is unknown at this time what improvements might be needed or what those improvements might cost. To address this issue this TSP contains a recommendation that a refinement plan be done with close cooperation between the community and ODOT.~~



OR 99 JUNCTION CITY REFINEMENT PLAN

ADOPTED _____, 2008



PREPARED FOR THE CITY OF JUNCTION CITY BY



DKS Associates
TRANSPORTATION SOLUTIONS

EXECUTIVE SUMMARY

Due to the growth in Junction City (City), recent changes in land uses, and a 3.22% average annual increase in travel every year since 1996, the OR 99 Refinement Plan (Refinement Plan), which includes an access management plan, is necessary to complete the City's Transportation System Plan (TSP). The purpose of this Plan is to determine how best to preserve the function of OR 99 through the City. This includes improvements to the surrounding local transportation system that combines the vision of the City's Downtown Plan with State, County and local transportation and land use planning efforts. The Plan aims to enhance the quality of life in Junction City by providing a project recommendation for improvements to OR 99 that meet the travel needs of the community.

With funding from the State's Transportation Growth Management (TGM) Program, the Plan was developed between July 2006 and January 2008. The scope of the project included several steps. First, extensive data collection, transportation computer modeling and mapping were developed into an existing conditions analysis. Second, a range of facility improvement alternatives were identified, then screened for feasibility and evaluated for operational performance that would lead to a long-term solution. The alternatives were then further analyzed and reduced to three. After significant input from several stakeholders, a preferred alternative was identified.

A project management team, technical advisory committee (TAC) and citizen advisory committee (CAC), and thoughtful participation from the public via open houses, written and emailed comments and countless conversations, generated diverse dialog which shaped this project's development at all levels.

The Refinement Plan contains several useful tools. First, a project – the preferred alternative – is recommended. Strong consensus indicated that the preferred design alternative for OR 99 is a couplet between OR 99 or Ivy Street (southbound) and Holly Street (northbound). In addition, an implementation phasing plan, an access management plan, and a funding analysis were developed for the preferred alternative. These tools provide the City with a framework for moving toward a design solution for OR 99 through Junction City that meets the needs of the State facility and the community.

TABLE OF CONTENTS

Acknowledgements

Introduction

Chapter 1 - Updated Plan, Policy and Study Review

Chapter 2 - Existing Conditions

Chapter 3 - No Build Case Operational Analysis

Chapter 4 - Problem Statement, Evaluation Criteria, and Technical Rating Methods

Chapter 5 - Alternative Identification and Preliminary Screening

Chapter 6 - Refined Alternatives Evaluation

Chapter 7 - Preferred Alternative

Appendix [Printed as Separate Document]

ACKNOWLEDGEMENTS

City Administrator David Clyne
Planning Director Kay Bork

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Ed Moore, Area 5 Senior Planner, Oregon Department of Transportation
Kay Bork, Planning Director, Junction City
Sue Geniesse, TGM Project Manager, Oregon Department of Transportation

FUNDING

This project was funded by the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation (ODOT) and the Department of Land Conservation and Development (DLCD). The TGM Program relies on funding from the federal Safe, Accountable, Flexible, Efficient, Transportation Enhancement Act – Legacy for Users (SAFETEA-LU) funding and the Oregon Lottery. The Refinement Plan scope was structured around State land use and transportation policies. While it is consistent with these policies, this Refinement Plan does not necessarily reflect all of the views and policies of the State of Oregon.

The identified preferred alternative in this Refinement Plan contains a project recommendation and future improvements to OR 99 within Junction City and a discussion of possible means of funding these improvements. The Refinement Plan does not, however, obligate or imply obligations of funds by any jurisdiction for project level planning or construction. The preferred alternative project is eligible for inclusion in State, County, and local documents such as the State Transportation Improvement Program (STIP) and the Lane County Capital Improvements Program (CIP). Further, if Junction City is incorporated into a Metropolitan Planning Organization (MPO) in the future, the proposed project would be eligible for inclusion into regional planning documents. Inclusion into such documents is contingent upon State, County, and local efforts to prioritize, champion, identify and secure funding.

It is also important to note that the recommended projects on the State of Oregon transportation system cannot be considered to be reasonably likely to be constructed during the identified planning horizon as defined by Oregon Administrative Rule 660-0012-0060. Consequently, these projects cannot be relied upon to support plan amendments or zone changes and achieve compliance with Oregon Administrative Rule 660-0012-0060 unless or until they are included in an adopted State Transportation Improvement Program or a specific funding source is identified and supported by ODOT in writing or a specific funding plan that is supported by ODOT in writing is developed. The projects on the State of Oregon transportation system recommended in this document simply represent state and local agreement about State transportation system needs in Junction City that have been identified through this planning process. The process of funding the recommended projects on the State of Oregon transportation system through the STIP is discussed in greater detail in the Funding section of this Plan.

Chapter 1

Background, Policy, and Study Review

Introduction

Project Description

Due to growth in Junction City, Oregon, recent changes in land uses, and a 3.22% increase in travel per year on OR 99 since 1996; OR 99 through Junction City needs to be improved. State and local officials have developed a common understanding that an OR 99 refinement plan and access management plan are necessary to complete the City's Transportation System Plan (TSP) and protect long term functionality of this vital transportation corridor.

The purpose of this OR 99 Refinement Plan (Refinement Plan) is to determine how best to preserve the function of OR 99, including improvements to the surrounding local system that will reduce pressure on the state facility. Further, it is acknowledged that existing access spacing is less than current standards. Spacing deviations are examined to minimize impacts to property while improving long term safety and operations and an access management plan is incorporated into this document to address access issues. Overall project recommendations encompass a combination of measures aimed at improving efficiency, including access management policies, actions, and treatments, intersection improvements, and local street connections.

Project Objectives

The Refinement Plan accomplished the following objectives:

- Identify roadway facility needs, both on the highway and on the surrounding local system
- Solve short and long term problems associated with the safe operation of the highway through the city, including access management and pedestrian and bicycle crossing issues
- Identify decision thresholds for implementing the plan
- Adopt the Refinement Plan through a public process as an amendment to the Junction City TSP

Planning Process

The overall work approach for this analysis included several steps and numerous participants. First, the project management team developed a participation structure, defined the project decision making process, and developed a schedule. The Refinement Plan preferred alternative relied heavily on the participation of several bodies.

Project Management Team (PMT)

The PMT was comprised of representatives from Junction City, ODOT, the consultant – DKS Associates, Lane Council of Governments, and later, Lane County. This team met monthly between June 2006 and January 2008 to fulfill the contracted requirements of the project, provide peer feedback, and participate in the technical and public outreach efforts.

Technical Advisory Committee (TAC)

The TAC provided technical guidance for the Refinement Plan. TAC membership included the PMT, Federal Highway Administration, Transportation Planning Analysis Unit (TPAU), ODOT Access Management, Department of Land Conservation and Development (DLCD), Lane County (County), Lane Transit District, Junction City School District, railroad operators, and additional Junction City Staff. Four formal meetings were held to review project deliverables by the TAC prior to taking them to the Citizen Advisory Committee for feedback. Consensus was found in choosing both the broader design alternatives and, ultimately, the preferred alternative.

Citizen Advisory Committee (CAC)

A 20-person Citizen Advisory Committee (CAC) was formed to provide input on project process. The membership consisted of several diverse stakeholders including, but not limited to the Lane County Roads Advisory Committee (RAC), a “through user”, adjacent property owners, bike and pedestrian users, and business owners. Four formal meetings were attended by this committee. The CAC provided important feedback throughout the development of the Refinement Plan. Consensus within the CAC was found in choosing both the broader design alternatives and, ultimately, the preferred alternative. These decisions also reflected, in large part, the TAC decisions.

Extended Public Outreach

The PMT also developed a public involvement program to solicit participation in transportation planning in Junction City. Draft documents were available at Junction City Hall; notices to public open houses were printed in the regional newspaper and distributed throughout the community with flyers. The City website reflected project progress, and City staff and project managers were accessible by email, phone, and written correspondence throughout the project. Significant one-on-one dialog between project managers and citizens catalyzed the relatively high public participation at open houses as well as minimal negative feedback about the chosen design alternatives and the preferred alternative. A qualitative assessment of written and verbal feedback throughout the project characterized the public outreach efforts as inclusive and fair. In particular, the one-on-one effort that DKS invested into discussions with property owners about access management issues was beneficial to the project’s success.

Adoption Process

Within the scope of the TGM program, two open houses focused on the community at large. Both events attracted several people, with diverse backgrounds and opinions. The second open house, which concentrated on a final access management plan and the selection of a preferred alternative, drew over 90 participants (including staff).

The adoption of the Refinement Plan took several steps and provided several additional opportunities for public input. Many decision-making bodies reviewed the Refinement Plan prior to adoption. Public hearings, work sessions and meetings included:

- Joint Session between the Junction City Planning Commission and City Council
- Recommendation by Lane County Roads Advisory Committee
- Recommendation by Lane County Planning Commission
- Recommendation by Junction City Planning Commission
- Adoption by Junction City City Council
- Adoption by Lane County Board of Commissioners
- Adoption by Oregon Transportation Commission

The additional steps of the project are detailed in the Refinement Plan including:

- *Data Collection* – review of new documentation relating to OR 99 operations, traffic counts, coordinated transportation modeling conditions, and GIS mapping.
- *Existing Conditions Analysis* – analysis and validation of existing safety, operating and geometric conditions, future year traffic volumes, and future operating conditions.
- *Alternatives Identification* – identification of a range of facility management and improvement alternatives and conducted a qualitative/quantitative screening process to select the most feasible alternatives for comprehensive operational and geometric evaluation.
- *Alternatives Evaluation* – evaluating the operational performance and geometric feasibility of the selected alternative scenarios using the future traffic volumes. In addition, a threshold analyses is conducted to determine the points at which various recommended improvements will be required (in terms of both time and demand), and development of phasing concepts that could be implemented as a series of short term improvements that lead to successfully implementing the recommended long-range solution.
- *Plan & Implementation Package* – preparation of the Refinement Plan with a recommended implementation package, including a list of short- and long-range or phased improvements, complementary local system improvements and management strategies, and an analysis of financing mechanisms for projects identified in the Capital Improvement Plan.
- *TSP Amendment Adoption* – facilitation of adoption of the Refinement Plan as a component of the Junction City TSP.

Policy Review

The first step in developing the Refinement Plan is to identify and analyze updates to major long-range planning documents since the adoption of the Junction City TSP on 2000 to ensure consistency between statewide and local planning processes. Several policy refinements were made during this period both at the State and County level. The Oregon State Transportation Planning Rule (TPR), for example, experienced an entire overhaul. Other documents, such as the Oregon Highway Plan (OHP) amended specific actions. It is both

unrealistic and unnecessary to describe the breadth of each change in this Refinement Plan. However, a substantial effort was made to highlight the amendments most relevant to the Junction City TSP Update. The remaining portion of this chapter outlines the changes to State and County planning requirements that provided guidance for the development of the Refinement Plan.

State

Oregon Transportation Plan (2006)

The Oregon Transportation Plan (OTP) is the state's long-range multimodal transportation plan for Oregon's airports, bicycle and pedestrian facilities, highways and roadways, pipelines, ports and waterway facilities, public transportation and railroads. The OTP establishes policies, strategies and initiatives for addressing the challenges and opportunities in the next 25 years and guides transportation investment decisions. An OTP update was adopted by the Oregon Transportation Commission (OTC) October 2006. Key updates/changes to the plan since 2002 that are relevant to the Junction City TSP Update include, but are not limited to, the following basic principles:

- Investments will weigh heavily on maintaining the existing transportation infrastructure and to use those facilities more efficiently.
- More language is incorporated to emphasize the importance of mode choice.
- Increased prioritization of safety issues and projects.
- Emphasis on freight mobility.
- Capacity building projects should make the following considerations:
 - Ensure that strategic investments balance maintenance and preservation needs with critical capacity enhancements and operations
 - Recognize that safety may be a strategic investment
 - Address key bottlenecks where feasible. This encompasses driver behavior and places where constricted movements are creating delay for passenger or goods movements including interchanges, tunnels, bridges, rail yards, transit malls and other hubs where existing capacity is overwhelmed by transportation movements.
 - Support investments where congestion obstructs or impedes movements on key segments of the system.
 - Balance inter-modal investment considering return on investment, all modes and advancement of modal choice.
 - Enhance inter-modal areas which foster the integration of service delivery or provide for more efficient service delivery.
 - Assist in the promotion of job development and retention in areas such as industrial/employment centers.
 - Support the optimal use of technology to resolve issues or improve the effectiveness or integration of transportation elements.
 - Make investments that further the long-term functioning of the system as a whole.
 - Promote appropriate allocation and coordination of jurisdictional responsibility.
 - Support regional and local land use plans.
- Additional work on refining criteria for strategic investments should occur in the multimodal and modal/topic plans that implement the OTP as well as during Statewide Transportation Improvement Program (STIP) development and funding allocations.

These refinements will vary by mode and change over time as the transportation system faces new issues.

Transportation Planning Rule (2007)

The Transportation Planning Rule (TPR) are the administrative rules implemented at the local level that provide agencies a process for considering short range land use actions, long range transportation plans and changes to zoning. On June 29, 2006 the Land Conservation and Development Commission (LCDC) adopted proposed amendments to the TPR. Key updates/changes to the plan include, but are not limited to, the following areas:

- A Revised the "purpose statement" to more accurately express the overall policy consistent with Goal 12.
- Update requirements for metropolitan area planning (does not directly affect the Junction City planning process).
- Revised rule provisions for "transportation project development" to clarify that decisions made in Transportation System Plans (TSPs) need not be revisited as projects undergo detailed design and approval.
- Consolidated requirements for goal exceptions for transportation projects into the TPR. (Currently exceptions must address the Exceptions Rule as well as the TPR).
- A series of minor and housekeeping amendments were also adopted.

Oregon Highway Plan (2006)

There have been many amendments to the OHP in the last four years. Several do not directly affect the Junction City project. However, there have been amendments to both policy and technical language that could affect the Junction City TSP refinement approach. The follow summarizes the relevant amendments. A full list of amendments made to the OHP since May 29, 2002 can be found in Appendix A.

Technical Corrections

These amendments changed the way that approach spacing standards are administrated in several ways.

- The amendments removed the distinction between "minor" and "major" deviations to the standards. Now there are only "deviations". Deviation review is now automatic when spacing standards can not be met. Several OR 99 access points do not meet the current spacing standards. Deviation review will be part of implementation for the Refinement Plan.
- Division 51 no longer requires that Technical Advisory Committees be convened as advisors for spacing deviation decisions.
- The "M" dimension was one of several measurements used to determine spacing for approaches for freeways with multi-lane crossroads. It is no longer considered to be a useful measurement.

Policies

OR 99 is a state freight route and, therefore, the changes to the freight policies (Policy 4A – Freight Routes) affect the Refinement Plan development.

Policy 1B

Policy 1B implements the OHP Accessibility Policy. More specifically, this policy addresses Highway Segment Designations. Several changes have been made to this policy including an emphasis on developing more compact development patterns with Special Transportation Areas (STAs), Urban Business Areas (UBAs), and Commercial Center (CC) designations. Junction City is not currently designated and is, therefore, considered a 'Non-Designated Urban Highway' (Urban Highway) area. Urban Highway areas have their own set of standards outside the aforementioned designations.

The objective of a non-designated Urban Highway segment is to efficiently move through traffic while also meeting the access needs of nearby properties. Access can be provided to and from individual properties abutting an urban segment consistent with the highway access permitting criteria set forth in OAR 734-051. Transit turnouts, sidewalks, and bicycle lanes are accommodated. OAR Chapter 734, Division 51, establishes spacing standards for Urban Highway segments consistent with the OHP objectives. Non-designated Urban Highways traverse many different types of land use areas, from urban fringe and suburban areas to developed areas and traditional downtown or central business districts. The ODOT Highway Design Manual establishes design standards for these different development patterns along Urban highways, as well as design standards for Expressways, STAs, UBAs and Commercial Centers.

Highway Segment Designations provide benefits to the community including more lenient spacing standards; allowing a lower mobility standard, and providing more opportunity for context sensitive design considerations.

Implementing a highway segment designation was considered with the operational analysis alternatives and is included in Chapter 8.

Policy 1C and 4A

In August 2005, amendments were made to Policy 1C and 4A, which addresses the State Highway Freight System. The Junction City section of OR 99 was designated a freight route; therefore the amendments have an affect on the OR 99 analysis. The changes to these policies can be summarized by the following:

- More emphasis was placed on the importance of providing efficient and reliable movement through a designated freight system.
- Freight routes will be managed according to their highway classification. The OR 99 section through Junction City is a district freight route.
- Management plans will be developed that combine local land use planning needs while recognizing the special significance of the freight route designation. Improvements associated with designated freight routes will impact highway design elements such as roadway section widths, median barriers and intersection design. Statewide Freight Routes in general have higher mobility standards than other highways of the same classification.
- Recognize National Highway System Intermodal connectors as part of the freight network in transportation planning and funding considerations. Manage state-owned Intermodal connectors according to their state highway classification as Regional or District Highways.

- Recognize that local truck routes are important linkages in the movement of freight throughout the state. ODOT will consider requests to establish local government designated truck routes that will serve to detour trucks off the state highway system. ODOT will coordinate with local jurisdictions when designating, managing and constructing a project on a local freight route.
- Develop an amendment process for the identification of additional routes or modifications to the State Highway Freight System.
- Appendix C was updated with new spacing standards.

Lane County

Transportation System Plan

Lane County Transportation System Plan (TSP) was adopted May 2004 (effective June 2004). It was a complete rewrite of the 1980 plan. The Lane County and Junction City TSPs are required by the TPR to be mutually consistent. The project list in the Lane County TSP includes projects from the Junction City July 2000 TSP, as follows:

Table 1.

Lane County Transportation System Plan 20-Year Project List								
Projects on Lane County Roads - Sorted by TSP								
Project Number	Road Name	Limits	Begin Milepost	End Milepost	Length	Source	Description	Estimated Cost
24	High Pass Road Modernization	Hwy 99 to Oaklea Drive	0.000	0.859	0.859	Junction City	Urban Standards, 2-3 lane with curb, gutter, sidewalks, and bike lanes. Need and location of turn lanes to be determined., #5	\$1,200,000
25	High Pass Road Modernization (Future)	Oaklea Drive to UGB	0.859	1.620	0.861	Junction City	Urban Standards, 2-3 lane with curb, gutter, sidewalks, and bike lanes. Need and location of turn lanes to be determined., #5	\$900,000
21	Oaklea Drive Modernization	18th Ave West to High Pass Rd	1.612	2.634	1.022	Junction City	Urban Standards, 2-3 lane with curb, gutter, sidewalks, and bike lanes. Need and location of turn lanes to be determined., #7	\$1,400,000
17	Pitney Lane North	UGB to High Pass Road	1.370	1.509	0.139	Junction City	Urban Standards, 2 lane with curb, gutter, sidewalks, and bike lanes, #11	\$200,000
19	Prairie Road Modernization	Highway 99 to High Pass Road	8.030	9.250	1.220	Junction City	Urban Standards, 2-3 lane with curb, gutter, sidewalks, and bike lanes. Need and location of turn lanes to be determined., #6	\$1,700,000
26	Prairie Road Widening (Future)	UGB to End (near Hwy 99)	7.300	8.030	0.730	Junction City	Rural Modernization. Widen shoulders. Discussion of prison siting., #9	\$1,000,000
27	River Road Modernization*	Hwy 99 to vicinity of Strome Ln	0.000	0.694	0.694	Junction City	Urban Standards, 2-3 lane with curb, gutter, sidewalks, and bike lanes. Need and location of turn lanes to be determined., #10	\$970,000
23	8th Avenue West	City Limits to Oaklea Drive	0.000	0.330	0.330	Junction City	Bike-Ped, add sidewalks, restripe to add bike lanes and possibly turn lanes at intersections., #1	\$50,000
22	10th Avenue West	Rose Street South to Oaklea Dr	0.000	0.346	0.346	Junction City	Bike-Ped, add sidewalks, restripe to add bike lanes and possibly turn lanes at intersections., #2	\$50,000
18	18th Avenue East & Deal St Modernization	Highway 99E to Dane Lane	0.000	0.509	0.509	Junction City	Urban Standards, 2 lane with curb, gutter, sidewalks, bike lanes, and possibly turn lanes at intersections., #4	\$700,000
20	18th Avenue West Modernization	Hwy 99W to Oaklea Drive	0.000	0.854	0.854	Junction City	Urban Standards, 2 lane with curb, gutter, sidewalks, bike lanes, and possibly turn lanes at intersections such as Oaklea Dr and Rose Street., #3	\$1,200,000

Source: Lane County Transportation System Plan (2004)

The above table represents the current adopted TSP, but note that Project #22, 10th Avenue West, is no longer a County road. Therefore, this project will become a Junction City project during a future Junction City TSP update.

Capital Improvement Program (CIP)

The Lane County Capital Improvement Program (CIP) is a 5-year plan for capital improvements to Lane County's transportation network. In this 5-year plan a number of modernization projects identified in previous CIP cycles had to be cut so that the 07-11 Program would be fiscally representative of current budget projections. Goal 24, Policy 24-a in the Lane County Transportation System Plan (TSP) gives priority to preservation and maintenance (Core Program) of the County road and bridge system.

In the 2008-2012 CIP, there is one County project currently identified for Junction City:

PRAIRIE ROAD

Bailey Lane to High Pass Road

Category: GENERAL CONSTRUCTION

Scope: Two Lane Urban Facility

Justification: Total construction and right of way will be funded by the City of Junction City.

The City has also committed to accepting this section of Prairie Road as a City Street. Lane County will provide design and construction services.

Programmed for FY 08/09: Cost: 1,000,000, R/W: 100,000, TOTAL: 1,000,000

Junction City

System Development Charge Update

System Development Charges (SDCs) are often a primary funding tool for transportation. February 2005 Resolution (Res. 851), brought an update to the Junction City System Development Charge (SDC) system including Article 3: Streets. The city can charge for non-assessable costs associated with collector and arterial streets. The primary component in calculating street SDCs is vehicle trip ends generated by development at full build out. The Junction City Planning Commission and City Council considered amending the SDC methodology to include state facilities to the collector and arterial street classifications as eligible projects. However, there was general consensus not to amend the methodology to include state facilities at this time. See Chapter 8 for recommendations associated with the Junction City SDCs.

Rail Lines

There have been no substantial changes to the rail companies or maintenance agreements between the City and the rail companies since 2002. At the time this Refinement Plan was adopted, Junction City and rail companies were negotiating both maintenance and franchise agreements. Currently, Burlington Northern Railroad (BN) operates and maintains, but leases to Willamette and Pacific, one track line through Junction City between W. 2nd Avenue and W. 17th. Its primary purpose continues to be for freight movement. In the past 10 years, but more intensely in 2007, there has been a dialog regarding the potential relocation of the BN line along the existing Southern Pacific in order to free the BN right-of-way for local street use. Union Pacific (UP) owns and maintains the second track with its Valley Main Line. This line continues to be the more heavily used line. The passenger train, Amtrak Coast Starlight, continues to operate from UP.

In order for the preferred alternative to move into future planning steps, the rail line on Holly Street would need to be relocated to a different corridor.

Correctional Facility

In November 2002, Kittelson and Associates, Inc. prepared the Transportation Impact Analysis (TIA) for the potential Junction City Correctional Facility (Project No. 3884.03) for the Oregon Department of Corrections (ODOC). This report was completed under the assumption that the facility was to begin construction in 2004. Site decisions have not been made. Funding for this project will not be pursued in the 2007 legislature. Therefore, the tentative planning schedule for this facility has changed from the following: fiscal years 2007-'2009 planning, 2009-2011 construction, and completion in 2012. According to ODOC officials, work completed in the TIA remains the most accurate source for predicting potential traffic impact and planned mitigation if and when the facility is built. The 2002 plan includes plans to construct 1,700-bed minimum and medium security correctional facility. The first phase of the project would construct 400 minimum security beds. The facility would be located approximately 2.5 miles south of the current Junction City city limits. Primary access to the facility is anticipated to be provided via Milliron Road, with possible secondary emergency access available via Highway 99. The findings of the operational analysis include both ODOT and Lane County intersections. Both tables, below, present 2002 traffic conditions, forecast future conditions with and without site development, and the corresponding 2002 operating standard that must be maintained at each intersection

Table 2.

**Summary of ODOT Study Intersection Operations
(Peak 15-Minute Intersection Volume-to-Capacity Ratio Operational Analysis Findings)**

Intersection	Time of Day	Year 2002 Existing Traffic V/C Ratio	Year 2005 Traffic Conditions V/C Ratio		Year 2010 Traffic Conditions V/C Ratio		ODOT Maximum V/C Standard
			Without Site	With Site	Without Site	With Site	
Meadowview Road/ Highway 99*	AM Peak	0.02	0.02	0.02	0.03	0.03	0.70
	PM Peak	0.04	0.05	0.05	0.06	0.06	0.70
Milliron Road/ Highway 99*	AM Peak	0.01	0.01	0.03	0.03	0.10	0.70
	PM Peak	0.01	0.01	0.02	0.02	0.02	0.70
Highway 86/ Highway 99	AM Peak	0.44	0.53	0.53	0.59	0.60	0.75
	PM Peak	0.63	0.67	0.67	0.70	0.70	0.75
1 st Ave/River Road/ Highway 99	AM Peak	0.61	0.60	0.60	0.65	0.67	0.80
	PM Peak	0.93	0.72	0.72	0.79	0.79	0.80
6 th Avenue/ Highway 99	AM Peak	0.47	0.53	0.54	0.59	0.61	0.80
	PM Peak	0.66	0.82	0.82	0.91	0.91	0.80
10 th Avenue/ Highway 99	AM Peak	0.46	0.54	0.54	0.60	0.61	0.80
	PM Peak	0.52	0.66	0.67	0.72	0.73	0.80
Highway 99E/ Highway 99W	AM Peak	0.34	0.41	0.41	0.45	0.45	0.80
	PM Peak	0.43	0.51	0.51	0.55	0.56	0.80

V/C = Volume-to-Capacity Ratio

ODOT= Oregon Department of Transportation

*Note: Intersection V/C ratio represents operations of the critical movement on the state highway only.

Table 3.

**Summary of Lane County Study Intersection Operations
(Peak 15-Minute Intersection Level of Service Operational Analysis Findings)**

Intersection	Time of Day	Year 2002 Existing Traffic LOS	Year 2005 Traffic Conditions LOS		Year 2010 Traffic Conditions LOS		Lane County Maximum LOS Standard
			Without Site	With Site	Without Site	With Site	
Prairie Road / Milliron Road*	AM Peak	A	B	B	B	B	D
	PM Peak	B	B	B	B	B	D
Milliron Road/ Site-Access Drwy.*	AM Peak			A	A	A	D
	PM Peak			A	A	A	D

LOS = Level of Service

*Note: Intersection LOS represents operations of critical movement only.

Two study intersections were improved to meet local operating standards, the 1st Avenue/River Road/OR 99 intersection and the 6th Avenue/OR 99 intersection. The 1st Avenue/River Road/OR 99 intersection did not meet ODOT operating standards 2002. In 2004, turn lanes were added. Further, left turn signals are a planned improvement in the STIP.

The 6th Avenue/OR 99 intersection is not forecast to meet ODOT’s operating standards under forecast 2005 and 2010 traffic conditions regardless of whether or not the correctional facility is developed as planned. Accordingly, it was recommended that ODOT and Junction City monitor operations of the 6th Avenue/OR 99 intersection and provide appropriate turn lane striping improvements at such time as conditions warrant. When warranted, separate left-turn lanes could be striped on the eastbound and westbound intersection approaches to improve the intersection to an acceptable volume-to-capacity ratio. The projected traffic volumes at the 6th Avenue/OR 99 intersection assume full build-out of the Oaklea Subdivision and property. As a result, it may not be necessary to provide the left-turn striping improvements in the near-term. Based on the results of this study, the planned correctional facility can be developed while maintaining acceptable traffic operations and safety at the study intersections within the site vicinity. The following maintenance and site development improvements were pulled directly from the executive summary of the study to enhance intersection operations and safety.

In conjunction with site development, it is recommended that the following improvements be made:

- A northbound right turn lane with 100 feet of storage should be provided at the intersection of Milliron Road/Highway 99.
- If a new site-access roadway is developed via Milliron Road and the existing north-south right-of-way easement, it should be constructed such that it aligns with the access road serving the former Swanson-Superior Forest Products wood processing facility located on the north side of Milliron Road.
- Separate left- and right-turn lanes should be constructed on the northbound approach of the new site-access roadway at its intersection with Milliron Road.
- A new stop sign should be placed on the northbound approach to the Milliron Road/Site-Access Driveway intersection.

- A “DO NOT STOP ON TRACKS” (R8-8) sign should be installed on Milliron Road on the westbound approach to the BNSF railroad crossing. The westbound lane of Milliron Road should be flared between the BNSF tracks and Highway 99 to facilitate right turn movements.
- ODOC could enhance safety by coordinating with their staff and delivery providers to route large vehicles (inmate transfer buses, large panel trucks, tractor trailers, etc.) to and from the site via Prairie Road until such time that the BNSF grade crossing is improved and a traffic signal is provided on Highway 99 at Milliron Road.
- ODOC should consider working cooperatively with Blachley-Lane Electric Coop to secure permission to use the existing BLEC crossing of the BNSF Railroad as an emergency access route to the ODOC property. In the future, as properties located south of the ODOC property are redeveloped, ODOC may wish to consider opportunities to pursue a secondary access arrangement offering a connection to Meadowview Road.
- Any landscaping provided along the site frontage should be maintained to ensure adequate sight distance at the site-access driveway.
- ODOT and Junction City should monitor operations of the 6th Avenue/Highway 99 intersection and provide appropriate left-turn lane striping on the east and west approaches to the intersection at such time as conditions warrant.
- Lane County and ODOT should monitor traffic volumes at the Milliron Road/Highway 99 intersection as future development occurs in the area. As the area is brought into the City limits and traffic volumes rise to the point that signal warrants are met, a traffic signal should be installed at the intersection in conjunction with appropriate interconnect to new active grade crossing devices at the BNSF railroad crossing (refer to pages 45 and 48 of this report for further details and explanation).
- Lane County and ODOT should ensure that existing shrubbery is properly maintained along the westbound approach of Milliron Road at the Burlington Northern Santa Fe railroad grade crossing (heading toward Highway 99) to ensure the continued availability of adequate sight distance looking south.

Additional details of the study methodology, findings, and recommendations are provided within the report.

Land Needs Assessment for Comprehensive Plan Amendments

The last major Comprehensive Plan Amendment depended on a significant land needs assessment and buildable lands inventory developed in 1999 by ECONorthwest, LCOG, and Winterowd Consulting. This 1999 data will be used by staff modelers to develop the updated model for the 2007 Update. Following is a summary of this process and data that developed into the Year 2020 Land Needs Assessment. The document updated the *Junction City Comprehensive Plan*, pp. 36, 37, 40-44 and 75-107, specifically:

- The Population Growth Projections (pp. 36, 37);
- The Economic Development Element trend analysis (pp. 40-44);
- The 1982 “Junction City Buildable Lands Inventory” (pp. 75-79);

- Appendix I, which includes Appendix A “Tables” and Appendix B “Meeting Low Income and Regional Needs for Housing” (pp. 80-89);
- The “Goal 14: Urbanization, Analysis” (pp. 90-97); and
- Appendix II, which includes additional information adopted by the City in 1983, in order to comply with Statewide Planning Goals (pp. 98-107).

Population

The population projections and land needs analysis in the acknowledged Junction City Comprehensive Plan are nearly 20 years old. The revised Year 2020 population projection of 8,130 represents an average annual growth rate of 1.9%. This projection was derived from the draft *Junction City Transportation Systems Plan*, which has been coordinated with Lane County.

Buildable Lands

The updated buildable lands inventory is based on LCOG data. The land need analysis was based on 1999 socio-economic and development trends in Junction City and was modified to be consistent with the draft Junction City TSP. Following is a summary of conclusions for this analysis and amendment process.

In 1998, the Junction City UGB had a total of 2,252 dwelling units. About 57% of the 2,252 units were considered single-family. Based on recent development trends, there is need for about 1,578 new dwelling units between 1998 and 2020. Junction City has a deficit of about 135 gross acres of buildable residential land within its 1999 UGB.

In 1999, Junction City included approximately 1,738 total acres within its Urban Growth Boundary (UGB). Of those, an estimated 813 were developed and 925 were vacant. Of total vacant acres, about 198 acres were constrained by wetlands leaving a total of 727 vacant buildable acres. Of the 727 vacant buildable acres within the Junction City UGB, more than one-third (273 acres) are in the Professional/Technical designation. Another 198 acres have an Industrial designation. About 205 acres are in Residential designations, and the remaining 52 acres are in Commercial designations.

Less than one half of all land within the Junction City UGB was developed in 1999.

The distribution of buildable land by plan designation is significantly different from that of developed land, primarily because of the large inventory of buildable land designated for Professional-Technical uses. A significant portion (273 acres) of the land in Professional-Technical designation is buildable. Over 36% (about 330 acres) of the vacant land inside the UGB is in this designation; all the Professional-Technical land is outside the City Limits. About 27% of buildable land is designated Industrial, while only 21% of vacant land is designated for residential uses.

Based on historic development trends, the City has over-allocated lands in Professional-Technical and Industrial designations. These two designations make up nearly 65% of the City’s vacant buildable land, but account for only 22% of developed land.

The majority of constrained land is on land designated for industrial and professional/technical use; 167 of the 198 acres of constrained land are designated for these two uses.

Land Use Actions

There have been a relatively few number of land use actions between 2002 and the present that affect the Refinement Plan transportation modeling efforts. Zone changes, annexations, vacations, and developments were incorporated into the updated Junction City model. A comprehensive list of major land use actions are listed in Appendix G. Notably, the correctional facility and state hospital has acquired 250 acres. In addition to the information included in the buildable lands inventory, there have been two additional comprehensive plan amendments to incorporate the Country Coach expansion and the Oaklea Master Plan. All of these amendments were manually allocated into the transportation model.

Chapter 2 Existing Conditions

This chapter provides a description of existing conditions within the study area, including an overview of the surrounding environment, an inventory of existing transportation facilities, an evaluation of the recent crash history, and an analysis of operating conditions. The assessment of existing conditions provides a baseline for comparison to the future conditions analysis to be completed later and aids in the identification of opportunities and constraints when developing improvement alternatives to mitigate future deficiencies.

Study Area

The City of Junction City is located near the southern end of the Willamette Valley, approximately five miles northwest of Eugene and 26 miles south of Corvallis. OR 99 runs from north to south through the center of the city, splitting into OR 99W and OR 99E near the north city limits. Between 1st Avenue and 18th Avenue, OR 99 is also known as Ivy Street. OR 99 to the south creates a direct connection to the Eugene/Springfield area, Interstate 5, and the McKenzie Highway, which provides access to the Willamette National Forest and destinations in central Oregon. To the north, OR 99W parallels Interstate 5 for over 100 miles and connects Junction City to Corvallis and several other cities before terminating in Portland. OR 99E connects Junction City to Harrisburg and Albany and provides a route to Interstate 5 for travelers destined to the north. In addition, OR 36 intersects OR 99 near the south end of town and provides a connection to the coast and other destinations to the west.

Two railroad lines, owned by Union Pacific (UPRR) and Burlington Northern Santa Fe (BNSF), parallel OR 99 to the east through Junction City. The BNSF line, which is leased to Willamette & Pacific, runs through the middle of Holly Street while in town and stays within 100 feet of OR 99 as it continues to the south. The UPRR line, which carries a much higher volume of traffic, runs approximately 600 feet to the east of the BNSF line through most of the area, but diverges to the east near the southern urban growth boundary. The presence of these lines create barriers to the downtown area, reduce east-west connectivity, and limit access to the industrial lands between them south of town.

Study Area Land Use

The central area of the city, including lands immediately adjacent to OR 99, is currently zoned for commercial uses. Additional commercial land is located in and around the downtown area, roughly bounded by 4th Avenue, Front Street, 8th Avenue, and the alley between OR 99 and Juniper Street. To the west of this area, most of the land within the city is zoned for residential uses, with some areas set aside as public lands. Industrial lands are located in the northeast and southeast corners of the city, with additional residential land in between these areas.

The city is currently experiencing a lot of new development (mainly residential subdivisions) on the west side of town, which is where much of the developable land within the urban growth boundary (UGB) lies. More developable land, zoned for industrial uses, is located to the northeast and southeast. In addition, an undeveloped triangle of commercial land lies between OR 99E and OR 99W at the north end of the city.

The City's comprehensive plan identifies essentially the same zoning as existing conditions within the urban growth boundary and follows a similar pattern for lands outside of the urban growth boundary, with the exception of approximately five acres of professional technical land on the west side of town and a large strip of industrial property paralleling OR 99 to the southeast. Figure 2-1 displays the comprehensive plan zoning of property within the urban growth boundary and how it relates to the existing transportation system. For comparison purposes, current land uses on area properties are shown in Figure 2-2.

Study Area Boundaries

The focus of this study will be on assessing the operation of OR 99 through the year 2026 and examining alternatives to preserve its ability to function in accordance with adopted standards. Considering observations made during a project area tour and the intent of this study, the study area boundaries will generally follow the existing City urban growth boundary limits, with some exceptions. On the west side, south of 1st Avenue, Pitney Lane will be included because of its potential for use as an alternate north-south route to OR 99.

To the south, the study area will be limited to the OR 99/OR 36 intersection for operational analysis purposes. While the City urban growth boundary extends well beyond this point, it is anticipated that OR 99 will have adequate capacity through this area, as it is already built out to five lanes and is protected from direct access by the adjacent railroad line.

A separate sub-area including the southern portion of the urban growth boundary bounded by the BNSF and UPRR railroads from 1st Avenue to the southern urban growth boundary (including the entire future prison site) will also be addressed with the goal of identifying a conceptual access plan to facilitate the orderly and timely construction of transportation facilities and potential new and/or consolidated railroad crossings as properties in this area develop. No operational analysis will be conducted for the sub-area.

OR 99
Junction City
 Refinement Plan

FIGURE 2-1

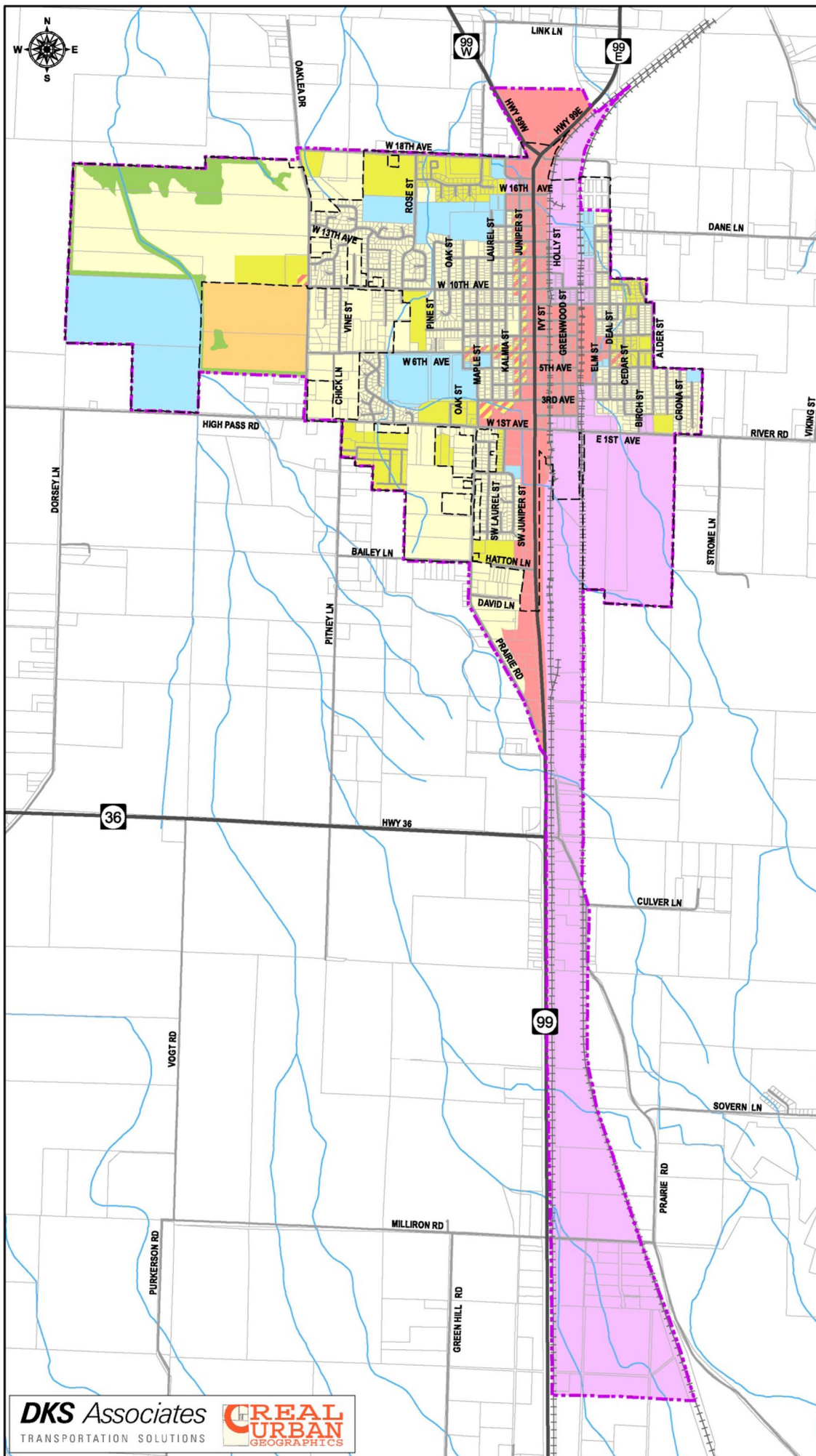
Study Area Map

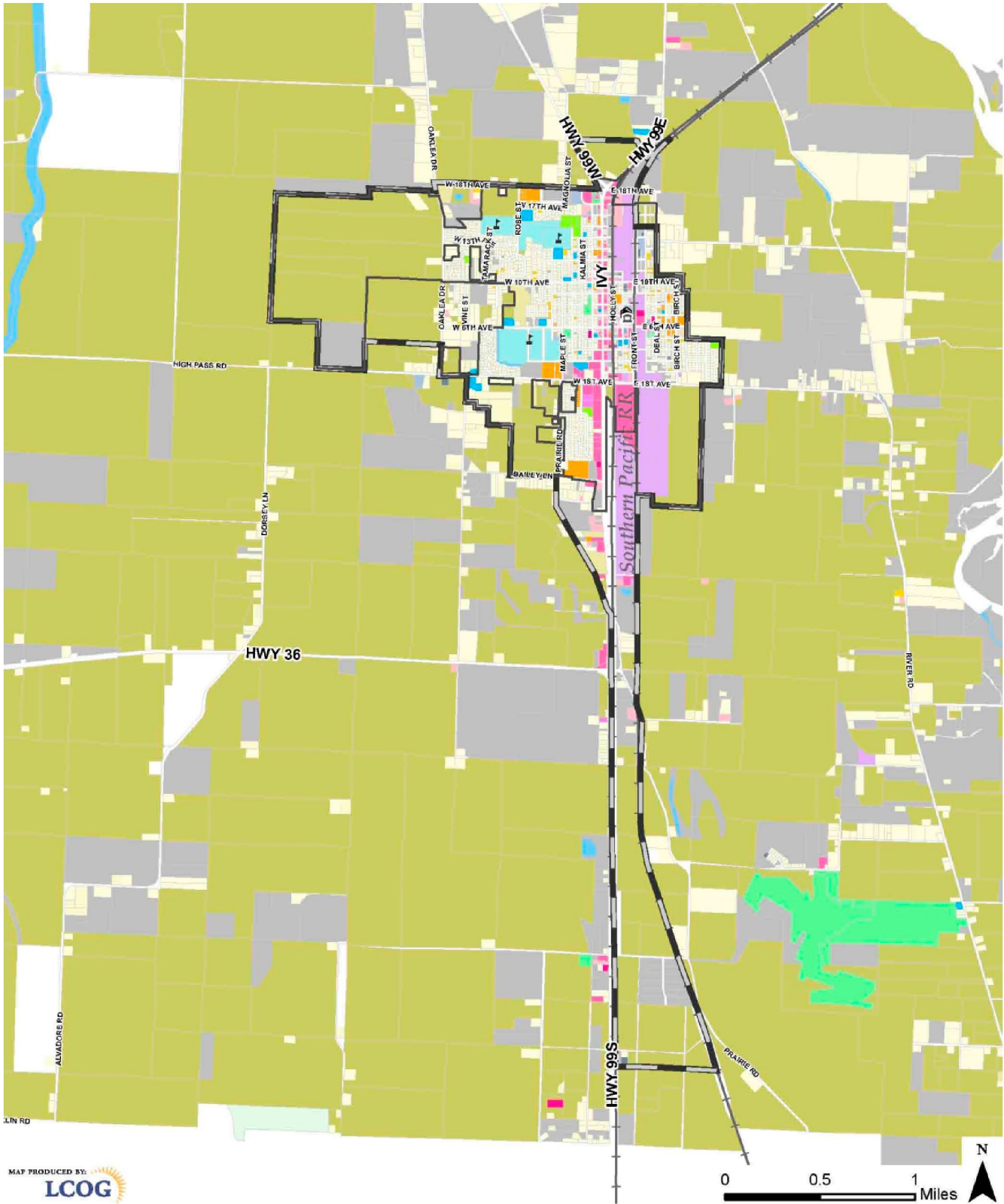
Legend

Comprehensive Plan Zone

- COMMERCIAL
- COMMERCIAL/RESIDENTIAL
- INDUSTRIAL
- LOW DENSITY RESIDENTIAL
- MED. DENSITY RESIDENTIAL
- OPEN SPACE/WETLANDS
- PROFESSIONAL/TECHNICAL
- PUBLIC

- HIGHWAY
- ROAD
- CITY LIMITS
- URBAN GROWTH BOUNDARY
- TAX LOTS
- RAILROAD
- STREAM





MAP PRODUCED BY
LCOG

Legend

- Urban Growth Boundary
- City Limits

Land Use

- | | | | | |
|----------------|------------------------|--------------------|----------------|--------------------------------|
| Agriculture | Transportation Related | Mobile Home Park | Park | Utilities |
| Railroad | Government | Recreation | Group Quarters | Vacant |
| Communications | Wholesale | Multi-Family | Retail | Water |
| Duplex | Industrial | Mobile Home on Lot | Single Family | Alleyways, Walkways, Bikepaths |
| Education | Religious / Charitable | General | Timber | Road |

Physical Condition

Roadway and Intersection Geometry

Approaching from the north, OR 99W and OR 99E are both two-lane highways with paved shoulders varying from 5 to 6 feet wide on OR 99W and from 3 to 4 feet wide on OR 99E. From this junction, OR 99 quickly reduces from a 5-lane cross-section to a 4-lane cross-section before crossing the Flat Creek Bridge. From this point (approximately 15th Avenue), the highway maintains a four-lane, 48-foot cross-section with no turn lanes to 3rd Avenue, where it widens to a five-lane cross-section through the remainder of the study area. Between 3rd Avenue and 1st Avenue, shoulder widths vary from 4 to 5 feet, but from 1st Avenue to the south they maintain an 8-foot width.

The restricted roadway width between the OR 99W/OR 99E intersection and 3rd Avenue, where no turn lanes are available, appears to be due to two constraints: 1) the existing width of the Flat Creek Bridge (approximately 70 feet), and 2) the presence of buildings on highway-adjacent properties that have been constructed in close proximity to the right-of-way line. Improvement alternatives that include widening this corridor will need to address both issues.

For the assessment of operations along the OR 99 corridor, the following intersections were selected for analysis.

- OR 99W at OR 99E
- OR 99 at 10th Avenue
- OR 99 at 6th Avenue
- OR 99 at 1st Avenue
- OR 99 at Prairie Road
- OR 99 at OR 36

The lane geometry and traffic controls present at each intersection, as well as the changes in highway cross-section through the corridor, are displayed in Figure 2-3. It should be noted that the proximity of the BNSF railroad to the east may impact the ability to modify these intersections in the future. To supplement this information, a roadway functional class and posted speed map for the city has been included in Figure 2-4.

OR 99
Junction City
 Refinement Plan

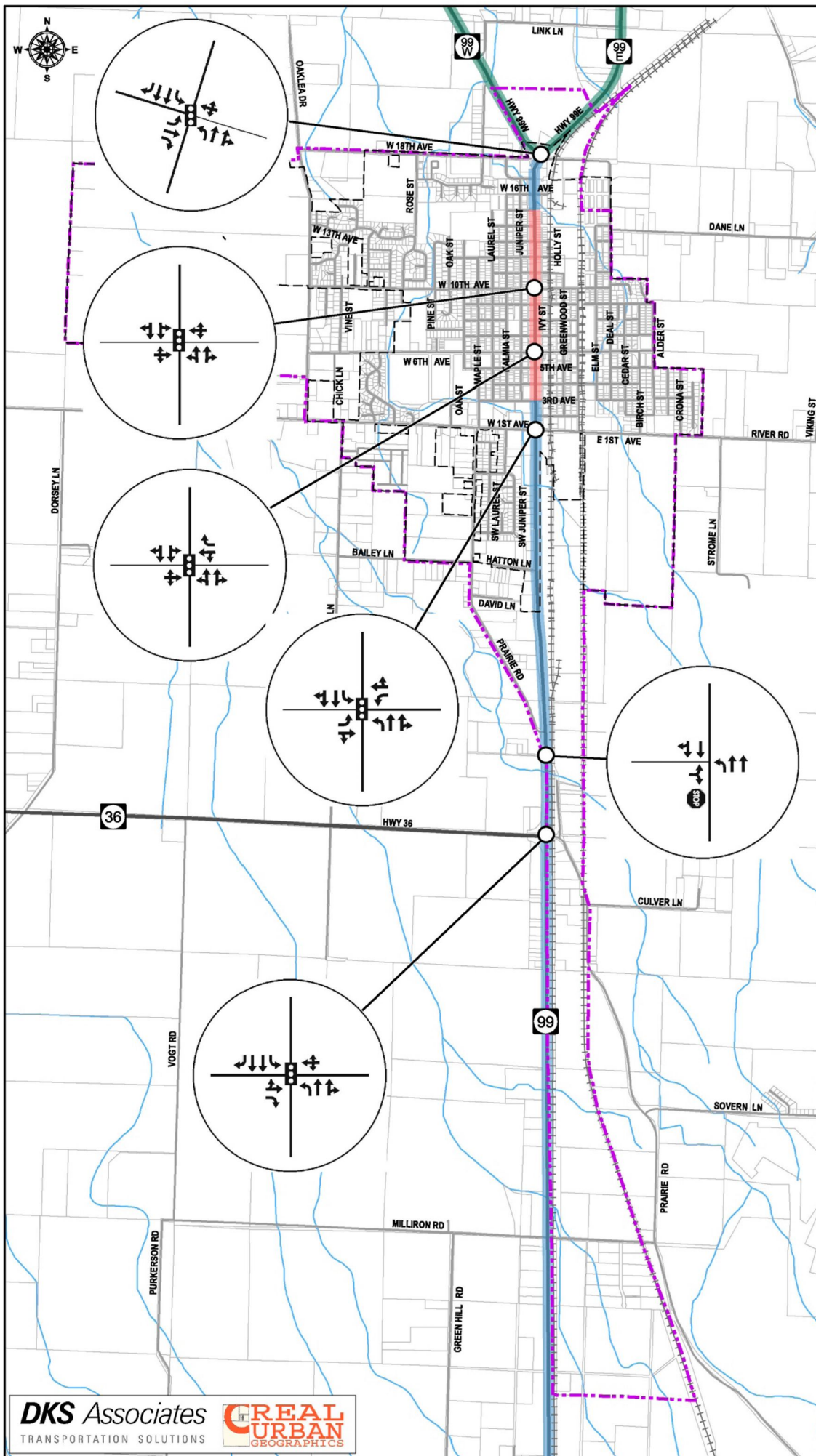
FIGURE 2-3

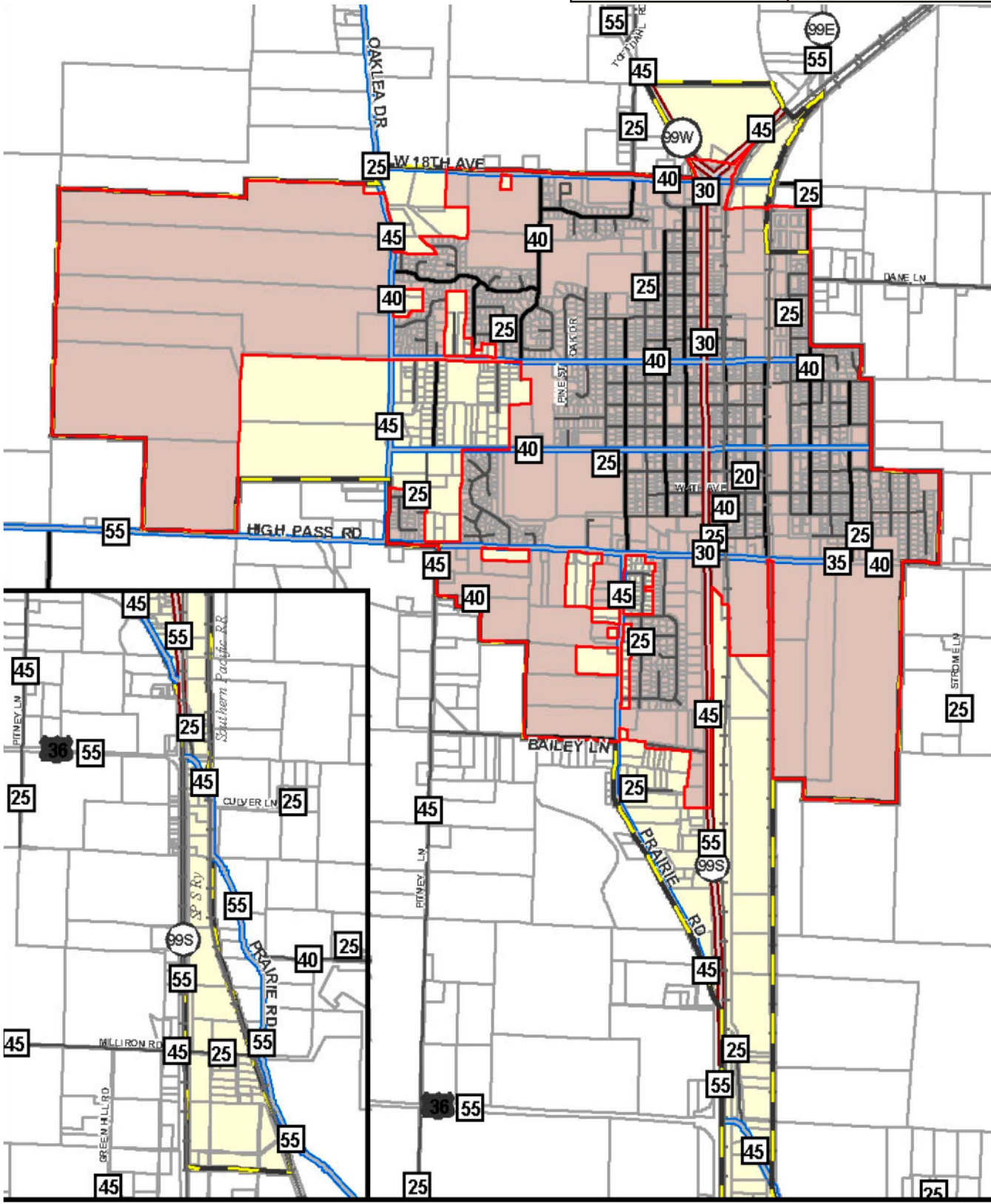
Existing
 OR 99
 Lane Configurations
 & Traffic Controls

Legend

Lane Configurations

- 2 LANES
- 4 LANES
- 5 LANES
- HIGHWAY
- ROAD
- CITY LIMITS
- URBAN GROWTH BOUNDARY
- TAX LOTS
- RAILROAD
- STREAM





Legend

- Urban Growth Boundary
- City Limits

Functional Class

- Major Arterial
- Major Collector
- Minor Collector
- Local Roads

0 1,000 2,000 Feet

55 Road Speed



Sidewalks and Bike Lanes

The locations of sidewalks and bike lanes along OR 99 were inventoried and have been mapped on Figure 2-5. Through the study area, sidewalks are available on both sides of the highway between the OR 99W/OR 99E junction and 1st Avenue, with additional sidewalk on the west side from 1st Avenue to a point approximately 800 feet to the south.

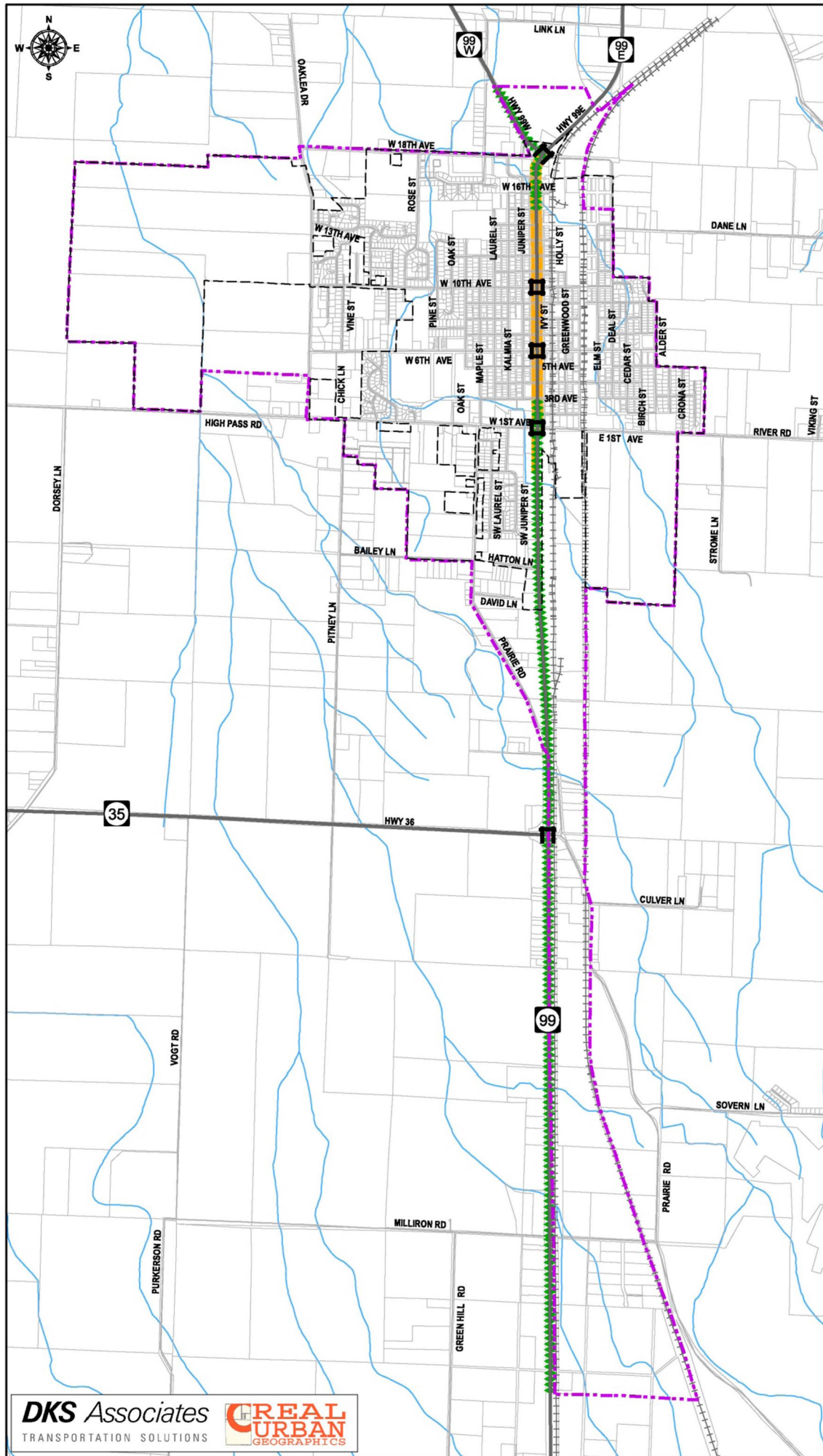
Marked crosswalks on OR 99 are located at the intersections of OR 99W/OR 99E, OR 99/10th Avenue, OR 99/6th Avenue, OR 99/1st Avenue, and OR 99/OR 36. Crosswalks are present on all approaches with the exception of the OR 99W/OR 99E intersection, which does not maintain a crosswalk on the southwest (OR 99) approach and the OR 99/OR 36 intersection, which does not maintain a crosswalk on the south approach.

There are no marked bike lanes on OR 99 within the City, but as previously indicated, there are some segments of highway maintaining adequate shoulder widths for bicycle use. On OR 99W and OR 99E, most of the shoulder is wide enough to be used as a shoulder bikeway, however, the 3-foot widths sometimes seen on OR 99E should be considered inadequate for bicycle use. From the OR 99W/OR 99E junction, adequate shoulders are available for bicycle use through the Flat Creek bridge. However, from the end of the bridge to 3rd Avenue, there are no shoulders or separate bicycle facilities available. Once past 3rd Avenue, the shoulders widen and are again adequate for bicycle use through the remainder of the study area to the south.

Transit

The Lane Transit District (LTD) serves Junction City with two bus routes that provide connections throughout the Eugene-Springfield area. The 95X Junction City Express travels between Junction City and Eugene via OR 99, circulating through town to pick up and drop off passengers. Service is only available on weekdays, with one trip made in the morning between 6:30 and 7:00 a.m. and three trips in the afternoon between 3:00 and 7:00 p.m.

The 95 Junction City route travels between Junction City and Eugene via River Road. This route provides service on both weekdays and Saturdays, with three weekday trips in the morning between 6:00 a.m. and 1:00 p.m. and three weekday trips in the afternoon between 2:00 and 6:00 p.m. On Saturdays, one a.m. trip is made between 9:00 and 10:00 a.m. and one p.m. trip is made between 4:30 and 5:30 p.m. Figure 2-6 displays the locations of these bus routes within the study area, as well as the locations of designated bus stops.













**OR 99
Junction City
Refinement Plan**

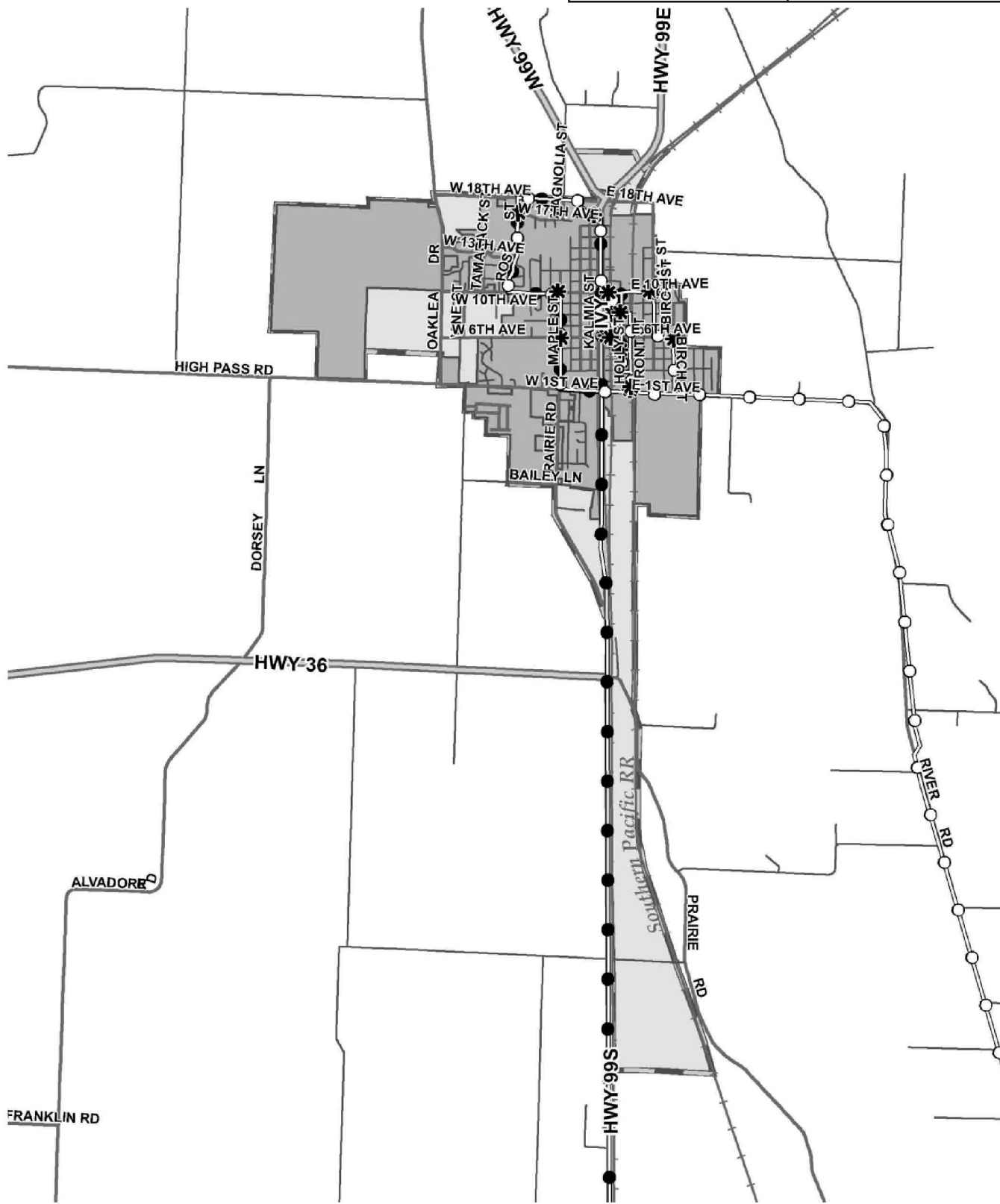
FIGURE 2-5

**Existing
OR 99
Pedestrian &
Bicycle Facilities**






Legend

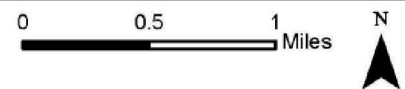
-  EXISTING MARKED CROSSWALK (signalized)
-  EXISTING SHOULDER BIKEWAY
-  EXISTING SIDEWALK
-  HIGHWAY
-  ROAD
-  CITY LIMITS
-  URBAN GROWTH BOUNDARY
-  TAX LOTS
-  RAILROAD
-  STREAM





Legend

-  Urban Growth Boundary
-  City Limits
-  BusStops_LTD_05
-  Bus Routes (LTD 2005)
-  95
-  95x



Pavement Conditions

ODOT evaluates highway pavement conditions for all highways under state jurisdiction using a pavement condition index to rate conditions considering the amount of rutting, cracking, and other damage found to be present. This index, which uses a scale from 100 to 1, is then used to assign a qualitative grade for sections of highways, indicating that pavement conditions are “Very Good” to “Very Poor”.

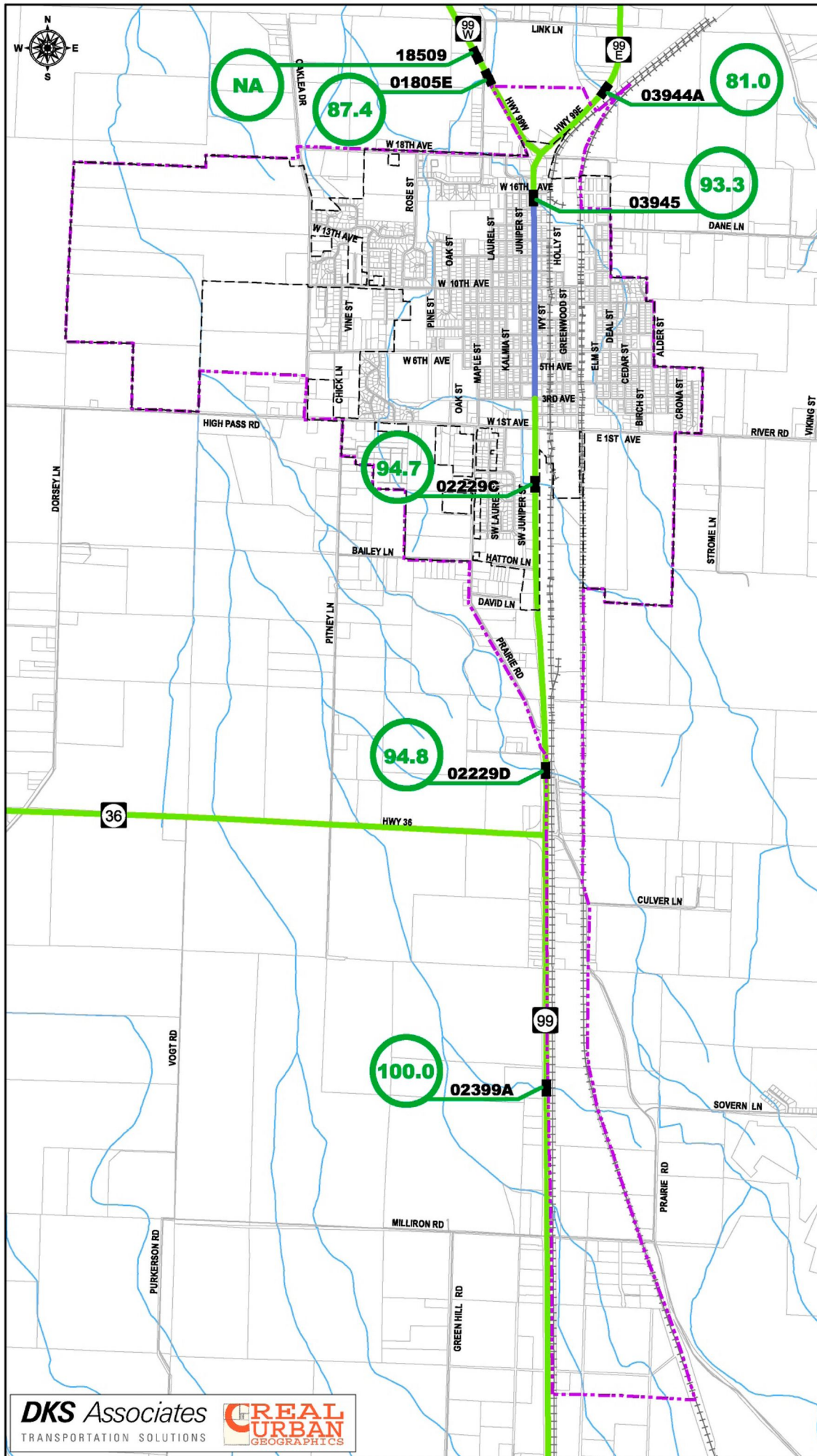
Figure 2-7 illustrates the state highway pavement condition ratings from 2004 for all highways within the study area. As shown, all pavement has been rated as, “Good”, with the exception of the segment between 15th Street and 3rd Street on OR 99, which was recently paved in 2003 and rated as, “Very Good”.

Bridges

Within the study limits, there are seven bridges on OR 99W and OR 99E. According to ODOT Bridge Inspection Reports, all bridges were inspected in 2005 and rated as “Not Deficient”, with sufficiency ratings between 80 and 100 (note that inspection records for the bridge on OR 99W at mile point 108.32 could not be found).

Bridge sufficiency ratings are an indication of structural condition and are made on a scale from 1 to 100, with a rating of 1 being extremely poor and 100 being excellent. While all decisions on the future of bridges are dependant on engineering studies, in general, ratings of 50 or greater indicate that a bridge is in good condition, while ratings under 30 indicate that replacement or rehabilitation may be needed.

All bridges and their corresponding sufficiency ratings are shown on Figure 2-7.



**OR 99
Junction City
Refinement Plan**

FIGURE 2-7

**Existing
OR 99
Pavement &
Bridge Conditions**

Highway Access

ODOT maintains access management spacing standards for all highways under its jurisdiction that identify the minimum required separation between adjacent approaches to a highway (on the same side of the highway). These standards vary depending on the management objectives for the highway, the posted speeds, and the character of the surrounding land uses. Because the study area passes through both urban and rural areas and maintains several posted speed changes, the access management spacing standards for the study highways will vary. Table 2-1 breaks the study area into different zones characterized by changes in access management spacing standards. The locations of the zone boundaries are delineated in the series of Figures 2-8A through 2-8D.

Table 2-1: Study Area Access Management Spacing Standards

Zone	Highway Segment	Classification	Segment Designation	Urban/Rural	Posted Speed	Access Spacing Standard
1	OR 99W: MP 108.32 - 108.50	Regional Hwy	Other	Rural*	55 mph	990 ft.
2	OR 99W: MP 108.50 - 108.70	Regional Hwy	Other	Urban	45 mph	750 ft.
3	OR 99W/99: MP 108.70 - 109.83	Regional Hwy	Other	Urban	30 mph	425 ft.
4	OR 99: MP 109.83 - 110.04	Regional Hwy	Other	Urban	45 mph	750 ft.
5	OR 99: MP 110.04 - 111.27	Regional Hwy	Other	Urban	55 mph	990 ft.
6	OR 99E: MP 31.78 - 32.07	Regional Hwy	Other	Rural	55 mph	990 ft.
7	OR 99E: MP 32.07 - 32.29	Regional Hwy	Other	Rural*	45 mph	750 ft.
8	OR 99E: MP 32.29 - 32.46	Regional Hwy	Other	Urban	30 mph	425 ft.

* Segment lies in both Urban and Rural areas, but spacing standard is not impacted.

A physical inventory of existing approaches to OR 99W, OR 99E, and OR 99 was collected through the study area, with descriptive information recorded for each approach indicating the approach's location, how the approach has been constructed and how it is currently being used. This physical inventory was compiled into Table A.1, which has been included in the appendix to this memorandum. Additional investigation regarding property access rights, including a search of approach permits issued in the study corridor and right of way research conducted was performed, with results documented in Table A.2 (also included in appendix). To compliment the physical inventory, a graphical display of individual approach locations along the highway is shown in the series of Figures 2-8A through 2-8D.

Using this information, a comparison of existing conditions to ODOT's access management spacing standards was made to evaluate areas needing improvement. Tables 2-2A and 2-2B provide the results of this investigation, displaying the number of approaches found in the zones identified above for each side of the study highways and comparing the average approach spacing per section to the applicable access management spacing standard. While this level of analysis can not be used to identify potential improvements to approach spacing, it does reflect the degree to which the spacing standards are being met and provides an indication of the extent of improvements needed. The rightmost column in the table indicates the approximate number of

driveway or public street approaches that would be allowed to fully comply with access spacing standards. Because this type of analysis does not account for access spacing between zone boundaries, the actual numbers shown are not as important as the magnitudes of differences between the actual number of approaches and the number that would be allowed according to the spacing standards.

Table 2-2A: OR 99W/99E Existing Southbound (west side of highway) Approach Spacing

Zone	Number of Approaches	Segment Length (ft.)	Average Approach Spacing (ft.)		Number of Approaches Able to Meet Standard
			Actual	Standard	
1	1	950	950	990	1*
2	1	1,055	1,055	750	1
3	40	5,965	150	425	14
4	5	1,110	220	750	1
5	27	6,500	240	990	6
6	7	1,530	220	990	1
7	2	1,160	580	750	1
8	1	900	900	425	2
Totals	89	19,170	-	-	27

* Segment Length is shorter than Spacing Standard

Table 2-2B: OR 99W/99E Existing Northbound (east side of highway) Approach Spacing

Zone	Number of Approaches	Segment Length (ft.)	Average Approach Spacing (ft.)		Number of Approaches Able to Meet Standard
			Actual	Standard	
1	1	950	950	990	1*
2	0	1,055	1,055	750	1
3	44	5,965	135	425	14
4	0	1,110	1,110	750	1
5	8	6,500	815	990	6
6	3	1,530	510	990	1
7	1	1,160	1,160	750	1
8	1	900	900	425	2
Totals	58	19,170	-	-	27

* Segment Length is shorter than Spacing Standard

These tables show that in zones 1, 2, 7, and 8 (segments of OR 99W and OR 99E north of the junction), there are relatively few existing approaches and that the applicable access management spacing standards are currently met or are very close to being met. However, in zone 6, which is the northern segment of OR 99E in the study area, existing access density increases.

South of the junction of OR 99W and OR 99E, access density increases substantially, with average approach spacing in zone 3 (OR 99W/99E junction to south of 1st Avenue) dropping below 200 feet. Of course, it should be acknowledged that the approach counts include public street intersections and that this zone spans the downtown area where the public street grid creates city blocks of approximately 300 feet in length. Therefore, even if all private approaches were removed, the average approach spacing would still be only slightly greater than 300 feet.

Zones 4 and 5 (south of 1st Avenue to OR 36) represent a transition from the densely developed zone 3 area to more of a highway commercial/semi-rural area where posted speeds have increased to 45 and 55 mph and public street intersection spacing has increased significantly. On the west side of the highway, access density continues to be relatively high, but on the east side, the presence of the railroad tracks limits access opportunities.



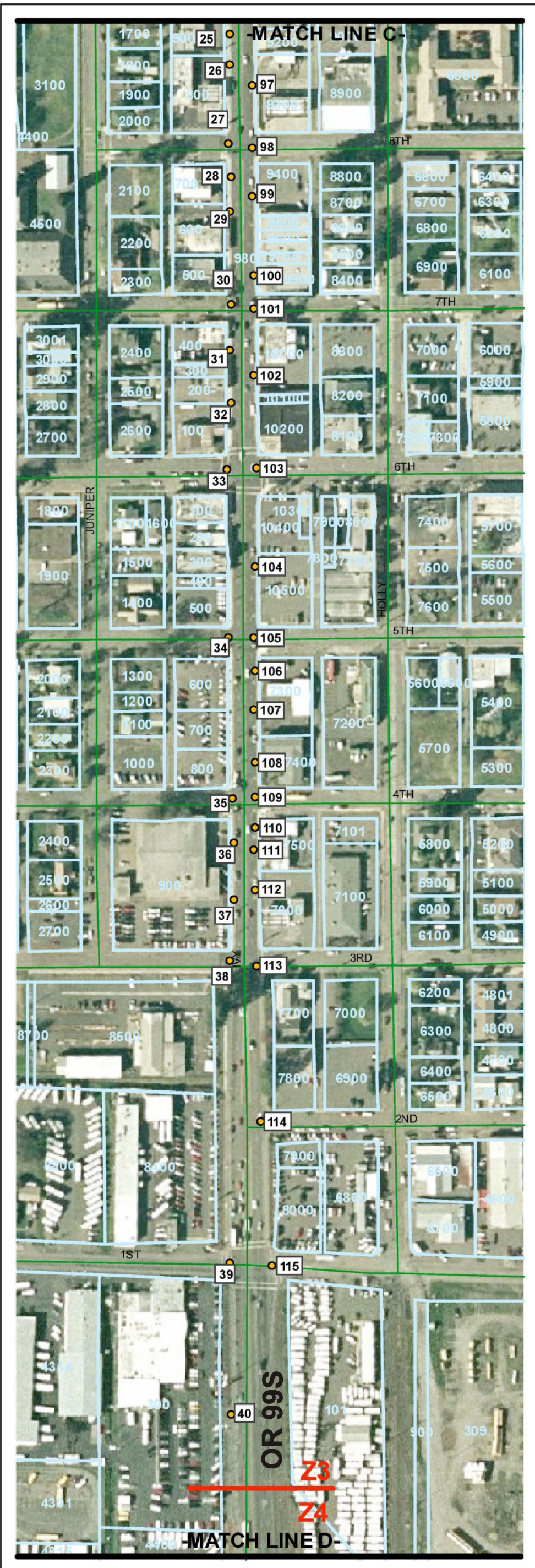
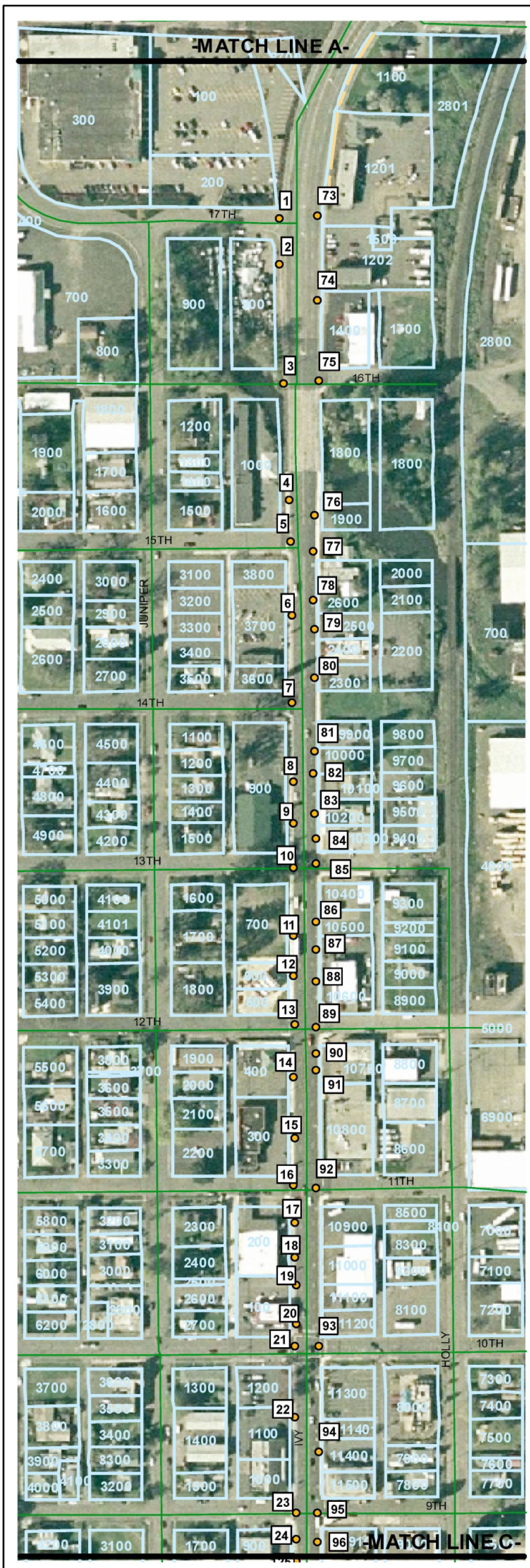
Legend

UGB	Access Control
Approach	Tax Lot
Approach Number	Access Management Zone Boundary and Number

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200 100 0 200 Feet

FIGURE 2-8A
Existing Approach Locations



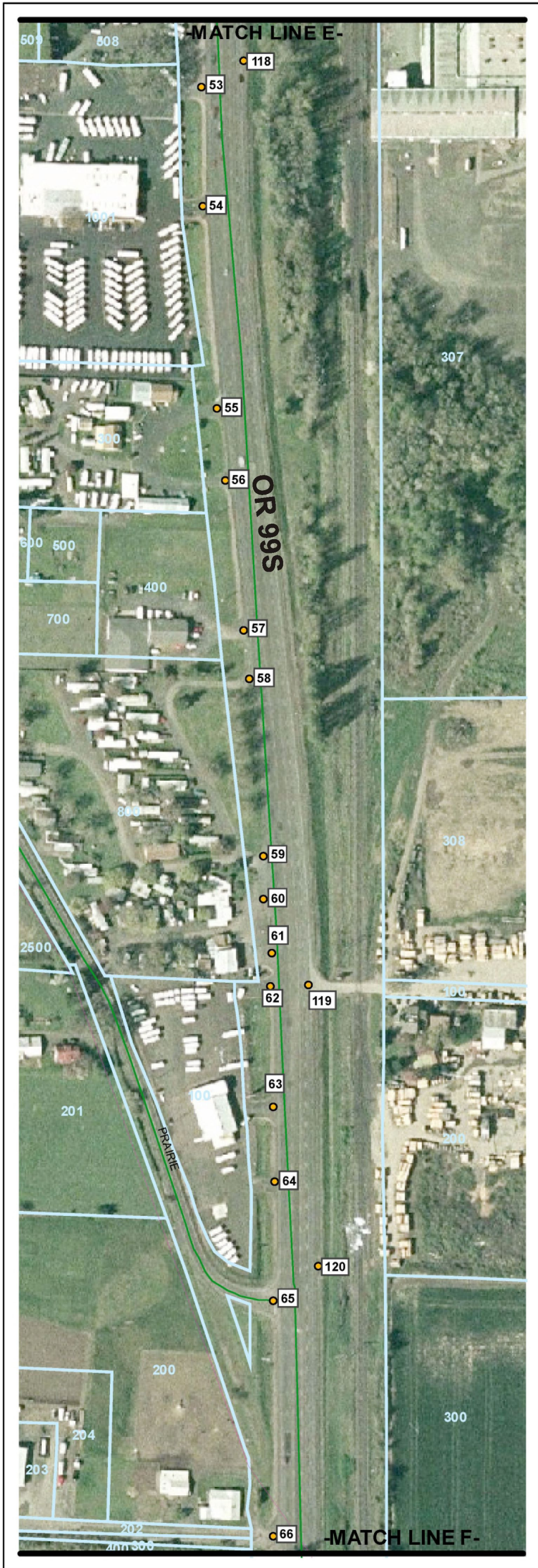
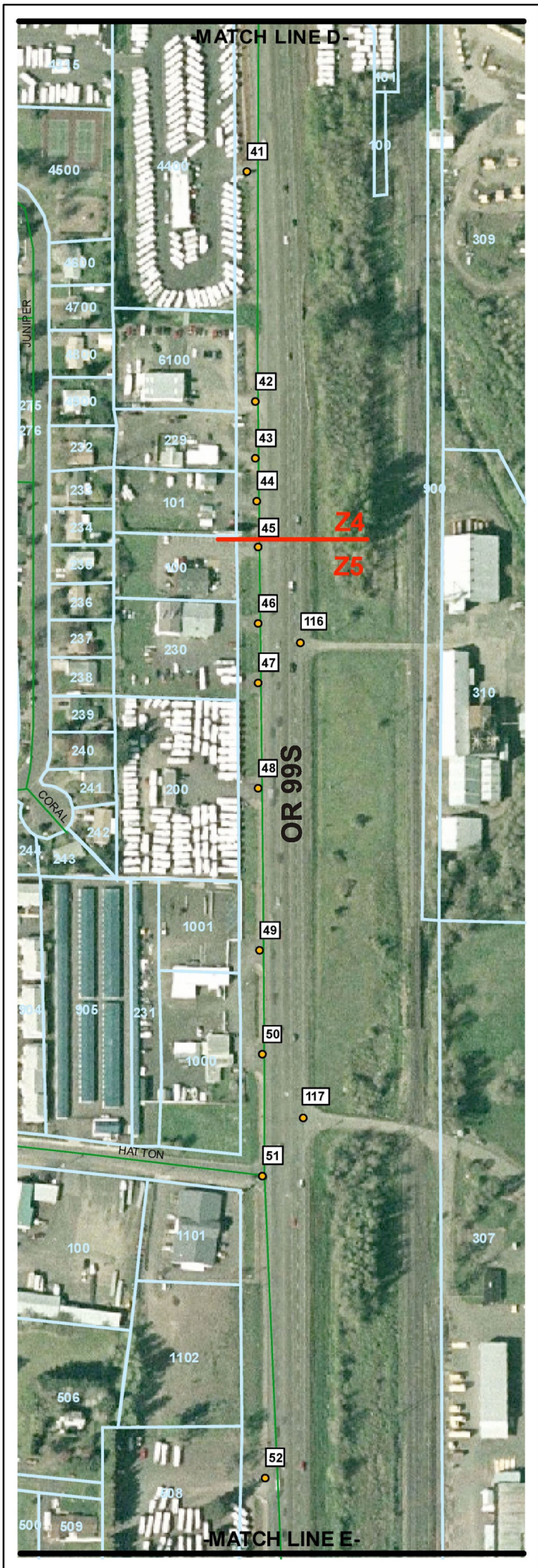
Legend

- UGB
- Access Control
- Approach
- Tax Lot
- # Approach Number
- Access Management Zone Boundary and Number

DKS Associates
TRANSPORTATION SOLUTIONS

200 100 0 200 Feet

FIGURE 2-8B
Existing Approach Locations



Legend

- UGB
- Tax Lot
- Approach
- Z# Access Management Zone Boundary and Number
- # Approach Number

DKS Associates
TRANSPORTATION SOLUTIONS

200 100 0 200 Feet

FIGURE 2-8C
Existing Approach Locations



Legend

- UGB
- Tax Lot
- Approach
- Z# Access Management Zone Boundary and Number
- # Approach Number

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FIGURE 2-8D
Existing Approach Locations

Safety Analysis

The last five years (2001 – 2005) of available crash data for the OR 99 study corridor was obtained from ODOT to analyze current conditions. To identify potential deficiencies, crash rates for sections of OR 99 were compared to statewide average crash rates for similar facilities. Sections experiencing higher crash rates than the statewide average were investigated further to see if crash patterns could be mitigated through countermeasure implementation.

Crash rates identifying the number of crashes per million vehicle-miles traveled for specified sections of OR 99, as well as statewide average crash rates for various facility types, were obtained from ODOT's *2005 State Highway Crash Rate Tables*¹. Highway sections analyzed in these tables are categorized by area type and functional classification to provide a basis for comparison between various facilities. For this analysis, OR 99 was classified as a non-freeway principal arterial, and the study corridor was separated into "Rural City" and "Rural Area" categories. Predetermined highway sections within these categories are provided in the crash rate tables with crash rates calculated for each section, as well as for groups of contiguous sections within the same area type. The reported crash rates through the OR 99 corridor are shown in Tables 2-3 and 2-4.

Rural Area Sections

Within the study corridor, there are two areas that fall under the Rural Area category: the section of OR 99E north of the city limits and the section of OR 99 from the southern city limits to OR 36. Crash rates for each of these sections are listed below in Table 2-3, which shows the crash rates experienced on the OR 99E section north of the city limits to have been consistently below the statewide average crash rates over the last five years. In 2001 and 2005, the crash rate experienced on the section from the south city limits to OR 36 were much lower than the statewide average, but in 2003 and 2004, they increased dramatically and were significantly higher than the statewide average.

Table 2-3: OR 99 5-year Crash Rate Comparison for Statewide Rural Areas

Section Limits (Milepoints)	Section Description	Crashes per Million Vehicles				
		2005	2004	2003	2002	2001
Statewide Average Rate		0.68	0.62	0.72	0.72	0.85
29.09 – 32.32	OR 99E: Harrisburg – Junction City	0.30	0.60	0.20	-	0.30
110.39 – 111.27	OR 99: J.C. South City Limits – OR 36	0.38	1.58	1.23	-	0.37

Note: Bold type indicates the crash rate is greater than the statewide average.

Taking a closer look at the section between the south city limits and OR 36, it was found that out of a total of 20 crashes occurring over the five-year period, seven happened in 2003 and nine happened in 2004. In the following year, only two crashes occurred. In the years with high amounts of crashes (2003 and 2004), no correlation was found between crashes and time of day, day of week, crash type, weather conditions, or lighting conditions. However, it was noticed that

¹ *2005 State Highway Crash Rate Tables (August 2006)*. Retrieved August 24, 2006, from Oregon Dept. of Transportation Web site: http://www.oregon.gov/ODOT/TD/TDATA/car/CAR_Publications.shtml

in 2003, all crashes occurred in the months of February, September, and October, while in 2004 all crashes occurred between October and December. Given that no other trend was noticed and that crashes were infrequent in 2001 and 2002 and dropped again in 2005, no action is needed at this time. However, crash rates over the next couple of years should be monitored to see if an increase occurs again. Furthermore, the fact that this segment is less than one mile long could be an indication that crash frequencies are being over-exaggerated.

Rural City Section

The “Rural City” section of the study area includes OR 99 between the north and south city limits. As shown in Table 2-4, the crash rates experienced on this segment have been much higher than the statewide average crash rate for similar facilities during each of the last five years. In fact, the crash rates experienced more closely resemble those found in urban cities within the state.

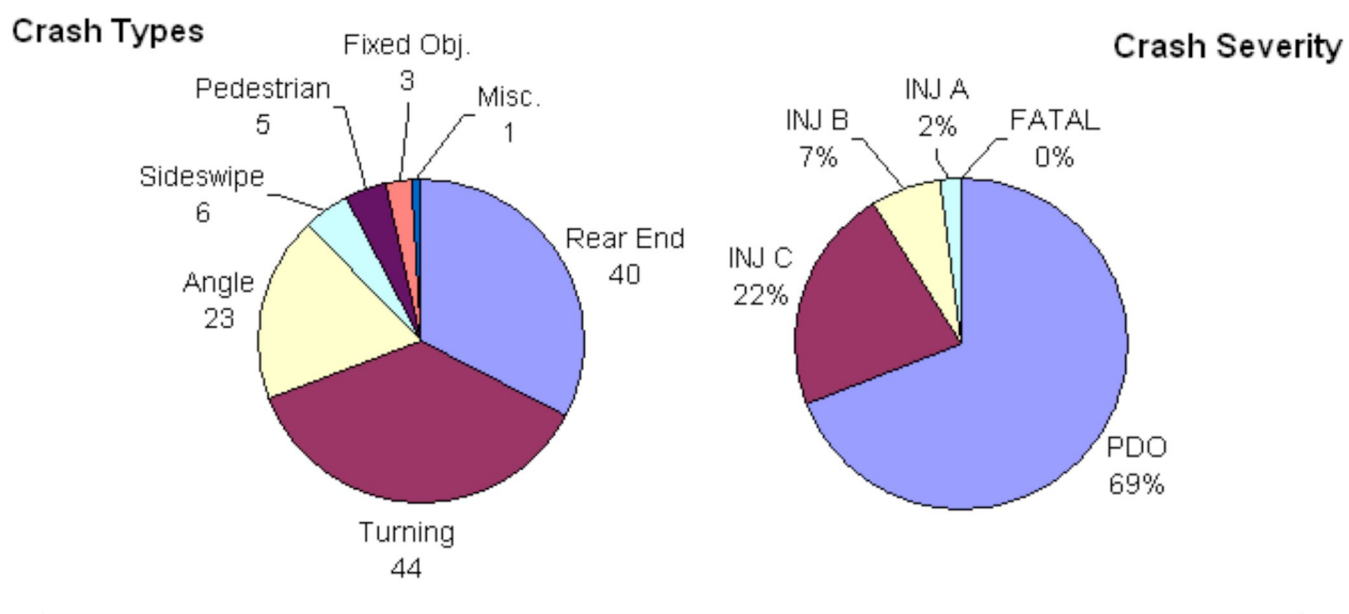
Table 2-4: OR 99 5-year Crash Rate Comparison for Statewide Rural Cities

Section Limits (Milepoints)	Section Description	Crashes per Million Vehicles				
		2005	2004	2003	2002	2001
Statewide Average Rate		0.90	0.99	1.28	1.16	1.70
108.68 – 110.38	OR 99E: N. City Limits to S. City Limits	2.54	2.06	3.05	2.29	2.40

Note: Bold type indicates the crash rate is greater than the statewide average.

By examining individual crashes within this area for the five-year period, it was noted that out a total of 122 crashes, 44 (36%) were related to turning movements and 40 (33%) were related to rear end collisions. Furthermore, the four-lane section with no turning lanes that was previously described between 15th Avenue and 3rd Avenue accounts for 44% of this distance, but experienced a disproportionate 77% of the section’s crashes. Given the types of crashes and the environment in which they are occurring, it appears that the lack of turning lanes and high number of access points within the city limits may be major contributors to the high crash frequency within this corridor. Figure 2-9 provides further information on crash types and crash severities documented within the city limits on OR 99.

Figure 2-9: OR 99 Crashes within Junction City Limits



As shown in Figure 2-9, there were also five crashes on OR 99 within the city limits involving pedestrians. These crashes have been investigated further and are detailed in Table 2-5.

Table 2-5: Pedestrian Crashes on OR 99 within the City Limits

Crash Number	Location	Severity	Age of Ped.	Ped. Crossing Direction	Cause / Error
1	MP 109.16 (north of 11th Ave.)	Injury C	70	East to West (crossing OR 99)	Pedestrian crossed between intersections.
2	MP 109.47 (6th Ave.)	Injury C	63	West to East (crossing OR 99)	Auto (traveling east to south) failed to yield right-of-way to pedestrian.
3*	MP 109.47 (6th Ave.)	Injury A Injury A	52 52	East to West (crossing OR 99)	Auto (traveling east to south) failed to yield right-of-way to pedestrian.
4	MP 109.75 (north of 1st Ave.)	Injury A	42	unknown (crossing OR 99)	unknown
5	MP 109.76 (1st Ave.)	Injury C	unknown	East to West (crossing OR 99)	Auto (traveling west to north) failed to yield right-of-way to pedestrian.

* Crash involved 2 pedestrians.

According to this information, all pedestrian-related crashes involved attempted crossings of OR 99. In most cases, it appears the cause of the crash was the driver failing to yield the right-of-way to the pedestrian.

Intersection Analysis

Crash rates at study intersections were calculated to identify problem areas in need of mitigation. Because the total number of crashes experienced at an intersection is typically proportional to the number of vehicles entering it, a crash rate describing the frequency of crashes per million entering vehicles (MEV) is used to determine if the number of crashes occurring should be considered high. Using this technique, a crash rate of 1.0 MEV or greater is commonly used to identify when further investigation is warranted. As shown in Table 2-6, crash rates calculated at all study intersections are well below this threshold, indicating the frequency of crashes occurring is normal for the volume of traffic served.

Table 2-6: Study Intersection Crash Rates (MEV)

Intersection	Crash Rate
OR 99W @ OR 99E	0.03
OR 99 @ 10th Ave.	0.51
OR 99 @ 6th Ave.	0.34
OR 99 @ 1st Ave.	0.16
OR 99 @ Prairie Rd.	0.00
OR 99 @ OR 36	0.08

SPIS Ratings

This analysis was supplemented by reviewing ODOT's Safety Priority Index System listing for locations in the study corridor ranked among the state's top 10% of hazardous locations. The Safety Priority Index System (SPIS) is a method developed by ODOT for identifying hazardous locations on state highways. The SPIS score is based on three years of crash data and considers crash frequency, crash rate, and crash severity. ODOT bases its SPIS on 0.10-mile segments to account for variances in how crash locations are reported. This information is a general comparison of the overall safety of the highway based on crash information for all sections throughout the state.

According to ODOT's 2005 SPIS ratings, the intersection on OR 99 at 6th Avenue is the only location within the study area with a rating within the top 10%. In the last five years, a total of 15 crashes occurred at this intersection, with seven of them happening in the year 2003. No more than three crashes occurred in any of the remaining four years. Considering that the SPIS rating may be inflated due to one bad year that has been followed by two years with very few crashes and that a traffic signal was recently installed in 2003, conditions at this location are expected to improve.

Operational Analysis

To assess the highway's ability to adequately accommodate travel demand under existing conditions, traffic volume counts were obtained and used along with other inventory data including intersection geometrics and traffic controls to analyze the performance of study intersections. The methodology used and results obtained are described below.

Traffic Volumes

At the north end of the study area, average daily traffic volumes experienced on OR 99W and OR 99E are approximately 6,000 and 8,100 vehicles, respectively. Through the remainder of the study corridor to the south, daily traffic volumes range from 15,500 to 16,200 vehicles. Heavy vehicles are estimated to make up approximately 15% of the daily traffic volumes, but during the weekday peak hour they drop to approximately 4%.

For the analysis of study intersection performance, ODOT supplied 16-hour manual classification counts taken in November 2005. From these six intersections, a common weekday peak hour was selected between 5:00 and 6:00 p.m. Because transportation improvements are typically designed for the 30th highest hour (30 HV) of traffic volumes experienced within the year, a seasonal factor was applied to the November counts obtained to better represent volumes seen during that time. Because there are no Automatic Traffic Recorder (ATR) stations within the study corridor to provide reliable annual traffic data, ODOT's 2005 Seasonal Trend Table² was used to develop a seasonal factor. The Seasonal Trend Table, developed by ODOT's Transportation Planning Analysis Unit, was constructed by averaging seasonal trend groupings from all ATRs across the state. To emulate seasonal peak volumes on OR 99 through Junction City, data from this table for ATRs on highways characterized by summer peaks and commuting between cities were averaged. The resulting factors increased the November counts by 16 to 20%, depending on the time of the month in which the counts were collected.

In addition, a growth factor of 2.2% per year was applied to the counts collected in 2005 to reflect volumes that would be present in 2006, which was the selected base year for this study. The growth rate was obtained through ODOT's Primary 2024 Future Volume Table,³ which uses historic growth trends to project future highway traffic volumes. This growth rate also results in similar growth on the crossing local streets as seen in the Junction City Transportation System Plan (March 2000, LCOG).

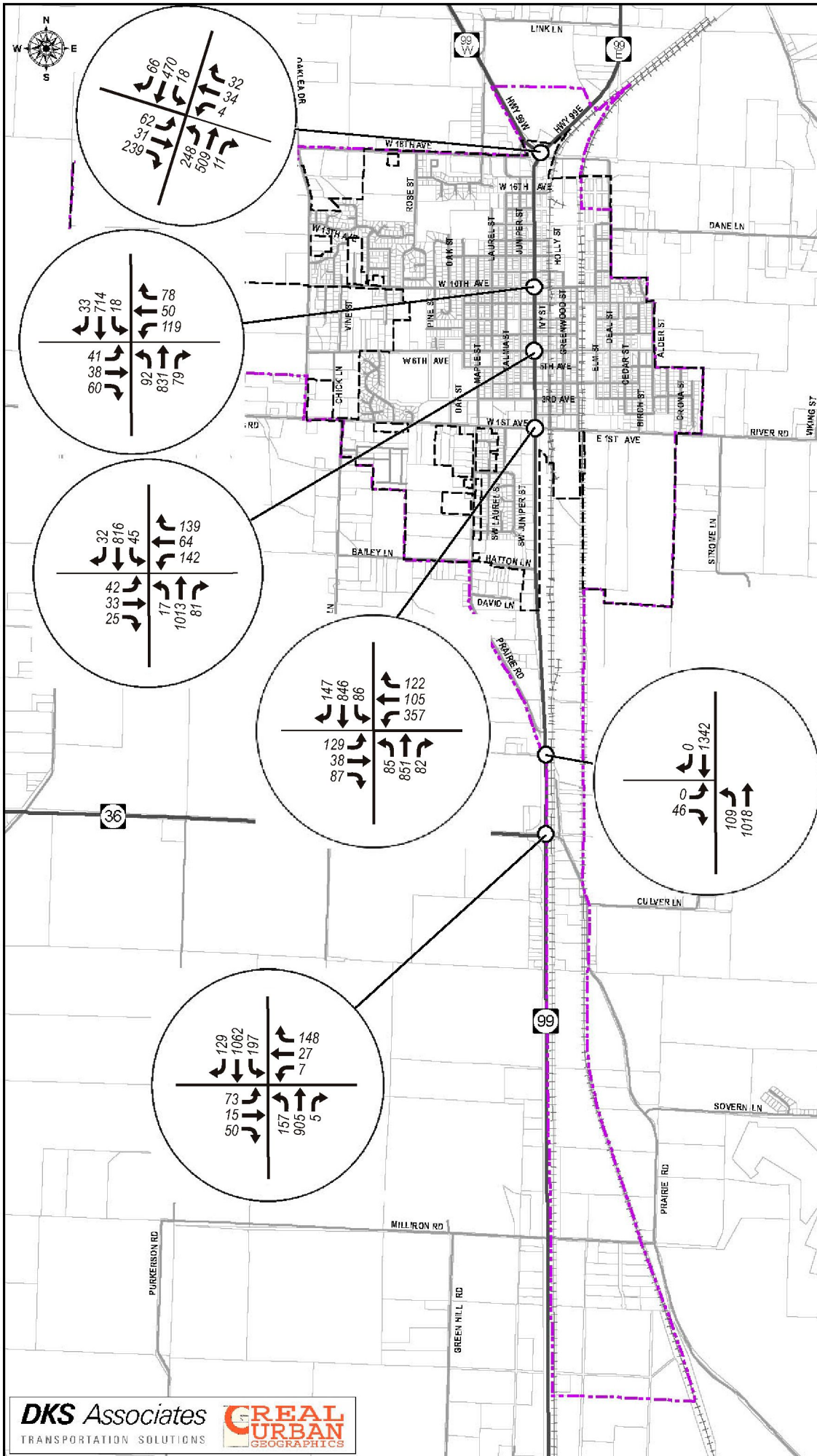
The 30HV traffic volumes developed for 2006 at study intersections are displayed in Figure 2-10. These volumes have also been balanced to show a reasonable amount of variation in inflows and outflows between adjacent intersections given the number of opportunities for vehicles to enter or exit the highway, as some counts were not collected during the same day.

² *2005 Seasonal Trend Table*. Retrieved July 5, 2006, from Oregon Dept. of Transportation Web site: <http://www.oregon.gov/ODOT/TD/TP/TADR.shtml>

³ *Primary 2024 Future Volume Table*. Retrieved June 30, 2006, from Oregon Dept. of Transportation Web site: <http://www.oregon.gov/ODOT/TD/TP/TADR.shtml>

OR 99
Junction City
 Refinement Plan

FIGURE 2-10
 2006 30HV
 Traffic Volumes



Capacity Analysis

All study intersections are located along OR 99 which is under ODOT jurisdiction. For this reason, all intersections are subject to ODOT's mobility standards as outlined in the 1999 Oregon Highway Plan⁴ (OHP). ODOT's mobility standards are based on volume-to-capacity (v/c) ratios, which are comparisons of the actual volume using the intersection (or a particular movement) to the maximum volume that could be served. A v/c ratio greater than 1.0 would indicate that there is more demand for the intersection than can be provided, which often results in long queues at the approaches.

The OHP requires that different v/c thresholds be met for each classification of highway, reflecting the management objectives for that type of facility. Through the study area, OR 99 is classified as a regional highway and lies within the UGB of Junction City, which is a member of the Lane Council of Governments. In addition, this section of highway was classified as a freight route by the Oregon Transportation Commission through an amendment to the OHP adopted in August 2005. Considering these factors, Table 6 in the OHP shows that all study intersections must maintain a v/c ratio no greater than 0.85 to comply with adopted mobility standards. Because the intersection with Prairie Road is unsignalized, the movements that are stop-controlled or must yield right of way may dictate whether the intersection can operate safely and efficiently. Therefore, according to the OHP, a mobility standard requiring a v/c ratio of 0.90 or lower for those movements shall be applied. The applicable mobility standard for each intersection is repeated in Table 2-7.

To perform the intersection capacity analysis, all study intersections were modeled in Synchro and analyzed using Highway Capacity Manual⁵ (HCM) methodology. Intersections were analyzed using the 30HV volumes, lane configurations, and traffic controls previously described, along with signal timing data provided by ODOT. The capacity analysis worksheets have been included in the appendix for reference.

As shown in Table 2-7, all study intersections currently comply with ODOT's mobility standards, with the exception of the intersection on OR 99 at 1st Avenue. According to the signal timing sheets provided by ODOT, this intersection is currently programmed to run on a fixed cycle length. The signal timing for this intersection, as well as others within this corridor, may be revisited under the future year analysis to see if adequate mitigation can be provided without requiring high-cost capacity improvements.

Also, it should be noted that while the stop-controlled and yielding movements on the intersection of OR 99/Prairie Road are shown have very low v/c ratios, the southbound through movements are experiencing a v/c ratio of 0.58 (mobility standard for this movement would be 0.85). While operations on stop-controlled and yielding movements often degrade faster than other movements as intersection volumes increase, this southbound through movement will need to be evaluated again during the future year analysis to ensure adequate operations are being maintained.

⁴ 1999 Oregon Highway Plan – August 2005 Amendment, Oregon Department of Transportation, 2005.

⁵ 2000 Highway Capacity Manual, Transportation Research Board, Washington DC, 2003.

Table 2-7: 2006 30HV Existing Intersection Performance

Study Intersection	Intersection Performance			Mobility Standard
	Delay	LOS	V/C	V/C
Traffic Signal Control				
OR 99E & OR 99	15.9	B	0.59	0.85
10 th Avenue & OR 99	11.9	B	0.71	0.85
6 th Avenue & OR 99	11.3	B	0.64	0.85
1 st Avenue & OR 99	33.4	C	0.88	0.85
OR 36 & OR 99	23.3	C	0.72	0.85
STOP Sign Control				
Prairie Road & OR 99	16.6	B/C	0.17*	0.90

LOS Level of service

"A/A" refers to level of service of left turning traffic from major street and the average level of service of traffic turning from the minor street onto the major street.

Delay Average vehicle delay in seconds for all movements at signalized and four-way stop intersections. Minor street delay in seconds at unsignalized intersections.

V/C Volume to capacity ratio of the intersection.

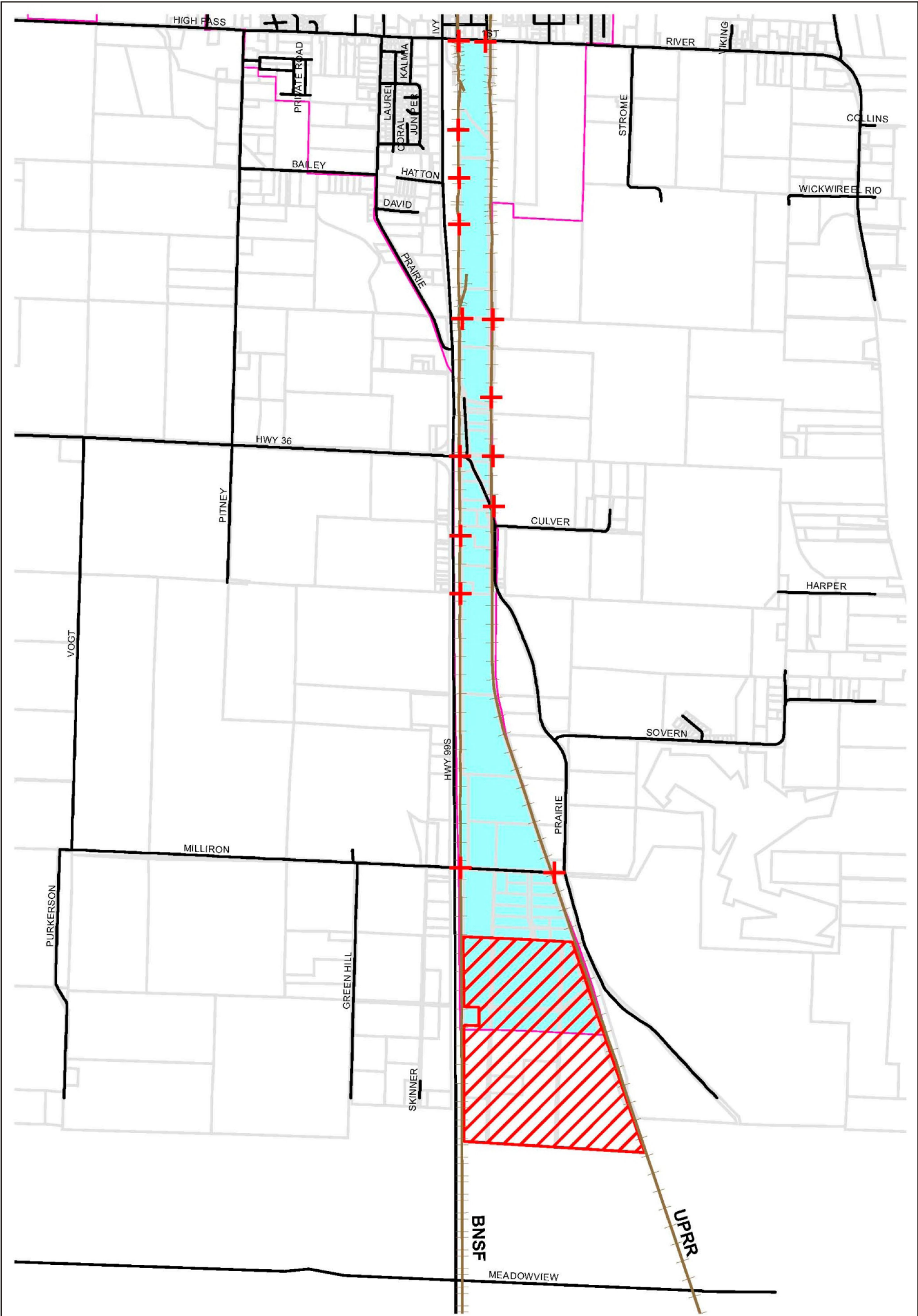
* critical v/c for OR 99/Prairie Rd is on northbound left turn.

Black background and bold type indicates mobility standard is not met.

Sub-Area Conceptual Access Plan


As previously noted, there are lands bounded by the BNSF and UPRR railroads from 1st Avenue to the southern urban growth boundary, including the entire future prison site, which may be difficult to develop due to the inaccessibility of the individual properties resulting from the presence of the railroads. These properties are zoned for industrial development, but are currently developed with a mix of industrial and agricultural uses that are being served through a combination of private and public railroad crossings. As these properties attempt to redevelop, the existing means of access may not be adequate to serve the new uses or restrictions on existing railroad crossings may not allow for continued use. Therefore, to facilitate the development of this area, a conceptual access plan will be developed to guide the construction of future roads and railroad crossings.

Figure 2-11 displays the sub-area bounded by the railroad tracks and the locations of existing access points serving all properties within it. The access points shown include both public and private crossings, many of which would not remain after redevelopment of this area. The goal of the conceptual access plan will be to provide access to all properties within this area, while reducing the number of rail crossings as much as possible. Developing new public streets and taking advantage of existing public rail crossings will be key elements of this plan.



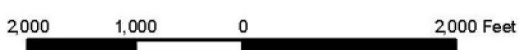
Legend

- UGB
- SubArea
- Tax Lot
- Future Jail/Hospital Site
- Existing Street
- Rail
- + Existing Access Location



W N E S

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2,000 1,000 0 2,000 Feet

FIGURE 2-11
Existing
Sub-Area Access
Locations

Chapter 3

No Build Case Operational Analysis

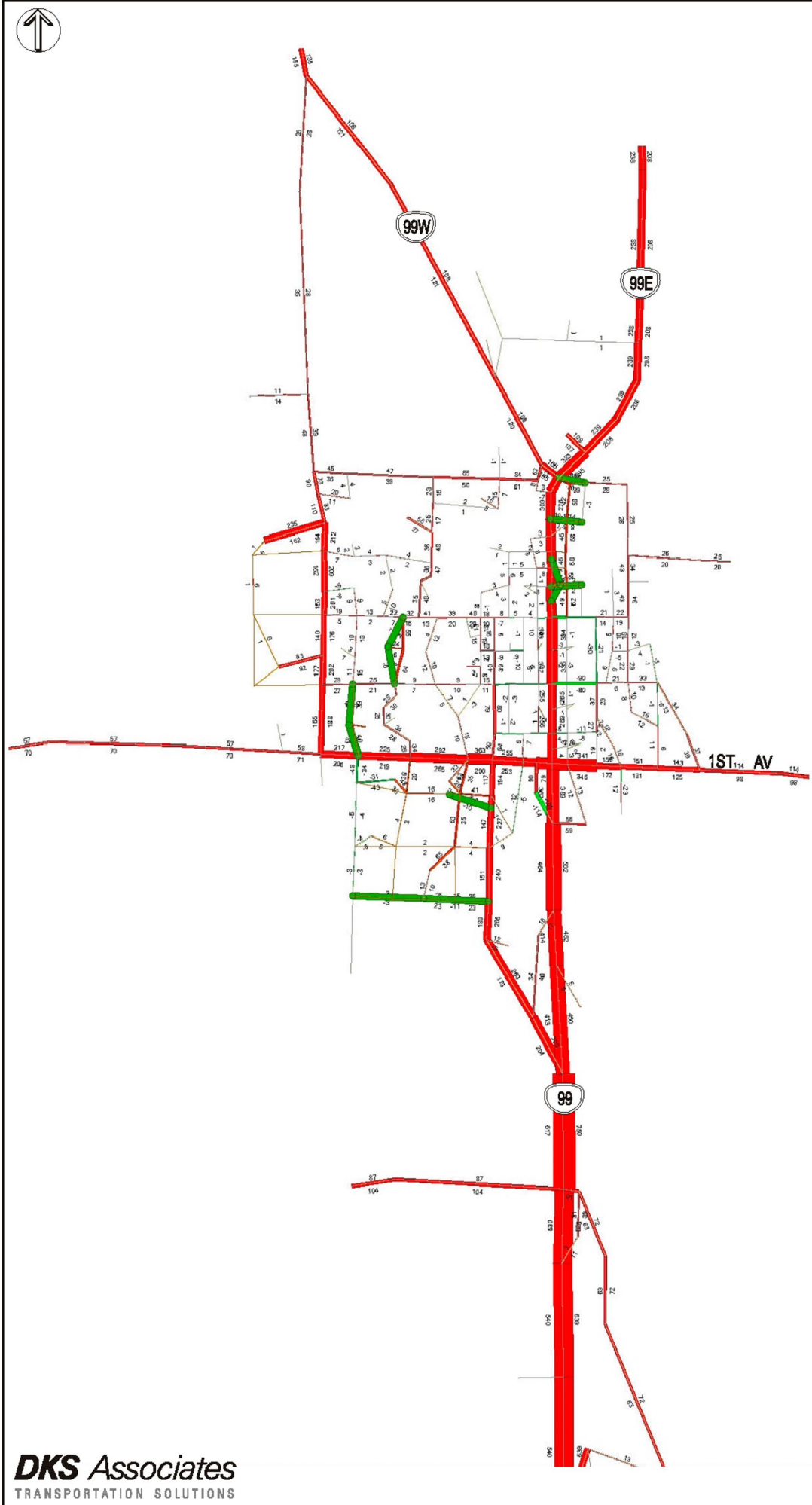
The purpose of this chapter is to analyze future operating conditions in 2026 through the study corridor assuming only currently committed transportation improvements are in place. This effort will require forecasting future traffic volumes using the Junction City transportation demand model created by LCOG and using them along with operational and geometric data collected for existing conditions to assess operations on OR 99 at the study intersections. This analysis will be used in later stages of the project to identify needed improvements and to develop an implementation strategy.

Future Traffic Volumes

To develop design hour volumes for the year 2026, LCOG created a transportation demand model for Junction City that included a base year scenario for the year 2006 and a future year scenario for the year 2026. Using the volume assignments from these two scenarios, a post-processing technique recommended in NCHRP Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design*¹ was employed to forecast design hour volumes. In essence, this methodology applies the growth found to occur between base year and future year scenarios and applies a portion of it to actual traffic count data, accounting for time that has already passed between the base year scenario and the date of the collected counts. Because in this case the base year of the model is the same as the year of the actual traffic counts taken (plus one year of growth that was previously added), the entire increment of growth between the base and future scenarios could be applied.

The degree of growth experienced on study area streets is illustrated in Figure 3-1, which displays a model plot of the difference in forecasted traffic volumes between the base year (2006) scenario and the future year (2026) scenario, with red links showing positive growth and green links showing negative growth. It should be noted when looking at this plot that the fat green links seen do not represent negative growth, but are actually locations where links that were present in the base year scenario were removed or relocated in the future year scenario.

¹ *Highway Traffic Data for Urbanized Area Project Planning and Design*, National Cooperative Highway Research Program, Report 255, TRB, Washington D.C., 1982.



DKS Associates
TRANSPORTATION SOLUTIONS

OR 99
Junction City
Refinement Plan

FIGURE 3-1
Junction City Model
Difference Plot
(2026-2006)

By taking the growth found to occur between the base year and future year scenarios on each turning movement at study intersections and applying it to the 2006 30th highest hour volumes previously developed, design hour volumes for the year 2026 were obtained. In a few cases where volumes decreased, it was assumed the primary cause was related to trip shifts due to system capacity improvements or changes in land use between the base and future years. Therefore, to keep a conservative forecast, these movements were assumed to experience no growth rather than negative growth. These volumes are displayed in Figure 3-2.

Compared to the 30th highest hour volumes under existing conditions, most of the growth on OR 99 through the study area occurs at the northern and southern ends of the city. To the north of 18th Avenue, OR 99W and OR 99E grow 49% and 53%, respectively. Then from 18th Avenue to Prairie Road, growth drops to approximately 34%. South of Prairie Road, growth on OR 99 increases again to approximately 55%.

Using the model developed by LCOG, trips along OR 99 through Junction City were tracked to determine the percentage of highway users that are only passing through versus those that begin or end their trip somewhere within the city. From this analysis it was found that in 2026, approximately 38% of the traffic on OR 99 through Junction City will be through traffic. Furthermore, it is anticipated that approximately 75% of the through trips will arrive from or depart to OR 99E, with the remaining 25% using OR 99W.

Future Traffic Operations

Intersection Capacity

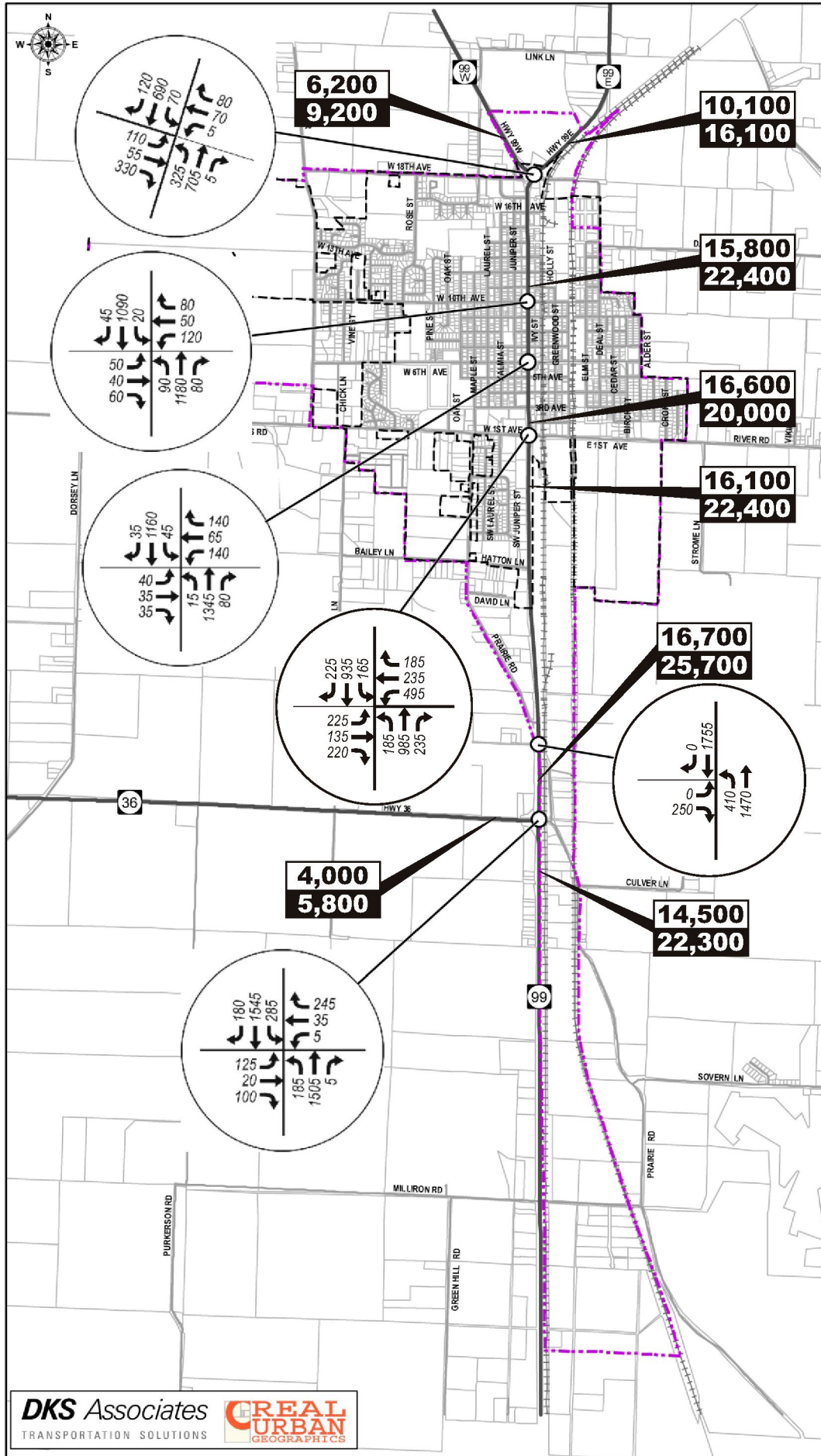
Using the 2026 design hour volumes developed, study intersections were analyzed to evaluate future operating conditions. Because there are no planned transportation improvements along OR 99 through the study area, the same Synchro model that was used to analyze existing conditions was used for this analysis, with no modifications made to signal timing or phasing or to intersection geometry. The results of this analysis are summarized in Table 3-1, which compares key measures of effectiveness including delay, level of service (LOS), and volume-to-capacity (v/c) ratios for each intersection under 2006 and 2026 conditions. Because the analysis of future conditions assumes a no-build condition, the mobility standards from the 1999 Oregon Highway Plan, which were applicable to existing conditions, continue to be the appropriate means for determining adequacy of operations.

As shown in Table 3-1, the growth in traffic volumes through the OR 99 corridor will increase congestion at all intersections, with four of the six study intersections failing to meet mobility standards and the intersections at 1st Avenue and OR 36 operating over capacity.

OR 99
Junction City
 Refinement Plan

FIGURE 3-2

2026 Design Hour
 Traffic Volumes



6,200
9,200

10,100
16,100

15,800
22,400

16,600
20,000

16,100
22,400

16,700
25,700

14,500
22,300

4,000
5,800

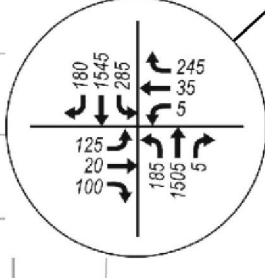
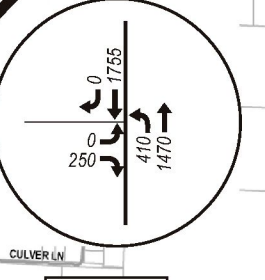
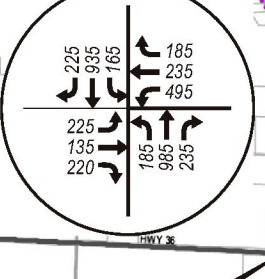
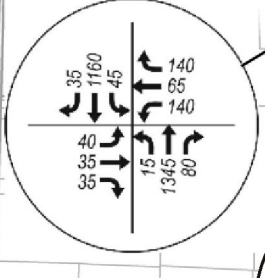
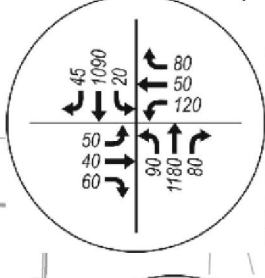
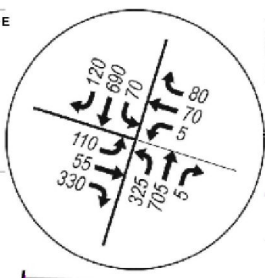


Table 3-1: 2026 Design Hour Operations - No Build Condition

Study Intersection	2006 Performance			2026 Performance			Mobility Standard
	Delay (sec)	LOS	v/c	Delay (sec)	LOS	v/c	v/c
Traffic Signal Control							
OR 99W & OR 99E	15.9	B	0.59	21.9	C	0.74	0.85
OR 99 & 10th Ave.	11.9	B	0.71	13.5	B	0.87	0.85
OR 99 & 6th Ave.	11.3	B	0.64	11.9	B	0.73	0.85
OR 99 & 1st Ave.	33.4	C	0.88	>80.0	F	>1.0	0.85
OR 99 & OR 36	23.3	C	0.72	58.2	E	>1.0	0.85
Stop Sign Control							
OR 99 & Prairie Rd.	16.6	B/C	0.17*	>60.0	C/F	0.96**	0.90

Notes: LOS (Level of Service)

“A/A” refers to level of service of left turning traffic from major street and the average level of service of traffic turning from the minor street onto the major street.

Delay Average vehicle delay in seconds for all movements at signalized and four-way stop intersections. Minor street delay in seconds at unsignalized intersections.

v/c Volume to capacity ratio of the intersection.

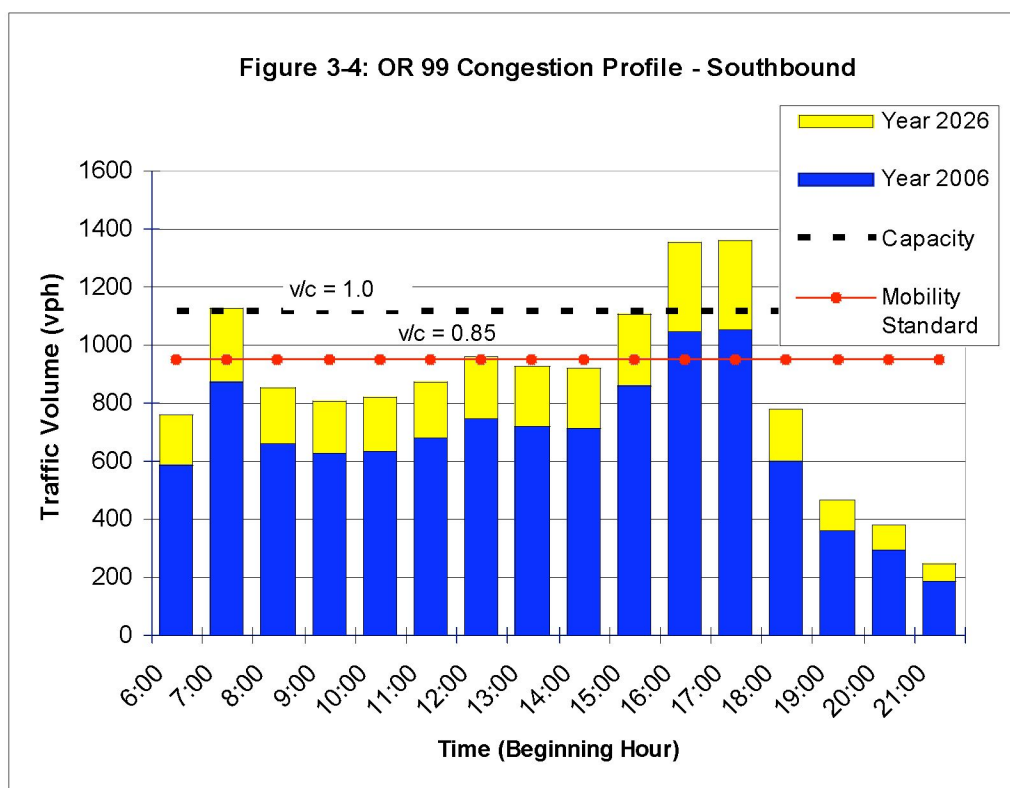
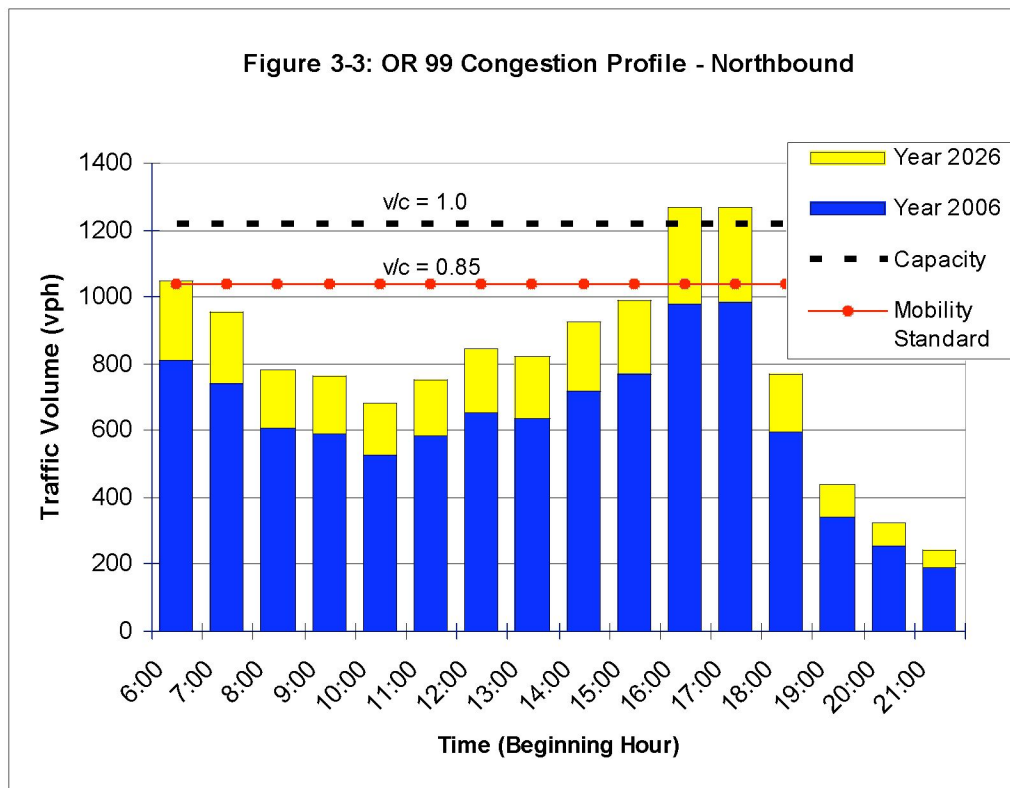
* critical v/c for OR 99/Prairie Rd in 2006 is on northbound left turn.

** critical v/c for OR 99/Prairie Rd in 2026 is on eastbound right turn.

Black background and bold type indicates mobility standard is not met.

To gauge the approximate duration of congestion that would be experienced in 2026, traffic volume profiles over a 16-hour period were created using counts collected under existing conditions. To project future volumes for all hours in this profile, the growth found to occur between the future design hour and the same hour under existing conditions was applied to volumes measured during all hours under existing conditions. For this evaluation, the point on OR 99 at 1st Avenue was selected, as it maintains some of the highest traffic volumes in the study corridor and represents a key bottleneck in the system.

Figures 3-3 and 3-4 present the hourly volume profiles on OR 99 under both existing and future conditions for the northbound and southbound directions of travel, respectively. To indicate when congested conditions would occur, a capacity ceiling was overlaid on these charts using adjusted (not ideal) saturation flow rates and actuated green times from the capacity analysis of the OR 99 intersection at 1st Avenue during the 2026 design hour (representing a v/c = 1.0). It should be recognized when considering this information that when traffic volumes exceed capacity the actual duration of congestion may be longer than shown because of the time needed for the system to recover from the “breakdown” that has occurred.



As shown in these figures, in both directions of travel the p.m. peak period currently experiences higher traffic volumes than the a.m. peak period, with two continuous hours between 4:00 and 6:00 p.m. where volumes are nearly identical. Assuming this trend continues through 2026, there will be at least a two-hour period, beginning at approximately 4:00 p.m., where traffic demands will exceed system capacity ($v/c > 1.0$). Also of note is that in the southbound direction, the a.m. peak hour volume will also exceed capacity, although only by a small degree.

An additional line was overlaid on these charts to also indicate approximately how many hours of the day would experience conditions that failed to meet ODOT's mobility standards. From Figure 3-4 it is seen that the peak hour that was previously identified as failing to meet mobility standards under existing conditions may actually be two hours long or more. However, in the future, there will be at least 3 hours during the p.m. period where conditions fail to meet mobility standards and potentially 2 hours in the a.m. period, in addition to several midday hours approaching the standard as well.

Vehicle Queuing

Under congested conditions, long vehicle queues will form along the highway. Between 15th Avenue and 3rd Avenue, OR 99 would be particularly sensitive to this because no separate turn lanes are present to move turning vehicles out of the way of through traffic. To get a better understanding of future traffic operations in 2026, an analysis of vehicle queues at study intersection approaches was performed to supplement the capacity analysis. Because of the level of congestion forecast to occur, SimTraffic was used to calculate vehicle queues rather than relying on Synchro. Figure 3-5 presents the calculated 95th percentile vehicle queues for each intersection movement and compares it to the amount of available queue storage, with movements experiencing queues that can not be contained within available storage highlighted.

To support the information presented in Figure 3-5, further descriptions of areas where excessive queues were found are provided below.

OR 99W at OR 99E

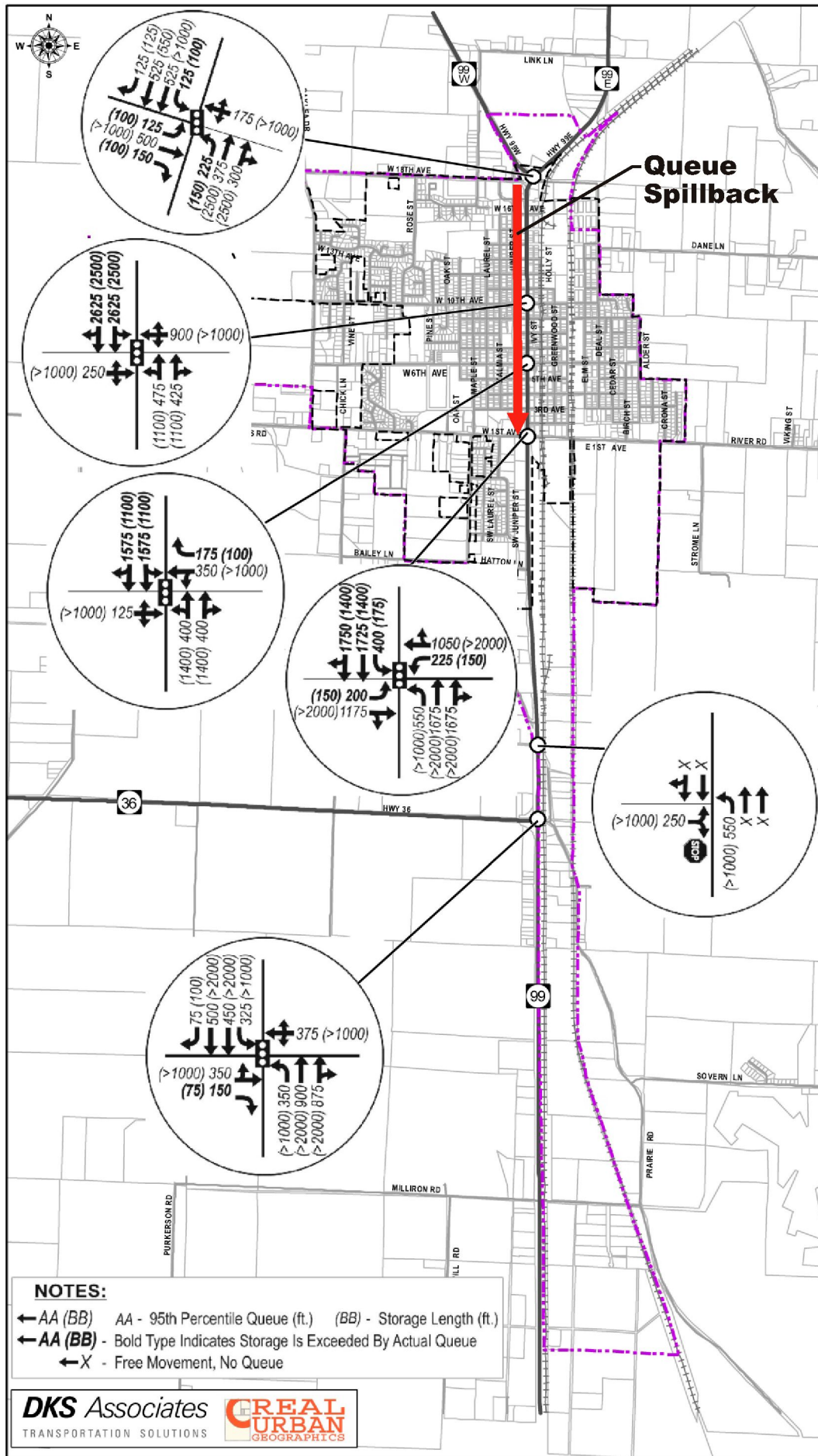
- The eastbound through queue on OR 99W spills back through the intersection with Juniper Street.

OR 99 at 10th Avenue

- The southbound queue on OR 99 spills back through the intersection with OR 99W/OR 99E.
- The westbound queue on 10th Avenue spills back beyond the UPRR tracks.
- The eastbound queue on 10th Avenue spills back through the intersection with Juniper Street.
- The northbound queue on OR 99 spills back through the intersection with 9th Avenue.

OR 99
Junction City
 Refinement Plan

FIGURE 3-5
 2026 No Build
 95th-Percentile
 Vehicle Queues



OR 99
Junction City
 Refinement Plan

FIGURE 3-5
 2026 No Build
 95th-Percentile
 Vehicle Queues

Legend

- HIGHWAY
- ROAD
- CITY LIMITS
- URBAN GROWTH BOUNDARY
- TAX LOTS
- RAILROAD
- STREAM

0 1,000 2,000 4,000 Feet

OR 99 at 6th Avenue

- The southbound queue on OR 99 spills back through the intersection with 10th Avenue.
- The westbound queue on 6th Avenue spills back through the intersection with Holly Street.
- The northbound queue on OR 99 spills back through the intersection with 5th Avenue.

OR 99 at 1st Avenue

- The southbound queue on OR 99 spills back through the intersection with 6th Avenue.
- The westbound queue on 1st Avenue spills back beyond the UPRR tracks.
- The eastbound queue on 1st Avenue spills back through the intersection with Prairie Road.

OR 99 at OR 36

- The westbound queue on Prairie Road spills back beyond the BNSF tracks.

Traffic Progression

Under the signal timing plans currently in use at the study intersections, only the traffic signals at 10th Avenue, 6th Avenue, and 1st Avenue are maintaining common cycle lengths and are running in coordination, providing a bandwidth of 32 seconds in the northbound direction and 23 seconds in the southbound direction. With the intersections of OR 99W at OR 99E and OR 99 at OR 36 being approximately ½ mile and 1 ½ miles away, respectively, including them as part of this coordinated system of signals may provide little benefit. Time-space diagrams have been included in the appendix.

Chapter 4

Problem Statement, Evaluation Criteria, and Technical Rating Methods

The purpose of this chapter is to define the problem statement for the project to focus alternatives development, as well as evaluation criteria and technical rating methods to use for alternatives screening.

Problem Statement

Through the analysis of existing and future (2026) conditions through the OR 99 corridor, a number of deficiencies were identified, as well as constraints that must be addressed when developing improvement alternatives. Through the 20-year planning period, OR 99 will experience a significantly higher traffic demand than the current infrastructure can handle. With no capacity enhancements made, high levels of congestion will be experienced for at least 3 hours during the weekday p.m. peak period, including vehicle queues in the southbound direction that will block intersections from 1st Avenue through the OR 99W/OR 99E split. Over a third of this demand will only be passing through with no origin or destination within the City.

The increased congestion experienced in 2026 will also intensify problems noted under existing conditions, such as the need for bike lanes along OR 99 and improved pedestrian crossing opportunities in the section between OR 99W and 10th Avenue and the section between 1st Avenue and OR 36. Furthermore, it is anticipated that the already high crash frequency potentially related to the high access density and lack of turn lanes will continue to rise.

Providing the needed capacity to meet future demands will be difficult to achieve within the existing highway corridor. There is not enough right of way in the constrained section between the Flat Creek Bridge and 1st Avenue to accommodate all modes of travel and provide needed turning lanes. However, due to the presence of many buildings that have been constructed very near the highway right of way, widening this section would be very expensive and would have significant impacts on the downtown area. Furthermore, the presence of the railroad tracks to the east of OR 99 will limit opportunities to develop improvement alternatives in that direction, as it is possible that no new at-grade crossings would be allowed.

Accessibility of industrial lands in the south end of the City will also be a challenge, as railroads bound this area to the east and west. Because few rail crossings will be allowed, a comprehensive plan to provide access to all properties within this area will be needed to allow for development to occur in an orderly manner.

Evaluation Criteria and Technical Rating Methods

To rank potential improvement alternatives that will be developed to address the problems discussed above, evaluation criteria were created that are focused on compliance with state and local plans and policies, engineering design requirements, and a desire to minimize environmental and private property impacts. The criteria developed are described below.

Evaluation Criterion	Rating Method
<p>Meets HDM Mobility Standards The effectiveness of new state facilities constructed will be evaluated according to the mobility standards in the Highway Design Manual. Because alternatives that do not meet these standards, but may provide remarkable improvement, could be deemed acceptable, using a pass/fail rating method would not be desirable.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Meets HDM mobility standard. ✓ No effect on mobility. - Mobility is worsened.
<p>Reduces Corridor Through Travel Time Because over one third of all travel along OR 99 will be associated with through travel only and this highway has been designated as a freight route, improving the ability to move traffic through the study area is important. Alternatives that do not improve through travel time should be rated lower.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Reduces through travel time. ✓ No effect on through travel time. - Through travel time is worsened.
<p>Reduces OR 99 intersection queue blockage Under No Build conditions, queue spillback from downstream intersections prohibits many intersections from functioning properly. When queues block upstream intersections, adequate operations can not be achieved. All alternatives considered must be able to manage vehicle queues along OR 99 better than the No Build condition.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Major reduction in queue spillback. ✓ Minor reduction in queue spillback. - No reduction in queue spillback.
<p>Able to meet Design Standards While it is important that proposed alternatives would be able to meet adopted design standards (from the Highway Design Manual for state facilities), there may be situations where the standards can not be met, but it is reasonable to assume a design exception could be obtained. Therefore, using a pass/fail rating method would not be desirable.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Meets design standards. ✓ May require design exception. - Would require significant design exception(s).

<p>Facilitates Pedestrian Crossing of OR 99 Under current conditions, OR 99 acts as a barrier between the east and west sides of town and does not have adequate pedestrian crossing opportunities in some areas of the corridor. Improvement alternatives should address the need to facilitate pedestrian travel.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Improves pedestrian crossings. ✓ No effect on pedestrian crossings. - Degrades pedestrian crossings.
<p>Improves Bicycle Travel There are currently no bike lanes on OR 99 for a considerable distance, forcing bikes to ride in the motor vehicle lanes or discouraging bike travel altogether. Proposed alternatives need to provide for bicycle travel to enhance corridor safety and encourage alternate travel mode use.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Improves bicycle travel. ✓ No effect on bicycle travel. - Degrades bicycle travel.
<p>Reduces Direct Highway Access The high access density along OR 99 should be reduced to help alleviate the current safety problems in the corridor, to provide an environment where traffic can move efficiently, and to make the area more attractive to walking and biking.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Reduces access density. ✓ No effect on access density. - Increases access density.
<p>Reduces Vehicle Conflicts Under current conditions, the high access density and lack of turn lanes between the Flat Creek Bridge and 1st Avenue provide an environment that results in a substantial number of vehicular conflicts that degrade safety and mobility. Reductions in conflicts through access management techniques (reducing the number of driveways, adding turn lanes, installing median barrier, etc...) or other means is essential for achieving adequate operations.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Reduces vehicle conflicts. ✓ No effect on vehicle conflicts. - Increases vehicle conflicts.
<p>Potential Environmental Impacts Environmental impacts, including impacts to natural resources, socioeconomics, and visual impacts should be avoided where possible. While such impacts will not be studied in detail as part of this project, alternatives will be reviewed for potential impacts to known areas of environmental sensitivity (wetlands, haz-mat, parks, cultural/historic resources, etc...).</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + No known impacts. ✓ Potential for minor impacts. - Significant impacts.

<p>No new at-grade RR crossings Obtaining approval for new at-grade railroad crossings is generally very difficult and commonly requires the simultaneous closure of other existing at-grade crossings. The feasibility of advancing any alternatives that show new at-grade railroad crossings would therefore be questionable.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Reduces number of at-grade RR crossings. ✓ No change in number of at-grade RR crossings. - Increases number of at-grade RR crossings.
<p>Feasible Construction/ Implementation Alternatives that can be constructed or implemented with little impact to traffic flow should be rated higher than those that would require the elimination of travel lanes during construction. Also, alternatives with elements that may not be constructible or implementable should not be pursued.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + No phasing required. ✓ Constructible in phases. - Not constructible.
<p>Private Property Impacts Alternatives with no private property impacts would be the most desirable. While private property impacts should be minimized where feasible, impacts that would not require purchasing the entire property and would allow current development to continue operating are preferable.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + No impacts. ✓ Requires partial property takes. - Requires total property takes.
<p>Cost-effectiveness Some alternatives may have higher costs associated with them, but may also provide the most improvement for traffic operations. Therefore, the cost alone should not be used to determine if an alternative is desirable from a financial standpoint.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Very cost-effective. ✓ Moderately cost-effective. - Not cost-effective.
<p>Consistent with City Comp Plan/ TSP Alternatives considered should not conflict with adopted policies or planned improvements in the City's Comprehensive Plan or Transportation System Plan (TSP) unless it is reasonable to assume that adopted plans would be amended by the City to remove such conflicts.</p>	<p style="text-align: center;">+ / ✓ / -</p> <hr/> <ul style="list-style-type: none"> + Consistent with adopted plans. ✓ Conflicts exist, but could be resolved by City through amendments. - Conflicts exist and City will not amend plans to resolve them.

Consistent with Junction City Downtown Plan

Alternatives considered should not conflict with the objectives and strategies in Junction City's adopted Downtown Plan. Specifically, alternatives should provide improved automobile, pedestrian, and bicycle access and safety throughout the downtown.

+ / ✓ / -

- +** Consistent with and compliments Downtown Plan.
 - ✓** Does not compliment Downtown Plan, but is or would be made consistent.
 - Would conflict with Downtown Plan.
-

Chapter 5

Alternative Identification and Preliminary Screening

The purpose of this chapter is to identify the preliminary alternatives considered for transportation improvements to address deficiencies noted in the OR 99 corridor under existing and future conditions. The following sections present descriptions, scaled physical layouts, and opportunities and constraints associated with the five preliminary alternatives. Preliminary screening was applied to the alternatives to determine which should be advanced for further consideration.

Alternative Descriptions

Five preliminary alternatives were considered to address the transportation needs in the OR 99 corridor through Junction City. These alternatives address all transportation modes and have a broad range of complexities and cost. The alternatives include:

- Alternative 1: Improve Existing Corridor – Maintain width from Flat Creek Bridge to 3rd Avenue;
- Alternative 2: Improve Existing Corridor with Widening as Needed;
- Alternative 3: Improve Local Facilities;
- Alternative 4: Juniper Street / Ivy Street Couplet¹; and
- Alternative 5: OR 99 By-pass: OR 99E to OR 36.

A description of each alternative follows.

Alternative 1: Improve Existing Corridor within Available Right-of-way

The first alternative focuses on improvements that can be implemented with limited acquisition of right-of-way. As previously discovered, the four-lane section of OR 99 between the Flat Creek Bridge and 3rd Avenue acts as a major bottleneck in the system with no turn lanes or bike lanes provided. With only 60 feet of right-of-way available in this area and many buildings constructed close to the existing back of sidewalk, there is no ability to widen the highway and add these needed amenities without major property and business impacts.

This proposed alternative would restripe the existing highway, which includes only four through lanes (two in each direction), to include one through lane in each direction, one bike lane in each direction, and a median to allow for left turn lanes where desired. Therefore, the resulting cross-section within the existing 60-foot right-of-way would include:

- 2 travel lanes (12 feet wide each),
- 1 median/left turn lane (14 feet wide),
- 2 bike lanes (5 feet wide each), and
- 2 sidewalks (6 feet wide each).

¹ Alternative 4 includes two options for the southern extents of the couplet. Under Option A the couplet would begin on the southern end approximately 1,000 feet south of 1st Avenue. Under Option B the couplet would extend farther south.

Figure 5-1 shows the extents of the three-lane section of OR 99, as well as the proposed cross-section.

This new cross-section would be achieved by transitioning from the existing five-lane cross-sections to the north and south by dropping a through lane as a right turn in the southbound direction at 17th Avenue, as well as in the northbound direction at 3rd Avenue. The capacity of the roadway could be further improved through implementation of an access management plan and pedestrian refuge islands could be constructed at mid-block locations to improve pedestrian safety and highway crossing opportunities. Pedestrian crossing for the visually impaired could further be enhanced through the provision of audible pedestrian signals at all signalized highway intersections.

While only a preliminary level of analysis that did not include use of the travel demand model was conducted to determine if the above referenced improvements could reasonably be expected to meet mobility standards, it was found that the proposed modification of OR 99 from the Flat Creek Bridge to 3rd Avenue that adds left turn lanes by removing through lanes makes intersection operation worse than in the No Build condition. It is suspected that further analysis would find that without the existing two through lanes in each direction, insufficient capacity would remain to adequately serve highway traffic, resulting in over-capacity conditions on OR 99 and the potential for increased traffic on local streets in the area.

To mitigate poor operations at the OR 99/ 1st Avenue intersection, right turn lanes would be added to all approaches, along with dual left turn lanes on the westbound approach and modifications to the current signal timing and phasing. While the northbound and southbound right turn lanes would fit within available right-of-way, the other improvements to the eastbound and westbound approaches would not, resulting in private property impacts. Furthermore, the additional turn lanes on the westbound approach may require widening of the BNSF railroad crossing. Preliminary analysis results suggest this intersection may operate at a v/c ratio of 0.81 with these improvements in place (mobility standard requires $v/c \leq 0.75$).

Improvements required at the intersection of OR 99/ OR 36 include the construction of a westbound right turn lane, dual eastbound left turn lanes with restriping to create a shared through-right turn lane, signal timing and phasing modifications, and relocating the crosswalk from the north approach to the south approach. Adding the westbound right turn lane would require widening the BNSF railroad crossing, but other improvements would fit within available right-of-way. Preliminary analysis results suggest this intersection may operate at a v/c ratio of 0.84 with these improvements in place (mobility standard requires $v/c \leq 0.75$).

Installing a traffic signal at the three-way intersection on OR 99 at Prairie Road would allow for mobility standards to be met, but may not be a desirable improvement as virtually all turning movements at this intersection are turning left from OR 99 to Prairie Road or turning right from Prairie Road to OR 99. Because of this, it is very unlikely that required warrants for signalization could be met and that signalization would not benefit these turning movements enough to justify the added delay incurred by mainline traffic.

Given that the movement that failed to meet mobility standards was the right turn from Prairie Road, another option for mitigation includes the construction of an acceleration lane from Prairie Road to southbound OR 99, allowing for free right-turn movements. However, with a private driveway that is used by large trucks associated with a light industrial business located on the west side of OR 99 approximately 400 feet south of Prairie Road, an acceleration lane at this location could present a hazard.

Alternative 2: Improve Existing Corridor with Widening as Needed

Alternative 2 increases the capacity in the OR 99 corridor by retaining the existing two through lanes in each direction while adding bicycle lanes and a center turn lane through the purchase of additional right-of-way. This would provide needed left turn lanes and bicycle lanes between the Flat Creek Bridge and 3rd Avenue similar to Alternative 1, however it would not be done at the expense of losing existing through lanes. The proposed cross-section for this alternative would require 92 feet of right-of-way (compared to the 60 feet of existing right-of-way) and would include:

- 4 travel lanes (12 feet wide each),
- 1 median/left turn lane (14 feet wide),
- 2 bike lanes (5 feet wide each), and
- 2 sidewalks (10 feet wide each).

While only 6-foot wide sidewalks are required to meet design standards for this facility, 10-foot sidewalks are recommended to provide a more comfortable and attractive walking environment and allow for potential inclusion of street trees, benches, bike racks, trash cans, and other amenities. If the narrower 6-foot sidewalks were constructed, the cross-section would be reduced to 84 feet. Pedestrian travel would be further improved by constructing mid-block refuge islands to aid crossings of OR 99 and pedestrian crossing for the visually impaired could further be enhanced through the provision of audible pedestrian signals at all signalized highway intersections. Figure 5-2 shows the extents of the new five-lane section on OR 99, as well as the proposed cross-section.

As indicated in Figure 5-2, widening the highway to a 92-foot right-of-way width would result in property impacts on both sides of the highway out to 16 feet from the existing back of sidewalk. From a preliminary review of area properties adjacent to OR 99 between the Flat Creek Bridge and 3rd Avenue, it is estimated that this would result in the purchase of approximately 27 businesses (or approximately 50% of area businesses) based on current building locations. If the narrower cross-section including the smaller 6-foot sidewalks were constructed, the number of businesses purchased would only drop to approximately 22 (or approximately 40%).

While only a preliminary level of analysis that did not include use of the travel demand model was conducted to determine if the above referenced improvements could reasonably be expected to meet mobility standards, it is expected that with the improvements made along OR 99, including the northbound and southbound left turn lanes, no other improvements would be necessary at the study intersections of 10th Avenue and 6th Avenue.

Improvements needed at the intersections on OR 99 at 1st Avenue, Prairie Road, and OR 36 are the same as identified in Alternative 1.

Alternative 3: Improve Local Facilities

The third alternative considers improvements that would extend, realign, upgrade and increase the capacity of County roads surrounding the City to enhance connectivity and provide alternative routes to OR 99. Under this alternative, new and upgraded roads would be constructed to County Collector standards, but no new improvements would be included within the OR 99 corridor. In most areas, the roadway upgrades would simply provide wider shoulders (total pavement width of 36 feet), which

generally makes a roadway more comfortable for drivers but provides only small capacity benefits. The wider shoulders would also be able to accommodate bicycle traffic. However, it should be noted that where new facilities are proposed that would be located on rural lands, land use approvals are necessary, and a statewide land use Goal 3 (Agriculture) exception could be required unless the area is first brought into the urban growth boundary. The cross-sections of these roadways would include:

- 2 travel lanes (12 feet wide each)
- 2 shoulders (6 feet wide each)

Pitney Lane, a local street, would be improved to collector (with shoulder) standards from OR 36 north to Bailey Lane and would be realigned from Bailey Lane north to intersect with High Pass Road opposite Oaklea Drive. This realignment and upgrade would make Pitney Lane more attractive as an alternate route to OR 99 and would facilitate north-south connectivity by acting as an extension of Oaklea Drive. The realigned section of Pitney Lane would impact rural lands and statewide land use law restricts the level of road improvements that can be constructed on these lands. State land use does permit a certain level of road improvement outside urban growth boundaries if certain criteria are met. Realignment of roads is a permitted use, provided the Transportation Planning Rule (TPR) definition of a realignment is met, and provided improvements do not force a significant change in, or significantly increase the cost of farm and forest practices on the lands.

Prairie Road (east of OR 99) would be realigned to remove the skewed UPRR crossing, and continue north along the east side of the UPRR line. A new east-west roadway would then be constructed to connect Prairie Road to the OR 99/ OR 36 intersection, creating a “T”-intersection with Prairie Road. This would have negligible impact on the BNSF rail crossing, but would require construction of a new UPRR crossing (to replace the old one) just west of the intersection of the new roadway at Prairie Road. As the extension of Prairie Road continues northward, it would veer east, close to the City’s urban growth boundary, run over the existing Strome Lane, intersect with River Road, and continue due north until it connects to Dane Lane. This route would further enhance north-south connectivity by providing an alternative to River Road and Lovelake Road that is closer to the urban area, requiring less out-of-direction travel. This route may also provide an attractive alternative to using 1st Avenue for employees of the County Coach facility that want to go southbound on OR 99. Again, as most of these improvements would impact rural lands, a land use permit would at minimum be required, and an exception to statewide land use Goal 3 (Agriculture) may be necessary unless the surrounding area is first brought into the urban growth boundary. In particular, any new road extensions would require a Goal 3 exception unless the area of construction is within the urban growth boundary, or unless it can be proven that the purpose of the road is to reduce local access to or local traffic on a state highway, the road is limited to two travel lanes, and private access and intersections are limited to rural needs or to provide adequate emergency access.

East-side connectivity enhancements that may make the Prairie Road extension and the existing routes along Lovelake Road and River Road more attractive include upgrades of Dane Lane and River Road on the east side of the City. These enhancements would generally include widening to increase shoulder widths, making the roadways more comfortable for motorists and bicycles. Dane Lane would be upgraded from a local street to a collector (with shoulders) from Deal Street to Lovelake Road, while River Road would be improved from OR 99 to Lovelake Road.

Figure 5-3 illustrates the local facility improvements of Alternative 3 described above.

A preliminary analysis of the effectiveness of these improvements was conducted by adding the proposed road extensions to the street network in the transportation demand model developed for the Junction City area. The results showed only about 200 vehicles an hour diverting away from OR 99 to use these upgraded routes.

Alternative 4: Juniper Street / Ivy Street Couplet

Alternative 4 would change the traffic circulation pattern along the OR 99 corridor through much of the City by replacing a section of the existing highway with a couplet system that would accommodate northbound travel only along Ivy Street (OR 99), with southbound travel rerouted to Juniper Street one block to the west. By separating the northbound and southbound traffic onto two streets, turning conflicts at intersections are reduced and additional right-of-way becomes available for capacity and streetscape improvements.

Under this proposal, the north end of the couplet would begin at 17th Avenue where the southbound lanes would shift to the west and align with Juniper Street at the intersection with 16th Avenue. This would require purchasing the property bounded by 17th Avenue, OR 99, 16th Avenue, and Juniper Street and construction of a bridge over Flat Creek. From 16th Avenue, the southbound lanes would travel along the existing Juniper Street corridor to 3rd Avenue, with no need to widen the existing 60-foot right-of-way along Juniper Street.

While the existing alignment of Juniper Street ends at 3rd Avenue, it was decided to carry the southbound lanes south of 1st Avenue, as the intersection of OR 99 at 1st Avenue was previously determined to be a significant bottleneck in the corridor in need of mitigation. Therefore, from 3rd Avenue, the southbound lanes veer further to the west to intersect 1st Avenue opposite Kalmia Street. They then travel down the existing Kalmia Street alignment for approximately 500 feet before turning back to the east to connect with the existing OR 99 alignment approximately 900 feet south of 1st Avenue. Much of this alignment would require purchase of private property. The northbound travel lanes would stay within the existing OR 99 right-of-way through the entire corridor.

In each direction within the couplet, OR 99 will be constructed to fit within the existing 60-foot right-of-ways along Ivy Street and Juniper Street and will include:

- 2 travel lanes (12 feet wide each)
- 1 bike lane (6 feet wide)
- Parallel parking on one side of the highway (8 feet wide)
- 2 sidewalks (11 feet wide each)

Figure 5-4 shows the proposed couplet alignment and an illustration of the proposed highway cross-section. A design speed of 30 mph, which would allow for a posted speed of 25 mph, was maintained for both directions of OR 99. Potential new traffic signal locations shown on Figure 5-4 were assumed for cross streets currently maintaining signals on the existing OR 99 alignment and are not based on needs discovered through actual analysis, which would occur in the next phase of this study.

The improvements proposed as part of this alternative would improve capacity for northbound and southbound travel along OR 99 by retaining two through lanes in each direction and reducing the amount of turning conflicts at highway intersections. The inclusion of parallel parking would

supplement existing on-site parking for abutting businesses, which in many cases is very limited today. Also, the inclusion of bike lanes would fill the existing gap in the bike system, allowing for a continuous route along OR 99 through the entire study area. Furthermore, posted speeds, which are 30 mph today, may be able to drop as the new cross-section would communicate to motorists that they are in a downtown environment.

Pedestrian travel would be significantly enhanced by providing wider sidewalks that could be used to accommodate street trees and street furniture such as trash cans, decorative light poles, benches, and bike racks. A buffer between pedestrians and motor vehicle traffic would be created by the bike lanes and parking aisle, making the environment more comfortable for walking. In addition, pedestrian crossings of OR 99 would become easier as people would only be required to cross two lanes of traffic at a time, with vehicles only approaching in one direction. Furthermore, bulb-outs could be constructed at street corners at the ends of the parallel parking aisles to shorten crossing distances and pedestrian crossing for the visually impaired could further be enhanced through the provision of audible pedestrian signals at all signalized highway intersections.

The slower highway speeds and wider sidewalks may also create a more conducive environment for bus stops through the couplet, allowing for direct access to adjacent businesses. The additional sidewalk widths may provide opportunities to supplement bus stops with shelters and benches. While bus pullouts could not be accommodated with the proposed cross-section, there are two alternatives for including them where desired.

The first alternative would be to place the parallel parking and bike lanes side-by-side on the right side of the highway, rather than on opposite sides of the highway as proposed. Where bus pullouts are desired (requiring approximately 10 feet of width), the parking aisle would be eliminated, the bike lane would be reduced to 5 feet wide, and the sidewalk would be reduced to 10 feet wide. While bike lanes and parallel parking aisles are often located side-by-side, especially on two-way roads, separating them as proposed would create a more attractive and safe environment for bicyclists as the danger of being hit with a car door would be eliminated. If this alternative for the inclusion of bus pullouts were selected, this risk would be reintroduced.

The other alternative would be to identify where bus pullouts are likely to be desired in the future, outline where additional right-of-way would be required to accommodate them, and either obtain that right-of-way during construction and build them or require the dedication of that right-of-way from adjacent properties when they redevelop and include the pullout as part of the frontage improvements.

Finally, this alternative would include impacts to private properties along the corridor. While much of the couplet would fit within existing right-of-way, the transitions at the north and south ends will require the purchase of private property. However, as the land surrounding Juniper Street is already zoned for commercial/residential uses, construction of the couplet may induce redevelopment of the Juniper Street corridor and extend activity in the west side of the downtown.

Alternative 4 – Option A: Juniper Street / Ivy Street Couplet with Southern Extension

This modification to the southern end of the Juniper Street/ Ivy Street couplet introduced as Alternative 4 was forwarded to explore opportunities to utilize currently vacant land along the east side of OR 99 between 1st Avenue and Prairie Road. As illustrated in Figure 5-5, this extension would begin at the southern end of original Alternative 4 where the southbound and northbound lanes

would come back together. However, rather than bringing these lanes back together on a common roadbed, the northbound lanes would veer to the west approximately 100 feet to run adjacent to the BNSF railroad. This would create a strip of vacant land between the northbound and southbound directions approximately 100 feet in width that would continue to the south until the couplet is brought back together approximately 1,300 feet north of the intersection with Prairie Road, where available right-of-way is reduced.

The vacant lands created between the northbound and southbound alignments could be made available for development or even used to offset private property impacts resulting from the project. The comprehensive plan shows the western portion of this area designated for commercial zoning, but transitions to industrial zoning in the eastern portion near the railroad. Therefore, the zoning of this land may need to be modified to fit the new property boundaries and highway alignment.

Also shown in Figure 5-5 is a new access road along the west side of the UPRR line running south from 1st Avenue. Currently two properties between the BNSF and UPRR lines south of 1st Avenue in the area where the couplet would be extended are taking access directly from OR 99 via long driveways (approximately 200 feet long). When the couplet is shifted to the east and brought close to the BNSF line, these driveways would be reduced in length considerably, with rail crossings very close to the northbound lanes of the highway. When the crossing is blocked by a train, vehicles attempting to enter these sites, which may include large trucks associated with the industrial uses, would queue on the highway. To prevent this, the access road was included to provide alternate access to these properties so the driveways across the BNSF line could be eliminated.

Alternative 5: Construct a By-pass

Alternative 5 includes a realignment of OR 99 around the east side of Junction City, creating a by-pass of much of the urban area. This concept is illustrated in Figure 5-6, with additional detail around the proposed interchange areas provided in Figures 5-7 and 5-8.

The south end of the by-pass would begin south of OR 36, with a new interchange in the southwest quadrant of the existing OR 99/ OR 36 intersection. The existing OR 99 alignment north of OR 36 would be realigned to become the crossroad with the interchange, with OR 36 being realigned to the north to intersect the realigned portion of OR 99 no closer than 1,320 feet from the interchange ramp terminals.

From this interchange, the new OR 99 alignment would be elevated as it proceeds north, with grade separated crossings of a realigned Prairie Road and the BNSF and UPRR railroad tracks. Once over the UPRR line, OR 99 would drop to meet grade and would continue north close to the east side of the City's urban growth boundary. Grade separated crossings would be provided at major crossing roadways such as River Road and Dane Lane. However, no access would be allowed to the realigned OR 99 between the interchanges at the north and south termini, as there would be less than 3 ½ miles between them. Given ODOT's spacing standards for interchanges, requiring 1.9 miles between interchanges in urban areas and 3 miles in rural areas, there would not be sufficient distance to accommodate a third interchange.

OR 99 would then be elevated to cross over the UPRR and BNSF railroads before returning to grade to take over the existing OR 99E alignment, where the second interchange would be constructed. To accommodate the interchange, the connection between OR 99E and OR 99W would be relocated by

cutting off the existing OR 99E alignment south of the interchange and constructing a new roadway between the interchange and OR 99W near the City's northern urban growth boundary.

With the by-pass in place, the existing OR 99 alignment between the new interchanges would become a business route and could be transferred from ODOT to fall under the jurisdiction of the City or County.

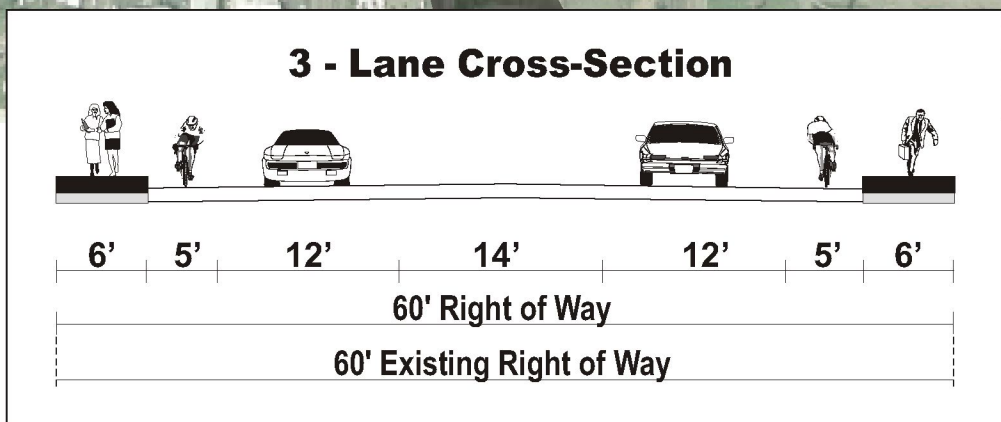
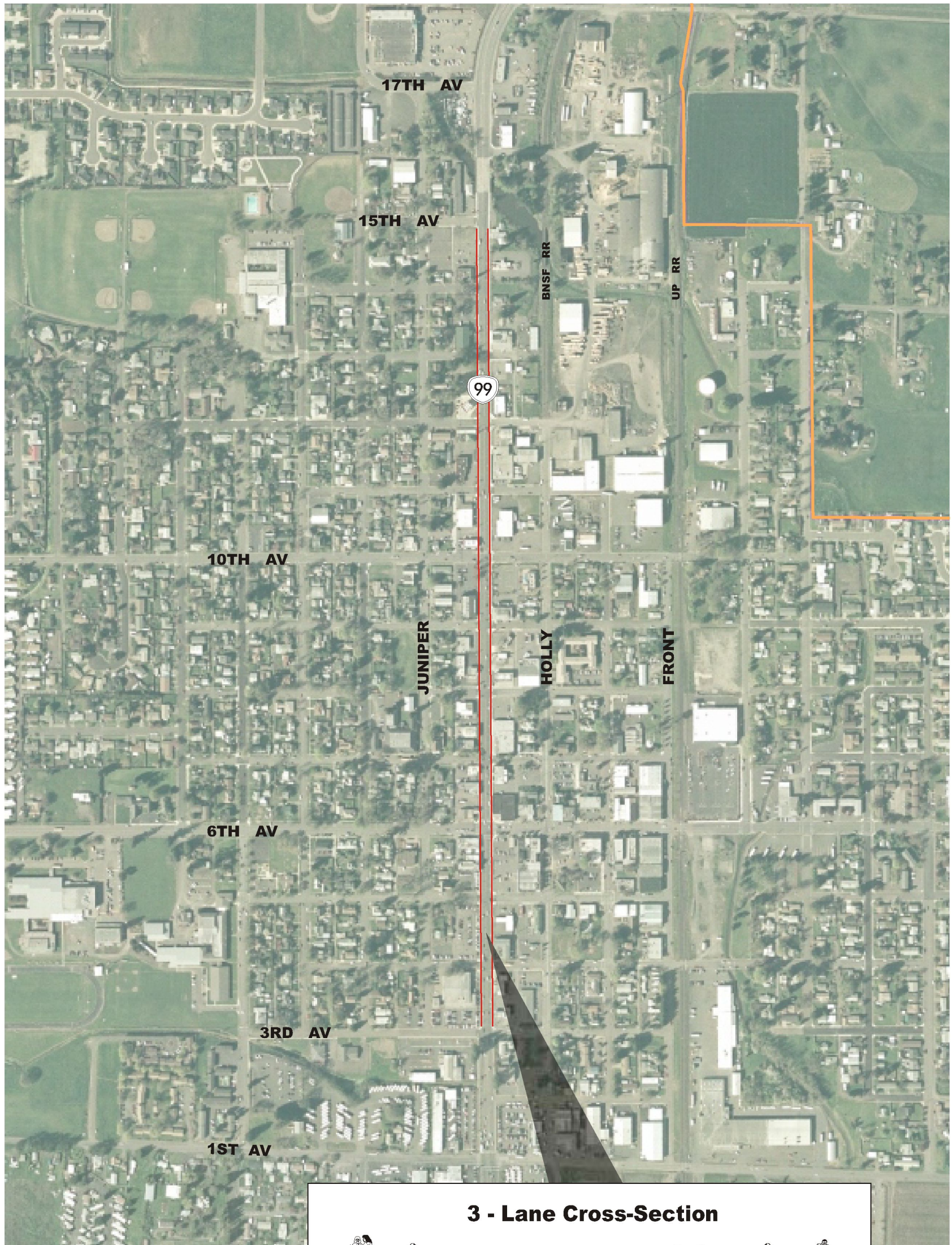
The new alignment would require a 58-foot cross-section which would be composed of the following:

- 2 travel lanes (12 feet wide each)
- A median (14 feet wide)
- 2 shoulders (10 feet wide on each side)

The illustrations in Figures 5-6, 5-7, and 5-8 were drawn to accommodate a 70 mph design speed on the realignment of OR 99.

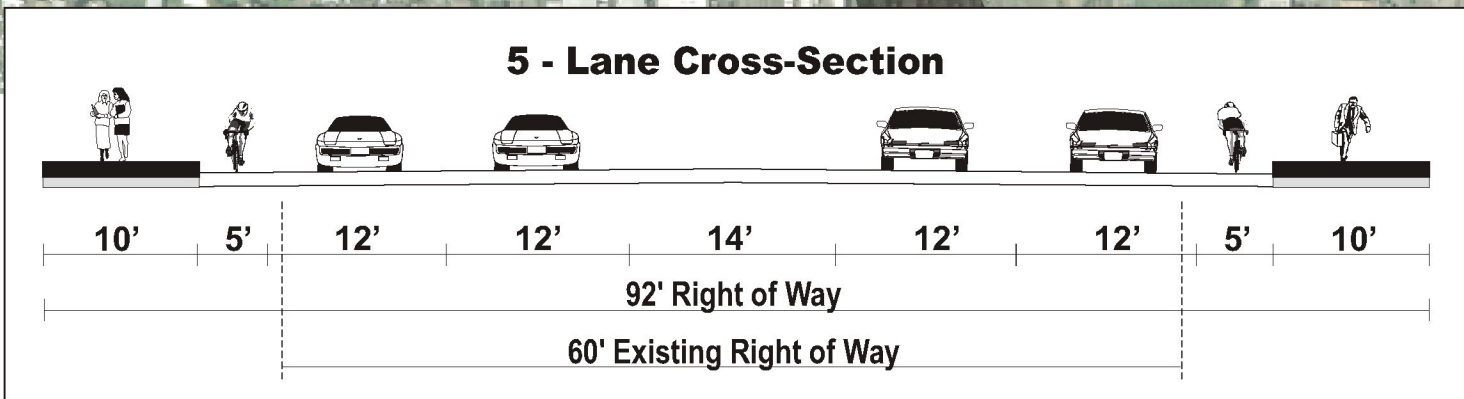
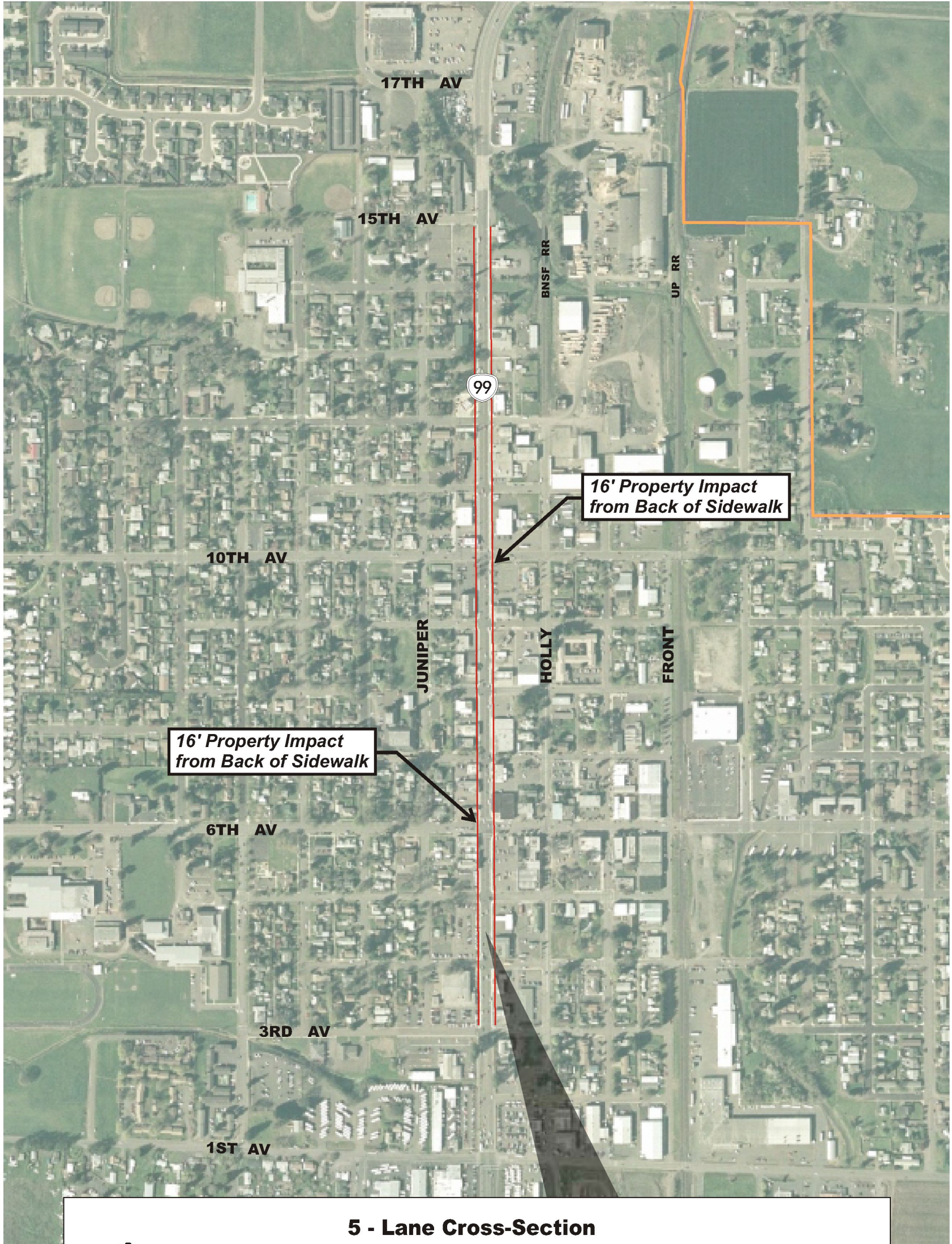
While this alternative may have the potential to remove a significant amount of traffic out of the current OR 99 alignment to relieve over-capacity intersections, improvements within the existing OR 99 corridor would still be necessary to address needs for turn lanes, bicycle lanes, and improved pedestrian facilities. Furthermore, the reduction in traffic volumes through town could have negative impacts on area businesses.

LEGEND
- 3 Lane Right of Way Line
- Urban Growth Boundary (UGB)



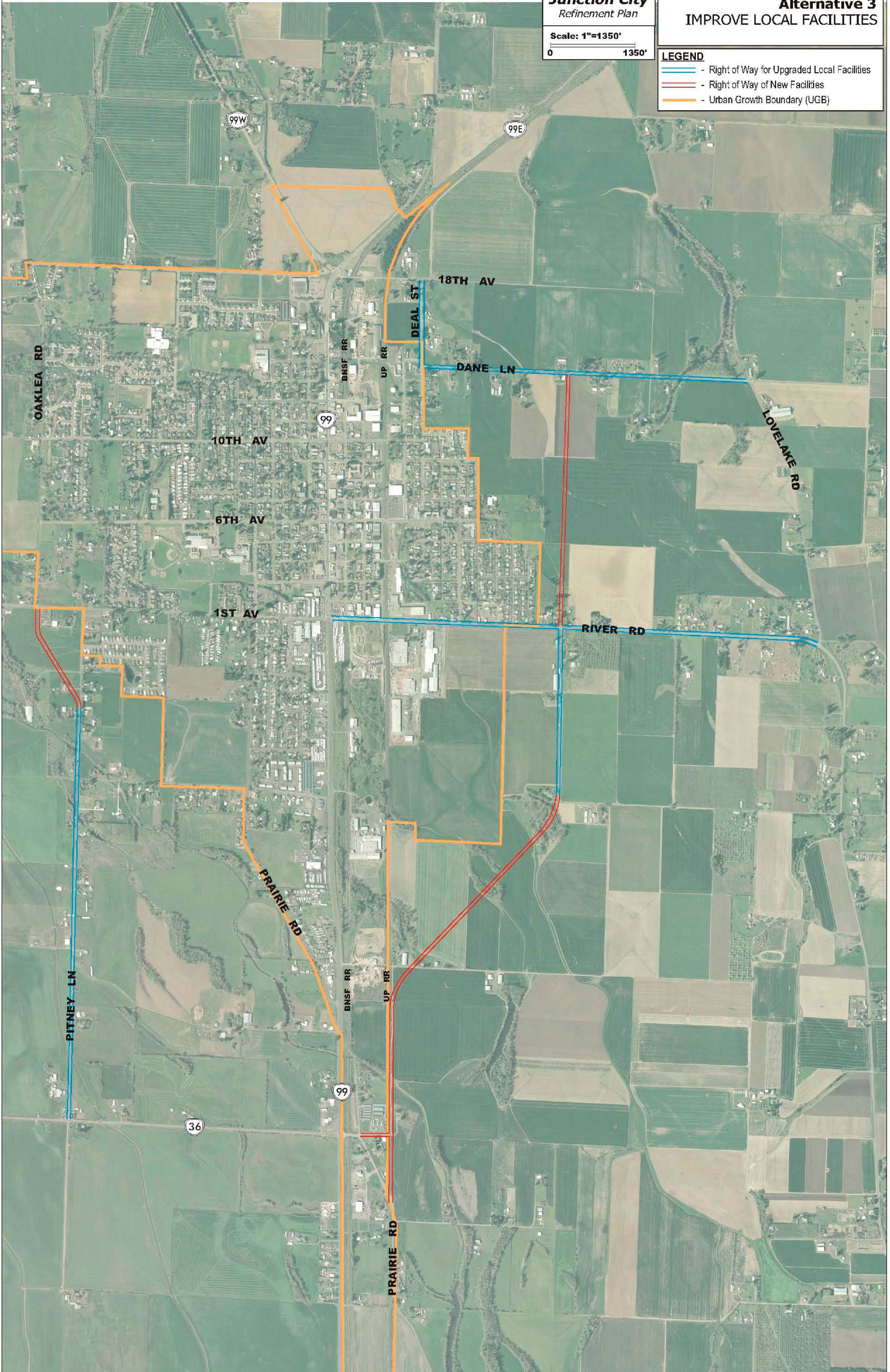
LEGEND

- 5 Lane Right of Way Line
- Urban Growth Boundary (UGB)







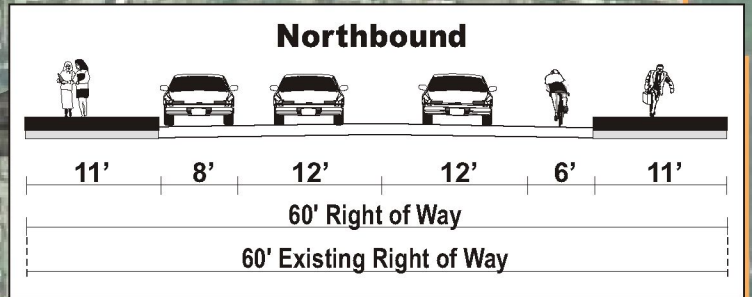
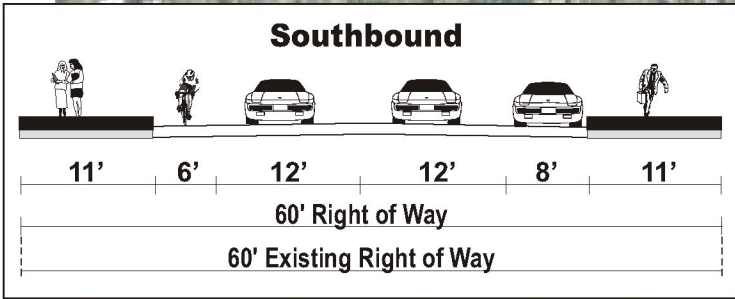
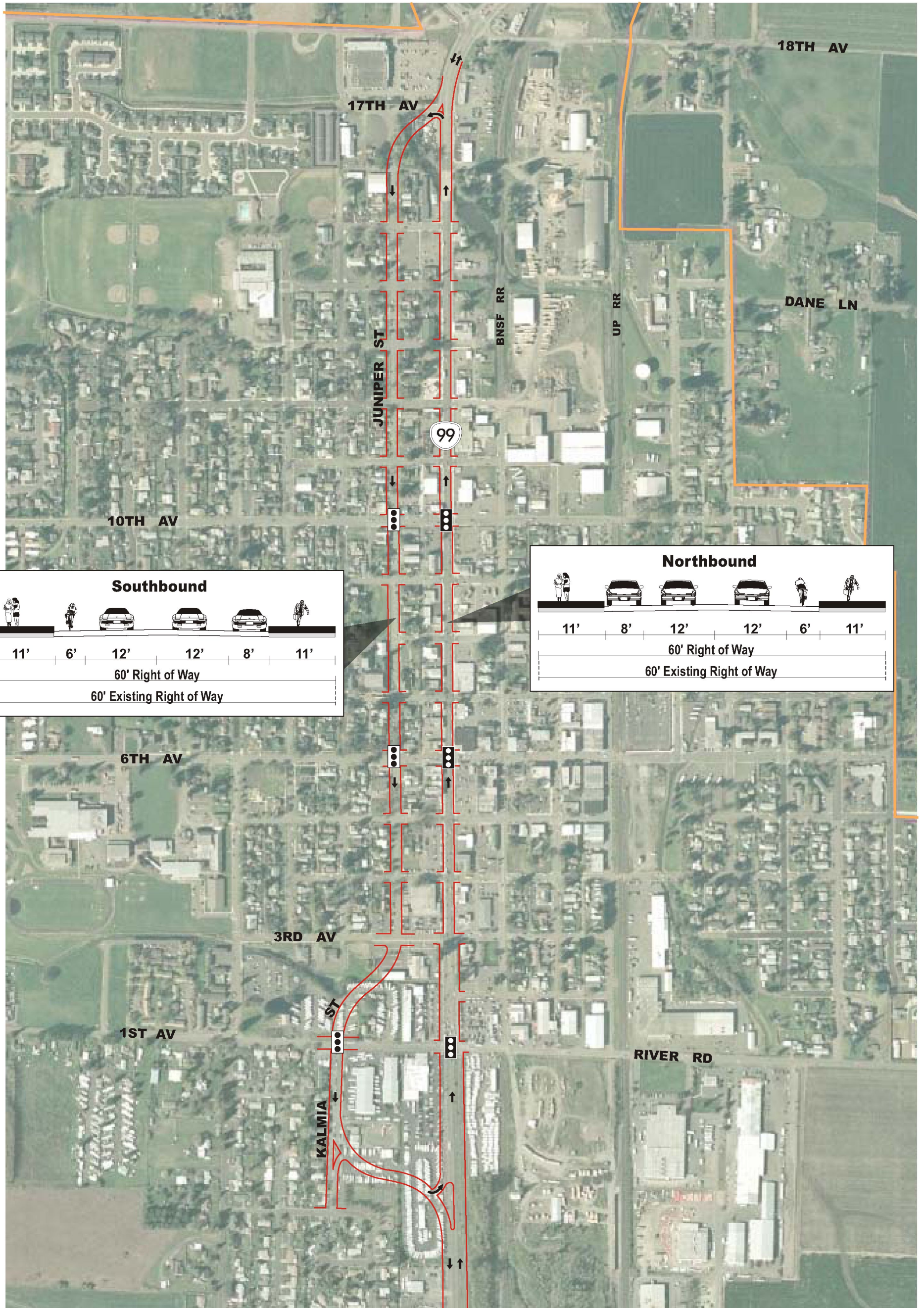
LEGEND

- Right of Way for Upgraded Local Facilities
- Right of Way of New Facilities
- Urban Growth Boundary (UGB)




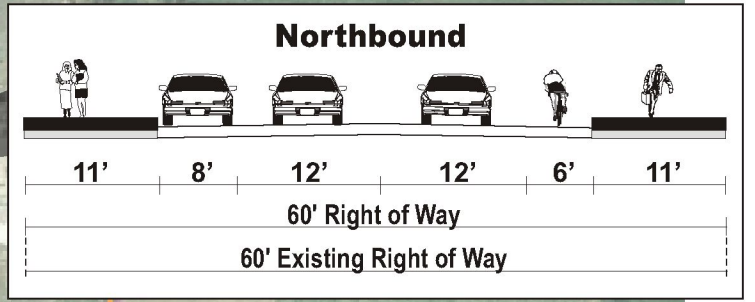
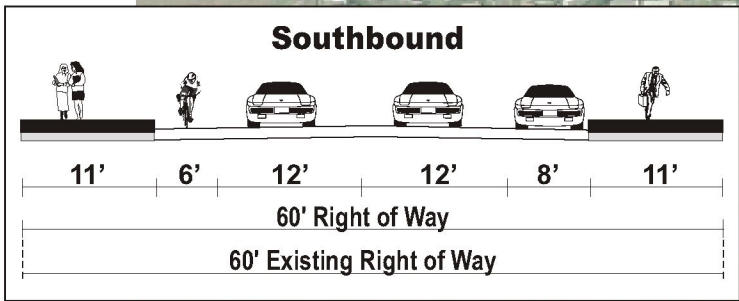
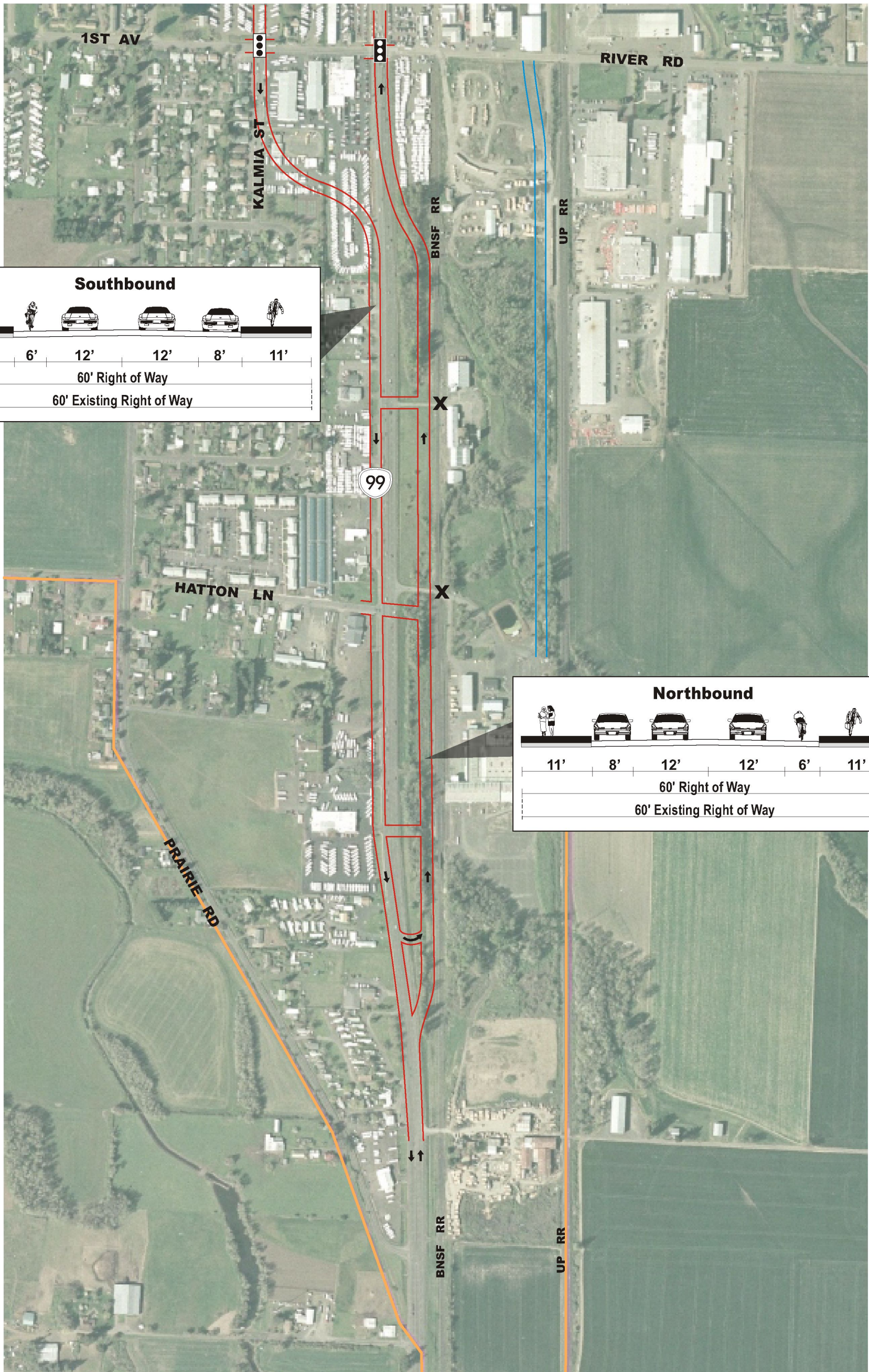
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0 500'

- LEGEND**
-  - Couplet Alignment
 -  - Urban Growth Boundary (UGB)
 -  - Potential New Traffic Signal
 -  - Existing Traffic Signal



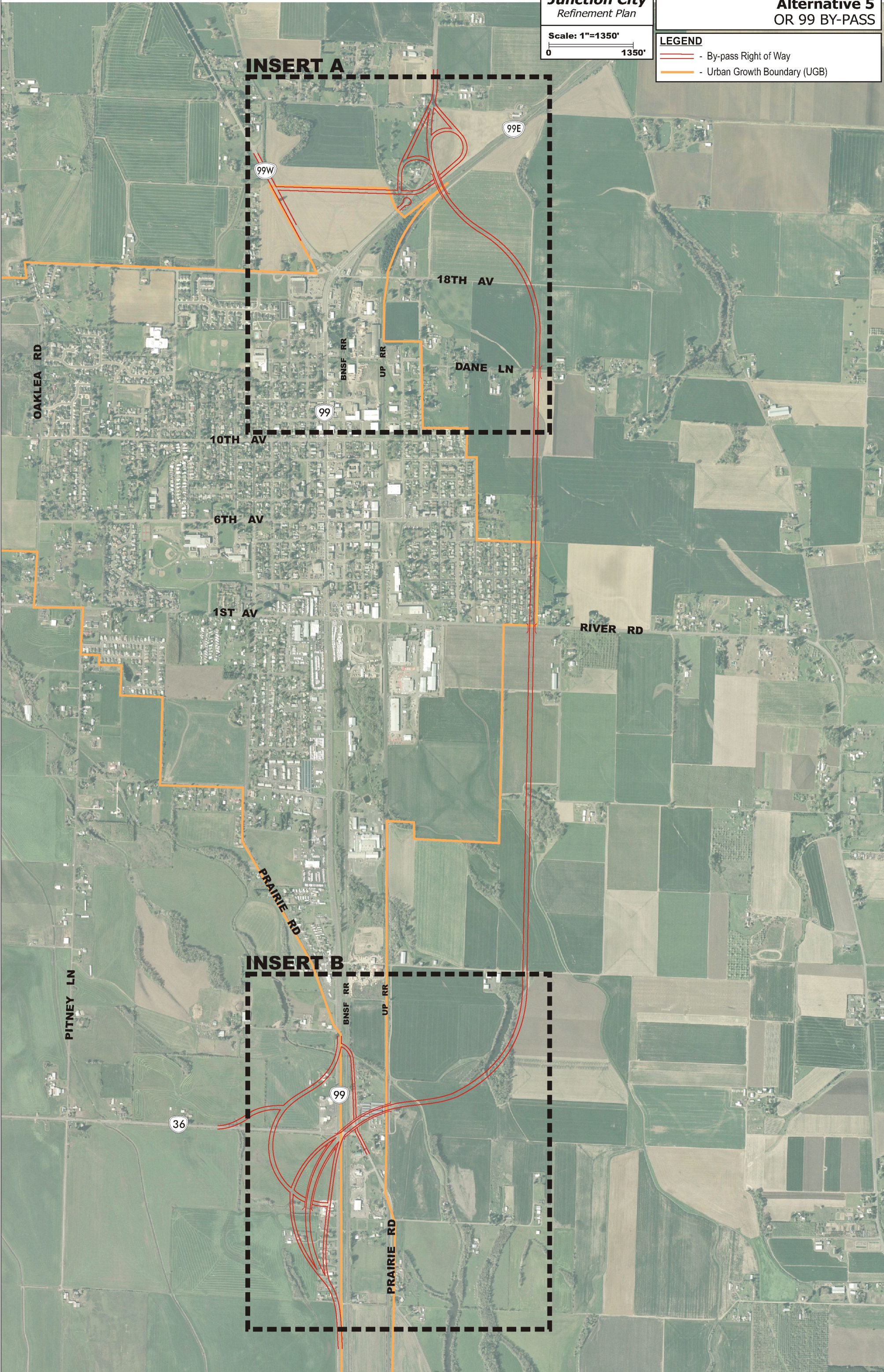
LEGEND

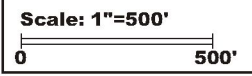
- - Couplet Option A Right of Way
- - Access Road
- - Urban Growth Boundary (UGB)
-  - Potential New Traffic Signal
-  - Existing Traffic Signal
- X** - Close Approach



Scale: 1"=1350'
0 1350'

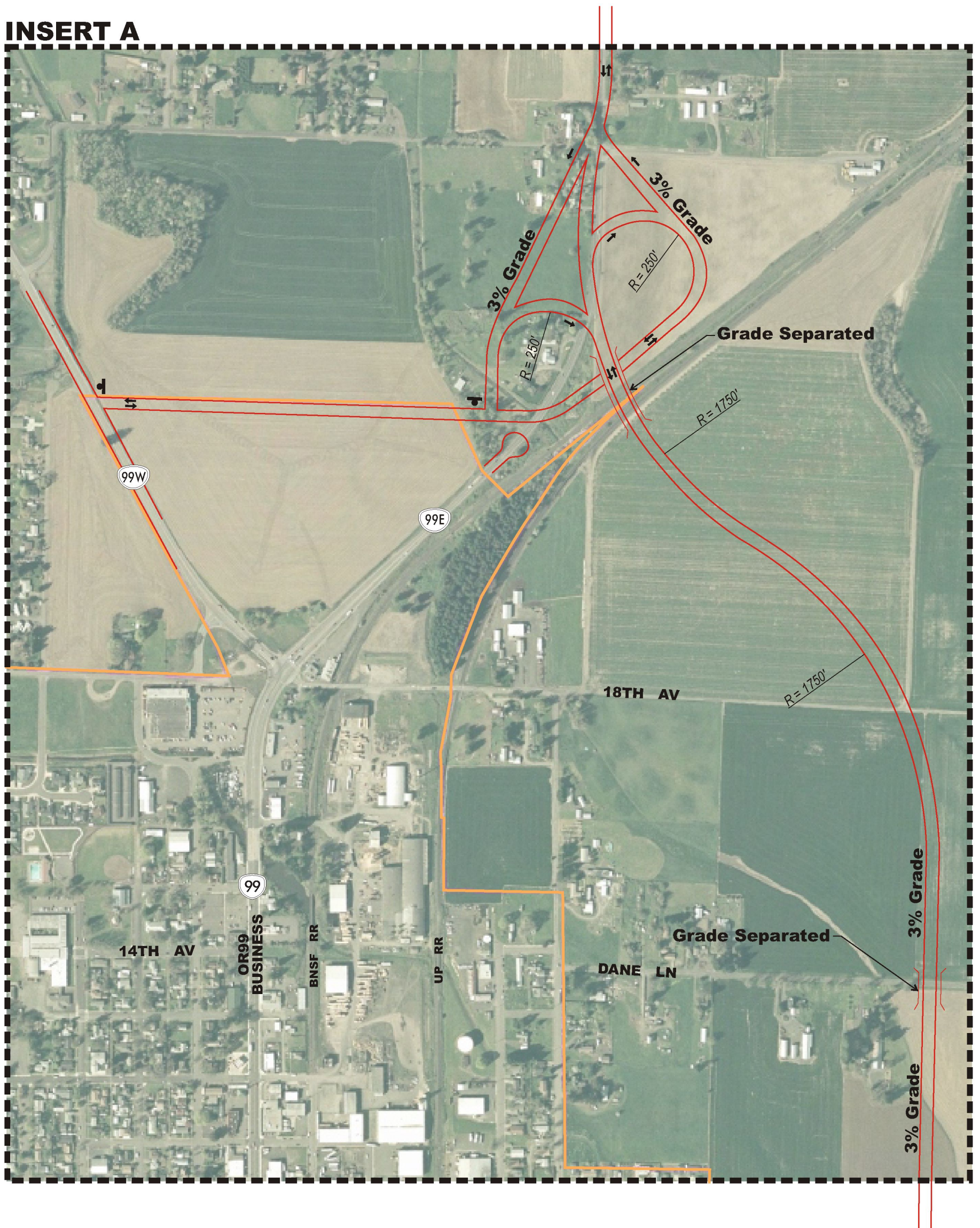
LEGEND
- By-pass Right of Way
- Urban Growth Boundary (UGB)

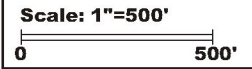




LEGEND	
	- Proposed By-pass Alignment
	- Stop Sign
	- Urban Growth Boundary (UGB)

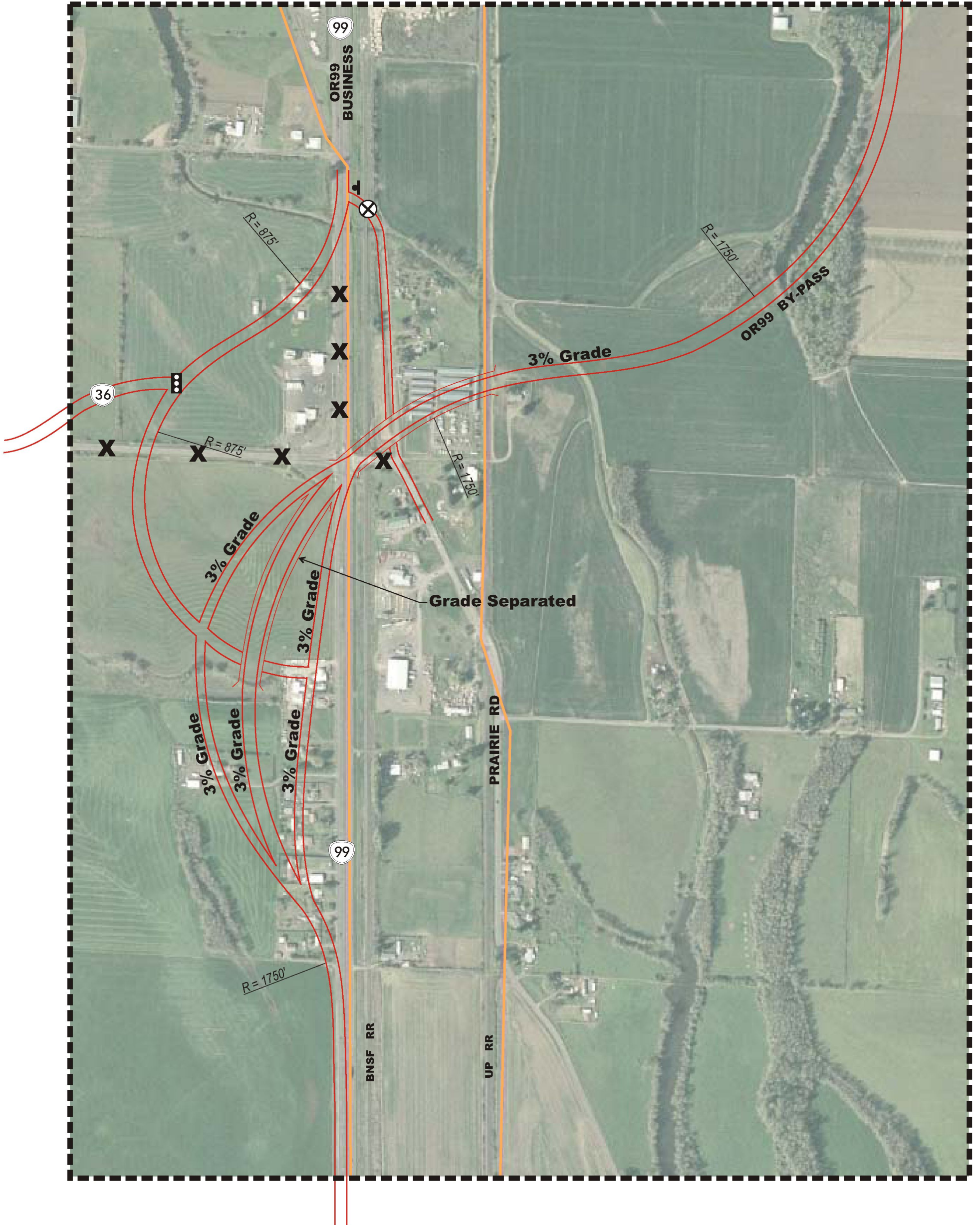
INSERT A





LEGEND	
	- Proposed By-pass Alignment
	- Stop Sign
	- Traffic Signal
	- Existing Road to be Closed
	- Urban Growth Boundary (UGB)
	- At Grade Rail Crossing

INSERT B



Opportunities and Constraints

Opportunities and constraints associated with each alternative are described below for consideration during the preliminary screening process. As only the alternatives selected for further consideration will undergo detailed analysis, some characteristics of alternatives at this stage must be described on a qualitative basis aimed at identifying major or fatal flaws.

Alternative 1: Improve Existing Corridor – Maintain width from Flat Creek Bridge to 3rd Avenue

Opportunities

- Left turn lanes are provided at intersections between 17th Avenue and 3rd Avenue.
- Pedestrian travel along OR 99 is improved by providing a buffer (5-foot bike lane) between the sidewalk and vehicle traffic.
- Pedestrian crossings of OR 99 are facilitated by decreasing the number of vehicle lanes and construction of refuge islands in the median.
- Crossing safety for the visually impaired would be enhanced with audible pedestrian signals.
- Bike lanes are provided, creating continuous bike facilities through the entire OR 99 corridor within the City.
- There would be no private property impacts north of 3rd Avenue.

Constraints

- Intersections along OR 99 at 10th Avenue and 6th Avenue would not meet ODOT mobility standards, even with additional capacity given to side streets.
- No improvements are made for transit. In fact, within the new cross-section between 17th Avenue and 3rd Avenue, bus stops could not be allowed.
- Significant private property impacts would be required on the eastbound and westbound approaches of 1st Avenue.
- Minor private property impacts would be required on the westbound approach of OR 36.
- The BNSF railroad crossings east of the intersections with 1st Avenue and OR 36 may require widening.

Alternative 2: Improve Existing Corridor with Widening as Needed

Opportunities

- Through capacity on OR 99 is maximized by retaining 4 through lanes
- Left turn lanes are provided at intersections between 17th Avenue and 3rd Avenue.
- Pedestrian travel along OR 99 is improved by providing a buffer (5-foot bike lane) between the sidewalk and vehicle traffic.
- Pedestrian crossings of OR 99 are facilitated by construction of refuge islands in the median.
- Crossing safety for the visually impaired would be enhanced with audible pedestrian signals.

- Bike lanes are provided, creating continuous bike facilities through the entire OR 99 corridor within the City.

Constraints

- Would require 16 feet of widening on either side of OR 99 between the Flat Creek Bridge and 3rd Avenue. Given the proximity of existing development to the current right-of-way line, this would result in a significant amount of property impacts, requiring an estimated 27 (50% of total) complete purchases and building demolitions. With smaller sidewalks, the impact only drops to 22 (40% of total) complete purchases and building demolitions.
- Significant private property impacts would be required on the eastbound and westbound approaches of 1st Avenue.
- Minor private property impacts would be required on the westbound approach of OR 36.
- The BNSF railroad crossings east of the intersections with 1st Avenue and OR 36 may require widening.
- No improvements are made for transit. Bus stops could be accommodated, but would be required to stop in the outer travel lanes causing temporary obstructions to vehicular flow.

Alternative 3: Improve Local Facilities

Opportunities

- Would improve overall connectivity around the City and may take some traffic away from OR 99.

Constraints

- Unlikely that enough traffic would divert from OR 99 to these new facilities to allow OR 99 intersections to operate within adopted mobility standards.
- Does not address deficiencies along OR 99 corridor including lack of turn lanes and bicycle facilities or pedestrian crossing needs.
- New roadways and some widening will require additional right-of-way, including impacts to farmlands outside of the urban growth boundary. As noted earlier, the new roads may require statewide land use Goal 3 (Agriculture) exceptions unless certain land use requirements can be met, or the area is first brought into the urban growth boundary. Road realignments and widening may be conditionally approved, with notice and opportunity for public appeal, and must demonstrate that no significant change in, nor increase in cost of accepted farming and forestry practices results from the realignment or widening.

Alternative 4: Juniper Street / Ivy Street Couplet

Opportunities

- The one-way system eliminates many turning conflicts, enhancing capacity and safety.
- Makes use of existing right-of-way along Ivy Street and Juniper Street.
- New highway cross-section may result in reduced posted speeds through the downtown.
- Provision of on-street parking would supplement on-site parking for adjacent businesses.
- Wide sidewalks would allow for landscaping and street furniture, creating a more enjoyable setting.
- Crossing safety for the visually impaired would be enhanced with audible pedestrian signals.
- Pedestrian crossings of OR 99 would be facilitated by potential construction of bulb-outs at corners and need to only cross two lanes of one-way traffic at a time.
- Inclusion of parking aisle and bike lanes would provide a buffer between pedestrians and motor vehicles, making the area more attractive for walking.
- Bike lanes are provided, creating continuous bike facilities through the entire OR 99 corridor within the City.
- Buses stops could be incorporated if desired.
- Compatible with commercial/residential zoning along Juniper Street.
- New exposure to highway traffic may encourage redevelopment of properties along Juniper Street and the new southbound roadway.

Constraints

- Right-of-way acquisition would be required at the north and south ends of the southbound alignment.
- Incorporation of bus stops would require additional right-of-way if bus pullouts were desired.

Alternative 4: Option A: Juniper Street / Ivy Street Couplet with Southern Extension

(In addition to Opportunities and Constraints listed under Alternative 4)

Opportunities

- Would make additional vacant land available for development.
- Additional vacant land could be used to offset other private property impacts resulting from the project.

Constraints

- May need to amend comprehensive plan zoning for properties between the northbound and southbound roadways in the southern extension to address current mix of commercial and industrial zoning.
- May need to eliminate OR 99 access to two industrial businesses to the east, potentially requiring construction of a new road through private properties.
- As the distance between the northbound and southbound roadbeds would only be approximately 100 feet, there would be limited room for vehicle queues on crossroads joining the two.

Alternative 5: OR 99 By-pass: OR 99E to OR 36

Opportunities

- Regional traffic could potentially be diverted from the current OR 99 alignment through Junction City to reduce traffic on that facility.

Constraints

- Two interchanges, several structures, and extensive right-of-way make this alternative the most costly.
- The by-pass could create a potential loss of customers for Junction City businesses as highway volumes through town decrease.
- Even with the reduction in traffic volumes on the existing OR 99 alignment, additional improvements would be necessary to address the need for turn lanes, bicycle lanes and improved pedestrian facilities.
- A relocation of the rail crossing on Prairie Road would be required.

Preliminary Screening

The goal of this task is to consider the opportunities and constraints related to each of the five alternatives described and select no more than three of these alternatives to carry forward for further analysis. While the level of analysis conducted on each alternative at this stage is not intended to be comprehensive, it can be used to identify fatal or major flaws that would result in a recommendation to eliminate an alternative from further consideration. Using the discussion of opportunities and constraints above, along with preliminary consideration of select evaluation criteria² developed in an earlier task, key characteristics and major differences between alternatives are highlighted below.

² Due to the level of analysis conducted through this task, not all criteria can be reasonably considered.

Table 5-1: Preliminary Alternative Screening

Evaluation Criterion	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 4, Opt. A	Alt. 5
Meets HDM Mobility Standards + Meets HDM mobility standard. ✓ No effect on mobility. - Mobility is worsened.	-	+	✓	+	+	+
Able to meet Design Standards + Meets design standards. ✓ May require design exception. - Would require significant design exception(s).	+	+	+	+	+	+
Facilitates Pedestrian Crossing of OR 99 + Improves pedestrian crossings. ✓ No effect on pedestrian crossings. - Degrades pedestrian crossings.	+	+	✓	+	+	✓
Improves Bicycle Travel + Improves bicycle travel. ✓ No effect on bicycle travel. - Degrades bicycle travel.	+	+	✓	+	+	✓
Reduces Direct Highway Access + Reduces access density. ✓ No effect on access density. - Increases access density.	✓	✓	✓	✓	✓	+
Reduces Vehicle Conflicts + Reduces vehicle conflicts. ✓ No effect on vehicle conflicts. - Increases vehicle conflicts.	+	+	✓	+	+	+

Table 5-1 (continued): Preliminary Alternative Screening

Evaluation Criterion	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 4, Opt. A	Alt. 5
No new at-grade RR crossings	✓	✓	✓	✓	+	✓
+ Reduces number of at-grade RR crossings.						
✓ No change in number of at-grade RR crossings.						
- Increases number of at-grade RR crossings.						
Private Property Impacts	✓	-	✓	-	-	-
+ No impacts.						
✓ Requires partial property takes.						
- Requires total property takes.						

Table 5-1 provides a preliminary review of select evaluation criteria for each alternative. It should be recognized that as further analysis is conducted in upcoming stages of this study, the ratings shown above will be refined.

Capacity

Alternative 1 will not mitigate poor traffic operations on OR 99 between the Flat Creek Bridge and 3rd Avenue. Traffic volumes are simply too high to remove through lanes. Similarly, Alternative 3 will not reduce enough demand for OR 99 to relieve forecasted congestion under the No Build scenario.

Pedestrian & Bicycle

Alternatives 1, 2, and 4 will improve pedestrian crossing opportunities and provide needed bicycle facilities. Alternatives 2 and 4 would also provide a more attractive walking environment along the highway by incorporating wide sidewalks. All alternatives could incorporate audible pedestrian crossing signals to enhance safety for the visually impaired.

Reduction of Conflicts on OR 99

Alternative 3 is the only alternative that would not reduce conflicts on OR 99.

Railroad Crossings

Some alternatives would reconstruct or move railroad crossings, but none would increase the number of existing crossings. Alternative 4 with the option to extend the couplet to the south would remove to railroad crossings to private businesses if the additional access road were constructed.

Property Impacts

All alternatives will result in impacts to private properties. Alternative 1 is expected to have the fewest impacts, followed by Alternatives 3 and 4, which would have moderate impacts. Alternatives 2 and 5 would have a high degree of impacts.

Other Factors

Alternative 4 would provide on-street parking and opportunities to incorporate streetscape elements such as benches, light poles, bike racks, trees/landscaping, and trash cans. Alternative 2 could also provide opportunities to incorporate streetscape elements if the wider 10-foot sidewalk is constructed.

Posted speeds on OR 99 between 17th Avenue and 1st Avenue may drop as a result of the roadway cross-section proposed as part of Alternative 4.

Alternatives 2 and 4 could provide opportunities to introduce bus stops on OR 99 in the downtown area.

Alternative 4 could stimulate new development activity along Juniper Street, with further development opportunities created by the option to extend the couplet to the south. Conversely, Alternative 2 would require the demolition of many existing businesses and the impacts of removing regional traffic from the City with Alternative 5 could result in a loss of customers.

Alternative 3 includes the construction of new roadways on rural lands to support urban uses within the City, which could require statewide land use Goal 3 (Agriculture) exceptions unless certain land use requirements are met, or the urban growth boundary is expanded to include these areas.

Alternative 5 may function very well for highway users, but further improvements to the old OR 99 corridor between the Flat Creek Bridge and 3rd Avenue would still be needed to address turning conflicts and pedestrian and bicycle needs.

Recommendations

Because Alternative 1 will not mitigate poor traffic operations on OR 99, it should not be considered for further analysis.

Alternative 2 has the ability to address highway capacity problems and improve pedestrian and bicycle facilities in the corridor, but also results in what may be the most costly property impacts, potentially eliminating 40 to 50% of existing businesses abutting OR 99 between the Flat Creek Bridge and 3rd Avenue. While it may prove to be a viable alternative from most other aspects, it should be determined whether or not it would be reasonable to assume impacts of this type and magnitude would be accepted by the City before carrying this alternative forward for further consideration.

Alternative 3 was also unable to relieve traffic congestion on OR 99 and, therefore, should not be considered further. However, some elements could be incorporated into other alternatives to provide additional benefits by enhancing overall connectivity.

Alternative 4 has many positive characteristics including the ability to make use of existing public right-of-way, reducing turning conflicts, accommodating bicycle and pedestrian needs, providing opportunities for streetscape enhancements, including needed downtown parking, potentially reducing travel speeds, and possibly stimulating new development opportunities to help offset private

property impacts. As no potentially fatal flaws are known, it is recommended this alternative, as well as the option to extend it further to the south, be carried forward for further analysis.

Alternative 5 is likely to be very costly, but has the ability to mitigate all deficiencies. This alternative is also recommended for further consideration.

Chapter 6 Refined Alternatives Evaluation

As part of a previous task, five preliminary alternatives were identified for consideration to address area deficiencies. Each alternative was reviewed through a preliminary screening process and discussed with the Technical Advisory Committee (TAC), Citizen Advisory Committee (CAC), and the general public at an open house with the goal of forwarding no more than three alternatives for further analysis. The purpose of this technical memorandum is to describe and evaluate the three refined transportation alternatives for the OR 99 corridor in Junction City, using concept drawings, operational analysis, planning-level cost estimates¹, and the evaluation criteria and technical rating methods that were previously developed for this project.

Alternative Descriptions

The five preliminary alternatives that were considered to address the transportation needs in the OR 99 corridor through Junction City included:

- Alternative 1: Improve Existing Corridor – Maintain width from Flat Creek Bridge to 3rd Avenue;
- Alternative 2: Improve Existing Corridor with Widening as Needed;
- Alternative 3: Improve Local Facilities, including roads outside the existing urban growth boundary;
- Alternative 4: Juniper Street / Ivy Street Couplet²; and
- Alternative 5: OR 99 By-pass: OR 99E to OR 36.

Through a preliminary screening process and discussion of alternative characteristics with members of the TAC and CAC, as well as with the general public at an open house meeting, three new alternatives were created for further analysis using elements of each alternative that were desirable or projected to perform well under future conditions. The three refined alternatives are described below.

Alternative A: Juniper/Ivy Couplet

Alternative A includes the proposed Juniper/Ivy couplet and optional southern extension from Preliminary Alternative 4 in combination with the supportive local system improvements from Preliminary Alternative 3. As illustrated in Figures 6-1 and 6-2, this alternative would change traffic circulation along the OR 99 corridor through much of the City by replacing the existing highway with a couplet system that would accommodate northbound travel only along Ivy Street (OR 99), with southbound travel rerouted to Juniper Street one block to the west. By separating the northbound and

¹ Planning-level cost estimates are approximates and are intended to identify the appropriate magnitude of actual costs to guide project funding. These costs are based on available mapping and non-survey-grade field measurements with aggregate unit costs for construction of roadway elements developed from actual costs experienced on past construction projects.

² Alternative 4 included two options for the southern extents of the couplet. Under Option A the couplet would begin on the southern end approximately 1,000 feet south of 1st Avenue. Under Option B the couplet would extend farther south.

southbound traffic onto two streets, turning conflicts at intersections are reduced and additional right-of-way becomes available for capacity and streetscape improvements.

Under this proposal, the north end of the couplet would begin at 17th Avenue where the southbound lanes would shift to the west and align with Juniper Street at the intersection with 16th Avenue. This would require purchasing the property bounded by 17th Avenue, OR 99, 16th Avenue, and Juniper Street and construction of a bridge over Flat Creek. From 16th Avenue, the southbound lanes would travel along the existing Juniper Street corridor to 3rd Avenue, with no need to widen the existing right-of-way along Juniper Street. As shown in Figure 6-1, OR 99 would be constructed to fit within the existing 60-foot right of ways along Ivy Street and Juniper Street, using a design speed of 30 mph (posted speed of 25 mph) and would include:

- 2 travel lanes (12 feet wide each),
- 1 bike lane (6 feet wide),
- Parallel parking on one side of the highway (8 feet wide), and
- 2 sidewalks (11 feet wide each).

While the existing alignment of Juniper Street ends at 3rd Avenue, it was decided to carry the southbound lanes south of 1st Avenue, as the intersection of OR 99 at 1st Avenue was previously determined to be a significant bottleneck in the corridor in need of mitigation. Because the surrounding area is fully developed, the extension of Juniper Street was shifted to the west to minimize impacts to development and to take advantage of existing public right of way. Therefore, from 3rd Avenue, the southbound lanes of Juniper Street veer further to the west to intersect 1st Avenue opposite Kalmia Street. They then travel down the existing Kalmia Street alignment for approximately 500 feet before turning back to the east to connect with the existing OR 99 alignment approximately 900 feet south of 1st Avenue. Much of this alignment would require purchase of private property.

The northbound travel lanes would stay within the existing OR 99 roadbed through the entire corridor north of 1st Avenue. However, south of 1st Avenue, the northbound lanes would be shifted to the east to run adjacent to the eastern right of way line abutting the Burlington Northern Santa Fe (BNSF) property. This eastward shift of the northbound lanes uses existing highway right of way to create a divided highway that would merge back to match the existing highway approximately ¼-mile north of the intersection with Prairie Road. The distance of separation between the northbound and southbound roadbeds varies, but could be as great as 125 feet. Directional median openings would be provided to allow for U-turns and improved access to properties adjacent to the highway. Given the change in roadside environment from downtown to highway commercial and industrial, a higher design speed of 40 mph (posted 35 mph) was used for the divided highway section, resulting in the elimination of on-street parking and a small reduction in overall roadbed width compared to the northern section.

Within the area of the proposed divided highway, there are currently two properties between the BNSF and UPRR lines south of 1st Avenue, which take direct access to OR 99 via long private driveways (approximately 200 feet long). When the highway is shifted to the east and brought closer to the BNSF line, these driveways will be reduced in length considerably, with rail crossings very close to the northbound lanes of the highway. When the crossings are blocked by trains, vehicles attempting to enter these sites, which may include large trucks associated with the industrial uses, would queue on the highway. To prevent this, consideration should be given to either providing wide

shoulders or right-turn lanes in the vicinity of these access points to provide enough storage to keep queued vehicles out of travel lanes during train blockages.

Improvements to Local Facilities






To supplement improvements within the OR 99 corridor itself, Alternative A could include improvements that would extend, realign, and increase the capacity of County roads surrounding the City to enhance connectivity and provide alternative routes to OR 99. New and upgraded roads would be constructed to County Collector standards. In most areas, the roadway upgrades would simply provide wider shoulders (total pavement width of 36 feet), which generally makes a roadway more comfortable for drivers but provides only small capacity benefits. The wider shoulders would also be able to accommodate bicycle traffic. However, it should be noted that where new facilities are proposed that would be located on rural lands, a statewide land use Goal 3 (Agriculture) exception could be required unless certain criteria for land use approval are met or the area is first brought into the urban growth boundary. The locations of proposed improvements are illustrated in Figure 6-3. The cross-sections of these roadways would include:

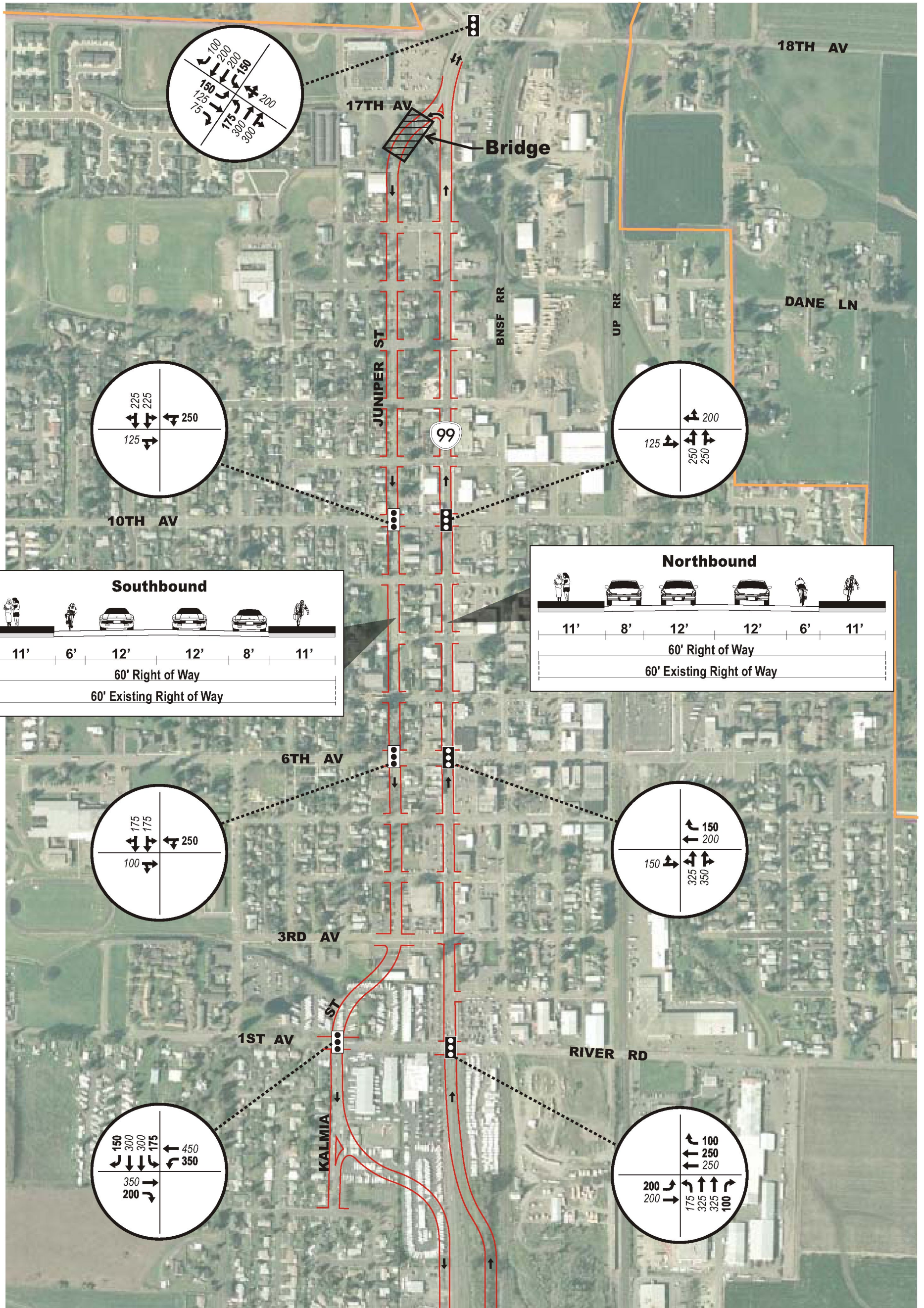
- 2 travel lanes (12 feet wide each) and
- 2 shoulders (6 feet wide each).

Pitney Lane, a local street, would be improved to collector (with shoulder) standards from OR 36 north to Bailey Lane and would be realigned from Bailey Lane north to intersect with High Pass Road opposite Oaklea Drive. This realignment and upgrade would make Pitney Lane more attractive as an alternate route to OR 99 and would facilitate north-south connectivity by acting as an extension of Oaklea Drive. However, the realigned section of Pitney Lane would impact rural lands and may require a statewide land use Goal 3 (Agriculture) exception unless the surrounding area is first brought into the urban growth boundary, or criteria for land use approval are met.






Prairie Road (east of OR 99) would be realigned to remove the skewed Union Pacific Railroad (UPRR) crossing, and continue north along the east side of the UPRR line. A new east-west roadway would then be constructed to connect Prairie Road to the OR 99/ OR 36 intersection, creating a “T”-intersection with Prairie Road. This would have negligible impact on the BNSF rail crossing, but would require construction of a new UPRR crossing (to replace the old one) just west of the intersection of the new roadway at Prairie Road, which would require obtaining a crossing permit from ODOT Rail. As the extension of Prairie Road continues northward, it would veer east, close to or within the City’s urban growth boundary, and intersect with River Road. This route would further enhance north-south connectivity by providing an alternative to River Road that is closer to the urban area, requiring less out-of-direction travel. This route may also provide an attractive alternative to using 1st Avenue for employees of the County Coach facility that want to go southbound on OR 99. Again, as most of these improvements would impact rural lands, an exception to statewide land use Goal 3 (Agriculture) may be necessary unless criteria for land use approval are met, or the surrounding area is first brought into the urban growth boundary. It should also be noted that additional discussions related to the conflict between ODOT rail crossing policy and possible impacts to rural lands and technical analysis of alternatives to address the congestion at 1st Street and OR 99 will be necessary before the Prairie Road extension can be supported as the sole preferred alternative. While completing this additional work is not necessary prior to adoption of this refinement plan, ODOT is committed to resolving this issue as soon as possible.

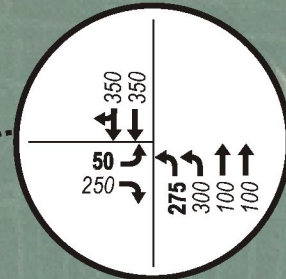
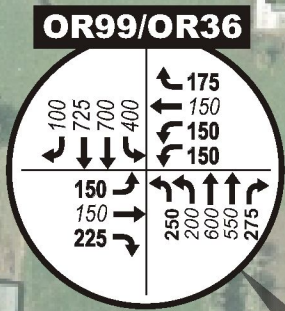
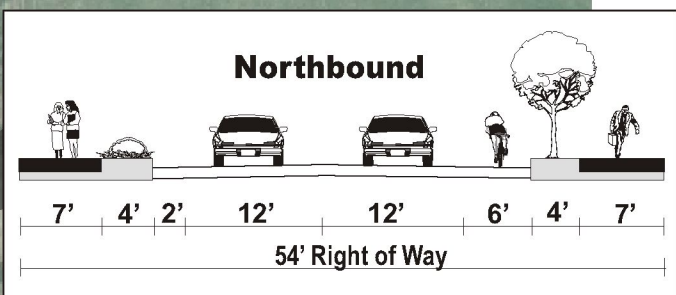
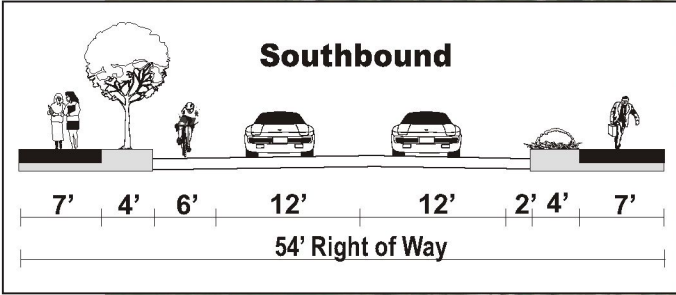
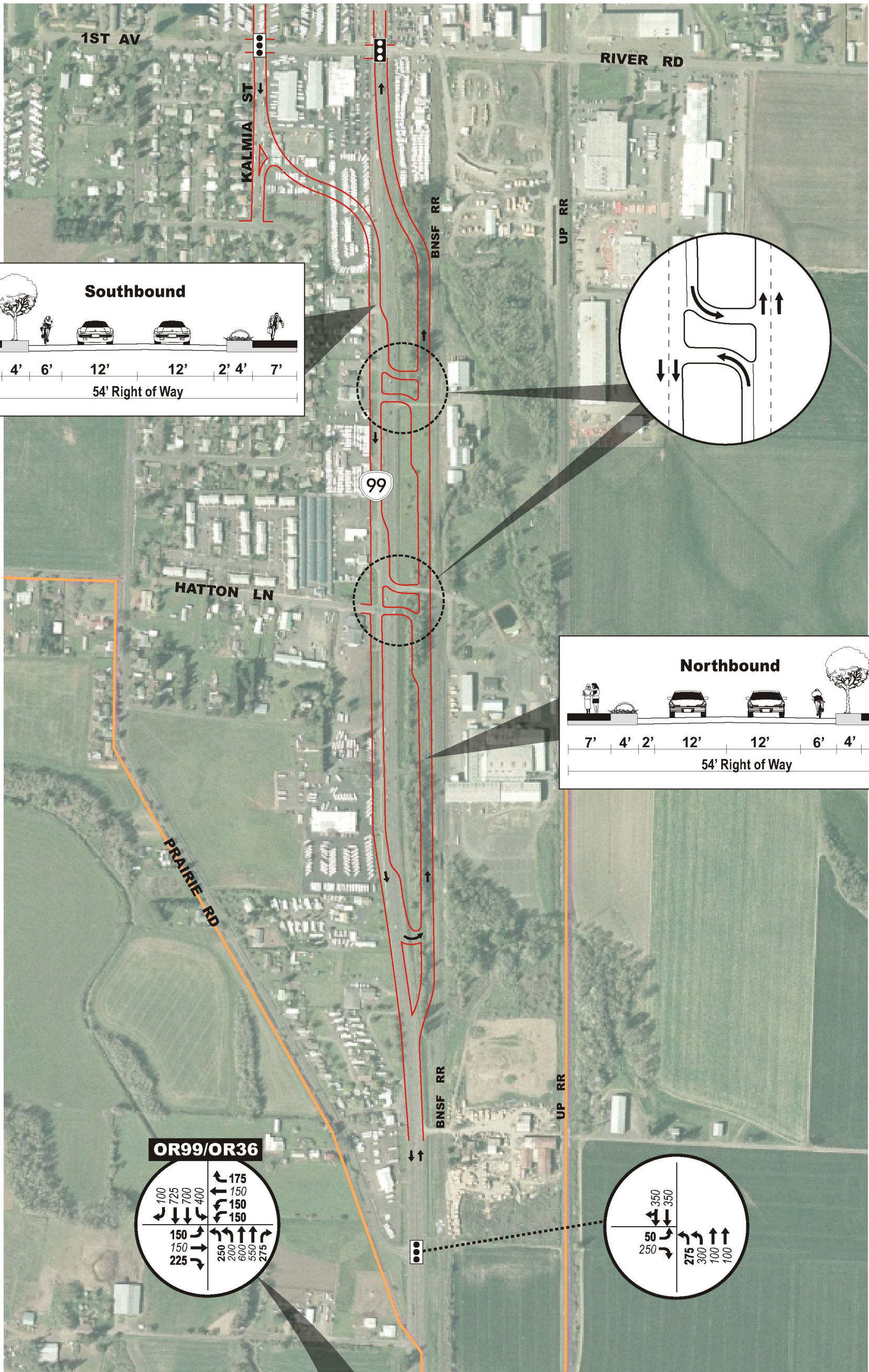
LEGEND

-  - Couplet Alignment
-  - Urban Growth Boundary (UGB)
-  - Potential New Traffic Signal
-  - Existing Traffic Signal
-  - Approach Lane
- 000** - 95th Percentile Queue (feet)
- 000** - Bold Type Indicates Extended Storage or New Lane Needed
- X - Free Movement, No Queue



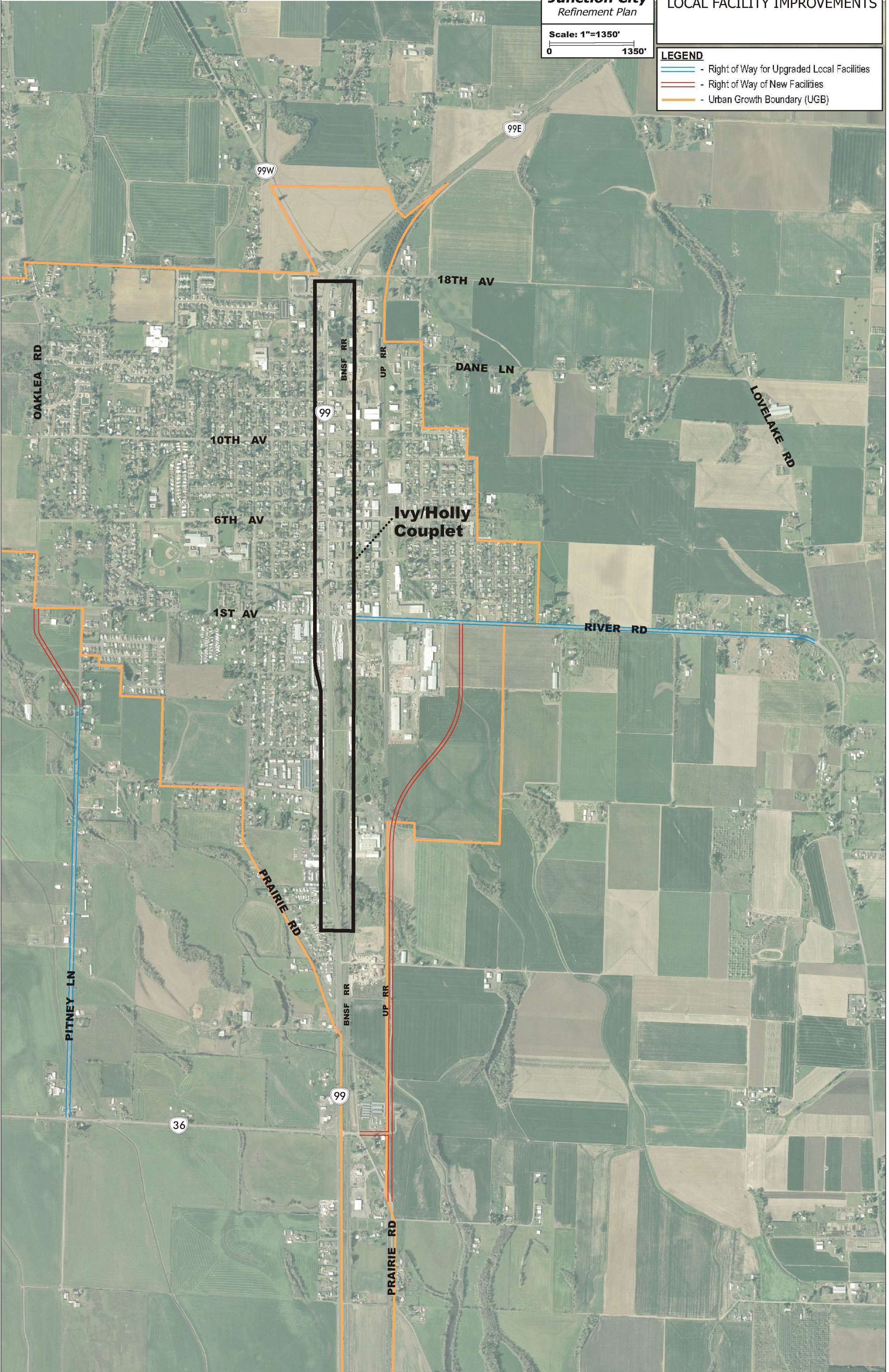
LEGEND

 - Couplet Alignment	 - Approach Lane
 - Urban Growth Boundary (UGB)	000 - 95th Percentile Queue (feet)
 - Potential New Traffic Signal	000 - Bold Type Indicates Extended Storage or New Lane Needed
 - Existing Traffic Signal	X - Free Movement, No Queue



Scale: 1"=1350'
0 1350'

- LEGEND**
- Right of Way for Upgraded Local Facilities
 - Right of Way of New Facilities
 - Urban Growth Boundary (UGB)



East-side connectivity enhancements that may make the Prairie Road extension and the existing route along River Road more attractive include upgrades of River Road on the east side of the City from OR 99 to Lovelake Road. These enhancements would generally include widening to increase shoulder widths, making the roadway more comfortable for motorists and bicycles.

As noted above, many of the local facility improvements are partially outside the existing urban growth boundary but would mostly serve urban uses. To the extent that state land use law restricts accommodating urban development and the proposed facilities on rural lands, it is understood that some or all of the improvements may not be able to be implemented unless criteria for land use approval are met, or until such time as the Junction City urban growth boundary is expanded or the City obtains an exception to statewide land use Goal 3 (Agriculture).

Alternative B: Ivy/Holly Couplet

Like Alternative A, Alternative B would convert OR 99 to a one-way couplet system through Junction City in addition to supportive improvements to local facilities. However, Alternative B assumes that the BNSF railroad would be relocated or discontinued prior to construction, allowing the routing of OR 99 over Holly Street instead of Juniper Street. Ivy Street would be utilized by southbound travel while Holly Street would carry northbound travel. Alternative B is illustrated in Figures 6-4 and 6-5.

While many of the elements included in Alternatives A and B are very similar, one key difference is the northern terminus of the couplet. Under Alternative B, the northbound roadbed of the OR 99 couplet would follow the BNSF railroad alignment until about 16th Avenue, where it would veer to the east and return to align with OR 99W to become the fourth leg of the existing OR 99W/OR 99E intersection. This would require a realignment of 18th Avenue from the UPRR crossing to intersect with the northbound couplet roadbed rather than the OR 99W/OR 99E intersection as it does under existing conditions. Under this scenario, the existing alignment of OR 99 would accommodate only southbound traffic south of the OR 99W/OR 99E intersection.

Another key difference between Alternatives A and B is the alignment of the couplet roadbeds in the vicinity of 1st Avenue. As shown in the provided figures, under Alternative B the highway alignment remains straight. While this eliminates the need for significant private property impacts, it also locates the signalized intersections on 1st Avenue closer together, reducing available distance needed for queue storage.

Finally, with the BNSF railroad removed, the section of divided highway south of 1st Avenue could be constructed with a greater distance between the roadbeds, potentially improving the potential of the land in between to be used for future development. However, if allowed to develop, direct access to the highway from new development will be required to meet the access spacing standards in the Oregon Highway Plan and OAR 734-051.

The highway cross-sections and design speeds are essentially the same as proposed under Alternative A, with the design speed and cross-section changing at the intersections with 1st Avenue. A design speed of 30 mph (posted 25 mph), allowing for on-street parking, would be provided for north of 1st Avenue, with an increase to 40 mph (posted 35 mph) and the prohibition of on-street parking south of 1st Avenue.

Improvements to Local Facilities

Alternative B would include the same improvements to County roadways described previously for Alternative A. As noted previously, some local improvements are shown to occur partially outside the existing urban growth boundary. To the extent that state land use law restricts accommodating urban development and the proposed facilities on rural lands, it is understood that some or all of the improvements may not be able to be implemented unless criteria for land use approval are met, or until such time as the Junction City urban growth boundary is expanded or the City obtains an exception to statewide land use Goal 3 (Agriculture).

Alternative C: OR 99 By-pass

Alternative C includes several components of improvements to the transportation system. The primary component is a realignment of OR 99 around the east side of Junction City, creating a by-pass of much of the urban area. This concept is illustrated in Figure 6-6, with additional detail around the proposed interchange areas provided in Figures 6-7 and 6-8. Other changes include improvements to Pitney Lane and a modification to the section of OR 99 through downtown Junction City (which would then be referred to as the OR 99 Business Route) to include one travel lane and one bicycle lane in each direction as well as a center turn lane.

OR 99 By-pass

The south end of the by-pass would begin south of OR 36, with a new interchange in the southwest quadrant of the existing OR 99/ OR 36 intersection. The existing OR 99 alignment north of OR 36 would be realigned to become the crossroad with the interchange, with OR 36 being realigned to the north to intersect the realigned portion of OR 99 no closer than 1,320 feet from the interchange ramp terminals.

From this interchange, the new OR 99 alignment would be elevated as it proceeds north, with grade separated crossings of a realigned Prairie Road and the BNSF and UPRR railroad tracks. Once over the UPRR line, OR 99 would drop to meet grade and would continue north close to the east side of the City's urban growth boundary. Grade separated crossings would be provided at major crossing roadways such as River Road and Dane Lane. However, no access would be allowed to the realigned OR 99 between the interchanges at the north and south termini, as there would be less than 3 ½ miles between them. Given ODOT's spacing standards for interchanges, requiring 1.9 miles between interchanges in urban areas and 3 miles in rural areas, there would not be sufficient distance to accommodate a third interchange.

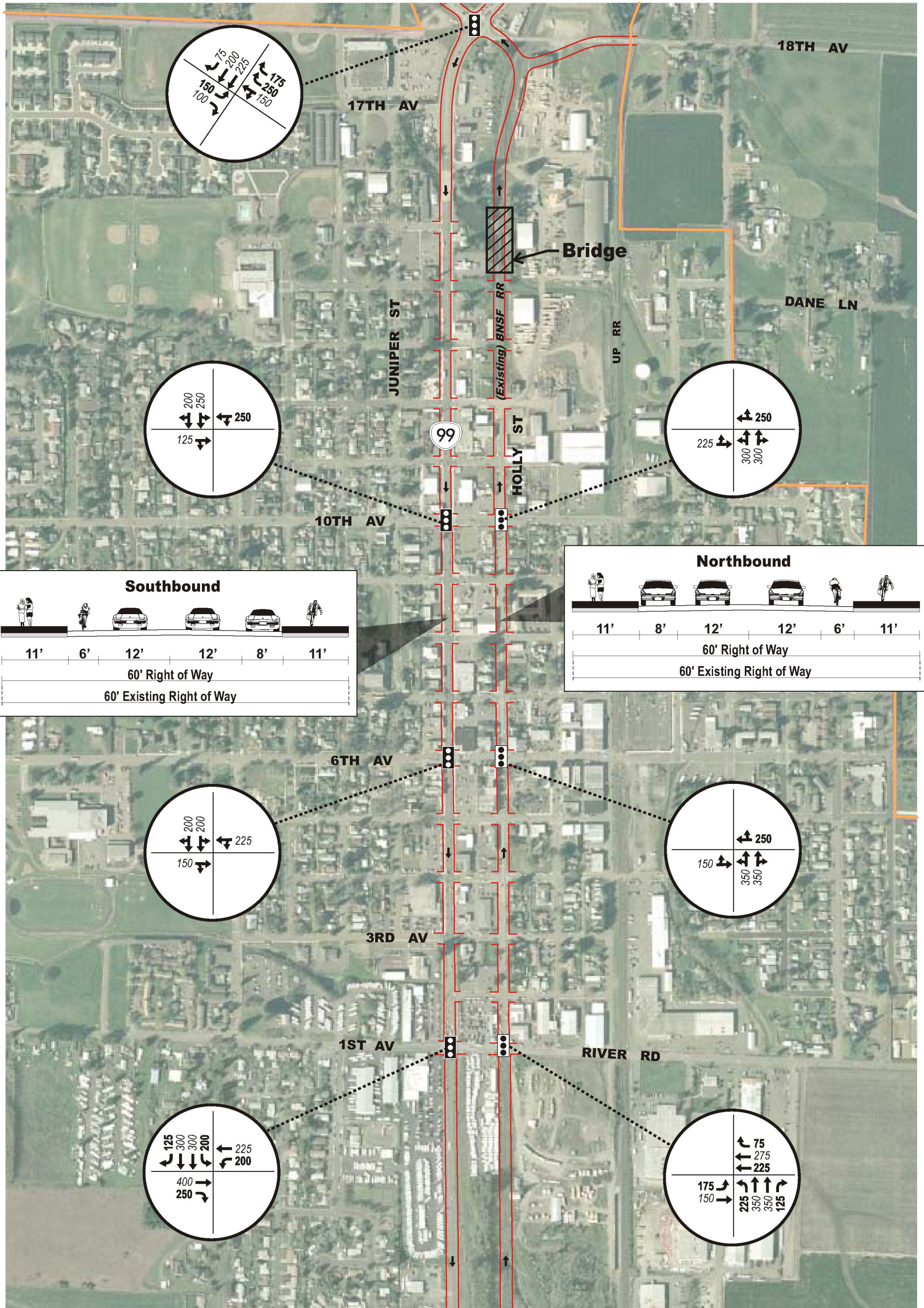
OR 99 would then be elevated to cross over the UPRR and BNSF railroads before returning to grade to take over the existing OR 99E alignment, where the second interchange would be constructed. To accommodate the interchange, the connection between OR 99E and OR 99W would be relocated by cutting off the existing OR 99E alignment south of the interchange and constructing a realignment of OR 99W near the City's northern urban growth boundary.

The illustrations in Figures 6-6 through 6-8 were drawn to accommodate a 70 mph design speed on the realignment of OR 99. The new alignment would require a 44-foot cross-section (wider if median barrier is required), which would be composed of the following:




- 2 travel lanes (12 feet wide each) and
- 2 shoulders (10 feet wide on each side).

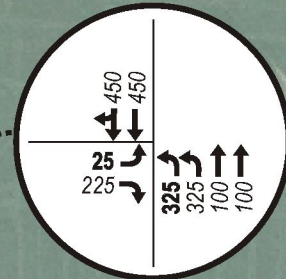
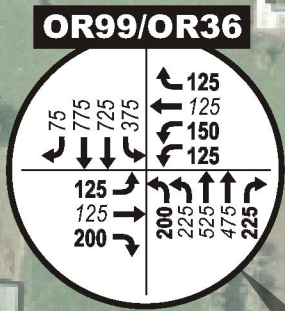
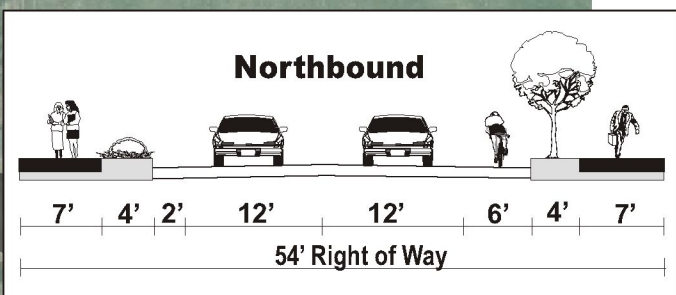
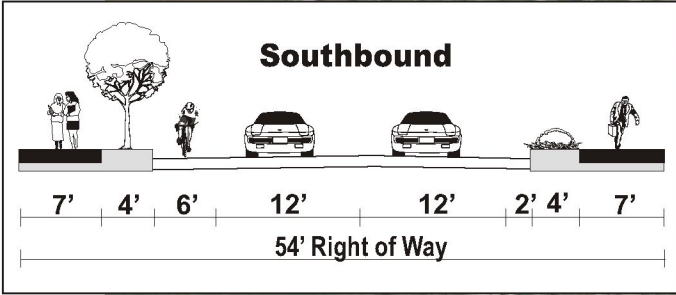
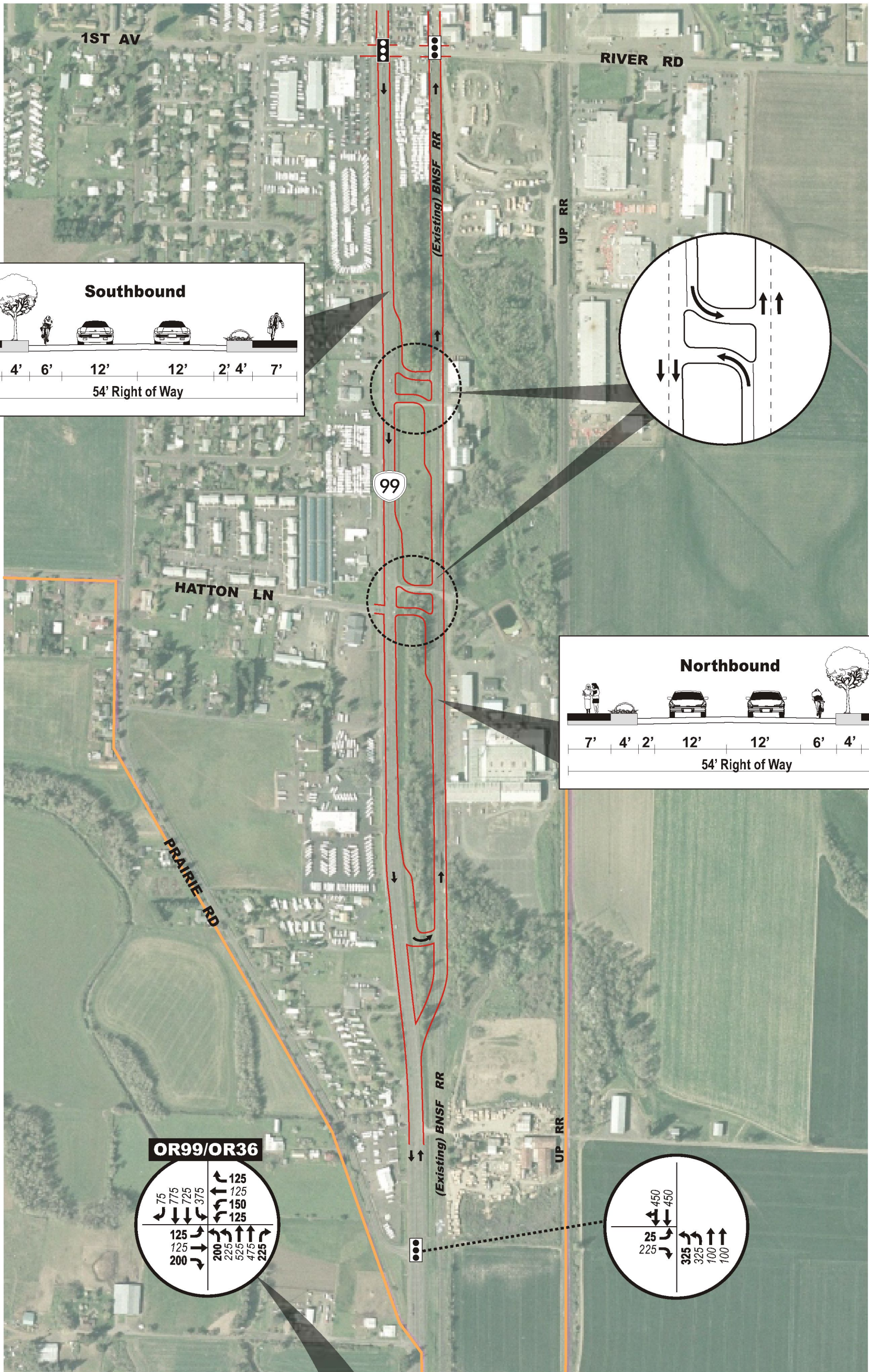
LEGEND

	- Couplet Alignment		- Approach Lane
	- Urban Growth Boundary (UGB)		- 95th Percentile Queue (feet)
	- Potential New Traffic Signal		- Bold Type Indicates Extended Storage or New Lane Needed
	- Existing Traffic Signal		- Free Movement, No Queue



LEGEND

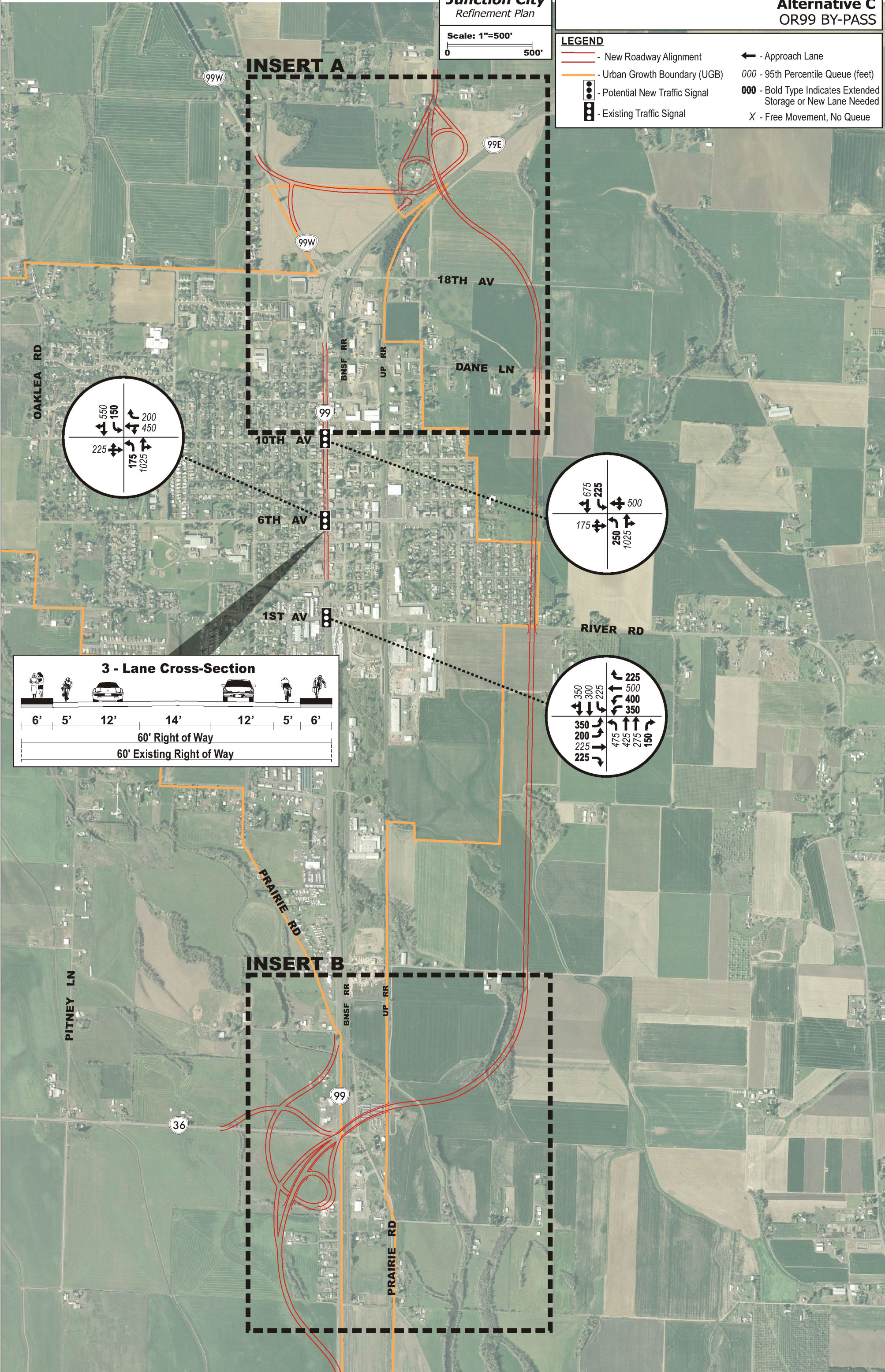
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- - Urban Growth Boundary (UGB)
-  - Potential New Traffic Signal
-  - Existing Traffic Signal
-  - Approach Lane
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- 000** - Bold Type Indicates Extended Storage or New Lane Needed
- X - Free Movement, No Queue



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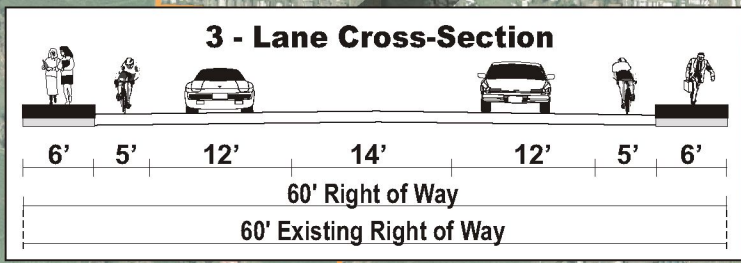
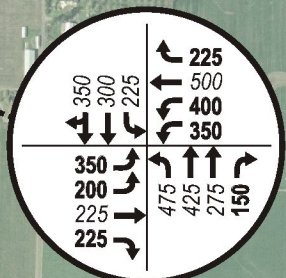
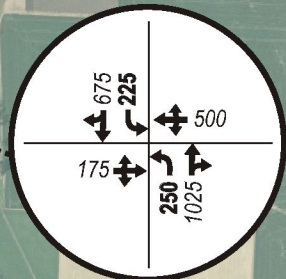
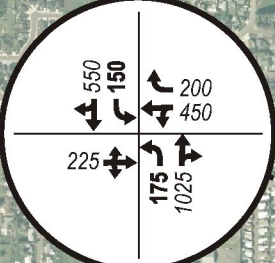
LEGEND

- - New Roadway Alignment
- - Urban Growth Boundary (UGB)
- Potential New Traffic Signal
- Existing Traffic Signal
- Approach Lane
- 000** - 95th Percentile Queue (feet)
- 000** - Bold Type Indicates Extended Storage or New Lane Needed
- X - Free Movement, No Queue



INSERT A

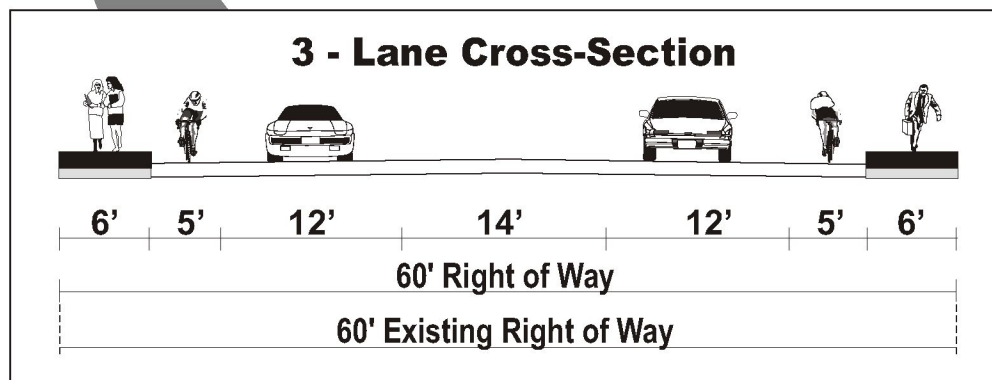
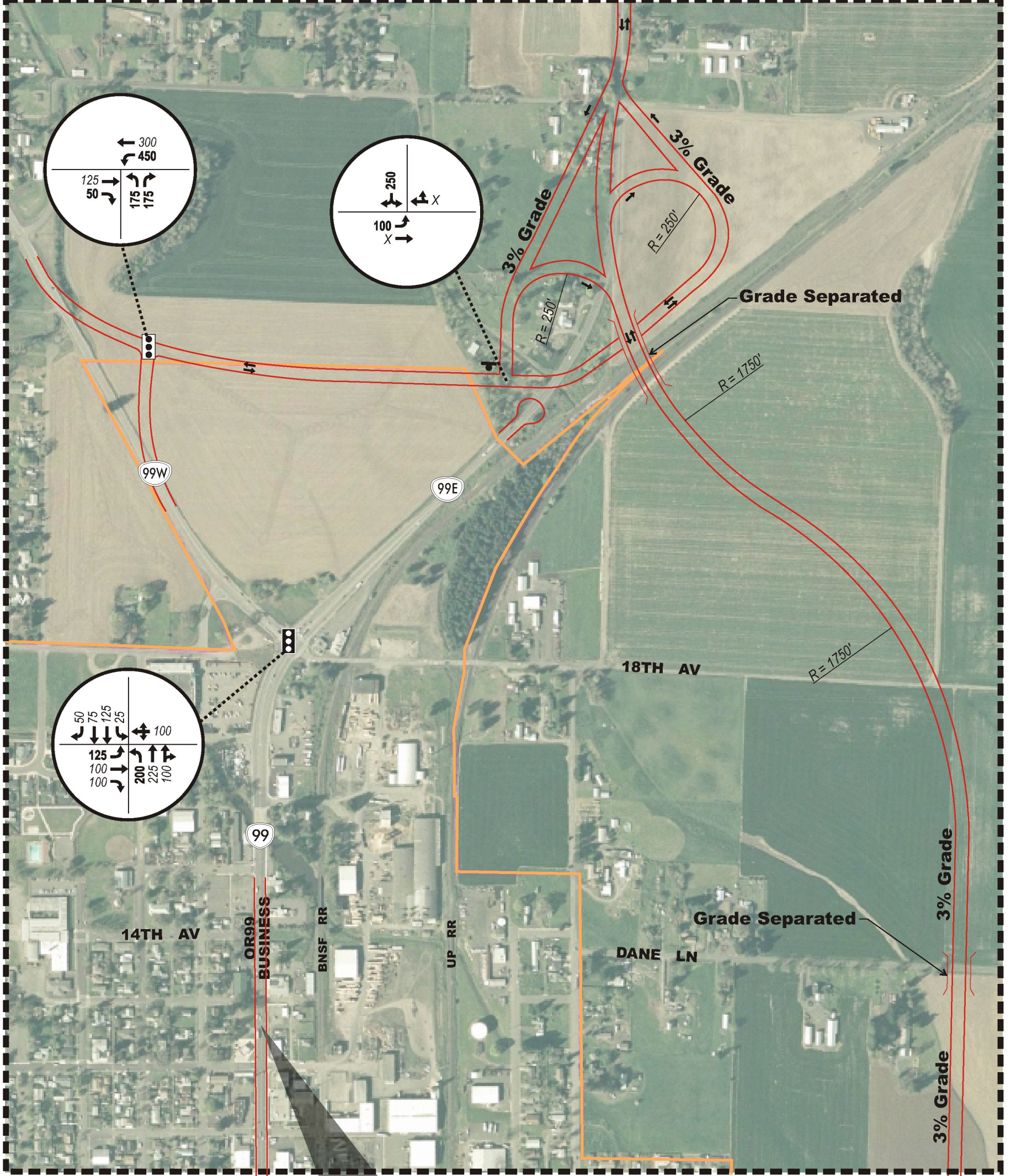
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LEGEND

- - New Roadway Alignment
- - Urban Growth Boundary (UGB)
- Potential New Traffic Signal
- Potential New Stop Sign
- Existing Traffic Signal
- Approach Lane
- 000 - 95th Percentile Queue (feet)
- 000** - Bold Type Indicates Extended Storage or New Lane Needed
- X - Free Movement, No Queue

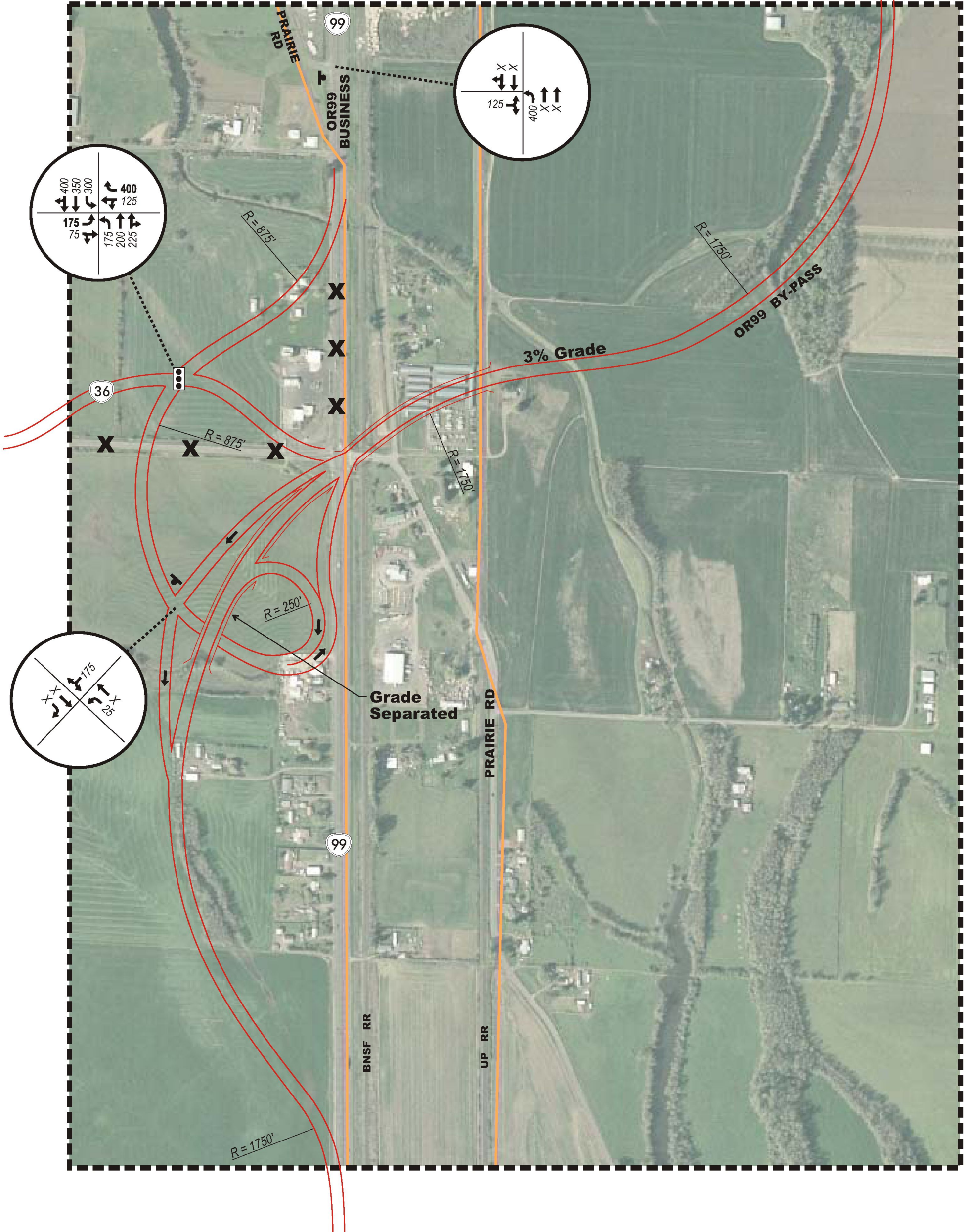
INSERT A



LEGEND

	- New Roadway Alignment		- Approach Lane
	- Urban Growth Boundary (UGB)	<i>000</i>	- 95th Percentile Queue (feet)
	- Potential New Traffic Signal	000	- Bold Type Indicates Extended Storage or New Lane Needed
	- Potential New Stop Sign	X	- Free Movement, No Queue
	- Existing Traffic Signal		
	- Existing Road to be Closed		

INSERT B



Modification to Existing OR 99 Alignment

With the by-pass in place, the existing OR 99 alignment between the new interchanges would become a business route and could be transferred from ODOT to fall under the jurisdiction of the City. With a significant amount of traffic diverted to the by-pass, the OR 99 business route could be modified to improve safety and multi-modal travel through the downtown area. The existing 60 feet of right of way could be re-stripped to include one through lane in each direction, one bike lane in each direction, and a median to allow for left turn lanes where desired. Therefore, the resulting cross-section within the existing 60-foot right-of-way would include:

- 2 travel lanes (12 feet wide each),
- 1 median/left turn lane (14 feet wide),
- 2 bike lanes (5 feet wide each), and
- 2 sidewalks (6 feet wide each).

Figure 6-6 shows the proposed extents of the three-lane section on the OR 99 business route, as well as the proposed cross-section. This new cross-section would be achieved by transitioning from the existing five-lane cross-sections to the north and south by dropping a through lane as a right turn in the southbound direction at 17th Avenue, as well as in the northbound direction at 3rd Avenue. The capacity of the roadway could be further improved through implementation of an access management plan and pedestrian refuge islands could be constructed at mid-block locations to improve pedestrian safety and roadway crossing opportunities. Pedestrian crossing for the visually impaired could further be enhanced through the provision of audible pedestrian signals at all signalized intersections.

Improvements to Pitney Lane

The third component of this alternative includes improvements to Pitney Lane that would extend, realign, and increase the capacity of the roadway to enhance connectivity and provide an alternative route to OR 99. Pitney Lane, a local street, would be improved to collector (with shoulder) standards from OR 36 north to Bailey Lane and would be realigned from Bailey Lane north to intersect with High Pass Road opposite Oaklea Drive. This realignment and upgrade would make Pitney Lane more attractive as an alternate route to OR 99 and would facilitate north-south connectivity by acting as an extension of Oaklea Drive. The roadway upgrades would simply provide wider shoulders (total pavement width of 36 feet), which generally makes a roadway more comfortable for drivers but provides only small capacity benefits. The wider shoulders would also be able to accommodate bicycle traffic. The cross-sections of Pitney Lane would include:

- 2 travel lanes (12 feet wide each) and
- 2 shoulders (6 feet wide each).

As with other alternatives, improvements included with Alternative C that are shown to be outside the existing urban growth boundary will not be constructed unless and until such time as the Junction City urban growth boundary is expanded to include these lands, or until the City obtains any required land use approvals or an exception to statewide land use Goal 3 (Agriculture).

Motor Vehicle Operational Performance

By employing the same analysis tools as were used to measure the operational performance of OR 99 under future No Build conditions, the operational performance of each of the proposed alternatives were evaluated for comparison purposes. The analysis methodologies and results are described below.

Future Alternative Traffic Volumes

To forecast traffic volumes that would be present on the area transportation system in the year 2026 with each alternative in place, a similar methodology as that used to forecast future No Build volumes was used. For each alternative, LCOG created a new scenario in the Junction City transportation demand model with representative improvements made to the transportation system. However, rather than comparing changes occurring between the base year (2006) and future year (2026) scenarios in the model, volumes for each alternative were derived by comparing changes occurring between each alternative scenario for the 2026 and the 2026 No Build scenario.

Using the incremental changes in area traffic volumes from the model, the post-processing techniques from NCHRP Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design*³ were again used to forecast actual design hour volumes. Because significant new north-south roadways were being added with each alternative scenario, screenlines were also used to track volume diversions between major transportation corridors and identify potential over or under-assignments.

As design hour volumes were developed for each alternative, key differences in traffic diversions related to each one were noted as described below.

- As each alternative was implemented, the total volume of north-south traveling traffic through the study area remained unchanged. The added capacity related to each alternative did not stimulate new demand. However, this may be due to the nature of the transportation model used, which was only developed as a city-wide, rather than region-wide, model.
- East-west travel through the area was not significantly impacted by the alternatives, with the exception of 1st Avenue east of OR 99 and OR 36 from OR 99 to Pitney Lane. These segments were impacted by diversions in traffic that was ultimately heading north or south through the area that was caused by the improvements made to local facilities. As a result, 1st Avenue experienced a decrease in volume, whereas OR 36 experienced an increase.
- The use of improved local facilities (County roads) surrounding the City as alternate routes to OR 99 was much more prominent in the alternatives including couplets. With the by-pass alternative, there was no attraction to the enhanced Oaklea/Pitney corridor, which actually experienced a small decrease in use. Consequently, if the by-pass option is selected, local improvements to Oaklea/Pitney would not be required. However, if improvements were to move forward for implementation, the improvements to Oaklea/Pitney would not occur until the area was brought into the UGB. The two couplet-based alternatives experienced similar diversions to the improved local routes along the west and east sides of the City, with approximate usage as follows:

³ *Highway Traffic Data for Urbanized Area Project Planning and Design*, National Cooperative Highway Research Program, Report 255, TRB, Washington D.C., 1982.

- Oaklea Drive: OR 99W to High Pass Road – increase in volume of approximately 400 vph near OR 99W (55% increase), with approximately 500 new trips near High Pass Road (85% increase).
- Pitney Lane: High Pass Road to OR 36 – increase in volume of approximately 350 vph (75% increase).
- Prairie Road extension: River Road to OR 36 – increase in volume of approximately 575 vph (new facility).
- The extension of Prairie Road to River Road along the City’s eastern UGB provided an attractive option for trips associated with the employment area around the Country Coach property, diverting over 30% of those trips away from the intersection on OR 99 at 1st Avenue.
- The by-pass diverted approximately 34% of traffic out of the existing OR 99 corridor (approximately 1,200 vph).

Intersection Operations

The study intersections were again analyzed using the new lane configurations, traffic controls, and traffic volumes associated with each alternative for comparison against applicable mobility standards from ODOT’s *2003 Highway Design Manual*.⁴ The Synchro model used for the analysis of future No Build conditions was modified to create new scenarios for each alternative, with v/c ratios and levels of service obtained for study intersections. The results for each alternative are displayed in Table 6-1 along with the applicable mobility standard. New lane configurations and traffic controls assumed for study intersections under each alternative are illustrated in Figures 6-1 through 6-8.

As shown, all alternatives are able to provide adequate operational performance at study intersections through 2026. Under Alternative C, the southbound ramp terminal of the north by-pass interchange would not meet mobility standards under the traffic control assumed, but would be very close (operates at 0.66 with standard requiring 0.65). To avoid installation of an unwarranted signal or implementation of an unusual stop sign control configuration, it may be preferable to seek a design exception than attempt to improve operations further. It should be noted that if the by-pass were constructed, the old alignment of OR 99 would likely be converted into a business route and transferred to City jurisdiction. As the City does not currently maintain a standard for transportation mobility, intersections along this route can not be evaluated for adequacy. However, many local agencies employ a mobility standard that requires intersection operation at a level of service D or better during the peak hour. Under such a standard, all study intersections under City jurisdiction would operate adequately.

⁴*Highway Design Manual*, Oregon Dept. of Transportation, Table 10-1, 2003 English.

Table 6-1: 2026 Alternative Design Hour Operations

Study Intersection	2026 Performance			Mobility Standard
	Delay (sec)	LOS	v/c	v/c
No Build Alternative				
Traffic Signal Control				
OR 99W & OR 99E	21.9	C	0.74	0.85
OR 99 & 10th Ave.	13.5	B	0.87	0.85
OR 99 & 6th Ave.	11.6	B	0.73	0.85
OR 99 & 1st Ave.	>80.0	F	>1.0	0.85
OR 99 & OR 36	58.2	E	>1.0	0.75
Stop Sign Control				
OR 99 & Prairie Rd.	>60.0	C/F	0.94*	0.80
Alternative A: Juniper/Ivy Couplet				
Traffic Signal Control				
OR 99W & OR 99E	24.4	C	0.68	0.75
Juniper St. & 10th Ave.	10.8	B	0.51	0.75
Ivy St. & 10th Ave.	8.1	A	0.56	0.75
Juniper St. & 6th Ave.	6.6	A	0.52	0.75
Ivy St. & 6th Ave.	10.9	B	0.57	0.75
Kalmia St. & 1st Ave.	21.1	C	0.60	0.75
Ivy St. & 1st Ave.	25.8	C	0.68	0.75
OR 99 & Prairie Rd.	15.3	B	0.62	0.75
OR 99 & OR 36	34.2	C	0.72	0.75
Alternative B: Ivy/Holly Couplet				
Traffic Signal Control				
OR 99W & OR 99E	19.1	B	0.64	0.75
Ivy St. & 10th Ave.	11.1	B	0.56	0.75
Holly St. & 10th Ave.	17.9	B	0.56	0.75
Ivy St. & 6th Ave.	10.4	B	0.54	0.75
Holly St. & 6th Ave.	13.4	B	0.61	0.75
Ivy St. & 1st Ave.	26.8	C	0.69	0.75
Holly St. & 1st Ave.	24.8	C	0.64	0.75

Table 6-1: 2026 Alternative Design Hour Operations (continued)

Study Intersection	2026 Performance			Mobility Standard
	Delay (sec)	LOS	v/c	v/c
Alternative B: Ivy/Holly Couplet (continued)				
OR 99 & Prairie Rd.	14.2	B	0.65	0.75
OR 99 & OR 36	30.3	C	0.70	0.75
Alternative C: OR 99 By-pass				
Traffic Signal Control				
OR 99 Business & 18th Ave.	14.1	B	0.49	NA
OR 99 Business & 10th Ave.	33.6	C	0.91	NA
OR 99 Business & 6th Ave.	24.7	C	0.88	NA
OR 99 Business & 1st Ave.	34.8	C	0.75	NA
OR 99 Business & OR 36	23.1	C	0.74	NA
OR 99W & OR 99 Business	10.9	B	0.72	0.75
Stop Sign Control				
OR 99 Business & Prairie Rd.	22.5	C/C	0.50**	NA
OR 99E SB ramp & OR 99W	17.5	-/C	0.66	0.65
OR 99 By-pass SB & OR 99 Business	20.8	-/C	0.21	0.65

Notes: LOS = Level of Service

"A/A" refers to level of service of left turning traffic from major street and the average level of service of traffic turning from the minor street onto the major street.

Delay

Average vehicle delay in seconds for all movements at signalized and four-way stop intersections. Minor street delay in seconds at unsignalized intersections.

v/c = Volume to capacity ratio of the intersection

* critical v/c is on eastbound right turn.

** critical v/c is on northbound left turn.

NA = Not Applicable - OR 99 Business Route would be transferred to Junction City. Junction City does not have standards for transportation mobility.

Black background and bold type indicates mobility standard is not met.

Vehicle Queuing

Under No Build conditions in 2026, vehicle queues along the OR 99 corridor were very long, with southbound queues extending from 1st Avenue through the OR 99W/OR99E intersection. Using SimTraffic, as was done for No Build conditions, queuing at study intersections was again examined to assess the ability to adequately store queued vehicles and avoid spillback into adjacent intersections. Anticipated 95th percentile queues for all study intersection movements are shown in Figures 6-1 through 6-8.

Under Alternatives A and B, queues along OR 99 are dramatically reduced in the couplet areas. In particular, the southbound queues that extended from 1st Avenue to OR 99W under No Build conditions are reduced to only one to two blocks. When couplets are created, careful attention should be given to the ability to accommodate queued vehicles on cross-streets between sides of the couplet, as any spillback could impact safety and operations on the highway. Under both Alternatives A and B, anticipated queues on 10th Avenue and 6th Avenue between the northbound and southbound sides of the couplet would exceed available storage by approximately one vehicle length during the peak hour. While modifications to signal timing or phasing could be implemented to better manage these queues, it may require small reductions in operational efficiency along the OR 99 corridor.

At 1st Avenue, where traffic volumes are much higher, side-by-side left turn pockets will be needed to keep queues from spilling back into the highway. Even with side-by-side left turn pockets the available storage between sides of the couplet will barely be adequate under Alternative B, where these intersections are only one block apart.

With the by-pass in place under Alternative C, traffic volumes along the OR 99 business route would be reduced compared to the No Build condition, but the conversion of OR 99 to a three-lane section from the Flat Creek Bridge to 3rd Avenue will also reduce capacity. While queues along the business route would generally be lower than under the No Build condition, there would still be long queues of over four blocks in length in the northbound direction.

Travel Time

To help measure the effectiveness of each alternative at improving overall mobility through the OR 99 corridor, travel times and speeds were measured from simulations of corridor operations using SimTraffic. For each alternative, five different simulations of peak hour operations were recorded, with the results of each averaged. For the No Build alternative and Alternatives A and B, travel times were measured between the OR 99W/OR 99E intersection and the OR 99/ OR 36 intersection. For Alternative C, travel times were measured between the new interchanges to be located at the north and south ends of the by-pass.

As shown in Table 6-2, the by-pass clearly provides the most improved travel times and speeds though the corridor. Of course, these improvements will be provided primarily to regional traffic passing through the area with lesser improvements experienced on the business route, whose primary objective would now be to serve local traffic.

Under No Build conditions, northbound travel was significantly less congested than southbound travel, as was evidenced by the much longer southbound vehicle queues. With Alternatives A or B in place, travel time in both directions is significantly improved, with northbound reductions of 28% and 19% and southbound reductions of 34% and 36%, respectively. It should be recognized that

Alternatives A and B both provide improved travel times and speeds through the study area, despite the proposed implementation of lower posted speed limits.⁵

Table 6-2: OR 99 Corridor Travel Times (2026)

Alternative	NB Travel Time	NB Speed	SB Travel Time	SB Speed
No Build	8 min. 15 sec.	21 mph	10 min. 47 sec.	14 mph
Alt. A: Juniper/Ivy Couplet	5 min. 54 sec.	26 mph	7 min. 7 sec.	22 mph
Alt. B: Ivy/ Holly Couplet	6 min. 47 sec.	23 mph	6 min. 54 sec.	23 mph
Alt. C: OR 99 By-pass	5 min. 20 sec.	43 mph	6 min. 1 sec.	38 mph

Travel Time taken from OR99W/ OR 99E intersection to OR 99/ OR 36 intersection for No Build and Alts A and B.

Travel Time taken from north interchange to south interchange for Alt C.

Signal Progression

The ability to maintain good progression of traffic through traffic signals assumed to be in place along OR 99 under each alternative should not be significantly impacted by proposed signal locations. Compared to No Build conditions, the only signal changing north-south signal spacing would be the new signal at OR 99/Prairie Road under Alternatives A and B. However, as this signal would still be over 2,000 feet away from the closest signal at OR 99/OR 36, the ability to maintain good progression of traffic should not be compromised. It should be noted that any proposed signals must meet signal warrants and receive approval of the State Traffic Engineer before installation can occur.

The biggest impact on traffic progression would be experienced in the downtown area with Alternatives A and B, which create a couplet system along OR 99. One factor is the close signal spacing in the east-west direction resulting from splitting the highway into two separate roadbeds one block apart (approximately 275 feet). Because of this close spacing, the east and west approaches may require more green time than would ordinarily be assigned to them to keep vehicles queues from spilling back into the northbound and southbound directions of the highway.

The other factor could be related to the desired cycle lengths assigned to signals at 10th Avenue, 6th Avenue, and 1st Avenue. Because the intersections on OR 99 at 1st Avenue serve higher traffic volumes, a higher cycle length of 90 seconds is needed to adequately accommodate traffic and meet mobility standards. However, at the intersections on OR 99 at 10th Avenue and 6th Avenue, lower cycle lengths closer to 60 seconds can accommodate the lesser traffic demands and may be more desirable to provide less delay for pedestrians within the downtown area. If operating at different cycle lengths, the adjacent signalized intersections on OR 99 at 6th Avenue and 1st Avenue, which are approximately 1,500 feet apart, could not provide consistent progression of traffic.

⁵ Posted speeds were assumed to be lowered for this analysis based on the proposed design speeds of improvements. The actual posted speeds will need to be determined through a speed zone investigation after all improvements are in place.

Other Modes

Because the objectives of this project also include making improvements to pedestrian, bicycle, and transit transportation, the impact on each of these modes related to each alternative is evaluated below.

Pedestrian Impact

With the couplet section of Alternatives A and B, pedestrian travel would be significantly enhanced by providing wider sidewalks that could be used to accommodate street trees and street furniture such as trash cans, decorative light poles, benches, and bike racks. A buffer between pedestrians and motor vehicle traffic would be created by the bike lanes and parking aisle, making the environment more comfortable for walking. In addition, pedestrian crossings of OR 99 would become easier as people would only be required to cross two lanes of traffic at a time, with vehicles only approaching in one direction. Furthermore, bulb-outs could be constructed at street corners at the ends of the parallel parking aisles to shorten crossing distances and pedestrian crossing for the visually impaired could further be enhanced through the provision of audible pedestrian signals at all signalized highway intersections. It should be recognized that because OR 99 is designated as a Freight Route, the design of any curb bulb-outs must not impede the movement of heavy vehicles.

South of 1st Avenue, where the couplet transitions into a divided highway, sidewalks would continue to be provided, with buffers created by a bike lane and landscape strips. Unsignalized crossing opportunities could be provided, allowing pedestrians to cross each two-lane section of one-way highway separately. However, bulb-outs at crossing locations are not recommended in this area given the higher traffic speeds anticipated.

Most improvements related to Alternative C are associated with the by-pass, which would include shoulders, but no sidewalks. However, the improvements made to the OR 99 business route between the Flat Creek Bridge and 3rd Avenue, including the conversion of the highway to a three-lane section with bike lanes, will enhance pedestrian travel in that section by providing a buffer between cars and pedestrians with the bike lanes and the ability to provide pedestrian refuges in the median.

Bicycle Impact

Alternatives A and B would construct dedicated bike lanes from south of the OR 99W/OR 99E intersection to north of Prairie Road, where they would join existing bicycle shoulders. This would fill an existing gap in the bicycle system from the Flat Creek Bridge to 3rd Avenue. Bicycle crossings of OR 99 would also be facilitated by creating shorter crossings of one-way traffic where the highway is split into two separate roadbeds.

Alternative C would provide shoulders adequate for bicycle travel along the length of the by-pass, as well as filling in the existing gap in the bicycle system from the Flat Creek Bridge to 3rd Avenue where the OR 99 business route would be improved to include bike lanes.

Transit Impact

The slower highway speeds and wider sidewalks may also create a more conducive environment for bus stops through the couplet that would be created by Alternatives A and B, allowing for direct access to adjacent businesses. The additional sidewalk widths may provide opportunities to supplement bus stops with shelters and benches. Within the low-speed, multi-lane, one-way sections,

bus pullouts would not be necessary. Bus pullouts are not included in the proposed highway cross-section and are not desired by the Lane Transit District.

Alternative C would not provide any benefits for transit operations. In fact, within the new cross-section between the Flat Creek Bridge and 3rd Avenue, bus stops could not be allowed.

Freight Impact

As OR 99 has been designated as a Freight Route by the Oregon Department of Transportation, any improvements in this corridor must accommodate freight movement. Also, according to ORS 366.215, the vehicle-carrying capacity of freight routes can not be permanently reduced unless the reduction is necessitated to address highway safety or access needs. Exemptions are allowed where a finding is made by the commission that the reduction is in the best interest of the state and that freight movement is not unreasonably impeded as a result.

The concept drawings for Alternatives A and B, shown in Figures 6-1, 6-2, 6-4, and 6-5, provide highway alignments and widths in accordance with ODOT's *Highway Design Manual*, with design speeds no lower than 30 mph. While the current posted speed through the downtown area is 30 mph compared to the proposed posted speed of 25 mph, operational analysis of Alternatives A and B have shown that intersection operations and overall corridor travel times would improve as a result. Therefore freight mobility would be facilitated by these alternatives.

If Alternative C were constructed, the freight route designation would likely be removed from the OR 99 business route and applied to the new by-pass. The concept drawings shown in Figures 6-6 through 6-8 provide highway alignments and widths in accordance with ODOT's *Highway Design Manual*, with design speeds no lower than 70 mph. As traffic traveling along the by-pass would not be required to stop, delays for freight traveling through the area would be very low.

Rail Impact

With two railroad lines running parallel to OR 99 to the east, there is significant potential for any transportation improvement in this corridor to result in the need for a new or modified railroad crossing. As the need to obtain approval for a crossing order from the rail owner would add a significant amount of complexity and uncertainty to any project, the anticipated impacts to rail lines associated with each alternative should be considered during the evaluation process.

In Alternative A, the couplet north of 1st Avenue would move highway traffic to the west of the existing right of way on Juniper Street. Therefore, there would be no railroad impacts in this area. However, at 1st Avenue, the BNSF railroad crossing would be impacted by the construction of a second westbound through lane and a westbound right turn lane for traffic heading northbound on OR 99.

South of 1st Avenue, the highway would shift to the east closer to the BNSF railroad. While the highway would remain within existing right of way, the roadway itself would be much closer to the railroad. This closer proximity would impact two existing rail crossings associated with access to private properties by eliminating the available vehicle storage used when trains block the driveways. However, this could be mitigated by the provision of wide shoulders in the proximity of the driveways for vehicle storage during such events.

Finally, the BNSF crossing at Prairie Road, opposite OR 36, would also be impacted by widening needed to accommodate additional turn lanes at the OR 99/OR 36 intersection.

Alternative B is based on the assumption that the BNSF railroad is no longer in use and has been removed. Therefore, the routing of the northbound lanes of OR 99 up the existing BNSF rail line would have no rail impacts at that time. However, the realignment of 18th Avenue to intersect with the northbound side of the couplet may require the approval of a crossing order as improvements would occur at or near (within 500 feet) the crossing on 18th Avenue with the UPRR line.

The improvements proposed to County roads surrounding the study area that would be included as part of both Alternatives A and B would also have railroad impacts at the existing crossings on River Road and Prairie Road. While the River Road impacts may be minor, potential including only shoulder widening, they may be enough to require approval of crossing orders for the BNSF and UPRR railroads.

Prairie Road (east of OR 99) would be realigned to remove the skewed UPRR crossing, and continue north along the east side of the UPRR line. A new east-west roadway would then be constructed to connect Prairie Road to the OR 99/ OR 36 intersection, creating a “T”-intersection with Prairie Road. This would have negligible impact on the BNSF rail crossing, but would require construction of a new UPRR crossing (to replace the old one) just west of the intersection of the new roadway at Prairie Road.

The alignment of the by-pass in Alternative C would include crossings of the BNSF and UPRR lines at the north and south ends of the study area, but each would be grade-separated with the highway passing over the top on a structure. Also, the BNSF railroad crossing on 1st Avenue would be impacted by the construction of needed turn lanes on the westbound approach of the OR 99/1st Avenue intersection.

Property and Environmental Impacts

As each alternative includes the construction of transportation facilities in different locations of the study area, many of which occur outside of the existing highway right of way, the impact of each alternative on surrounding properties is examined for consideration.

Private Property Impacts

One of the key features of the couplets in Alternatives A and B is the use of existing public right of way and local streets for new transportation improvements, which reduces the need for property acquisition and creates less new impermeable surface. However, even the conversion of adjacent City streets into new highway lanes will require the purchase of some properties, either in part or in full.

At the north end of the Juniper/Ivy couplet (Alternative A), the realignment of the southbound lanes to join Juniper Street will require purchasing the property bounded by 17th Avenue, OR 99, 16th Avenue, and Juniper Street. A significant amount of additional property will be needed south of 3rd Avenue, where Juniper Street currently ends, to connect Juniper Street to Kalmia Street at 1st Avenue and connect back to the OR 99 corridor south of 1st Avenue. Once rejoined with the OR 99 corridor, no additional right of way is anticipated to be needed within the divided highway section. However, more property acquisitions will be necessary surrounding the 1st Avenue and OR 36 intersections where approaches are to be widened to accommodate new lanes.

At the north end of the Ivy/Holly couplet (Alternative B), the northbound travel lanes will follow the existing BNSF alignment, but will shift to the east north of 15th Avenue to obtain an appropriate angle of approach for intersecting the highway opposite OR 99W. Additional property impacts will occur south of 18th Avenue where this roadway would be realigned to intersect with the northbound side of the couplet.

To the south, property impacts would be considerably less than under Alternative A, as the use of the BNSF property can accommodate the remainder of the couplet and divided highway sections. However, much like Alternative A, more property acquisitions will be necessary surrounding the 1st Avenue and OR 36 intersections where approaches are to be widened to accommodate new lanes.

The proposed improvements to County roadways and the by-pass included as part of Alternative C will require a substantial amount of private property impacts and land acquisitions to accommodate the construction of new roadways where none exist today. While there would be few impacts to existing development and buildings as much of this land is currently used for farmland, the quantity of land needed will be significant.

In addition to private property impacts associated with acquisitions, many properties may benefit from improvements made, such as the provision of on-street parking in the couplets to supplement on-site parking, which is limited in many areas. Furthermore, the construction of the couplets in Alternatives A and B or the three-lane conversion from the Flat Creek Bridge to 3rd Avenue in Alternative C may provide opportunities to implement streetscape enhancements that would beautify the corridor and create a more attractive pedestrian environment in the downtown.

Finally, construction of the Juniper/Ivy couplet may create both negative and positive property impacts related to existing land uses on Juniper Street and potential for redevelopment. The increased traffic from routing southbound OR 99 onto Juniper Street could negatively affect existing residential uses. Because the land along Juniper Street is already zoned for commercial/residential uses, construction of the Juniper/Ivy couplet may induce commercial redevelopment of the Juniper Street corridor and extend activity in the west side of the downtown. This assumes, however, that there is sufficient commercial market capacity for significant downtown area expansion, which this plan has not assessed.

Environmental Impacts

As an in-depth environmental assessment of proposed alternatives was not within the scope of this study, the impact of potential improvements on environmentally sensitive areas was limited to the review of information that had previously been mapped for this area. For this exercise, maps of known wetland habitats were obtained from the U.S. Fish and Wildlife National Wetland Inventory.

For the improvements within the OR 99 corridor associated with Alternatives A and B, there does not appear to be any impacts to known wetlands. However, it should be noted that each alternative would require a new structure over Flat Creek at the north end of the couplet.

Existing wetlands are scattered around the City within the surrounding farmlands. The improvements proposed to County roads have the potential to impact these areas, but refinements in road alignments during the design process may help avoid them. The proposed extension of Prairie Road to River Road passes through an area with a moderate amount of wetlands, but they appear to be avoidable with changes in the roadway alignment.

The proposed by-pass alignment included in Alternative C would pass through or near several pockets of wetlands. Again, refinements to the alignment could minimize impacts. However, as the by-pass would likely be constructed with a higher design speed than the new County roads, curves in the alignment would need to be more gradual, making it more difficult to weave around these sensitive areas.

Cost Estimates

Using the concept drawings in Figures 6-1 through 6-8, **planning level** cost estimates for each alternative were calculated for comparison purposes. Estimated costs and key assumptions for each alternative are described below. Detailed cost estimation worksheets are provided in the appendix.

Alternative A: Juniper/Ivy Couplet	\$43.8 million
Local Facility Improvements	\$41.9 million
Total	\$85.7 million

- A total of 1,900 feet of new roadway will need to be constructed to provide transitions to and from the southbound couplet alignment.
- Roadway improvements along the northbound couplet alignment (Ivy Street) between 18th Avenue and 1st Avenue include the following: widening the sidewalks from 5 feet to 11 feet on both sides of the roadway, replacing the curb and gutter on both sides of the roadway, replacing drainage inlets due to the relocated curb line and pavement overlay along the narrowed 38-foot roadway section.
- The southbound couplet alignment was assumed to require a significant amount of reconstruction to support highway traffic volumes. Juniper Street will be completely rebuilt with new roadway base and pavement. New sidewalk, curb and gutter will also be constructed along both sides of the roadway.
- A new structure approximately 100 feet in length and 50 feet wide (6-foot sidewalks) will be constructed along the southbound couplet alignment near 17th Avenue to span Flat Creek.
- Four left turn pockets (two located along the northbound alignment and two along the southbound alignment) will be constructed south of 1st Avenue in the divided highway section. The turn pockets will be 325 feet (including the segment between the northbound and southbound alignments) in length with a 325-foot taper.
- Eight new traffic signals will be installed. Existing signals that would require modification were assumed to be replaced.
- Approximately 5,000 feet of traffic signal interconnect will be installed along the couplet to allow for coordinated signal timing. The cost includes trenching in both rural and urban areas.
- Side-by-side left turn lanes will be constructed along 1st Avenue between the northbound and southbound couplet alignments. This will require an additional 28 feet of right-of-way width along a 500-foot segment of roadway.

- A second westbound through lane will be constructed on 1st Avenue between the northbound side of OR 99 (Ivy Street) and the UPRR line. The inside through lane would align with the left turn lane leading to Juniper Street (OR 99 southbound).
- Improvements to local roadway facilities (County or City roads) include upgrades to existing roadways as well as constructing new connections. These improvements will include right-of-way acquisition of rural residential and farm land. It should be recognized that if these lands are brought within the urban growth boundary in the future, the cost of the land would be expected to increase commensurate with the applicable zoning designation.
- Improvements to local facilities (County or City roads) will be constructed to local standards. For cost estimate purposes, it was assumed that improvements would consist of 12-foot travel lanes with 8-foot shoulders along an 80-foot section of right of way.
- The cost to widen along Prairie Road and OR 36 to accommodate the dual northbound left turn lanes on OR 99 is included in the Juniper/Ivy Couplet alternative as part of the OR 99 intersection improvements, with \$3.8 million assumed for the Prairie Road improvements and \$6.4 million assumed for the OR 36 improvements.

Alternative B: Ivy/Holly Couplet	\$42.5 million
<u>Local Facility Improvements</u>	<u>\$41.9 million</u>
Total	\$84.4 million

- Roadway improvements along the southbound couplet alignment (Ivy Street) between 18th Avenue and 1st Avenue include the following: widening the sidewalks from 5 feet to 11 feet on both sides of the roadway, replacing the curb and gutter on both sides of the roadway, replacing drainage inlets due to the relocated curb line and pavement overlay along the narrowed 38-foot roadway section.
- The northbound couplet alignment was assumed to require a significant amount of reconstruction to support highway traffic volumes. Holly Street will be completely rebuilt with new roadway base and pavement. New sidewalk, curb and gutter will also be constructed along both sides of the roadway. Acquisition of railroad right-of-way will be required to construct the north segment of the couplet (between 13th Avenue and 18th Avenue).
- The BNSF railroad is assumed to be removed through the project limits prior to this project. The cost of removing and/or relocating the BNSF railroad is not included in this estimate.
- A new structure approximately 250 feet in length and 50 feet wide (6-foot sidewalks) will be constructed along the southbound couplet alignment near 15th Avenue to span Flat Creek.
- Four left turn pockets (two located along the northbound alignment and two along the southbound alignment) will be constructed south of 1st Avenue within the divided highway section. The turn pockets will be 325 feet (including the segment between the northbound and southbound alignments) in length with a 325-foot taper.
- Nine new traffic signals will be installed. Existing signals that would require modification were assumed to be replaced.

- Approximately 5,000 feet of traffic signal interconnect will be installed along the couplet to allow for coordinated signal timing. The cost includes trenching in both rural and urban areas.
- Side-by-side left turn lanes will be constructed along 1st Avenue between the northbound and southbound couplet alignment. This will require an additional 28 feet of right-of-way width along a 500-foot segment of roadway.
- A second westbound through lane will be constructed on 1st Avenue between the northbound side of OR 99 (Holly Street) and the UPRR line. The inside through lane would align with the left turn lane leading to Ivy Street (OR 99 southbound).
- Improvements to local roadway facilities (County or City roads) include upgrades to existing roadways as well as constructing new connections. These improvements will include right-of-way acquisition of rural residential and farm land. It should be recognized that if these lands are brought within the urban growth boundary in the future, the cost of the land would be expected to increase commensurate with the applicable zoning designation
- Improvements to local facilities (County or City roads) will be constructed to local standards. For cost estimate purposes, it was assumed that improvements would consist of 12-foot travel lanes with 8-foot shoulders along an 80-foot section or right of way.

Alternative C: OR 99 By-pass	\$114.6 million
<u>Local Facility Improvements</u>	<u>\$10.9 million</u>
Total	\$125.5 million

- The OR 99 by-pass will be approximately 2.8 miles (15,000 feet) in length with a 44-foot roadway section. Construction of the by-pass will require approximately 20.7 acres (900,000 square feet) of right-of-way. The unit cost for rural land has been estimated at \$2 per square foot. It should be recognized that if these lands were brought into the urban growth boundary, the cost of the right of way would increase commensurate with the applicable zoning designation.
- The OR 99 by-pass will include two new interchanges, which include approximately 180,400 square feet of new roadway and 58.5 acres (2,548,000 square feet) of right of way acquisition (\$2 per square foot).
- New roadway will be constructed to connect OR 99W to the northern by-pass interchange. The cost will include approximately 4,200 feet of new roadway (44-foot cross section) and right of way acquisition (approximately 62,000 square feet) for the entire alignment.
- Prairie Road will be extended to intersect the OR 99 business route at OR 36.
- The OR 99 by-pass will include large structures at the north and south interchanges, two smaller structures along the by-pass at Dane Lane and River Road, and four small structures for stream crossings.
- The OR 99 business route will be realigned between Prairie Road and the south interchange (see Figure 6-8).

- Improvements to local roadway facilities (County or City roads) include upgrades to existing roadways as well as constructing a new connection between OR 36 and High Pass Road along Pitney Lane. These improvements will include right of way acquisition of rural residential and farm land. It should be recognized that if these lands are brought within the urban growth boundary in the future, the cost of the land would be expected to increase commensurate with the applicable zoning designation.
- Improvements to local facilities (County or City roads) will be constructed to local standards. For cost estimate purposes, it was assumed that improvements would include 12-foot travel lanes with 8-foot shoulders along an 80-foot section or right of way.

Access Management Plan

With no dedicated funds available to construct any improvement alternative selected, the timing of implementation is unknown and may be many years away. By adopting an access management plan for the existing corridor, incremental improvements can be made in the meantime to help enhance safety and operations. Because access points introduce a number of potential vehicular conflicts on a roadway and are frequently the causes of slowing or stopping vehicles, they can significantly degrade the flow of traffic and reduce the efficiency of the transportation system. By reducing the overall number of access points and providing greater separation between them, the impacts of these conflicts can be minimized.

As an added benefit, the access management enhancements made would complement any alternative when constructed and would help preserve the functional life of new improvements. However, as the construction of new facilities will modify the transportation system, it is recommended that the access management plan be modified during the project development process to implement appropriate management objectives for those new facilities.

Public Outreach

As part of the Access Management Plan development process, a public involvement plan was implemented to obtain input from affected property owners and tenants, as well as from the general public. In addition to the public outreach conducted for the overall project, including three Technical Advisory Committee meetings, three Citizen Advisory Committee meetings, and two public open houses, an additional public open house was held to discuss access management implementation and impacts and invitations were mailed to highway-adjacent property and business owners in the study area to establish individual meetings to discuss site-specific access needs and potential access modifications. As a result, individual meetings were held with 33 property/business owners to discuss access to over 40 highway-adjacent properties.

Access Management Plan Objectives

To provide a basis for decision-making during the development of the access management plan, the objectives of the plan were formed with ODOT staff and outlined as shown below.

1. Where reasonable alternate access is available, direct highway access is to be removed. Where reasonable alternate access is not available, the objective will be to meet, or move in the direction of meeting, ODOT's adopted access management spacing standards for Regional Highways, as documented in OAR 734-051-0115, Table 2. Applicable spacing standards for

each access management zone within the study area are shown below, with zone boundaries illustrated in Figures 6-9A through 6-9D.

Table 6-3: Study Area Access Management Spacing Standards

Zone	Highway Segment	Classification	Segment Designation	Urban/Rural	Posted Speed	Access Spacing Standard
1	OR 99W: MP 108.32 - 108.50	Regional Hwy	Other	Rural*	55 mph	990 ft.
2	OR 99W: MP 108.50 - 108.70	Regional Hwy	Other	Urban	45 mph	750 ft.
3	OR 99W/99: MP 108.70 - 109.83	Regional Hwy	Other	Urban	30 mph	425 ft.
4	OR 99: MP 109.83 - 110.04	Regional Hwy	Other	Urban	45 mph	750 ft.
5	OR 99: MP 110.04 - 111.27	Regional Hwy	Other	Urban	55 mph	990 ft.
6	OR 99E: MP 31.78 - 32.07	Regional Hwy	Other	Rural	55 mph	990 ft.
7	OR 99E: MP 32.07 - 32.29	Regional Hwy	Other	Rural*	45 mph	750 ft.
8	OR 99E: MP 32.29 - 32.46	Regional Hwy	Other	Urban	30 mph	425 ft.

* Segment lies in both Urban and Rural areas, but spacing standard is not impacted.

2. In attempting to meet access management spacing standards, exceptions may be allowed to take advantage of existing property boundaries and existing or planned public streets, and to accommodate environmental constraints.
3. Replace private approaches with public streets, where feasible, to provide consolidated access to multiple properties.
4. Develop short, medium, and long-range actions for access management implementation, where short-range actions could be implemented immediately, medium-range actions are dependent on property redevelopment, and long-range actions would occur as part of or following a construction project by ODOT or the City. As the timing of property redevelopment and future construction projects can not be predicted, the labeling of actions as short, medium, or long-range is only intended to be a guide and should not be used to establish a required order of implementation. Any action should be implemented as opportunities arise, regardless of timing.
5. Modifications of property access should acknowledge needs of existing development. Where on-site infrastructure, such as buildings and other permanent objects, have been located in such a way that site access or function is dependent on the existing access location or design, modifications of access should be delayed until the site is redeveloped. However, this condition shall be re-evaluated should a "Change in Use" of an approach occur as defined in OAR 734-051-0045.
6. Proposed actions shall not prevent properties from maintaining reasonable access to the transportation system where available under existing conditions. This objective is not intended to require provision of reasonable access to properties that do not maintain it under existing conditions or to properties not impacted by recommended actions.

7. Where approaches to the highway are to remain upon consideration of the preceding objectives, such approaches should be aligned on opposite sides of roadways where feasible to reduce turning conflicts.

Access Management Action Plan

Using these objectives, an action plan for each approach to the State highway system within the study area was developed, as shown below in Table 6-4. As noted in the objectives, the short-range actions could be implemented at any time and are not dependant on site redevelopment or future improvement projects. The medium-range actions represent those that are dependent on site redevelopment due to potential hardships that could result by modifying property access given current infrastructure locations. Long-range actions represent those that are dependent on improvement projects to be constructed before access changes could be made. The long-range action plan has also been illustrated in Figures 6-9A through D to aid in the interpretation of the actions in Table 6-4. Note that the use of the term “further development” is intended to refer to any degree of development activity, whereas the term “redevelopment” is intended to refer to a level of development activity that would allow for site circulation to be modified as a result of such actions as building relocations or on-site circulation changes.

Detailed information regarding approach and property characteristics, as well as existing access rights, has been compiled into inventory lists. These databases will provide needed information to ODOT staff in determining the appropriate procedure for executing the recommended actions in Table 6-4. The inventory lists, included in the appendix, have been separated into an existing approach physical inventory (Appendix Table A.1) and an existing property access rights list (Appendix Table A.2).

Table 6-4: OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
1	(17th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
2	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 17th Ave.	None
3	(16th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
4	Close approach as opportunity arises. Alternate access is available via 15th Ave. and 16th Ave.	Same as Short-Range.	None
5	(15th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
6	Close approach to OR 99 as opportunity arises. Alternate access is available via 15th Ave. and 14th Ave.	None	None
7	(14th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
8	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 14th Ave. and/or 13th Ave.	None
9	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 14th Ave. and/or 13th Ave.	None
10	(13th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
11	Property is currently vacant. At time of development, close approach to OR 99. Future access to be taken from 13th Ave.	None	None
12	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 12th Ave.	None
13	(12th Ave.) No action.	Same as Short-Range.	Same as Short-Range.

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
14	Combine with approach No. 15.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 12th Ave.	None
15	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 11th Ave.	None
16	(11 th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
17	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 11th Ave.	None
18	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 11th Ave.	None
19	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 10th Ave.	None
20	Approach to be restricted to right-out movements only. Installation of traffic separator in median is recommended. However, given right-of-way limitations, interim improvements may consist of on-site signing and/or pavement markings to convey right-out only restriction.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 10th Ave.	Install traffic separator in median if determined to be feasible as part of future highway improvement project if redevelopment and approach closure (see medium-range action) has not occurred.
21	(10th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
22	Convert to serve entrance only. Alternate access exists on both 10th & 9th Ave.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 10th Ave. and 9th Ave.	None
23	(9th Ave.) No action.	Same as Short-Range.	Same as Short-Range.

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
24	As opportunity arises, close approach to OR99. Alternate access is available via 9th Ave.	Same as Short-Range.	None
25	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 9th Ave.	None
26	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 8th Ave.	None
27	(8th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
28	Combine with approach No. 29.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 8th Ave.	None
29	No action.	Same as Short-Range.	Same as Short-Range.
30	(7th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
31	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 7th Ave.	None
32	No action.	Same as Short-Range.	Same as Short-Range.
33	(6th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
34	(5th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
35	(4th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
36	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 4th Ave. and 3rd Ave.	None
37	As opportunity arises, close approach to OR99. Alternate access is available via 3rd Ave.	Same as Short-Range.	None
38	(3rd Ave.) No action.	Same as Short-Range.	Same as Short-Range.

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
39	(1st Ave.) No action.	Same as Short-Range.	Same as Short-Range.
40	As opportunity arises, close approach to OR99 and relocate 425 feet south of the centerline of 1st Ave.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 1st Ave.	None
41	No action.	Same as Short-Range.	Same as Short-Range.
42	Combine with approach No. 43.	Concurrent with further development on property, construct vehicular access road (and bridge if necessary) between TL 6100 and TL 4400 and take access from approach number 41 on TL 4400, resulting in closure of approach number 42.	None
43	No action.	Upon property redevelopment, close approach to OR 99. Construct shared approach to be used by TL 229 and neighboring TL 101 to the south (one approach total). Establish access easements between TL 229 and TL 101 to support use of shared approach. Location of access to be determined during development review.	None
44	No action.	Upon property redevelopment, close approach to OR 99. Construct shared approach to be used by TL 101 and neighboring TL 229 to the north (one approach total). Establish access easements between TL 101 and TL 229 to support use of shared approach. Location of access to be determined during development review.	None
45	No action.	Same as Short-Range.	Same as Short-Range.

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
46	As opportunity arises, close approach to OR99. Alternate access is available via approach #47.	Same as Short-Range.	None
47	No action.	Same as Short-Range.	Same as Short-Range.
48	No action.	Upon redevelopment, if shared approach is available from TL 1001 to the south, close approach to OR 99 and take access from shared approach from TL 1001. If shared approach on TL 1001 is not yet available upon redevelopment of TL 200, site circulation on TL 200 shall be planned to accommodate a change in access to close the OR 99 approach and use the shared approach on TL 1001 as it becomes available.	None
49	No action.	Upon property redevelopment, close approach to OR 99. An approach to OR 99 may be considered by ODOT if constructed near the north property line of TL 1001 to be shared with TL 200 to the north (one approach total). Establishment of access easements between TL 1001 and TL 200 to support use of shared approach would be required.	None
50	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from Hatton Lane.	None
51	(Hatton Ln.) No action.	Same as Short-Range.	Same as Short-Range.
52	No action.	Same as Short-Range.	None

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
53	Convert to serve entrance only.	Same as Short-Range.	None
54	Convert to serve exit only.	Same as Short-Range.	None
55	As opportunity arises, close approach to OR99. Alternate access is available via approach #56.	Same as Short-Range.	None
56	No action.	Same as Short-Range.	Same as Short-Range.
57	No action.	Upon redevelopment, if shared approach is available from TL 800 to the south, close approach to OR 99 and take access from shared approach from TL 800. If shared approach on TL 800 is not yet available upon redevelopment of TL 400, site circulation on TL 400 shall be planned to accommodate a change in access to close the OR 99 approach and use the shared approach on TL 800 as it becomes available.	None
58	Modify approach to be used for emergency access only. Design of emergency access to be determined by ODOT.	Upon property redevelopment, close approach to OR 99. An approach to OR 99 may be considered by ODOT if constructed near north property line of TL 800 to be shared with TL 400 to the north (one approach total). Establishment of access easements between TL 800 and TL 400 to support use of shared approach would be required.	None
59	As opportunity arises, close approach to OR99. Alternate access is available via Prairie Rd.	Same as Short-Range.	None

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
60	As opportunity arises, close approach to OR99 and combine it with approach #61 into a new approach.	Upon property redevelopment, close approach to OR 99. Future access to be taken from Prairie Rd. and approach to OR 99 near north property line to be shared with TL 400.	None
61	As opportunity arises, close approach to OR99 and combine it with approach #60 into a new approach. New approach should be located further north than approach #61 to increase separation between new approach and next approach to the south.	Upon property redevelopment, close approach to OR 99. Future access to be taken from Prairie Rd. and approach to OR 99 near north property line to be shared with TL 400 (if approved).	None
62	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from Prairie Rd. Approach to Prairie Rd. should be moved to north to provide adequate sight distance to south along Prairie Rd.	None
63	As opportunity arises, close approach to OR99. Alternate access is available via Prairie Rd.	Same as Short-Range.	None
64	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from Prairie Rd. Approach to Prairie Rd. should be moved to north to provide adequate sight distance to south along Prairie Rd.	None
65	(Prairie Rd.) No action.	Same as Short-Range.	Same as Short-Range.
66	No action.	Same as Short-Range.	Same as Short-Range.
67	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from OR 36.	None

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
68	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from OR 36.	None
69	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from OR 36.	None
70	As opportunity arises, close approach to OR99. Alternate access is available via OR 36.	Same as Short-Range.	None
71	(OR 36) No action.	Same as Short-Range.	Same as Short-Range.
72	(18th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
73	No action.	Same as Short-Range.	Same as Short-Range.
74	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 16th Ave.	None
75	(16th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
76	No action.	Same as Short-Range.	None
77	Close approach as opportunity arises. Use approach No. 76.	Same as Short-Range.	None
78	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from approach 77 located opposite 15th Ave.	None
79	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from approach 80 or approach to 14th Ave.	None

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
80	No action.	Upon property redevelopment, close approach and take access from 14th Avenue if 14th Avenue has been constructed or will be constructed concurrent with the development. If 14th Avenue has not been or will not be constructed, retain approach to OR 99.	None
81	No action.	Upon property redevelopment, close approach and take access from 14th Avenue if 14th Avenue has been constructed or will be constructed concurrent with the development. If 14th Avenue has not been or will not be constructed, retain approach to OR 99.	None
82	Close approach as opportunity arises. Use approach No. 81.	Same as Short-Range.	Same as Short-Range.
83	Modify to serve garage bay only.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 13th Ave.	None
84	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 13th Ave.	None
85	(13th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
86	No action.	Upon further property development, close approach to OR 99. Future access to be taken from 13th Ave.	None
87	As opportunity arises, close approach to OR 99 and replace with access to 12th Ave.	Same as Short-Range.	None
88	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 12th Ave.	None

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
89	(12th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
90	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 12th Ave.	None
91	Close approach.	Same as Short-Range.	None
92	(11th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
93	(10th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
94	Convert to serve entrance movements only. Egress is available via alley.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 9th Ave.	None
95	(9th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
96	As opportunity arises, close approach to OR 99 and replace with access to 9th Ave.	Same as Short-Range.	None
97	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 8th Ave.	None
98	(8th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
99	As opportunity arises, close approach to OR 99 and replace with access to 8th Ave.	Same as Short-Range.	None
100	Approach to serve egress movements from site only, with ingress movements from 7th Ave.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 7th Ave.	None
101	(7th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
102	Convert to serve entrance movements only. Egress is available to 7th Ave.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 7th Ave.	None

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

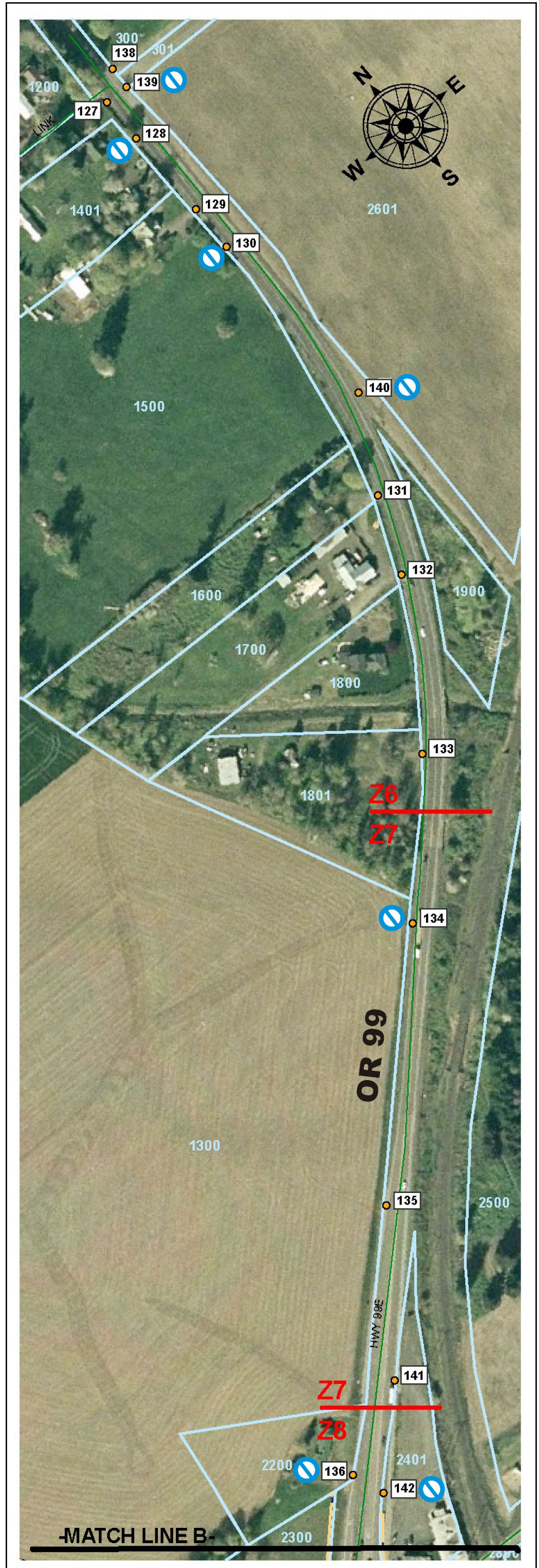
Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
103	(6th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
104	Close approach as opportunity arises. Access exists from two city streets and alley.	Same as Short-Range.	Same as Short-Range.
105	(5th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
106	Close approach as opportunity arises. Alternate access available to 5th Ave.	Same as Short-Range.	None
107	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 5th Ave.	None
108	Approach to serve egress movements from site only, with ingress movements from 4th Ave.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 4th Ave.	None
109	(4th Ave.) No action.	Same as Short-Range.	Same as Short-Range.
110	Close approach as opportunity arises. Alternate access available to 4th Ave.	Same as Short-Range.	None
111	Close approach as opportunity arises. Alternate access available to 4th Ave.	Same as Short-Range.	None
112	No action.	Upon property redevelopment, close approach to OR 99. Future access to be taken from 3rd Ave.	None
113	(3rd Ave.) No action.	Same as Short-Range.	Same as Short-Range.
114	(2nd Ave.) No action.	Same as Short-Range.	Same as Short-Range.
115	(1st Ave.) No action.	Same as Short-Range.	Same as Short-Range.
116	Approach to remain until reasonable alternate access becomes available.	Same as Short-Range.	Same as Short-Range.

Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
117	Approach to remain until reasonable alternate access becomes available.	Same as Short-Range.	Same as Short-Range.
118	As opportunity arises, close approach to OR 99.	Same as Short-Range.	None
119	Approach to remain until reasonable alternate access becomes available.	Same as Short-Range.	Same as Short-Range.
120	As opportunity arises, close approach to OR 99.	Same as Short-Range.	None
121	As opportunity arises, close approach to OR 99.	Same as Short-Range.	None
122	As opportunity arises, close approach to OR 99.	Same as Short-Range.	None
123	(Prairie Rd.) No action.	Same as Short-Range.	Same as Short-Range.
124	No action.	Upon property redevelopment, close approach to OR 99W and take access from Toftdahl Rd.	None
125	(Juniper St.) No action.	Same as Short-Range.	Same as Short-Range.
126	(Toftdahl Rd.) No action.	Same as Short-Range.	Same as Short-Range.
127	(Link Ln.) No action.	Same as Short-Range.	Same as Short-Range.
128	Close approach as opportunity arises. Alternate access is available via Link Lane.	Same as Short-Range.	None
129	Combine with approach No. 130.	Same as Short-Range.	Same as Short-Range.
130	Close approach as opportunity arises. Alternate access is available via approach No. 129.	Same as Short-Range.	None
131	No action.	Same as Short-Range.	Same as Short-Range.
132	No action.	Same as Short-Range.	Same as Short-Range.
133	No action.	Same as Short-Range.	Same as Short-Range.

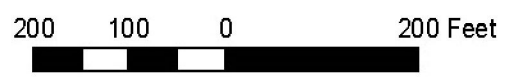
Table 6-4 (continued): OR 99 Junction City Access Management Plan Actions

Approach #	Short-Range Action	Medium-Range Action	Long-Range Action
134	Close approach as opportunity arises. Alternate access is available via approach No. 135.	Same as Short-Range.	None
135	No action.	Same as Short-Range. However, upon property redevelopment, consideration should be given to maximizing the distance to the OR 99W/OR 99E intersection and providing adequate sight distance to the north along OR 99E (horizontal curve).	None
136	No action.	Upon property redevelopment, close approach to OR 99E.	None
137	(OR 99W/OR 99E) No action.	Same as Short-Range.	Same as Short-Range.
138	Combine with approach No. 139 and locate shared approach on property line.	Same as Short-Range.	Same as Short-Range.
139	Combine with approach No. 138 and locate shared approach on property line.	Same as Short-Range.	Same as Short-Range.
140	Close approach as opportunity arises. Alternate access is available via approach No. 139.	Same as Short-Range.	Same as Short-Range.
141	No action.	Same as Short-Range.	Same as Short-Range.
142	Close approach as opportunity arises. Alternate access is available via approach No. 141.	Same as Short-Range.	None
143	As opportunity arises, close approach to OR 99. Alternate access is available via Pitney Lane.	Same as Short-range.	Same as Short-range.
New Approach between No. 143 and No. 67	Provide one approach to OR 99 from area of TL 400 that is landlocked by a stream. Locate approach as far south of neighboring approach to the north as feasible.	Same as Short-range.	Same as Short-range.



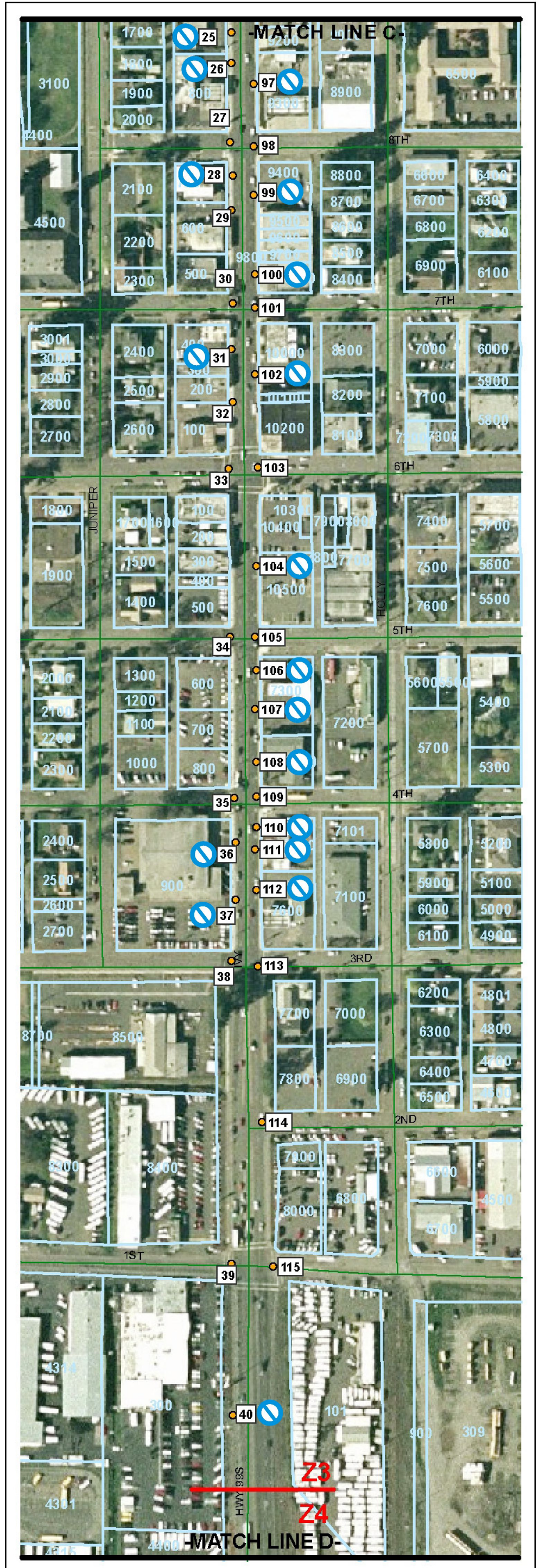
Legend

- Tax Lot
- UGB
- Approach
- Approach Number
- Access Control
- Access Management Zone Boundary and Number
- Close Approach
- Restricted Turn Movements
- Construct Approach



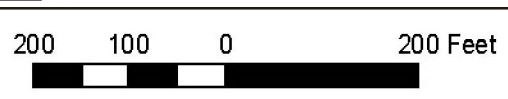
Notes:
 - For detailed information regarding individual approach treatment, see Table 6-4.
 - The actions illustrated are subject to change as described in the text of the access management plan.

FIGURE 6-9A
OR 99 Long-Range
Access Management Plan



- Legend**
- UGB
 - Approach
 - Approach Number
 - Access Control

- Tax Lot
- Access Management Zone Boundary and Number
- Close Approach
- Restricted Turn Movements
- Construct Approach



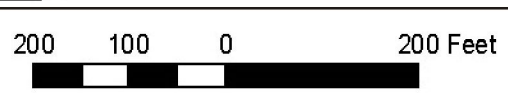
Notes:
 - For detailed information regarding individual approach treatment, see Table 6-4.
 - The actions illustrated are subject to change as described in the text of the access management plan.

FIGURE 6-9B
OR 99 Long-Range
Access Management Plan



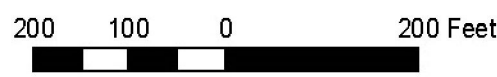
Legend

- Tax Lot
- Access Management Zone Boundary and Number
- UGB
- Approach
- # Approach Number
- Access Control
- /
 Close Approach
- R
 Restricted Turn Movements
- ▶
 Construct Approach



Notes:
 - For detailed information regarding individual approach treatment, see Table 6-4.
 - The actions illustrated are subject to change as described in the text of the access management plan.

FIGURE 6-9C
OR 99 Long-Range
Access Management Plan



- Legend**
- UGB
 - Approach
 - # Approach Number
 - Access Control
 - Tax Lot
 - Access Management Zone Boundary and Number
 - Close Approach
 - R Restricted Turn Movements
 - ▶ Construct Approach

Notes:
 - For detailed information regarding individual approach treatment, see Table 6-4.
 - The actions illustrated are subject to change as described in the text of the access management plan.

FIGURE 6-9D
OR 99 Long-Range
Access Management Plan

Access Management Plan Modification Recommendation

As the access management plan is implemented over time, there may be conditions under which modifications to the plan are desired as a result of new findings or changes in circumstances related to property accessibility. Under such conditions, modifications to the plan may be made by ODOT, with input provided by the applicable local jurisdiction (i.e. City of Junction City or Lane County). Any modifications made should be documented in writing and provided to ODOT, the City of Junction City, and Lane County. Specific conditions under which modifications to the access management plan actions are recommended are as follows.

Approach Permitting

The actions in this plan do not replace the requirement to obtain an approach permit from ODOT for the construction, maintenance, and operation of an approach to a state highway.

Turn Restrictions & Approach Design

Conditions of use, including but not limited to approach design and the restriction of turning movements allowed, may be applied by ODOT through the approach application process. Unless specifically stated, the actions in this plan do not guarantee that all turning movements will be allowed to/from an approach.

Land Divisions and Consolidations

It should be noted that the recommended actions were based in part on current property configurations and ownerships. Should property boundaries change in the future through consolidation or other land use action, the access management plan may be modified by ODOT following consultation by the applicable local jurisdiction (i.e. City of Junction City or Lane County), where such modifications would move in the direction of the adopted access management spacing standards in this plan. Additional access points should not be allowed where they would result from future land partitions or subdivisions. Also, where contiguous properties have been placed under common ownership following plan adoption, opportunities to further consolidate access should be pursued.

Changes in Property Zoning

It should be noted that the recommended actions were based in part on current property zoning and comprehensive plan zoning. Should property zoning change in a manner inconsistent with current or comprehensive plan zoning, the access management plan may be modified by ODOT following consultation by the applicable local jurisdiction (i.e. City of Junction City or Lane County), where such modifications would move in the direction of the adopted access management spacing standards in this plan. Provision for access management plan modification by ODOT shall also be allowed where conditional uses are approved.

Shared Mid-block Access

Along the corridor of OR99 from 17th Avenue to 1st Avenue where property access is recommended to be relocated to the side-streets rather than taken directly from the highway, applications for approaches to the highway where not shown in the plan may be considered by ODOT where proposed approaches would be located at a mid-block location, adjacent property owners agree to record access easements to allow for joint use, and where a right of access exists. When approving such applications, OAR 734-051 will govern decisions and findings must be made that side-street

access as shown in the plan could not adequately serve existing and proposed development and that approval of the proposed access would benefit the highway.

Also, should the corridor along OR99 from 17th Avenue to 1st Avenue become adopted as a Special Transportation Area (STA), the prevailing access management spacing standards for that section would be used.

Maintenance & Modernization of Legal Approaches

The actions listed in this plan shall not prevent the reconstruction of legal approaches as necessary to meet City, County, or ODOT standard design. This provision is not intended to apply to conditions related to ODOT projects or actions resulting in a “Change in Use” of an approach as defined in OAR 734-051-0045.

Recommended Modifications to Public Alley Design

Within the corridor along OR99 from 17th Avenue to 1st Avenue, property access is recommended to be relocated to the side-streets, rather than taken directly from the highway. However, most properties are currently served by alleys to the side-streets that are located approximately 100 feet from the intersection with OR99, making the establishment of additional access points undesirable. As these alleys are only 20 feet wide, they may not be adequate to accommodate trips associated with some developments.

Therefore, it is recommended that all alleys be improved at the time access is relocated from OR99 to a side-street. Improvements shall include widening the alley by a minimum of four feet on each side (each side improved as part of development activity on that property) and establishing a minimum unobstructed approach throat distance of 30 feet from the back of sidewalk. Larger dimensions may be required as determined appropriate through the development review process. If improvements are not possible due to existing development patterns or insufficient right-of-way, one-way travel should be considered.

Project Phasing

This discussion includes an assessment of the anticipated timing and importance of various elements of each alternative to guide prioritization of funding. It should be recognized that this assessment assumes growth through 2026 will occur evenly throughout the City and on a linear basis. Significant develop activity in any one area of the City could have an impact on the timing of improvements needed.

Alternatives A and B:

Alternatives A and B are fundamentally the same, with the most significant difference being only the alignment of the new half of the couplet (i.e. Juniper Street or Holly Street). Therefore, the phasing discussion for these alternatives will be the same.

As the intersection on OR 99 at 1st Avenue is the only intersection that fails to meet mobility standards under existing conditions and is projected to be the primary bottleneck in 2026, the timing of the need to implement improvements at this location is immediate. Therefore, the first phase must include the couplet from the north end of the project (OR 99W/OR 99E) through the 1st Avenue intersection. The divided highway section south of 1st Avenue does not address any mobility needs,

but was included to improve traffic safety and extend pedestrian facilities further to the south. Therefore, the divided highway section could be included as a separate phase to be constructed when desired.

While possibly subject to an urban growth boundary expansion or goal exception, the timing of the proposed improvements to local facilities (Prairie Road extension and River Road and Pitney Lane enhancements) will play a key role in the ability of the couplet and other improvements in the corridor to operate adequately. Without the improved local facilities in place, the intersections on the couplet with 1st Avenue could only operate adequately through the year 2011. The study intersections north of 1st Avenue will operate adequately through 2026 with the couplet in place regardless of timing of the local facility improvements.

When prioritizing the local facility improvements, consideration should be given to the amount of traffic that is expected to divert to each facility. Under that method, the extension of Prairie Road to River Road would be highest in priority, followed by the Pitney Lane improvements and lastly, the River Road enhancements. The Prairie Road extension to River Road would be the most effective if made easily accessible to the high employment area southeast of the River Road/UPRR crossing (including Country Coach), as it would divert a large volume of trips away from the critical OR 99/1st Avenue intersections.

The OR 99/Prairie Road intersection will continue to meet mobility standards without signalization through the year 2023, assuming the local improvements have not been made. With the local improvements in place, this intersection could operate adequately through 2026 without signalization. However, given the high volumes of conflicting southbound through and northbound left turning traffic, safety concerns may drive the need for a signal sooner. When the signal is installed, the capacity will be reduced for northbound and southbound through traffic that will now be required to stop at times. The construction of dual northbound left turn lanes would be required as part of the signal installation to meet adopted mobility standards. However, given the cost of constructing the dual northbound left turn lanes, which includes widening Prairie Road to Bailey Lane, consideration should be given to pursuing a design exception to allow operation at a v/c ratio of 0.76 rather than 0.75.

The intersection of OR 99/OR 36 will continue to operate adequately without improvement and without the improved local facilities through the year 2014. An additional four years could be gained by constructing the westbound right turn lane. When the Prairie Road extension is constructed, the northbound right turn lane and dual westbound left turn lanes will be needed. The separate eastbound left turn lane should be constructed along with the implementation of the Pitney Lane improvements. The dual northbound left turn lanes would not be needed until 2026, and could therefore be included as part of any of the other phases of improvement for this intersection. However, given the cost of constructing the dual northbound left turn lanes, which includes widening OR 36 to Pitney Lane, consideration should be given to pursuing a design exception to allow operation at a v/c ratio of 0.77 rather than 0.75.

Alternative C

With Alternative C, the by-pass must be included in the first phase if improvements to poor operations in the corridor are to be addressed. Again, as the intersection on OR 99 at 1st Avenue is the only intersection that fails to meet mobility standards under existing conditions and is projected to be the primary bottleneck in 2026, the timing of the need to implement improvements at this location is immediate. Therefore, the needed timing of the first phase (by-pass) is immediate as well.

Because at-grade railroad crossings on the by-pass would not be desirable and are not likely to be allowed, the grade-separated crossings at the north and south ends of the by-pass must be included in phase 1.

A traffic signal could be used as an interim improvement at the north end of the by-pass to allow the construction of the whole north interchange to be deferred to another phase. A signal could meet mobility standards through 2026, but the northbound left turn queues would be nearly 400 feet long. Also, there may be safety concerns with installing what would be a rural, isolated signal on a high-speed facility. As the large structure over the railroads must be constructed as part of phase 1 anyway, it may be more desirable to complete the interchange as well to avoid these potential safety concerns.

If a traffic signal were used as an interim improvement at the south end of the by-pass rather than constructing the full interchange during phase 1, mobility standards could be met through 2026. However, the high conflicting volumes of southbound through and northbound left turn traffic will result in very long queues (greater than 500 feet), even with dual left turn lanes, and may become a safety concern. In addition, as noted for the north end of the by-pass, there may be safety concerns related to the installation of an isolated signal on a high-speed rural corridor. Because the large structure over the railroad must be constructed as part of phase 1, it may be more desirable to construct the entire south interchange at that time as well.

The improvements on the OR 99 business route between the Flat Creek Bridge and 3rd Avenue are not intended to improved motor vehicle operations or meet mobility standards, but were included to improve bicycle and pedestrian transportation. Therefore, these improvements could be deferred to a later phase and constructed when desired.

With the by-pass in place, the improvements to local facilities would be underutilized. Therefore, these could be assigned a low priority or dropped from the project altogether.

Alternatives Evaluation

Using the Evaluation Criteria and Technical Rating Methods developed in Technical Memorandum #4, each alternative was rated for compliance with project needs and expectations. Table 6-5 provides a side-by-side comparison of each alternative in consideration of the evaluation criteria. While all alternatives appear to be equally rated in many categories, it should be acknowledged that many of the criteria simply indicate whether improvement was made in that category or not and that the ratings do not always convey the degree to which improvements were made. As an example, all alternatives are shown to reduce corridor travel time, but from Table 6-2 it is shown that Alternative C offered the greatest reduction.

From the evaluation matrix, it can be concluded that if the No Build alternative were selected, there would be no direct property impacts or additional costs, but congestion in the corridor would become severe, bicycle and pedestrian travel would be inhibited, and the high crash rates and hazardous trends along OR 99 would continue unabated. While the ratings from the matrix alone do not provide a clear differentiation between Alternatives A, B, and C, it can be concluded that each of these alternatives are viable and capable of addressing the needs outlined. It can also be concluded that Alternative C would come at a significantly higher cost (approximately 50% higher) than Alternatives A or B.

In addition to the ratings provided, other key issues raised by the discussion in this memorandum that should be taken into account include:

- Alternatives A and B could include on-street parking north of 1st Avenue to supplement on-site parking for area businesses.
- While all alternatives would improve pedestrian crossings of OR 99, Alternatives A and B would provide a much longer area of improvement compared to Alternative C (nearly 2 miles compared to approximately ¾ of a mile). Also, the sidewalks included as part of Alternatives A and B would be wider than those provided under Alternative C (11 feet compared to 6 feet).

Table 6-5: Alternatives Evaluation Matrix

Evaluation Criteria	Alternatives			
	No Build Alternative	Alternative A: Juniper/Ivy Couplet	Alternative B: Ivy/Holly Couplet	Alternative C: OR 99 By-pass
Meets HDM mobility standards	-	+	+	+
Reduces corridor through travel time	-	+	+	+
Reduces OR 99 intersection queue blockage	-	+	+	+
Able to meet design standards	-	+	+	+
Facilitates pedestrian crossing of OR 99	-	+	+	+
Improves bicycle travel	-	+	+	+
Reduces direct highway access	✓	+	+	+
Reduces vehicle conflicts	✓	+	+	+
Potential environmental impacts	+	✓	✓	✓
No new at-grade railroad crossings	✓	✓	✓	✓
Feasible construction/implementation	NA	✓	✓	✓
Private property impacts	+	-	-	-
Cost-effectiveness	+	+	+	-
Consistent with City Comp Plan/ TSP	+	+	+	+
Consistent with Junction City Downtown Plan	+	+	+	+

- Alternatives A and B would facilitate the operation of transit stops along the OR 99 corridor, while Alternative C would provide no benefit to transit in some areas and would actually preclude the operation of transit stops through the downtown area.
- Alternative C has the potential to remove through freight traffic from the downtown and would provide the shortest travel time for freight movement.
- Alternatives A and B appear to have less potential for impacting wetlands.

- As Pitney Lane was underutilized under Alternative C, the improvements to that corridor could be removed from the project to reduce the total cost by approximately \$10 million.
- While the Prairie Road extension does not create any additional at-grade railroad crossings, it does remove an existing one and replaces it with a new crossing, which would require approval of a crossing order.
- Rail impacts of varying degrees are present as part of every alternative, including widened crossings associated with the construction of new turn lanes at nearby intersections, construction of grade-separated crossings, and many roadway improvements near (within 500 feet), but not at, rail crossings.
- Policy 1G (Major Improvements) from the 1999 Oregon Highway Plan (as amended) places a higher priority on projects such as Alternatives A and B that improve the efficiency of or add capacity to existing facilities rather than promoting the construction of new facilities as would be required for Alternative C.
- While Alternatives A and B are similar in many ways, they are very different in how they would potentially impact the downtown area of the City. Alternative A, which incorporates Juniper Street into the couplet system, would effectively extend the downtown to the west. While the comprehensive plan zoning of properties along Juniper Street is consistent with both commercial and residential development, the conversion of Juniper Street into a highway would have a significant impact on existing land uses such as historic homes and schools. In contrast, the existing land uses surrounding Holly Street (Alternative B) are predominantly commercial in nature and would more readily accommodate the conversion to a highway corridor. However, Alternative B is dependant on the elimination of the BNRR line along Holly Street.

It should be noted that the constraints of state land use law regarding rural and urban land deserves mention with regard to evaluating the feasibility of construction of the local improvements outside the urban growth boundary, which were included as elements of all alternatives.

As mentioned previously, in order to accommodate many of the local improvements, the City may either need to expand its urban growth boundary or obtain an exception to statewide land use Goal 3 (Agriculture). In order to expand the urban growth boundary, the City will need to demonstrate that the additional land is necessary to accommodate growth over the next 20 years. A new urban growth boundary expansion will require revised growth projections that make a convincing argument to the state Land Conservation and Development Commission, who must sanction the expansion, that another urban growth boundary expansion is justified.

Alternatively, the City could apply for an exception to state land use Goal 3 (Agriculture) to accommodate construction of the improvements. This would require a demonstration that there are no other alternatives to solving the OR 99 issues being addressed by this plan within the existing urban growth boundary. With the exception of the need to further evaluate solutions to the problems identified at OR 99 and 1st Street, the alternative evaluations completed for this plan are believed to fulfill this obligation, as the local improvements identified have been shown to be essential for any alternative to provide adequate operations through the planning horizon.

The relatively near-term need for supplementary local facility improvements underscores the importance of resolving the ODOT/Oregon Transportation Commission both the policy issues related to railroad crossings and possible impacts to rural lands and the remaining operational questions

related to address the congestion at the intersection of 1st Street and OR 99 without adding new facilities outside of the UGB as quickly as possible. Similarly, if it is determined that there really is no solution to the congestion at OR99 and 1st Street that can be implemented within the UGB, it will be necessary to work with Lane County and the Department of Land Conservation and Development to investigate the potential to expand the urban growth boundary or obtain land use approvals or goal exceptions as needed to enable solutions outside of the UGB to move forward in a timely manner.

Chapter 7 Preferred Alternative

Following review of the alternatives evaluation, there was consensus among the Technical Advisory Committee (TAC), Citizen Advisory Committee (CAC), and the general public attending the final open house that Alternative B, including the Ivy/Holly couplet, would be the Preferred Alternative. This chapter will provide further detail on this alternative, including an outline of a potential phasing plan, to help guide further analysis and design efforts through the project development process in the future.

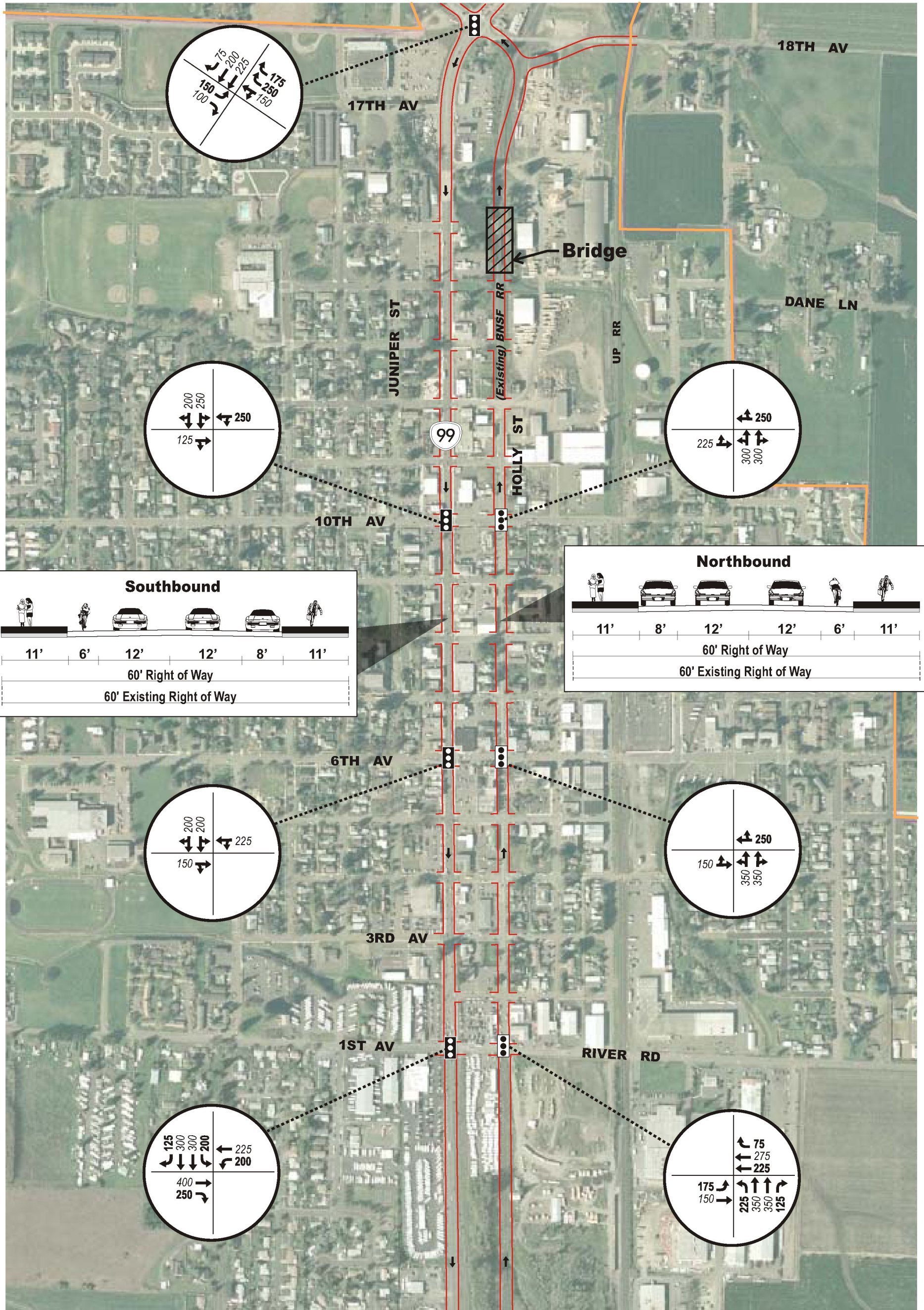
Preferred Alternative: Alternative B – Ivy/Holly Couplet

Functional Plan

The key aspects of Alternative B are that it maintains two lanes of capacity in both directions of travel along OR 99, while reducing turning conflicts, utilizing existing public right of way, and creating an environment that is more conducive to walking and biking. In particular, the element that made this alternative preferred over the other couplet-based alternative considered was that it minimized impacts on existing land uses by shifting the highway alignment to the east, towards the center of the downtown, by routing northbound traffic over Holly Street and southbound traffic over Ivy Street (existing OR 99), where surrounding land uses are already consistent with highway-oriented businesses. It is important to note that a critical assumption associated with this project is that the Burlington Northern Santa Fe (BNSF) railroad, which currently runs down the middle of Holly Street, would be removed as part of a separate effort. Alternative B could not be constructed with the BNSF railroad in its current location. A concept drawing of Alternative B, showing general roadway alignments, typical highway cross-sections, lane configurations, traffic signal locations, and 95th percentile queue lengths for use in turn lane design, is provided in Figures 7-1 and 7-2.

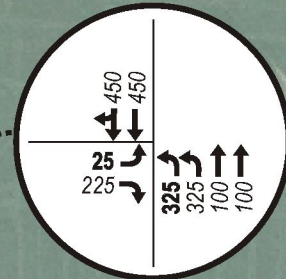
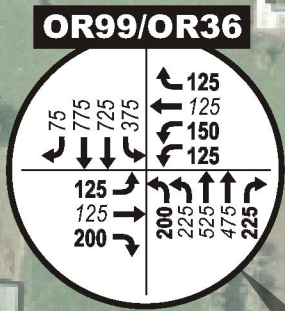
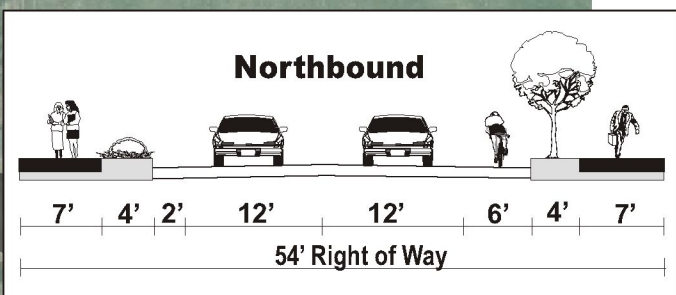
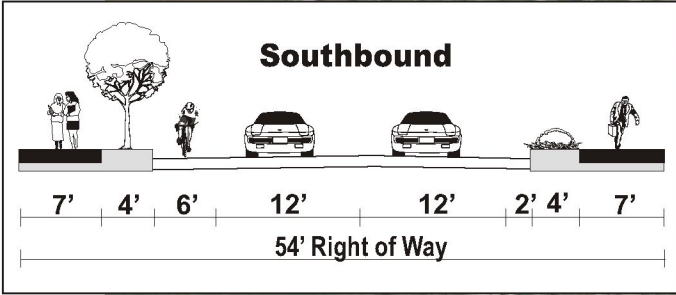
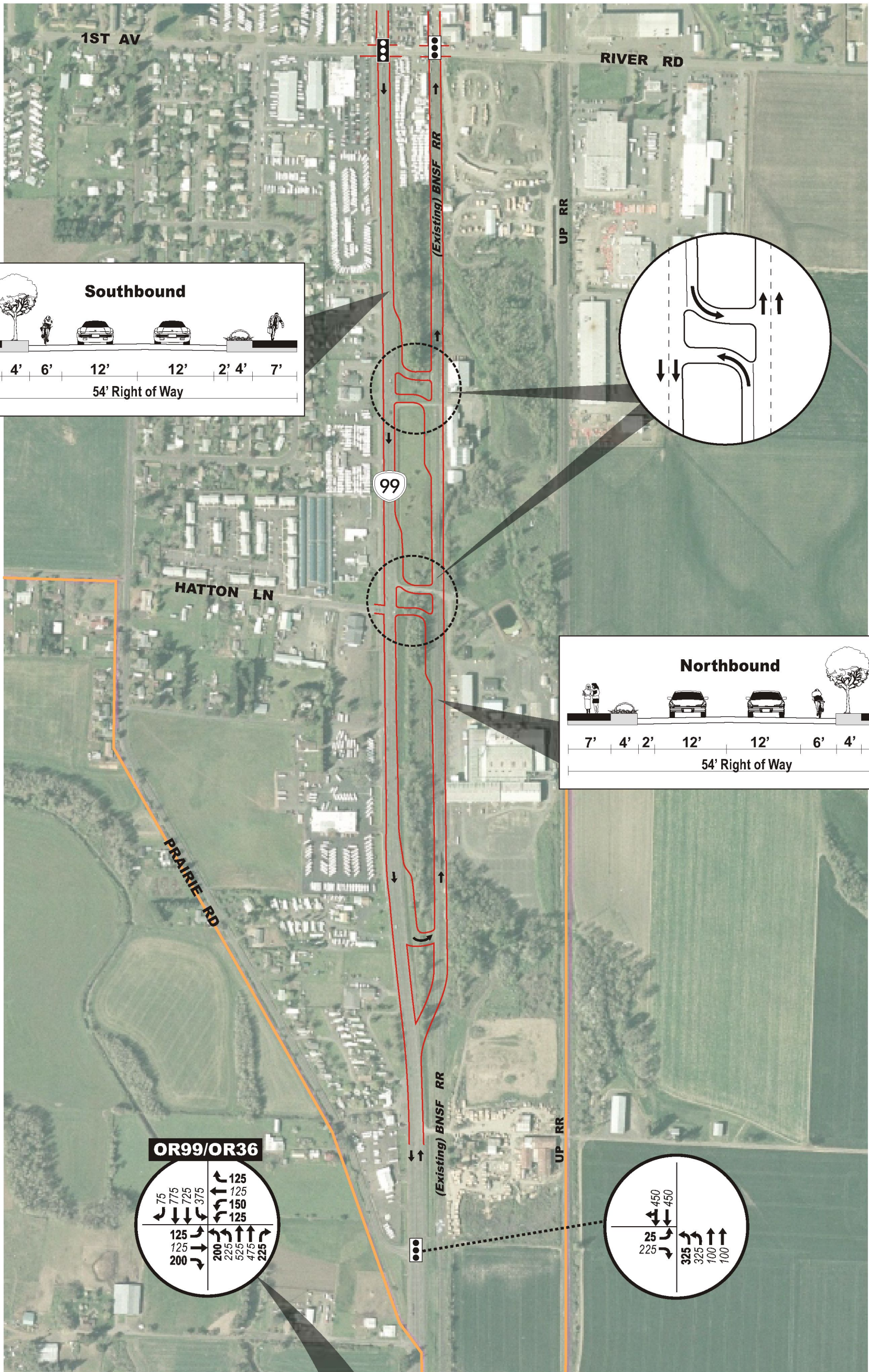
LEGEND

	- Couplet Alignment		- Approach Lane
	- Urban Growth Boundary (UGB)		- 95th Percentile Queue (feet)
	- Potential New Traffic Signal		- Bold Type Indicates Extended Storage or New Lane Needed
	- Existing Traffic Signal		- Free Movement, No Queue



LEGEND

- Couplet Alignment
- Urban Growth Boundary (UGB)
- Potential New Traffic Signal
- Existing Traffic Signal
- Approach Lane
- 000** - 95th Percentile Queue (feet)
- 000** - Bold Type Indicates Extended Storage or New Lane Needed
- X** - Free Movement, No Queue



Alternative B consists of several distinct sets of improvements that, while all necessary to achieve adequate operations through the OR 99 study corridor, can be viewed separately to facilitate understanding of the various elements and potential construction phasing options. These groupings include:

- The north couplet,
- The south couplet,
- Local facility improvements,
- OR 99/Prairie Road improvements, and
- OR 99/OR 36 improvements.

Each of these groupings has been highlighted on an area map in Figure 7-5 later in this memorandum.

The North Couplet

The elements of the overall improvements referred to as the “north couplet” include the improvements in the OR 99 corridor from the north project limits at the OR 99W/OR 99E junction to just south of 1st Avenue (see Figure 7-1).

The new couplet would begin at the OR 99W/OR 99E junction, where Ivy Street would be converted to serve only one-way travel in the southbound direction. The existing approach of 18th Avenue would be replaced by a new highway approach serving only one-way travel in the northbound direction. The approaches of OR 99W and OR 99E would continue to serve two-way traffic, but would require some modifications to be compatible with the new one-way approaches to the intersection and modification of the existing traffic signal would be necessary. For the purpose of this analysis, the modified traffic signal at the OR 99W/OR 99E junction was assumed to be actuated and uncoordinated (2,600 feet from nearest signal at 10th Avenue) and operate at a cycle length of 90 seconds. Split phasing was used, with each of the three approaches (Ivy Street has no entering traffic) having its own phase.

The northbound roadbed of the OR 99 couplet would follow the BNSF railroad/Holly Street alignment (the railroad is assumed to have been previously removed through a separate effort) until about 16th Avenue, where it would veer to the east and return to align with OR 99W to become the fourth leg of the existing OR 99W/OR 99E intersection. This would require a realignment of 18th Avenue from the UPRR crossing to intersect with the northbound couplet roadbed (right-in/right-out intersection) rather than the OR 99W/OR 99E intersection as it does under existing conditions. Just north of 14th Avenue, a new bridge would be needed along the northbound Holly Street alignment to cross over Flat Creek.

The one-way northbound and southbound roadbeds would continue to the south along the Holly Street and Ivy Street alignments, respectively, through the intersections with 1st Avenue. Each one-way corridor of OR 99 would be constructed to fit within the existing 60-foot right-of-ways along Ivy Street and Holly Street, using a design speed of 30 mph (posted speed of 25 mph) and would include:

- 2 travel lanes (12 feet wide each),
- 1 bike lane (6 feet wide),
- Parallel parking on one side of the highway (8 feet wide), and
- 2 sidewalks (11 feet wide each).

Where there are existing traffic signals along OR 99 at 10th Avenue and 6th Avenue, it was assumed future traffic signals would continue to be needed at these locations on each corridor (preliminary signal warrants are met for all four signals and are included in the appendix). For the purpose of this analysis, each traffic signal was assumed to be actuated and coordinated, with coordination from 1st Avenue through 10th Avenue in each corridor. To keep vehicle queues short in the east-west direction between the halves of the couplet and to better serve pedestrian crossings, cycle lengths of 60 seconds were used. Each signal was operated with only two phases, using permissive left turn control. Because the signal at 1st Avenue was assumed to run with a 90-second cycle length to serve higher traffic demands, the signals at 10th and 6th Avenues would only be coordinated with the signal at 1st Avenue every third cycle. If better coordination between these signals is desired (approximately 1,500 feet between 1st Avenue and 6th Avenue), a 90-second cycle length could be used at 10th and 6th Avenue intersections, but this may result in longer side-street queues and longer pedestrian wait times in the downtown area.

Per a request from the CAC, all signalized intersections are to include audible pedestrian crossing signals to assist the vision impaired.

As noted, the intersections on OR 99 at 1st Avenue will need to serve higher traffic volumes, so were assumed to run at 90-second cycle lengths with protected left turn phasing provided on the side streets. The addition of separate turn lanes on intersection approaches was also required to adequately serve the expected demand. These improvements include:

Ivy Street/1st Avenue Intersection

- 200' southbound left turn lane on Ivy Street;
- 125' southbound right turn lane on Ivy Street;
- 250' eastbound right turn lane on 1st Avenue; and
- Separate westbound left turn lane – full length, extending to Holly Street.

Holly Street/1st Avenue Intersection

- 225' northbound left turn lane on Holly Street;
- 125' northbound right turn lane on Holly Street;
- 75' westbound right turn lane on 1st Avenue;
- Second westbound through lane on 1st Avenue, extending 225' from intersection; and
- Separate eastbound left turn lane – full length, extending to Ivy Street.

An important element of the improvements at the 1st Avenue intersections is the side-by-side left turn lanes along 1st Avenue between the northbound and southbound sides of the couplet, which are needed to maximize left turn storage space within the short block length (approximately 225 feet available). Because the demand for the westbound left turn movement at Ivy Street is projected to be fairly high and was estimated to use all of the available storage in this block, the second westbound through lane on 1st Avenue at Holly Street was added to act as an extension of this lane to improve lane balance between the lefts and throughs and to help keep left turn queue overflows from blocking through traffic (see Figure 7-3).

Once south of 1st Avenue, the northbound and southbound sides of the couplet transition into what can be referred to as the “south couplet”.

The South Couplet

South of 1st Avenue, the one-way corridors are extended to a point approximately ¼-mile north of the intersection with Prairie Road, where they are brought back together into the existing five-lane corridor and alignment. Within the south couplet, the northbound and southbound couplet corridors change in roadside environment and proposed design. While referred to as a couplet, in this area they could be more appropriately referred to as a divided highway, as the area between the roadbeds is undeveloped and there are no cross-streets.

With the BNSF railroad removed, the northbound lanes could either use the railroad right-of-way or return to the highway right-of-way south of 1st Avenue. The distance of separation between the northbound and southbound roadbeds varies, but could be as great as 125 feet. Directional median openings would be provided to allow for U-turns and improved access to properties adjacent to the highway. Given the change in roadside environment from downtown to highway commercial and industrial, a higher design speed of 40 mph (posted 35 mph) was used for the divided highway section, resulting in the elimination of on-street parking and a small reduction in overall roadbed width compared to the northern section. The south couplet has been illustrated in Figure 7-2, showing general roadway alignments, typical highway cross-sections, lane configurations, traffic signal locations, and locations and conceptual drawings of directional median openings.




Local Facility Improvements

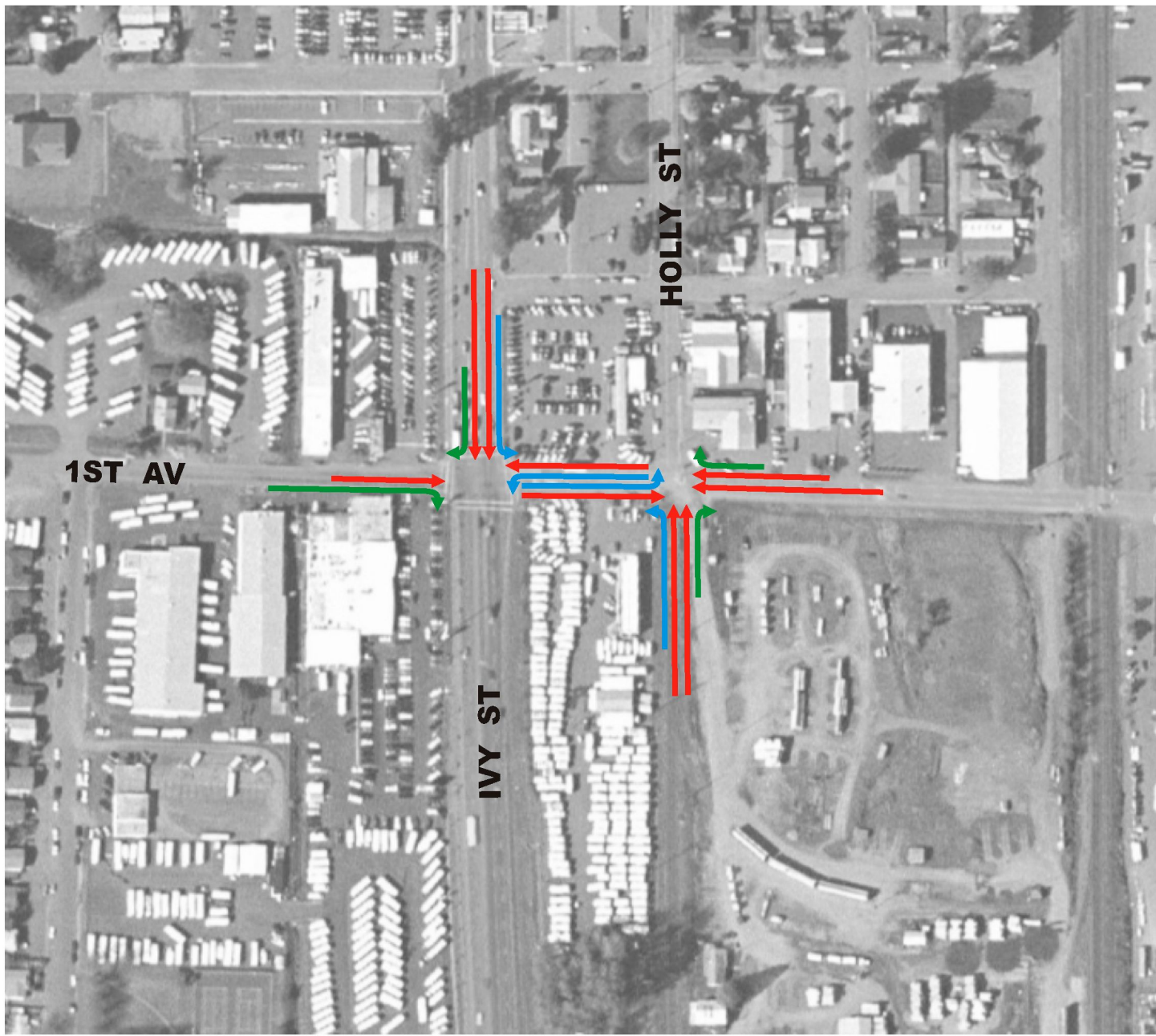
To supplement improvements within the OR 99 corridor itself, improvements that would extend, realign, and increase the capacity of County roads surrounding the City to enhance connectivity and provide alternative routes to OR 99 were developed and analyzed. New and upgraded roads outside of the UGB would be constructed to County Rural Collector standards. In most areas, the roadway upgrades would simply provide wider shoulders (total pavement width of 36 feet), which generally makes a roadway more comfortable for drivers but provides only small capacity benefits. The wider shoulders would also be able to accommodate bicycle traffic. The locations and status of proposed improvements are illustrated in Figure 7-4. The cross-sections of these roadways would include:

- 2 travel lanes (12 feet wide each) and
- 2 shoulders (6 feet wide each).



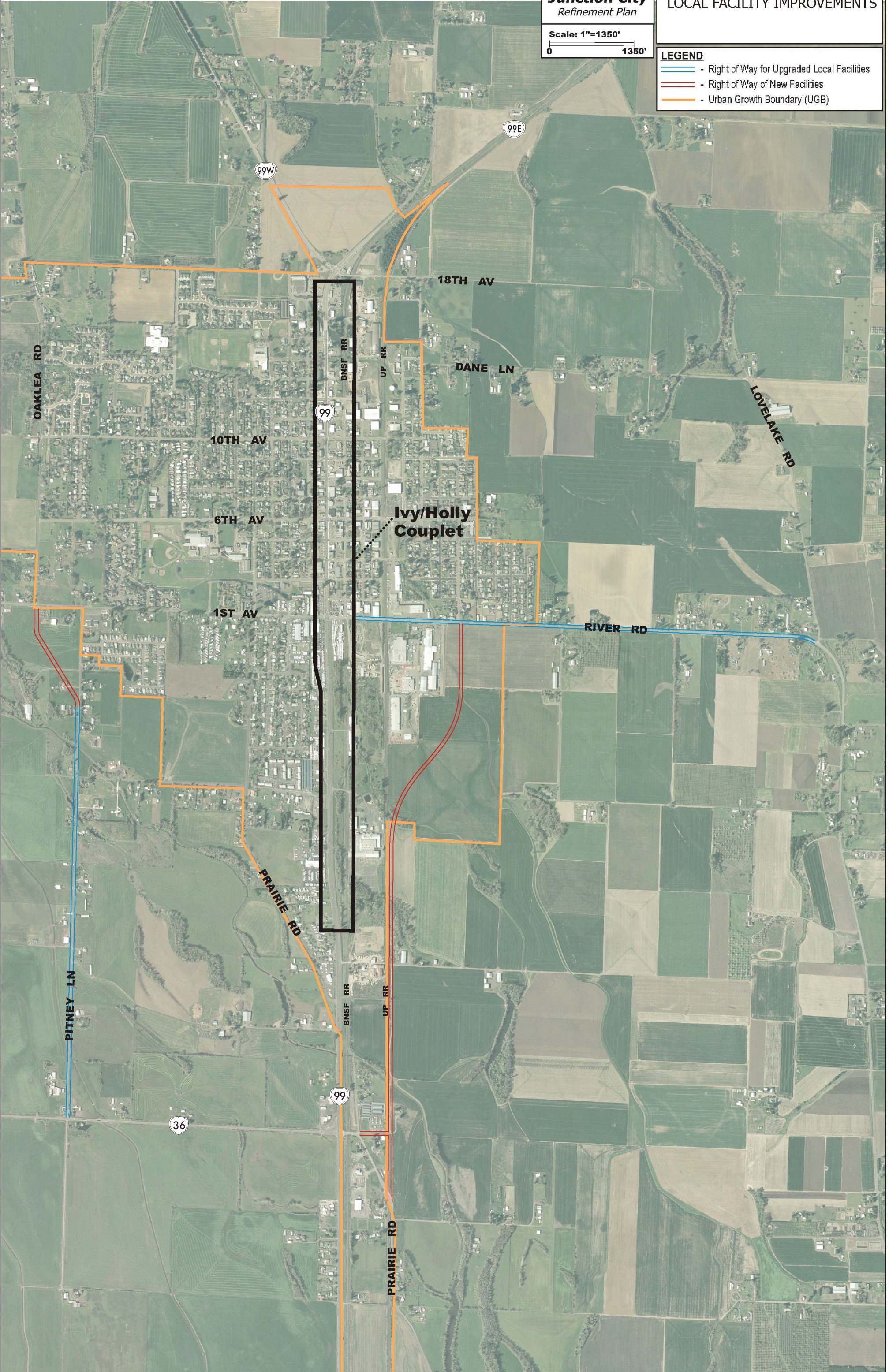
LEGEND

-  - Left Turn Lane
-  - Through Lane
-  - Right Turn Lane



Scale: 1"=1350'
0 1350'

- LEGEND**
- Right of Way for Upgraded Local Facilities
 - Right of Way of New Facilities
 - Urban Growth Boundary (UGB)



Pitney Lane, a local street, would be improved to collector (with shoulder) standards from OR 36 north to Bailey Lane and would be realigned from Bailey Lane north to intersect with High Pass Road opposite Oaklea Drive. This realignment and upgrade would make Pitney Lane more attractive as an alternate route to OR 99 and would facilitate north-south connectivity by acting as an extension of Oaklea Drive. As shown in Figure 7-4, the realigned portion of Pitney Lane would lie outside of the current UGB. Realignments are permitted on rural lands (outside the UGB) provided they can demonstrate through a special use permit process that no significant change is forced on accepted farming and forestry practices on agricultural or forest lands, and no significant cost increase in farming or forestry practices would result, and provided an alternatives analysis meeting TPR requirements supports the realignment.

Prairie Road (east of OR 99) would be realigned to remove the skewed Union Pacific Railroad (UPRR) crossing, and continue north along the east side of the UPRR line. A new east-west roadway would then be constructed to connect Prairie Road to the OR 99/ OR 36 intersection, creating a “T”-intersection with Prairie Road. This would have negligible impact on the BNSF rail crossing (if that section of the line were still in its existing location), but would require construction of a new UPRR crossing (to replace the old one) just west of the intersection of the new roadway at Prairie Road, which would require obtaining a crossing permit from ODOT Rail.

An extension of Prairie Road north of its current intersection with OR 99 was also analyzed, primarily as a means to reduce peak hour congestion at 1st Street and OR 99 that is largely associated with traffic generated by large employers. It would address this congestion by providing an alternative way to access OR 99 and the Eugene area to and from the south without requiring the use of the OR 99 and 1st Street intersection. This extension would run north from the current intersection or Prairie and OR 99, east of the UPRR line through County lands outside of the UGB. As this extension continues north, it would enter the UGB, intersect with 1st Street/River Road, and create a new four-way intersection with Birch Street.

This improvement concept was developed because of the difficulty of creating an alternative connection to OR 99 inside the UGB that would help relieve congestion at OR 99 and 1st Street. The primary difficulty addressing this issue within the existing UGB is associated with developing the new or upgraded rail crossing that would be needed to provide this alternative within the UGB. East-west connectivity enhancements that may make the Prairie Road extension and the existing route along River Road more attractive also include upgrades of River Road on the east side of the City from OR 99 to Lovelake Road. These enhancements would generally include widening to increase shoulder widths, making the roadway more comfortable for motorists and bicycles.

As noted above, this improvement concept is partially outside the existing urban growth boundary but would mostly serve urban uses. Due to state land use law restrictions on accommodating urban development with rural road improvements, it is possible that new road extensions could not be implemented until such time as the Junction City urban growth boundary is expanded or the City obtains an exception to State Land Use Goal 3 (Agriculture). New roads are permitted provided the function of the road is to reduce local access to or local traffic on a state highway, they are limited to two travel lanes, and private access and intersections are limited to rural needs. Such roads are also subject to notice and opportunity to appeal under land use procedures, and must demonstrate that they do not force a significant change in, or increase the cost of, accepted farm and forest practices. Finally, an alternatives analysis is required meeting Transportation Planning Rule (TPR) requirements. If required, the exception would have to provide persuasive evidence that no alternative solutions are available within the urban growth boundary.

This improvement concept does raise an as yet unresolved policy conflict between the ODOT rail crossing policies and the land use goal that strives to minimize or eliminate the pressure to urbanize and develop rural lands that can occur when a new road provides more accessibility.

The Oregon Transportation Commission (OTC) has a long standing reluctance to endorse projects on the state transportation system or that benefit the state transportation system that may increase pressure for development of rural lands. As of the completion of this document, ODOT has not received clear direction from the OTC with regard to the best way to address the congestion problems at the intersection of 1st Street and OR 99. While ODOT is in full agreement that the problem at the intersection of 1st Street and OR 99 exists and needs to be addressed, further analysis of alternatives that stay within the UGB and specific policy guidance from the OTC will be needed before ODOT can endorse a recommended solution to this problem. ODOT is committed to work with the OTC and the City as rapidly as possible to resolve this outstanding question after the completion and adoption of this Refinement Plan. The results of that subsequent process can be amended into this Refinement Plan and/or adopted as part of the next update of the Junction City Transportation System Plan (TSP).

OR 99/Prairie Road improvements

Improvements to the OR 99/Prairie Road intersection (illustrated in Figure 7-2) include signalization (preliminary signal warrants met when modified to treat the northbound left turn as a minor street), construction of a minimal 50-foot eastbound left turn lane on Prairie Road to maximize capacity for the eastbound right turn movement, and the construction of a second northbound left turn lane on OR 99. For the purpose of this analysis, the signal at Prairie Road was assumed to operate with a 120-second cycle length and was coordinated with the signal at OR 99/OR 36 (approximately 2,000 feet to the south). Protected left turn phasing was provided for the northbound left turn movement.

The construction of the second northbound left turn lane on OR 99 will also require the widening of Prairie Road to provide two northbound lanes with which to receive the left turns from northbound OR 99. To ensure adequate lane balance between the two left turn lanes from OR 99, the widening on Prairie Road should be extended to Bailey Lane (approximately 3,800 feet away), where one lane would drop as a left turn lane. However, given the cost of constructing the dual northbound left turn lanes and associated widening of Prairie Road to Bailey Lane, consideration should be given instead to pursuing a design exception to allow operation at a v/c ratio of 0.76 rather than 0.75 (mobility standard from the 2003 Highway Design Manual).

OR 99/OR 36 improvements

Improvements to the OR 99/OR 36 intersection (illustrated in Figure 7-2) include:

- A second northbound left turn lane with 200' of storage;
- 225' northbound right turn lane;
- 125' eastbound left turn lane;
- 200' eastbound right turn lane;
- 125' westbound right turn lane;
- Dual westbound left turn lanes with 150' of storage each; and
- Signal modifications to accommodate approach widening.

Similar to the improvements at the OR 99/Prairie Road intersection, the construction of the dual northbound left turn lanes on OR 99 will require widening of OR 36 to provide two westbound lanes with which to receive the left turns from northbound OR 99. To ensure adequate lane balance between the two left turn lanes from OR 99, the widening on OR 36 may need to be extended to Pitney Lane (approximately 4,200 feet away), where one lane would drop as a right turn lane. However, it may be difficult to characterize such an improvement as solely necessary to accommodate turn movements rather than as general capacity improvements. If such improvements were determined to be general capacity improvements, an exception to Statewide Land Use Goal 3 (Agriculture) could be needed. A certain level of road improvements that increase capacity on rural lands is allowable provided certain criteria associated with impacts to agriculture and forestry practices can be met. Before advancing the project described above, additional analysis should be conducted to determine if adequate turn lanes could be provided without extending all of the way between OR 99 and Pitney Lane. Additionally, given the cost of constructing the dual northbound left turn lanes and associated widening OR 36 to Pitney Lane, serious consideration should be given instead to pursuing a design exception to allow operation at a v/c ratio of 0.77 rather than 0.75 (mobility standard from the 2003 Highway Design Manual).

Implementation Plan

This discussion includes an assessment of the anticipated timing and importance of various elements of Alternative B to guide prioritization of funding. It should be recognized that this assessment assumes growth through 2026 will occur evenly throughout the City and on a linear basis. Significant development activity in any one area of the City could have an impact on the timing of improvements needed. Figure 7-5 has been provided to illustrate the locations of phased elements discussed.

As the intersection on OR 99 at 1st Avenue is the only intersection that fails to meet mobility standards under existing conditions and is projected to be the primary bottleneck in 2026, the timing of the need to implement improvements at this location is immediate. Therefore, the first phase must include the couplet from the north end of the project (OR 99W/OR 99E) through the 1st Avenue intersection (referred to as, “The North Couplet”). The divided highway section south of 1st Avenue (referred to as, “The South Couplet”) does not address any mobility needs, but was included to improve traffic safety and extend pedestrian facilities further to the south. Therefore, the divided highway section could be included as a separate phase to be constructed when desired.

While possibly subject to an urban growth boundary expansion or goal exception, the timing of the proposed improvements to local facilities (Prairie Road extension or other solution to address congestion at 1st Street and OR 99 and the River Road and Pitney Lane enhancements) will play a key role in the ability of the couplet and other improvements in the corridor to operate adequately. Without the improved local facilities in place, the intersections on the couplet with 1st Avenue could only operate adequately through the year 2011. The study intersections north of 1st Avenue will operate adequately through 2026 with the couplet in place regardless of timing of the local facility improvements. The relatively near-term need for these improvements should underscore the importance of resolving the ODOT/OTC policy issues described earlier and/or, if necessary, investigating the potential to expand the urban growth boundary or obtain goal exceptions as needed to enable appropriate solutions to move forward in a timely manner.

When prioritizing the local facility improvements, consideration should be given to the amount of traffic that is expected to divert to each facility. Under that method, the extension of Prairie Road to

River Road or an alternative that would similarly address the congestion at the intersection of 1st Street and OR 99 without adding new facilities outside of the UGB would be highest in priority, followed by the Pitney Lane improvements and lastly, the River Road enhancements.

The OR 99/Prairie Road intersection will continue to meet mobility standards without signalization through the year 2023, assuming the local improvements have not been made. With the local improvements in place, this intersection could operate adequately through 2026 without signalization. However, given the high volumes of conflicting southbound through and northbound left turning traffic, safety concerns may drive the need for a signal sooner. When the signal is installed, the capacity for northbound and southbound through traffic that will now be required to stop at times will be reduced. The construction of dual northbound left turn lanes would be required as part of the signal installation to meet adopted mobility standards. However, given the cost of constructing the dual northbound left turn lanes, which includes widening Prairie Road to Bailey Lane, consideration should be given to pursuing a design exception to allow operation at a v/c ratio of 0.76 rather than 0.75.

The intersection of OR 99/OR 36 will continue to operate adequately without improvement and without the improved local facilities through the year 2014. An additional four years could be gained by constructing the westbound right turn lane. When the Prairie Road extension is constructed, the northbound right turn lane and dual westbound left turn lanes will be needed. The separate eastbound left turn lane should be constructed along with the implementation of the Pitney Lane improvements. The dual northbound left turn lanes would not be needed until 2026, and could therefore be included as part of any of the other phases of improvement for this intersection. However, given the cost of constructing the dual northbound left turn lanes, which includes widening OR 36 to Pitney Lane, consideration should be given to pursuing a design exception to allow operation at a v/c ratio of 0.77 rather than 0.75.

In summary, the phasing of improvements should be as shown below. It should be noted that the timing of needed improvements may change over time and that projects should be pursued as needs dictate or as opportunities arise.

Phase 1: The North Couplet – The need for this project is immediate.

Phase 2: Local Facility Improvements –

- Unit 1 would include the Prairie Road extension to River Road or an alternative that would similarly address the congestion at the intersection of 1st Street and OR 99 without adding new facilities outside of the UGB. This project is estimated to be needed by the year 2012.
- Unit 2 would include the Pitney Lane improvements. This project is estimated to be needed by the year 2014.

Phase 3: OR 99/36 Improvements – Elements of this project may be included in Units 1 and 2 of the Local Facility Improvements. Remaining elements not constructed as part of these other projects would be needed by 2026.

Phase 4: OR 99/Prairie Rd. Improvements – This project would not be needed until 2026, unless safety concerns demand it be constructed sooner.

Phase 5: The South Couplet – This project may be constructed at any time.

Local Facility Improvements –

- Unit 3 would include the River Road enhancements. The timing for this project is flexible and may be implemented at any time.

To enable needed projects to be implemented in a timely manner, the removal of the BNSF railroad from Holly Street and the process of resolving ODOT/OTC policy conflict issues, expanding the urban growth boundary, and/or obtaining goal exceptions as needed should be initiated immediately.

Freight Route Considerations

This plan recognizes that OR 99 is a heavy haul freight route. During the design phase, ODOT should involve freight representatives and ensure that any highway improvements resulting from this plan will accommodate the length, width, height, and weight of expected vehicles and loads. Particular attention should be paid to the design of entrances and exits to the couplet, and, in the southern section, to left turns through the median of the proposed divided highway. Also, ODOT redesign of the Holly Street bridge across Flat Creek should be certified as able to withstand repeated heavy haul weights loading.

Planning Document Updates

In order for the Refinement Plan preferred alternative to be fully implemented, a number of local planning documents will need to be updated. First, the adoption of this Refinement Plan updated the TSP Policy 37 to acknowledge the Refinement Plan for future OR 99 project planning and implementation. However, the TSP needs to be updated to reflect the current project priorities of the City, project costs, and non-OR 99 policy refinements. At the time this Refinement Plan was adopted, the City had begun a Periodic Review which included a complete TSP update. Second, it is recommended that the City review and refine the system development charge methodology.

Funding Options

Financing for state transportation system improvements comes from a variety of local, state, and federal sources. Most of the federal and state programs are competitive, and need clear documentation of the project scope, costs, and benefits. The adopted Refinement Plan is the best first step toward this documentation and will be an important planning tool when developing a strategy to acquire funding for the preferred alternative.

As noted earlier in this Refinement Plan, the state transportation system improvements or projects that are expected to be funded by ODOT that are listed on the Recommended Project List are not guaranteed future funding at this time and cannot yet be considered as reasonably likely to be funded during the identified planning horizon for the purpose of addressing OAR 660-0012-0060. For recommended projects to be considered reasonably likely to be funded during the identified planning horizon, they must either be selected for inclusion on the State Transportation Improvement Program (STIP), associated with a specific source of funding that is supported by ODOT in writing, or identified in a funding plan that is supported by ODOT in writing. The STIP is a project scheduling and funding document.

Unlike project lists contained in the STIP and Metropolitan Transportation Improvement Programs (MTIP's) prepared by Metropolitan Planning Organizations (MPOs), the Junction City OR 99 Transportation Refinement Plan project list is not required by federal or state law to be "fiscally constrained." Fiscal constraint is defined as a "*demonstration of sufficient funds (Federal, State, local, and private) to implement proposed transportation system improvements, as well as to operate and maintain the entire system, through the comparison of revenues and costs.*"¹ This means that this Plan can provide a single comprehensive list of regional transportation improvement needs and associated costs without having to provide fiscal rationale as to how the respective projects will actually be funded. However, with this rationale, as defined by OAR 660-0012-0060, the projects listed on the state transportation system or expected to be funded through ODOT cannot be used to support subsequent local land use changes unless or until they are included in an adopted State Transportation Improvement Program or a specific funding source is identified and supported by ODOT in writing or a specific funding plan that is supported by ODOT in writing is developed.

Therefore, with respect to the projects listed on the state transportation system or expected to be funded through ODOT, the Junction City OR 99 Transportation Refinement Plan Recommended Project List acts only as a reference for regional and local officials responsible for state and local transportation facilities in Junction City and Lane County to consult when (1) considering projects to propose to the State for inclusion in the STIP, (2) developing priorities for local funding, (3) determining project needs associated with private development proposals, and (4) determining projects needed to support publicly initiated plan amendments or zone changes. Because the cost of needed transportation improvements across the state far exceeds available funds, state officials must ultimately decide what projects to fund on the state transportation system, through inclusion on the STIP, based on a thorough evaluation of all projects proposed statewide. This evaluation and selection process is detailed in the *STIP User's Guide* (ODOT, 2003)².

The primary source for funding a major project on the State system is through the State Transportation Improvement Program (STIP). For the local road improvement portions of the

¹ Source: Federal Highway Administration web page: <http://www.fhwa.dot.gov/planning/fcdef62805.htm>

² STIP User's Guide available online at: <http://www.oregon.gov/ODOT/TD/TP/stipGuide.shtml>

preferred alternative, some local funding will most likely be required and would typically come from potential future bond or other local revenues. While the improvements are proposed on county roads, the loss to the county of Secure Rural Schools funding, and the absence of any other identified funding sources at this time, mean that Lane County is unlikely to be able to provide funding for these road improvements. Other local funding sources might include grants and private funds. A summary of potential public funding sources for the OR 99 couplet concept are included in this section of the Refinement Plan. Some of these funds are restricted to the type of improvements that qualify for assistance. Typically, state and federal funds require projects to comply with current ADA guidelines for accessibility.

Federal Funding Sources

Some federal funding programs are administered by the state. These programs are listed below.

Safe, Affordable, Flexible, Efficient, Transportation Equity Act- Legacy for Users (SAFETEA-LU)

SAFETEA-LU funding is targeted to improvements that demonstrate beneficial impacts towards implementing a region's transportation system plan; enhancing the multi-modal nature of the transportation system; and meeting local land use, economic, and environmental goals. Funding categories created by SAFETEA-LU are intended to provide more discretion in allocating federal transportation funds to projects ranging from highway improvements to transit improvements, management systems, and non-vehicular modes such as bicycle and pedestrian improvements. SAFETEA-LU funding programs include: National Highway System, Interstate Program, Surface Transportation Program, and National Scenic Byways Program.

Surface Transportation Program

Funding for transportation enhancement activities is provided under the Surface Transportation Program (STP) of SAFETEA-LU. These enhancement activities include the provision of facilities for pedestrians and bicycles. Ten percent of each state's share of STP funds is to be set aside for transportation enhancements. These funds are dispersed through ODOT's regional offices. The project must be included in the State Transportation Improvement Program (STIP) to receive STP funds. The STP is the most flexible of the funding programs and can fund improvements on any highway except those with a functional classification of local street or rural minor collector. These roads are now collectively referred to as federal-aid routes. Transit capital improvement projects are also eligible for funding through this category. Each eligible city is suballocated a portion of the State's STP funds. The project sponsor must request inclusion of the project in the annual STIP.

Transportation Enhancement Program (TE)

The state is required to set aside a portion of its STIP funds for projects that will enhance the cultural and environmental values of the state's transportation system. Projects need to demonstrate a link to the intermodal transportation system. This program funds enhancements that include mitigation of water pollution due to highway runoff, landscaping or other scenic beautification, bicycle/pedestrian projects, historic preservation, acquisition of scenic easements and scenic or historic sites, archaeological planning and research, and preservation of abandoned railway corridors.

Community Development Block Grants

Community Development Block Grants (CDBG) are administered by the Department of Housing and Urban Development and disbursed through the state. Although CDBG funds could be used for

transportation projects in eligible cities, these funds typically are used for other types of infrastructure projects.

Land and Water Conservation Fund

This grant program is administered by ODOT. Funds are derived under Public Law 88-578 from the National Park Service and U.S. Department of the Interior. Grants are available for the acquisition of land and the development of public outdoor recreation facilities. Grants are limited to 50 percent of the total project cost and the cities and counties are responsible for the remaining project cost. Bicycle/pedestrian paths have been funded under this program in instances where they were shown as needed in connection with outdoor recreation activities.

State Funding Sources

Oregon Department of Transportation State Highway Fund

The State of Oregon collects gas tax revenues, vehicle registration fees, and weight mile taxes on freight carriers. ODOT, through the Department of Revenue, receives these revenues and disburses a portion of them to individual cities and counties based on their percentage of statewide population. The Oregon constitution limits the use of these funds to capital projects within right-of-ways. Cities may use funds for local street, bike lane and sidewalk upgrades, maintenance, and new construction. A reasonable amount of this fund (at least one percent) must be spent on bicycle and pedestrian facilities.

ODOT administers two annual grant programs for bicycle and pedestrian projects using Highway Fund money. This grant program funds projects that cost up to \$100,000 and may require a 20 percent local match. One program is for bicycle and pedestrian projects within road right-of-ways of local streets or for bicycle maps. The second program is for small-scale urban pedestrian and bicycle improvements on state highways.

ODOT combines federal funds with State Gasoline Tax Revenues to support capital projects in the STIP. The STIP is the state document that lists projects in the coming years, the associated fund, and the source of those funds. The STIP is a project prioritization and scheduling document developed through various planning processes that involved local and regional governments and transportation agencies. Aeronautics, rail, public transit, bicycle/pedestrian and highway projects are included. Public meetings are held throughout the state prior to adoption by the Oregon Transportation Commission (OTC). The adopted STIP lists projects by ODOT's regions. These regional offices are responsible for administration and disbursement of the funds.

Access Management Program

Approximately \$500,000 is set aside each year to address access management issues, including the evaluation of existing approach roads to state highways. Over the years, many accesses to state highways have become unsafe due to higher speeds and increased traffic volumes. The program will identify those locations, determine necessary mitigation, prioritize improvements, and correct problems.

Local Government Fund Exchange

This program helps local governments make the most effective use of limited transportation funding. To reduce their administrative burden, local governments can agree to develop their projects with

state funds, which are easier to administer, while the state uses the local governments' federal funds for state projects. This program allows flexibility in spending.

Community Transportation Program

The Community Transportation Program provides money to fund public and special needs transportation in small cities and communities throughout the state. The program is financed by a combination of state, federal, and local matching funds. The program is a unified project application, review, and selection process for discretionary funds. These funds are made available under the Federal Transit Act, Elderly Persons with Disabilities Program, the Non-Urbanized Area Formula Program, and the Special Transportation Fund (STF).

Special Transportation Fund (STF)

The STF (ORS 391.800-391.830) revenues are collected through the state cigarette tax and are distributed based on a formula that takes into consideration the elderly population in poverty. The funds that come into Lane County are then allocated to the rural districts based on population and service needs according to the STF Advisory Committee. The STF is the only dedicated revenue source in the State of Oregon for specialized transportation for the elderly and persons with disabilities. This funding source has declined over the years due to the reduction in the amount of cigarette tax collected. There is awareness that new sources of revenue are needed. Lane Transit District oversees and coordinates with providers to operate services funded through STF.

Oregon Economic Development Department Special Public Works Funds

The State of Oregon, using lottery proceeds passed through the Oregon Economic Development Department (OEDD), has provided grants and loans to local government to construct, improve, and repair public infrastructure in support of local economic development and job creation. The application of this funding source for transportation improvements is limited. Funds for rail projects are also available through the OEDD. Projects must compete with other public works projects submitted by local and state agencies. As of 1996, OEDD had administered approximately \$4.5 million in lottery funds to develop three rail projects.

Immediate Opportunity Fund

ODOT funds the Immediate Opportunity Fund through an annual \$5 million allotment from the State Motor Vehicle Fund. OEDD administers the fund. The funds are set aside to provide OEDD the opportunity to respond quickly to transportation improvements that demonstrate a significant benefit to economic development and job creation. The program has been expanded recently to include alternate modes that reduce vehicle miles traveled, and for new technologies that improve commerce or safety. The maximum amount available for a single project is \$500,000. A key factor in determining eligibility for funds is whether an immediate commitment of funds is required to influence the location, relocation, or retention of a firm in Oregon. Funding is reserved for cases where an actual transportation problem exists, and where a location decision hinges on immediate commitment of road construction resources.

Lane County Funding Sources

Lane County Road Fund

This is a set of funds collected from the County's share of the state motor vehicle fund and federal timber receipts. They are limited to use within street right-of-ways. These funds can be used for

restoration and upgrading County roads. However, the county's Road Fund is known to be suffering from a structural deficit where revenues are flat and costs are increasing, and a primary source of those funds, federal Secure Rural Schools funding, has been eliminated. Lane County is therefore moving away from road reconstruction or construction projects.

Economic Development Assistance Program

The Economic Development Assistance Program (EDAP) is funded through loans from the County Road Fund. Funds may be used to improve the marketability of for sale industrial properties or to improve access to existing industrial businesses. The goal of EDAP is to create family-wage jobs that directly benefit local communities. The future of this funding source is in question due to the County's diminishing share of federal timber receipts.

Payroll Tax

LTD typically funds its services through an employer payroll tax.

City Funding Sources

City Transportation Fund

This is a set of funds from the City's share of the state motor vehicle fund and the federal timber receipts allocated through Lane County.

System Development Charges

System Development Charges (SDCs) could be collected as vacant parcels of land are developed or redeveloped. This charge would be based on the development's impact on the overall transportation system. Transportation SDCs are based on the land use type, the size of the development (number of dwelling units or number of acres), the number of trips per unit of development (derived from the Institute of Transportation Engineers' Manual), and the fee/trip rate. These funds may also be used for financing alternative modes projects. Coburg could create a SDC based on this transportation plan. The costs of setting up a SDC can be covered in the charge itself.

Debt Financing

General obligation bonds: Bonds are sold by the municipal government to fund public infrastructure and other improvements, and are repaid with property tax revenue. Voters must approve general obligation bond sales. Revenue bonds: Bonds are sold by the City and repaid from an enterprise fund that has steady revenue from sources such as a water or sewer fund. The bonds are typically sold to fund improvements in the system that is producing the revenue. They are a common means to fund large, high-cost capital improvements that have a long, useful life.

User Fees

In general, the users pay based on their use of, or impact on, the system.

Local gas tax: The City or County could implement a local gas tax, in addition to the existing revenues from the state gas tax. Several cities and counties in Oregon have a local gas tax. Given the current anti-tax atmosphere, it may be difficult to get voter approval on a local gas tax. Local vehicle registration fee: Counties can implement a local vehicle registration fee. A portion of the County fee would be allocated to cities in Lane County. The fee would provide a stable and reasonable funding source, but is unlikely to receive local support. Street utility fee: Similar to a water or sewer utility

fee, a fee would be assessed in the city for use of streets. Implementing a street utility fee would require voter approval and political support would likely be low.

Special Assessments

Assessments pay for on-site or adjacent public improvements. The property owners who directly benefit from the improvement pay the assessments. Local improvement district: The property owners who will benefit from the improvements pay an assessment of the project cost. Agreement for improvements: It does not always make sense for a land divider or property owner to install the required improvements (including streets and sidewalks) at the time of development. If that is the case, s/he executes and files with the city an agreement to pay for future improvements.

Local Improvement Districts (LIDs)

Districts typically are created by local property owners, imposing a “new tax” to fund improvements. Funds can be used for right-of-way acquisition and construction. LIDs can support improvements for roadways, bicycle and pedestrian facilities and amenities.

Parking Fees

Instituting parking fees, for commercial districts and/or increasing parking fees for illegal parking is an option to augment street funds.

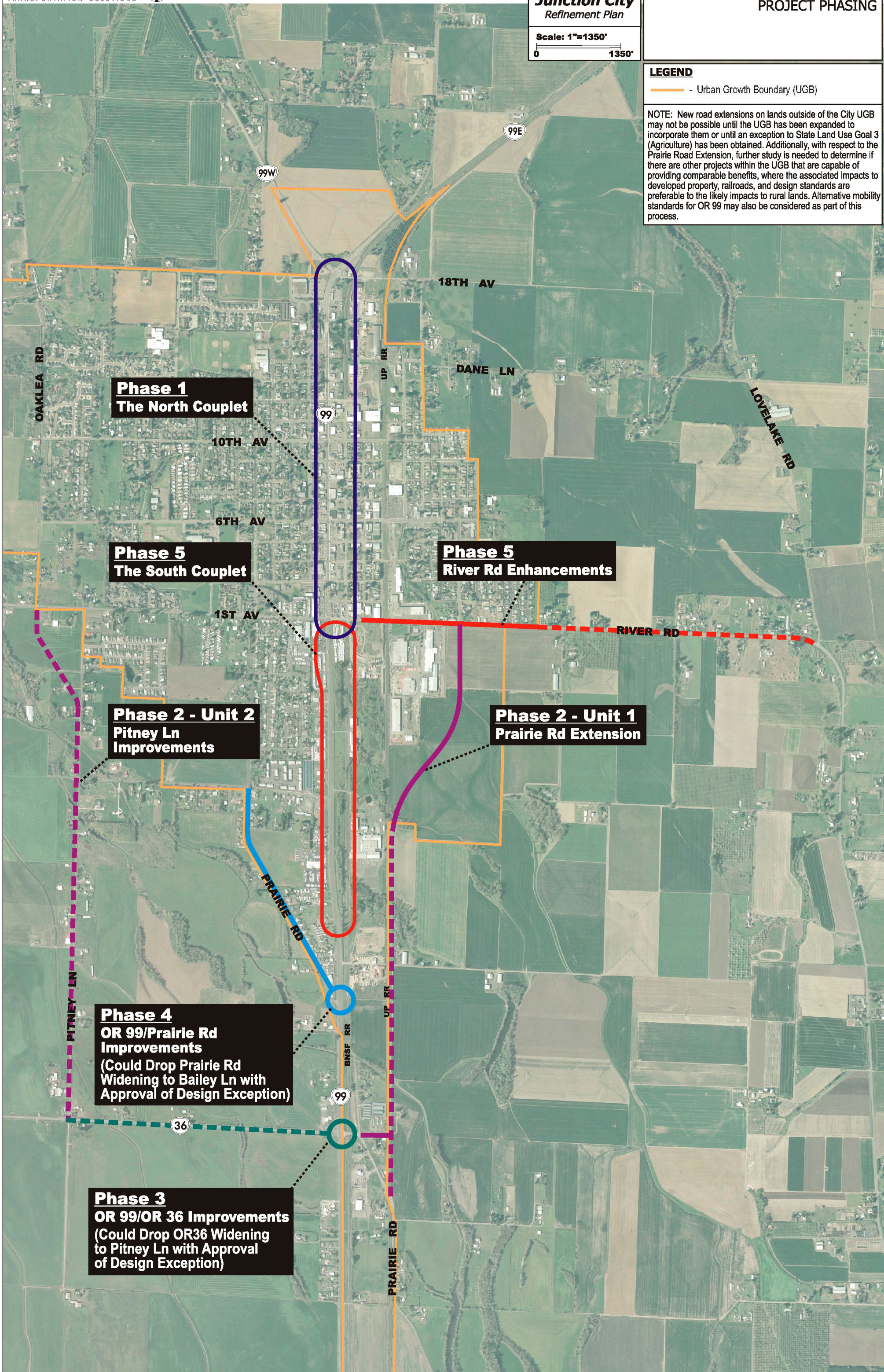
Private Developers

The majority of local streets and sidewalks are paid for at the time of development by the developer who includes the cost in the sale price of the homes or properties. This will also apply to bikeways, bicycle parking, and transit facilities. In this way, the benefiting users are paying for the cost of the system installation. The city then is responsible for maintaining improvements within the public right-of-way.

LEGEND

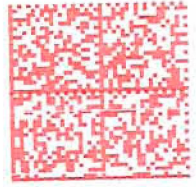
— Urban Growth Boundary (UGB)

NOTE: New road extensions on lands outside of the City UGB may not be possible until the UGB has been expanded to incorporate them or until an exception to State Land Use Goal 3 (Agriculture) has been obtained. Additionally, with respect to the Prairie Road Extension, further study is needed to determine if there are other projects within the UGB that are capable of providing comparable benefits, where the associated impacts to developed property, railroads, and design standards are preferable to the likely impacts to rural lands. Alternative mobility standards for OR 99 may also be considered as part of this process.





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