

**AGENDA**

**WILSONVILLE CITY COUNCIL MEETING  
MAY 16, 2016  
7:00 P.M.**

**CITY HALL  
29799 SW TOWN CENTER LOOP  
WILSONVILLE, OREGON**

Mayor Tim Knapp

Council President Scott Starr  
Councilor Susie Stevens

Councilor Julie Fitzgerald  
Councilor Charlotte Lehan

**CITY COUNCIL MISSION STATEMENT**

To protect and enhance Wilsonville’s livability by providing quality service to ensure a safe, attractive, economically vital community while preserving our natural environment and heritage.

**Executive Session and Work Session are held in the Willamette River Room, City Hall, 2<sup>nd</sup> Floor**

- 5:00 P.M. EXECUTIVE SESSION [15 min.]**
  - A. Pursuant to ORS 192.660 (2)(e) Real Property Transactions  
ORS 192.660(2)(f) Exempt Public Records  
ORS 192.660(2)(h) Litigation
- 5:15 P.M. REVIEW OF AGENDA [5 min.]**
- 5:20 P.M. COUNCILORS’ CONCERNS [5 min.]**
- 5:25 P.M. PRE-COUNCIL WORK SESSION**
  - A. Boones Ferry Rd to Brown Rd Connector Corridor Plan [15 min.]  
(Kraushaar)
  - B. Wilsonville Priority Transportation Projects for Clackamas [5 min.]  
County C4 Retreat (Kraushaar)
  - C. TSP Minor Amendment (Mende) [20 min.] Page 1
  - D. LED Lighting (Kerber) [20 min.] Page 16
  - E. Community Enhancement Program Recommendations [10 min.] Page 49  
(Ottenad)
  - F. Equitable Housing Update (Gail) [10 min.] Page 54
- 6:55 P.M. ADJOURN**

**CITY COUNCIL MEETING**

The following is a summary of the legislative and other matters to come before the Wilsonville City Council a regular session to be held, Monday, May 16, 2016 at City Hall. Legislative matters must have been filed in the office of the City Recorder by 10 a.m. on May 3, 2016. Remonstrances and other documents pertaining to any matters listed in said summary filed at or prior to the time of the meeting may be considered therewith except where a time limit for filing has been fixed.

**7:00 P.M. CALL TO ORDER**

- A. Roll Call
- B. Pledge of Allegiance
- C. Motion to approve the following order of the agenda and to remove items from the consent agenda.

**7:05 P.M. MAYOR'S BUSINESS**

- A. Public Works Week Proclamation (staff – Kerber) Page 60
- B. Upcoming Meetings Page 61

**7:10 P.M. COMMUNICATIONS**

- A. Metro Councilor Dirksen – Metro Update
- B. Laura McKinney – OIT
- C. Frank Lonergan Republic Services Presentation to Wilsonville Community Sharing
- D. Through A Child's Eyes (TACE) Update – Alan Kirk

**7:40 P.M. CITIZEN INPUT & COMMUNITY ANNOUNCEMENTS**

This is an opportunity for visitors to address the City Council on items *not* on the agenda. It is also the time to address items that are on the agenda but not scheduled for a public hearing. Staff and the City Council will make every effort to respond to questions raised during citizens input before tonight's meeting ends or as quickly as possible thereafter. Please limit your comments to three minutes.

**7:45 P.M. COUNCILOR COMMENTS, LIAISON REPORTS & MEETING ANNOUNCEMENTS**

- A. Council President Starr – (Park & Recreation Advisory Board Liaison)
- B. Councilor Fitzgerald – (Development Review Panels A & B Liaison)
- C. Councilor Stevens – (Library Board and Wilsonville Seniors Liaison)
- D. Councilor Lehan– (Planning Commission and CCI Liaison)

**7:50 P.M. CONSENT AGENDA**

- A. **Resolution No. 2582** Page 62  
A Resolution Of The City Of Wilsonville Authorizing The City Manager To Execute A Construction Contract With Canby Excavating, Inc. For The Charbonneau High Priority Utility Repair Phase I Project (Capital Improvement Project #1500, 2500, & 7500).
- B. Minutes of the April 18, 2016 and May 2, 2016 Council Meetings. (staff – King) Page 69

**7:55 P.M. PUBLIC HEARING**

- A. **Ordinance No. 776** – *to be continued to June 20<sup>th</sup> Council Meeting*  
An Ordinance Of The City Of Wilsonville Amending Wilsonville Code Chapter 3, Right-Of-Way And Public Easement Management Section, By Amending Section 3.410, Franchise Required, And Adding A New Section 3.415, Franchise Fees. (staff – Kohlhoff)
- B. **Ordinance No. 790** 1<sup>st</sup> reading Page 90  
An Ordinance Of The City Of Wilsonville Approving A Comprehensive Plan Map Amendment From Residential 0-1 Dwelling Units Per Acre To Residential 4-5 Units Per Acre On Approximately 4.37 Acres Located At 28500 And 28530 SW Canyon Creek Road South – Comprising Tax Lots 900 And 1000 Of Section 13B, Township 3 South, Range 1 West, Clackamas County, Oregon, Beth Ann Boeckman And Karen And Marvin Lewallen – Owners, Scott Miller, SAMM-MILLER LLC – Applicant. (staff – Pauly)



- C. **Ordinance No. 791** 1<sup>st</sup> Reading Page 113  
An Ordinance Of The City Of Wilsonville Approving A Zone Map Amendment From The Residential Agriculture-Holding (RA-H) Zone To The Planned Development Residential-3 (PDR-3) Zone On Approximately 4.37 Acres Located At 28500 And 28530 SW Canyon Creek Road South- Comprising Tax Lots 900 And 1000 Of Section 13B, Township 3 South, Range 1 West, Clackamas County, Oregon, Beth Ann Boeckman And Karen And Marvin Lewallen – Owners. Scott Miller, SAMM-MILLER LLC – Applicant. (staff – Pauly)

**8:45 P.M. CONTINUING BUSINESS**

- A. **Ordinance No. 789** – 2<sup>nd</sup> Reading Page 228  
An Ordinance Of The City Of Wilsonville Approving A Minor Amendment To Wilsonville’s 2013 Transportation Systems Plan (2016 TSP Amendment) (staff – Mende)

Links to the April 13, 2016 Planning Commission Record Documents:

Transportation System Plan (TSP) Amendment  
[VI. A. LP16-0001 -- Transportation System Plan \(TSP\) Amendments.Pdf](#)

TSP Additional Attachment "G" 4.12.2016  
[TSP Additional BP Project Memo ATTACH G-4.12.2016.Pdf](#)

TSP Additional Memo Attachment H  
[VI. A.2. Additional Memo ATTACH H 4.13.2016.Pdf](#)

TSP Additional BW-15 Project Memo Attachment I  
[VI. A.3. TSP Additional BW-15 Project Memo ATTACH I Final 4 13.Pdf](#)

TSP Amendment Presentation PC Hearing 4.13.16  
[Wilsonville TSP Amendment Presentation\\_PC Hearing 4.13.16.Pdf](#)

**9:00 P.M. CITY MANAGER’S BUSINESS**

- A. Photo Radar Camera use at Wilsonville Road/Boones Ferry Road Intersection Update.

**9:05 P.M. LEGAL BUSINESS**

**9:15 P.M. ADJOURN**

Informational Items – No Council action necessary.

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## AN URBAN RENEWAL AGENCY MEEETING WILL IMMEDIATELY FOLLOW

Time frames for agenda items are not time certain (i.e. Agenda items may be considered earlier than indicated. The Mayor will call for a majority vote of the Council before allotting more time than indicated for an agenda item.) Assistive Listening Devices (ALD) are available for persons with impaired hearing and can be scheduled for this meeting if required at least 48 hours prior to the meeting. The city will also endeavor to provide the following services, without cost, if requested at least 48 hours prior to the meeting:-Qualified sign language interpreters for persons with speech or hearing impairments. Qualified bilingual interpreters. To obtain services, please contact the City Recorder, (503)570-1506 or [king@ci.wilsonville.or.us](mailto:king@ci.wilsonville.or.us)



**CITY COUNCIL  
STAFF REPORT**

<p><b>Meeting Date:</b>  May 16, 2016</p>	<p><b>Subject: Ordinance No. 789:</b> Proposed minor amendments to the 2013 Transportation System Plan (TSP).  <b>Staff Member:</b> Eric Mende, Capital Projects Manager <b>Department:</b> Community Development</p>	
<p><b>Action Required</b></p>	<p><b>Advisory Board/Commission Recommendations</b></p>	
<p><input checked="" type="checkbox"/> Motion</p>     <p><input type="checkbox"/> Public Hearing Date:  <input checked="" type="checkbox"/> Ordinance (2<sup>nd</sup> Reading)  <input type="checkbox"/> Information or Direction  <input type="checkbox"/> Information Only  <input type="checkbox"/> Council Direction  <input type="checkbox"/> Consent Agenda</p>	<p><b>Comments:</b> On April 13, 2016 the Planning Commission conducted a public hearing on the proposed TSP modifications forwarding a unanimous recommendation of approval onto the City Council. On May 02, 2016, City Council held a Public Hearing and first reading of Ordinance 789, holding the record open until this (May 16, 20016) meeting.</p>     <p><b>NOTE: This is a Supplement to the May 02, 2016 Public Hearing Staff Report. Please reference the May 02, 2016 Council packet for the TSP Amendment Exhibits and Ordinance, and please reference the attached Staff Memorandum for proposed revisions to the May 02, 2016 documents.</b></p>	
<p><b>Staff Recommendation:</b> Approve Ordinance No. 789: minor amendments to the 2013 Transportation System Plan.</p>		
<p><b>Recommended Language for Motion:</b> I move to approve Ordinance No. 789 adopting minor amendments to the 2013 Transportation System Plan, as revised by the Staff Memorandum of May 04, 2016 included as Attachment 1 to this report.</p>		
<p><b>PROJECT / ISSUE RELATES TO:</b></p>		
<p><input checked="" type="checkbox"/> Council Goals/Priorities Ensure efficient, cost effective and sustainable development and infrastructure. Multi-modal transportation.</p>	<p><input checked="" type="checkbox"/> Adopted Master Plan(s) 2013 Transportation Systems Plan,</p>	<p><input type="checkbox"/> Not Applicable</p>

**ISSUE BEFORE THE CITY COUNCIL:**

The issue before the City Council is approval of an Ordinance for approval and adoption of minor amendments (2016 TSP Amendment) to the 2013 TSP, as a sub-element of the City's Comprehensive Plan. During the Public Hearing on May 02, 2016, public testimony was received, with no objections to the proposed amendments voiced by the public. However, Council expressed concern with the scope of projects affecting three specific locations in the City and directed staff to prepare additional information, as detailed on the attached Staff Memorandum dated May 04, 2016.

**EXECUTIVE SUMMARY:**

Key concerns raised at the May 02, 2016 Hearing included:

- 1) Alignment issues and other impacts on Wilsonville's long range plan to create a continuous west side freight route if Kinsman Road is deleted in favor of Garden Acres Road as the primary north-south collector through the Coffee Creek area. *Staff recommends deletion<sup>[NC1]</sup> of the Kinsman Road project (RE-07) between Ridder and Day Roads and substitution of the Garden Acres alignment (UU-08) be approved. Consideration of the remainder of the west side truck route be postponed to the next major update to the TSP.*
- 2) Conversion of Printer Parkway from a private street to a public street: Was the street built to Public Works Standards? Will the City be responsible for improvements to this street if it is now included in the TSP? *Staff recommends the Printer Parkway project (UU-09) be included in the Amendment as originally presented. The street section likely does not meet current standards. Street improvements bringing Printer Parkway up to standard would be tied to future development proposals and would be paid for by the developer.*
- 3) Potential TSP additions to address congestion at Boones Ferry Road / Wilsonville Road / Interstate 5: Are previous traffic projections accurate compared to existing volumes? Should spot improvements on Boones Ferry Road be included in the TSP Amendment? Should I-5 improvements (e.g., auxiliary lane or widened southbound on-ramp) be included in the TSP Amendment? *Staff recommends three new projects be added: 1) Project SI-05: Boones Ferry Road Turning Movement Improvements, as a Higher Priority Project; 2) Project RW-P2: I-5 Southbound On-Ramp Widening, as an Additional Planned Project; and 3) Project RW-P3: I-5 Southbound Auxiliary Lane, as an Additional Planned Project<sup>[KN2]</sup>.*

**EXPECTED RESULTS:**

Adoption of the Amendment will result in continued compliance with Statewide Planning Goal 12, the Transportation Planning Rule and Metro's Regional Transportation Functional Plan, providing a sound, integrated planning document that will continue to guide the next 20-years of transportation projects and policies.

**TIMELINE:**

On April 13<sup>th</sup>, the Planning Commission conducted a Public Hearing and unanimously approved Resolution LP 16-0001 recommending approval of the minor amendments. On May 2<sup>nd</sup> City

Council held a Public Hearing and solicited testimony. Two letters were received prior to the hearing, one from Washington County and as well as a letter of support from OTAK, on behalf of their client, for the Printer Parkway modification. After Public Testimony, the Council moved to hold the record open until the May 16<sup>th</sup> regular meeting, where additional testimony may or may not be received. 2<sup>nd</sup> Reading and Adoption of Ordinance 789 are scheduled for May 16<sup>th</sup>. The Amendments would become effective 30 days following second reading and adoption of the Ordinance.

**CURRENT YEAR BUDGET IMPACTS:**

See May 02, 2016 Public Hearing Council Packet.

**FINANCIAL REVIEW / COMMENTS:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**LEGAL REVIEW / COMMENT:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMUNITY INVOLVEMENT PROCESS:**

See May 02, 2016 Public Hearing Council Packet.

**POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY:**

See May 02, 2016 Public Hearing Council Packet.

**ALTERNATIVES:**

Council can approve the Amendment as originally presented on May 02, approve with the changes identified in the Staff Memorandum, approve with other changes, or may choose not to approve. City Council can also direct Staff to modify the policies, projects, or programs recommended in the draft Amendment, and bring it back for further hearing.

**CITY MANAGER COMMENT:**

**ATTACHMENTS**

1. May 04, 2016 Staff Memorandum with recommendations.

# MEMORANDUM

Date: May 04, 2016

To: Mayor and City Council

From: Eric Mende PE, Capital Projects Engineering Manager

**Re: TSP Amendments – May 02, 2016 Council Comments**



Dear Mayor and Councilors,

This Memorandum addresses questions and concerns raised during the May 02, 2016 Public Hearing for Ordinance 789 - 2016 TSP Amendments.

Key concerns raised by Mayor Knapp and Councilor Starr at the Hearing included:

1. Mis-alignment issues with a future Kinsman alignment south of Ridder Road, and other impacts on Wilsonville's long range plan for Kinsman as a continuous west side freight route if Kinsman Road From Ridder to Day is deleted in favor of Garden Acres Road.
2. Conversion of Printer Parkway from a private street to a public street: Was the street built to the City's Public Works Standards? Will the City be responsible for improvements to this street if it is now included in the TSP?
3. Potential TSP additions to address congestion at Boones Ferry Road / Wilsonville Road / Interstate 5: Are previous traffic projections accurate compared to existing volumes? Will spot improvements on Boones Ferry Road help alleviate congestion? Should I-5 improvements (e.g., Auxiliary lane/widened on ramp) be included in the TSP Amendment?

Each of these concerns are addressed below.

## Garden Acres Road / Kinsman Road / West Side Freight Route

Ben Altman, representing Republic Services, provided accurate and detailed testimony concerning the coordination effort and decision making resulting in the proposed deletion of the Kinsman Road alignment, and the substitution of Garden Acres Road as the primary north-south Collector and Freight Route through the Coffee Creek Industrial Area. The 2007 Coffee Creek Master Plan, 2011 Coffee Creek Infrastructure Analysis, and 2013 TSP all assumed that the Kinsman alignment would take half of the Right of Way from Republic Services, and half of the Right of Way from the adjoining property, as is general City policy. Subsequent discussions with the adjoining property owner, Bonneville Power Administration (BPA), indicated very strong opposition to any dedication of Right of Way, primarily because the area in question is underlain by a large grounding grid for the electrical substation. To maintain the general alignment plan combined with the inability to place a road partially on the substation property would shift the entire 70+ foot Right of Way onto Republic Services property.



Discussions with Republic Services and a review of their current operations indicated this shift would force closure and relocation of Republic's primary access driveway, impacting the weigh scales and circulation pattern for the entire existing facility as well as the access point for the proposed SORT bioenergy facility located due north of the existing operations. Staff concurred with this opinion, and initiated an analysis of multiple alternative alignments of the street network within the Coffee Creek area, assuming the Kinsman alignment was deleted. The traffic models showed the Garden Acres alignment did not appreciably change the overall traffic distribution, and peak (build out) traffic volumes were well within the capacity of the proposed Collector street section. Preliminary layouts were then prepared to ensure that tractor-trailer truck turning movements at Ridder Road could be accommodated (see Figure "A"). Cost estimates for these new layouts were also prepared, and are incorporated into the TSP Amendment project estimates.

While the revised Coffee Creek street plan adequately accommodates freight movement to and from Sherwood, Tualatin and the I-5 Elligsen interchange, direct connection to south Wilsonville via a continuous west side truck route remains difficult. The issue with BPA north of Ridder Road also exists south of Ridder Road. Along the nominal Kinsman alignment, BPA owns all of the property from Ridder Road south to Freeman Drive, as well as a fee-simple power line corridor extending south to the railroad tracks. (Figure "B") Staff intends to revisit the currently shown future alignment of Kinsman Road between Boeckman Road and Ridder Road during the next major update to the TSP, however, the planning efforts needed to re-evaluate options for a continuous west side freight route were felt to be beyond the scope of this current Amendment.

*Staff recommends deletion of the Kinsman Road project (RE-07) and substitution of the Garden Acres alignment (UU-08) be approve as originally presented, with consideration of the remainder of the west side truck route postponed to the next major update to the TSP.*

### Printer Parkway

Printer Parkway was originally constructed by Xerox Corporation as a private street in the mid-1970's. It does not meet current City standards for width or section. Acceptance of Printer Parkway as a public street (and inclusion in the project list for this TSP Amendment) is the result of negotiations with the current property owner (SKB Companies) as part of a proposed multi-faceted, multi-phased development for which a broad range of development related Conditions of Approval will be written, and likely a formal Development Agreement. Presently we have an understanding with the developer for the following improvements to Printer Parkway prior to acceptance by the City (see Figure "C"):

- 1) The western portion of Printer Parkway will be brought up to full City Standards, with the developer responsible for design and construction of a three-lane collector including bike lanes, landscaping, street lights, storm facilities and sidewalks. Per standard development policy, the City would be responsible for reimbursement of the bike lanes and any increased structural section of the roadway from a local street to a collector street.

- 2) The central and eastern portion of Printer Parkway will remain as a two-lane street, without curbs or parking, but will include streetlighting and will meet the general criteria for a collector section, however, a 12' wide multi-use public pathway may be constructed in lieu of bike lanes and

two 5-ft sidewalks. This design will provide a meandering multi-use path which will minimize impacts to the natural environment on the site. The structural section will be upgraded based on a geotechnical evaluation of the current structural section. Depending on the condition of this private roadway this could be as simple as an asphalt overlay or could be more extensive (the extent of repairs/upgrades depends on how the street was built). The geotechnical investigation, design and construction of this portion of the roadway is solely at the developers cost.

Although only about a third of the vacant land is proposed for current development (and the developer desires to limit the street improvements to only the developed frontage), our Conditions will require the entire length of Printer Parkway be improved before being accepted as a City (public) street. The advantage to the City is that a public street connection between Parkway Drive and Canyon Creek is established at minimal cost to the City. This connection is currently “envisioned” in the TSP via the (unconstructed) Weideman Road collector, which will remain in the TSP as a “future” road (additional planned but unfunded project), but could potentially be eliminated in a future TSP major update. The advantage to the developer is that they will not have to construct (or partially construct) Weideman Road as part of their development, as would be the case if the Printer Parkway option did not exist. The Weideman Road alignment contains many similar constraints to Kinsman, particularly BPA ownership.

*Staff recommends the Printer Parkway project (UU-09) be included in the Amendment as originally presented.*

#### Boones Ferry Road / Wilsonville Road / I-5 congestion

The cause(s) of traffic congestion at the southbound I-5 Ramp, Wilsonville Road, and Boones Ferry Road are well understood by City Staff. However, remedies are generally on the Interstate itself, which is outside the control of the City and cannot be fixed by a City initiated improvement project. This does not necessarily prevent the City from including I-5 related projects in our TSP to highlight the need for improvements, and inform the regional transportation planning process.

The congestion experienced on Wilsonville Road and Boones Ferry Road are primarily a result of a lack of capacity on southbound I-5 across the Boone Bridge. Traffic backs up on I-5, which backs up the on-ramps, which backs up onto Wilsonville Road and Boones Ferry Road. A review of previous traffic studies shows the analyses/predictions of traffic volumes have been generally conservative – i.e., higher than actual traffic counts. A 2002 *Freeway Access Study* predicted a 2020 southbound peak hour on-ramp volume of 1590. The 2008 Fred Meyer traffic study showed existing volume at 1211, and a predicted Stage II (build out) volume of 1389. Recent counts (Dec. 2014) showed 1191 vehicles per hour – essentially unchanged from 2008. The southbound ramp meter, set by ODOT at 1260 vehicles per hour, is higher than the actual counts, indicating that the ramp meter is not the primary cause of the backups, since the congestion across the Boone Bridge appears to be limiting actual volumes to less than the ramp meter setting.



What has changed is the traffic volume on Wilsonville Road and Boones Ferry Road feeding into the interchange, and because the capacity of the Boone Bridge remains the same, the additional vehicles wanting to go south on I-5 are stuck on City streets. Given the inability of Wilsonville's TSP to guide improvements to I-5, the current TSP approach to resolving congestion in this area is to remove vehicles from the area that are not destined to get on I-5. The two primary projects that do this are the Brown Road Extension (Project RE-04B) – also known as the Old Town Escape and recently re-titled as Boones Ferry Road to Brown Road (BFR2BR) Connector Corridor Plan (CIP 4196), and the Kinsman Road Extension (Project RE-08)(CIP 4004). These projects remain in the Amendment.

The ultimate solution to traffic congestion in and around the I-5 / Wilsonville Road interchange requires increased capacity on I-5 across the Boone Bridge. Specifically, a southbound auxiliary lane from Wilsonville Road to either the Charbonneau exit or further to the Canby/Hubbard exit will improve capacity across the Boone Bridge, allowing traffic stuck on Wilsonville Road to enter the interstate more efficiently. A southbound auxiliary lane was identified in the 2002 Freeway Access Study, although ODOT has said many times that the bridge width is insufficient to implement that project. No cost estimate has been developed for this project, however, staff will continue to participate with ODOT to evaluate capacity constraints for I-5 through Wilsonville and across and south of the Boone Bridge. A widened on-ramp (i.e., 3 lane stacking queue) does not increase capacity on I-5, but would at least get a few more vehicles off of Wilsonville Road and Boones Ferry Road. (See Figure "D") A 2014 ODOT cost estimate puts the project cost at \$1.28M. Neither of these projects can be implemented directly by Wilsonville, but including them in our TSP will allow these projects to be uploaded to the Regional Transportation Plan (RTP) at some point in the future.

Spot improvement on Boones Ferry Road – specifically removal of the curb bump out at the Fred Meyers/Albertson entrance drive and re-striping of the lanes, will result in a small capacity increase on Boones Ferry Road, and allow the intersection to function more efficiently during periods of congestion. Indirectly, these spot improvements may also impact the overall congestion at the southbound on-ramp. Importantly, this project can be implemented by Wilsonville without ODOT involvement. The cost estimate for this project is \$150k to \$200k.

*Staff recommends three new projects be added to the Amendment (See revised Figures 5-2, 5-5, 5-7, and 5-10): 1) Project SI-05: Boones Ferry Road Turning Movement Improvements, as a Higher Priority Project; 2) Project RW-P2: I-5 On-Ramp Widening, as an Additional Planned Project; and 3) Project RW-P3: I-5 Southbound Auxiliary Lane, as an Additional Planned Project.*

Respectfully Submitted,



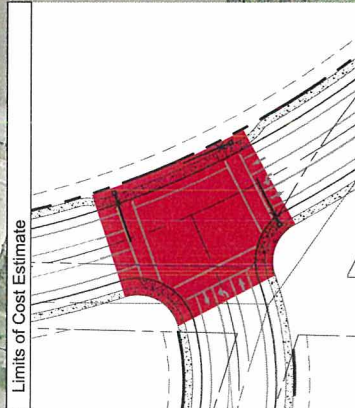
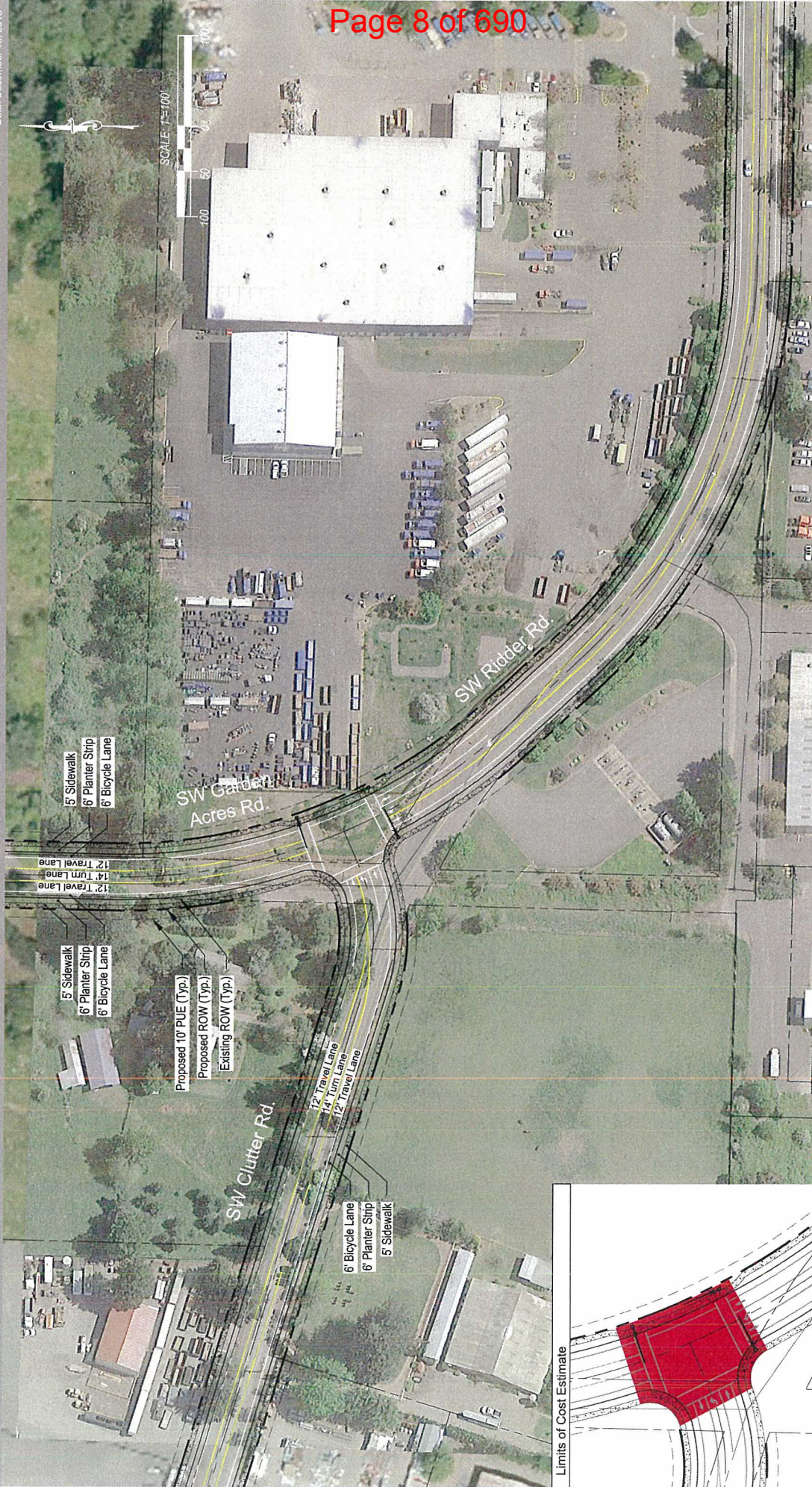
Eric Mende



# FIGURE "A"

## Coffee Creek Area Concepts

Preliminary Design Subject to Change  
Date: December 15, 2015



SW Ridder Rd to SW Garden Acres Rd Concept  
Wilsonville, Oregon

**K** KITTELSON & ASSOCIATES, INC.  
PHONE (503) 223-9220  
CONTACT: Fred Wessner or Judy Baraban





Figure "B"











124th Ave Extension  
from Tualatin-Sherwood Rd  
(Washington County Project)

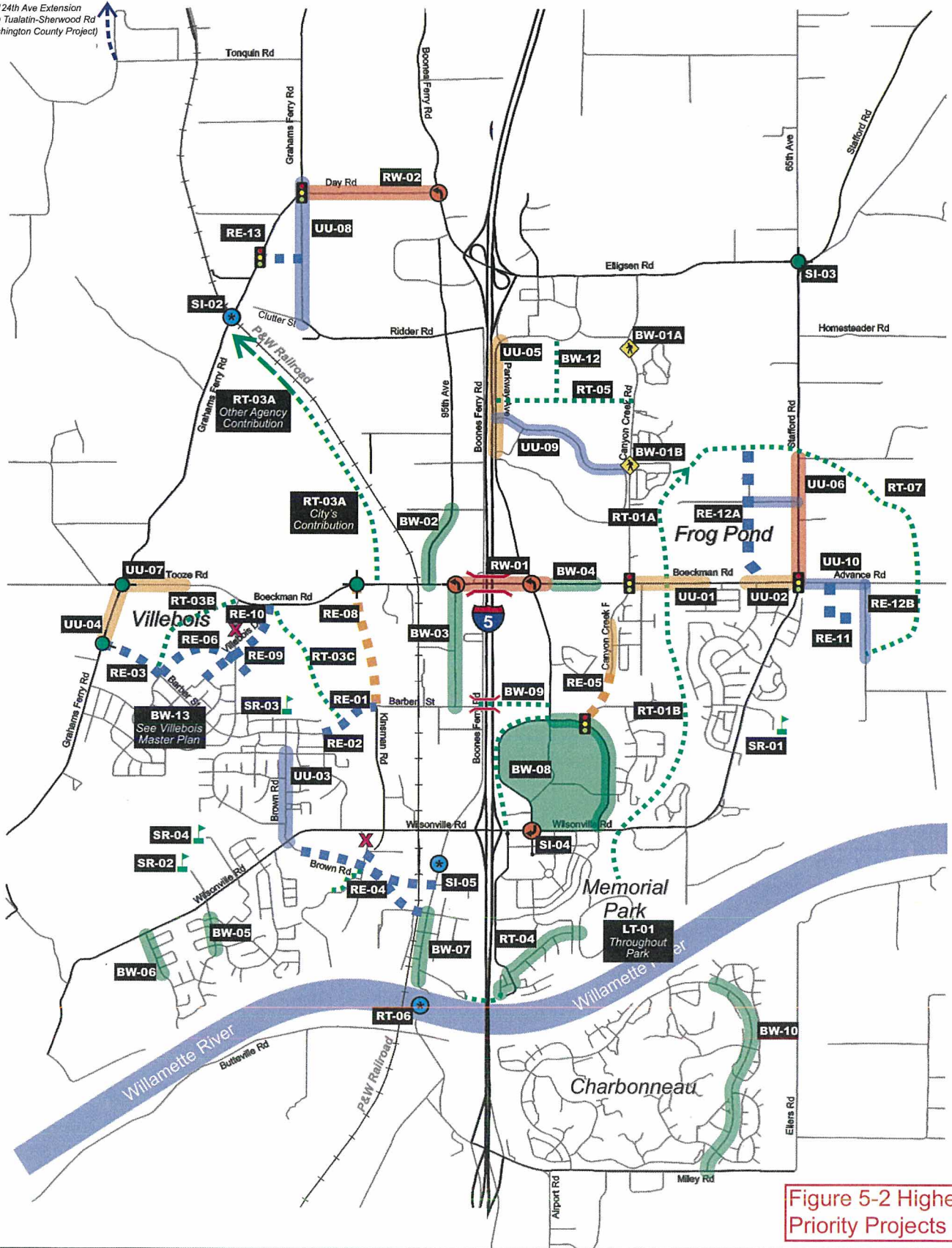


Figure 5-2 Higher Priority Projects



**LEGEND**

- Roadway Widening/Upgrade**
- Major Arterial
  - Minor Arterial
  - Collector

- Roadway Extensions**
- Major Arterial
  - Minor Arterial
  - Collector

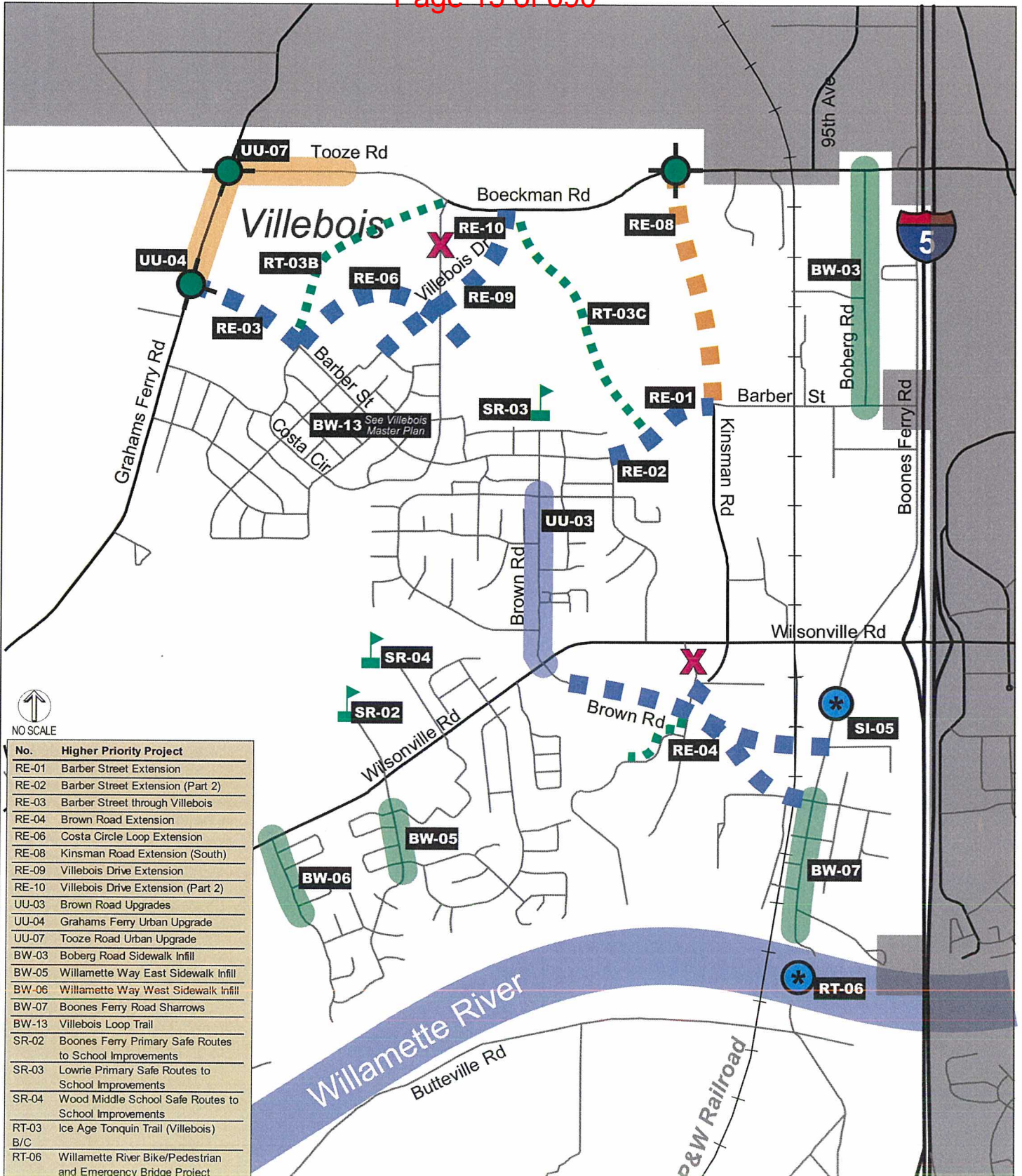
- Spot Improvements**
- New Traffic Signal
  - New Roundabout
  - Additional Turn Lanes
  - Project Development

**Standalone Bike/Pedestrian Improvement**

- Enhanced Pedestrian Crossing
- Shared-Use Trail (City)
- Shared-Use Trail (County)
- Bikeway/Walkway
- Safe Routes to School

- Road Closure
- Bridge Work
- AA-## Project Type and Number





NO SCALE

No.	Higher Priority Project
RE-01	Barber Street Extension
RE-02	Barber Street Extension (Part 2)
RE-03	Barber Street through Villebois
RE-04	Brown Road Extension
RE-06	Costa Circle Loop Extension
RE-08	Kinsman Road Extension (South)
RE-09	Villebois Drive Extension
RE-10	Villebois Drive Extension (Part 2)
UU-03	Brown Road Upgrades
UU-04	Grahams Ferry Urban Upgrade
UU-07	Tooze Road Urban Upgrade
BW-03	Boberg Road Sidewalk Infill
BW-05	Willamette Way East Sidewalk Infill
BW-06	Willamette Way West Sidewalk Infill
BW-07	Boones Ferry Road Sharrows
BW-13	Villebois Loop Trail
SR-02	Boones Ferry Primary Safe Routes to School Improvements
SR-03	Lowrie Primary Safe Routes to School Improvements
SR-04	Wood Middle School Safe Routes to School Improvements
RT-03	Ice Age Tonquin Trail (Villebois)
B/C	
RT-06	Willamette River Bike/Pedestrian and Emergency Bridge Project Development

(See Project Table for Additional Details)

Figure 5-5  
Higher Priority Projects (Southwest Quadrants)

**LEGEND**

<p><b>Roadway Widening/Upgrade</b></p> <ul style="list-style-type: none"> <li> Major Arterial</li> <li> Minor Arterial</li> <li> Collector</li> </ul>	<p><b>Roadway Extensions</b></p> <ul style="list-style-type: none"> <li> Major Arterial</li> <li> Minor Arterial</li> <li> Collector</li> </ul>	<p><b>Spot Improvements</b></p> <ul style="list-style-type: none"> <li> New Traffic Signal</li> <li> New Roundabout</li> <li> Additional Turn Lanes</li> <li> Project Development</li> </ul>	<p><b>Standalone Bike/Pedestrian Improvement</b></p> <ul style="list-style-type: none"> <li> Enhanced Pedestrian Crossing</li> <li> Shared-Use Trail (City)</li> <li> Shared-Use Trail (County)</li> <li> Bikeway/Walkway</li> <li> Safe Routes to School</li> </ul>	<ul style="list-style-type: none"> <li> Road Closure</li> <li> Bridge Work</li> <li> AA-## Project Type and Number</li> </ul>
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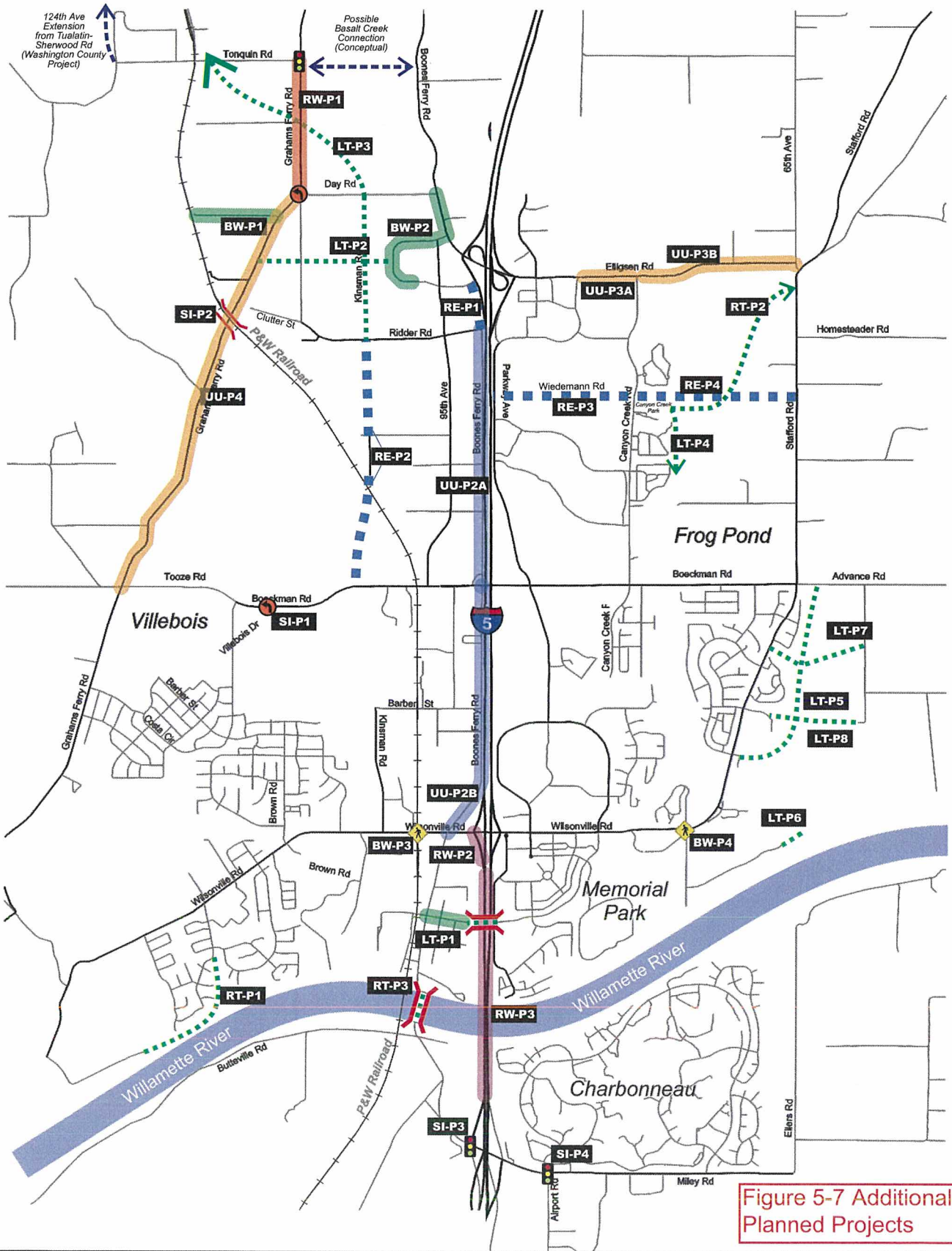


Figure 5-7 Additional Planned Projects

**LEGEND**

Roadway Widening/Upgrade	Roadway Extensions	Spot Improvements	Standalone Bike/Pedestrian Improvement
Major Arterial	Major Arterial	New Traffic Signal	Enhanced Pedestrian Crossing
Minor Arterial	Minor Arterial	New Roundabout	Shared-Use Trail (City)
Collector	Collector	Additional Turn Lanes	Shared-Use Trail (County)
ODOT Facility		Project Development	Bikeway/Walkway
			Safe Routes to School
			Road Closure
			Bridge Work
			AA-## Project Type and Number



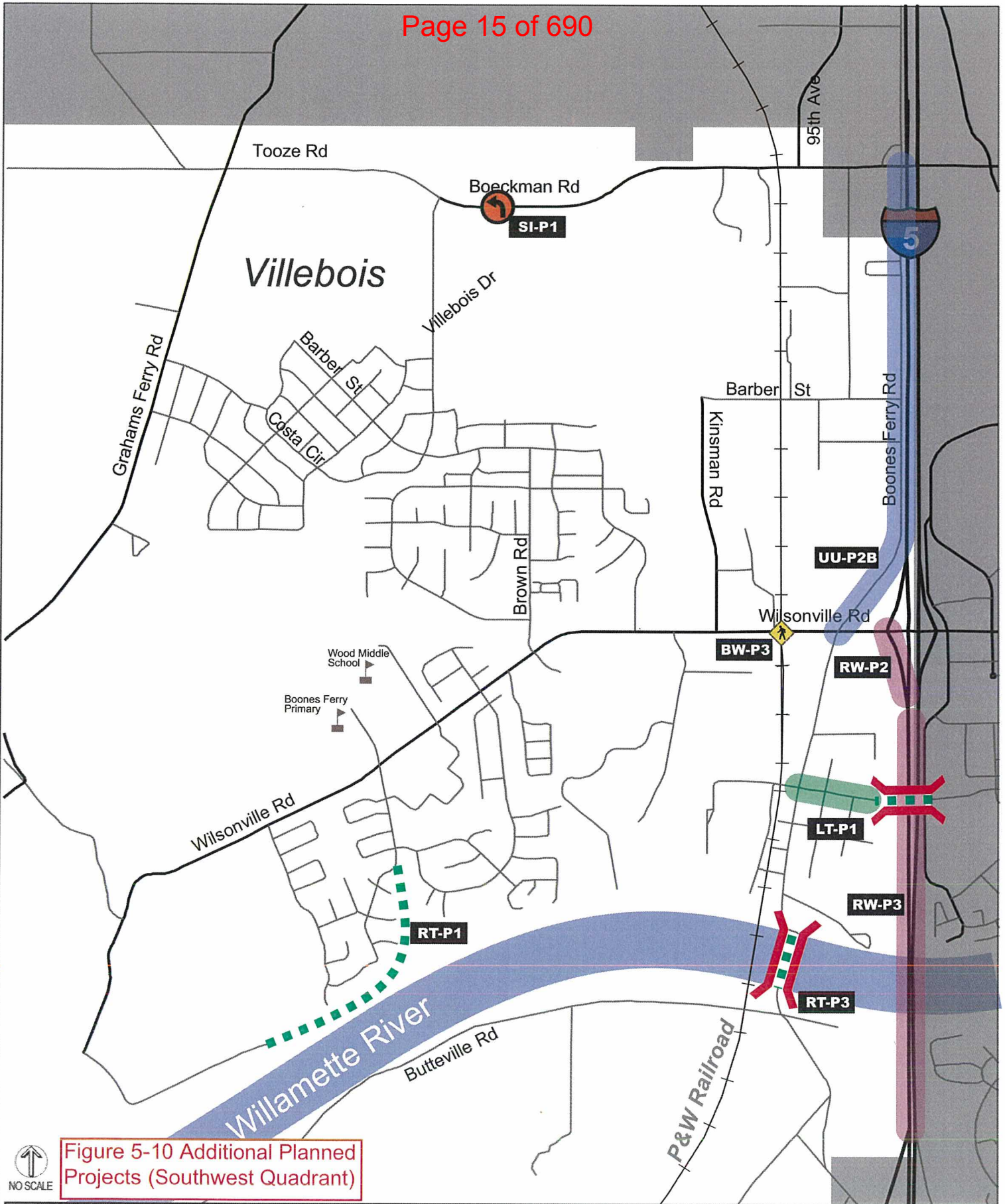


Figure 5-10 Additional Planned Projects (Southwest Quadrant)



**LEGEND**

**Roadway Widening/Upgrade**

- Major Arterial
- Minor Arterial
- Collector
- ODOT Facility

**Roadway Extensions**

- - - Major Arterial
- - - Minor Arterial
- - - Collector

**Spot Improvements**

- New Traffic Signal
- New Roundabout
- Additional Turn Lanes
- Project Development

**Standalone Bike/Pedestrian Improvement**

- Enhanced Pedestrian Crossing
- - - Shared-Use Trail (City)
- Shared-Use Trail (County)
- Bikeway/Walkway
- Safe Routes to School

**Road Closure**

- Road Closure
- Bridge Work
- AA-##** Project Type and Number





**CITY COUNCIL MEETING  
STAFF REPORT**

<b>Meeting Date:</b> May 16, 2016		<b>Subject:</b> LED Streetlight Conversion	
		<b>Staff Member:</b> Delora Kerber	
		<b>Department:</b> Public Works	
<b>Action Required</b>		<b>Advisory Board/Commission Recommendation</b>	
<input type="checkbox"/> Motion <input type="checkbox"/> Public Hearing Date: <input type="checkbox"/> Ordinance 1 <sup>st</sup> Reading Date: <input type="checkbox"/> Ordinance 2 <sup>nd</sup> Reading Date: <input type="checkbox"/> Resolution <input type="checkbox"/> Information or Direction <input checked="" type="checkbox"/> Information Only <input type="checkbox"/> Council Direction <input type="checkbox"/> Consent Agenda		<input type="checkbox"/> Approval <input type="checkbox"/> Denial <input type="checkbox"/> None Forwarded <input checked="" type="checkbox"/> Not Applicable	
		<b>Comments:</b>	
<b>Staff Recommendation:</b> This is an informational update on the status of the LED Street Light Conversion process.			
<b>Recommended Language for Motion:</b> N/A			
<b>Project / Issue Relates To:</b>			
<input checked="" type="checkbox"/> Council Goals/Priorities Environmental Stewardship; Fiscal Discipline	<input type="checkbox"/> Adopted Master Plan(s)	<input type="checkbox"/> Not Applicable	

**ISSUE BEFORE COUNCIL:** Staff will present information, and seek direction from Council regarding street light conversion from high pressure sodium (HPS) to light emitting diode (LED).

**EXECUTIVE SUMMARY:** A LED Streetlight Conversion memo was developed by our consultant (Global Transportation Engineering/DKS Associates) assuming the City would convert streetlights to LED. The memo does not address the option of PGE converting the streetlights on behalf of the City. PGE does not currently have a conversion program in place and likely will not implement another conversion program until late 2017 or early 2018. However, PGE is willing to provide us with an updated pro forma if we were to wait and use PGE for

converting in the future. Once the PGE information is obtained it will be compared to the information in the memo to confirm the best financial option for the City.

The LED Light Conversion memo is based on the review of market ready luminaires, light level analysis, past LED conversions, International Dark Sky Association criteria along with information from manufacturers, Portland General Electric (PGE) and other local agencies who have converted to LED luminaires.

Project Goals include: developing a sustainable lighting system that reduces energy; meet the International Dark Sky's standards for light pollution, health, and wildlife concerns; replace existing luminaires with aesthetically pleasing similar LED luminaires that provide payback periods that will justify the capital, operations and maintenance costs; determine if using PGE Option A or Option C maintenance plan provides better life cycle cost. This plan is based on 2,514 of total street lights.

Luminaire Selection is based on a compromise of various selection criteria including: manufacturer; Dark Sky compliance; cost; performance and physical measures; estimated lifecycle and maintenance and aesthetics. It is recommended that 3000 Kelvin color lights be used as a good compromise as it will provide both acceptable light levels performance and energy savings.

Potential Payback if the City were to buy and install new LED luminaires was calculated using a simple payback period which is capital cost per luminaire divided by annual operations and maintenance savings. Capital cost of the luminaires assumed a conservation incentive from Energy Trust of Oregon and if incentives are not available at the time of purchase the payback period will be a longer duration. For cobra head style lights of which we have 880 is between 4.5 and 5.5 years achieving an average annual energy savings of 55 percent. Ornamental fixture (1634) payback analysis shows mixed results for the various styles of luminaires and range from 12 to 36 years with most not reaching payback within the estimated lifecycle of 20 years. This is due to the large upfront capital cost. Ornamental luminaires can achieved an average annual savings of 51 percent. Payback periods through conversion by PGE may be different.

Conversion Schedule in the report for all streetlights shows a five year timeline. With the proposed funding allocation of \$400,000 in the first year all cobra head luminaires and almost 40 percent of rectangular box luminaires could be replaced. The remaining rectangular box and around 80 percent of acorn fixtures could be replaced the second year with an available allocation of \$400,000. For the remainder of the lights to complete the conversion in the five year timeline additional funding would be required either from the general fund or by raising the streetlight fee. If additional funding is not available then conversion of all streetlight would occur over a 12 year period. Though due to the long payback period for ornamental lights, it is recommended the City reevaluate in year two of the conversion as to whether or not it makes sense to convert those luminaires. If PGE performs the conversion, the timeline may vary.

PGE Considerations are integral to the LED streetlight conversion process. Currently the City's streetlights are under PGE's Schedule 91 Option B tariff where the City owns the streetlight equipment and PGE maintains and operate the system with electricity billed at a flat rate. For

new lighting technology (i.e. LED), PGE developed a Schedule 95 tariff with only two options for maintenance and operations. Option A is when PGE owns and maintenance the street lighting and Option C is when the agency owns and maintains the street lighting. It is important to note if the City decides to convert any Schedule 91, Option B lights to Schedule 95, the entirety of the Option B lighting must be completely converted to Option A or Option C within five years following PGE's group lamp replacement cycle or within three years on a schedule mutually agreed upon between PGE and the City. Being PGE is not currently offering a conversion program, if the City were to convert to LED light now then our system would need to transition to Option C.

Operations and Maintenance (O&M) costs shown in the memo are for LED converted lights only. Additional O&M costs will be required for non-LED lighting systems prior to transition as well as O&M for existing circuits. On average there are over 200 service calls per year for maintenance of streetlights which is approximately 5% of the inventory. If the City pursues Option C then the amount being paid to PGE for light and pole maintenance would be used to cover these costs.

An informal survey was taken from other local agencies about the status of LED streetlight conversions projects with the following results: Lake Oswego converted cobra head streetlights to LED and moved from Option B to Option C maintenance; Tigard converted cobra head streetlights to LED and went from Option B to Option A maintenance. Tualatin is still weighing their options on whether to convert to LED streetlights. Portland, Gresham, and Salem are converting cobra head lights and moving from Option B to Option C. Washington County has converted their Option A lights to LED but are still weighing the option of converting their Option B lights.

**EXPECTED RESULTS:** Develop a LED conversion program that is financially advantageous for the City.

**TIMELINE:** Dependent on the outcome of the financial and funding options.

**CURRENT YEAR BUDGET IMPACTS:** In FY 15/16 \$400,000 has been budgeted for this project. Another \$400,000 has been requested in FY 16/17.

**FINANCIAL REVIEW / COMMENTS:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**LEGAL REVIEW / COMMENT:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMUNITY INVOLVEMENT PROCESS:** A public information program will be developed and implemented prior to any street light conversion.

**POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY** (businesses, neighborhoods, protected and other groups): Improve lighting quality, nighttime visibility and safety. Use 50 – 55% less energy. Reduce maintenance costs for LED lights. Comply with Dark Sky standards.

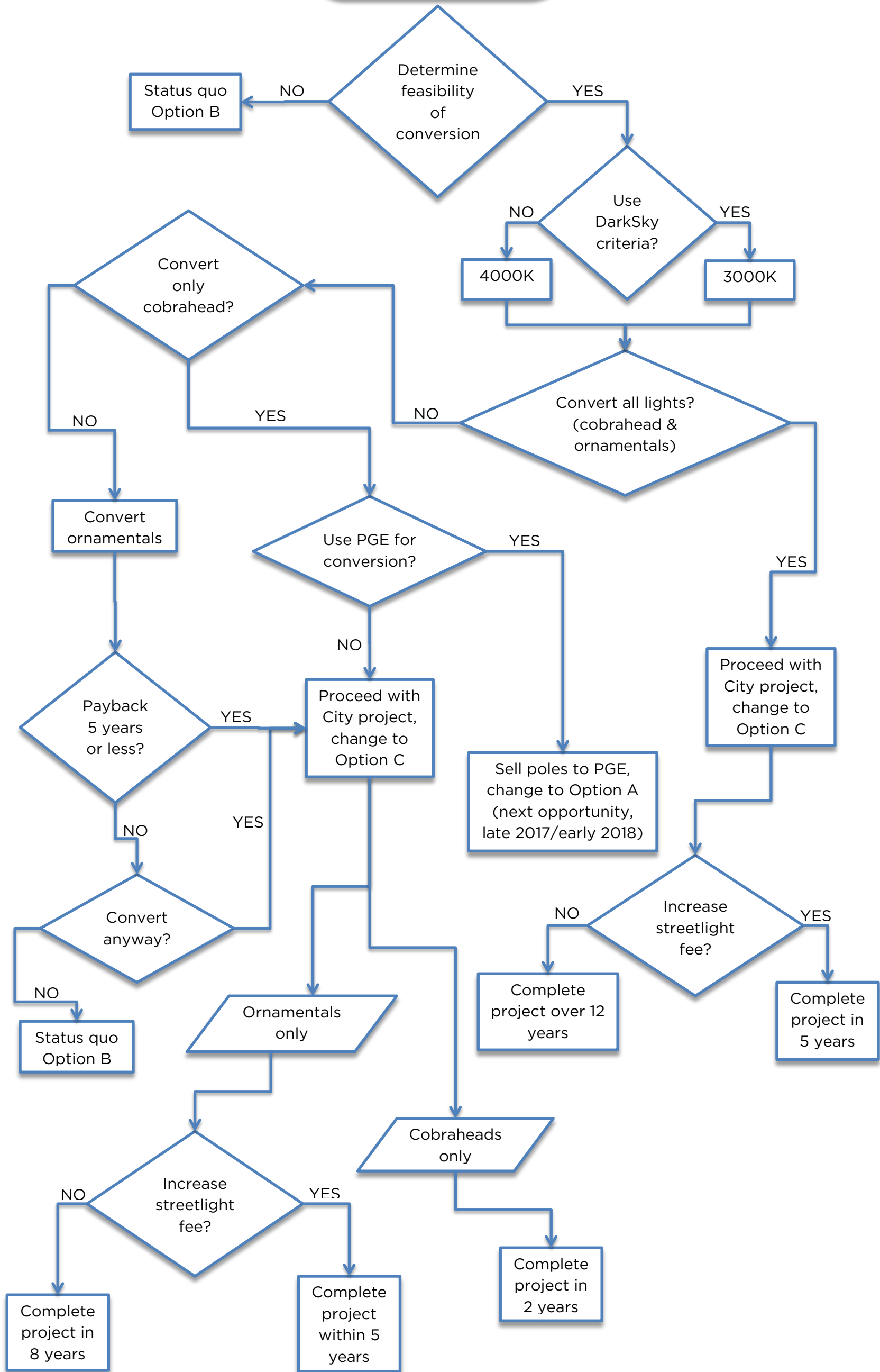
**ALTERNATIVES:** See decision flowchart

**CITY MANAGER COMMENT:**

**ATTACHMENTS:**

A. Wilsonville LED Lighting Conversion Memo- dated May 5, 2016

# LED Streetlight Conversion



# MEMORANDUM

**DATE:** May 5, 2016

**TO:** Delora Kerber, City of Wilsonville

**FROM:** Dana Beckwith, PE, PTOE/Global Transportation Engineering  
Peter Coffey, PE/DKS Associates  
Monica Leal, PE/Global Transportation Engineering  
Michelle Lohr, PE/DKS Associates

**SUBJECT:** **Wilsonville LED Lighting Conversion**

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## Overview

The following memorandum documents the findings and recommendations for the City of Wilsonville, Oregon's LED Luminaire Conversion program. The recommendations are based on review of market ready luminaires, past LED conversions, light level analysis, and coordination with manufacturers, Portland General Electric (PGE), the City of Wilsonville and other local agencies that have conducted LED luminaire conversions.

## Project Description

Solid state LED (light emitting diode) street lighting technology is becoming more prevalent in roadway lighting systems around Oregon and the Country. The City of Wilsonville wants to explore the feasibility, costs, impacts and other issues related to converting high intensity discharge (HID) street lights to LED.

## Project Goals

Specific project goals for the Wilsonville LED lighting conversion include the following:

- Develop a sustainable lighting system that reduces energy consumption.
- Meet International Dark-Sky's standards for light pollution, health and wildlife concerns.
- Replace existing luminaires with aesthetically similar LED luminaires that provide payback periods that will justify the capital, operations, and maintenance costs.
- Determine if using PGE Option A or C maintenance plan provides better life cycle cost.

## Summary

### Luminaires Selection

The luminaire selection process included researching manufacturer reputation and longevity in the industry, correlated color temperature, International Dark Sky's (IDA) compliance, cost of operations, lighting performance, luminaire lifecycle, maintenance costs and aesthetics.

Ultimately the selection process comes down to a compromise of the various criteria used in the selection process. In Wilsonville's case, the following luminaire characteristics are recommended:

- Use manufacturers with a history in lighting;
- Comply with a color temperature of  $\approx 3000^\circ$  Kelvin;

Memorandum: Wilsonville LED Lighting Conversion

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- Luminaire with acceptable performance measures;
- Lifecycle expectancy of 20 years and low maintenance;
- Match existing style and aesthetic features to the extent possible.

#### Luminaire Energy Savings and Payback

Average energy savings and payback was analyzed for the cobra head and ornamental luminaires. The payback analysis shows cobra head style luminaires easily achieve payback within 4.5 years on average with the longest payback being 5.5 years for the manufactures analyzed. Cobra head luminaires achieved an average annual energy savings of 55 percent.

Ornamental fixture payback analysis shows mixed results for the various styles of luminaires. Paybacks range from 12 to 36 years with most luminaires not reaching payback within the estimated lifecycle of 20 years. Up front capital cost is the biggest factor in not achieving payback. Ornamental luminaires achieved an average annual energy savings of 51 percent. Careful consideration needs to be used when determining what ornamental luminaires to convert and when it makes sense to convert them.

#### PGE Considerations

PGE requirements need to be considered into the City's conversion program. These items ultimately pertain to identifying ownership responsibilities and safety. Items to be considered include:

- Connection requirements to PGE service points
- Transitioning between City and PGE circuit ownership
- Responsibility for maintenance and operation of existing associated circuits
- OSHA and PGE requirements for qualified workers
- Conversion to Schedule 95, Option C within 3 or 5 year cycle

#### Conversion Schedule

The estimated cost to convert the City's roadway lighting system is \$1,955,000. This estimate is based on the average cost of each luminaire type the City has to convert.

The City of Wilsonville has dedicated an annual allocation of \$400,000 for a two-year period to be used towards the conversion. Assuming additional annual allocations of \$400,000 are available beyond the two-year period, a complete conversion would take approximately five years (fifth year funding allocation would only need to be \$350,000).

The City can take advantage of the money saved from each prior years converted luminaires reduced energy costs to offset the full allocation of \$400,000 each year. First year energy savings are estimated at \$42,614 with the fifth and final year savings estimated at \$66,300.

Due to the long payback periods associated with ornamental luminaires, it is recommended the City convert those luminaires near the end of the conversion and re-evaluate in year two the conversion cost. Note that with a conversion to an Option C system, the City will be responsible for all street light maintenance, but even with a longer payback period, the conversion of the ornamental luminaires would result in reduced operations and maintenance costs.

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### Procurement Specifications

Two different styles of procurement specifications will be developed for utility grade cobra head style luminaires, ornamental and shoebox style luminaires.

**Cobra head luminaires:** Application based specification with pre-approved manufacturers – Performance is the most important factor. This type of specification will allow for a competitive bidding process and manufacturers to provide their most current product that best fits the application defined by the City. This type of specification has been used for procurement by other jurisdictions within the Metropolitan Area.

**Ornamental and shoebox luminaires:** Functional based specifications with pre-approved luminaires – Aesthetics and performance are important. Luminaires will be pre-approved so that the City has luminaires that perform well, while retaining the general characteristics of existing luminaires. The bidding process can still be competitive if proposals are requested from all manufacturers of pre-approved luminaires or approved equal luminaires are allowed to be submitted.

### Luminaire Selection

The City of Wilsonville has an estimated 2,514 luminaires that are owned by the City and maintained by PGE. These can be classified into five primary styles: cobra head, lantern, acorn, pendant, and rectangular shoebox. Each style can have a number of different luminaire types associated with it. See Appendix A for an overall map of luminaire types. Each type of luminaire in use on public roadways within the City were considered for a conversion to LED technology. The existing luminaires and their potential replacement luminaires are shown in the matrix in Appendix B.

There are a number of criteria that were considered in the luminaire selection process for the City of Wilsonville's LED street lighting conversion. These included manufacturer reputation and longevity in the industry, correlated color temperature, International Dark Sky's (IDA) compliance, cost of operations, lighting performance, luminaire lifecycle, maintenance costs and aesthetics.

Ultimately the selection process comes down to a compromise of the various criteria. In Wilsonville's case, the following luminaire characteristics are recommended:

- Utilize luminaires from manufacturers with a history in lighting that are industry leaders.
- Comply with the IDA Dark Sky's color temperature of  $\approx 3000^\circ$  Kelvin. Based on the assumed benefits to health, operational costs, and performance, this is a good compromise.
- Base the ultimate luminaire selection off acceptable performance measures.
- Utilize luminaires with a good life expectancy and low maintenance.
- Match existing style and aesthetic features to the extent possible, but maintain luminaire performance and typical 20 to 24 year lifecycles.

### Key Selection Criteria

#### Manufacturer

LED Luminaires that are considered for use and used in the analysis conducted for Wilsonville's Citywide conversion process were those manufactured by companies that have a long history within the industry or have a reputation as being a leader in the LED roadway luminaire industry. They are also developing



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their products around US based specifications developed for the manufacturing and application of LED roadway luminaires. A number of the luminaire manufacturers are listed in the Matrix included in Appendix B.

### Dark Sky's Compliance

The International Dark-Sky Association (IDA) is an organization which aims to minimize light pollution and through education, inform designers about the adverse effects of light pollution (including glare), human health effects and disruption to nearby wildlife. The organization has developed standards for lighting, which designates lighting as accordant with IDA's goals.

Regarding LED lighting, the IDA is particularly concerned with outdoor lighting which dispenses a large amount of blue light. As of the end of 2014, IDA will only give approval for products "that offer a listed correlated color temperature configuration of 3000° Kelvin and lower (up to 3220° Kelvin actual measured value – ANSI C78.377)." IDA recommendations include warm white or filtered LEDs with a CCT of less than 3000° Kelvin and an S/P ratio of less than 1.2 in order to minimize the emission of blue light<sup>1</sup>.

Taking into account the research and recommended practices for light levels using luminaire color temperature developed by IDA is a good compromise in reducing concerns about human health and wildlife disruption, while providing reasonably efficient lighting that performs well and provides needed security. Utilizing luminaires with color temperature near 3000° Kelvin will provide acceptable light level performance and energy savings.

### Correlated Color Temperature

The typical color temperature for LED roadway lighting applications is  $\approx$  4000° Kelvin. This is the approximate color of moonlight and provides a good combination of white light and efficacy<sup>2</sup>. However, the International Dark-Sky Association (IDA) suggests that lower color temperatures can reduce light pollution for astronomers and are better for the environment. They have therefore recommended color temperatures of 3000° Kelvin. See Figure 1 for various color temperatures.

**Human Health Concerns** - Lower color temperature contains less blue light which is one of the main health affect concerns. Blue light suppresses melatonin in the body which in turn disrupts the circadian rhythm in humans. Suppressed melatonin levels indicate to the body that is daytime and it should be active. Some studies have shown that this can lead to fatigue, depression, obesity and reduced concentration.

**Wildlife Concerns** - Studies have shown that some wildlife relies on the light of the moon for orientation. Using

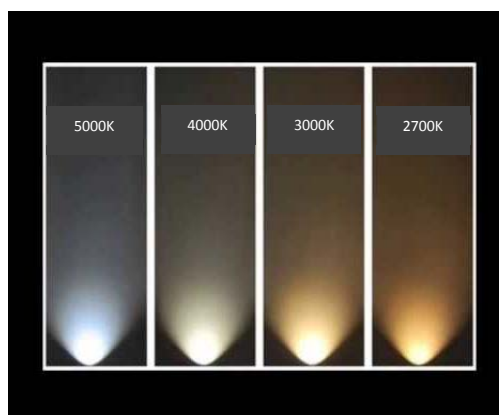


Figure 1- Correlated Color Temperatures

<sup>1</sup> International Dark-Sky Association (IDA) website. <http://darksky.org/fsa/> Accessed August 5, 2015.

<sup>2</sup> Efficacy (lumens/watt) is the calculation of the amount of light produced by each watt of energy consumed. Basically in accounting terms, how much are you paying for lighting your roadway.

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outdoor lighting that mimics the moon can influence their behavior. One of the concerns is this influence may ultimately have an effect on the overall food chain.

*Cost*

Reducing color temperature does have an effect on the overall economics and efficacy of a lighting system. The following Table 1 shows a sample comparison of a 100W HPS luminaire replacement with an equivalent LED luminaire at various color temperatures.

*Table 1 - 100W HPS Replacement with Equivalent LED Luminaire (varied Color Temperature) \**

Description	Equivalent LED Luminaire			
	4000K	3000K	1700K PC Amber	1600K Amber
Color Temperature	4000K	3000K	1700K PC Amber	1600K Amber
Efficacy (lumens/watt)	150	130	100	80
Luminaire Wattage	40	44	60	74
Energy Savings	70%	63%	54%	43%

\*Data obtained from Cyclone Lighting April 2016.

It is apparent from Table 1 that to produce the same light as the 100W HPS with a decrease in color temperature there is also an increase in energy consumption and a reduction in efficacy and energy savings. This is just one example and actual performance will vary by manufacturer and luminaire. However, based on this analogy the difference between a color temperature of 4000° Kelvin and 3000° Kelvin, the energy savings is still above fifty percent. Reviewing the luminaires selected as possible replacements for the City’s conversion, going from a 4000° Kelvin to a 3000° Kelvin fixture can increase wattage requirements between 15 to 20 percent on average.

*Performance and Physical Measures*

LED street lighting conversions are not possible without luminaires that are capable of lighting roadways to current levels or to levels documented in recommended practices and standards. For the City’s LED conversion, the following performance and physical measures were considered in evaluating market ready luminaires that can meet the needs of the City’s street lighting conversion:

- Photometric Performance: Ability to meet the Illuminating Engineering Society of North America’s *Roadway Lighting Recommended Practice, RP-8-014* or at a minimum, current light levels. Lighting analysis and consideration of City typical roadway cross-sections and actual in-field cross-sections were considered.
- Power Consumption: Should be less than the existing high intensity discharge (HID) luminaires. Fifty percent reduction is preferred.
- Weight: Minimize luminaire weight to reduce the risk of over loading existing mounting hardware and amount of weight lifted by maintenance personnel.
- BUG Ratings: Amount of up-light, back-light. These should be minimized.
- Effective Projected Area (EPA): Minimize luminaire EPA to reduce the risk of over loading existing mounting hardware.
- Correlated Color Temperature: Color of light emitted from the luminaire.
- Luminaire Maintenance: Lumen Depreciation (light loss over time due to age and component degradation) over expected life of luminaire.
- Warranty: Five to ten year are standard within the industry.
- Heat dissipation: Are heat dissipation systems designed into the luminaire.

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- Housing and finish: Are materials and paint durable enough to withstand the environment they will operate in over the 20-year lifecycle.
- Mounting: Ability to mount to existing supports.
- Operating temperatures: Are luminaires design to operate in the intended environment.
- Vibration Testing: Do luminaires meet vibration testing standards.
- Electrical Immunity: Surge suppression.
- Drivers: Life expectancy. 100,000 hours is desired.
- Control interface options: Is the luminaire control ready.

These performance and physical measures will be incorporated into the specification for procurement of the luminaires for the LED conversion.

#### Estimated Life Cycle and Maintenance

The life expectancy of an LED is estimated by many manufacturers to be well beyond 100,000 hours. For an LED, its end of life is defined as  $L_{70}$  which is when it is producing only 70 percent of its original lumen output.<sup>3</sup> For this analysis, the estimated life of an LED luminaire is assumed to be 20 years<sup>4</sup> and maintenance will consist of inspection and cleaning only. This lifecycle assumption is conservative based on improved LED arrays, drivers identified as having 100,000-hour life expectancies and the introduction of long life photocells designed to last 20 plus years. The maintenance cycle for LED luminaires is currently assumed to occur once every ten years. This effectively means there will be one maintenance cycle during the life of the luminaire, with the luminaire being replaced at the next cleaning cycle.

In contrast to LED lamps, HID systems with high pressure sodium light sources have a lamp life expectancy of 24,000 hours. End of life estimates are defined for HID lamps when 50 percent of a test set catastrophically fails. The maintenance cycle for HPS luminaires is assumed to occur once every five years to be consistent with the PGE group lamping policy. This scheduled maintenance includes inspection, lamping, cleaning, and torquing mounting bolts. Luminaire life cycle is estimated at 20 years. Therefore, there would be four maintenance cycles with the HID luminaire being replaced at the end of the fourth cycle.

#### Aesthetics

The City of Wilsonville has many different luminaires and light poles that uniquely define the different areas of the City. One goal of the conversion process is to replace the existing luminaires with ones that are similar in aesthetics. Many manufacturers have reproduced new fixtures to replace existing ones, however exact duplicates are not always obtainable. Appendix B identifies existing luminaires and recommended replacements. These were based on the selection criteria previously discussed and closely matched luminaires to the existing.

#### Luminaire Payback

This section summarizes the lifecycle analysis for the Wilsonville LED Street Light Conversion. The lifecycle analysis estimates the average payback period and potential energy savings of the LED

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<sup>3</sup> LEDs do not generally burn out, but rather have diminished lumen output over time.

<sup>4</sup> Twenty years was chosen to be consistent with the PGE lifecycle assumption.

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luminaires in comparison to the HID luminaires they would replace. LED luminaires from 20 manufacturers (10 cobra head and 10 ornamental) were analyzed as part of the analysis. Due to confidential pricing information, the manufacturers are kept anonymous. The payback calculations are based on a weighted average of LED luminaire wattage and unit cost used for each HID wattage category. No cost escalations were considered as part of the evaluation.

The payback analysis shows cobra head style luminaires easily achieve payback within 4.3 years on average with the longest payback being 5.3 years for the manufactures analyzed. Cobra head luminaires achieved an average annual energy savings of 55 percent.

Ornamental fixture payback analysis shows mixed results for the various styles of luminaires with payback ranging from 12 to 36 years depending on style. Careful consideration needs to be used when determining what style of ornamental luminaires to convert and when. Ornamental luminaires achieved an average annual energy savings of 51 percent.

### Definitions and Assumptions

The following definition and assumptions will be helpful in understanding the simple payback calculations.

#### Definition

- Simple Payback Period: The amount of time in number of years it takes to recover an initial capital investment based on savings attributed to operational and maintenance improvements.

$$\text{Simple Payback Period} = \frac{\text{Capital Cost per Luminaire}}{\text{Annual Operation \& Maintenance Savings}}$$

#### Assumptions

- No change in PGE power rate over time.
- Current manufacturers claim the life of an LED is 50,000 hours to 100,000 hours. To be consistent with PGE's 20 year LED life cycle, 82,000 hours will be used in the analysis.
- Although capital costs of LED fixtures have decreased significantly in the past, no change in costs is projected in this analysis.

#### Simple Payback

The factors and assumptions that went into the evaluation process to determine payback are summarized below:

**Capital Cost:** The capital cost for a luminaire is the purchase price for the luminaire along with the cost to energize it at an existing location. An experienced crew is assumed to be capable of replacing an HPS

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luminaire with an LED luminaire in 20 minutes.<sup>5</sup> This equates to approximately 24 luminaires per day. This is a conservative estimate.

**Installation Cost:** The installation cost is assumed to be equal for HPS and LED luminaires. Both luminaires utilize the same type of mounting mechanism and can be mountable on the same arms. Wiring connections for both types of luminaires can be made identical. The installation cost basically accounts for time and materials required for installation.

**Annual Operation Cost:** The annual operation costs are dependent on energy consumption of the luminaire, the number of hours the luminaire will operate in a year, and the electrical rate (cost per kilowatt hour). According to PGE's Schedule 91, luminaires operate for an average of 4,100 hours per year. The average electrical rate paid by the City of Wilsonville is \$0.1066 per kilowatt-hour.<sup>6</sup> Watts per luminaire takes into account the luminaire, ballast for HPS luminaires, or drivers for LED luminaires.

**Annual Maintenance Cost:** It was assumed that LED luminaires have a lamp life of 82,000 hours (20 years) and HPS luminaires have a lamp life of 24,000 hours (5.9 years). With a longer lamp life, the maintenance costs for LED luminaires will be less than those for HPS luminaires. With existing HPS luminaires, maintenance crews are typically scheduled to inspect, clean, and re-lamp the luminaire every four to five years. Over an estimated luminaire life span of 20 years, this would equate to four to five scheduled maintenance cycles (four was assumed in the analysis) with the luminaire being replaced at the end of the fifth cycle (beginning of the 20<sup>th</sup> year). LED maintenance needs will consist of inspection and cleaning only. The required maintenance cycle for LED luminaires is currently assumed to be once every ten years. If the life span of an LED luminaire is estimated to be 20 years, there is the potential for one maintenance cycle with luminaire replacement at the end of the second cycle.

**Failures:** A catastrophic failure occurs when a luminaire fails and requires replacement, which can be the result of manufacturer defect, hardware or circuit failure. It was estimated that HPS luminaires will have a catastrophic failure rate of five percent in the field and LED luminaires will have a catastrophic failure rate of 0.3 percent<sup>7</sup>. Based on review of failure rates for other agencies with major LED luminaire installation, the 0.3 percent failure rate is assumed to be conservative. This analysis assumes that no failures occur during warranty since the replacement of the fixture is covered.

**Warranty:** All reputable LED outdoor lighting manufacturers offer some type of luminaire warranty or warranty program. A ten-year warranty covering defects in the material and workmanship of the luminaire is common. Each manufacturer's warranty will vary and should be considered when selecting a product.

**Conservation Incentives:** Conservation incentives may be available for converting HID fixtures to LED. Currently, Energy Trust of Oregon offers incentives for lighting conversion ranging from \$40 to \$100 for cobra head luminaires, depending on LED wattage. Incentives for ornamental luminaires are also offered

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<sup>5</sup> Twenty minutes is the time Seattle City Lights uses for LED replacement.

<sup>6</sup> *Schedule 91: Street and Highway Lighting Standard Service*, Portland General Electric Company, December 2015.

<sup>7</sup> 2012 DOE Solid-State Lighting R&D Workshop, Presented by Edward Smalley, Atlanta, GA, January 31—February 2, 2012.

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on a custom basis that will need to be applied for prior to a conversion taking place. Estimated incentives for ornamental and rectangular box luminaires range from \$60 to \$120. To simplify calculations, these incentives were normalized across the total number of each type of luminaire.

### Energy Demand and Savings

Although an HPS lamp is made to consume a fixed amount of power as indicated in the product specification, the total power consumed by an HPS cobra head luminaire is higher due to the ballast and other electrical components. Energy demand in kilowatt hours for HPS luminaires were compared to energy demand for analyzed LED luminaires. Tables 2 and 3 summarize average energy savings on a one-to-one comparison for cobra head and ornamental LED luminaires.

*Table 2 – Average Cobra Head Energy Consumption and Savings*

Nominal HID Replacement	kWh Used Annually		Average Energy Savings (Annually)
	HID Nominal	LED Average	
70W	390	152	61 %
100W	533	274	49 %
150W	779	326	58 %
175W	841	385	54 %
200W	988	405	59 %
250W	1,262	477	62 %
400W	1,919	1066	44 %

*Table 3 – Average Ornamental Energy Consumption and Savings*

Nominal HPS Replacement	kWh Used Annually		Average Energy Savings (Annually)
	HPS Nominal	LED Average	
70W Town & Country (Lantern)	390	279	28%
100W Town & Country (Lantern)	533	279	48%
150W Acorn (Capital)	779	279	64%
200W Acorn (Capital)	988	279	72%
100W Acorn	533	258	52%
150W Acorn	779	365	53%
70W to 250W Rectangular Box*	761	414	46%
100W Westbrooke (Pendant)	533	320	40%
150W Westbrooke (Pendant)	779	320	59%

\*Values represent and average of 70W, 100W, 150W, 175W and 250W luminaires.

### Payback

The following summarizes the simple paybacks that were calculated for cobra head and ornamental styles of luminaires. Weighted average costs and wattages for the various luminaire styles were used. It should be noted that payback calculations are sensitive to the capital cost of the luminaires.

Manufacturer typically provide conservative estimates to account for unknowns, that can make longer than anticipated payback periods. A complete summary of the payback calculations is included in Appendix C.

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Cobra Head LED Luminaires

Simple payback for LED cobra head luminaires analyzed is achievable in less than half of the expected life of the luminaire. The payback analysis shows cobra head style luminaires easily achieve payback within 4.3 years on average with the longest payback being 5.3 years.

Taking advantage of new control systems with dimmable drivers is an option that can provide additional energy savings. Cost of the system and control routines for turning lights on and off will affect the added realized savings. Careful consideration including assessing City needs is necessary to determine if a control system can benefit the City. The cost of a control systems was not included in this analysis. The payback period estimated for each cobra head LED luminaire has been summarized Table 4.

Table 4 - Cobra Head Payback Period

Nominal HID Replacement	LED Payback (Years)
70W	4.3
100W	5.3
150W	3.9
175W	4.4
200W	3.9
250W	2.9
400W	5.0

Ornamental LED Luminaires

Ornamental luminaires have a significantly higher capital cost than cobra head luminaires and thus a longer payback period. The payback period for ornamentals (including rectangular box) in this analysis ranges from 12 years to 36 years as summarized in Table 5.

Most ornamental luminaires do not have a payback period that falls within the estimated lifecycle. This indicates careful consideration is needed when determining when to upgrade, specifying, and approving luminaires for use.

In further review of the payback analysis, some manufacturers have provided luminaire cost estimates with conservative quotes. These quotes are representative of purchasing small luminaire quantities which are typically high than larger quantities that would be purchased during a conversion creating long payback periods. Better capital costs may be obtained at time of bid.

Table 5 - Ornamental Payback Period

Nominal HID Replacement	LED Payback (Years)
70W Town & Country	31
100W Town & Country	20
150W Acorn (Capital)	16
200W Acorn (Capital)	21
100W Acorn	21
150W Acorn	30
70W to 250W Rectangular Box*	12 to 26
100W Westbrooke	36
150W Westbrooke	21

\*Values represent and average of 70W, 100W, 150W, 175W and 250W luminaires.



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## PGE Considerations

Utilities like PGE, the energy provider for Wilsonville, have either developed or are in the process of developing new operations and maintenance tariffs. These tariffs account for the new efficiencies that LED technology has in reducing maintenance and energy consumption compared to existing high intensity discharge (HID) lighting systems. The changes in technology and tariffs have many local agencies raising the question of system ownership responsibilities.

In June 2000, per Resolution 1645, the City purchased street light fixtures and poles from PGE for \$780,289 to enable the City to forgo monthly replacement charges. The City then replaced most of the wooden poles with aluminum or fiberglass poles that have a long life expectancy. Given the changes in street lighting technology, PGE tariffs, and an offer from PGE to purchase City owned and PGE maintained Option B lights, Wilsonville is now faced with determining whether to sell the Option B lights back to PGE (Option A) or move to Option C.

To meet their goals, the City of Wilsonville is considering the conversion of their existing PGE Option B lighting systems to PGE Schedule 95 Option C and utilize contract services for maintenance of their lighting system. To retain ownership and take over the operations and maintenance of the lighting systems within Wilsonville, PGE requirements need to be considered into the City's conversion program and a certain level of negotiation will be required.

The following is a summary of PGE Schedule 91 and 95 tariffs, connection requirements for PGE service points, transitioning between City and PGE circuit ownership, responsibility for maintenance and operation of existing associated circuits, and PGE requirements for qualified workers based on agreements with the City of Portland. The City of Wilsonville's requirements may vary from these requirements which will require negotiations between PGE and the City.

Many agencies within the Portland Metropolitan area have already gone through conversions that involve PGE. Many of these agencies are willing to discuss their experiences and lessons learned.

### PGE Schedule 91 & 95 Tariffs

#### Existing PGE Schedule 91 Tariff (Street and Highway Lighting Standard Service)

PGE's Schedule 91 tariff was developed for high intensity discharge lighting technologies. Wilsonville's existing street lighting installations fall under PGE's Schedule 91 Option B tariff. Under this tariff, the City owns the street lighting equipment, but PGE maintains and operates the system (with electricity typically billed at a flat rate depending on the fixture and pole type). Under this tariff, all roadway lighting equipment must be approved by PGE. Other Schedule 91 tariff options including the following:

- Schedule 91, Option A (Flat Rated): PGE ownership and maintenance of street lighting
- Schedule 91, Option C (Flat Rated): Agency ownership and maintenance of street lighting

#### New PGE Schedule 95 Tariff (Street and Highway Lighting New Technology)

PGE's Schedule 95 tariff was developed exclusively for new lighting technologies (i.e. LED). The Schedule 95 tariff is comprised of two options:

- Schedule 95, Option A (Flat Rate): PGE ownership and maintenance of street lighting
- Schedule 95, Option C (Flat Rate): Agency ownership and maintenance of street lighting



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A distinguishing factor between Schedule 91 (existing HID technology tariff) and Schedule 95, is that Option B no longer exists as part of Schedule 95. Therefore, if Wilsonville decided to convert any Schedule 91 Option B lighting to Schedule 95, the entirety of the Option B lighting must be completely converted to either Schedule 95 Option A or Option C using one of two methods:

- (1) Within five years following PGE's group lamp replacement cycle.
- (2) Within three years on a schedule mutually agreed upon between PGE and the City.

After the three or five-year period, any remaining Option B luminaires will be converted to Option C.

If the City converts their lighting to Schedule 95 Option C, PGE will provide electricity to luminaires "that are purchased, owned and maintained by the Customer and installed on non-Company owned poles or Company-owned distribution poles". Maintenance and service to the poles will be the responsibility of the City<sup>8</sup>. "As a condition of the election of Option C, Customer is responsible for ensuring that all new underground service installation of Option C luminaire is isolated by a disconnected switch or fuse."

#### Connection Requirements for PGE Service Points

A PGE service point is the where the City connects its system to a PGE power circuit. For Option C lighting systems, the City is responsible for lighting design and for the cost of all trench excavations, road crossings, conduits, elbows, vaults, junction boxes, and associated permits which occur between the PGE power source and the connection point to the City lighting system. Specific PGE requirements for trench excavation, conduits, elbows, and junction boxes are available in the PGE *Option C Streetlight Installation Responsibilities* document<sup>9</sup>. Upon altering a load to an existing electrical service point, the change in power load must be provided to PGE in writing.

PGE is responsible for the following:

- Determining the PGE power source
- Calculating the fault current
- Approving the conduit design from the source to the City's lighting system connection point

#### Transitioning Between City and PGE Circuit Ownership

In the case of Option B luminaires, the City generally owns the circuit in the pole and PGE owns everything underground and overhead. When a transition in circuit ownership is made, the demarcation point between City and PGE circuit ownership is often an existing utility junction box or a junction box at the base of a luminaire pole which is installed by the City. However, this can differ depending on if the circuit is overhead or underground. If a pole is fed by an underground circuit and there is no junction box at the base of the pole, a hand hole may provide access to a splice in the pole. In this case, the splice would be the connection point<sup>10</sup>.

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<sup>8</sup> Portland General Electric (PGE). Schedule 95: Street and Highway Lighting New Technology (Cost of Service).

<sup>9</sup> Schedule 91 Option C Street Light Installation Responsibilities. PGE. Revised December 15, 2008. According to a phone conversation with PGE Staff, responsibilities do not differ between Schedule 91 and Schedule 95, Option C installation requirements.

<sup>10</sup> Conversation with Norberto Adre, City of Portland and Lori Swanson, PGE on August 25, 2015.

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### PGE Requirements for Qualified Workers

The conversion of Option B luminaires to Option C LED luminaires on electrical distribution poles must be performed by qualified workers, as noted in regulations established by the Occupational Safety & Health Administration (OSHA)<sup>11</sup>. Qualified workers are also required to perform maintenance on fixtures located on PGE utility poles. This does not apply to City owned lighting at traffic signal systems or that are operated from a service panel where there is a fused separation from PGE's service.

OSHA defines a qualified worker as "one who has received training in and has demonstrated skills and knowledge in the construction and operation of electric equipment and installations and the hazards involved"<sup>12</sup>. PGE Schedule 95 specifies that, in the case of LED conversion to Option C, "a Qualified Worker is a journeyman lineman, or someone who has the equivalent training, expertise and experience to perform journeyman lineman work"<sup>13</sup>. Work performed must be in compliance with requirements established by OSHA, Oregon Public Utility Commission (OPUC) Safety Rules, and the National Electrical Safety Code (NESC) and/or the National Electrical Code (NEC).

### Responsibility for Operation and Maintenance of Existing Circuits

When the City converts its Schedule 91 Option B luminaires to Schedule 95 Option C, the City will assume maintenance responsibilities for luminaires and associated circuits, including responsibility for performing underground locates for circuits, conduit, and junction boxes. An associated (existing) circuit is the conductors on the City side of the lighting system.

For underground circuits, PGE will continue to maintain underground circuitry until PGE deems that the system is no longer maintainable or operational. When this occurs, the City becomes responsible for the replacement and maintenance of those underground circuits. At the point in time the City takes over complete ownership of the system, the demarcation point between the City and PGE will need to be determined.

For above ground circuits, PGE will be responsible for the first run from the power source. The City is responsible for the remainder of the circuit.

### Conversion

The following section identifies a schedule for converting the City of Wilsonville's lighting system and a recommendation on specifications for the procurement of luminaires.

### Schedule

Based on the luminaires analyzed for both the cobra head and ornamental (including rectangular box) luminaires, the cost to convert the City's roadway lighting system is estimated at \$1,955,000. This estimate is based on the average cost of each luminaire type.

The City of Wilsonville has dedicated an annual allocation of \$400,000 for at least a two-year period to be used towards the conversion. Based on the funding allocation for the first two years, all cobra head

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<sup>11</sup> 29 CFR 1910.269. OSHA Law & Regulations. Accessed August 24, 2015.

<sup>12</sup> 1910.399 OSHA Law & Regulations. Accessed August 24, 2015.

<sup>13</sup> Schedule 95. PGE.

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luminaires and almost 40 percent of the rectangular box luminaires can be replaced during the first year, as shown in Table 6. The remaining rectangular box and approximately 80 percent of the acorn fixtures can be replaced the second year. Assuming additional annual allocations of \$400,000 are available, a complete conversion will take approximately five years. From the second year forward, it is recommended to replace the remaining acorn fixtures followed by the Acorn (Capital), Town & County and finally the Westbrook fixtures. The fifth year funding allocation would only need to be \$350,000.

To offset the full allocation of \$400,000 each year, the money saved from reduced energy costs from the prior year can be put back into the conversion process for the following year. First year energy savings are estimated at \$42,614 with the fifth and final year savings estimated at \$66,300. This equates to an approximate \$214,948 energy savings during the five-year conversion period.

By the sixth year following the completed conversion, it is estimated the City will realize an annual energy savings of \$71,000.

Due to the long payback periods associated with ornamental luminaires, it is recommended the City convert those luminaires near the end of the conversion and re-evaluate in year two the conversion cost. Note that with a conversion to an Option C system, the City will be responsible for all street light maintenance, but with even with a longer payback period, the conversion of the ornamental luminaires would result in reduced operations and maintenance costs.

### Procurement Specifications

Luminaires and light poles are instrumental in defining specific areas and neighborhood aesthetics within Cities. Once defined, whether chosen by a designer, agency staff, developer or a public involvement process, changing the defined character of an area can have a negative connotation if all stakeholders are not involved in the process. For the procurement process, utility grade cobra head luminaires can be procured differently than ornamental luminaires to obtain the best lighting options for the roadway.

Two different styles of procurement specifications will be developed for utility grade cobra head style luminaires, ornamental and shoebox style luminaires.

**Cobra head luminaires:** Application based specification with pre-approved manufacturers – Performance is the most important factor. This type of specification will allow for a competitive bidding process and manufacturers to provide their most current product that best fits the application defined by the City.

**Ornamental and shoebox luminaires:** Functional based specifications with pre-approved luminaires – Aesthetics and performance are important. Luminaires will be pre-approved so that the City has luminaires that performs well, but retains the general characteristics of existing luminaires. Bidding process can still be competitive if proposals are requested from all manufacturers of pre-approved luminaires or approved equal luminaires are allowed.

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Table 6 - Conversion Schedule

Luminaire Type	Total Qty	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
		Qty	Material & Labor Cost	Qty	Material & Labor Cost	Qty	Material & Labor Cost	Qty	Material & Labor Cost	Qty	Material & Labor Cost
Cobra Heads	880	880	\$277,875								
Rectangular Box	467	188	\$122,220	279	\$145,638						
Acorn	237			188	\$254,826	30	\$38,610				
Acorn (Capitol)	373					231	\$361,746	142	\$222,372		
Town and Country	491							199	\$177,409	292	\$260,318
Westbrook	66									66	\$93,456
<b>TOTAL COST</b>	<b>\$1,954,469</b>		<b>\$400,095</b>		<b>\$400,464</b>		<b>\$400,356</b>		<b>\$399,781</b>		<b>\$353,774</b>
<b>TOTAL ENERGY SAVINGS</b>	<b>\$214,948</b>				<b>\$41,645</b>		<b>\$49,012</b>		<b>\$57,994</b>		<b>\$66,297</b>

#### Recommended Cobra Head Luminaire Procurement Specifications

Cobra head luminaire replacements can be converted with less stakeholder input as long as light levels are retained and roadways are lit to public expectations. These types of luminaires are typically used to put light on the roadways and provide security with less regard to aesthetics. With this in mind, an “application based” specification with pre-approved manufacturers that can submit proposals is recommended for procurement. This type of specification defines the following:

- Site Parameters: roadway characteristics, light pole placement along the roadway
- Luminaire Performance Criteria: photometric requirements and analysis methodology
- LED Luminaire Characteristics

Based on the defined application, the manufacturers will conduct a lighting analysis and provide luminaires that best meet the defined application. This allows manufacturers to provide the best product or family of products to meet the application. Since the specification is developed from luminaires that are available on the market today it keeps the process competitive and will typically result in competitive bids.

#### Recommended Ornamental Luminaire Procurement Specifications

In comparison to cobra head luminaires, ornamental luminaires are focal points along the roadway and can be key in defining special areas within a City. Aesthetics of the luminaire can be as important as its performance. With this in mind, a “functional based” specification with pre-approved luminaires is recommended. This type of specification defines just the functional requirements of the luminaire, while allowing the City to retain the desired aesthetics that have been chosen with the pre-approved luminaires. This method of procurement is competitive as long as a request for proposal goes out to all the manufacturers of the pre-approved luminaires. The City may also choose to accept approved equals to the pre-approved luminaires that meet both the functional specifications and aesthetic requirements allowing for a more competitive bid.

Appendix

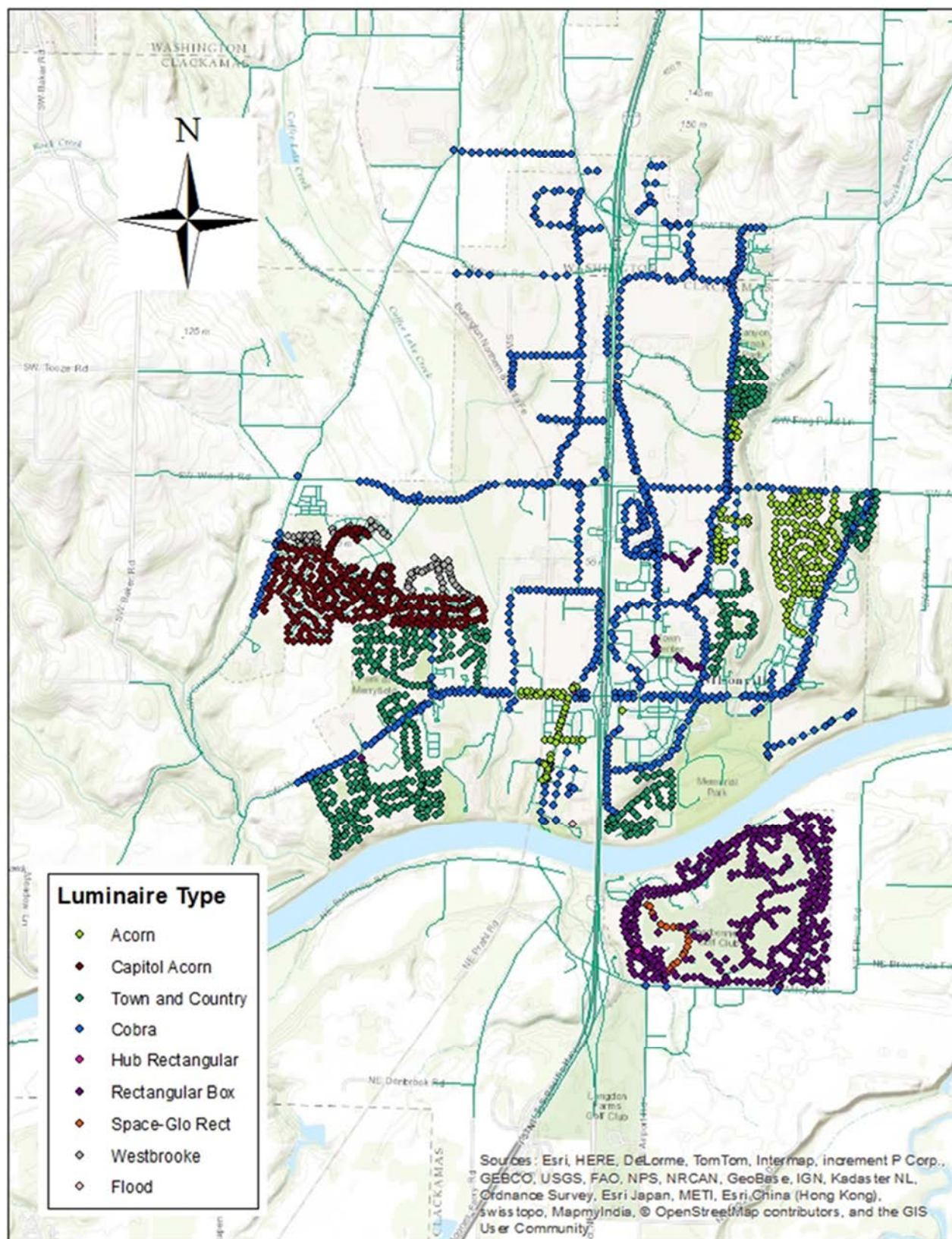
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- A - City Luminaire Type and Location
- B - Luminaire Matrix
- C - Payback Spreadsheet

Appendix A - City Luminaire Type and Location



## City of Wilsonville Luminaire Types













Appendix B - Luminaire Matrix













LED Conversion  
Recommended Replacement Matrix

Luminaire Style	Recommended LED Replacement	Manufacturer	Model	Color Temperature
 <b>Cobra Head</b>		CREE	BXSP Series	3000K
		Leotek	Ecobra	3000K
		American Electric	ATB0/ATB2	3000K
 <b>Mongoose</b>		CREE	BXSP Series	3000K
		Leotek	Ecobra	3000K
		American Electric	ATB0/ATB2	3000K









LED Conversion  
Recommended Replacement Matrix

Luminaire Style	Recommended LED Replacement	Manufacturer	Model	Color Temperature
 <b>Acorn</b>		Philips Hadco	RL34	3000K
		Holophane	Washington Postlite II LED	3000K
		King	K139R Wellington LED	3000K
 <b>Blue Acorn with Cap</b>		Philips Hadco	RL34 Post Top LED (with roof D, painted blue)	3000K
		King	K139R Wellington LED (painted blue)	3000K
 <b>Acorn Capitol</b>	 	Philips Hadco	RL34 Post Top LED (with cage, G, and roof, D or G)	3000K



LED Conversion  
Recommended Replacement Matrix

Luminaire Style	Recommended LED Replacement	Manufacturer	Model	Color Temperature
 <p>Town &amp; Country</p>		American Electric	American Revolution LED Series 247L	3000k
		General Electric	Evolve LED Post Top	3000K
		Sun Valley	Colonial Series LED	3000K
 <p>Rectangular Box</p>		Philips Gardco	AeroScape LED (TDB Dark Bronze finish)	3000K
		Lithonia	D-Series	3000K
		Leotek	Arieta AR13	3000K
		Kim	Archetype LED	3000K



LED Conversion  
Recommended Replacement Matrix

Luminaire Style	Recommended LED Replacement	Manufacturer	Model	Color Temperature
 <b>Westbrooke</b>		Philips Hadco	Westbrooke LEDGINE CXF15	3000K
		Sternberg	Omega LED 1527	3000K
		King	Satelite Sr LED Pendant K806	3000K
		Philips Lumec	Domus	3000K

Appendix C - Payback Spreadsheet

Simple Payback Calculator - Cobra Head with Incentives														
Description	Base System							37 Watts	67 Watts	80 Watts	94 Watts	99 Watts	116 Watts	260 Watts
	70W HPS Cobra Head	100W HPS Cobra Head	150W HPS Cobra Head	175W MV Cobra Head	200W HPS Cobra Head	250W HPS Cobra Head	400W HPS/MV Cobra Head	Replaces 70W HPS	Replaces 100W HPS	Replaces 150W HPS	Replaces 175W MV	Replaces 200W HPS	Replaces 250W HPS	Replaces 400W HPS/MV
<b>Initial Cost per Fixture</b>														
Number of Luminaires	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Number of Lamps per Luminaire	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Capital Cost per Luminaire****								\$ 155.00	\$ 190.00	\$ 213.00	\$ 222.00	\$ 241.00	\$ 296.00	\$ 475.00
Installation Cost								\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00
<b>Initial Cost</b>								<b>\$ 221.00</b>	<b>\$ 256.00</b>	<b>\$ 279.00</b>	<b>\$ 288.00</b>	<b>\$ 307.00</b>	<b>\$ 362.00</b>	<b>\$ 541.00</b>
<b>Annual Operations Cost per Fixture</b>														
Watts per Fixture (luminaire and ballast/driver)	95	130	190	205	241	308	468	37	67	80	94	99	116	260
kW per Fixture	0.095	0.13	0.19	0.205	0.241	0.308	0.468	0.0370	0.0670	0.0800	0.0940	0.0990	0.1160	0.2600
Annual Hours of Operation	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs
kW Hours per Year	389.5 kWh	533.0 kWh	779.0 kWh	840.5 kWh	988.1 kWh	1,262.8 kWh	1,918.8 kWh	151.7 kWh	274.7 kWh	328.0 kWh	385.4 kWh	405.9 kWh	475.6 kWh	1,066.0 kWh
Electric Rate (\$/kWh)	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066
<b>Annual Operations Cost</b>	<b>\$ 41.53</b>	<b>\$ 56.83</b>	<b>\$ 83.06</b>	<b>\$ 89.62</b>	<b>\$ 105.36</b>	<b>\$ 134.65</b>	<b>\$ 204.60</b>	<b>\$ 16.18</b>	<b>\$ 29.29</b>	<b>\$ 34.97</b>	<b>\$ 41.10</b>	<b>\$ 43.28</b>	<b>\$ 50.71</b>	<b>\$ 113.67</b>
<b>Annual Maintenance Cost</b>														
Fixture Life (yrs)	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs
Lamp Life (hrs)*	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs
Lamp Life (yrs)	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs
Theoretical Relamps/Cleanings Over Life of Fixture	3.42	3.42	3.42	3.42	3.42	3.42	3.42	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Relamps/Cleanings Over Life of Fixture	4.0	4.0	4.0	4.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cost per Relamp/Cleaning (maintenance + parts)**	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00
Annualized Relamp/Cleaning Cost	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25
Other Annualized Costs (Catastrophic Failure/Damage)***	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20
<b>Annual Maintenance Cost</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>
<b>Payback (Compared to Base HPS System)</b>														
Initial Cost per Fixture	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 221.00	\$ 256.00	\$ 279.00	\$ 288.00	\$ 307.00	\$ 362.00	\$ 541.00
Rebate per Fixture								\$ 40.00	\$ 19.00	\$ 23.23			\$ 72.05	
Initial Cost after Rebate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 181.00	\$ 237.00	\$ 255.77	\$ 288.00	\$ 307.00	\$ 289.95	\$ 541.00
Annual Operations Cost	\$ 41.53	\$ 56.83	\$ 83.06	\$ 89.62	\$ 105.36	\$ 134.65	\$ 204.60	\$ 16.18	\$ 29.29	\$ 34.97	\$ 41.10	\$ 43.28	\$ 50.71	\$ 113.67
Annual Operations Savings	NA	NA	NA	NA	NA	NA	NA	\$ 25.36	\$ 27.54	\$ 48.09	\$ 48.53	\$ 62.08	\$ 83.94	\$ 90.93
Annual Maintenance Cost	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45
Annual Maintenance Savings	NA	NA	NA	NA	NA	NA	NA	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85
Total Annual O&M Savings	NA	NA	NA	NA	NA	NA	NA	\$ 42.21	\$ 44.39	\$ 64.94	\$ 65.38	\$ 78.93	\$ 100.79	\$ 107.79
<b>Payback Period</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>4.3 yrs</b>	<b>5.3 yrs</b>	<b>3.9 yrs</b>	<b>4.4 yrs</b>	<b>3.9 yrs</b>	<b>2.9 yrs</b>	<b>5.0 yrs</b>
*Calculated at 20 year fixture life.														
** LED fixtures to be cleaned only, no relamp required.														
***Assumes a 5% failure rate for HPS luminaires and assumed 0.3% failure for LED fixtures														
**** Based on information provided by the manufacturer														
<b>Energy Demand and Savings</b>														
Watts per Fixture	95	130	190	205	241	308	468	37	67	80	94	99	116	260
Base System (HPS) kWh per year	389.50	533.00	779.00	840.50	988.10	1262.80	1918.80	151.70	274.70	328.00	385.40	405.90	475.60	1066.00
Savings in kWh (Compared to Base HPS System)	NA	NA	NA	NA	NA	NA	NA	237.80	258.30	451.00	455.10	582.20	787.20	852.80
Savings in Cost	NA	NA	NA	NA	NA	NA	NA	\$ 25.36	\$ 27.54	\$ 48.09	\$ 48.53	\$ 62.08	\$ 83.94	\$ 90.93

Simple Payback Calculator - Ornamental

Description	Base System - Acorn		Base System - Capital Acorn		Base System - Town Country		Base System - Westbrook		Base System - Acorn		Base System - Capital Acorn		Base System - Town Country		Base System - Westbrook		
									63 Watts	89 Watts	68 Watts	68 Watts	68 Watts	68 Watts	78 Watts	78 Watts	
	100W HPS	150W HPS	150W HPS	200W HPS	70W HPS	100W HPS	100W HPS	150W HPS	100W HPS	150W HPS	150W HPS	200W HPS	70W HPS	100W HPS	100W HPS	150W HPS	
<b>Initial Cost per Fixture</b>																	
Number of Luminaires	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Number of Lamps per Luminaire	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Capital Cost per Luminaire****										\$ 1,293.00	\$ 1,293.00	\$ 1,500.00	\$ 1,500.00	\$ 826.00	\$ 826.00	\$ 1,350.00	\$ 1,350.00
Installation Cost										\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00
<b>Initial Cost</b>										<b>\$ 1,359.00</b>	<b>\$ 1,359.00</b>	<b>\$ 1,566.00</b>	<b>\$ 1,566.00</b>	<b>\$ 892.00</b>	<b>\$ 892.00</b>	<b>\$ 1,416.00</b>	<b>\$ 1,416.00</b>

Annual Operations Cost per Fixture

Watts per Fixture (luminaire and ballast/driver)	130	190	190	241	95	130	130	190	63	89	68	68	68	68	78	78
kW per Fixture	0.13	0.19	0.19	0.241	0.095	0.13	0.13	0.19	0.0630	0.0890	0.0680	0.0680	0.0680	0.0680	0.0780	0.0780
Annual Hours of Operation	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs
kW Hours per Year	533.0 kWh	779.0 kWh	779.0 kWh	988.1 kWh	389.5 kWh	533.0 kWh	533.0 kWh	779.0 kWh	258.3 kWh	364.9 kWh	278.8 kWh	278.8 kWh	278.8 kWh	278.8 kWh	319.8 kWh	319.8 kWh
Electric Rate (\$/kWh)	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066
<b>Annual Operations Cost</b>	<b>\$ 56.83</b>	<b>\$ 83.06</b>	<b>\$ 83.06</b>	<b>\$ 105.36</b>	<b>\$ 41.53</b>	<b>\$ 56.83</b>	<b>\$ 56.83</b>	<b>\$ 83.06</b>	<b>\$ 27.54</b>	<b>\$ 38.91</b>	<b>\$ 29.73</b>	<b>\$ 29.73</b>	<b>\$ 29.73</b>	<b>\$ 29.73</b>	<b>\$ 34.10</b>	<b>\$ 34.10</b>

Annual Maintenance Cost

Fixture Life (yrs)	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs
Lamp Life (hrs)*	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs
Lamp Life (yrs)	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs
Theoretical Relamps/Cleanings Over Life of Fixture	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Relamps/Cleanings Over Life of Fixture	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cost per Relamp/Cleaning (maintenance + parts)**	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00
Annualized Relamp/Cleaning Cost	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25
Other Annualized Costs (Catastrophic Failure/Damage)***	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20
<b>Annual Maintenance Cost</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>

Payback (Compared to Base HPS System)

Initial Cost per Fixture	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,359.00	\$ 1,359.00	\$ 1,566.00	\$ 1,566.00	\$ 892.00	\$ 892.00	\$ 1,416.00	\$ 1,416.00
Rebate per Fixture										\$ 60.52	\$ 80.00	\$ 120.00				\$ 60.00
Initial Cost after Rebate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,359.00	\$ 1,298.48	\$ 1,486.00	\$ 1,446.00	\$ 892.00	\$ 892.00	\$ 1,416.00	\$ 1,356.00
Annual Operations Cost	\$ 56.83	\$ 83.06	\$ 83.06	\$ 105.36	\$ 41.53	\$ 56.83	\$ 56.83	\$ 83.06	\$ 27.54	\$ 38.91	\$ 29.73	\$ 29.73	\$ 29.73	\$ 29.73	\$ 34.10	\$ 34.10
Annual Operations Savings	NA	NA	NA	NA	NA	NA	NA	NA	\$ 29.29	\$ 44.16	\$ 53.34	\$ 75.63	\$ 11.80	\$ 27.11	\$ 22.73	\$ 48.96
Annual Maintenance Cost	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45
Annual Maintenance Savings	NA	NA	NA	NA	NA	NA	NA	NA	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85
Total Annual O&M Savings	NA	NA	NA	NA	NA	NA	NA	NA	\$ 46.14	\$ 61.01	\$ 70.19	\$ 92.48	\$ 28.66	\$ 43.96	\$ 39.59	\$ 65.82

<b>Payback Period</b>	NA	NA	NA	NA	NA	NA	NA	NA	29.5 yrs	21.3 yrs	21.2 yrs	15.6 yrs	31.1 yrs	20.3 yrs	35.8 yrs	20.6 yrs
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\*Calculated at 20 year fixture life.

\*\* LED fixtures to be cleaned only, no relamp required.

\*\*\*Assumes a 5% failure rate for HPS luminaires and assumed 0.3% failure for LED fixtures

\*\*\*\* Based on information provided by the manufacturer

Energy Demand and Savings

Watts per Fixture	130	190	190	241	95	130	130	190	63	89	68	68	68	68	78	78
Base System (HPS) kWh per year	533.00	779.00	779.00	988.10	389.50	533.00	533.00	779.00	258.30	364.90	278.80	278.80	278.80	278.80	319.80	319.80
Savings in kWh (Compared to Base HPS System)	NA	NA	NA	NA	NA	NA	NA	NA	274.70	414.10	500.20	709.30	110.70	254.20	213.20	459.20
Savings in Cost	NA	NA	NA	NA	NA	NA	NA	NA	\$ 29.29	\$ 44.16	\$ 53.34	\$ 75.63	\$ 11.80	\$ 27.11	\$ 22.73	\$ 48.96



Simple Payback Calculator - Rectangular Box										
Description	Base System					65 Watts	65 Watts	125 Watts	125 Watts	125 Watts
	70W HPS	100W HPS	150W HPS	175W MV	250W HPS	Replaces 70W HPS	Replaces 100W HPS	Replaces 150W HPS	Replaces 175W MV	Replaces 250W HPS
<b>Initial Cost per Fixture</b>										
Number of Luminaires	1	1	1	1	1	1	1	1	1	1
Number of Lamps per Luminaire	1	1	1	1	1	1	1	1	1	1
Capital Cost per Luminaire****						\$ 456.00	\$ 456.00	\$ 1,125.00	\$ 1,125.00	\$ 1,125.00
Installation Cost						\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00	\$ 66.00
<b>Initial Cost</b>						<b>\$ 522.00</b>	<b>\$ 522.00</b>	<b>\$ 1,191.00</b>	<b>\$ 1,191.00</b>	<b>\$ 1,191.00</b>
<b>Annual Operations Cost per Fixture</b>										
Watts per Fixture (luminaire and ballast/driver)	95	130	190	205	308	65	65	125	125	125
kW per Fixture	0.095	0.13	0.19	0.205	0.308	0.0650	0.0650	0.1250	0.1250	0.1250
Annual Hours of Operation	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs	4,100 hrs
kW Hours per Year	389.5 kWh	533.0 kWh	779.0 kWh	840.5 kWh	1,262.8 kWh	266.5 kWh	266.5 kWh	512.5 kWh	512.5 kWh	512.5 kWh
Electric Rate (\$/kWh)	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066	\$ 0.1066
<b>Annual Operations Cost</b>	<b>\$ 41.53</b>	<b>\$ 56.83</b>	<b>\$ 83.06</b>	<b>\$ 89.62</b>	<b>\$ 134.65</b>	<b>\$ 28.42</b>	<b>\$ 28.42</b>	<b>\$ 54.65</b>	<b>\$ 54.65</b>	<b>\$ 54.65</b>
<b>Annual Maintenance Cost</b>										
Fixture Life (yrs)	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs	20 yrs
Lamp Life (hrs)*	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	24,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs	82,000 hrs
Lamp Life (yrs)	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	5.9 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs	20.0 yrs
Theoretical Relamps/Cleanings Over Life of Fixture	3.42	3.42	3.42	3.42	3.42	1.0	1.0	1.0	1.0	1.0
Relamps/Cleanings Over Life of Fixture	4.0	4.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Cost per Relamp/Cleaning (maintenance + parts)**	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00
Annualized Relamp/Cleaning Cost	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25
Other Annualized Costs (Catastrophic Failure/Damage)***	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 3.30	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20
<b>Annual Maintenance Cost</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 18.30</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>	<b>\$ 1.45</b>
<b>Payback (Compared to Base HPS System)</b>										
Initial Cost per Fixture	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 522.00	\$ 522.00	\$ 1,191.00	\$ 1,191.00	\$ 1,191.00
Rebate per Fixture										\$ 80.00
Initial Cost after Rebate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 522.00	\$ 522.00	\$ 1,191.00	\$ 1,191.00	\$ 1,111.00
Annual Operations Cost	\$ 41.53	\$ 56.83	\$ 83.06	\$ 89.62	\$ 134.65	\$ 28.42	\$ 28.42	\$ 54.65	\$ 54.65	\$ 54.65
Annual Operations Savings	NA	NA	NA	NA	NA	\$ 13.12	\$ 28.42	\$ 28.42	\$ 34.97	\$ 80.00
Annual Maintenance Cost	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 18.30	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45	\$ 1.45
Annual Maintenance Savings	NA	NA	NA	NA	NA	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85	\$ 16.85
Total Annual O&M Savings	NA	NA	NA	NA	NA	\$ 29.97	\$ 45.27	\$ 45.27	\$ 51.83	\$ 96.86
<b>Payback Period</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>17.4 yrs</b>	<b>11.5 yrs</b>	<b>26.3 yrs</b>	<b>23.0 yrs</b>	<b>11.5 yrs</b>
*Calculated at 20 year fixture life.										
** LED fixtures to be cleaned only, no relamp required.										
***Assumes a 5% failure rate for HPS luminaires and assumed 0.3% failure for LED fixtures										
**** Based on information provided by the manufacturer										
<b>Energy Demand and Savings</b>										
Watts per Fixture	95	130	190	205	308	65	65	125	125	125
Base System (HPS) kWh per year	389.50	533.00	779.00	840.50	1262.80	266.50	266.50	512.50	512.50	512.50
Savings in kWh (Compared to Base HPS System)	NA	NA	NA	NA	NA	123.00	266.50	266.50	328.00	750.30
Savings in Cost	NA	NA	NA	NA	NA	\$ 13.12	\$ 28.42	\$ 28.42	\$ 34.97	\$ 80.00



**CITY COUNCIL MEETING  
STAFF REPORT**

<b>Meeting Date:</b> May 16, 20176	<b>Subject:</b> 2016 Project Recommendations for the Wilsonville-Metro Community Enhancement Program <b>Staff Member:</b> Mark Ottenad, Public/Government Affairs Director <b>Department:</b> Administration	
<b>Action Required</b>	<b>Advisory Board/Commission Recommendation</b>	
<input type="checkbox"/> Motion <input type="checkbox"/> Public Hearing Date: <input type="checkbox"/> Ordinance 1 <sup>st</sup> Reading Date: <input type="checkbox"/> Ordinance 2 <sup>nd</sup> Reading Date: <input type="checkbox"/> Resolution Information or Direction <input checked="" type="checkbox"/> Information Only <input type="checkbox"/> Council Direction <input type="checkbox"/> Consent Agenda	<input type="checkbox"/> Approval <input type="checkbox"/> Denial <input type="checkbox"/> None Forwarded <input checked="" type="checkbox"/> Not Applicable <b>Comments:</b>	
<b>Staff Recommendations:</b> NA		
<b>Recommended Language for Motion:</b> NA		
<b>PROJECT / ISSUE RELATES TO:</b>		
<input checked="" type="checkbox"/> Council Goals/Priorities	<input type="checkbox"/> Adopted Master Plan(s)	<input type="checkbox"/> Not Applicable

**ISSUE BEFORE COUNCIL**

Update on 2016 Community Enhancement Program projects recommendations by the Wilsonville-Metro Community Enhancement Committee.

**EXECUTIVE SUMMARY**

Wilsonville-Metro Community Enhancement Committee has met and made a number of project recommendations to City Council awarding a total of \$69,543 in funding to four different projects in Wilsonville to the City Council.

The community enhancement projects recommended for funding include:

- [Memorial Park “Dog Park” Relocation Project](#): \$25,000

- [“Bee Stewards” Wilsonville Pollinator Improvement Project](#): \$21,433
- [Multifamily Waste-Reduction and Recycling Project](#): \$16,000
- [Fluorescent Mercury-Lamp Business Recycling Program](#): \$7,110

A fifth project, Frog Pond Church Campus Restoration Project, is still under consideration by the committee to allow committee members more time to research and gather information about the proposal prior to reaching a final funding decision. This project is planned to be reviewed for funding at the committee’s next meeting that is to be scheduled for May or June.

Approval by Council of the committee recommendations is schedule to come before Council in June.

## **BACKGROUND**

Project nominations from the public and public agencies were first reviewed by City staff and then forwarded for consideration to the new seven-member Wilsonville-Metro Community Enhancement Committee, which is composed of four community members—Chair Brad Highbanks, Vice Chair Larry Beck, Kate Johnson and Jimmy Lee; Mayor Tim Knapp and City Councilor Susie Stevens; and Metro District Three Councilor Craig Dirksen. The committee was formed over the 2015-16 period as a part of the new Wilsonville-Metro Community Enhancement Program.

Funded by a per-ton charge on biodegradable solid-waste, the Community Enhancement Program was extended by Metro regional government effective July 2015 to cover all cities with a waste-transfer facility, including the Willamette Resources Inc. facility operated by Republic Services in Wilsonville. Metro estimates that about \$85,000 per year in community enhancement funds would be available to Wilsonville; current trends and potential changes in the Metro solid-waste franchise disposal program over the next few years may result in increased volumes being transferred that eventually yield \$100,000 per year of enhancement funds. Funds may be used immediately on smaller projects or accumulated for up to three years to underwrite a larger project.

The Community Enhancement Program funding is used for “enhancing the host community of the facility from which the fees have been collected” to fund projects that “rehabilitate and enhance the area within the city.” Eligible projects can improve the appearance or environmental quality of the community, increase reuse and recycling opportunities or improve recreational areas and programs. Program proposals will be accepted again next winter, Dec. 1, 2016, through Jan. 31, 2017, with potential project awards next spring.

For more information about the program or the 2016 projects recommended for funding approval visit [www.ci.wilsonville.or.us/CommunityEnhancement](http://www.ci.wilsonville.or.us/CommunityEnhancement).

## **FISCAL YEAR BUDGET IMPACTS**

A total of \$85,000 was budgeted for FY16-17, based on Metro estimates from early 2016.

## **FINANCIAL REVIEW / COMMENTS:**

Reviewed by: SCole Date: 5/6/2016

The FY2016-17 Proposed Budget includes \$85,000 of both revenue and expenditure for this program

**LEGAL REVIEW / COMMENTS**

Reviewed by: BJ Date: 5/6/2016

NA.

**CITY MANAGER COMMENTS**

The Wilsonville-Metro Community Enhancement Program will provide additional resources to advance community improvements.

**ATTACHMENT**

Wilsonville-Metro Community Enhancement Program: 2016 Project Nominations

## Wilsonville-Metro Community Enhancement Program

## 2016 Project Nominations Information Summary

PROJECT TITLE	SPONSOR/SUBMITTER	CITY DEPTS*	AMOUNT
<b>1. "Bee Stewards" Wilsonville Pollinator-Improvement Project</b>	Sponsored by NCAP in conjunction with City	CD/P; CD/NR*; P&R; PW	\$21,433
Project proposes to: 1) create productive pollinator habitats on City and School District-owned property, utilizing volunteers and youth organizations to help plant and maintain plantings; 2) develop Integrated Pest Management (IPM) for City; 3) provide public educational opportunity and materials about pollinator habitats.			
<b>2. Fluorescent Mercury-Lamp Recycling Program</b>	Sponsored by Clackamas County, City and Republic Services	Admin*; CD/P*	\$7,110
Project proposes to conduct two fluorescent-lamp collection events in Fall 2016 and Spring 2016 at Republic Services' Wilsonville facility. The collection events are targeted to businesses known to use fluorescent lamps and are to be staffed by professionals, with the collected tubes being properly disposed and recycled.			
<b>3. Frog Pond Church Campus Restoration Project</b>	Submitted by Rich Truitt, Meridian United Church of Christ	CD/P*; CD/NR; PW	\$20,000
Project proposes to undertake extensive landscaping improvements on historic church property, including removal/replacement and trimming of certain trees/shrubs and installation of a fence.			
<b>4. Memorial Park 'Dog Park' Relocation</b>	Sponsored by City	CD/P; P&R*	\$25,000 – \$45,400
Project proposes to relocate the enclosed, off-leash dog-run area of park, including creating 37 parking spaces and installing new fencing, drinking-water fountains, two covered shelters with benches and dog-play elements.			
<b>5. Multifamily Waste-Reduction and Recycling Project Proposal</b>	Sponsored by Clackamas County, City and Republic Services	Admin; CD/P*	\$12,000 – \$16,000
Project proposes to conduct a six-month-long focused effort to increase recycling opportunities at multifamily communities, including conducting a public education campaign with signage, working with residents and property managers, distributing light-weight recycling materials tote bags and looking at possible modification of central-collection/enclosure area.			
<b>6. Striping &amp; Signage for Intersection of Wilsonville/Boones Ferry Roads and I-5 Interchange</b>	Submitted by resident Susan Mundell	CD/E*; PW	\$400
Project proposes to install pavement markings and signage to improve rush-hour traffic flows. City staff support installing three signs but no pavement striping.			



## Projects Nominated and Removed from Consideration

**Bicycle Repair Station at SMART Transit Center**, submitted by resident Al Levitt

Why removed from consideration:

Alternative funding from SMART readily available; project advancing with existing City resources.

**Memorial Park Disc Golf Course**, sponsored by City Parks & Rec Dept.

Why removed from consideration:

Alternative funding source approved project: Clackamas County Community Tourism Grant program is funding project for tourism development purposes.

**Non-motor Watercraft Launch at Boones Ferry Park on Willamette River**, submitted by resident Kim Warram

Why removed from consideration:

Project requires prior updating of Boones Ferry Park Master Plan before a major capital addition and new use of park. Related issues include river navigation and endangered species concerns that implicate Oregon Dept. of State Lands, Oregon State Marine Board and Oregon Parks & Recreation Dept., along with federal US Army Corps of Engineers, US Fish & Wildlife Service and possibly others.

**Traffic Violation-Fine Signs Installation**, submitted by resident John Carroll

Why removed from consideration:

Project would require considerable scoping and research to determine what traffic violations might be of greatest priority and where these occur that would benefit from signage. Staff had concerns over increasing proliferation of signs that may decrease effectiveness of signage, and would seek to discuss in advance with City Council. Law Enforcement expressed concerns that a citation might actually include multiple violations, and hence signage could be perceived as inaccurate. Legal Department indicated that fines can change over time from legislative session to session, and often the officer may have discretion between one or more offences and fines to cite to, depending on the circumstance of the infraction.



**CITY COUNCIL MEETING  
STAFF REPORT**

<b>Meeting Date:</b> May 16, 2016		<b>Subject:</b> Equitable Housing Planning and Development Grant from Metro  <b>Staff Member:</b> Jon Gail and Miranda Bateschell <b>Department:</b> Admin and Community Development	
<b>Action Required</b>		<b>Advisory Board/Commission Recommendation</b>	
<input type="checkbox"/> Motion <input type="checkbox"/> Public Hearing Date: <input type="checkbox"/> Ordinance 1 <sup>st</sup> Reading Date: <input type="checkbox"/> Ordinance 2 <sup>nd</sup> Reading Date:		<input type="checkbox"/> Approval <input type="checkbox"/> Denial <input type="checkbox"/> None Forwarded <input checked="" type="checkbox"/> Not Applicable	
<input type="checkbox"/> Resolution <input type="checkbox"/> Information or Direction <input type="checkbox"/> Information Only <input checked="" type="checkbox"/> Council Direction <input type="checkbox"/> Consent Agenda		<b>Comments:</b> No formal action is required by City Council at this time; however the project proposal must be vetted with City Council and the City Council must provide a letter of endorsement for the proposal along with the Letter of Interest by June 8.	
<b>Staff Recommendation:</b> Direct staff to submit a letter of endorsement to Metro in order to apply for an Equitable Housing Planning and Development Grant.			
<b>Recommended Language for Motion:</b> N/A			
<b>Project / Issue Relates To:</b> <i>Support vulnerable residents</i>			
<input checked="" type="checkbox"/> Council Goals/Priorities	<input type="checkbox"/> Adopted Master Plan(s)	<input type="checkbox"/> Not Applicable	

**ISSUE BEFORE COUNCIL:** Shall the City apply for an Equitable Housing Planning and Development Grant from Metro?

**EXECUTIVE SUMMARY:** Metro Council is offering \$50,000 - \$100,000 grants to other governments, nonprofit organizations or businesses for proposals that support the creation of equitable housing – defined as diverse, quality, physically accessible, affordable housing choices with access to opportunities, services and amenities.

As part of Metro’s community planning and development grant program and funded by the regional construction excise tax, the grants are to be used for proposals that support the creation of equitable housing. Metro has a maximum of \$500,000 in total funding for related grants. Cities and counties within the Portland regional urban growth boundary are eligible to apply for grants, either alone or in partnership with other governments, nonprofit organizations or businesses. If the City Council desires to apply for the grant, a letter of interest and a letter of endorsement are due to Metro by Wednesday, June 8. The grant has a 10% matching requirement which may be comprised of in-kind staff time to manage and oversee the project.

To learn more about the grant, on April 28 City staff met with Emily Lieb, Senior Project Manager, Equitable Housing from Metro. During the meeting Ms. Lieb explained more about the grant program and the goals for the program. There was a strong emphasis on funding proposals that are likely to result in the development of more equitable housing opportunities. Grant projects fall into one of two categories which include **Opportunity site identification and analysis** and **Policy evaluation and implementation**.

Potential projects that fit in the **Opportunity site identification and analysis** category are more project based proposals and include:

- Site identification
- Environmental analysis and brownfield site assessments
- Financial feasibility analysis, and funding strategy development
- Parking analysis
- Schematic design.

The second category, **Policy evaluation and implementation**, includes potential projects such as:

- Zoning/code changes to eliminate barriers to the development of “missing middle” housing, creative infill housing such as accessory dwelling units or cottage clusters.
- Evaluation and implementation of regulatory or incentive program, such as vertical housing tax credits, tax exemptions for affordable housing units or inclusionary zoning
- Implementation of streamlined permitting.

Criteria for evaluating project proposals are similar to previous CPDG cycles and include how well the proposals achieve the goals of Metro’s Regional Framework Plan - a set of regional policies to implement the 2040 Growth Concept Plan.

The grant criteria include:

- Expected development outcome
- Regional significance
- Ability to support vibrant Centers, Corridors, and Main Streets
- Addressing the needs of underrepresented or underserved groups (equity)
- Use of best practices
- Leveraging past or future public and private investments, such as transit projects
- Available matching funds
- Absorbing projected growth in the community
- Public involvement
- Commitment for action by a governing body
- Capacity of applicant

In considering grant proposals, Metro emphasized they seek to fund proposals that do not just analyze the problem, but actually result in the creation of more equitable housing opportunities or the adoption of related policies and funding strategies by local government. Thus Metro expects the City to take affirmative action on the recommended policy recommendations to be developed as a result of the proposal.

## **Grant Proposal**

While the funding source may be used for site identification and pre-construction project costs, staff is recommending applying for a grant in the Policy evaluation and implementation category. Staff's proposal is to apply for a grant to study the gaps in Wilsonville's current housing market and then identify local policy and incentive programs that would address the gaps in our local housing market. Staff recommends contracting with a consulting firm to conduct a comprehensive market analysis of Wilsonville's current housing market, including a gap analysis, and then research and develop policy and incentive options that the City Council should consider implementing to address the identified gaps. With different areas of future residential growth in the City, the recommended policies, programs, and tools may also vary. Such programs would include, but are not limited to, new policy options approved by the Oregon State Legislature such as development of new resources using a construction excise tax, inclusionary zoning and other policy options now under local control. While the development of these equitable housing tools and analysis are primarily to benefit Wilsonville, a secondary benefit will accrue to Metro and other cities by establishing local models that other cities may be able to leverage and follow.

If grant funds are awarded, staff is proposing to conduct a request for proposals to identify and contract with an independent housing and policy research firm that has expertise in conducting housing market studies, gap analysis and evaluating/developing housing policy and incentives programs. A specific contractor is to be identified if the City is awarded a grant, but initial conversations suggest the cost for a firm to complete this project is expected to be within the individual grant awards of \$50,000 to \$100,000.

The next step is for the City is to submit a letter of interest to Metro by Wednesday, June 8. The grant management handbook states that the applicant must vet the project with City Council and that City Council must give approval to submit the Letter of Interest. To proceed, City Council must issue a letter of endorsement of the proposal so that staff to can submit a letter of interest to Metro for the grant proposal described above on or before the Council's June 6 meeting.

**EXPECTED RESULTS:** Obtain direction from City Council on whether or not to apply for an Equitable Housing Planning and Development Grant from Metro and get direction and support from City Council on the grant proposal.

**TIMELINE:** A letter of interest along with a letter of endorsement from City Council is due to Metro by Wednesday, June 8 and requires City Council support. By July 1, Metro intends to issue invitations for eligible projects to submit full applications. Full applications are due by Friday, August 12. Funding awards are scheduled to be made in November.

**CURRENT YEAR BUDGET IMPACTS:** There is no impact on the current year's budget. Grants for this program are scheduled to be announced in November 2016 and with funding occurring sometime thereafter. Based on previous CPDG cycles, an IGA will need to be in place Spring 2017 with the majority of the project work occurring during Fiscal Year 2017-2018.

A 10% match by means of funding or in-kind staff time is required. Staff proposes the required match to be met using in-kind staff time that is required to managing and overseeing the project.

**FINANCIAL REVIEW / COMMENTS:** No concerns.  
Reviewed by: Susan Cole Date: May 5, 2016

**LEGAL REVIEW / COMMENT:** Submission of the letter of intent is only the first step and if invited by Metro staff will then prepare the application for review by City Council before the formal application is submitted to Metro.  
Reviewed by: Barbara Jacobson Date: May 6, 2016

**COMMUNITY INVOLVEMENT PROCESS:** The community involvement process is not yet determined and will depend on the selected contractor's approach to complete the project.

**POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY** (businesses, neighborhoods, protected and other groups): The proposed grant seeks to support current and future residents, particularly more vulnerable residents by better understanding the gaps in Wilsonville housing market and then identifying and recommending policies and programs the City should pursue to address the gaps.

**ALTERNATIVES:** City Council may recommend an alternative grant proposal or may decide not to apply for the grant at all.

**CITY MANAGER COMMENT:**

**ATTACHMENTS:** Equitable Housing Planning & Development Grants Fact Sheet

## **Equitable Housing Planning & Development Grants**

Promoting equitable housing means ensuring **diverse, quality, affordable housing choices with access to opportunities and amenities.**

The Metro Council seeks to inspire and foster innovative projects that support the creation of *equitable housing*—defined as diverse, quality, physically accessible, affordable housing choices with access to opportunities, services and amenities.

Local governments can adopt regulatory and administrative reforms, create incentive programs and partner with developers to eliminate barriers to equitable housing development on a specific site or in a general area.

As a subset of Metro’s Community Planning and Development Grant program, Metro’s Equitable Housing Planning and Development Grant (“Equitable Housing Grant”) program will make \$500,000 available in 2016 to support local planning to eliminate barriers to equitable housing development.

Funding is made possible by a regional construction excise tax.

### **Who is eligible?**

Cities and counties within the Portland regional urban growth boundary can apply for grants, either solely or in partnership with other government entities, nonprofit organizations or businesses.

Proposed projects must fulfill the following minimum requirements to be considered:

- The total grant request must be between \$50,000 and \$100,000.
- The proposed use of grant funds must be for planning and development; grants cannot be used to support general budget needs, construction or operating costs.
- Applicants must match grant funds with outside funding or in-kind services equivalent to 10 percent of the grant request.
- Applicants must provide a letter of endorsement from a governing body.
- See next page for eligible projects and evaluation criteria.

### **Timeline, website, contact**

Letters of interest are due June 8, 2016, with full applications due August 12, 2016. The Metro Council will award grants in the fall.

Find the application handbook:  
**[oregonmetro.gov/housinggrants](http://oregonmetro.gov/housinggrants)**

Questions? Contact Emily Lieb, program manager: 503-797-1921 or [emily.lieb@oregonmetro.gov](mailto:emily.lieb@oregonmetro.gov).



## Examples of eligible projects

Grants will be administered in accordance with the code and administrative rules that currently govern the CPDG program. Eligible Equitable Housing Grant projects fall into two categories:

- 1) Opportunity site identification and analysis: Conduct predevelopment work on potential affordable or mixed income housing development sites in centers and corridors (as identified in Title 6 of Metro's Urban Growth Management Functional Plan)

*Examples of potential projects:*

- *site identification*
- *environmental analysis and brownfield site assessments*
- *financial feasibility analysis and funding strategy development*
- *parking analysis*
- *schematic design*

- 2) Policy evaluation and implementation: Conduct evaluation and develop tools to support modification of local code, zoning or permitting processes or create incentives that eliminate barriers to equitable housing development.

*Examples of potential projects:*

- *zoning/code changes to eliminate barriers to the development of "missing middle" housing and creative infill housing, such as accessory dwelling units or cottage clusters*
- *evaluation and implementation of a regulatory or incentive program, such as Vertical Housing Tax Credits, tax exemptions for affordable units, or inclusionary zoning*
- *implementation of streamlined permitting for affordable housing*

## Criteria

Project proposals will be evaluated based on how well they achieve the goals of the Regional Framework Plan, which identifies regional policies to implement the 2040 Growth Concept.

Criteria include the following.

- expected development outcome
- regional significance
- ability to support vibrant Centers, Corridors, and Main Streets
- addressing the needs of underrepresented or underserved groups (equity)
- use of best practices
- leveraging past or future public and private investments, such as transit projects
- available matching funds
- absorbing projected growth in the community
- public involvement
- commitment for action by a governing body
- capacity of applicant

For detailed descriptions, download the handbook: [oregonmetro.gov/housinggrants](https://oregonmetro.gov/housinggrants)



City of Wilsonville  
**National Public Works Week:**  
"Public Works – Always There"

**WHEREAS**, public works infrastructure, facilities and services are of vital importance to sustainable communities and to the health, safety and well-being of the people of Oregon; and

**WHEREAS**, such facilities and services could not be provided without the dedicated efforts of public works professionals including field workers, engineers, analysts, managers, and other employees from the City and the private sector. Together they plan, design, build, operate, and maintain the transportation network, water, wastewater and storm water systems, public buildings, and other structures and facilities essential to serve our citizens; and

**WHEREAS**, it is in the public interest for the citizens, civic leaders and children in the City of Wilsonville to gain knowledge of and to maintain a progressive interest and understand the importance of public works and public works programs in their respective communities, and

**WHEREAS**, the year 2016 marks the 56<sup>th</sup> annual National Public Works Week sponsored by the American Public Works Association, and

**WHEREAS**, it should be recognized "Public Works is Always There".

**NOW, THEREFORE**, I, Tim Knapp, Mayor of the City of Wilsonville in the State of Oregon, hereby proclaim May 15-21, 2016 to be

**PUBLIC WORKS WEEK**

in Wilsonville and encourage all Wilsonville citizens to join me in honoring our public works professionals and recognizing their substantial contribution to our community.

Signed this 16<sup>th</sup> day of May, 2016

Mayor Tim Knapp

**CITY COUNCIL ROLLING SCHEDULE****Board and Commission Meetings 2016****Items known as of 05/10/16****MAY**

<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
5/16	Monday	7 p.m.	City Council Meeting	Council Chambers
5/18	Wednesday	6 p.m.	Budget Committee Meeting	Council Chambers
5/23	Monday	6:30 p.m.	DRB Panel B -- <b>cancelled</b>	Council Chambers
5/25	Wednesday	6:30 p.m.	Library Board	Library
May 30	Monday	Memorial Day – All City offices closed		

**JUNE**

<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
6/1	Wednesday	6 P.M.	Budget Committee Meeting	Council Chambers
6/8	Wednesday	6 p.m.	Planning Commission	Council Chambers
6/8	Wednesday	6 p.m.	Budget Committee Meeting if necessary	Willamette River I & II
6/9	Thursday	4:30 p.m.	Parks and Recreation Board	Parks and Recreation Administration Building
6/13	Monday	6:30 p.m.	DRB Panel A	Council Chambers
6/22	Wednesday	6:30 p.m.	Library Board	Library
6/27	Monday	6:30 p.m.	DRB Panel B	Council Chambers

**COMMUNITY EVENTS****Queen of the High Road Half-Marathon and 10K**

Saturday, May 21 -- 8:00 AM - 3:00 PM Memorial Park River Shelter. For more information, please visit [www.solesisters.us](http://www.solesisters.us) **Links:** [Queen of the High Road Web](#)

**Wilsonville Festival of the Arts**

June 4 and 5 – 10 AM to 6 PM at Town Center Park

**Tonkin Challenge – For The Love of Schools Run**

June 5 – 8 a.m. Audi Wilsonville



**CITY COUNCIL MEETING  
STAFF REPORT**

<p><b>Meeting Date:</b>  May 16, 2016</p>	<p><b>Subject: Resolution No. 2582</b> Charbonneau High Priority Utility Repair Phase I CIP 1500, 2500, 7500 – Construction Contract Award</p> <p><b>Staff Member:</b> Zachary Weigel, P.E., Civil Engineer</p> <p><b>Department:</b> Community Development</p>	
<p><b>Action Required</b></p>	<p><b>Advisory Board/Commission Recommendation</b></p>	
<p><input checked="" type="checkbox"/> Motion  <input type="checkbox"/> Public Hearing Date:  <input type="checkbox"/> Ordinance 1<sup>st</sup> Reading Date:  <input type="checkbox"/> Ordinance 2<sup>nd</sup> Reading Date:  <input checked="" type="checkbox"/> Resolution  <input type="checkbox"/> Information or Direction  <input type="checkbox"/> Information Only  <input type="checkbox"/> Council Direction  <input checked="" type="checkbox"/> Consent Agenda</p>	<p><input type="checkbox"/> Approval  <input type="checkbox"/> Denial  <input type="checkbox"/> None Forwarded  <input checked="" type="checkbox"/> Not Applicable</p> <p><b>Comments:</b></p>	
<p><b>Staff Recommendation:</b> Staff recommends approval of Resolution No. 2582</p>		
<p><b>Recommended Language for Motion:</b> I move to approve Resolution No. 2582</p>		
<p><b>Project / Issue Relates To:</b> <i>[Identify which goal(s), master plans(s) your issue relates to.]</i></p>		
<p><input checked="" type="checkbox"/> Council Goals/Priorities Well-Maintained Infrastructure</p>	<p><input checked="" type="checkbox"/> Adopted Master Plan(s) Charbonneau Consolidated Improvement Plan</p>	<p><input type="checkbox"/> Not Applicable</p>

**ISSUE BEFORE COUNCIL:**

A City of Wilsonville Resolution approving the public bid process, accepting the lowest, responsible bidder and awarding a construction contract to Canby Excavating, Inc. in the amount of \$898,284.00 for the construction of the Charbonneau High Priority Utility Repair Phase I project.

**EXECUTIVE SUMMARY:**

The Charbonneau High Priority Utility Repair Phase I project will repair, rehabilitate and replace approximate 2,750 feet of Priority 1 sanitary and storm pipe, between 8” and 24” in diameter, at five locations within the Charbonneau district. The project also includes installation of

approximately 500 feet of 12” water main across the Charbonneau Golf Course property, replacing the water main that ruptured at 32080 Boones Bend Road on October 6, 2015. A map of the project locations is provided in Attachment A.

The Charbonneau Consolidated Improvement Plan, adopted on August 4, 2014, identified these sewer and storm pipe lines as being the most deficient and given the highest priority for repair. This project represents the first of three planned phases to repair and/or replace the Charbonneau high priority utilities.

This project was approved for funding in the City’s adopted FY2015-16 budget as Sewer Operations Allocation to Charbonneau (CIP No. 2500) and Stormwater Operations Allocation to Charbonneau (CIP No. 7500). Replacement of the 12” water line will be constructed in October 2016 as part of this construction contract and funding from water operations is proposed in the FY2016-17 budget.

The City received four (4) bids by the April 26, 2016 deadline (see Attachment B for bid summary), of which Canby Excavating submitted the lowest, responsive bid.

**EXPECTED RESULTS:**

Repair, rehabilitate, and replace approximately 3250 feet of sanitary, storm, and water pipeline at six locations within the Charbonneau District.

**TIMELINE:**

Construction is expected to begin June 6, 2016 with final completion scheduled for October 31, 2016.

**CURRENT YEAR BUDGET IMPACTS:**

The water portion, Project #1500 is funded through water operating fees. The proposed FY 2016-17 Wilsonville budget includes \$182,500.00 for water pipeline construction, contract administration, and overhead. The water portion of the construction contract is \$125,690, within the budgeted amount.

The sewer portion, Project #2500 is funded through sewer operating fees. The adopted FY 2015-16 Wilsonville budget includes \$439,494.00 for design, construction, contract administration, and overhead. The FY 2015-16 expenses for design and construction administration, including overhead, is anticipated to be \$60,000.00. The sewer portion of the construction contract is \$116,761.24, within the budgeted amount.

The storm portion, Project #7500 is financed through an interfund loan from the General Fund, which will be paid back with stormwater operation fees. The adopted FY2015-16 Wilsonville budget includes \$811,425.00 for design, construction, contract administration, and overhead. The FY 2015-16 expenses for design and construction administration, including overhead, is anticipated to be \$320,000.00. The stormwater portion of the construction contract is \$655,832.76, which is approximately \$165,000 over the budgeted amount. However, the project will be constructed into FY 2016-17, which recommends a proposed Project #7500 budget of \$1,042,800.00 to the Budget Committee, covering a carryover for this Phase I work.

During the budgeting process for FY2015-16, it was anticipated that all of the sewer would be construction in the first phase of the Charbonneau High Priority Utility Repair program. However, project phasing was further refined during the design process and after public comments were received. As a result, the first phase included less sewer repair and more storm repair than was anticipated during budgeting. However, the following phases of work over the next couple of years will balance the total cost, as more sewer and less storm will be constructed under later phases than was originally anticipated.

**FINANCIAL REVIEW / COMMENTS:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**LEGAL REVIEW / COMMENT:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMUNITY INVOLVEMENT PROCESS:**

A public open house was held on Tuesday, November 17, 2015 for community members to review and comment on the type of construction to be utilized and the proposed grouping and timing of each project phase. Notice of the open house was mailed to residents and businesses located within the project area construction zone, as well as published in the Boones Ferry Messenger and The Charbonneau Villager. Approximately 150 interested persons attended the meeting and the project team was able to address concerns raised during the meeting.

**POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY** (businesses, neighborhoods, protected and other groups):

The Charbonneau High Priority Utility Repair project will replace the most deficient sections of sewer and storm pipe within the Charbonneau District. The Wilsonville community will benefit from the project by replacing aging and deficient infrastructure with newer materials that are expected to remain in good working condition for the next 75 plus years.

**ALTERNATIVES:**

City staff considered a number of design and phasing alternatives as part of this utility repair and replacement project. Cured-in-Place Pipe (CIPP), a trenchless method of pipe repair, is being implemented where feasible to minimize the amount of open trench construction and lessen construction impacts on the community. Where open trench construction is necessary, new sections of pipeline have been located as to minimize impacts to mature landscaping as much as possible.

Also, the high priority utility repair projects have been phased as to avoid continued construction impacts in the same area over multiple construction projects, while still combining similar type of construction work to minimize construction costs.

**CITY MANAGER COMMENT:**

**ATTACHMENTS:**

- A. Project Location Map
- B. Bid Summary



**RESOLUTION NO. 2582**

**A RESOLUTION OF THE CITY OF WILSONVILLE AUTHORIZING THE CITY MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH CANBY EXCAVATING, INC. FOR THE CHARBONNEAU HIGH PRIORITY UTILITY REPAIR PHASE I PROJECT (CAPITAL IMPROVEMENT PROJECT #1500, 2500, & 7500).**

WHEREAS, the City has planned, designed, and budgeted for the completion of Capital Improvement Project #1500, 2500, & 7500, known as Charbonneau High Priority Utility Repair Phase I project (the Project); and

WHEREAS, the City solicited sealed bids from qualified contractors for the Project that duly followed the State of Oregon Public Contracting Rules and the City of Wilsonville Municipal Code; and

WHEREAS, four bids were received and opened on April 26, 2016, and Canby Excavating, Inc. submitted a bid of \$898,284.00 for the Project, which was subsequently evaluated as the lowest responsive and responsible bid.

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. The procurement process for the Project duly followed Oregon Public Contracting Rules, and Canby Excavating, Inc. submitted the lowest responsive and responsible bid.
2. The City of Wilsonville acting as the Local Contract Review Board authorizes the City Manager to enter into and execute, on behalf of the City of Wilsonville, a Construction Contract with Canby Excavating, Inc. for a stated value of \$898,284.00.
3. This resolution becomes effective upon adoption.

ADOPTED by the Wilsonville City Council at a regular meeting thereof this 16<sup>th</sup> day of May 2016, and filed with the Wilsonville City Recorder this date.

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Tim Knapp, Mayor

ATTEST:

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Sandra C. King, City Recorder, MMC

SUMMARY OF VOTES:

Mayor Knapp

Council President Starr

Councilor Fitzgerald

Councilor Stevens

Councilor Lehan

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ATTACHMENT A  
PHASE I - SITE LOCATIONS





**WILSONVILLE**  
Community Development Dept.  
Engineering Division

## BID SUMMARY

**Project:** Charbonneau High Priority Utility Repair - Phase I

**CIP No:** 1500 / 2500 / 7500

**File No:** 15 04 001

**Bid Date:** April 26, 2016 @ 2:00 PM

Open Order	Bidder	Envelope Marked	First Tier Sub-Con.	Bid Security Amount	Bid Security Type	Proposal Complete	Addenda	Proposal Signed	Pre-Qualify	Bid Amount:	Rank
Contractor Name		Y/N	Y/N	%	Check /Bond	Y/N - Why?	Y/N	Y/N	Y/N		DQ?
--	Engineer's Estimate									\$1,156,219.00	--
1	Enterprises Northwest	Y	Y	10%	Bond	N - Insurance Info Missing	Y	Y	Y	\$1,430,535.35	4 - DQ
2	Landis & Landis Construction	Y	Y	10%	Bond	Y	Y	Y	Y	\$1,186,768.00	3
3	Canby Excavating	Y	Y	10%	Bond	Y	Y	Y	Y	\$898,284.00	1
4	Titan Utilities	Y	Y	10%	Bond	Y	Y	Y	Y	\$980,212.00	2

A regular meeting of the Wilsonville City Council was held at the Wilsonville City Hall beginning at 7:00 p.m. on Monday, April 18, 2016. Mayor Knapp called the meeting to order at 7:05 p.m., followed by roll call and the Pledge of Allegiance.

The following City Council members were present:

Mayor Knapp  
Councilor Starr  
Councilor Fitzgerald  
Councilor Stevens  
Councilor Lehan

Staff present included:

Bryan Cosgrove, City Manager  
Jeanna Troha, Assistant City Manager  
Barbara Jacobson, City Attorney  
Sandra King, City Recorder  
Martin Brown, Building Official  
Mike Ward, Engineer  
Mark Ottenad, Government and Public Affairs  
Dan Pauly, Planner  
Martin Brown, Building Official  
Nancy Kraushaar, Community Development Director  
Stephan Lashbrook, SMART Director

**Motion:** Councilor Starr moved to approve the order of the agenda. Councilor Fitzgerald seconded the motion.

**Vote:** Motion carried 5-0.

## **MAYOR'S BUSINESS**

Mayor Knapp presented three proclamations the first declaring the week of May 1-7, 2016 as Construction Safety Week, the second declaring the first week of May as Drinking Water Week, and the third proclaiming the same week as Municipal Clerks Week.

Mayor Knapp announced the City has received, for the nineteenth year in a row, the Certificate of Achievement for the fiscal year ending June 30, 2015.

Upcoming meetings were announced by the Mayor, who also identified the regional meetings he attended on behalf of the City.

## **COMMUNICATIONS**

- A. Megan McKibben, Clackamas County Field Representative Office of Congressman Schrader

Mark Ottenad introduced Megan McKibben, the Clackamas County Field Representative Office of Congressman Schrader.

Ms. McKibben read the remarks of Congressman Schrader regarding legislation dealing with transportation infrastructure funding.

### **CITIZEN INPUT & COMMUNITY ANNOUNCEMENTS**

This is an opportunity for visitors to address the City Council on items not on the agenda. It is also the time to address items that are on the agenda but not scheduled for a public hearing. Staff and the City Council will make every effort to respond to questions raised during citizens input before tonight's meeting ends or as quickly as possible thereafter. Please limit your comments to three minutes.

Theonie Gilmore, Wilsonville Arts and Culture Council, expressed concerned that the Tourism Committee would be assuming the funds administered and allocated by the Parks and Recreation Board for the Wilsonville Tourism Grants Program. Her fear was that the funds would be unavailable for local non-profit organizations.

Mr. Cosgrove explained the grant application process and requirements will remain the same; the administration of the program is changing to the Tourism Promotion Committee rather than the Parks and Recreation Board.

Councilor Lehan asked if the source of the grant funds remains the same.

Mr. Cosgrove responded the funding source remained the same; however, he felt there would be more public art opportunities now with the Metro Enhancement Funds. The Metro funds are a new source for community beautification and enhancement, which would include public art possibilities.

Mark Ottenad added the Tourism Committee is aware of the importance of the Community Tourism Fund grant program. The Committee is considering asking the funding groups to poll visitors to gather demographic data about who is attending local events. Other than the polling, no major changes are intended. He explained the new Metro Community Enhancement Program can be used for a number of projects, including art and culture related projects.

Terry Kester, addressed tourism and quality of life issues and the need for performing arts venues rather than an aquatic/recreation center. Mr. Kester read a prepared statement which has been made part of the record.

Michael Gibson spoke in favor of a performing arts center for the "metro south region" and that cultural tourism is an economic driver benefiting the larger community. Mr. Gibson read a prepared statement that has been made part of the record.

### **COUNCILOR COMMENTS, LIAISON REPORTS & MEETING ANNOUNCEMENTS**



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**CITY OF WILSONVILLE**  
**CITY COUNCIL MEETING MINUTES**

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Council President Starr – (Park & Recreation Advisory Board Liaison) reported the Parks and Recreation Advisory Board awarded \$15,000 in grant funds from the City Opportunity Grant Program to support community programs. Three local organizations were awarded a grant of \$5,000 each: the Jr. Scoops of Wood Middle School, Relay for Life of Wilsonville, and Wilsonville Farmers Market. These Opportunity Grants are funded through the City’s General Fund to assist local individuals and organizations to further educational or artistic opportunities, encourage and foster diversity, foster advances in art, education, community leadership or involve youth or elderly populations in community activities.

The Councilor and Mayor attended a Chamber/City Leadership meeting to discuss tourism and transit issues. He invited the public to participate in Bulky Waste Day set for May 7<sup>th</sup>.

Councilor Starr responded to the comments made during the Citizen Input to clarify misconceptions related to the use of tourism dollars. The aquatic/recreation center vote is not related to the use of tourism dollars; nor is the aquatic/recreation center related to community conversations about a sports facility.

The Council decision to put an aquatic/recreation center on the November ballot is the result of two city-wide surveys which indicated citizens of Wilsonville ranked an aquatic/recreation center as their highest desire. A question about a fine arts facility was also part of the two surveys; but it did not score as high as a pool and fitness facility. The residents of Wilsonville asked that an aquatic/recreation facility be brought forward, and the vote in November will determine whether they still support the concept.

Recently Council purchased land along the Willamette River to provide access to the river once Boones Ferry Park is expanded.

The Councilor indicated the Opportunity Grants are available to art organizations via the application process if the requesting organization puts together a strong application.

Councilor Fitzgerald – (Development Review Panels A & B Liaison) reported the DRB Panel-A approved an expansion of the Coca Cola warehouse facility; Panel-B will continue consideration of the 14-lot subdivision application on Canyon Creek south. She announced the upcoming DRB meetings and the Jr. Scoops Clothing Drive.

Councilor Fitzgerald noted she had been the leader of the Tourism Task Force which resulted in the Tourism Promotion Committee. She stated there were certain aspects that relate to the Tourism and Lodging Tax (TLT) but there is also a broader focus. In 2013 the Committee developed a vision that read “Wilsonville is a welcoming, family friendly community that is one of Oregon’s premier destination cities, investing in tourism, meetings, leisure, recreational strengths amenities and services providing compelling year round experiences”. The mission statement read “To facilitate the thoughtful development of Wilsonville’s visitor economy for the benefit of visitors and partners and to enhance the quality of life for those who live and work in the community.” Both the vision statement and mission statement were adopted by the Council and both convey the message that whatever was developed is also intended to benefit the people who live in the city.

Councilor Stevens – (Library Board and Wilsonville Seniors Liaison) noted the Wilsonville Seniors Group continues their fundraising efforts to supply class scholarships, utility bill assistance and services for seniors. The Councilor announced the date of the next Library Board meeting, the SOLVE Earth Day to be held at Graham Oaks Park, and the annual WERK Day.

Councilor Lehan – (Planning Commission and CCI Liaison) announced the Planning Commission conducted a public hearing on amendments to the 2013 Transportation System Plan, which was unanimously approved. The Commission also held a work session on the Transit Master Plan update.

Regarding the arts and culture issues, Councilor Lehan shared the frustration of those who spoke during Citizen Input, stating she did not understand why it was so difficult for organizations like the Historical Society to remain afloat in Wilsonville when that problem is not experienced in surrounding communities. She did not think the issue was with City Hall, pointing out the clock tower at WES and the Beauty and the Bridge artwork under the I-5 overpass as city supported art projects. The cities of Lake Oswego, Tualatin, Sherwood and Canby have strong arts and history programs that are not necessarily city run programs. She felt the tourism piece should be able to work in conjunction with the arts, culture and heritage programs.

As president of the Pleasant View Historical Cemetery, Councilor Lehan, invited interested persons to attend the Pleasant View Work Day this Saturday and May 14<sup>th</sup> she added cemeteries are both heritage and art pieces that deserve care and appreciation for the craftsmanship that is there.

Mayor Knapp announced the upcoming marathon and 10K sponsored by Queen Of The High Road group, as well as the Urban Renewal Open House for the proposed Coffee Creek Urban Renewal District on April 25<sup>th</sup>; and the Basalt Creek Concept Plan Open House set for April 28 at the Juanita Pohl Community Center in Tualatin.

## CONSENT AGENDA

Ms. Jacobson read the items on the Consent Agenda into the record.

A. **Resolution No. 2580**

A Resolution Of The City Of Wilsonville, Oregon Authorizing The Refunding Of Water Revenue Bonds And Related Matters. (staff – Cole)

B. Minutes of the April 4, 2016 Council Meeting. (staff – King)

Mayor Knapp removed the resolution from the Consent Agenda and placed it under New Business in order to describe what the resolution will accomplish.

**Motion:** Councilor Stevens moved to approve the Consent Agenda, the minutes only. Councilor Fitzgerald seconded the motion.

**Vote:** Motion carried 5-0.

## PUBLIC HEARING

*The Development Review Board Panel-B continued this item to their 4/25/26 meeting. Public notice has been given for this Council hearing which will need to be continued.*

A. Comprehensive Plan Map Amendment and Zone Map Amendment for 14 lot subdivision on Canyon Creek Road South. Owners, Boeckman and Lewallen. (staff – Pauly)

Mr. Pauly prepared the staff report. Due to DRB Panel B proceedings for the subject Comprehensive Plan and Zone Map amendments, the originally noticed date of April 18, 2016 for the City Council hearing on the amendments needs to be continued to the City Council meeting of May 16, 2016.

On March 28, 2016 DRB Panel B continued consideration of a Comprehensive Plan Map Amendment, Zone Map Amendment and related development applications to their April 25, 2016 meeting. This meeting date is after the noticed City Council Hearing date of April 18, 2016. City Council needs to thus continue their noticed hearing to a date following the DRB's continued review and recommendation to City Council. A public hearing and 1st reading of related ordinances is recommended for the Council's May 16th meeting, and a 2nd reading of the ordinances at the June 6<sup>th</sup> meeting. The City must render a final decision on the application by June 16, 2016, which is 120 days from the application being deemed complete.

The proposed Comprehensive Plan Map Amendment and Zone Map Amendment along with associated development applications would allow the development of 14 single-family lots. In continuing their hearing of the application, the DRB wanted further consideration by the applicant and staff of the traffic study, the setback waiver request, density, layout, and traffic safety.

The City must issue a final decision no later than June 16, 2016, which is 120 days from the application being deemed complete. If adopted by Council, the ordinances approving the Comprehensive Plan Map Amendment and Zone Map Amendment would be in effect after 30 days.

**Motion:** Councilor Lehan moved to continue the public hearing for the Comprehensive Plan Map Amendment and Zone Map Amendment for a 14-lot subdivision proposed for the properties at 28500 and 28530 SW Canyon Creek Road South to a date certain of May 16. Councilor Stevens seconded the motion.

Councilor Starr asked if the traffic study was found to be inadequate.

Ms. Jacobson responded the traffic study contained a typographical error in the date which called into question the day it was conducted, whether it was a Saturday versus a Tuesday. One member of the Development Review Board was concerned that a traffic study conducted on a Saturday would not represent the traffic volumes. Staff believed the traffic study was done on a Tuesday; however, the traffic consultant was not in attendance, so that was going to be corrected. To address further testimony by the neighbors and their concerns about traffic, a second follow-

up traffic study would be done. Both of these two items will be completed prior to the next DRB meeting.

**Vote:** Motion carried 5-0.

## **NEW BUSINESS**

### **A. Resolution No. 2580**

A Resolution Of The City Of Wilsonville, Oregon Authorizing The Refunding Of Water Revenue Bonds And Related Matters. (staff – Cole)

Ms. Jacobson read the title of Resolution No. 2580 into the record.

Mayor Knapp wanted the public to understand the resolution before Council deals with refinancing water revenue bonds, which will save the City \$150,000 and is an example of how staff monitors changes in the financial market.

**Motion:** Councilor Starr moved to approve Resolution No. 2580. Councilor Fitzgerald seconded the motion.

**Vote:** Motion carries 5-0.

### **B. Wilsonville Tourism Development Strategy Five-Year Action Plan and Annual One-Year Implementation Plan (staff – Ottenad)**

Mr. Ottenad prepared the staff report. He introduced Al Levitt, who serves as vice chair of the Tourism Promotion Committee.

The City Council adopted Resolution No. 2541 in June 2015, to create the new 12-member Tourism Promotion Committee composed of seven (7) voting members drawn from the area hospitality and tourism industry and five (5) ex-officio members who provide expertise, advice and assistance to the committee.

One of the tasks that the City Council requested of the committee through Resolution No. 2541 was the creation of a Five-Year Action Plan and Annual One-Year Implementation Plan (“Plan”) that is to be updated annually. The Plan is to describe the actions needed over the next one to five years to implement the “Visit Wilsonville” Tourism Development Strategy adopted by Council in May 2014.

On April 4, 2016, Tourism Promotion Committee Chair Jeff Brown, General Manager of Holiday Inn Wilsonville, and Vice Chair Al Levitt, a Bike Club Coordinator and Wilsonville Planning Commissioner, appeared on behalf of the committee at City Council Work Session to review the Plan with City Council. Committee members understood that City Council was generally supportive of the Draft Plan as presented.

The Plan reviews the work results to date and specifically makes a set of recommendations to be executed starting this year and through Year 2, 2016-17, that seek to implement the longer-range, five-year components of the larger Tourism Development Strategy.

The one-year implementation plan seeks to advance the top priorities of the larger five-year action plan. The first-year work plan is segmented into three main sections:

1. **Organizational Framework / Staffing Resource:** The committee seeks to have a dedicated human resource as staff or contractor for tourism development and promotion in order to advance the Strategy and the implementation/action plan.

The committee also intends to assume responsibility for overseeing the tourism grant programs in Fall 2016.

2. **Online / Marketing:** The Committee seeks to have the staff or contractor focus on online/Internet website products and processes as a primary task that the Strategy identified as a top priority and the committee strongly supports.

Creating an authoritative website for Wilsonville tourism was one of the top recommendations of the Tourism Strategy. Such an online product can also complement City efforts to advance business recruitment and to welcome new residents.

3. **Study Efforts for City to Advance Tourism Development:** The committee makes four specific recommendations to the City Council for study efforts to advance tourism:
  - Visitor profile study.
  - Feasibility study for an all-weather/indoor, multi-purpose playing fields facility for sports tournaments and other recreational/entertainment purposes.
  - Destination marketing strategy plan.
  - Hotel/conference center study as part of Town Center Master Plan redevelopment project.

The longer-range five-year plan shows an increasing workload and level of activity, progressing towards the launch of the recommended nonprofit Destination Marketing Organization (DMO) to be named "Visit Wilsonville." In the meanwhile, the City's Park & Recreation Department will be doing business as "Visit Wilsonville," a label that is reserved as both an assumed business name and dot-com website.

Adoption of the Plan satisfies a requirement of Resolution No. 2541 (2015) to advance the Wilsonville Tourism Development Strategy adopted by the City Council in May 2014.

In essence, City Council adoption of the Plan provides a road-map forward to develop action plans to advance components of the Tourism Strategy. Staff will look in detail at the Plan recommendations to develop specific plans, timelines and cost estimates for further review by the committee and City Council as may be needed to advance projects. For example, some of the studies recommended by the Plan need further clarification and research in order to have an accurate sense of a scope of work and potential budget.

A total of \$125,000 was budgeted for tourism promotion in FY2015-16, in addition to \$25,000 for the Community Tourism Grant Program. The City has supported the work of the Committee to-date through existing general fund staff in the City Manager's Office and Parks & Recreation Department.

Meetings and materials of the Tourism Promotion Committee have been posted timely online at the City's website, which uses "e-notifier" function to notify interested members of the public who are subscribed to the Tourism Promotion Committee distribution list.

Mr. Levitt indicated the Tourism Promotion Committee formed two subcommittees whose work focused on Organizational Structure and Marketing and Web Priorities.

The Committee assessed the priorities developed by the Wilsonville Tourism Strategy adopted by the Council in 2014, and started work on a one-year implementation plan. Top priorities include:

- Obtain a professional in the tourism development field well versed in the subject matter and who should be able to advance programs with minimal Committee oversight. This would either be a staffer in the Parks and Recreation Department, or an independent contractor reporting to the Parks and Recreation Department Director. Mr. Sherer is willing to use existing staff resources until capacity is exceeded or until a dedicated person is obtained.
- The Committee has evaluated the need for online marketing and a tourism specific website. Recently a mockup of a website has been developed for Committee member comments; however this website is not "live".
- Agreement was reached on a five-year action plan, which will progress steadily on several fronts:
  - Moving dedicated staff person to full time.
  - Committee will assume responsibility for the tourism grant programs, including evaluation of results and increasing attendance of people from further than 50 miles, a requirement for the use of the TLT.
  - Continue establishing an internet website and social media presence.
  - Recommend to Council in the third year that a nonprofit DMO titled "Visit Wilsonville" be formed and implemented during the following two years.
- Funding will come from the Transit Lodging Tax, 44% has been used for tourism and related visitor services over the past ten years, and in the next five years it is projected to be 50% of revenue. If additional revenue is needed Council should consider dedicating a larger portion of the TLT to the Committee's work.

The Committee is requesting four major studies to be funded from the TLT:

- Visitor Profile study to provide a bench mark, and learn what attracts people to Wilsonville now.
- Feasibility study for an all-weather/indoor, multi-purpose playing field facility for sports tournaments and other recreational/entertainment purposes to attract visitors during the shoulder seasons.
- Destination marketing strategy plan.
- Hotel/conference center study as part of the Town Center Master Plan redevelopment project.

The Committee encouraged the Council to continue with the current with existing tourism programs.



Mr. Ottenad added the Planning Division is looking at the scope of the Town Center Redevelopment Plan, and that a hotel/conference center could be part of that. They believe a more detailed study may be needed specifically on the market demand, since the redevelopment plan will focus on the Town Center and potential uses, but not the market demand for a new hotel.

Councilor Starr asked what the tourism website would cost.

Mr. Ottenad did not know, the Committee was hoping for direction from the Council to go forward to look at those items, which is what staff and the Committee members will be doing – determining what the costs are for the website and studies. Council approval will provide an outline of action for the Committee; any recommendations would be brought back to Council for consideration.

Councilor Lehan was impressed with the work of the Committee, and the prototype of the website. She mentioned the website was another interface with the arts and cultural events.

Councilor Stevens asked how success would be measured.

Mr. Levitt stated the surveys would provide that baseline information with the initial survey, and build data over time to see trends.

Mr. Ottenad felt a professional consultant who has access to aggregated data from both counties would be beneficial. The Committee was not clear if the clientele at the Holiday Inn was totally representative of all the visitors to Wilsonville, so there was a desire to have something that dug deeper at the visitor profile.

Mayor Knapp understood the recommendation from the Committee is contained in the packet for both the one-year implementation and the five-year strategic plan adopting the recommendation would enable that Committee to go forward with some concrete work, but does not end Council's engagement with the Committee.

**Motion:** Councilor Lehan moved to adopt the development strategy for the five year action plan and one year implementation plan of the Wilsonville Tourism Development Committee. The motion was seconded by Councilor Fitzgerald.

Councilor Starr was uncomfortable with several undefined factors, and felt strongly the position should not be a City staff position; rather it should be a consultant position with that particular expertise. The Councilor was also concerned about the cost of designing and maintaining a website. He thought the profile study was not as important as the feasibility study. Councilor Starr thought destination marketing strategy will provide what was needed in the future versus what was in place now.

Mr. Cosgrove explained if the Committee moved to a DMO model, the staffer would not be a City position; but right now, with the existing work load, the work could be managed with



existing staff. He assured the Councilor that Council's opinion would be sought on expenditures, and any hand off to a DMO if one is created.

The Mayor pointed out these efforts are being funded by the hotel-motel tax collected with the rationale to promote the area enticing more people to come to stay in those same facilities, and we have an obligation to expend those funds in a way that is related to their original intent.

Councilor Starr agreed, but asked why one would spend money now when the hotels are full. He was interested in the destination marketing strategy and creating opportunity to maximize and build upon what is in place.

Councilor Fitzgerald was impressed with the amount of time spent and the level of commitment of the Committee. She felt the study was a good way to find out why people were traveling to Wilsonville and how to attract more and build on that, but until we can find ways to maximize the occupancy year round, reinvestments and expansion of the hotels would not occur.

**Vote:** Motion carried 5-0.

Councilor Lehan asked Council to consider a joint meeting with the Planning Commission to discuss affordable housing issues.

Mr. Cosgrove stated he would facilitate a joint meeting and suggested an August work session.

**C. Resolution No. 2581**

A Resolution Of The City Of Wilsonville Authorizing Acquisition Of Property And Property Interests Related To The Construction Of The Tooze Road Improvement Project From 110th Avenue To Graham's Ferry Road. (staff – Ward)

Ms. Jacobson read the title of Resolution No. 2581 into the record.

Mike Ward presented the staff report. The City's Transportation System Plan identifies the Tooze Road Improvement project (from 110th Ave to Graham's Ferry Road) as necessary to accommodate traffic generated by the Villebois development. This project is identified in the adopted 2013 Wilsonville Transportation System Plan, the West Side Urban Renewal Plan (although urban renewal funds are not being used on this portion of the project), and in development agreements and amended development agreements between the City, the Urban Renewal Agency, and Villebois land owners and developers. Mr. Ward identified the project area, the locations of slope easements; right of way acquisitions; drainage easements; and construction easement.

The Tooze Road improvement project was awarded \$800,000 in federal funding. The balance of project costs will be funded through Street System Development Charges (SDCs) and the Westside Urban Renewal District. The total project cost estimate is \$6.7 million, with \$2.0 million for design and acquisition and \$4.7 million for construction. As this is a federalized project, the City must satisfy FHWA right-of-way practices including right-of-way certification

through ODOT. Consequently, Resolution No. 2581 authorizes Council to use condemnation to acquire the needed property interests if necessary.

Staff expects to begin appraisals in the spring of 2016 and initiate negotiations as soon as appraisal work is complete. If settlement has not been achieved by the end of the mandatory 40-day consideration period, staff will notify the Council regarding the status of negotiations and any recommendations to proceed with condemnation proceedings. Construction is anticipated to begin in May 2017, and legal possession of needed property, either through settlement or condemnation, is required by ODOT before the project can be put out to bid.

**Motion:** Councilor Fitzgerald moved to approve Resolution No. 2581. Councilor Stevens seconded the motion.

Councilor Lehan commended staff for their sensitivity with the interface between the developed urban area and the rural neighbors.

**Vote:** Motion carried 5-0.

#### **CITY MANAGER'S BUSINESS**

No report given.

#### **LEGAL BUSINESS**

Ms. Jacobson reported staff will be attending a meeting that Metro has scheduled to discuss affordable housing.

#### **ADJOURN**

Mayor Knapp adjourned the meeting at 8:53 p.m.

Respectfully submitted,

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

ATTEST:

\_\_\_\_\_  
Tim Knapp, Mayor

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CITY OF WILSONVILLE  
CITY COUNCIL MEETING MINUTES

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A regular meeting of the Wilsonville City Council was held at the Wilsonville City Hall beginning at 7:00 p.m. on Monday, May 2, 2016. Council President Starr called the meeting to order at 7:00 p.m., followed by roll call and the Pledge of Allegiance.

The following City Council members were present:

Mayor Knapp – connected via telephone call  
Councilor Starr  
Councilor Fitzgerald - Excused  
Councilor Stevens - Excused  
Councilor Lehan

Staff present included:

Bryan Cosgrove, City Manager  
Jeanna Troha, Assistant City Manager  
Barbara Jacobson, City Attorney  
Sandra King, City Recorder  
Eric Mende, Capital Projects Manager  
Nancy Kraushaar, Community Development Director

Motion to approve the order of the agenda.

**Motion:** Councilor Lehan moved to approve the order of the agenda. Mayor Knapp seconded the motion.

**Vote:** Motion carried 3-0.

**CITIZEN INPUT** – There was none.

### **LIAISON REPORT**

Councilor Lehan announced the next Planning Commission meeting is scheduled for May 11<sup>th</sup> at 5 p.m. The Commission will be hosting a public open house on the Frog Pond Master Plan.

### **PUBLIC HEARINGS**

- A. **Ordinance No. 789** – first reading  
An Ordinance Of The City Of Wilsonville Approving A Minor Amendment To Wilsonville’s 2013 Transportation Systems Plan (2016 TSP Amendment). (Staff – Mende)

Ms. Jacobson read the title of Ordinance No. 789 into the record on first reading.

Council President Starr opened the public hearing at 7:03 p.m. and read the public hearing format.

Mr. Mende prepared the following staff report.

The TSP is the City's long-term policy and planning document for transportation improvements (vehicular, bicycle, pedestrian, transit and freight) and includes a list (TSP Chapter 5) of higher priority projects that will be implemented over a 20-year timeframe through the City's Capital Improvement Program (CIP), development review process, and occasionally by other agencies. The TSP identifies the City's transportation system goals, objectives and projects needed to provide efficient transportation choices for all users, design standards for a system that operates reliably and safely, and is complementary to surrounding land uses.

Having a TSP in place is essential for the City to compete for federal, state and regional funding for transportation projects. This 2016 TSP Amendment, once adopted, will update and replace the Executive Summary and Chapters 3, 4, and 5 of the 2013 TSP.

Wilsonville, like other cities in the state, needs to update its TSP to remain current with changes in state and regional transportation policy as well as to address changing local conditions. Major TSP updates typically occur on an 8 to 10-year cycle. Minor amendments are common, and occur as needed between major updates. The key changes driving this 2016 TSP Amendment include completion of concept planning for the Frog Pond/Advance Road area; development of a revised transportation network for the Coffee Creek Industrial Area; and having an accurate project list to use for the Transportation System Development Charge update.

The amendments incorporate input received to date from City Council, Planning Commission, and the public. The information and recommendations contained in the 2016 TSP Amendment have been previously presented to Planning Commission and state mandated public notices have been distributed. As of the date of this staff report, approximately seven requests for information have been made, and responded to, however, written comments have been received from only one party - Republic Services (see Planning Commission Record). At the Planning Commission Hearing, minor edits to a couple of figures were identified, and an additional project requested by staff (Project BW-15) was included to identify a funding set-aside for acquisition of properties having strategic potential to facilitate bike and pedestrian connections identified in the TSP. Based on this input, Ordinance 789 includes an updated Executive Summary and proposed Chapters 3, 4, and 5.

Adoption of the 2016 TSP Amendment will result in continued compliance with Statewide Planning Goal 12, the Transportation Planning Rule and Metro's Regional Transportation Functional Plan, providing a sound, integrated planning document that will continue to guide the next 20-years of transportation projects and policies.

On April 13, 2016, the Planning Commission conducted a Public Hearing and unanimously approved Resolution LP 16-0001 recommending approval of the minor amendments. On May 2, 2016, City Council held a public hearing, solicit testimony, and continue the public hearing to May 16, 2016. At the May 16 meeting, there will be an opportunity for additional public comment before the public hearing is closed. If Council chooses to approve the 2016 TSP Amendment, it will be done via approval of Ordinance 789. The 2nd reading of Ordinance 789 is currently scheduled for May 16. The Amendment would become effective 30 days following second reading and adoption of the Ordinance.

Other than staff time for Community Development personnel and Consulting Services provided by DKS Associates for technical evaluation and document preparation, there are no expected implementation costs. These costs are currently budgeted (FY 15/16).

Adoption of the 2013 TSP included a substantial public engagement process over the course of two years with numerous opportunities for input and community dialog. The Planning Commission and City Council spent considerable time and energy shaping the Plan and the corresponding Comprehensive Plan text amendments.

For this minor Amendment, Staff created a broad property owner notification that targeted all owners in the general vicinity of the proposed changes reflected in the Amendment. Key target areas included the Coffee Creek area and Commerce Circle businesses, and the Canyon Creek, Meadows, and Landover residential areas. Businesses and residences outside city limits, but potentially impacted by the Amendment, were notified, and potentially affected governmental entities such as Metro, Washington County, and Tualatin Valley Fire and Rescue were also provided notice, as required by law. The City received very few inquiries as a result of the notification, and only one set of written comments. As referenced in the Conclusionary Findings Statewide Planning Goal #1 – Citizen Involvement, is met.

The TSP and this proposed Amendment identify projects and policies that set the framework for the next 20 years of transportation improvements in all modes. These projects are intended to support community livability and economic development by providing a wide variety of transportation choices that connect the community both internally as well as externally.

Scott Mansur of DKS and Associates, presentation began with an explanation of why the TSP needed to be amended at this time. The TSP is the City's long term transportation document which sets the framework for the City especially as it relates to future development. The TSP is the document necessary to support requests for state, federal, and local funding grant applications. The TSP is updated based on rapidly changing conditions.

Changing Local Conditions that warranted an update in the TSP include:

- The adoption of the West Neighborhood and Frog Pond Development Master Plan which includes a new street system.
- Completion of the Boeckman dip engineering refinement study which identifies future improvements to Boeckman Road east of Canyon Creek Road, and updates cost estimates and project information related to that project.
- Two new projects in the Coffee Lake Creek Industrial Area – Universal Health Services, and Republic Services.
- Ongoing Basalt Creek Transportation Analysis System Planning.
- Planned improvements to the Xerox Campus that require modifications to Printer Parkway.

Changes since the adoption of the 2013 TSP include:

- Remove the segment of Kinsman Road between Day and Ridder roads and improving the existing Garden Acres Road to the Day Road Grahams Ferry intersection

- Future Java Road east west connection has the potential to replace the existing Clutter intersection and improve safety
- The Frog Pond north-south and east-west collectors
- Changing Printer Parkway to a collector with bike lanes and connect to Canyon Creek Road
- Modifications to the Meridian Creek Middle School include the proposed collector of 63<sup>rd</sup>, as well as Hazel connecting to 60<sup>th</sup> Avenue.
- Adoption of the new Urban Growth Boundary to include the Meridian Creek Middle School and city park properties.
- Updated information for the Boeckman Dip and sidewalk infill project along Boones Ferry Road and Commerce Circle.

Changes to the Functional Classification Designation map include:

- Update the UGB to include the area surrounding the proposed Advance Road Middle School and include 63<sup>rd</sup> Avenue and Hazel Street as collector Roadways.
- Show Advance Road as a collector road to 60<sup>th</sup> Avenue.
- Remove the Kinsman Road extension between Day Road and Ridder Road.
- Additional collector roadways proposed in the adopted Frog Pond Area Plan.
- The addition of Printer Parkway as a collector with bike lanes that will become multi use path east of the Xerox campus.
- Modify the functional classification of 60<sup>th</sup> Avenue adjacent to the proposed Advance Middle School site to a collector.
- Add the future Java Road collector.
- Garden Acres modified to a collector road.

Freight Route Modifications include:

- Update the map to include the UGB changes.
- Remove the Kinsman Road freight route designation.
- Classify Garden Acres Road as a truck route.

Bicycle Route Changes:

- Update the UGB to include the area surrounding the proposed Advance Road Middle School and show bike lanes on 63<sup>rd</sup> Avenue and Hazel Street.
- Update to show bike lanes on Advance Road to 60<sup>th</sup> Avenue.
- Remove the Kinsman Road extension and update the alignment to the proposed future shared use paths in the area.
- Add the planned bike lanes on the future Java Road collector.
- Show the planned future bike lanes on Garden Acres Road.
- Show the planned future bike facilities on Printer Parkway.
- Update the bicycle facilities and shared use paths in the Frog Pond area as designated in the Frog Pond Area Plan.

Roadway Cross-Section Deficiencies

- Update the UGB to include the area surrounding the proposed Meridian Creek Middle School.
- Highlight Garden Acres Road as experiencing existing collector cross-section deficiencies.
- Highlight Printer Parkway as experiencing existing collector cross-section deficiencies.
- Highlight Advance Road between Stafford Road and 60th Avenue as experiencing collector cross section deficiencies.
- Highlight 60th Avenue adjacent to the proposed Meridian Creek Middle School site as experiencing collector cross-section deficiencies.

Higher Priority Projects:

Remove the following projects:

- RE-07 Kinsman Road Extension
- BW-11 Frog Pond Trails
- RT-02 Frog Pond Trail

Add the following projects:

- UU-08 Garden Acres Road Urban Upgrade
- UU-09 Printer Parkway Urban Upgrade
- RE-11 Meridian Creek Middle School Collector Roads
- UU-10 Advance Road Urban Upgrade
- RE-12A Frog Pond West Neighborhood Collector Roads
- RE-12B Frog Pond South Neighborhood Collector Road
- RE-13 Java Road Connection and Signal on Grahams Ferry
- RT-07 Revised Frog Pond Regional Trail
- BW-15 Consistent with Council Goal for Neighborhood Connectivity providing funds for the city to acquire property for future bike and ped connectivity as properties become available.

Additional Planned Projects include:

- Update project BW-P2 Commerce Circle Loop Sidewalk Infill to include sidewalk infill on Boones
- Ferry Road from Commerce Circle to Day Road.
- Delete project UU-P1 Advance Road Urban Upgrade.

Mayor Knapp asked staff to consider three areas of concern. The first is the elimination of the truck route on Kinsman Road north of Boeckman Road and how long-term north-south freight connections will be served. He questioned how well a proposal to eliminate the connection without providing another access serves the long-term industrial community.

Mr. Mansure said the freight route used to go straight up Kinsman north of Ridder, up to Day Road. Now freight traffic would have to use Ridder and Garden Acres.

The Mayor's second concern dealt with Printer Parkway which was originally built to private standards; he was curious whether it was built to anything near the city's standards that would



apply if it were a public road. He wanted to know why it is suddenly elevated to a priority when it has not been included in previous discussions. Are the property owners looking for the public to buy that right-of-way or is someone looking to contribute that right of way without it being purchased.

Council President Starr asked if Printer Road would span Boeckman Creek to Frog Pond West.

Mr. Mansure responded Printer Road would go from Parkway to Canyon Creek, and there will not be a Printer Road in Frog Pond West.

Mayor Knapp stated his third area of concern is the congestion issue around the Fred Meyer complex on Boones Ferry Road south of Wilsonville Road. Have the original projects for traffic volumes at those driveway and street intersections been proven out, or are there significantly different volumes and impacts than those original projections anticipated. He understood city engineering was looking at some spot improvements potentially at the Albertsons / north Fred Meyer driveway junction with Boones Ferry, and different approaches to increase the flow capacity at Wilsonville Road and Boones Ferry; however there was no discussion of these projects in the Plan.

Council President Starr asked staff to come back with responses to the Mayor's concerns at the next meeting. He noted this was the City's chance to update the Plan, and to include projects such as an auxiliary lane across the Boone Bridge to make the Wilsonville Road and Boones Ferry intersection work. If the City needs to go to the state for funding, the project is in the plan. He agreed with the Mayor's comment that now is the time to address the congestion issue.

The Mayor would like to have more discussion on his three concerns at the next meeting.

Mr. Mende noted the TSP was scheduled for the May 16<sup>th</sup> Work Session allowing opportunity for discussion.

Council President Starr noted two letters had been received regarding the TSP amendments; a letter of support for the TSP Amendment to include Printer Parkway on the City's Capital Improvement Projects List from Don Hanson of OTAK, Inc., and a letter from Andrew Singelakis of Washington County expressing commitment in the continued planning of the Coffee Creek and Basalt Creek areas. Both letters are included in the record.

Ben Altman, of Pioneer Design Group, Inc. 9020 SW Washington Square Road, Suite 170, Portland, OR represented Republic Services. Mr. Altman submitted his testimony in a letter which has been made part of the record. His client, Republic Services, supported staff's recommendation to shift the collector alignment from Kinsman Road to Garden Acres Road.

Council President Starr requested a motion.

**Motion:** Mayor Knapp moved to continue the public hearing to a date certain of May 16, 2016, and to keep the record open. Councilor Lehan seconded the motion.

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CITY OF WILSONVILLE  
CITY COUNCIL MEETING MINUTES

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**Vote:** Motion carried 3-0.

Ms. Jacobson suggested adopting the ordinance on first reading.

**Motion:** Councilor Lehan moved to approve Ordinance No. 789 on first reading. Mayor Knapp seconded the motion.

**Vote:** Motion carried 3-0.

**ADJOURN**

Council President Starr adjourned the meeting at 7:34 p.m.

Respectfully submitted,

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

ATTEST:

\_\_\_\_\_  
Scott Starr, Council President



**CITY COUNCIL MEETING  
STAFF REPORT**

<p><b>Meeting Date:</b>  May 16, 2016</p>	<p><b>Subject: Ordinance Nos. 790 and 791</b> Comprehensive Plan Map Amendment and Zone Map Amendment for approximately 4.37 acres at 28500 and 28530 SW Canyon Creek Road South <b>Staff Member:</b> Daniel Pauly AICP, Associate Planner <b>Department:</b> Community Development, Planning Division</p>	
<p><b>Action Required</b></p> <p><input checked="" type="checkbox"/> Motion  <input checked="" type="checkbox"/> Public Hearing Date: May 16.  <input checked="" type="checkbox"/> Ordinance 1<sup>st</sup> Reading Date: May 16, 2016.  <input checked="" type="checkbox"/> Ordinance 2<sup>nd</sup> Reading Date: June 6, 2016  <input type="checkbox"/> Resolution  <input type="checkbox"/> Information or Direction  <input type="checkbox"/> Information Only  <input type="checkbox"/> Council Direction  <input type="checkbox"/> Consent Agenda</p>	<p><b>Development Review Board Recommendation</b></p> <p><input checked="" type="checkbox"/> Approval  <input type="checkbox"/> Denial  <input type="checkbox"/> None Forwarded  <input type="checkbox"/> Not Applicable</p> <p><b>Comment:</b> Following review at their March 28<sup>th</sup> and April 25<sup>th</sup> meetings, Development Review Board Panel B recommended approval of a Comprehensive Plan Map Amendment and a Zone Map Amendment for the subject properties. The DRB also approved a Stage I Master Plan, Stage II Final Plan, Site Design Review, Type C Tree Plan, Waiver and Tentative Subdivision Plat for the development of a 14-lot single-family subdivision.</p>	
<p><b>Staff Recommendation:</b> Staff recommends that the City Council adopt Ordinance Nos. 790 and 791.</p>		
<p><b>Recommended Language for Motion:</b> In two separate motions, I move to adopt Ordinance Nos. 790 and 791 on 1<sup>st</sup> reading.</p>		
<p><b>PROJECT / ISSUE RELATES TO:</b> Comprehensive Plan Map Amendment, Zone Map Amendment.</p>		
<p><input type="checkbox"/> Council Goals/Priorities</p>	<p><input type="checkbox"/> Adopted Master Plan(s) Villebois Village Master Plan</p>	<p><input type="checkbox"/> Not Applicable</p>

**ISSUE BEFORE COUNCIL:** Approve, modify, or deny Ordinance Nos.: 790 and 791 to change the Comprehensive Plan residential density designation and rezone approximately 4.37 acres located at 28500 and 28530 SW Canyon Creek Road South enabling development of a 14-lot single-family subdivision.

**EXECUTIVE SUMMARY:** The proposed Comprehensive Plan Map Amendment and Zone Map Amendment along with associated development applications would allow the development of 14 single-family lots.

For areas of the City designated as residential on the Comprehensive Plan Map, planned densities are indicated in dwelling units per acre. The applicant requests a change of the planned residential density of the subject properties from 0-1 dwelling units per acre to 4-5 dwelling units per acre.

The subject properties are part of the 1964 Bridle Trail Ranchettes subdivision where each lot was approximately 2 acres. When the City adopted the current Comprehensive Plan Map the density for this area reflected the existing subdivision. Beginning in the mid 2000's, the City approved a series of requests for many of the Bridle Trail Ranchette to increase the density from 0-1 to 4-5 dwelling units an acre. The City has previously approved the increased density on 12 of the original 19 Bridle Trail Ranchette lots.

Contingent on approval of the Comprehensive Plan Map Amendment for an increased density of 4-5 dwelling units per acre, the subject properties would receive a corresponding PDR zoning of PDR-3. The City approved the same zoning for other portions of Bridle Trail Ranchettes with increased density.

**EXPECTED RESULTS:** Adoption of Ordinances

**TIMELINE:** The Comprehensive Plan Map Amendment and Zone Map Amendment will be in effect 30 days after the Council adopts the ordinances.

**CURRENT YEAR BUDGET IMPACTS:** None.

**FINANCIAL REVIEW / COMMENTS:**

Reviewed by: \_\_\_\_\_, Date: \_\_\_\_\_, 2016

**LEGAL REVIEW / COMMENT:**

Reviewed by: \_\_\_\_\_, Date: \_\_\_\_\_, 2016

**COMMUNITY INVOLVEMENT PROCESS:** The Planning Division sent the required public hearing notices and a number of nearby residents participated in the public hearing process.

**POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY:** The ordinances will provide:

- Increased traffic in neighborhood at a level meeting City performance standards
- Additional single-family home options within the current urban growth boundary

**ALTERNATIVES:** Approve or deny the Comprehensive Plan Map Amendment and Zone Map Amendment.

**CITY MANAGER COMMENT:**



**EXHIBITS AND ATTACHMENTS:**

Exhibit A – Comprehensive Plan Map Amendment Ordinance No. 790

Attachment 1 Comprehensive Plan Map Order DB15-0108 including legal description and sketch depicting map amendment.

Attachment 2 Comprehensive Plan Map Amendment findings

Exhibit B – Zone Map Amendment Ordinance No. 791

Attachment 1 Zoning Order DB15-0109 including legal description and sketch depicting zone map amendment

Attachment 2 Zone Map Amendment Findings

Exhibit C – DRB Resolution No. 324 recommending approval of Comprehensive Plan Map Amendment and Zone Map Amendment

Exhibit D – Amended and Adopted Staff Report and DRB Recommendation

Exhibit E – Compliance Report Submitted by applicant

**ORDINANCE NO. 790**

**AN ORDINANCE OF THE CITY OF WILSONVILLE APROVING A COMPREHENSIVE PLAN MAP AMENDMENT FROM RESIDENTIAL 0-1 DWELLING UNITS PER ACRE TO RESIDENTIAL 4-5 UNITS PER ACRE ON APPROXIMATELY 4.37 ACRES LOCATED AT 28500 AND 28530 SW CANYON CREEK ROAD SOUTH – COMPRISING TAX LOTS 900 AND 1000 OF SECTION 13B, TOWNSHIP 3 SOUTH, RANGE 1 WEST, CLACKAMAS COUNTY, OREGON, BETH ANN BOECKMAN AND KAREN AND MARVIN LEWALLEN – OWNERS, SCOTT MILLER, SAMM-MILLER LLC – APPLICANT.**

RECITALS

WHEREAS, Beth Ann Boeckman and Daren and Marvin Lewallen (“Owners”) and Scott Miller of SAMM-Miller LLC (“Applicant”) have made a development application requesting, among other things, a Comprehensive Plan Map Amendment of the Property; and

WHEREAS, the development application form has been signed by the Owners of the real property legally described and shown in Attachment 1, attached hereto and incorporated by reference herein (“Property”); and

WHEREAS, THE City of Wilsonville Planning Staff analyzed the Comprehensive Plan Map Amendment request and prepared a staff report for the Development Review board, finding that the application met the requirements for a Comprehensive Plan Map Amendment and recommending approval of the Comprehensive Plan Map Amendment, which staff report was presented to the Development Review Board on March 28 and April 25, 2016; and

Whereas, the Development Review Board Panel B held a public hearing on the application for a Comprehensive Plan Map Amendment on March 28 and April 25, 2016, and after taking public testimony and giving full consideration t the matter, adopted Resolution No. 324 which recommends that the City Council approve a request for a Comprehensive Plan Map Amendment (Case File DB 15-0108); and

WHEREAS, on May 16, 2016, the Wilsonville City Council held a public hearing regarding the above described matter, wherein the City Council considered the full public record made before the Development Review Board, including the Development Review Board and City Council staff reports; took public testimony; and upon deliberation, concluded that the proposed Comprehensive Plan Map Amendment meets the applicable approval criteria under the City of Wilsonville Development Code; and

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

Section 1. Findings. The City Council adopts, as findings and conclusions, the foregoing Recitals and Comprehensive Plan Map Amendment Findings in Attachment 2, as if fully set forth herein.

Section 2. Order. The official City of Wilsonville Comprehensive Plan Map is hereby amended by Comprehensive Plan Map Order DB15-0108, attached hereto as Attachments 1 from Residential 0-1 dwelling units per acre to Residential 4-5 dwelling units per acre.

SUBMITTED to the Wilsonville City Council and read the first time at a meeting thereof on the 16<sup>th</sup> day of May 2016, and scheduled for the second reading on June 6, 2016, commencing at the hour of 7 p.m. at the Wilsonville City Hall, 29799 SW Town Center Loop East, Wilsonville, Oregon.

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

ENACTED by the City Council on the 6<sup>th</sup> day of June 2016 by the following votes:

Yes: \_\_\_\_\_ No: \_\_\_\_\_

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

DATED and signed by the Mayor this \_\_\_\_ day of June, 2016.

\_\_\_\_\_  
TIM KNAPP, MAYOR

SUMMARY OF VOTES:

Mayor Knapp  
Councilor Starr  
Councilor Fitzgerald  
Councilor Stevens  
Councilor Lehan

Exhibits and Attachments:

- Attachment 1 – Comprehensive Plan Map Order DB15-0108 including legal description and sketch depicting map amendment
- Attachment 2 – Comprehensive Plan Map Amendment Findings, April 26, 2016

**ORDINANCE NO. 790 – ATTACHMENT 1**

**BEFORE THE CITY COUNCIL OF THE  
CITY OF WILSONVILLE, OREGON**

In the Matter of the Application of	)	
SAMM-MILLER LLC for an	)	<b>Comprehensive Plan Map</b>
Amendment of the City of Wilsonville	)	<b>Order DB15-0108</b>
Comprehensive Plan Map	)	

The above entitled matter is before the Council to consider the application of DB15-0108, for a Comprehensive Plan Map Amendment and an Order, amending the official Comprehensive Plan Map of the City of Wilsonville.

The Council finds that the subject property (“Property”), legally described and shown in the attached legal description and sketch, has heretofore appeared on the City of Wilsonville Comprehensive Plan Map with a designation of Residential 0-1 dwelling units per acre.

The Council having heard and considered all matters relevant to the application for a Comprehensive Plan Map Amendment, including the Development Review Board record and recommendation, finds that the application should be approved.

THEREFORE, IT IS HEREBY OREDERD, that the Property, consisting of approximately 4.37 acres located at 28500 and 28530 SW Canyon Creek Road South, comprising tax lots 900 and 1000 of Section 13B, T3S, R1W, Clackamas County, Oregon, as more particularly shown and described in the attached legal description and sketch, is hereby designated as Residential 4-5 dwelling units per acre, subject to conditions detailed in this Order’s adopting Ordinance. The foregoing designation is hereby declared an amendment to the Wilsonville Comprehensive Plan Map and shall appear as such from and after entry of this Order.

DATED: June 6, 2016

\_\_\_\_\_  
TIM KNAPP, MAYOR

APPROVED AS TO FORM:

\_\_\_\_\_  
Barbara A. Jacobson, City Attorney

ATTEST:

---

Sandra C. King, MMC, City Recorder

Attachment:

Legal Description and Sketch Depicting Properties subject to the Comprehensive Plan Map Amendment.



**EMERIO**  
*Design*

Civil Engineering  
Land Survey  
Land Use Planning  
Construction Management

ZONE CHANGE  
CANYON CREEK ROAD SOUTH

JOB NO. 500-015  
APRIL 27, 2016

EXHIBIT A (PAGE 1 OF 2)

LOTS 5 AND 6, "BRIDLE TRAIL RANCHETTS", AND OTHER LAND LOCATED IN THE N.W. 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 1 WEST OF THE WILLAMETTE MERIDIAN, CITY OF WILSONVILLE, CLACKAMAS COUNTY, OREGON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 5, "BRIDLE TRAIL RANCHETTS", BEING ON THE EAST RIGHT OF WAY LINE OF CANYON CREEK ROAD SOUTH (50.0 FEET WIDE); THENCE ALONG THE NORTH LINE OF SAID LOT 5 AND ITS EASTERLY EXTENSION, NORTH 89°29'30" EAST, 652.49 FEET TO THE WEST LINE OF TRACT J, "WILSONVILLE MEADOWS NO. 5"; THENCE ALONG SAID WEST LINE AND THE WEST LINE OF TRACT M, "WILSONVILLE MEADOWS NO. 6", SOUTH 00°40'00" WEST, 292.04 FEET TO THE EASTERLY EXTENSION OF THE SOUTH LINE OF LOT 6, "BRIDLE TRAIL RANCHETTS"; THENCE ALONG SAID EASTERLY EXTENSION AND SOUTH LINE, SOUTH 89°29'30" WEST, 649.98 FEET TO THE SOUTHWEST CORNER OF SAID LOT 6 ON THE EAST RIGHT OF WAY LINE OF CANYON CREEK ROAD SOUTH; THENCE ALONG SAID EAST RIGHT OF WAY LINE, NORTH 00°10'30" EAST, 292.00 FEET TO THE POINT OF BEGINNING.

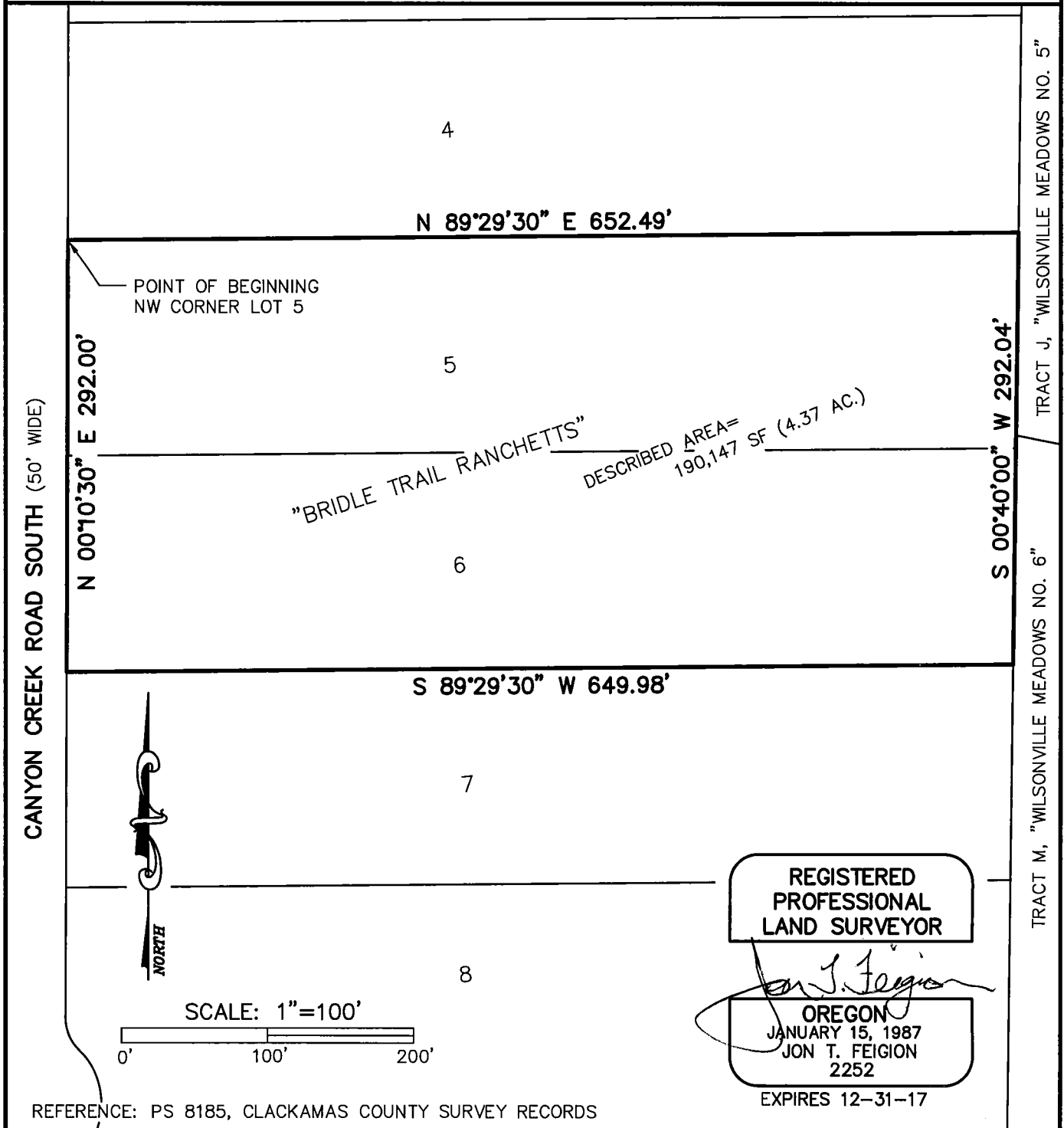
CONTAINING 190,147 SQUARE FEET (4.37 ACRES), MORE OR LESS.



REFERENCE: PS 8185, CLACKAMAS COUNTY SURVEY RECORDS

EXHIBIT A (PAGE 2 OF 2)

LOTS 5 AND 6, "BRIDLE TRAIL RANCHETTS" AND  
OTHER LAND LOCATED IN THE  
N.W. 1/4 OF SEC. 13, T.3S., R.1W., W.M.  
CITY OF WILSONVILLE, CLACKAMAS COUNTY, OREGON



DRAWN BY: JTF	
JOB NO.: 500-015	ZONE CHANGE
SCALE: 1" = 100'	
DATE: 4-27-16	

**EMERIO**  
*Design*

8285 SW NIMBUS AVE, SUITE 180  
BEAVERTON, OREGON 97008  
TEL: (503) 746-8812  
FAX: (503) 639-9592  
www.emeriodesign.com

Ordinance No. 790  
Staff Report  
Wilsonville Planning Division

14-Lot Single-Family Subdivision at 28500 and 28530 SW Canyon Creek Rd. South  
Comprehensive Plan Map Amendment

City Council  
Quasi-Judicial Public Hearing

---

<b>Hearing Date:</b>	May 16, 2016
<b>Date of Report:</b>	April 26, 2016
<b>Application No.:</b>	DB15-0108 Comprehensive Plan Map Amendment

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**Request:** The City is being asked to review a Quasi-judicial Comprehensive Plan Map Amendment for a 14-lot single-family subdivision.

**Location:** Approximately 4.37 acres at 28500 and 28530 SW Canyon Creek Road South. East side of SW Canyon Creek Road South at and just south of SW Daybreak Street. The property is specifically known as Tax Lots 900 and 1000, Section 13B, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon

**Owners:** Beth Ann Boeckman (28500 SW Canyon Creek Rd. S.)  
Karen and Marvin Lewallen (28530 SW Canyon Creek Rd. S.)

**Applicant:** Scott Miller, Samm-Miller LLC

**Applicant’s Representative:** AnneMarie Skinner, Emerio Design

**Comprehensive Plan Designation (Current):** Residential 0-1 dwelling units per acre  
**Comprehensive Plan Designation (Proposed):** Residential 4-5 dwelling units per acre

**Staff Reviewer:** Daniel Pauly AICP, Associate Planner

**Staff Recommendation:** Approve the requested Comprehensive Plan Map Amendment.

**Applicable Review Criteria:**

<b><u>Development Code:</u></b>	
Section 4.008	Application Procedures-In General
Section 4.009	Who May Initiate Application
Section 4.010	How to Apply
Section 4.011	How Applications are Processed
Section 4.014	Burden of Proof
Section 4.031	Authority of the Development Review Board
Subsection 4.035 (.04)	Site Development Permit Application

Subsection 4.035 (.05)	Complete Submittal Requirement
Section 4.198	Comprehensive Plan Changes
<b>Other Documents:</b>	
Comprehensive Plan	
Oregon Statewide Planning Goals	

**Vicinity Map**

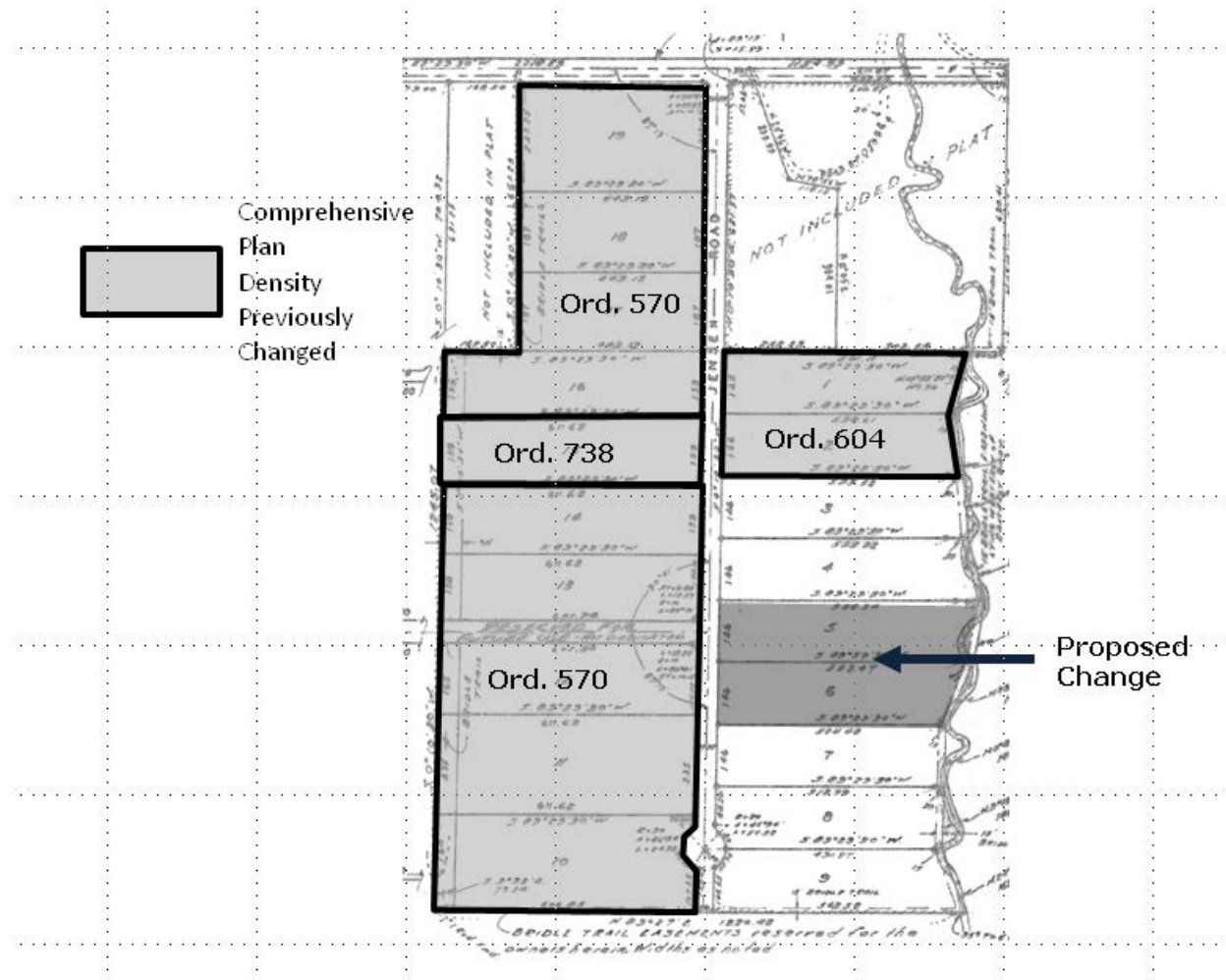


**Background/Summary:**

Comprehensive Plan Map Amendment (DB15-0108)

For areas of the City designated as residential on the Comprehensive Plan Map, planned densities are also indicated in dwelling units per acre. The applicant requests a change of the planned residential density of the subject properties from 0-1 dwelling units per acre to 4-5 dwelling units per acre.

The subject properties are part of the 1964 Bridle Trail Ranchettes subdivision where each lot was approximately 2 acres. When the current Comprehensive Plan Map was adopted the density for this area reflected the existing subdivision. Beginning in the mid 2000's, many of the Bridle Trail Ranchette lots were approved for Comprehensive Plan Map amendments to increase the density from 0-1 to 4-5 dwelling units an acre. Currently 12 of the original 19 Bridle Trail Ranchette lots have been approved by the City for increased density.



The first and largest approved change in this area from 0-1 to 4-5 dwelling units was in 2004 with the adoption of Ordinance No. 570 for Renaissance at Canyon Creek. The supporting staff



report discussed the need of additional single-family homes to provide housing for people working in Wilsonville as well as others desiring to live here. In addition, the findings point out the limited amount of vacant residential land within the City, and that the subject area is surrounded by residential designations for higher density.

In early 2006, Ordinance No. 604 similarly changed the comprehensive plan designation for approximately 4 acres on the east side of Canyon Creek Road South from 0-1 to 4-5 dwelling units an acre for the development of the 13-lot Cross Creek Subdivision. The same findings regarding the need of additional housing units, the limited amount of vacant land within the City, and the density of surrounding areas were made.

More recently, Ordinance No. 738 approved the same density change in 2014 for a property whose owners had elected not to participate in the 2004 project and now desired to redevelop.

The owners of the subject properties and their development partner now desire for a similar change of density for the subject property for similar reasons as the other lots redeveloped in Bridle Trail Ranchettes.

**Conclusion:**

Staff and the DRB have reviewed the application and facts regarding the request and recommend the City Council approve the Comprehensive Plan Map Amendment (DB15-0108).

**Findings of Fact:**

1. The statutory 120-day time limit applies to this application. The application was received on December 23, 2015. On January 21, 2016 staff conducted a completeness review within the statutorily allowed 30-day review period and found the application to be incomplete. On February 1, 2016, the Applicant submitted new materials. On February 17, 2016 the application was deemed complete. The City must render a final decision for the request, including any appeals, by June 16, 2016.
2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North:	RA-H	Single-family Residential
East:	PDR-4	Single-family Residential
South:	RA-H	Single-family Residential
West:	PDR-3	Single-family Residential

3. Previous Planning Approvals:  
Current subdivision (Bridle Trail Ranchettes) approved prior to City incorporation.

4. The applicant has complied with Sections 4.013-4.031 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.

### **Conclusionary Findings:**

NOTE: Pursuant to Section 4.014 the burden of proving the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case.

## **General Information**

### Application Procedures-In General

Section 4.008

**Review Criteria:** This section lists general application procedures applicable to a number of types of land use applications and also lists unique features of Wilsonville’s development review process.

**Finding:** These criteria are met.

**Details of Finding:** Processing of the application follows the applicable general procedures of this Section.

### Initiating Application

Section 4.009

**Review Criterion:** “Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring the property, or by an agent who has been authorized by the owner, in writing, to apply.”

**Finding:** This criterion is satisfied.

**Details of Finding:** Applications have been signed by property owners of both properties involved.

### Pre-Application Conference

Subsection 4.010 (.02)

**Review Criteria:** This section lists the pre-application process

**Finding:** These criteria are satisfied.

**Details of Finding:** A Pre-application conferences was held on April 23, 2015 (PA15-0008) in accordance with this subsection.

### Lien Payment before Approval

Subsection 4.011 (.02) B.

**Review Criterion:** “City Council Resolution No. 796 precludes the approval of any development application without the prior payment of all applicable City liens for the subject property. Applicants shall be encouraged to contact the City Finance Department to verify that there are

no outstanding liens. If the Planning Director is advised of outstanding liens while an application is under consideration, the Director shall advise the applicant that payments must be made current or the existence of liens will necessitate denial of the application.”

**Finding:** This criterion is satisfied.

**Details of Finding:** No applicable liens exist for the subject property. The application can thus move forward.

#### General Submission Requirements

Subsection 4.035 (.04) A.

**Review Criteria:** “An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code.” Listed 1. through 6. j.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has provided all of the applicable general submission requirements contained in this subsection.

#### Zoning-Generally

Section 4.110

**Review Criteria:** “The use of any building or premises or the construction of any development shall be in conformity with the regulations set forth in this Code for each Zoning District in which it is located, except as provided in Sections 4.189 through 4.192.” “The General Regulations listed in Sections 4.150 through 4.199 shall apply to all zones unless the text indicates otherwise.”

**Finding:** These criteria are satisfied.

**Details of Finding:** This proposed development is in conformity with the applicable zoning district and general development regulations listed in Sections 4.150 through 4.199 have been applied in accordance with this Section.

### DB15-0108 Comprehensive Plan Amendment

#### **Zoning and Land Development Ordinance**

#### **Comprehensive Plan Amendment Process**

Procedures and Criteria in Comprehensive Plan

Subsection 4.198 (.01)

A1. **Review Criteria:** “Proposals to amend the Comprehensive Plan, or to adopt new elements or sub-elements of the Plan, shall be subject to the procedures and criteria contained in the Comprehensive Plan.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The lot of the subject development site is of sufficient size to be developed in a manner consistent with the purposes and objectives of Section 4.140.

## Review Bodies

Subsection 4.198 (.02)

- A2. Review Criteria:** “Following the adoption and signature of the Resolution by the Development Review Board or Planning Commission, together with minutes of public hearings on the proposed Amendment, the matter shall be shall be scheduled for public hearing before the City Council.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The DRB and City Council are considering the request as described.

## Applicant Agreeing to Conditions of Approval

Subsection 4.198 (.05)

- A3. Review Criteria:** “In cases where a property owner or other applicant has requested an amendment to the Comprehensive Plan map and the City Council has approved the change subject to conditions, the owner or applicant shall sign a statement accepting, and agreeing to complete the conditions of approval before the Comprehensive Plan map shall be changed.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The owner will be required to sign a statement accepting conditions.

## Comprehensive Plan Amendment Required Findings

### Meets Identified Public Need

Subsection 4.198 (.01) A.

- A4. Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed amendment meets a public need that has been identified;”

**Finding:** These criteria are satisfied.

**Details of Finding:** The “Residential Development” portion of the Comprehensive Plan (Policy 4.1.4) identifies the need for additional housing within the City to serve housing and economic needs of residents and employees working within the City.

On the basis of the Housing Data used for the 2015 City of Wilsonville Housing Report, of the City’s 10,283 housing units, 55% are multi-family (apartments and condos), 45% are single-family.

Policy 4.1.4 and its implementation measures seek to “provide opportunities for a wide range of housing types, sizes, and densities at prices and rent levels to accommodate people who are employed in Wilsonville.” The proposal provides additional single-family homes supporting an ongoing desire for single-family homes at various price levels as part of Wilsonville’s strong diversity of housing unit types.

Meets Identified Public Need As Well As Reasonable Alternative  
Subsection 4.198 (.01) B.

- A5. **Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed amendment meets the identified public need at least as well as any other amendment or change that could reasonably be made;”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed subdivision has similarities in site density and housing product to other subdivisions nearby such as Renaissance at Canyon Creek and Cross Creek, and provides a consistent density and development type as the area becomes more dense and urban over time. The consistency with nearby development, while accommodating the required usable open space, makes the proposed continued residential use at the proposed density meet the need for a variety of single-family homes better than other density or design options for the site.

Supports Statewide Planning Goals  
Subsection 4.198 (.01) C.

- A6. **Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed amendment supports applicable Statewide Planning Goals, or a Goal exception has been found to be appropriate;”

**Finding:** These criteria are satisfied.

**Details of Finding:** With the implementation of the proposed conditions of approval, the project supports the applicable Statewide Planning Goals.

No Conflict with Other Portions of Plan  
Subsection 4.198 (.02) D.

- A7. **Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed change will not result in conflicts with any portion of the Comprehensive Plan that is not being amended.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant is requesting an amendment of the Comprehensive Plan Map for the subject properties. The applicant does not propose to modify or amend any other portion of the Comprehensive Plan or Plan Map.

## **Comprehensive Plan and Plan Components**

### **Initiating, Applying for, and Considering Plan Amendments**

#### Who May Initiate Plan Amendments Introduction Page 7 “Plan Amendments” 1.

- A8. **Review Criteria:** “An Amendment to the adopted Plan may be initiated by: a. The City Council, b. The Planning Commission (for legislative amendments) or Development Review Board (for quasi-judicial amendments); or c. Application of property owner(s) or contract purchaser(s) affected or their authorized agents, as specified in #2 below.”



**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed amendment has been initiated by the property owners of the subject lots.

#### How to Make Application

Introduction Page 7 "Plan Amendments" 2.

**A9. Review Criteria:** "An application for an amendment to the Plan maps or text shall be made on forms provided by the City. The application, except when initiated by the City Council, DRB, or Planning Commission, as noted in #1, above, shall be accompanied by a Plan Amendment Fee.

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed amendment has been initiated by the property owners of the subject lots who have submitted signed application forms provided by the City and paid the required application fee.

#### Consideration of Plan Amendments

Introduction Page 7 "Plan Amendments" 3.

**A10. Review Criteria:** This language specifies how the City should consider a plan amendment including: requiring the City Council consider a plan amendment only after receiving findings and recommendation from the Planning Commission or Development Review Board; having sufficient time before the first evidentiary hearing for public notice and staff report preparation, considering compliance with Statewide Planning Goals and applicable Metro Plans.

**Finding:** These criteria are satisfied.

**Details of Finding:** The City Council will consider the plan amendment only after receiving a recommendation from the Development Review Board.

### Standards for Approval of Plan Amendments

#### Conformance with Other Portions of the Plan

Introduction Page 7 "Plan Amendments" 4. a.

**A11. Review Criterion:** "The proposed amendment is in conformance with those portions of the Plan that are not being considered for amendment."

**Finding:** This criterion is satisfied.

**Details of Finding:** The change of residential density for the subject properties does not lead to nonconformance with other portions of the Comprehensive Plan.

#### Public Interest

Introduction Page 7 "Plan Amendments" 4. b.

**A12. Review Criterion:** "The granting of the amendment is in the public interest."

**Finding:** This criterion is satisfied.

**Details of Finding:** The request is in the public interest by providing needed housing. See

also Finding A4.

Public Interest Best Served by Timing of Amendment  
Introduction Page 7 "Plan Amendments" 4. c.

**A13. Review Criterion:** "The public interest is best served by granting the amendment at this time."

**Finding:** This criterion is satisfied.

**Details of Finding:** The timing of the amendment is appropriate. See Finding A5.

Factors to Address in Amendment  
Introduction Page 7 "Plan Amendments" 4. d.

**A14. Review Criterion:** "The following factors have been adequately addressed in the proposed amendment:

- the suitability of the various areas for particular land uses and improvements;
- the land uses and improvements in the area;
- trends in land improvement;
- density of development;
- property values;
- the needs of economic enterprises in the future development of the area;
- transportation access;
- natural resources; and
- the public need for healthful, safe and aesthetic surroundings and conditions.

**Finding:** This criterion is satisfied.

**Details of Finding:** The area is suitable for the proposed development as it is in a residential area with similar development and has the necessary public services, including streets, available. It is similar to and follows the trends in recent nearby developments such as Renaissance at Canyon Creek and Cross Creek. The density is consistent with these other recent nearby developments. No evidence has been presented that the development would negatively impact property values. Preservation of Natural Resource areas is part of the development. Healthful, safe and aesthetic surroundings are ensured by application of design standards.

Conflict with Metro Requirements  
Introduction Page 7 "Plan Amendments" 4. e.

**A15. Review Criterion:** "Proposed changes or amendments to the Comprehensive Plan do not result in conflicts with applicable Metro requirements."

**Finding:** This criterion is satisfied.

**Details of Finding:** No conflicts with Metro requirements have been identified. Particularly, Wilsonville's housing mix continues to exceed Metro's requirements.

Public Notice Requirements  
Introduction Page 8 "Plan Amendments" 5.

**A16. Review Criterion:** This language describes the noticing requirements implemented by the City's noticing requirements for quasi-judicial review.

**Finding:** This criterion is satisfied.

**Details of Finding:** Public hearing notices have or will be sent as required.

## Urban Growth Management

### Urbanization for Adequate Housing

Implementation Measure 2.1.1.b.

**A17. Review Criteria:** "Allow urbanization to occur to provide adequate housing to accommodate workers who are employed within the City."

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposal provides for additional housing density to accommodate those employed with the City. See also Finding A4.

### Revenue Sources for Urbanization

Implementation Measure 2.1.1.d.

**A18. Review Criteria:** "Establish and maintain revenue sources to support the City's policies for urbanization and maintain needed public services and facilities."

**Finding:** These criteria are satisfied.

**Details of Finding:** Existing requirements for improvements and systems development charges apply to the development proposed concurrently with the Comprehensive Plan Map amendment.

### New Development and Concurrency

Implementation Measure 2.1.1.e.

**A19. Review Criteria:** "Allow new development to proceed concurrently with the availability of adequate public services and facilities as specified in Public Facilities and Services Section (Section C) of the Comprehensive Plan."

**Finding:** These criteria are satisfied.

**Details of Finding:** The City's concurrency requirements in the Development Code apply to the concurrently proposed development.

### Encourage Master Planning

Implementation Measure 2.1.1.f.2.

**A20. Review Criteria:** "To maximize design quality and conformity to the Comprehensive Plan, the City shall encourage master planning of large land areas. However, as an added growth management tool, the Development Review Board may, as a condition of approval, set an annual phasing schedule coordinated with scheduled Capital Improvements, particularly streets and related transportation facilities."

**Finding:** These criteria are satisfied.

**Details of Finding:** The subject properties are large enough, being greater than the 2 acre

threshold for planned development established in Section 4.140, to be designed consistent with the City's planned development regulations to support design quality and conformity with the Comprehensive Plan.

## Public Facilities and Services

### Urban Development Only Where Facilities and Services Can Be Provided

Implementation Measure 3.1.2.a.

**A21. Review Criterion:** "Urban development will be allowed only in areas where necessary facilities and services can be provided."

**Finding:** This criterion is satisfied.

**Details of Finding:** Application of the concurrency standards of the City's development code ensure the development proposed concurrently with this amendment request will have all necessary facilities and services provided. See Stage II Final Plan in Request D.

### Paying for Facilities and Services

Implementation Measures 3.1.3.a., 3.1.4.f., 3.1.5.c., 4.1.4.h.

**A22. Review Criteria:** "Developers will continue to be required to pay for demands placed on public facilities/services that are directly related to their developments. The City may establish and collect systems development charges (SDCs) for any or all public facilities/services, as allowed by law. An individual exception to this standard may be justified, or SDC credits given, when a proposed development is found to result in public benefits that warrant public investment to support the development." "The cost of all line extensions and individual services shall be the responsibility of the developer and/or property owners(s) seeking service. When a major line is to be extended, the City may authorize and administer formation of a Local Improvement District (LID). All line extensions shall conform to the City Sanitary Sewer Collection System Master Plan, urbanization policies, and Public Works Standards." "Extensions shall be made at the cost of the developer or landowner of the property being served." "Require new housing developments to pay an equitable share of the cost of required capital improvements for public services."

**Finding:** These criteria are satisfied.

**Details of Finding:** The City has all necessary codes and processes in place to ensure the development pays for public facilities/services directly related to the development.

### Growth and Sewer Capacity

Implementation Measure 3.1.4.b

**A23. Review Criterion:** "The City shall continue to manage growth consistent with the capacity of sanitary sewer facilities."

**Finding:** This criterion is satisfied.

**Details of Finding:** The City will not allow development without adequate sanitary sewer capacity. As reviewed in the Stage II Final Plan, adequate sanitary sewer capacity exists by connecting to the existing sewer in Canyon Creek Road South.

## Land Use and Development

### Variety of Housing Types

Implementation Measures 4.1.4.b, 4.1.4.j., and 4.1.4.o.

**A24. Review Criterion:** “Plan for and permit a variety of housing types consistent with the objectives and policies set forth under this section of the Comprehensive Plan, while maintaining a reasonable balance between the economics of building and the cost of supplying public services. It is the City’s desire to provide a variety of housing types needed to meet a wide range of personal preferences and income levels. The City also recognizes the fact that adequate public facilities and services must be available in order to build and maintain a decent, safe, and healthful living environment.” “The City shall have a diverse range of housing types available within its City limits.” “The City will encourage the development of housing of various types and densities. Guided by the urbanization, public facilities, and economic elements, the City will, however, manage residential growth to ensure adequate provision of public facilities and that proposed housing satisfies local need and desires, i.e., type, price and rent levels.”

**Finding:** This criterion is satisfied.

**Details of Finding:** Wilsonville has a rich diversity of housing types. Infill in other areas of the Bridle Trail Ranchettes involved single-family residential development of a similar density as proposed (including Renaissance at Canyon Creek and Cross Creek subdivisions). The proposal supports the area’s continued role as a single-family area amongst Wilsonville’s housing mix.

### Encouraging Variety

Implementation Measure 4.1.4.c

**A25. Review Criterion:** “encouraging variety through the use of planned developments and clusters.”

**Finding:** This criterion is satisfied.

**Details of Finding:** Being relatively small for a planned development, not a lot of variety would be expected within the development. However, a variety of lot sizes and widths are provided allowing diversity of housing products.

### Housing Balance

Implementation Measure 4.1.4.d

**A26. Review Criteria:** “Encourage the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms.”

**Finding:** These criteria are satisfied.

**Details of Finding:** On the basis of the Housing Data for the 2015 City of Wilsonville Housing Report of the City’s 10,283 housing units, 55% are multi-family and 45% are



single-family.

The proposal adds single-family to the housing mix having a minor impact on making single-family housing more balanced with multi-family. In addition, the development is proposed in a single-family area of the community where multi-family is not planned thus supporting the planned geographic distribution.

#### Housing Needs of Existing Residents

Implementation Measure 4.1.4.f.

**A27. Review Criteria:** “Accommodate the housing needs of the existing residents of the City of Wilsonville.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed housing will fit into the rich diversity of Wilsonville’s housing to allow existing residents to move up or move down, thus opening their units to others.

#### Housing Development and the Social and Economic Needs of the Community

Implementation Measure 4.1.4.g.

**A28. Review Criteria:** “Coordinate housing development with the social and economic needs of the community.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Wilsonville has a rich diversity of housing types, to which these additional single-family homes would contribute. The diversity of housing types supports the variety of needs of members of the community.

#### Jobs Housing Balance

Implementation Measures 4.1.4.l. and 4.1.4.p.

**A29. Review Criteria:** “The City shall work to improve the balance of jobs and housing within its jurisdictional boundaries.” “In an effort to balance residential growth with the City’s employment base, the City shall encourage the development of housing to meet the needs of the employees working in the City.”

**Finding:** These criteria are satisfied.

**Details of Finding:** It is anticipated the planned homes could be occupied by people working in Wilsonville. The location is close to employment centers including Town Center and the industrial area north of Boeckman between Canyon Creek and Parkway.

#### Residential Districts and Density

Implementation Measures 4.1.4.u. and 4.1.4.z.

**A30. Review Criteria:** “To provide variety and flexibility in site design and densities, residential lands shown on the Land Use Map of the Comprehensive Plan have been divided into districts, with different density ranges for each district. In all residential developments, other than those that are so small that it is not mathematically feasible to achieve the

prescribed minimum density, the 80% minimum shall apply. The following density ranges have been prescribed for each district:

Density: 0-1 units/acre  
2-3 units/acre  
4-5 units/acre  
6-7 units/acre  
10-12 units/acre  
18-20 units/acre”

“The City shall continue to apply a minimum density standard to all zones allowing residential use, such that all development, including subdivisions, will result in the eventual build-out of 80 percent or more of the maximum number of dwelling units per net acre permitted by the zoning designation for a given development. The minimum density requirement does not apply inside areas designated by the City as open spaces or significant resource sites. The maximum-zoned density does not include the density bonus for zones that allow them.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant requests the density to change from 0-1 dwelling units per acre to 4-5 dwelling units per acre in an area transitioning from rural residential to denser urban residential. Similar changes have occurred on other nearby properties including the areas currently occupied by Renaissance at Canyon Creek and Cross Creek subdivisions.

#### 2-3 or 4-5 Dwelling Unit Per Acre Residential District

“Residential Planning Districts” page D-19

**A31. Review Criteria:** “The purpose of this district is to provide for low density residential areas. The 2-3 du/acre density would generally fall under the PDR-2 zoning district category as outlined in the Development Code. The 4-5 du/acre density would generally fall under the PDR-2 and PDR-3 (or other categories that could work out to this level of density) zoning district category as outlined in the Development Code.

The following areas should be designated and developed at this density:

1. Areas with access to a minor arterial, collector, or local streets. However, direct vehicular access from individual lots onto a minor arterial will be restricted.
2. Undeveloped areas adjacent to existing lower density developments, or near the fringe of the Urban Growth Boundary.
3. Areas where sensitivity to the natural environment or natural hazards warrant a reduced density.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The 4-5 dwelling units designation is appropriate as adequate access to streets is available creating traffic volumes within the limits set by the City, it is adjacent to a variety of residential densities, including low density, and it is an appropriate density to allow development while preserving the natural slope and riparian areas of the properties.

## Metro Urban Growth Functional Plan

### Maintaining or Increasing Housing Capacity

Title 1 3.07.110

**A32. Review Criteria:** “Requiring each city and county to maintain or increase its housing capacity . . .”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposal will increase the City’s housing capacity within the current City limits.

## Statewide Planning Goals

### Citizen Involvement

Goal 1

**A33. Review Criteria:** “To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.”

**Finding:** These criteria are satisfied.

**Details of Finding:** A thorough citizen involvement process, as defined in Wilsonville’s Development Code and Comprehensive Plan, ensures citizen involvement in the decision.

### Land Use Planning

Goal 2

**A34. Review Criteria:** “To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The Comprehensive Plan Amendment is required to meet policies based on the statewide framework and is required to provide adequate facts to make a decision based on the applicable review criteria.

### Agriculture Lands

Goal 3

**A35. Review Criteria:** “To preserve and maintain agricultural lands.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The areas proposed for new housing development are not currently in commercial agriculture use. Increasing development within the City limits has the potential to slightly lessen the demand for housing on land currently in use for commercial agriculture.

Natural Resources, Scenic and Historic Areas, and Open Spaces  
Goal 5

**A36. Review Criteria:** “To protect natural resources and conserve scenic and historic and open spaces.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The City’s SROZ overlay standards are ensuring significant natural resources on the eastern portion of the subject properties are protected.

Air, Water and Land Resources Quality  
Goal 6

**A37. Review Criteria:** “To maintain and improve the quality of the air, water and land resources of the state.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The requirements to preserve the natural area as well as storm water requirements help maintain water quality. No significant negative impacts to air and land resources can reasonably be anticipated.

**ORDINANCE NO. 791**

**AN ORDINANCE OF THE CITY OF WILSONVILLE APPROVING A ZONE MAP AMENDMENT FROM THE RESIDENTIAL AGRICULTURE-HOLDING (RA-H) ZONE TO THE PLANNED DEVELOPMENT RESIDENTIAL-3 (PDR-3) ZONE ON APPROXIMATELY 4.37 ACRES LOCATED AT 28500 AND 28530 SW CANYON CREEK ROAD SOUTH- COMPRISING TAX LOTS 900 AND 1000 OF SECTION 13B, TOWNSHIP 3 SOUTH, RANGE 1 WEST, CLACKAMAS COUNTY, OREGON, BETH ANN BOECKMAN AND KAREN AND MARVIN LEWALLEN – OWNERS. SCOTT MILLER, SAMM-MILLER LLC – APPLICANT.**

**RECITALS**

WHEREAS, Beth Ann Boeckman and Karen and Marvin Lewallen (“Owners”) and Scott Miller of SAMM-MILLER LLC (“Applicant”) have made a development application requesting, among other things, a Zone Map Amendment of the Property; and

WHEREAS, the development application form has been signed by the Owners of the real property legally described and shown in Attachment 1, attached hereto and incorporated by reference herein (“Property”); and

WHEREAS, concurrently with the Zone Map Amendment the Applicant is requesting a change of the Comprehensive Plan Map designation to “Residential 4-5 dwelling units per acre”; and

WHEREAS, the City of Wilsonville desires to have the properties zoned consistent with the Comprehensive Plan Map designation of “Residential 4-5 dwelling units per acre”, upon approval the requested Comprehensive Plan Map designation; and

WHEREAS, the City of Wilsonville Planning Staff analyzed the Zone Map Amendment request and prepared a staff report for the Development Review Board, finding that the application met the requirements for a Zone Map Amendment and recommending approval of the Zone Map Amendment, which staff report was presented to the Development Review Board on March 28 and April 25, 2016;

WHEREAS, the Development Review Board Panel B held a public hearing on the application for a Zone Map Amendment on March 28 and April 25, 2016, and after taking public testimony and giving full consideration to the matter, adopted Resolution No. 324 which recommends that the City Council approve a request for a Zone Map Amendment (Case File DB15-0109) contingent on the concurrent Comprehensive Plan Map Amendment; and



WHEREAS, on May 16, 2016, the Wilsonville City Council held a public hearing regarding the above described matter, wherein the City Council considered the full public record made before the Development Review Board, including the Development Review Board and City Council staff reports; took public testimony; and, upon deliberation, concluded that the proposed Zone Map Amendment meets the applicable approval criteria under the City of Wilsonville Development Code;

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

Section 1. Findings. The City Council adopts, as findings and conclusions, the forgoing Recitals and Zone Map Amendment Findings in Attachment 2, as if fully set forth herein.

Section 2. Order. The official City of Wilsonville Zone Map is hereby amended by Zoning Order DB15-109, attached hereto as Attachments 1, from the Residential Agriculture-Holding (RA-H) Zone to Planned Development Residential-3 (PDR-3) Zone.

SUBMITTED to the Wilsonville City Council and read the first time at a meeting thereof on the 16<sup>th</sup> day of May 2016, and scheduled for the second and final reading on June 6, 2016, commencing at the hour of 7 p.m. at the Wilsonville City Hall, 29799 SW Town Center Loop East, Wilsonville, OR.

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

ENACTED by the City Council on the 6<sup>th</sup> day of June, 2016, by the following

votes: Yes:\_\_\_ No:\_\_\_

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

DATED and signed by the Mayor this \_\_\_\_ day of June, 2016.

\_\_\_\_\_  
TIM KNAPP, MAYOR

SUMMARY OF VOTES:

Mayor Knapp  
Councilor Starr  
Councilor Lehan  
Councilor Stevens  
Councilor Fitzgerald

Exhibits and Attachments:

- Attachment 1 – Zoning Order DB15-0109 including legal description and sketch depicting map amendment.
- Attachment 2 – Zone Map Amendment Findings, April 26, 2016.

**ORDINANCE NO. 791- ATTACHMENT 1**

**BEFORE THE CITY COUNCIL OF THE  
CITY OF WILSONVILLE, OREGON**

In the Matter of the Application of	)	
SAMM-MILLER, LLC	)	
for a Rezoning of Land and Amendment	)	<b>ZONING ORDER DB15-0109</b>
of the City of Wilsonville	)	
Zoning Map Incorporated in Section 4.102	)	
of the Wilsonville Code.	)	

The above-entitled matter is before the Council to consider the application of DB15-0109, for a Zone Map Amendment and an Order, amending the official Zoning Map as incorporated in Section 4.102 of the Wilsonville Code.

The Council finds that the subject property (“Property”), legally described and shown in the attached legal description and sketch, has heretofore appeared on the City of Wilsonville zoning map as Residential Agriculture-Holding (RA-H).

The Council having heard and considered all matters relevant to the application for a Zone Map Amendment, including the Development Review Board record and recommendation, finds that the application should be approved.

THEREFORE IT IS HEREBY ORDERED that The Property, consisting of approximately 4.37 acres at 28500 and 28530 SW Canyon Creek Road South. Comprising tax lots 900 and 1000 of Section 13B, T3S, R1W, Clackamas County, Oregon, as more particularly shown and described in the attached legal description and sketch, is hereby rezoned to Planned Development Residential-3 (PDR-3), subject to conditions detailed in this Order’s adopting Ordinance. The foregoing rezoning is hereby declared an amendment to the Wilsonville Zoning Map (Section 4.102 WC) and shall appear as such from and after entry of this Order.

Dated: June 6, 2016.

\_\_\_\_\_  
TIM KNAPP, MAYOR

APPROVED AS TO FORM:

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Barbara A. Jacobson, City Attorney

ATTEST:

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Sandra C. King, MMC, City Recorder

Attachment: Legal Description and Sketch Depicting Land/Territory to be Rezoned

# EMERIO *Design*

Civil Engineering  
Land Survey  
Land Use Planning  
Construction Management

ZONE CHANGE  
CANYON CREEK ROAD SOUTH

JOB NO. 500-015  
APRIL 27, 2016

EXHIBIT A (PAGE 1 OF 2)

LOTS 5 AND 6, "BRIDLE TRAIL RANCHETTS", AND OTHER LAND LOCATED IN THE N.W. 1/4 OF SECTION 13, TOWNSHIP 3 SOUTH, RANGE 1 WEST OF THE WILLAMETTE MERIDIAN, CITY OF WILSONVILLE, CLACKAMAS COUNTY, OREGON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 5, "BRIDLE TRAIL RANCHETTS", BEING ON THE EAST RIGHT OF WAY LINE OF CANYON CREEK ROAD SOUTH (50.0 FEET WIDE); THENCE ALONG THE NORTH LINE OF SAID LOT 5 AND ITS EASTERLY EXTENSION, NORTH 89°29'30" EAST, 652.49 FEET TO THE WEST LINE OF TRACT J, "WILSONVILLE MEADOWS NO. 5"; THENCE ALONG SAID WEST LINE AND THE WEST LINE OF TRACT M, "WILSONVILLE MEADOWS NO. 6", SOUTH 00°40'00" WEST, 292.04 FEET TO THE EASTERLY EXTENSION OF THE SOUTH LINE OF LOT 6, "BRIDLE TRAIL RANCHETTS"; THENCE ALONG SAID EASTERLY EXTENSION AND SOUTH LINE, SOUTH 89°29'30" WEST, 649.98 FEET TO THE SOUTHWEST CORNER OF SAID LOT 6 ON THE EAST RIGHT OF WAY LINE OF CANYON CREEK ROAD SOUTH; THENCE ALONG SAID EAST RIGHT OF WAY LINE, NORTH 00°10'30" EAST, 292.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 190,147 SQUARE FEET (4.37 ACRES), MORE OR LESS.

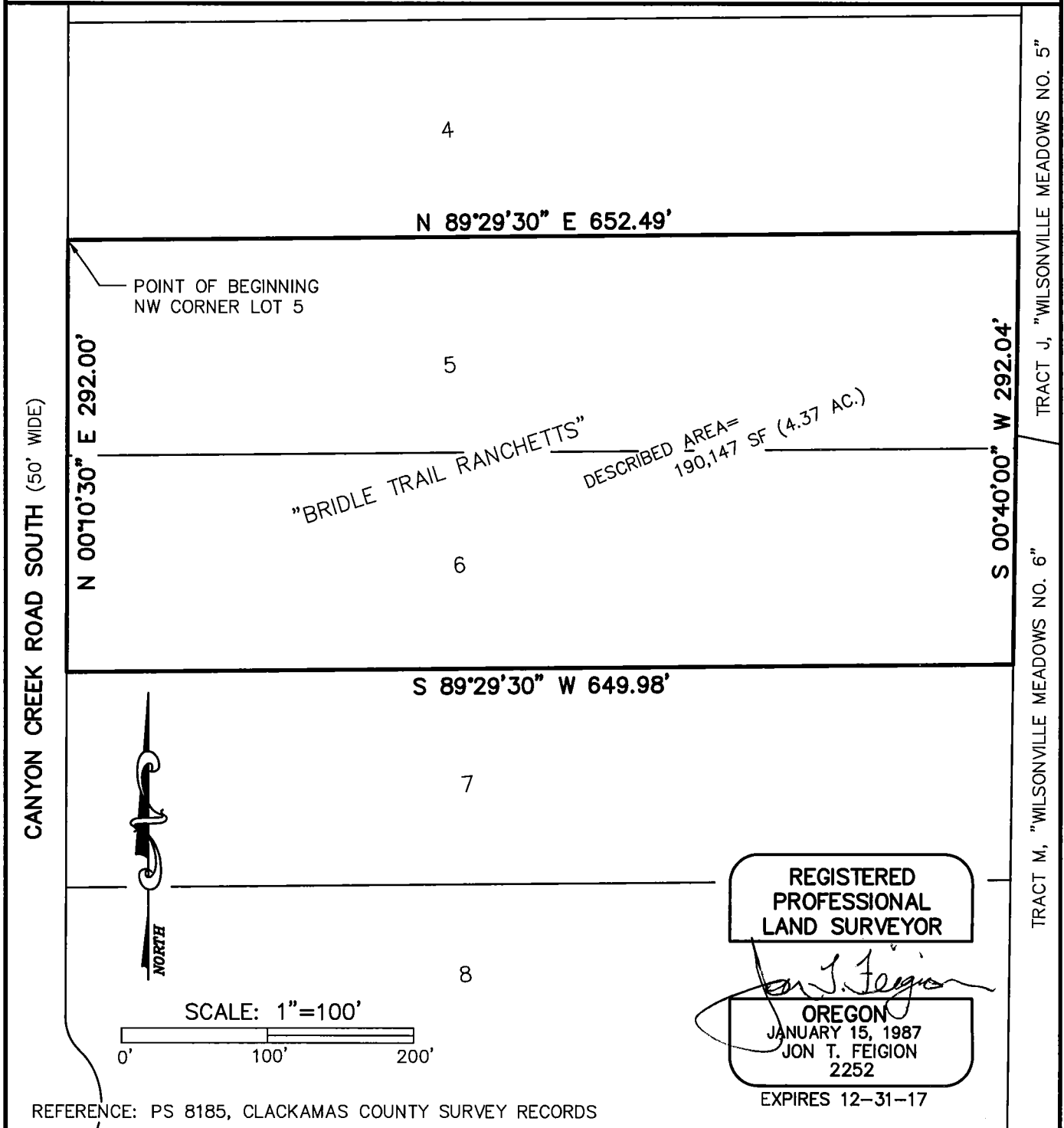


REFERENCE: PS 8185, CLACKAMAS COUNTY SURVEY RECORDS



EXHIBIT A (PAGE 2 OF 2)

LOTS 5 AND 6, "BRIDLE TRAIL RANCHETTS" AND  
OTHER LAND LOCATED IN THE  
N.W. 1/4 OF SEC. 13, T.3S., R.1W., W.M.  
CITY OF WILSONVILLE, CLACKAMAS COUNTY, OREGON



DRAWN BY: JTF	
JOB NO.: 500-015	ZONE CHANGE
SCALE: 1" = 100'	
DATE: 4-27-16	

**EMERIO**  
*Design*

8285 SW NIMBUS AVE, SUITE 180  
BEAVERTON, OREGON 97008  
TEL: (503) 746-8812  
FAX: (503) 639-9592  
www.emeriodesign.com

Ordinance No. 791  
Staff Report  
Wilsonville Planning Division

14-Lot Single-Family Subdivision at 28500 and 28530 SW Canyon Creek Rd. South  
Zone Map Amendment

City Council  
Quasi-Judicial Public Hearing

---

<b>Hearing Date:</b>	May 16, 2016
<b>Date of Report:</b>	April 26, 2016
<b>Application No.:</b>	DB15-0109 Zone Map Amendment

---

**Request:** The City is being asked to review a Quasi-judicial Zone Map Amendment for a 14-lot single-family subdivision.

**Location:** Approximately 4.37 acres at 28500 and 28530 SW Canyon Creek Road South. East side of SW Canyon Creek Road South at and just south of SW Daybreak Street. The property is specifically known as Tax Lots 900 and 1000, Section 13B, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon

**Owners:** Beth Ann Boeckman (28500 SW Canyon Creek Rd. S.)  
Karen and Marvin Lewallen (28530 SW Canyon Creek Rd. S.)

**Applicant:** Scott Miller, Samm-Miller LLC

**Applicant's Representative:** AnneMarie Skinner, Emerio Design

**Comprehensive Plan Designation (Current):** Residential 0-1 dwelling units per acre

**Comprehensive Plan Designation (Proposed with Ord. 790):** Residential 4-5 dwelling units per acre

**Zone Map Designation (Current):** Residential Agriculture-Holding (RA-H)

**Zone Map Designation (Proposed):** Planned Development Residential-3 (PDR-3)

**Staff Reviewer:** Daniel Pauly AICP, Associate Planner

**Staff Recommendation:** Approve the requested Zone Map Amendment contingent on approval of the concurrent Comprehensive Plan Map Amendment (Ordinance No. 790).

**Applicable Review Criteria:**

<b><u>Development Code:</u></b>	
Section 4.008	Application Procedures-In General
Section 4.009	Who May Initiate Application
Section 4.010	How to Apply
Section 4.011	How Applications are Processed
Section 4.014	Burden of Proof
Section 4.031	Authority of the Development Review Board
Subsection 4.035 (.04)	Site Development Permit Application
Subsection 4.035 (.05)	Complete Submittal Requirement
Section 4.110	Zones
Section 4.113	Standards Applying to Residential Development in Any Zone
Section 4.118	Standards Applying to Planned Development Zones
Section 4.124	Standards Applying to All Planned Development Residential Zones
Section 4.124.3	PDR-3 Zone
Sections 4.139.00 through 4.139.11	Significant Resource Overlay Zone (SROZ)
Section 4.197	Zone Changes and Amendments to the Development Code
<b><u>Other Documents:</u></b>	
Comprehensive Plan	
Oregon Statewide Planning Goals	

**Vicinity Map**



**Background/Summary:**

Zone Map Amendment (DB15-0109)

Contingent on approval of the Comprehensive Plan Map Amendment for an increased density of 4-5 dwelling units per acre, the subject properties would receive a corresponding PDR zoning of PDR-3. This is the same zoning as other portions of Bridle Trail Ranchettes where an increased density to 4-5 dwelling units per acre has been approved.

**Conclusion:**

Staff and the DRB have reviewed the application and facts regarding the request and recommend the City Council approve the Zone Map Amendment (DB15-0109) contingent on approval of the concurrent request for a Comprehensive Plan Map Amendment.

**Findings of Fact:**

1. The statutory 120-day time limit applies to this application. The application was received on December 23, 2015. On January 21, 2016 staff conducted a completeness review within the statutorily allowed 30-day review period and found the application to be incomplete. On February 1, 2016, the Applicant submitted new materials. On February 17, 2016 the application was deemed complete. The City must render a final decision for the request, including any appeals, by June 16, 2016.

2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North:	RA-H	Single-family Residential
East:	PDR-4	Single-family Residential
South:	RA-H	Single-family Residential
West:	PDR-3	Single-family Residential

3. Previous Planning Approvals:

Current subdivision (Bridle Trail Ranchettes) approved prior to City incorporation.

4. The applicant has complied with Sections 4.013-4.031 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.



## Conclusionary Findings:

NOTE: Pursuant to Section 4.014 the burden of proving the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case.

### General Information

#### Application Procedures-In General Section 4.008

**Review Criteria:** This section lists general application procedures applicable to a number of types of land use applications and also lists unique features of Wilsonville's development review process.

**Finding:** These criteria are met.

**Details of Finding:** Processing of the application follows the applicable general procedures of this Section.

#### Initiating Application Section 4.009

**Review Criterion:** "Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring the property, or by an agent who has been authorized by the owner, in writing, to apply."

**Finding:** This criterion is satisfied.

**Details of Finding:** Applications have been signed by property owners of both properties involved.

#### Pre-Application Conference Subsection 4.010 (.02)

**Review Criteria:** This section lists the pre-application process

**Finding:** These criteria are satisfied.

**Details of Finding:** A Pre-application conferences was held on April 23, 2015 (PA15-0008) in accordance with this subsection.

#### Lien Payment before Approval Subsection 4.011 (.02) B.

**Review Criterion:** "City Council Resolution No. 796 precludes the approval of any development application without the prior payment of all applicable City liens for the subject property. Applicants shall be encouraged to contact the City Finance Department to verify that there are no outstanding liens. If the Planning Director is advised of outstanding liens while an application is under consideration, the Director shall advise the applicant that payments must be made current or the existence of liens will necessitate denial of the application."

**Finding:** This criterion is satisfied.

**Details of Finding:** No applicable liens exist for the subject property. The application can thus move forward.

General Submission Requirements  
Subsection 4.035 (.04) A.

**Review Criteria:** “An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code.” Listed 1. through 6. j.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has provided all of the applicable general submission requirements contained in this subsection.

Zoning-Generally  
Section 4.110

**Review Criteria:** “The use of any building or premises or the construction of any development shall be in conformity with the regulations set forth in this Code for each Zoning District in which it is located, except as provided in Sections 4.189 through 4.192.” “The General Regulations listed in Sections 4.150 through 4.199 shall apply to all zones unless the text indicates otherwise.”

**Finding:** These criteria are satisfied.

**Details of Finding:** This proposed development is in conformity with the applicable zoning district and general development regulations listed in Sections 4.150 through 4.199 have been applied in accordance with this Section.

**DB15-0109 Zone Map Amendment**

**Comprehensive Plan**

Diversity of Housing Types  
Implementation Measure 4.1.4.b.,d.

**B1. Review Criteria:** “Plan for and permit a variety of housing types consistent with the objectives and policies set forth under this section of the Comprehensive Plan, while maintaining a reasonable balance between the economics of building and the cost of supplying public services. It is the City's desire to provide a variety of housing types needed to meet a wide range of personal preferences and income levels. The City also recognizes the fact that adequate public facilities and services must be available in order to build and maintain a decent, safe, and healthful living environment.” “Encourage the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** On the basis of the housing data used in the 2015 City of Wilsonville Housing Report of the City's 10,283 housing units, 55% are multi-family and 45% are single-family. Currently hundreds of new single-family home lots have been approved, mainly in Villebois, to be developed over the next few years. Only a few smaller multi-family developments are approved or under construction. In addition, the Frog Pond west planning area is planned exclusively for single-family homes as it begins to develop in the coming years. The proposal will provide additional single-family options outside of Villebois within the existing City limits supporting a trend of increasing the number of single-family homes in relation to multi-family homes.

## **Development Code**

Zoning Consistent with Comprehensive Plan  
Section 4.029

- B2. Review Criterion:** "If a development, other than a short-term temporary use, is proposed on a parcel or lot which is not zoned in accordance with the Comprehensive Plan, the applicant must receive approval of a zone change prior to, or concurrently with the approval of an application for a Planned Development."

**Finding:** This criterion is met or will be satisfied.

**Explanation of Finding:** The applicant is applying for a comprehensive plan map amendment and a zone change concurrently with a Stage I Master Plan, Stage II Final Plan, and other related development approvals. The proposed zoning is consistent with the proposed comprehensive plan residential density of 4-5 dwelling units per acre. The approval of the zone map amendment is contingent on City approval of the related comprehensive plan map amendment.

Base Zones  
Subsection 4.110 (.01)

- B3. Review Criterion:** This subsection identifies the base zones established for the City, including the Village Zone.

**Finding:** This criterion is satisfied.

**Explanation of Finding:** The requested zoning designation of Planned Development Residential-3 "PDR-3" is among the base zones identified.

## **Standards for All Planned Development Residential Zones**

Typically Permitted Uses  
Subsection 4.124 (.01)

- B4. Review Criteria:** This subsection list the allowed uses in the PDR Zones.

**Finding:** These criteria are satisfied.

**Details of Finding:** The list of typically permitted uses includes single-family dwelling units, open space, and parks, covering all proposed uses on the subject properties.

Appropriate PDR Zone  
 Subsection 4.124 (.05)

**B5. Review Criteria:**

Comprehensive Plan Density	Zoning District
0-1 u/acre	PDR-1
2-3 u/acre	PDR-2
4-5 u/acre	PDR-3
6-7 u/acre	PDR-4
10-12 u/acre	PDR-5
16-20 u/acre	PDR-6
20 + u/acre	PDR-7

**Finding:** These criteria are satisfied.

**Details of Finding:** PDR-3 is the appropriate PDR designation based on the Comprehensive Plan density designation, as proposed, of 4-5 dwelling units per acre.

Zone Change Procedures  
 Subsection 4.197 (.02) A.

**B6. Review Criteria:** “That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125(.18)(B)(2), or, in the case of a Planned Development, Section 4.140;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The applicant submitted the request for a zone map amendment as set forth in the applicable code sections.

Conformance with Comprehensive Plan Map, etc.  
 Subsection 4.197 (.02) B.

**B7. Review Criteria:** “That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed zone map amendment is consistent with the proposed (see Request A) Comprehensive Map designation of Residential 4-5 dwelling units per acre. As shown in Request A and Finding B1 the request complies with applicable Comprehensive Plan text.

Residential Designated Lands  
 Subsection 4.197 (.02) C.

**B8. Review Criteria:** “In the event that the subject property, or any portion thereof, is designated as “Residential” on the City’s Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measure 4.1.4.b, d, e, q, and x of Wilsonville’s Comprehensive Plan text;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Findings B1 under this request and A24-A30 under Request A provide the required specific findings.

#### Public Facility Concurrency

Subsection 4.197 (.02) D.

- B9. Review Criteria:** “That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The applicant’s Exhibits B1 and B2 (compliance report and the plan sheets) demonstrate the existing primary public facilities are available or can be provided in conjunction with the project.

#### Impact on SROZ Areas

Subsection 4.197 (.02) E.

- B10. Review Criteria:** “That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/ or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed design of the development preserves and protects the SROZ area on the properties.

#### Development within 2 Years

Subsection 4.197 (.02) F.

- B11. Review Criterion:** “That the applicant is committed to a development schedule demonstrating that the development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** Related land use approvals will expire after 2 years, so requesting the land use approvals assumes development would commence within two (2) years. However, in the scenario where the applicant or their successors do not commence development within two (2) years allowing related land use approvals to expire, the zone change shall remain in effect.



Development Standards and Conditions of Approval  
Subsection 4.197 (.02) G.

**B12. Review Criteria:** “That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached to insure that the project development substantially conforms to the applicable development standards.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** As can be found in the findings for the accompanying requests, the applicable development standards will be met either as proposed or as a condition of approval.

DEVELOPMENT REVIEW BOARD  
RESOLUTION NO. 324

A RESOLUTION ADOPTING FINDINGS RECOMMENDING APPROVAL TO CITY COUNCIL OF A COMPREHENSIVE PLAN MAP AMENDMENT FROM RESIDENTIAL 0-1 DWELLING UNITS PER ACRE TO RESIDENTIAL 4-5 DWELLING UNITS PER ACRE, A ZONE MAP AMENDMENT FROM RESIDENTIAL AGRICULTURE-HOLDING (RA-H) TO PLANNED DEVELOPMENT RESIDENTIAL 3 (PDR-3) AND ADOPTING FINDINGS AND CONDITIONS APPROVING A STAGE I MASTER PLAN, STAGE II FINAL PLAN, SITE DESIGN REVIEW, TYPE C TREE PLAN, WAIVER AND TENTATIVE SUBDIVISION PLAT FOR A 14-LOT SINGLE-FAMILY SUBDIVISION LOCATED AT 28500 AND 28530 SW CANYON CREEK ROAD SOUTH. THE SUBJECT SITE IS LOCATED ON TAX LOTS 900 AND 1000 OF SECTION 13B, TOWNSHIP 3 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, CITY OF WILSONVILLE, CLACKAMAS COUNTY, OREGON. BETH ANN BOECKMAN AND KAREN AND MARVIN LEWALLEN – OWNERS. SCOTT MILLER, SAMM-MILLER LLC – APPLICANT.

WHEREAS, an application, together with planning exhibits for the above-captioned development, has been submitted in accordance with the procedures set forth in Section 4.008 of the Wilsonville Code, and

WHEREAS, the Planning Staff has prepared staff report on the above-captioned subject dated April 18, 2016, and

WHEREAS, said planning exhibits and staff report were duly considered by the Development Review Board Panel B at a scheduled meeting conducted on April 25, 2016, at which time exhibits, together with findings and public testimony were entered into the public record, and

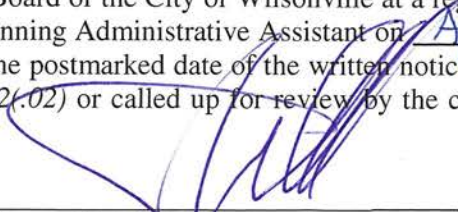
WHEREAS, the Development Review Board considered the subject and the recommendations contained in the staff report, and

WHEREAS, interested parties, if any, have had an opportunity to be heard on the subject.

NOW, THEREFORE, BE IT RESOLVED that the Development Review Board of the City of Wilsonville does hereby adopt the staff report dated April 18, 2016, attached hereto as Exhibit A1, with findings and recommendations contained therein, and authorizes the Planning Director to issue permits consistent with said recommendations, subject to City Council approval of the Comprehensive Plan Map Amendment and Zone Map Amendment Requests (DB15-0108 and DB15-0109) for:

DB15-0110 through DB15-0115, Stage I Preliminary Plan, Stage II Final Plan, Site Design Review, Type C Tree Plan, Waiver, and Tentative Subdivision Plat for a 14-lot residential subdivision, and associated parks and open space and other improvements.

ADOPTED by the Development Review Board of the City of Wilsonville at a regular meeting thereof this 25<sup>th</sup> day of April, 2016 and filed with the Planning Administrative Assistant on April 26, 2016. This resolution is final on the 15th calendar day after the postmarked date of the written notice of decision per WC Sec 4.022(.09) unless appealed per WC Sec 4.022(.02) or called up for review by the council in accordance with WC Sec 4.022(.03).

  
\_\_\_\_\_  
Shawn O'Neil, Chair, Panel B  
Wilsonville Development Review Board

Attest:  
  
\_\_\_\_\_  
Shelley White, Planning Administrative Assistant

Exhibit A1  
Staff Report  
Wilsonville Planning Division  
14-Lot Single-Family Subdivision at 28500 and 28530 SW Canyon Creek Rd. South  
Development Review Board Panel 'B'  
Quasi-Judicial Public Hearing

Deleted Language ~~struck through~~  
Added Language ***bold underline italics***

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<b>1<sup>st</sup> Hearing Date:</b>	March 28, 2016
<b>Continued Hearing Date:</b>	April 25, 2016
<b>Date of Original Report:</b>	March 21, 2016
<b>Date of Revised Report:</b>	April 18, 2016
<b>Amended and Adopted:</b>	April 25, 2016

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<b>Application Nos.:</b>	DB15-0108 Comprehensive Plan Map Amendment DB15-0109 Zone Map Amendment DB15-0110 Stage I Preliminary Plan DB15-0111 Stage II Final Plan DB15-0112 Site Design Review DB15-0113 Type C Tree Plan DB15-0114 Waiver to Average Lot Size DB15-0115 Tentative Subdivision Plat
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**Request:** The request before the Development Review Board is review of a Quasi-judicial Comprehensive Plan Map Amendment, Quasi-judicial Zone Map Amendment, Class 3 Stage I Master Plan, Stage II Final Plan, Site Design Review, Type C Tree Plan, Waiver to Average Lot Size, and Tentative Subdivision Plat for the development of a 14-lot single-family subdivision.

**Location:** 28500 and 28530 SW Canyon Creek Road South. East side of SW Canyon Creek Road South at and just south of SW Daybreak Street. The property is specifically known as Tax Lots 900 and 1000, Section 13B, Township 3 South, Range 1 West, Willamette Meridian, City of Wilsonville, Clackamas County, Oregon

**Owners:** Beth Ann Boeckman (28500 SW Canyon Creek Rd. S.)  
Karen and Marvin Lewallen (28530 SW Canyon Creek Rd. S.)

**Applicant:** Scott Miller, Samm-Miller LLC

**Applicant's Representative:** AnneMarie Skinner, Emerio Design

**Comprehensive Plan Designation (Current):** Residential 0-1 dwelling units per acre  
**Comprehensive Plan Designation (Proposed):** Residential 4-5 dwelling units per acre

**Zone Map Classification (Current):** RA-H (Residential Agriculture-Holding)

**Zone Map Classification (Proposed):** PDR-3 (Planned Development Residential-3)

**Staff Reviewers:** Daniel Pauly AICP, Associate Planner  
 Steve Adams PE, Development Engineering Manager  
 Kerry Rappold, Natural Resources Program Manager

**Staff Recommendation:** Approve with conditions the requested Stage I Master Plan, Stage II Final Plan, Site Design Review request, Type C Tree Plan, Waiver to Average Lot Size, and Tentative Subdivision Plat contingent on City Council approval of the Comprehensive Plan Map Amendment and Zone Map Amendment. Recommend approval to the City Council of the Comprehensive Plan Map Amendment and Zone Map Amendment.

**Applicable Review Criteria:**

<u>Development Code:</u>	
Section 4.008	Application Procedures-In General
Section 4.009	Who May Initiate Application
Section 4.010	How to Apply
Section 4.011	How Applications are Processed
Section 4.014	Burden of Proof
Section 4.031	Authority of the Development Review Board
Subsection 4.035 (.04)	Site Development Permit Application
Subsection 4.035 (.05)	Complete Submittal Requirement
Section 4.110	Zones
Section 4.113	Standards Applying to Residential Development in Any Zone
Section 4.118	Standards Applying to Planned Development Zones
Section 4.124	Standards Applying to All Planned Development Residential Zones
Section 4.124.3	PDR-3 Zone
Sections 4.139.00 through 4.139.11	Significant Resource Overlay Zone (SROZ)
Section 4.140	Planned Development Regulations
Section 4.154	On-site Pedestrian Access and Circulation
Section 4.155	Parking, Loading, and Bicycle Parking
Section 4.167	Access, Ingress, and Egress
Section 4.171	Protection of Natural Features and Other Resources
Section 4.175	Public Safety and Crime Prevention
Section 4.176	Landscaping, Screening, and Buffering
Section 4.177	Street Improvement Standards
Section 4.197	Zone Changes and Amendments to the Development Code

Section 4.198	Comprehensive Plan Changes
Sections 4.200 through 4.220	Land Divisions
Sections 4.236 through 4.270	
Sections 4.300 through 4.320	Underground Utilities
Sections 4.400 through 4.440 as applicable	Site Design Review
Sections 4.600-4.640.20	Tree Preservation and Protection
<b>Other Documents:</b>	
Comprehensive Plan	
Oregon Statewide Planning Goals	

**Vicinity Map**



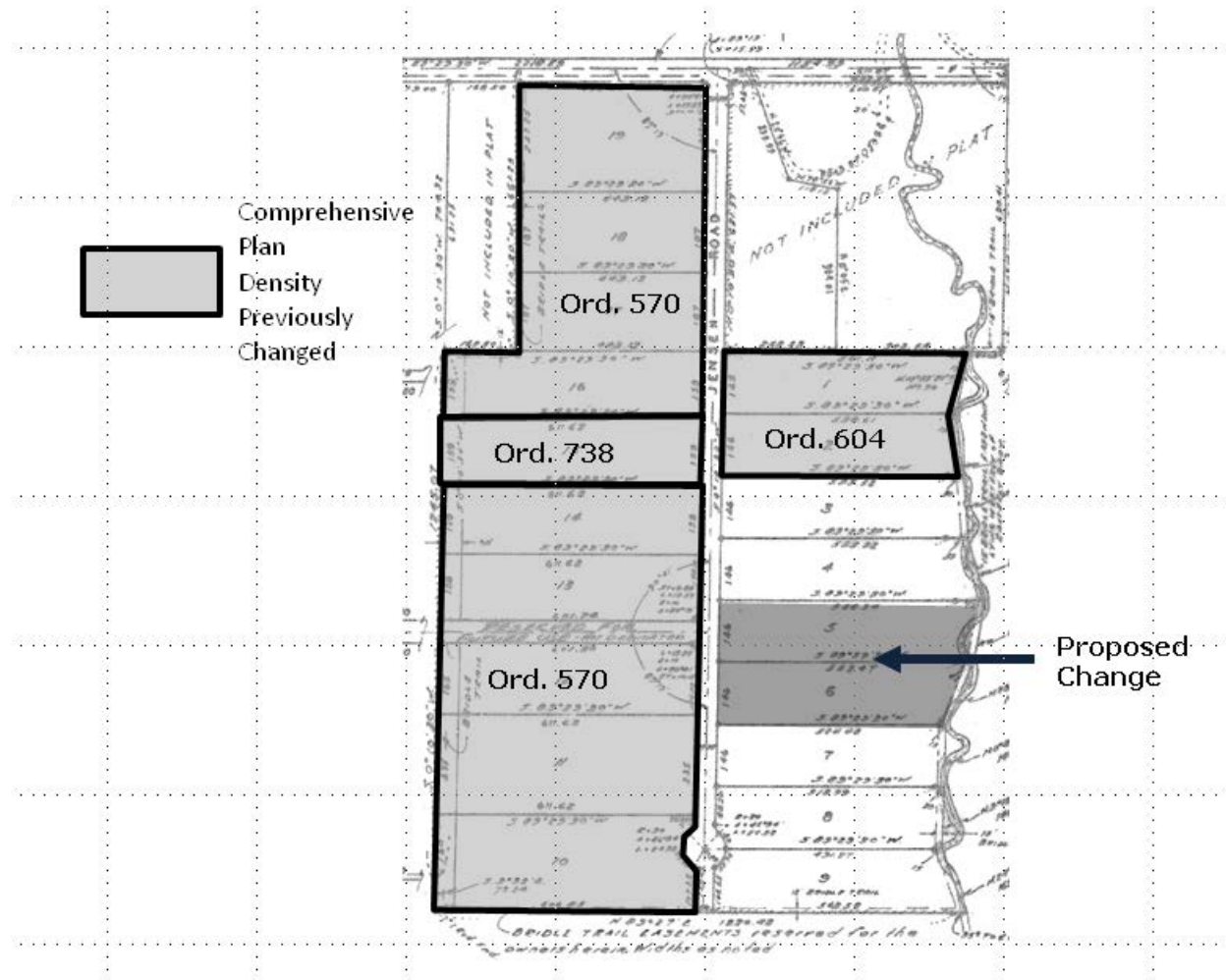


**Background/Summary:**

Comprehensive Plan Map Amendment (DB15-0108)

For areas of the City designated as residential on the Comprehensive Plan Map, planned densities are also indicated in dwelling units per acre. The applicant requests a change of the planned residential density of the subject properties from 0-1 dwelling units per acre to 4-5 dwelling units per acre.

The subject properties are part of the 1964 Bridle Trail Ranchettes subdivision where each lot was approximately 2 acres. When the current Comprehensive Plan Map was adopted the density for this area reflected the existing subdivision. Beginning in the mid 2000's, many of the Bridle Trail Ranchette lots were approved for Comprehensive Plan Map amendments to increase the density from 0-1 to 4-5 dwelling units an acre. Currently 12 of the original 19 Bridle Trail Ranchette lots have been approved by the City for increased density.



The first and largest approved change in this area from 0-1 to 4-5 dwelling units was in 2004 with the adoption of Ordinance No. 570 for Renaissance at Canyon Creek. The supporting staff report discussed the need of additional single-family homes to provide housing for people working in Wilsonville as well as others desiring to live here. In addition, the findings point out the limited amount of vacant residential land within the City, and that the subject area is surrounded by residential designations for higher density.

In early 2006, Ordinance No. 604 similarly changed the comprehensive plan designation for approximately 4 acres on the east side of Canyon Creek Road South from 0-1 to 4-5 dwelling units an acre for the development of the 13-lot Cross Creek Subdivision. The same findings regarding the need of additional housing units, the limited amount of vacant land within the City, and the density of surrounding areas were made.

More recently, Ordinance No. 738 approved the same density change in 2014 for a property whose owners had elected not to participate in the 2004 project and now desired to redevelop.

The owners of the subject properties and their development partner now desire for a similar change of density for the subject property for similar reasons as the other lots redeveloped in Bridle Trail Ranchettes.

#### Zone Map Amendment (DB15-0109)

Contingent on approval of the Comprehensive Plan Map Amendment for an increased density of 4-5 dwelling units per acre, the subject properties would receive a corresponding PDR zoning of PDR-3. This is the same zoning as other portions of Bridle Trail Ranchettes where an increased density to 4-5 dwelling units per acre has been approved.

#### Stage I Master Plan (DB15-0110)

The Stage I Master Plan generally establishes the location of housing, streets, and parks and open space on the properties, reviewed in more detail with the Stage II Final Plan. The planned uses of single-family residential and parks and open space are allowed in the PDR-3 zone.

#### Stage II Final Plan (DB15-0111)

##### Traffic

While residents often understandably desire a minimum amount of traffic on streets adjacent to and near their homes, minimizing traffic on every residential street is not a sustainable standard. Rather streets are designed for a certain traffic volume and the City has a Level of Service capacity standard to ensure traffic volumes from development do not exceed street and intersection capacity. The DKS Traffic Memorandum, see Exhibit A4, confirms the streets and nearby intersections continue to exceed the City's capacity standards with the proposed development. In addition, the City maintains a number of other standards including sidewalks

to separate pedestrian and vehicle traffic, crosswalk, and signage standards, among others, to support pedestrian safety on local residential and all levels of City streets.

#### Utilities and Services

All utility and services are readily available to support the denser development at this location.

#### Parks and Open Space

The City requires 25% of residential development be open space. With the preserved SROZ area, much more than 25% of the site is open space. In addition, the City requires  $\frac{1}{4}$  acre of “usable open space” in addition to the SROZ area. With the park area between Lots 3 and 4 an amount in excess of  $\frac{1}{4}$  acre is provided as usable open space.

#### Setbacks and Lot Coverage

The applicant provides lots on which the setbacks and lot coverage for the PDR-3 zone can be met.

#### Density and Density Transfer

Of the 4.37-acre development site, 2.04 acres are within the Significant Resource Overlay Zone (SROZ), leaving 2.33 acres outside the SROZ. The minimum density for the non-SROZ area is 9 units, and the maximum 11 units. In addition Section 4.139.11 states “for residential development proposals on lands which contain the SROZ, a transfer of density shall be permitted within the development proposal site.” The Section also lays out the formula for the density transfer as 50% of the maximum density allowed for the SROZ area under the Comprehensive Plan. The maximum Comprehensive Plan density, as proposed, is 5 units per acre. For 2.04 acres 50% of the maximum allowed density is 5 units. The applicant is proposing the minimum density for the non-SROZ area (9 units) plus the permitted density transfer (5 units) for a total of 14 units.

#### Lot Size and Shape

The site has 2.33 acres to accommodate the 14 lots plus other improvements, including a street, private drive, and usable open space. In addition, the applicant proposes 0.11 acres of SROZ be included as non-buildable portions of private lots. As shown in the table below, 1.75 acres, or 76,230 square feet, of the site is available for private lots. That area, if divided equally, would allow 5,445 square feet per each lot. The lot sizes range from 5,000 to 6,258 square feet to accommodate block size and shape. All lots meet the minimum width and depth requirements of the PDR-3 zone (40 foot width and 60 foot depth).

Description	Acres
Non-SROZ Area	2.33
-Streets and Private Drives	-0.48
-Tract B Usable Open Space	-0.21
=Remaining Non-SROZ Area for Private Lots	=1.64
+SROZ included as non-buildable portions of private lots	+0.11
=Total Area for Private Lots	=1.75

Significant Resource Overlay Zone (SROZ) Impacts

The only proposed impact to the SROZ area of the properties is a soft surface pedestrian trail to provide access to the area. The SROZ area will be fenced off and monitored during construction of the subdivision to protection from construction impacts.

Pedestrian Access and Circulation

The applicant’s plans show sidewalks extending along the public streets and private drive and a path is provided for access into the park and natural area. The design ensures pedestrian connectivity to the front of all homes.

Parking

The applicant plans driveways of sufficient size on each lot to satisfy the minimum parking requirement. Thus public streets or garages are not needed to meet minimum parking requirements.

Street and Access Improvements

Street and access improvements are proposed consistent with the City’s Transportation Systems Plan and Public Works Standards and other applicable standards, with one deviation, which has been determined acceptable by the City pursuant to 201.1.03 of the Public Works Standards which allows alternative designs. See Exhibit C2. The deviation is having spacing, 94.3 feet, between Daybreak Street and the new public street rather than the 100 foot or greater standard.

Site Design Review (DB15-0111)

The scope of Site Design Review is the public landscaped areas, including the landscaping in the planter strips between the sidewalk and street as well as the park area. All landscaping and fixtures are appropriate for the site, of an acceptable quality, and professionally designed enhancing the appeal of the subdivision.

Type C Tree Plan (DB15-0113)

While the development plans preserve the large forested area in the eastern portion of the properties, the plans include removal of a number of trees in the portion of site proposed for

development. Staff has worked closely with the applicant to preserve trees where practicable, but in the end 33 trees need to be removed due to tree condition and construction impacts. More than 33 trees will be planted for mitigation.

#### Waiver to Average Lot Size (DB15-0114)

A request to waive the average lot size is directly related to the number of lots and the permitted density. The relatively low number of lots within the allowed size range of the PDR-3 zone will drive down the average lot size below the 7,000 square foot standard to meet the permitted density. Renaissance at Canyon Creek and Cross Creek subdivisions also do not maintain an average lot size of 7,000 square feet.

#### Tentative Subdivision Plat (DB15-0115)

The tentative subdivision plat shows all the necessary information consistent with the Stage II Final Plan for dividing the properties in a manner to allow the proposed development.

### **Discussion Points:**

#### Public Comments and Applicant's Response

A number of comments from nearby residents have been received. Concerns include: traffic and street safety, spacing between proposed homes, proximity of homes to the existing home to the north of the project, too much density, size of lots, loss of open space, value of larger lots, because of small lot size homes will not be similar to other "housing in the community", narrowness of lots will lead to the garage dominating most of the house frontage, and the need of additional ingress and egress from the area. The applicant has worked with land use attorney Kelly Hossaini to provide specific responses to each of these concerns. Ms. Hossaini's letter providing the responses is Exhibit B5.

#### Redevelopment of Bridle Trail Ranchettes

The 1964 Bridle Trail Ranchettes Subdivision created 19 lots, many of which were approximately 2 acres in size. In the most recent adoption of the Comprehensive Plan map the entire subdivision was designated Residential 0-1 dwelling units per acre, and had a Zone Map designation of RA-H. Subsequently 9 of the 19 have been changed to 4-5 dwelling units per acre and rezoned as PDR-3. The current request continues the trend reflecting the continued infill with urban single-family densities of this area.

#### Republic Services Waste Collection and Turn Around

Republic Services is unable to service Lots 2 through 4. The trucks will come down the public street and turn around using the private drive. All collection bins will need to be placed along the street where the collection vehicles can reach them by coming down the street and turning around using the private drive.



**Conclusion and Conditions of Approval:**

Staff has reviewed the applicant’s analysis of compliance with the applicable criteria. The Staff report adopts the applicant’s responses as Findings of Fact except as noted in the staff’s Findings. Based on the Findings of Fact and information included in this Staff Report, and information received from a duly advertised public hearing, Staff recommends the Development Review Board approve the proposed applications (DB15-0110 through DB15-0115) and recommend approval of the comprehensive plan map amendment and zone map amendment (DB15-0008 and DB15-0009) with the following conditions:

**Planning Division Conditions:**

Request A: DB15-0108 Comprehensive Plan Map Amendment

No conditions for this request
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Request B: DB15-0109 Zone Map Amendment

The approval of the Zone Map Amendment (DB15-0109) is contingent on City Council Approval of the Comprehensive Plan Map Amendment (DB15-0108).
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Request C: DB15-0110 Stage I Preliminary Plan

The approval of the Stage I Preliminary Plan (DB15-0110) is contingent on the City Council Approval of the Zone Map Amendment (DB15-0109), which is contingent on City Council Approval of the Comprehensive Plan Map Amendment (DB15-0108).
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Request D: DB15-0111 Stage II Final Plan

<b>PDD 1.</b> The approval of the Stage II Final Plan (DB15-0111) is contingent on the City Council Approval of the Zone Map Amendment (DB15-0109), which is contingent on City Council Approval of the Comprehensive Plan Map Amendment (DB15-0108).
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<b>PDD 2.</b> The approved final plan and stage development schedule shall control the issuance of all building permits and shall restrict the nature, location and design of all uses. Minor changes in an approved preliminary or Stage II Final Plan may be approved by the Planning Director through the Class I Administrative Review Process if such changes are consistent with the purposes and general character of the development plan. All other modifications, including extension or revision of the stage development schedule, shall be processed in the same manner as the original application and shall be subject to the same procedural requirements. See Finding D15.
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<b>PDD 3.</b> Prior to the recording of the final plat of the subdivision the applicant shall submit for review and approval by the City Attorney CC&R’s, bylaws, etc. related to the maintenance of the open space and park area. Such documents shall assure the long-term protection and maintenance of the open space and park areas. See Finding D30.
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<b>PDD 4.</b> The applicant shall install sidewalks meeting the design standards of curb-tight
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	sidewalks in the City's Public Works Standards at least 5 foot in width along the frontage of the private drive to provide pedestrian access to the private walkways to the front entrance of homes. The sidewalk(s) shall extend past the entire width of the furthest pedestrian access to the front entrance of a home. Such sidewalks may be in the same tract as the private drive or easements over private lots. Such sidewalks shall be shown on subsequent construction drawings, including the public works permit and site plans for the individual lots affected. See Finding D71.
<b>PDD 5.</b>	At least one street tree, of a species and variety approved by the City through a Class I Administrative Review process, shall be installed on each lot fronting the private drive along the sidewalk. The street trees shall be installed prior to occupancy of each home. The street trees shall be in a street tree easement granted to the City assuring long term preservation and maintenance of the tree as a street tree. See Finding D100.
<b>PDD 6.</b>	A waiver of remonstrance against the formation of a local improvement district shall be recorded covering the subject properties. Such waiver shall be recorded in the County Recorder's Office, as well as the City's Lien Docket, prior to or as part of the recordation of the final plat for the subdivision. See Finding D115.
<b>PDD 7.</b>	All travel lanes shall be constructed to be capable of carrying a twenty-three (23) ton load. See Finding D126.
<b>PDD 8.</b>	Temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets. See Finding D133.

Request E: DB15-0112 Site Design Review

<b>PDE 1.</b>	The approval of the Site Design Review request (DB15-0112) is contingent on the City Council of Approval of the Zone Map Amendment (DB15-0109), which is contingent on City Council Approval of the Comprehensive Plan Map Amendment (DB15-0108).
<b>PDE 2.</b>	Construction, site development, and landscaping shall be carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents. Minor revisions may be approved by the Planning Director through administrative review pursuant to Section 4.030. See Finding E15.
<b>PDE 3.</b>	All landscaping in the parking area required and approved by the Board shall be installed prior to the issuance of the 8 <sup>th</sup> building permit for the subdivision. Street trees and planter strip landscaping on or adjoining a lot shall be completed prior to occupancy of each home, unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide

	<p>written authorization, to the satisfaction of the City Attorney, for the City or its designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City will be returned to the applicant. See Finding E34.</p>
<b>PDE 4.</b>	<p>The approved landscape plan is binding upon the applicant/owner. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, pursuant to the applicable sections of Wilsonville’s Development Code. See Finding E35.</p>
<b>PDE 5.</b>	<p>All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered as allowed by Wilsonville’s Development Code. See Findings E36 and E37.</p>
<b>PDE 6.</b>	<p>The following requirements for planting of shrubs and ground cover shall be met:</p> <ul style="list-style-type: none"> <li>• Non-horticultural plastic sheeting or other impermeable surface shall not be placed under landscaping mulch.</li> <li>• Native topsoil shall be preserved and reused to the extent feasible.</li> <li>• Surface mulch or bark dust shall be fully raked into soil of appropriate depth, sufficient to control erosion, and shall be confined to areas around plantings.</li> <li>• All shrubs shall be well branched and typical of their type as described in current AAN Standards and shall be equal to or better than 2-gallon containers and 10” to 12” spread.</li> <li>• Shrubs shall reach their designed size for screening within three (3) years of planting.</li> <li>• Ground cover shall be equal to or better than the following depending on the type of plant materials used: gallon containers spaced at 4 feet on center minimum, 4” pot spaced 2 feet on center minimum, 2-1/4” pots spaced at 18 inch on center minimum.</li> <li>• No bare root planting shall be permitted.</li> <li>• Ground cover shall be sufficient to cover at least 80% of the bare soil in required landscape areas within three (3) years of planting.</li> <li>• Appropriate plant materials shall be installed beneath the canopies of trees and large shrubs to avoid the appearance of bare ground in those locations.</li> <li>• Compost-amended topsoil shall be integrated in all areas to be landscaped, including lawns. See Finding E43.</li> </ul>
<b>PDE 7.</b>	<p>All trees shall be balled and burlapped and conform in size and grade to “American Standards for Nursery Stock” current edition. See Finding E44.</p>
<b>PDE 8.</b>	<p>Plant materials shall be installed to current industry standards and be properly</p>

	staked to ensure survival. Plants that die shall be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City. See Finding E48.
<b>PDE 9.</b>	Final landscape construction drawings shall accurately show tree plantings in park space not conflicting with path.

Request F: DB15-0113 Type C Tree Plan

<b>PDF 1.</b>	The approval of the Type C Tree Plan (DB15-0113) is contingent on the City Council of Approval of the Zone Map Amendment (DB15-0109), which is contingent on City Council Approval of the Comprehensive Plan Map Amendment (DB15-0108).
<b>PDF 2.</b>	This approval for removal applies only to the 33 trees identified in the Applicant’s submitted materials. All other trees on the property shall be maintained unless removal is approved through separate application.
<b>PDF 3.</b>	The Applicant shall submit an application for a Type ‘C’ Tree Removal Permit on the Planning Division’s Development Permit Application form, together with the applicable fee. In addition to the application form and fee, the Applicant shall provide the City’s Planning Division an accounting of trees to be removed within the project site, corresponding to the approval of the Development Review Board. The applicant shall not remove any trees from the project site until the tree removal permit, including the final tree removal plan, have been approved by the Planning Division staff.
<b>PDF 4.</b>	The Applicant/Owner shall install the required 33 mitigation trees, as shown in the Applicant’s sheet L1, per Section 4.620 WC.
<b>PDF 5.</b>	The permit grantee or the grantee’s successors-in-interest shall cause the replacement trees to be staked, fertilized and mulched, and shall guarantee the trees for two (2) years after the planting date. A “guaranteed” tree that dies or becomes diseased during the two (2) years after planting shall be replaced.
<b>PDF 6.</b>	Prior to site grading or other site work that could damage trees, the Applicant/Owner shall install six-foot-tall chain-link fencing around the drip line of preserved trees. The fencing shall comply with Wilsonville Public Works Standards Detail Drawing RD-1230. See Finding D14.
<b>PDF 7.</b>	<p>The following measures shall be taken for preservation and protection of retained trees, including the two trees overhanging Lot 1 from the property to the north.</p> <ul style="list-style-type: none"> <li>• Landscaping and irrigation beneath the dripline of preserved trees shall be compatible with the trees. Turf grass and other water intensive plantings are typically not appropriate.</li> <li>• All privacy fence installation within the drip line of the trees shall be hand dug under the supervision of a certified arborist. If tree roots are encountered, adjust the location of post holes to avoid root impacts. Mix concrete away from tree protection areas and transport using buckets or a wheel barrow. Boards shall be stockpiled outside of protected tree driplines.</li> </ul>

- Encroachment of home foundations and walls within tree driplines is only allowed under the guidance of a certified arborist. Any necessary root and canopy pruning shall follow accepted professional practices under supervision of a certified arborist and shall not damage the overall health of the trees. Particularly for the trees overhanging Lot 1 from the property to the north, special care shall be taken in canopy pruning to maintain a symmetrical canopy. See Finding F3.

**Request G: DB15-0114 Waiver to Average Lot Size**

The approval of the requested Waivers (DB15-0114) is contingent on the City Council of Approval of the Zone Map Amendment (DB15-0109), which is contingent on City Council Approval of the Comprehensive Plan Map Amendment (DB15-0108).

**Request H: DB15-0115 Tentative Subdivision Plat**

<b>PDH 1.</b>	The approval of the Tentative Subdivision Plat (DB15-0115) is contingent on the City Council of Approval of the Zone Map Amendment (DB15-0109), which is contingent on City Council Approval of the Comprehensive Plan Map Amendment (DB15-0108).
<b>PDH 2.</b>	A reserve strip shall be placed at the end of the private drive preventing future extension. See Finding H15.
<b>PDH 3.</b>	Any necessary easements or dedications shall be identified on the Final Subdivision Plat.
<b>PDH 4.</b>	The Final Subdivision Plat shall indicate dimensions of all lots, lot area, minimum lot size, easements, proposed lot and block numbers, parks/open space by name and/or type, and any other information required as a result of the hearing process for the Stage II Final Plan or the Tentative Plat.
<b>PDH 5.</b>	Public Utility Easements shall be provided along frontages of lots and tracts consistent with the City's Public Works Standards for installation of franchise utilities. See Finding H22.
<b>PDH 6.</b>	Easements for sanitary or storm sewers, drainage, water mains, or other public utilities shall be dedicated wherever necessary consistent with the City's Public Works Standards. This includes over park and open space with public utilities beneath them. See Finding H22.
<b>PDH 7.</b>	With the final plat a street tree easement shall be granted for lots along the private drive guaranteeing the City the right to enter the site and plant, remove, or maintain approved street trees located on private property. See Finding H28.

*The following Conditions of Approval are provided by the Engineering, Natural Resources, or Building Divisions of the City's Community Development Department or Tualatin Valley Fire and Rescue, all of which have authority over development approval. A number of these Conditions of Approval are not related to land use regulations under the authority of the Development Review Board or Planning Director. Only those Conditions of Approval related to criteria in Chapter 4 of Wilsonville Code and the Comprehensive Plan, including but not limited to those related to traffic level of service, site vision*



clearance, recording of plats, and concurrency, are subject to the Land Use review and appeal process defined in Wilsonville Code and Oregon Revised Statutes and Administrative Rules. Other Conditions of Approval are based on City Code chapters other than Chapter 4, state law, federal law, or other agency rules and regulations. Questions or requests about the applicability, appeal, exemption or non-compliance related to these other Conditions of Approval should be directed to the City Department, Division, or non-City agency with authority over the relevant portion of the development approval.

**Engineering Division Conditions:**

All Requests:

<b>PF 1.</b>	Public Works Plans and Public Improvements shall conform to the “Public Works Plan Submittal Requirements and Other Engineering Requirements” in Exhibit C1.				
<b>PF 2.</b>	At the request of Staff, DKS Associates completed a Trip Generation Memorandum dated December 9, 2015. The project is hereby limited to no more than the following impacts.  <table border="0" style="width: 100%;"> <tr> <td style="width: 80%;">Estimated New PM Peak Hour Trips</td> <td style="text-align: right;">14</td> </tr> <tr> <td>Estimated Weekday PM Peak Hour Trips Through Wilsonville Road Interchange Area</td> <td style="text-align: right;">5</td> </tr> </table>	Estimated New PM Peak Hour Trips	14	Estimated Weekday PM Peak Hour Trips Through Wilsonville Road Interchange Area	5
Estimated New PM Peak Hour Trips	14				
Estimated Weekday PM Peak Hour Trips Through Wilsonville Road Interchange Area	5				
<b>PF 3.</b>	Presently a 50-ft right-of-way exists along Canyon Creek Road South; no additional right-of-way dedication will be required along the west edge of the project.				
<b>PF 4.</b>	In anticipation of possible future extension of the proposed Public Street “A” applicant shall name this street McGraw Avenue.				
<b>PF 5.</b>	Lot 1 will be allowed one driveway access onto Canyon Creek Road South. All other lots shall obtain access via the proposed McGraw Avenue or Private Street to be constructed with the project.				
<b>PF 6.</b>	On frontage to Canyon Creek Road South the applicant shall be required to construct a 14-foot half-street improvement, face of curb to street centerline (asphalt roadway, curb and gutter, sidewalk, stormwater system, street lights and street trees) in compliance with Residential Street Standards as provided in the 2015 Public Works Standards. Existing street right-of-way is 50 feet; no additional right-of-way dedication is required.				
<b>PF 7.</b>	Applicant shall make every effort to coordinate their construction activities on Canyon Creek Road South with the previously approved Renaissance 3-Lot Partition at 28525 SW Canyon Creek Road South (AR15-0060).				
<b>PF 8.</b>	Applicant shall install an ADA ramp on Canyon Creek Road South opposite one of the existing ramps on the west side of the street at Daybreak Street.				
<b>PF 9.</b>	Applicant shall obtain water and sanitary sewer service from the existing systems in Canyon Creek Road South.				
<b>PF 10.</b>	Where feasible stormwater connections may be made to the public storm main in Canyon Creek Road South, provided stormwater quality and detention				

	requirements are met.
<b>PF 11.</b>	Where it is not feasible to connect to the stormwater main in Canyon Creek Road South the storm outfall shall be installed to the east, at the bottom of the hill to Boeckman Creek. Location and/or installation methods shall be coordinated with Community Development staff to minimize impacts in the SROZ. The outfall and appropriate energy dissipation shall be designed and installed per Section 301.7.08 of the 2015 Public Works Standards.
<b>PF 12.</b>	Lot 1 will be allowed to install a SS service to the main line in Canyon Creek Road South via using a 36" long radius bend, connecting the service into the upper surface of the main line using a saddle T connection.
<b>PF 13.</b>	Plans submitted with this DRB application do not show sanitary service to lots 5 and 6. A sanitary main line will need to be installed in the Private Street to provide the needed service.
<b>PF 14.</b>	In the absence of a looped water system, the applicant shall provide calculations performed by a Registered Professional Engineer in the State of Oregon showing adequate water flow for firefighting purposes (1500 gpm flow at 20 psi residual pressure with the City's Water Treatment Plant off-line) and, at applicant's cost, schedule and perform a fire flow test at the proposed new fire hydrant. Applicant to coordinate fire flow test with City staff.
<b>PF 15.</b>	Per Section 201.2.01.f.2 and 501.2.04.b of the 2015 Public Works Standards a fire hydrant shall be located at the end of a dead-end water main to be extended in the future in place of a blow-off.
<b>PF 16.</b>	For water services to Lots 5 and 6 it is allowed and recommended that a 4" water main be installed in the Private Street.

**Natural Resources Division Conditions:**

All Requests

<b>NR 1.</b>	Natural Resource Division Requirements and Advisories listed in Exhibit C3 apply to the proposed development.
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## Master Exhibit List:

The following exhibits are hereby entered into the public record by the Development Review Board as confirmation of its consideration of the application as submitted. The exhibit list includes exhibits for Planning Case File DB15-0108 through DB15-0115.

### Planning Staff Materials

- A1.** Staff report and findings (this document)
- A2.** Staff's Presentation Slides for Public Hearing (to be presented at Public Hearing)  
Notes: The revised traffic report labeled as Exhibit A3 in the March 21<sup>st</sup> staff report has been renumbered as Exhibit C4. Exhibit A4 listing recommended staff report changes, entered into the record at the March 28<sup>th</sup> meeting, is no longer needed as part of the record as all changes listed have been incorporated into the revised staff report.

### Materials from Owners and Applicant

- B1.** Applicant's Notebook: Narrative and Submitted Materials (under separate cover)
  - 1. Application Forms
  - 2. Ownership Information
  - 3. Certification of Assessment and Liens
  - 4. Traffic Report (updated, see Exhibit A3)
  - 5. Narrative and Findings (updated, see Exhibit B3)
  - 6. Reduced Drawings (not in electronic copy, same as Exhibit B2 below)
  - 7. Arborist Report
  - 8. Tree List
  - 9. Draft CC&R's
  - 10. Letter from Real Estate Broker Marla Rumpf regarding the need for more housing
  - 11. Article from "Oregon Catalyst" regarding lack of affordable housing
  - 12. Real Estate Listings in Wilsonville 3.18.16
- B2.** Drawings and Plans (under separate cover, updated, see Exhibit B4)
  - Sheet 1 of 8 Cover Sheet
  - Sheet 2 of 8 Existing Conditions Map
  - Sheet 3 of 8 Preliminary Plat
  - Sheet 4 of 8 Preliminary Grading Plan
  - Sheet 5 of 8 Street 'A' Plan and Profile
  - Sheet 6 of 8 Private Street Plan and Profile
  - Sheet 7 of 8 Preliminary Storm Water and Utilities Plan
  - Sheet 8 of 8 Tree Preservation and Removal Plan
  - Sheet L1 of 2 Street Trees
  - Sheet L2 of 2 Park Plantings
- B3.** Revised Narrative and Findings April 7, 2016 (under separate cover)

- B4. Revised Drawings and Plans April 7, 2016 (under separate cover)
  - Sheet 1 of 8 Cover Sheet
  - Sheet 2 of 8 Existing Conditions Map
  - Sheet 3 of 8 Preliminary Plat
  - Sheet 4 of 8 Preliminary Grading Plan
  - Sheet 5 of 8 Street 'A' Plan and Profile
  - Sheet 6 of 8 Private Street Plan and Profile
  - Sheet 7 of 8 Preliminary Storm Water and Utilities Plan
  - Sheet 8 of 8 Tree Preservation and Removal Plan
  - Sheet L1 of 2 Street Trees
  - Sheet L2 of 2 Park Plantings
- B5. Letter from Kelly Hossaini dated April 13, 2016 responding to concerns about the application on behalf on the applicant.
- B6. Letter from Property Owners Beth Boeckman and Marvin and Karen Lewallen dated April 14, 2016

#### Development Review Team Correspondence

- C1. Public Works Plan Submittal Requirements and Other Engineering Requirements
- C2. Memo from Steve Adams dated March 17, 2016 Regarding Street Spacing
- C3. Natural Resources Findings & Requirements
- C4. Updated DKS Traffic Report with information about I-5 Interchange Impact
- C5. Memo from Steve Adams dated April 15, 2016 regarding traffic with the following attachments (Revised to correct typo on day of week April 26, 2016):
  - a. Updated Trip Generation Memo dated April 12, 2016
  - b. Canyon Creek Road Daybreak to Morningside Speed Study June 2015
  - c. Oregon Driver Manual excerpt
  - d. Wilsonville Transportation Performance Report January 21, 2016
- C6. Email from Frank Lonergan, Republic Services Operations Manager, dated April 20, 2016 regarding waste and recycling collection
- C7. Memo from Jordin Ketelsen, DKS Associates, dated April 20, 2016 regarding correcting the typographical error in the original traffic memo

#### Other Correspondence/Public Comments

- D1. Email Correspondence form Mark Kochanowski dated March 14, 2016
- D2. Email from Brendan and Kristen Colyer dated March 15, 2016
- D3. Email from Erin Ward dated March 15, 2016
- D4. Letter from George Johnston dated March 17, 2016
- D5. Email Correspondence Regarding Revised Site Plan dated March 21, 2016
- D6. Public testimony and the Applicant's response received via email dated March 21, 2016 regarding the last minute changes from 15 to 14 lots.
- D7. Six 8.5 x 11 photos and one-page document noting Mark Kochanowski's key concerns

- D8. Letter and photos from George Johnston dated April 7, 2016
- D9. Email from Mike Lama dated April 17, 2016
- D10. Email from Laurie Barr dated April 19, 2016

**Findings of Fact:**

- 1. The statutory 120-day time limit applies to this application. The application was received on December 23, 2015. On January 21, 2016 staff conducted a completeness review within the statutorily allowed 30-day review period and found the application to be incomplete. On February 1, 2016, the Applicant submitted new materials. On February 17, 2016 the application was deemed complete. The City must render a final decision for the request, including any appeals, by June 16, 2016.
- 2. Surrounding land uses are as follows:

Compass Direction	Zone:	Existing Use:
North:	RA-H	Single-family Residential
East:	PDR-4	Single-family Residential
South:	RA-H	Single-family Residential
West:	PDR-3	Single-family Residential

- 3. Previous Planning Approvals:  
Current subdivision (Bridle Trail Ranchettes) approved prior to City incorporation.
- 4. The applicant has complied with Sections 4.013-4.031 of the Wilsonville Code, said sections pertaining to review procedures and submittal requirements. The required public notices have been sent and all proper notification procedures have been satisfied.



## Conclusionary Findings:

NOTE: Pursuant to Section 4.014 the burden of proving the necessary findings of fact can be made for approval of any land use or development application rests with the applicant in the case.

### General Information

#### Application Procedures-In General Section 4.008

**Review Criteria:** This section lists general application procedures applicable to a number of types of land use applications and also lists unique features of Wilsonville's development review process.

**Finding:** These criteria are met.

**Details of Finding:** Processing of the application follows the applicable general procedures of this Section.

#### Initiating Application Section 4.009

**Review Criterion:** "Except for a Specific Area Plan (SAP), applications involving specific sites may be filed only by the owner of the subject property, by a unit of government that is in the process of acquiring the property, or by an agent who has been authorized by the owner, in writing, to apply."

**Finding:** This criterion is satisfied.

**Details of Finding:** Applications have been signed by property owners of both properties involved.

#### Pre-Application Conference Subsection 4.010 (.02)

**Review Criteria:** This section lists the pre-application process

**Finding:** These criteria are satisfied.

**Details of Finding:** A Pre-application conferences was held on April 23, 2015 (PA15-0008) in accordance with this subsection.

#### Lien Payment before Approval Subsection 4.011 (.02) B.

**Review Criterion:** "City Council Resolution No. 796 precludes the approval of any development application without the prior payment of all applicable City liens for the subject property. Applicants shall be encouraged to contact the City Finance Department to verify that there are no outstanding liens. If the Planning Director is advised of outstanding liens while an application is under consideration, the Director shall advise the applicant that payments must be made current or the existence of liens will necessitate denial of the application."

**Finding:** This criterion is satisfied.

**Details of Finding:** No applicable liens exist for the subject property. The application can thus move forward.

#### General Submission Requirements Subsection 4.035 (.04) A.

**Review Criteria:** “An application for a Site Development Permit shall consist of the materials specified as follows, plus any other materials required by this Code.” Listed 1. through 6. j.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has provided all of the applicable general submission requirements contained in this subsection.

#### Zoning-Generally Section 4.110

**Review Criteria:** “The use of any building or premises or the construction of any development shall be in conformity with the regulations set forth in this Code for each Zoning District in which it is located, except as provided in Sections 4.189 through 4.192.” “The General Regulations listed in Sections 4.150 through 4.199 shall apply to all zones unless the text indicates otherwise.”

**Finding:** These criteria are satisfied.

**Details of Finding:** This proposed development is in conformity with the applicable zoning district and general development regulations listed in Sections 4.150 through 4.199 have been applied in accordance with this Section.

### Request A: DB15-1008 Comprehensive Plan Amendment

#### **Zoning and Land Development Ordinance**

#### **Comprehensive Plan Amendment Process**

##### Procedures and Criteria in Comprehensive Plan Subsection 4.198 (.01)

**A1. Review Criteria:** “Proposals to amend the Comprehensive Plan, or to adopt new elements or sub-elements of the Plan, shall be subject to the procedures and criteria contained in the Comprehensive Plan.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The lot of the subject development site is of sufficient size to be developed in a manner consistent with the purposes and objectives of Section 4.140.

## Review Bodies

Subsection 4.198 (.02)

- A2. Review Criteria:** “Following the adoption and signature of the Resolution by the Development Review Board or Planning Commission, together with minutes of public hearings on the proposed Amendment, the matter shall be shall be scheduled for public hearing before the City Council.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The DRB and City Council are considering the request as described.

## Applicant Agreeing to Conditions of Approval

Subsection 4.198 (.05)

- A3. Review Criteria:** “In cases where a property owner or other applicant has requested an amendment to the Comprehensive Plan map and the City Council has approved the change subject to conditions, the owner or applicant shall sign a statement accepting, and agreeing to complete the conditions of approval before the Comprehensive Plan map shall be changed.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The owner will be required to sign a statement accepting conditions.

## Comprehensive Plan Amendment Required Findings

### Meets Identified Public Need

Subsection 4.198 (.01) A.

- A4. Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed amendment meets a public need that has been identified;”

**Finding:** These criteria are satisfied.

**Details of Finding:** The “Residential Development” portion of the Comprehensive Plan (Policy 4.1.4) identifies the need for additional housing within the City to serve housing and economic needs of residents and employees working within the City.

On the basis of the Housing Data used for the 2015 City of Wilsonville Housing Report, of the City’s 10,283 housing units, 55% are multi-family (apartments and condos), 45% are single-family.

Policy 4.1.4 and its implementation measures seek to “provide opportunities for a wide range of housing types, sizes, and densities at prices and rent levels to accommodate people who are employed in Wilsonville.” The proposal provides additional single-family homes supporting an ongoing desire for single-family homes at various price levels as part of Wilsonville’s strong diversity of housing unit types.

Meets Identified Public Need As Well As Reasonable Alternative  
Subsection 4.198 (.01) B.

A5. **Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed amendment meets the identified public need at least as well as any other amendment or change that could reasonably be made;”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed subdivision has similarities in site density and housing product to other subdivisions nearby such as Renaissance at Canyon Creek and Cross Creek, and provides a consistent density and development type as the area becomes more dense and urban over time. The consistency with nearby development, while accommodating the required usable open space, makes the proposed continued residential use at the proposed density meet the need for a variety of single-family homes better than other density or design options for the site.

Supports Statewide Planning Goals  
Subsection 4.198 (.01) C.

A6. **Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed amendment supports applicable Statewide Planning Goals, or a Goal exception has been found to be appropriate;”

**Finding:** These criteria are satisfied.

**Details of Finding:** With the implementation of the proposed conditions of approval, the project supports the applicable Statewide Planning Goals.

No Conflict with Other Portions of Plan  
Subsection 4.198 (.02) D.

A7. **Review Criteria:** “Each such amendment shall include findings in support of the following: That the proposed change will not result in conflicts with any portion of the Comprehensive Plan that is not being amended.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant is requesting an amendment of the Comprehensive Plan Map for the subject properties. The applicant does not propose to modify or amend any other portion of the Comprehensive Plan or Plan Map.

## **Comprehensive Plan and Plan Components**

### **Initiating, Applying for, and Considering Plan Amendments**

#### Who May Initiate Plan Amendments Introduction Page 7 “Plan Amendments” 1.

A8. **Review Criteria:** “An Amendment to the adopted Plan may be initiated by: a. The City Council, b. The Planning Commission (for legislative amendments) or Development

Review Board (for quasi-judicial amendments); or c. Application of property owner(s) or contract purchaser(s) affected or their authorized agents, as specified in #2 below.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed amendment has been initiated by the property owners of the subject lots.

## How to Make Application

Introduction Page 7 “Plan Amendments” 2.

**A9. Review Criteria:** “An application for an amendment to the Plan maps or text shall be made on forms provided by the City. The application, except when initiated by the City Council, DRB, or Planning Commission, as noted in #1, above, shall be accompanied by a Plan Amendment Fee.

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed amendment has been initiated by the property owners of the subject lots who have submitted signed application forms provided by the City and paid the required application fee.

## Consideration of Plan Amendments

Introduction Page 7 “Plan Amendments” 3.

**A10. Review Criteria:** This language specifies how the City should consider a plan amendment including: requiring the City Council consider a plan amendment only after receiving findings and recommendation from the Planning Commission or Development Review Board; having sufficient time before the first evidentiary hearing for public notice and staff report preparation, considering compliance with Statewide Planning Goals and applicable Metro Plans.

**Finding:** These criteria are satisfied.

**Details of Finding:** The City Council will consider the plan amendment only after receiving a recommendation from the Development Review Board.

## Standards for Approval of Plan Amendments

### Conformance with Other Portions of the Plan

Introduction Page 7 “Plan Amendments” 4. a.

**A11. Review Criterion:** “The proposed amendment is in conformance with those portions of the Plan that are not being considered for amendment.”

**Finding:** This criterion is satisfied.

**Details of Finding:** The change of residential density for the subject properties does not lead to nonconformance with other portions of the Comprehensive Plan.

## Public Interest

Introduction Page 7 "Plan Amendments" 4. b.

**A12. Review Criterion:** "The granting of the amendment is in the public interest."

**Finding:** This criterion is satisfied.

**Details of Finding:** The request is in the public interest by providing needed housing. See also Finding A4.

## Public Interest Best Served by Timing of Amendment

Introduction Page 7 "Plan Amendments" 4. c.

**A13. Review Criterion:** "The public interest is best served by granting the amendment at this time."

**Finding:** This criterion is satisfied.

**Details of Finding:** The timing of the amendment is appropriate. See Finding A5.

## Factors to Address in Amendment

Introduction Page 7 "Plan Amendments" 4. d.

**A14. Review Criterion:** "The following factors have been adequately addressed in the proposed amendment:

- the suitability of the various areas for particular land uses and improvements;
- the land uses and improvements in the area;
- trends in land improvement;
- density of development;
- property values;
- the needs of economic enterprises in the future development of the area;
- transportation access;
- natural resources; and
- the public need for healthful, safe and aesthetic surroundings and conditions.

**Finding:** This criterion is satisfied.

**Details of Finding:** The area is suitable for the proposed development as it is in a residential area with similar development and has the necessary public services, including streets, available. It is similar to and follows the trends in recent nearby developments such as Renaissance at Canyon Creek and Cross Creek. The density is consistent with these other recent nearby developments. No evidence has been presented that the development would negatively impact property values. Preservation of Natural Resource areas is part of the development. Healthful, safe and aesthetic surroundings are ensured by application of design standards.

## Conflict with Metro Requirements

Introduction Page 7 "Plan Amendments" 4. e.

**A15. Review Criterion:** "Proposed changes or amendments to the Comprehensive Plan do not result in conflicts with applicable Metro requirements."



**Finding:** This criterion is satisfied.

**Details of Finding:** No conflicts with Metro requirements have been identified. Particularly, Wilsonville's housing mix continues to exceed Metro's requirements.

#### Public Notice Requirements

Introduction Page 8 "Plan Amendments" 5.

**A16. Review Criterion:** This language describes the noticing requirements implemented by the City's noticing requirements for quasi-judicial review.

**Finding:** This criterion is satisfied.

**Details of Finding:** Public hearing notices have or will be sent as required.

### Urban Growth Management

#### Urbanization for Adequate Housing

Implementation Measure 2.1.1.b.

**A17. Review Criteria:** "Allow urbanization to occur to provide adequate housing to accommodate workers who are employed within the City."

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposal provides for additional housing density to accommodate those employed with the City. See also Finding A4.

#### Revenue Sources for Urbanization

Implementation Measure 2.1.1.d.

**A18. Review Criteria:** "Establish and maintain revenue sources to support the City's policies for urbanization and maintain needed public services and facilities."

**Finding:** These criteria are satisfied.

**Details of Finding:** Existing requirements for improvements and systems development charges apply to the development proposed concurrently with the Comprehensive Plan Map amendment.

#### New Development and Concurrency

Implementation Measure 2.1.1.e.

**A19. Review Criteria:** "Allow new development to proceed concurrently with the availability of adequate public services and facilities as specified in Public Facilities and Services Section (Section C) of the Comprehensive Plan."

**Finding:** These criteria are satisfied.

**Details of Finding:** The City's concurrency requirements in the Development Code apply to the concurrently proposed development.

Encourage Master Planning  
Implementation Measure 2.1.1.f.2.

**A20. Review Criteria:** “To maximize design quality and conformity to the Comprehensive Plan, the City shall encourage master planning of large land areas. However, as an added growth management tool, the Development Review Board may, as a condition of approval, set an annual phasing schedule coordinated with scheduled Capital Improvements, particularly streets and related transportation facilities.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The subject properties are large enough, being greater than the 2 acre threshold for planned development established in Section 4.140, to be designed consistent with the City’s planned development regulations to support design quality and conformity with the Comprehensive Plan.

**Public Facilities and Services**

Urban Development Only Where Facilities and Services Can Be Provided  
Implementation Measure 3.1.2.a.

**A21. Review Criterion:** “Urban development will be allowed only in areas where necessary facilities and services can be provided.”

**Finding:** This criterion is satisfied.

**Details of Finding:** Application of the concurrency standards of the City’s development code ensure the development proposed concurrently with this amendment request will have all necessary facilities and services provided. See Stage II Final Plan in Request D.

Paying for Facilities and Services  
Implementation Measures 3.1.3.a., 3.1.4.f., 3.1.5.c., 4.1.4.h.

**A22. Review Criteria:** “Developers will continue to be required to pay for demands placed on public facilities/services that are directly related to their developments. The City may establish and collect systems development charges (SDCs) for any or all public facilities/services, as allowed by law. An individual exception to this standard may be justified, or SDC credits given, when a proposed development is found to result in public benefits that warrant public investment to support the development.” “The cost of all line extensions and individual services shall be the responsibility of the developer and/or property owners(s) seeking service. When a major line is to be extended, the City may authorize and administer formation of a Local Improvement District (LID). All line extensions shall conform to the City Sanitary Sewer Collection System Master Plan, urbanization policies, and Public Works Standards.” “Extensions shall be made at the cost of the developer or landowner of the property being served.” “Require new housing developments to pay an equitable share of the cost of required capital improvements for public services.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The City has all necessary codes and processes in place to ensure the development pays for public facilities/services directly related to the development.

Growth and Sewer Capacity  
Implementation Measure 3.1.4.b

**A23. Review Criterion:** “The City shall continue to manage growth consistent with the capacity of sanitary sewer facilities.”

**Finding:** This criterion is satisfied.

**Details of Finding:** The City will not allow development without adequate sanitary sewer capacity. As reviewed in the Stage II Final Plan, adequate sanitary sewer capacity exists by connecting to the existing sewer in Canyon Creek Road South.

**Land Use and Development**

Variety of Housing Types  
Implementation Measures 4.1.4.b, 4.1.4.j., and 4.1.4.o.

**A24. Review Criterion:** “Plan for and permit a variety of housing types consistent with the objectives and policies set forth under this section of the Comprehensive Plan, while maintaining a reasonable balance between the economics of building and the cost of supplying public services. It is the City’s desire to provide a variety of housing types needed to meet a wide range of personal preferences and income levels. The City also recognizes the fact that adequate public facilities and services must be available in order to build and maintain a decent, safe, and healthful living environment.” “The City shall have a diverse range of housing types available within its City limits.” “The City will encourage the development of housing of various types and densities. Guided by the urbanization, public facilities, and economic elements, the City will, however, manage residential growth to ensure adequate provision of public facilities and that proposed housing satisfies local need and desires, i.e., type, price and rent levels.”

**Finding:** This criterion is satisfied.

**Details of Finding:** Wilsonville has a rich diversity of housing types. Infill in other areas of the Bridle Trail Ranchettes involved single-family residential development of a similar density as proposed (including Renaissance at Canyon Creek and Cross Creek subdivisions). The proposal supports the area’s continued role as a single-family area amongst Wilsonville’s housing mix.

Encouraging Variety  
Implementation Measure 4.1.4.c

**A25. Review Criterion:** “encouraging variety through the use of planned developments and clusters.”

**Finding:** This criterion is satisfied.

**Details of Finding:** Being relatively small for a planned development, not a lot of variety would be expected within the development. However, a variety of lot sizes and widths

are provided allowing diversity of housing products.

#### Housing Balance

Implementation Measure 4.1.4.d

**A26. Review Criteria:** “Encourage the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms.”

**Finding:** These criteria are satisfied.

**Details of Finding:** On the basis of the Housing Data for the 2015 City of Wilsonville Housing Report of the City’s 10,283 housing units, 55% are multi-family and 45% are single-family.

The proposal adds single-family to the housing mix having a minor impact on making single-family housing more balanced with multi-family. In addition, the development is proposed in a single-family area of the community where multi-family is not planned thus supporting the planned geographic distribution.

#### Housing Needs of Existing Residents

Implementation Measure 4.1.4.f.

**A27. Review Criteria:** “Accommodate the housing needs of the existing residents of the City of Wilsonville.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed housing will fit into the rich diversity of Wilsonville’s housing to allow existing residents to move up or move down, thus opening their units to others.

#### Housing Development and the Social and Economic Needs of the Community

Implementation Measure 4.1.4.g.

**A28. Review Criteria:** “Coordinate housing development with the social and economic needs of the community.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Wilsonville has a rich diversity of housing types, to which these additional single-family homes would contribute. The diversity of housing types supports the variety of needs of members of the community.

#### Jobs Housing Balance

Implementation Measures 4.1.4.l. and 4.1.4.p.

**A29. Review Criteria:** “The City shall work to improve the balance of jobs and housing within its jurisdictional boundaries.” “In an effort to balance residential growth with the City’s

employment base, the City shall encourage the development of housing to meet the needs of the employees working in the City.”

**Finding:** These criteria are satisfied.

**Details of Finding:** It is anticipated the planned homes could be occupied by people working in Wilsonville. The location is close to employment centers including Town Center and the industrial area north of Boeckman between Canyon Creek and Parkway.

#### Residential Districts and Density

Implementation Measures 4.1.4.u. and 4.1.4.z.

**A30. Review Criteria:** “To provide variety and flexibility in site design and densities, residential lands shown on the Land Use Map of the Comprehensive Plan have been divided into districts, with different density ranges for each district. In all residential developments, other than those that are so small that it is not mathematically feasible to achieve the prescribed minimum density, the 80% minimum shall apply. The following density ranges have been prescribed for each district:

- Density: 0-1 units/acre
- 2-3 units/acre
- 4-5 units/acre
- 6-7 units/acre
- 10-12 units/acre
- 18-20 units/acre”

“The City shall continue to apply a minimum density standard to all zones allowing residential use, such that all development, including subdivisions, will result in the eventual build-out of 80 percent or more of the maximum number of dwelling units per net acre permitted by the zoning designation for a given development. The minimum density requirement does not apply inside areas designated by the City as open spaces or significant resource sites. The maximum-zoned density does not include the density bonus for zones that allow them.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant requests the density to change from 0-1 dwelling units per acre to 4-5 dwelling units per acre in an area transitioning from rural residential to denser urban residential. Similar changes have occurred on other nearby properties including the areas currently occupied by Renaissance at Canyon Creek and Cross Creek subdivisions.

#### 2-3 or 4-5 Dwelling Unit Per Acre Residential District

“Residential Planning Districts” page D-19

**A31. Review Criteria:** “The purpose of this district is to provide for low density residential areas. The 2-3 du/acre density would generally fall under the PDR-2 zoning district category as outlined in the Development Code. The 4-5 du/acre density would generally

fall under the PDR-2 and PDR-3 (or other categories that could work out to this level of density) zoning district category as outlined in the Development Code.

The following areas should be designated and developed at this density:

1. Areas with access to a minor arterial, collector, or local streets. However, direct vehicular access from individual lots onto a minor arterial will be restricted.
2. Undeveloped areas adjacent to existing lower density developments, or near the fringe of the Urban Growth Boundary.
3. Areas where sensitivity to the natural environment or natural hazards warrant a reduced density."

**Finding:** These criteria are satisfied.

**Details of Finding:** The 4-5 dwelling units designation is appropriate as adequate access to streets is available creating traffic volumes within the limits set by the City, it is adjacent to a variety of residential densities, including low density, and it is an appropriate density to allow development while preserving the natural slope and riparian areas of the properties.

## **Metro Urban Growth Functional Plan**

### Maintaining or Increasing Housing Capacity

Title 1 3.07.110

**A32. Review Criteria:** "Requiring each city and county to maintain or increase its housing capacity . . ."

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposal will increase the City's housing capacity within the current City limits.

## **Statewide Planning Goals**

### Citizen Involvement

Goal 1

**A33. Review Criteria:** "To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process."

**Finding:** These criteria are satisfied.

**Details of Finding:** A thorough citizen involvement process, as defined in Wilsonville's Development Code and Comprehensive Plan, ensures citizen involvement in the decision.

### Land Use Planning

Goal 2

**A34. Review Criteria:** "To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions."

**Finding:** These criteria are satisfied.

**Details of Finding:** The Comprehensive Plan Amendment is required to meet policies



based on the statewide framework and is required to provide adequate facts to make a decision based on the applicable review criteria.

#### Agriculture Lands

##### Goal 3

**A35. Review Criteria:** “To preserve and maintain agricultural lands.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The areas proposed for new housing development are not currently in commercial agriculture use. Increasing development within the City limits has the potential to slightly lessen the demand for housing on land currently in use for commercial agriculture.

#### Natural Resources, Scenic and Historic Areas, and Open Spaces

##### Goal 5

**A36. Review Criteria:** “To protect natural resources and conserve scenic and historic and open spaces.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The City’s SROZ overlay standards are ensuring significant natural resources on the eastern portion of the subject properties are protected.

#### Air, Water and Land Resources Quality

##### Goal 6

**A37. Review Criteria:** “To maintain and improve the quality of the air, water and land resources of the state.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The requirements to preserve the natural area as well as storm water requirements help maintain water quality. No significant negative impacts to air and land resources can reasonably be anticipated.

### Request B: DB15-0109 Zone Map Amendment

#### Comprehensive Plan

##### Diversity of Housing Types

##### Implementation Measure 4.1.4.b.,d.

**B1. Review Criteria:** “Plan for and permit a variety of housing types consistent with the objectives and policies set forth under this section of the Comprehensive Plan, while maintaining a reasonable balance between the economics of building and the cost of supplying public services. It is the City's desire to provide a variety of housing types needed to meet a wide range of personal preferences and income levels. The City also recognizes the fact that adequate public facilities and services must be available in order to build and maintain a decent, safe, and healthful living environment.” “Encourage the

construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** On the basis of the housing data used in the 2015 City of Wilsonville Housing Report of the City’s 10,283 housing units, 55% are multi-family and 45% are single-family. Currently hundreds of new single-family home lots have been approved, mainly in Villebois, to be developed over the next few years. Only a few smaller multi-family developments are approved or under construction. In addition, the Frog Pond west planning area is planned exclusively for single-family homes as it begins to develop in the coming years. The proposal will provide additional single-family options outside of Villebois within the existing City limits supporting a trend of increasing the number of single-family homes in relation to multi-family homes.

## Development Code

### Zoning Consistent with Comprehensive Plan

#### Section 4.029

- B2. Review Criterion:** “If a development, other than a short-term temporary use, is proposed on a parcel or lot which is not zoned in accordance with the Comprehensive Plan, the applicant must receive approval of a zone change prior to, or concurrently with the approval of an application for a Planned Development.”

**Finding:** This criterion is met or will be satisfied.

**Explanation of Finding:** The applicant is applying for a comprehensive plan map amendment and a zone change concurrently with a Stage I Master Plan, Stage II Final Plan, and other related development approvals. The proposed zoning is consistent with the proposed comprehensive plan residential density of 4-5 dwelling units per acre. The approval of the zone map amendment is contingent on City approval of the related comprehensive plan map amendment.

### Base Zones

#### Subsection 4.110 (.01)

- B3. Review Criterion:** This subsection identifies the base zones established for the City, including the Village Zone.

**Finding:** This criterion is satisfied.

**Explanation of Finding:** The requested zoning designation of Planned Development Residential-3 “PDR-3” is among the base zones identified.

**Standards for All Planned Development Residential Zones**

Typically Permitted Uses  
 Subsection 4.124 (.01)

**B4. Review Criteria:** This subsection list the allowed uses in the PDR Zones.

**Finding:** These criteria are satisfied.

**Details of Finding:** The list of typically permitted uses includes single-family dwelling units, open space, and parks, covering all proposed uses on the subject properties.

Appropriate PDR Zone  
 Subsection 4.124 (.05)

**B5. Review Criteria:**

Comprehensive Plan Density	Zoning District
0-1 u/acre	PDR-1
2-3 u/acre	PDR-2
4-5 u/acre	PDR-3
6-7 u/acre	PDR-4
10-12 u/acre	PDR-5
16-20 u/acre	PDR-6
20 + u/acre	PDR-7

**Finding:** These criteria are satisfied.

**Details of Finding:** PDR-3 is the appropriate PDR designation based on the Comprehensive Plan density designation, as proposed, of 4-5 dwelling units per acre.

Zone Change Procedures  
 Subsection 4.197 (.02) A.

**B6. Review Criteria:** “That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125(.18)(B)(2), or, in the case of a Planned Development, Section 4.140;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The applicant submitted the request for a zone map amendment as set forth in the applicable code sections.

Conformance with Comprehensive Plan Map, etc.  
 Subsection 4.197 (.02) B.

**B7. Review Criteria:** “That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed zone map amendment is consistent with the proposed (see Request A) Comprehensive Map designation of Residential 4-5 dwelling units per acre. As shown in Request A and Finding B1 the request complies with applicable Comprehensive Plan text.

Residential Designated Lands  
Subsection 4.197 (.02) C.

**B8. Review Criteria:** “In the event that the subject property, or any portion thereof, is designated as “Residential” on the City’s Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measure 4.1.4.b, d, e, q, and x of Wilsonville’s Comprehensive Plan text;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Findings B1 under this request and A24-A30 under Request A provide the required specific findings.

Public Facility Concurrency  
Subsection 4.197 (.02) D.

**B9. Review Criteria:** “That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The applicant’s Exhibits B1 and B2 (compliance report and the plan sheets) demonstrate the existing primary public facilities are available or can be provided in conjunction with the project.

Impact on SROZ Areas  
Subsection 4.197 (.02) E.

**B10. Review Criteria:** “That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/ or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone;”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed design of the development preserves and protects the SROZ area on the properties.

Development within 2 Years  
Subsection 4.197 (.02) F.

**B11. Review Criterion:** “That the applicant is committed to a development schedule demonstrating that the development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** Related land use approvals will expire after 2 years, so requesting the land use approvals assumes development would commence within two (2) years. However, in the scenario where the applicant or their successors do not commence development within two (2) years allowing related land use approvals to expire, the zone change shall remain in effect.

Development Standards and Conditions of Approval  
Subsection 4.197 (.02) G.

**B12. Review Criteria:** “That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached to insure that the project development substantially conforms to the applicable development standards.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** As can be found in the findings for the accompanying requests, the applicable development standards will be met either as proposed or as a condition of approval.

**Request C: DB15-0110 Stage I Preliminary Plan**

**Planned Development Regulations**

Planned Development Purpose  
Subsection 4.140 (.01)

**C1. Review Criterion:** The proposed revised Stage I Master Plan shall be consistent with the Planned Development Regulations purpose statement which states, “The purposes of these regulations are to encourage the development of tracts of land sufficiently large to allow for comprehensive master planning, and to provide flexibility in the application of certain regulations in a manner consistent with the intent of the Comprehensive Plan and general provisions of the zoning regulations and to encourage a harmonious variety of uses through mixed use design within specific developments thereby promoting the economy of shared public services and facilities and a variety of complimentary activities consistent with the land use designation on the Comprehensive Plan and the creation of an attractive, healthful, efficient and stable environment for living, shopping or working.”

**Finding:** This criterion is satisfied.

**Details of Finding:** The planning of Stage I Master plan area allows for homes along with

functional streets, preservation of significant natural resources, and the provision of a shared usable open space thus demonstrating it is of sufficient size for a planned development.

#### Planned Development Lot Qualifications

Subsection 4.140 (.02)

- C2. Review Criterion:** “Planned Development may be established on lots which are suitable for and of a size to be planned and developed in a manner consistent with the purposes and objectives of Section 4.140.”

**Finding:** This criterion is satisfied.

**Details of Finding:** The project has a number of homes, a functional street, preserved open space, and a usable park area demonstrating sufficient size for consistency with the purposes and objects of Section 4.140.

- C3. Review Criteria:** “Any site designated for development in the Comprehensive Plan may be developed as a Planned Development, provided that it is zoned “PD.” All sites which are greater than two (2) acres in size, and designated in the Comprehensive Plan for commercial, residential, or industrial use shall be developed as Planned Developments, unless approved for other uses permitted by the Development Code.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The subject property is greater than 2 acres, is designated for residential development in the Comprehensive Plan, proposed at 4-5 dwelling units per acre, and is proposed to be zoned Planned Development Residential (PDR-3). The property will be developed as a planned development with the permitted density.

#### Ownership Requirements

Subsection 4.140 (.03)

- C4. Review Criterion:** “The tract or tracts of land included in a proposed Planned Development must be in one (1) ownership or control or the subject of a joint application by the owners of all the property included.”

**Finding:** This criterion is satisfied.

**Details of Finding:** A joint application has been made and signed by owners of both properties involved, Marv Lewallen and Beth Ann Boeckman.

#### Professional Design Team

Subsection 4.140 (.04)

- C5. Review Criteria:** “The applicant for all proposed Planned Developments shall certify that the professional services of the appropriate professionals have been utilized in the planning process for development. One of the professional consultants chosen by the applicant shall be designated to be responsible for conferring with the planning staff with respect to the concept and details of the plan.”



**Finding:** These criteria are satisfied.

**Details of Finding:** As can be found in the applicant's submitted materials, appropriate professionals have been involved in the planning and permitting process. Annemarie Skinner with Emerio Design is the project manager for the planning portion of the project.

#### Planned Development Permit Process

Subsection 4.140 (.05)

C6. **Review Criteria:** "All parcels of land exceeding two (2) acres in size that are to be used for residential, commercial or industrial development, shall, prior to the issuance of any building permit:

1. Be zoned for planned development;
2. Obtain a planned development permit; and
3. Obtain Development Review Board, or, on appeal, City Council approval."

**Finding:** These criteria are satisfied.

**Details of Finding:** The subject property is greater than 2 acres, is designated for residential development in the Comprehensive Plan, and is zoned proposed to be zoned Planned Development Residential. The property will be developed as a planned development.

#### Comprehensive Plan Consistency

Subsection 4.140 (.06)

C7. **Review Criteria:** "The planning staff shall prepare a report of its findings and conclusions as to whether the use contemplated is consistent with the land use designated on the Comprehensive Plan." "The applicant may proceed to apply for Stage I - Preliminary Approval - upon determination by either staff or the Development Review Board that the use contemplated is consistent with the Comprehensive Plan."

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed project, as found elsewhere in this report, complies with the Planned Development Residential-3 zoning designation, which implements the proposed Comprehensive Plan designation of 'Residential' 4-5 dwelling units per acre.

#### Application Requirements

Subsection 4.140 (.07)

C8. **Review Criteria:** This subsection establishes that the Development Review Board shall consider a Stage I Master Plan after completion or submission of a variety of application requirements.

**Finding:** These criteria are satisfied.

**Details of Finding:** Review of the proposed revised Stage I Master Plan has been scheduled for a public hearing before the Development Review Board in accordance with this subsection and the applicant has met all the applicable submission requirements as follows:

- The property affected by the revised Stage I Master Plan is under a joint

application by the property owners, Marv Lewallen and Beth Ann Boeckman.

- The application for a Stage I Master Plan has been submitted on a form prescribed by the City.
- The professional design team and coordinator has been identified. See Finding A5.
- The applicant has stated the uses involved in the Master Plan and their locations.
- The boundary information is provided with the concurrent tentative subdivision plat request.
- Sufficient topographic information has been submitted.
- A tabulation of the land area to be devoted to various uses has been provided.
- The proposed development will be built in a single phase.
- Any necessary performance bonds will be required.
- Waivers have been requested concurrently with the Stage I Master Plan.

### **Standards for Residential Development in Any Zone**

#### Outdoor Recreational Area and Open Space

Subsections 4.113 (.01) and (.02)

**C9. Review Criteria:** These subsections establishes general and specific requirements for recreational area and open space for residential development.

**Finding:** These criteria are satisfied.

**Details of Finding:** The list of typically permitted uses includes single-family dwelling units, open space, and parks proposed on the subject properties.

#### Other Standards

Subsections 4.113 (.03) through (.14)

**C10. Review Criteria:** These subsections establishes a number of standards for residential development in the City including setbacks, height guidelines, residential uses for treatment and training, fences, prohibited uses, accessory dwelling units, bed and breakfasts, and needed housing.

**Finding:** These criteria are satisfied.

**Details of Finding:** These standards are proposed to be met.

### **Standards for All Planned Development Residential Zones**

#### Typically Permitted Uses

Subsection 4.124 (.01)

**C11. Review Criteria:** This subsection list the allowed uses in the PDR Zones.

**Finding:** These criteria are satisfied.

**Details of Finding:** The list of typically permitted uses includes single-family dwelling units, open space, and parks proposed on the subject properties.

Accessory Uses  
Subsection 4.124 (.02)

**C12. Review Criterion:** This subsection list the permitted accessory uses in the PDR Zones.

**Finding:** This criterion is satisfied.

**Details of Finding:** While none of the listed accessory uses are specifically proposed, they continue to be allowed accessory uses.

Appropriate PDR Zone  
Subsection 4.124 (.05)

**C13. Review Criteria:**

Comprehensive Plan Density	Zoning District
0-1 u/acre	PDR-1
2-3 u/acre	PDR-2
4-5 u/acre	PDR-3
6-7 u/acre	PDR-4
10-12 u/acre	PDR-5
16-20 u/acre	PDR-6
20 + u/acre	PDR-7

**Finding:** These criteria are satisfied.

**Details of Finding:** PDR-3 is the appropriate PDR designation based on the Comprehensive Plan density designation, as proposed, of 4-5 dwelling units per acre. See Requests A and B.

Block and Access Standards  
Subsection 4.124 (.06)

**C14. Review Criterion:** This subsection lists the block and access standards for all PDR Zones.

**Finding:** This criterion is satisfied.

**Details of Finding:** Street locations and lot configurations are such as to support the development of blocks supportive of these standards with potential future development of adjacent properties.

**PDR-3 Zone**

Development Standards  
Section 4.124.3

**C15. Review Criterion:** This subsection lists the development standards for the PDR-3 zone including lot size, setbacks, lot width, lot depth, height, and lot coverage.

**Finding:** This criterion is satisfied.

**Details of Finding:** The minimum lot size standard of 5,000 square feet is met or exceeded by each lot. The average lot size requirements have been requested to be waived as

discussed in greater detail under Request D and Request G. All lots are at least 40 feet wide and 60 feet deep. Setbacks will be met. Maximum height and lot coverage will be met.

## Request D: DB15-0111 Stage II Final Plan

### Planned Development Lot Qualifications

Lots Suitable for Planned Development  
Subsection 4.140 (.02) A.

**D1. Review Criteria:** “Planned Development may be established on lots which are suitable for and of a size to be planned and developed in a manner consistent with the purposes and objectives of Section 4.140.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The lot of the subject development site is of sufficient size to be developed in a manner consistent the purposes and objectives of Section 4.140.

Applicability of Planned Development Regulations  
Subsection 4.140 (.02) B.

**D2. Review Criteria:** “Any site designated for development in the Comprehensive Plan may be developed as a Planned Development, provided that it is zoned ‘PD.’ All sites which are greater than two (2) acres in size, and designated in the Comprehensive Plan for commercial, residential, or industrial use shall be developed as Planned Developments, unless approved for other uses permitted by the Development Code.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The subject property is greater than 2 acres, is designated for residential development in the Comprehensive Plan, and is zoned Planned Development Residential. The property will be developed as a planned development.

### Ownership Requirement for Planned Developments

All Owners Must be Involved in Application  
Subsection 4.140 (.03) A.

**D3. Review Criterion:** “The tract or tracts of land included in a proposed Planned Development must be in one (1) ownership or control or the subject of a joint application by the owners of all the property included.”

**Finding:** This criterion is satisfied.

**Details of Finding:** A joint application has been made and signed by owners of both properties involved, Marv Lewallen and Beth Ann Boeckman.

Transfer of Land in Planned Developments  
Subsection 4.140 (.03) B.

- D4. Review Criterion:** “Unless otherwise provided as a condition for approval of a Planned Development permit, the permittee may divide and transfer units or parcels of any development. The transferee shall use and maintain each such unit or parcel in strict conformance with the approval permit and development plan.”

**Finding:** This criterion is satisfied.

**Details of Finding:** It is understood the properties will be subdivided, lots sold, and park areas deeded to a HOA. It is understood all the lots and tracts will be maintained consistent with the Stage II Final Plan.

### Professional Design of Planned Developments

Professional Design Team  
Subsection 4.140 (.04) A. and B.

- D5. Review Criteria:** “The applicant for all proposed Planned Developments shall certify that the professional services of the appropriate professionals have been utilized in the planning process for development.” Appropriate Professionals listed 1. through 4.

**Finding:** These criteria are satisfied.

**Details of Finding:** As can be found in the applicant’s submitted materials, appropriate professionals have been involved in the planning and permitting process.

Professional Coordinator  
Subsection 4.140 (.04) C. and D.

- D6. Review Criteria:** “One of the professional consultants chosen by the applicant from either 1, 2, or 3, above, shall be designated to be responsible for conferring with the planning staff with respect to the concept and details of the plan.” “The selection of the professional coordinator of the design team will not limit the owner or the developer in consulting with the planning staff.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Annemarie Skinner of Emerio Design has been designated as the professional coordinator.

### Stage II Final Plan Submission Requirements and Process

Timing of Submission  
Subsection 4.140 (.09) A.

- D7. Review Criterion:** “Unless an extension has been granted by the Development Review Board, within two (2) years after the approval or modified approval of a preliminary development plan (Stage I), the applicant shall file with the City Planning Department a final plan for the entire development or when submission in stages has been authorized pursuant to Section 4.035 for the first unit of the development”

**Finding:** This criterion is satisfied.

**Details of Finding:** The applicant submitted the Stage II Request concurrently with the Stage I Master Plan.

Stage I Conformance, Submission Requirements  
Subsection 4.140 (.09) C.

**D8. Review Criteria:** “The final plan shall conform in all major respects with the approved preliminary development plan, and shall include all information included in the preliminary plan plus the following:” listed 1. through 6.

**Finding:** These criteria are satisfied.

**Details of Finding:** The Stage II plans substantially conforms with the Stage I Master Plan. The applicant has provided the required drawings and other documents showing all the additional information required by this subsection.

Stage II Final Plan Detail  
Subsection 4.140 (.09) D.

**D9. Review Criterion:** “The final plan shall be sufficiently detailed to indicate fully the ultimate operation and appearance of the development or phase of development.”

**Finding:** This criterion is satisfied.

**Details of Finding:** The applicant has provided sufficiently detailed information to indicate fully the ultimate operation and appearance of the development, including a detailed site plan and landscape plans.

Submission of Legal Documents  
Subsection 4.140 (.09) E.

**D10. Review Criterion:** “Copies of legal documents required by the Development Review Board for dedication or reservation of public facilities, or for the creation of a non-profit homeowner’s association, shall also be submitted.”

**Finding:** This criterion is satisfied.

**Details of Finding:** No additional legal documentation is required for dedication or reservation of public facilities.

Expiration of Approval  
Subsection 4.140 (.09) I. and Section 4.023

**D11. Review Criterion:** This subsection and section identify the period for which Stage II approvals are valid.

**Finding:** This criterion is satisfied.

**Details of Finding:** The Stage II Approval, along other associated applications, will expire two (2) years after approval, unless an extension is approved..



Consistency with Plans  
Subsection 4.140 (.09) J. 1.

**D12. Review Criteria:** “The location, design, size and uses, both separately and as a whole, are consistent with the Comprehensive Plan, and with any other applicable plan, development map or Ordinance adopted by the City Council.”

**Finding:** These criteria are satisfied.

**Details of Finding:** With the requested Comprehensive Plan Map Amendment, Request A, the project is consistent with the Comprehensive Plan and other applicable plans of which staff is aware.

Traffic Concurrency  
Subsection 4.140 (.09) J. 2.

**D13. Review Criteria:** “That the location, design, size and uses are such that traffic generated by the development at the most probable used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D, as defined in the Highway Capacity Manual published by the National Highway Research Board, on existing or immediately planned arterial or collector streets and will, in the case of commercial or industrial developments, avoid traversing local streets. Immediately planned arterial and collector streets are those listed in the City’s adopted Capital Improvement Program, for which funding has been approved or committed, and that are scheduled for completion within two years of occupancy of the development or four year if they are an associated crossing, interchange, or approach street improvement to Interstate 5.” Additional qualifiers and criteria listed a. through e.

**Finding:** These criteria are satisfied.

**Details of Finding:** As shown in revised Trip Generation Memorandum, Exhibit A4, the LOS D standard will continue to be met by existing street improvements at the studied intersections with existing, planned, and this proposed development as follows:  
SW Canyon Creek Road/SW Daybreak Street LOS A/B Volume to Capacity: 0.09

Facilities and Services Concurrency  
Subsection 4.140 (.09) J. 3.

**D14. Review Criteria:** “That the location, design, size and uses are such that the residents or establishments to be accommodated will be adequately served by existing or immediately planned facilities and services.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Sufficient facilities and services, including utilities, are proposed to be developed concurrently with the subdivision and needed utility lines are available in Canyon Creek Road South.

Adherence to Approved Plans  
Subsection 4.140 (.09) L.

**D15. Review Criteria:** “The applicant shall agree in writing to be bound, for her/himself and her/his successors in interest, by the conditions prescribed for approval of a development. The approved final plan and stage development schedule shall control the issuance of all building permits and shall restrict the nature, location and design of all uses. Minor changes in an approved preliminary or final development plan may be approved by the Director of Planning if such changes are consistent with the purposes and general character of the development plan. All other modifications, including extension or revision of the stage development schedule, shall be processed in the same manner as the original application and shall be subject to the same procedural requirements.”

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDD 2.

**Details of Finding:** Condition of Approval PDD 2 ensures adherence to approved plans except for minor revisions by the Planning Director.

**Residential Development Standards: Open Space and Outdoor Recreation**

Purpose of Outdoor Recreational Area  
Subsection 4.113 (.01) A.

**D16. Review Criteria:** “The purposes of the following standards for outdoor recreational area are to provide adequate light, air, open space and usable recreational facilities to occupants of each residential development.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The required outdoor recreational area is proposed.

Design for Privacy  
Subsection 4.113 (.01) A. 1.

**D17. Review Criteria:** “Outdoor recreational area shall be: Designed with a reasonable amount of privacy balanced between indoor and outdoor living areas.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed park area provides a shared outdoor living area without causing any privacy issues for private living areas.

Needs of Tenants  
Subsection 4.113 (.01) A. 2.

**D18. Review Criteria:** “Recreational areas shall be provided in keeping with the needs of the prospective tenants.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Providing the required area is adequate for the 14-lot subdivision.

Location Prohibitions

Subsection 4.113 (.01) A. 2.

**D19. Review Criteria:** “Recreational areas . . . shall not be located in required yards, parking, or maneuvering areas, or areas that are inaccessible.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed recreational area is not in any of the listed areas.

Waiving Outdoor Recreational Area Standard

Subsection 4.113 (.01) A. 2.

**D20. Review Criteria:** “Standards for outdoor recreational areas may be waived by the Development Review Board upon finding that the recreational needs of the residents will be adequately met through the use of other recreational facilities that are available in the area.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has not requested any waivers.

DRB Altering Amount of Outdoor Recreation Area

Subsection 4.113 (.01) A. 4.

**D21. Review Criteria:** “The Development Review Board may establish conditions of approval to alter the amount of required outdoor recreation area, based on findings of projected need for the development.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No additional conditions of approval are proposed.

Outdoor Recreational Area Part of Required Open Space

Subsection 4.113 (.01) A. 5.

**D22. Review Criteria:** “Outdoor recreational area shall be considered to be part of the open space required in the following subsection.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The shared outdoor recreational area is included as part of the open space requirement.

25 % Open Space Required

Subsection 4.113 (.02) A.

**D23. Review Criteria:** “In all residential subdivisions including subdivision portions of mixed use developments where (1) the majority of the developed square footage is to be in residential use or (2) the density of residential units is equal or greater than 3 units per acre, at least twenty-five percent (25%) of the area shall be in open space excluding streets and private drives.”

**Finding:** These criteria are satisfied.

**Details of Finding:** With much of the area in the SROZ, well in excess of 25% of the

properties are proposed as open space.

#### What Open Space Must Include

Subsection 4.113 (.02) A.

**D24. Review Criteria:** “Open space must include, as a minimum natural areas that are preserved under the City’s SROZ regulations and usable open space such as public park area, tot lots, swimming and wading pools, grass area for picnics and recreational play, walking paths, and other like space.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The open space includes the SROZ area plus the required usable open space. Additional discussion of open space can be found on page 4 of the applicant’s findings in Exhibit B1.

#### Usable Open Space When SROZ is Greater than 25 % of Developable Area

Subsection 4.113 (.02) A.

**D25. Review Criteria:** “Provided, however, where SROZ is greater than 25% of the developable area for any development, the development must also provide ¼ acre of usable park area for a development of less than 100 lots, and ½ acre of usable park area for a development of 100 lots, and pro rata amounts based on this formula for subdivisions exceeding 100 lots.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant proposes a usable park area of 0.29 acres, exceeding the 0.25 acre requirement.

#### Waiving Usable Open Space Requirement

Subsection 4.113 (.02) A.

**D26. Review Criteria:** “The Development Review Board may waive the usable open space requirement if there is substantial evidence in the record to support a finding that the intent and purpose of the requirement will be met in alternative ways.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has not requested any related waivers.

#### Phasing and Usable Open Space Requirement

Subsection 4.113 (.02) A.

**D27. Review Criteria:** “Irrespective of the amount of SROZ, a development may not use phasing to avoid the minimum usable space requirement.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No phasing is proposed.

Easements and Dedication to the Public of Open Space  
Subsection 4.113 (.02) B.

**D28. Review Criteria:** “Open space area required by this Section may, at the discretion of the Development Review Board, be protected by a conservation easement or dedicated to the City, either rights in fee or easement, without altering the density or other development standards of the proposed development. Provided that, if the dedication is for public park purposes, the size and amount of the proposed dedication shall meet the criteria of the City parks standards.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The open space tracts will be owned by a homeowners association.

Including Open Space Area in Density and Lot Coverage Calculations  
Subsection 4.113 (.02) B.

**D29. Review Criteria:** “The square footage of any land, whether dedicated or not, which is used for open space shall be deemed a part of the development site for the purpose of computing density or allowable lot coverage.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The density calculations include the open space area.

Assuring Protection and Maintenance of Open Space  
Subsection 4.113 (.02) C.

**D30. Review Criteria:** “The Development Review Board may specify the method of assuring the long-term protection and maintenance of open space and/or recreational areas. Where such protection or maintenance are the responsibility of a private party or homeowners’ association, the City Attorney shall review any pertinent bylaws, covenants, or agreements prior to recordation.”

**Finding:** These criteria will be satisfied by Condition of Approval PDD 3.

**Details of Finding:** A condition of approval requires City review of subdivision and homeowners association documents to ensure long term protection and maintenance of open space areas.

**Residential Development: Setbacks for Lots Less than 10,000 Square Feet**

Front Yard Setback  
Subsection 4.113 (.03) B. 1.

**D31. Review Criteria:** “Minimum front yard setback: Fifteen (15) feet, with open porches allowed to extend to within ten (10) feet of the property line.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed lots will allow homes to be built meeting these setbacks.

### Side Yard Setback

Subsection 4.113 (.03) B. 2.

**D32. Review Criteria:** “Minimum side yard setback: One story: five (5) feet; Two or more stories: seven (7) feet. In the case of a corner lot, abutting more than one street or tract with a private drive, the side yard on the street side of such lot shall be not less than ten (10) feet.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed lots will allow homes to be built meeting these setbacks.

### Setbacks and Future Streets

Subsection 4.113 (.03) B. 4.

**D33. Review Criteria:** “No structure shall be erected within the required setback for any future street shown within the City’s adopted Transportation Master Plan or Transportation Systems Plan.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No special setbacks are required for future planned streets.

### Garage Door or Carport Setbacks

Subsection 4.113 (.03) B. 5.

**D34. Review Criteria:** “Minimum setback to garage door or carport entry: Twenty (20) feet. Wall above the garage door may project to within fifteen (15) feet of property line, provided that clearance to garage door is maintained. Where access is taken from an alley, garages or carports may be located no less than four (4) feet from the property line adjoining the alley.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed lots will allow homes to be built meeting these setbacks.

### Rear Yard Setbacks

Subsection 4.113 (.03) B. 6.

**D35. Review Criteria:** “Minimum rear yard setback: One story: fifteen (15) feet. Two or more stories: Twenty (20) feet. Accessory buildings on corner lots must observe the same rear setbacks as the required side yard of the abutting lot.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed lots will allow homes to be built meeting these setbacks.

## Residential Development: Height Guidelines

### Height Guidelines

Subsection 4.113 (.04)

**D36. Review Criteria:** “The Development Review Board may regulate heights as follows:



A. Restrict or regulate the height or building design consistent with adequate provision of fire protection and fire-fighting apparatus height limitations.

B. To provide buffering of low density developments by requiring the placement of buildings more than two (2) stories in height away from the property lines abutting a low density zone.

C. To regulate building height or design to protect scenic vistas of Mt. Hood or the Willamette River from greater encroachments than would occur if developed conventionally.

**Finding:** These criteria are satisfied.

**Details of Finding:** No additional height regulations beyond the typical for the zone are recommended.

## Residential Treatment Facilities

Residential Homes (Treatment Facilities) Allowed in Single-Family Development  
Subsection 4.113 (.05) A.

D37. **Review Criteria:** "Residential Homes, as defined in Section 4.001, shall be permitted in any location where a single-family dwelling is permitted."

**Finding:** These criteria are satisfied.

**Details of Finding:** Residential Homes, though not currently planned, will be permitted in the subdivision.

## Fences in Residential Development

Front Yard Fence Height  
Subsection 4.113 (.08) A.

D38. **Review Criteria:** "The maximum height of a sight-obscuring fence located in the required front yard of a residential development shall not exceed four (4) feet."

**Finding:** These criteria are satisfied.

**Details of Finding:** No fences are proposed in the front yard.

Side and Rear Yard Fence Height  
Subsection 4.113 (.08) B.

D39. **Review Criteria:** "The maximum height of a sight-obscuring fence located in the side yard of a residential lot shall not exceed four (4) feet forward of the building line and shall not exceed six (6) feet in height in the rear yard, except as approved by the Development Review Board. Except, however, that a fence in the side yard of residential corner lot may be up to six (6) feet in height, unless a greater restriction is imposed by the Development Review Board acting on an application. A fence of up to six (6) feet in height may be constructed with no setback along the side, the rear, and in the front yard of a residential lot adjoining the rear of a corner lot as shown in the attached Figure."

**Finding:** These criteria are satisfied.

**Details of Finding:** All fences will be required to meet these height requirements. The applicant does not propose any fences over 6 feet.

#### Prohibited Fence Materials

Subsection 4.113 (.08) D.

**D40. Review Criteria:** “Fences in residential zones shall not include barbed wire, razor wire, electrically charged wire, or be constructed of sheathing material such as plywood or flakeboard.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Installed fences will not be allowed to be made of these materials.

#### Prohibited Uses in Residential Areas

##### Prohibited Uses

Subsection 4.113 (.10)

**D41. Review Criteria:** This subsection lists uses prohibited in residential development including: uses for structures not specifically permitted in the applicable zone, trailers travel trailers or mobile coaches for a residence except in approved RV parks, and outdoor advertising display, signs, or advertising structures as provided in the City’s sign code.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant does not propose any prohibited uses.

#### Accessory Dwelling Units

##### Accessory Dwelling Units

Subsection 4.113 (.11)

**D42. Review Criteria:** This subsection establishes the standards for accessory dwelling units for all PDR zones, R zone, RA-H zone, and Village zone.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant does not propose any accessory dwelling units. Any future accessory dwelling units will be required to conform with this subsection.

#### Compliance, Conditions, and Effect on Cost of Needed Housing

##### Impacting Needed Housing Cost

Subsection 4.113 (.14)

**D43. Review Criteria:** “The Planning Director and Development Review Board shall, in making their determination of compliance in attaching conditions, consider the effects of this action on the availability and cost of needed housing. The provisions of this section shall not be used in such a manner that additional conditions, either singularly or cumulatively, have the effect of unnecessarily increasing the cost of housing or effectively excluding a needed housing type. However, consideration of these factors shall not

prevent the Board or Planning Director from imposing conditions of approval necessary to meet the minimum requirements of the Comprehensive Plan and Code.”

**Finding:** These criteria are satisfied.

**Details of Finding:** During review of the project no conditions or requirements have been identified that would unduly increase the cost of housing proposed in the subdivision.

## Standards Applying in All Planned Development Zones

### Additional Height Guidelines

Subsection 4.118 (.01)

**D44. Review Criterion:** “In cases that are subject to review by the Development Review Board, the Board may further regulate heights as follows:

A. Restrict or regulate the height or building design consistent with adequate provision of fire protection and fire-fighting apparatus height limitations.

B. To provide buffering of low density developments by requiring the placement of three or more story buildings away from the property lines abutting a low density zone.

C. To regulate building height or design to protect scenic vistas of Mt. Hood or the Willamette River.”

**Finding:** This criterion is satisfied.

**Details of Finding:** Staff does not recommend the Development Review Board require a height less than otherwise allowed as the allowed height provides for fire protection access, does not abut a low density zone where shorter homes are required, and does not impact scenic views of Mt. Hood or the Willamette River.

### Underground Utilities

Subsection 4.118 (.02) and Sections 4.300 to 4.320

**D45. Review Criteria:** “Underground Utilities shall be governed by Sections 4.300 to 4.320. All utilities above ground shall be located so as to minimize adverse impacts on the site and neighboring properties.”

**Finding:** These criteria are satisfied.

**Details of Finding:** All utilities are required to be installed underground.

### Waivers

Subsection 4.118 (.03)

**D46. Review Criteria:** “Notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purposes and objectives of Section 4.140, and based on findings of fact supported by the record may” waive a number of standards as listed in A. through E.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant requests a waiver to average lot size. See Request G.

#### Other Requirements or Restrictions

Subsection 4.118 (.03) E.

**D47. Review Criteria:** “Notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purposes and objectives of Section 4.140, and based on findings of fact supported by the record may adopt other requirements or restrictions, inclusive of, but not limited to, the following:” Listed 1. through 12.

**Finding:** These criteria are satisfied.

**Details of Finding:** Staff does not recommend any additional requirements or restrictions pursuant to this subsection.

#### Impact on Development Cost

Subsection 4.118 (.04)

**D48. Review Criteria:** “The Planning Director and Development Review Board shall, in making their determination of compliance in attaching conditions, consider the effects of this action on availability and cost. The provisions of this section shall not be used in such a manner that additional conditions, either singularly or cumulatively, have the effect of unnecessarily increasing the cost of development. However, consideration of these factors shall not prevent the Board from imposing conditions of approval necessary to meet the minimum requirements of the Comprehensive Plan and Code.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Staff has determined compliance or attached conditions do not unnecessarily increase the cost of development, and no evidence has been submitted to the contrary.

#### Requiring Tract Dedications

Subsection 4.118 (.05)

**D49. Review Criteria:** “The Planning Director, Development Review Board, or on appeal, the City Council, may as a condition of approval for any development for which an application is submitted, require that portions of the tract or tracts under consideration be set aside, improved, conveyed or dedicated for the following uses:” Recreational Facilities, Open Space Area, Easements.”

**Finding:** These criteria are satisfied.

**Details of Finding:** For the purposes given, no additional tracts are required.

#### Habitat Friendly Development Practices

Subsection 4.118 (.09)

**D50. Review Criteria:** “To the extent practicable, development and construction activities of any lot shall consider the use of habitat-friendly development practices, which include:

A. Minimizing grading, removal of native vegetation, disturbance and removal of native soils, and impervious area;

B. Minimizing adverse hydrological impacts on water resources, such as using the practices described in Part (a) of Table NR-2 in Section 4.139.03, unless their use is prohibited by an applicable and required state or federal permit, such as a permit required under the federal Clean Water Act, 33 U.S.C. §§1251 et seq., or the federal Safe Drinking Water Act, 42 U.S.C. §§300f et seq., and including conditions or plans required by such permit;

C. Minimizing impacts on wildlife corridors and fish passage, such as by using the practices described in Part (b) of Table NR-2 in Section 4.139.03; and

D. Using the practices described in Part (c) of Table NR-2 in Section 4.139.03.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The portions of the subject properties proposed for development do not contain any wildlife corridors or fish passages. The site does contain SROZ area where the only development is a permitted access path. Grading on the site will be limited to necessary grading to install the site improvements and construct houses. Water, sewer and storm water are available and will be designed and constructed in accordance with the Code to minimize adverse impacts on the site, surrounding properties and environment.

## Standards Applying to All Planned Development Residential Zones

### Typically Permitted Uses

Subsection 4.124 (.01)

**D51. Review Criteria:** This subsection lists the typically permitted uses in all PDR Zones including: open space, single-family dwelling units, multi-family dwelling units subject to the density standards of the zone, public parks, playgrounds, recreational and community buildings and grounds, tennis courts, and similar recreational uses, and manufactured homes.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant proposes single-family homes, open spaces, and a park, all listed as permitted uses.

### Uses Permitted Accessory to Single-Family Dwellings

Subsection 4.124 (.02)

**D52. Review Criteria:** This subsection lists the uses permitted accessory to single-family dwellings including: uses customarily incidental, living quarters for employees or guests, accessory dwelling units, home occupations, private garage or parking area, keeping a limited amount of boarders (up to 2), temporary construction buildings, accessory buildings, and livestock and farm animals subject to City established provisions.

**Finding:** These criteria are satisfied.

**Details of Finding:** None of the listed accessory uses are specifically listed by the applicant but will be allowed consistent with this subject.

## Block and Access Standards in PDR Zones

### Maximum Block Perimeter

Subsection 4.124 (.06) 1.

**D53. Review Criteria:** "Maximum block perimeter in new land divisions: 1,800 feet."

**Finding:** These criteria are satisfied.

**Details of Finding:** Block 1 is approximately 208 long and is separated from Block 2 and Block 3 by a public street to the south and east. The residential lot area of Block 2 is 156 feet long, with an overall length of 341 feet, and is separated from Block 1 and Block 3 by a public street and a private street to the west. Block 3 is 214 feet long and is separated from Block 1 and Block 2 by a public street to the north and a private street to the east.

### Maximum Spacing Between Streets for Local Access

Subsection 4.124 (.06) 2.

**D54. Review Criteria:** "Maximum spacing between streets or private drives for local access: 530 feet, unless waived by the Development Review Board upon finding that barriers such as railroads, freeways, existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent street extensions meeting this standard."

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed public street providing access to the project is 94.3 feet south of Daybreak Street. The distance between the subdivision entrance and the private street is 214 feet.

### Maximum Block Length

Subsection 4.124 (.06) 3.

**D55. Review Criteria:** "Maximum block length without pedestrian and bicycle crossing: 330 feet, unless waived by the Development Review Board upon finding that barriers such as railroads, freeways, existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions meeting this standard."

**Finding:** These criteria are satisfied.

**Details of Finding:** Both Blocks 1 and 3 are less than 330 feet. Block 2 is 341 feet long, but contains a pedestrian pathway providing access from the public street and park to the SROZ area. Additionally, the entire eastern portion of Block 2 is SROZ that will not be developed.

## PDR-3 Zone Standards

### Average Lot Size

Subsection 4.124.3 (.01)

**D56. Review Criteria:** "Average lot size: 7,000 square feet."

**Finding:** These criteria are satisfied.



**Details of Finding:** The applicant has requested a waiver for the average lot size. See Request G.

Minimum Lot Size

Subsection 4.124.3 (.02)

D57. **Review Criteria:** "Minimum lot size: 5,000 square feet."

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant proposes all lots to be 5,000 square feet or more.

Minimum Density

Subsection 4.124.3 (.03)

D58. **Review Criteria:** "Minimum density at build out: One unit per 8,000 square feet."

**Finding:** These criteria are satisfied.

**Details of Finding:** Minimum density has been calculated based on the Comprehensive Plan density range, understood to be the controlling standard for density, as historically applied elsewhere with Planned Development Residential zoning. The minimum density calculation is as follows:

Usable (non-SROZ) acres  $2.33 \times 4 \text{ du/ac} = 9.32$  or 9 lots minimum

In addition, the property is permitted a density transfer from the SROZ portion of the property equal to 50% of the expected maximum density for the SROZ area, calculated as follows:

SROZ acres  $2.04 \times 5 \text{ du/ac} = 10.2 \times 0.5$  (50% SROZ transfer credit = 5.1 or 5 units)

The proposed unit count (14) is the minimum density (9) plus the permitted transfer credit (5).

Minimum Lot Width

Subsection 4.124.3 (.04) A.

D59. **Review Criteria:** "Minimum lot width at building line: Forty (40) feet."

**Finding:** These criteria are satisfied.

**Details of Finding:** All lot widths are 40 feet or greater as shown on the tentative plat.

Minimum Street Frontage

Subsection 4.124.3 (.04) B.

D60. **Review Criteria:** "Minimum street frontage of lot: Forty (40) feet; however, street frontage may be reduced to twenty-four (24) feet when the lot fronts a cul-de-sac. No street frontage is required when the lot fronts on an approved, platted private drive."

**Finding:** These criteria are satisfied.

**Details of Finding:** As shown on the tentative plat all lots have 40 feet or greater of frontage on a street or private drive.

Minimum Lot Depth

Subsection 4.124.3 (.04) C.

**D61. Review Criteria:** "Minimum lot depth: Sixty (60) feet.

**Finding:** These criteria are satisfied.

**Details of Finding:** As shown on the preliminary plat all lots are greater than 60 feet in depth.

Maximum Height

Subsection 4.124.3 (.04) E.

**D62. Review Criteria:** "Maximum building or structure height: Thirty-five (35) feet."

**Finding:** These criteria are satisfied.

**Details of Finding:** No homes will be approved for construction in this subdivision with a height greater than 35 feet.

Maximum Lot Coverage

Subsection 4.124.3 (.04) F.

**D63. Review Criteria:** "Maximum lot coverage: Fifty percent (50%) for lots containing less than 7000 square feet. Forty-five percent (45%) for lots between 7000 and 8000 square feet. Forty percent (40%) for lots exceeding 8000 square feet."

**Finding:** These criteria are satisfied.

**Details of Finding:** All proposed lots are less than 7,000 square feet in size and thus would be allowed up to 50% lot coverage.

**Significant Resource Overlay Zone**

Where SROZ Regulations Apply

Section 4.139.02

**D64. Review Criteria:** "The regulations of this Section apply to the portion of any lot or development site, which is within a Significant Resource Overlay Zone and its associated "Impact Areas". . . Unless otherwise exempted by these regulations, any development proposed to be located within the Significant Resource Overlay Zone and/or Impact Area must comply with these regulations."

**Finding:** These criteria are satisfied.

**Details of Finding:** The regulations apply to a significant portion of the properties within the SROZ. However, the proposed trail development within the SROZ is exempt.

Uses Exempt from SROZ Regulations

Section 4.139.04

**D65. Review Criteria:** This subsection lists the uses and activities exempt from SROZ requirements, including "The construction of new roads, pedestrian or bike paths into the SROZ in order to provide access to the sensitive area or across the sensitive area, provided

the location of the crossing is consistent with the intent of the Wilsonville Comprehensive Plan. Roads and paths shall be constructed so as to minimize and repair disturbance to existing vegetation and slope stability.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The regulations apply to a significant portion of the properties within the SROZ. However, the proposed development of a bark pathway within the SROZ is exempt.

## Density Transfer from Significant Resource Overlay Zone

Transfer of Density from SROZ Permitted

Subsection 4.139.11 (.02)

**D66. Review Criteria:** “For residential development proposals on lands which contain the SROZ, a transfer of density shall be permitted within the development proposal site.”

**Finding:** These criteria are satisfied.

**Details of Finding:** A density transfer is proposed consistent with this subsection.

SROZ Density Transfer Formula

Subsection 4.139.11 (.02)

**D67. Review Criteria:** “The following formula shall be used to calculate the density that shall be permitted for allowed residential use on the property:

A. Step 1. Calculate Expected Maximum Density. The Expected Maximum Density (EMD) is calculated by multiplying the acreage of the property by the maximum density permitted in the Wilsonville Comprehensive Plan.

B. Step 2. The density that shall be permitted on the property shall be equal to the EMD obtained in Step 1, provided:

1. The density credit can only be transferred to that portion of the development site that is not located within the designated Significant Resource; and
2. 50% of the maximum number of dwelling units that are within the SROZ are allowed to be transferred to the buildable portion of the proposed development site

**Finding:** These criteria are satisfied.

**Details of Finding:** The permitted density transfer is 5 units based on the following calculation:

SROZ acres 2.04x5 du/ac (maximum density per proposed Comprehensive Plan designation) = 10.2 x 0.5 (50% SROZ transfer credit) = 5.1 or 5 units

SROZ Density Transfer Limiting Standards.

Subsection 4.139.11 (.02) B. 2.-3.

**D68. Review Criteria:** “2. 50% of the maximum number of dwelling units that are within the SROZ are allowed to be transferred to the buildable portion of the proposed development site provided that the standards for outdoor living area, landscaping, building height and parking shall still be met. Applicants proposing a density transfer must demonstrate

compatibility between adjacent properties as well as satisfy the setback requirements of the zone in which the development is proposed or meet Section 4.139.10 A. above; and

3. The types of residential uses and other applicable standards permitted in the zone shall remain the same; and

**Finding:** These criteria are satisfied.

**Details of Finding:** The standards for outdoor living area, landscaping, building height and parking are still met as established by other findings under this request. The proposed lots are of a similar size as many in the area and meet the minimum of the PDR-3 zone and will allow development of homes similar to many in the area. Setbacks and relationships to adjacent properties are similar with or without the density transfer. Setbacks for the PDR-3 zone are met. Permitted single-family homes and parks and open space continue to be the only uses proposed with the density transfer. All other applicable standards are able to be met with the density transfer.

### **On-site Pedestrian Access and Circulation**

#### Conformance with Standards

Section 4.154 (.01) B. 1.

**D69. Review Criteria:** "Development shall conform to all of the following standards:"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** All of the on-site pedestrian access and circulation standards are being applied to the proposed development.

#### Continuous Pathway System

Section 4.154 (.01) B. 1.

**D70. Review Criteria:** "A pedestrian pathway system shall extend throughout the development site and connect to adjacent sidewalks, and to all future phases of the development, as applicable."

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Sidewalks are shown in the applicant's plans extending along the public streets and private drive. The design ensures pedestrian connectivity to the front of each home.

#### Safe, Direct, and Convenient

Section 4.154 (.01) B. 2.

**D71. Review Criteria:** "Pathways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas/playgrounds, and public rights-of-way and crosswalks based on all of the following criteria:"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The submitted plans show pedestrian connections to all the lots and the park and natural areas.

#### Free from Hazards/Smooth Surface

Section 4.154 (.01) B. 2. a.

**D72. Review Criteria:** “Pedestrian pathways are designed primarily for pedestrian safety and convenience, meaning they are free from hazards and provide a reasonably smooth and consistent surface.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed pathways are planned to be free from hazards and will be a smooth hard surface for sidewalks and an appropriate surface for the natural secondary path into the park and natural area.

#### Reasonably Direct

Section 4.154 (.01) B. 2. b.

**D73. Review Criteria:** “The pathway is reasonably direct. A pathway is reasonably direct when it follows a route between destinations that does not involve a significant amount of unnecessary out-of-direction travel.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The sidewalks and pathway provide direct access to the lots and park and natural area.

#### Vehicle/Pathway Separation

Section 4.154 (.01) B. 3.

**D74. Review Criteria:** “Except as required for crosswalks, per subsection 4, below, where a pathway abuts a driveway or street it shall be vertically or horizontally separated from the vehicular lane. For example, a pathway may be vertically raised six inches above the abutting travel lane, or horizontally separated by a row of bollards.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** All pedestrian pathways are vertically and or horizontally separated, except as necessitated by driveway cuts.

#### Crosswalks

Section 4.154 (.01) B. 4.

**D75. Review Criteria:** “Where a pathway crosses a parking area or driveway, it shall be clearly marked with contrasting paint or paving materials (e.g., pavers, light-color concrete inlay between asphalt, or similar contrast).”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Marked crosswalks with contrasting paint are proposed at the crossing of the proposed public street at Canyon Creek Road South and across the proposed public street at the entrance to the pathway to the park and natural area. In addition the sidewalk at the entrance to the private drive is concrete contrasting with the asphalt of the private drive.

Pathway Width and Surface

Section 4.154 (.01) B. 5.

**D76. Review Criteria:** “Primary pathways shall be constructed of concrete, asphalt, brick/masonry pavers, or other durable surface, and not less than five (5) feet wide. Secondary pathways and pedestrian trails may have an alternative surface except as otherwise required by the ADA.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** All proposed pathways are 5 feet or wider.

**Parking Area Design Standards**

Minimum and Maximum Parking

Subsection 4.155 (.03) G.

**D77. Review Criteria:** “Tables 5 shall be used to determine the minimum and maximum parking standards for various land uses. The minimum number of required parking spaces shown on Tables 5 shall be determined by rounding to the nearest whole parking space. For example, a use containing 500 square feet, in an area where the standard is one space for each 400 square feet of floor area, is required to provide one off-street parking space. If the same use contained more than 600 square feet, a second parking space would be required. Structured parking and on-street parking are exempted from the parking maximums in Table 5.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Each dwelling unit requires 1 parking space. The applicant states each lot will accommodate at least 1 exterior parking space meeting the dimensions of 20 feet lot and 12 feet wide. In addition, all homes will have at least a 1 car garage and on-street parking is provided on the proposed street.

Other Parking Area Design Standards

Subsections 4.155 (.02) and (.03)

**D78. Review Criteria:** These subsections list a number of standards affecting the design of parking areas.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicable standards are met as follows:

Standard	Met	Explanation
Subsection 4.155 (.02) General Standards		
B. All spaces accessible and usable for Parking	☒	Standard residential driveway design is proposed for the exterior parking. Staff does not have house plans to determine the accessibility of garages for parking. However, the garages are not necessary to



		meet minimum parking requirements.
I. Surfaced with asphalt, concrete or other approved material.	☒	Driveways and garages will be surfaced with concrete. Street surfaced with asphalt.
Drainage meeting City standards	☒	Professionally designed drainage will meet City standards
Subsection 4.155 (.03) General Standards		
A. Access and maneuvering areas adequate.	☒	All off-street parking areas will be accessible off the proposed street or private drive which provide adequate area for typical vehicles to circulate.
A.2. To the greatest extent possible, vehicle and pedestrian traffic separated.	☒	Vehicle and pedestrian traffic are clearly delineated and separated except for crosswalks.

**Other Parking Standards and Policies and Procedures**

Parking Standards Minimum Criteria  
 Subsection 4.155 (.02) A.

**D79. Review Criteria:** “The standards set forth herein shall be considered by the Development Review Board as minimum criteria.”  
Finding: These criteria are satisfied.  
Details of Finding: The standards are considered minimum criteria and in many cases have been exceeded such as number and size of planned parking spaces.

Parking Variances and Waivers  
 Subsection 4.155 (.02) A. 1.-2.

**D80. Review Criteria:** “1. The Board shall have the authority to grant variances or planned development waivers to these standards in keeping with the purposes and objectives set forth in the Comprehensive Plan and this Code. 2. Waivers to the parking, loading, or bicycle parking standards shall only be issued upon a findings that the resulting development will have no significant adverse impact on the surrounding neighborhood, and the community, and that the development considered as a whole meets the purposes of this section.”  
Finding: These criteria are satisfied.  
Details of Finding: No variances or waivers to the parking standards are requested nor would be necessary to approve the proposed subdivision.

On-Street Parking for Parking Calculations  
Subsection 4.155 (.03) F.

- D81. **Review Criteria:** “On-street parking spaces, directly adjoining the frontage of and on the same side of the street as the subject property, may be counted towards meeting the minimum off-street parking standards.”  
**Finding:** These criteria are satisfied.  
**Details of Finding:** The parking requirements are met without counting on-street parking.

**Access, Ingress, and Egress**

Access at Defined Points  
Subsection 4.167 (.01)

- D82. **Review Criterion:** “Each access onto streets or private drives shall be at defined points as approved by the City”  
**Finding:** This criterion is satisfied.  
**Details of Finding:** The access points are at defined points appropriate for a local street.

Health, Safety, and Welfare  
Subsection 4.167 (.01)

- D83. **Review Criterion:** “Each access onto streets or private drives shall be . . . consistent with the public's health, safety and general welfare.”  
**Finding:** This criterion is satisfied.  
**Details of Finding:** By virtue of meeting applicable standards of Chapter 4 as well as having a requirement to meet Public Works Standards a finding can be made the access points will be consistent with the public’s health, safety and general welfare.

Approval of Access Points  
Subsection 4.167 (.01)

- D84. **Review Criterion:** “Such defined points of access shall be approved at the time of issuance of a building permit if not previously determined in the development permit.”  
**Finding:** This criterion is satisfied.  
**Details of Finding:** The Engineering Division is reviewing and approving all points of access to public streets.

**Protection of Natural Features and Other Resources**

Regard for Natural Terrain and Features  
Section 4.171 (.02) A.

- D85. **Review Criteria:** “All developments shall be planned, designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant landforms.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Development is limited to the more open gently sloping portion of the site protecting the forested riparian area within the SROZ.

#### Grading Compliance with Uniform Building Code Section 4.171 (.02) B.

**D86. Review Criteria:** "All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code"

**Finding:** These criteria are satisfied.

**Details of Finding:** Prior to any site earth work a grading permit must be issued by the City's Building Division ensuring planned grading conforms with the Uniform Building Code.

#### Limiting Soil Disturbance Section 4.171 (.02) C. 1.

**D87. Review Criteria:** "all developments shall be planned, designed, constructed and maintained so as to: Limit the extent of disturbance of soils and site by grading, excavation and other land alterations"

**Finding:** These criteria are satisfied.

**Details of Finding:** Grading and disturbance is limited to only areas necessary for street construction, home sites, and park improvements.

#### Avoiding Erosion, Pollution, etc. Section 4.171 (.02) C. 2.

**D88. Review Criteria:** "all developments shall be planned, designed, constructed and maintained so as to: Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination, or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats."

**Finding:** These criteria are satisfied.

**Details of Finding:** Erosion control measures will be required during construction and no indications exist of the development leading to accelerated erosion, pollution, contamination, or siltation of water bodies, damage to significant native vegetation, or injury to wildlife or fish habitat.

#### Minimize Tree Removal Section 4.171 (.02) C. 3.

**D89. Review Criteria:** "all developments shall be planned, designed, constructed and maintained so as to: Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character."

**Finding:** These criteria are satisfied.

**Details of Finding:** Both the applicant and staff have carefully reviewed the tree removal plan to maximize the number of retained trees. Tree removal is limited to non-viable trees, and viable trees were construction impacts from streets, utilities, and home placement are not reasonably avoidable.

#### Timing of Vegetation Disturbance

Section 4.171 (.04) A. 1.

**D90. Review Criteria:** “All developments shall be planned, designed, constructed and maintained so that: Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant is not authorized to remove any vegetation that otherwise would not be removed for property maintenance or other non-development related reasons.

#### Incorporation of Trees and Wooded Area in Site Planning

Section 4.171 (.04) A. 2.

**D91. Review Criteria:** “All developments shall be planned, designed, constructed and maintained so that: Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The preservation of the forested riparian area along the eastern edge of the site is part of the site planning. Both the applicant and staff have carefully reviewed the tree removal plan to maximize the number of retained trees during home development.

#### Preservation of Trees in Right-of-Way

Section 4.171 (.04) A. 3.

**D92. Review Criteria:** “All developments shall be planned, designed, constructed and maintained so that: Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Both the applicant and staff have carefully reviewed the tree removal plan and have not found additional trees appropriate to preserve within the right-of-way.

Tree Protection During Construction  
Section 4.171 (.04) B.

**D93. Review Criteria:** "Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:" Listed 1. through 4.

**Finding:** These criteria are satisfied.

**Details of Finding:** As required under Request F, retained trees will be protected during construction consistent with City standards.

**Public Safety and Crime Prevention**

Design for Public Safety  
Subsection 4.175 (.01)

**D94. Review Criteria:** "All developments shall be designed to deter crime and insure public safety."

**Finding:** These criteria are satisfied.

**Details of Finding:** The development will be a fairly traditional single-family subdivision to create a quiet area with eyes on the street to discourage crime.

Addressing and Directional Signing  
Subsection 4.175 (.02)

**D95. Review Criteria:** "Addressing and directional signing shall be designed to assure identification of all buildings and structures by emergency response personnel, as well as the general public."

**Finding:** These criteria is satisfied.

**Details of Finding:** All homes will be required to have addresses meeting applicable requirements.

Surveillance and Access  
Subsection 4.175 (.03)

**D96. Review Criterion:** "Areas vulnerable to crime shall be designed to allow surveillance. Parking and loading areas shall be designed for access by police in the course of routine patrol duties."

**Finding:** This criterion is satisfied.

**Details of Finding:** No parking or loading areas are proposed needing surveillance. No other areas especially vulnerable to crime are proposed.

Lighting to Discourage Crime  
Subsection 4.175 (.04)

**D97. Review Criterion:** "Exterior lighting shall be designed and oriented to discourage crime."

**Finding:** This criterion is satisfied.

**Details of Finding:** No specific lighting is proposed or needed to discourage crime.

## Landscaping Standards

Landscape Code Compliance  
Subsection 4.176 (.02) B.

**D98. Review Criteria:** “All landscaping and screening required by this Code must comply with all of the provisions of this Section, unless specifically waived or granted a Variance as otherwise provided in the Code. The landscaping standards are minimum requirements; higher standards can be substituted as long as fence and vegetation-height limitations are met. Where the standards set a minimum based on square footage or linear footage, they shall be interpreted as applying to each complete or partial increment of area or length”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has not requested any waivers or variances to landscape standards. Thus all landscaping and screening must comply with standards of this section.

Intent and Required Materials  
Subsections 4.176 (.02) C. through I.

**D99. Review Criteria:** These subsections identify the various landscaping standards, including the intent of where they should be applied, and the required materials.

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDD 4.

**Details of Finding:** All landscape areas subject to the landscape standards are required to meet the general landscape standard. The standard is met except on the frontage of the lots facing the private drive, which does not have street trees. Condition of Approval PDD 4 requires one street tree for each lot along the private drive.

**Required Materials:** Shrubs and trees, other than street trees, may be grouped. Ground cover plants must fully cover the remainder of the landscaped area (see Figure 21: General Landscaping). The General Landscaping Standard has two different requirements for trees and shrubs:

a. Where the landscaped area is less than 30 feet deep, one tree is required for every 30 linear feet.

b. Where the landscaped area is 30 feet deep or greater, one tree is required for every 800 square feet and two high shrubs or three low shrubs are required for every 400 square feet.

**Materials Provided:** Street trees where driveway cuts and infrastructure placement allows, additional evergreen trees in the park area. All additional landscaping strip and park areas will have groundcover.



## Landscape Area

Subsection 4.176 (.03)

**D100. Review Criteria:** “Not less than fifteen percent (15%) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent (10%) parking area landscaping required by section 4.155.03(B)(1) is included in the fifteen percent (15%) total lot landscaping requirement.”

**Finding:** These criteria are satisfied.

**Details of Finding:** In residential development this standard is met by the open space requirements in Section 4.113.

## Landscape Locations

Subsection 4.176 (.03)

**D101. Review Criteria:** “Landscaping shall be located in at least three separate and distinct areas of the lot, one of which must be in the contiguous frontage area. Planting areas shall be encouraged adjacent to structures.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Landscaping is provided in all the landscaping strips throughout the project in addition to the proposed park and open space.

## Use of Landscaping

Subsection 4.176 (.03)

**D102. Review Criteria:** “Landscaping shall be used to define, soften or screen the appearance of buildings and off-street parking areas.”

**Finding:** These criteria are satisfied.

**Details of Finding:** While landscaping will soften homes from the street, no other buildings or off-street parking areas requiring screening are proposed.

## Plant Material Variety

Subsection 4.176 (.03)

**D103. Review Criteria:** “Materials to be installed shall achieve a balance between various plant forms, textures, and heights.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Applicant’s sheet L1 and L2 indicate a variety of landscaping materials that create the variety required by this subsection.

## Native Plant Material Use

Subsection 4.176 (.03)

**D104. Review Criteria:** “The installation of native plant materials shall be used whenever practicable.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The level of native plant use is appropriate for the application.

## Buffering and Screening

Subsection 4.176 (.04)

**D105. Review Criteria:** “Additional to the standards of this subsection, the requirements of the Section 4.137.5 (Screening and Buffering Overlay Zone) shall also be applied, where applicable.

A. All intensive or higher density developments shall be screened and buffered from less intense or lower density developments.

B. Activity areas on commercial and industrial sites shall be buffered and screened from adjacent residential areas. Multi-family developments shall be screened and buffered from single-family areas.

C. All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.

D. All outdoor storage areas shall be screened from public view, unless visible storage has been approved for the site by the Development Review Board or Planning Director acting on a development permit.

E. In all cases other than for industrial uses in industrial zones, landscaping shall be designed to screen loading areas and docks, and truck parking.

F. In any zone any fence over six (6) feet high measured from soil surface at the outside of fence line shall require Development Review Board approval.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No buffering and screening pursuant to this subsection is required or proposed.

## Landscape Plans

Subsection 4.176 (.09)

**D106. Review Criteria:** “Landscape plans shall be submitted showing all existing and proposed landscape areas. Plans must be drawn to scale and show the type, installation size, number and placement of materials. Plans shall include a plant material list. Plants are to be identified by both their scientific and common names. The condition of any existing plants and the proposed method of irrigation are also to be indicated.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Applicant’s sheets L1 and L2 provide the required information.

## Street Improvement Standards-Generally

### Conformance with Standards and Plan

Subsection 4.177 (.01)

**D107. Review Criteria:** “Development and related public facility improvements shall comply with the standards in this section, the Wilsonville Public Works Standards, and the Transportation System Plan,”

**Finding:** These criteria are satisfied.

**Details of Finding:** As shown in the findings below, the proposed public improvements are subject to the standards of Section 4.177 as well as the Public Works Standards and the TSP with the exception of the intersection spacing between SW Daybreak Street and the proposed public street which is 94.3 feet rather than the standard of 100 feet or greater. Exhibit C2 regards the City Engineer's approval of the reduced distance as allowed by Section 201.1.03 of the Public Works Standards.

The Engineering Division will issue a Public Works Permit prior to construction and inspect during construction ensuring the Public Works Standards are met. Canyon Creek Road South and the proposed new public street are local streets with no specific requirements or deficiencies in the Transportation System Plan outside the typical design requirements.

#### Rough Proportionality Subsection 4.177 (.01)

**D108. Review Criteria:** This subsection establishes public facility improvements required shall be in rough proportion to the potential impacts of the development.

**Finding:** These criteria are satisfied.

**Details of Finding:** Standard half street improvements are required and full-street improvements where the development is on both sides. No analysis of rough proportionality is necessary as the applied standards are the typical minimal standards and no questions exist regarding public improvements and rough proportionality.

#### Timing of Street Improvements Subsection 4.177 (.01)

**D109. Review Criteria:** "Such improvements shall be constructed at the time of development or as provided by Section 4.140, except as modified or waived by the City Engineer for reasons of safety or traffic operations."

**Finding:** These criteria are satisfied.

**Details of Finding:** Street improvements will be constructed prior to any home construction.

### **Street Improvement Standards-Adjoining Property Connectivity**

#### Streets and Adjoining Properties Subsection 4.177 (.02) A.

**D110. Review Criteria:** "All street improvements and intersections shall provide for the continuation of streets through specific developments to adjoining properties or subdivisions."

**Finding:** These criteria are satisfied.

**Details of Finding:** The public street proposed allows for future extension onto adjacent properties.

Adjoining Property Connections  
Subsection 4.177 (.02) A. 1.

**D111. Review Criteria:** “Development shall be required to provide existing or future connections to adjacent sites through the use of access easements where applicable. Such easements shall be required in addition to required public street dedications as required in Section 4.236(.04).”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed public street allows for future extension onto adjacent properties.

**Street Improvement Standards-Right-of-Way**

Right-of-Way Width Determination  
Subsection 4.177 (.02) B.

**D112. Review Criteria:** “The City Engineer shall make the final determination regarding right-of-way and street element widths using the ranges provided in Chapter 3 of the Transportation System Plan and the additional street design standards in the Public Works Standards.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The proposed street is shown consistent with Figure 3-9 of the 2013 Transportation Systems Plan.

Right-of-Way Dedication  
Subsection 4.177 (.02) C. 1.

**D113. Review Criteria:** “Prior to issuance of a Certificate of Occupancy Building permits or as a part of the recordation of a final plat, the City shall require dedication of rights-of-way in accordance with the Transportation System Plan. All dedications shall be recorded with the County Assessor's Office.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Right-of-way dedication is proposed as part of the Tentative Subdivision Plat. See Request H.

Waiver of Remonstrance  
Subsection 4.177 (.02) C. 2.

**D114. Review Criterion:** “The City shall also require a waiver of remonstrance against formation of a local improvement district, and all non-remonstrances shall be recorded in the County Recorder's Office as well as the City's Lien Docket, prior to issuance of a Certificate of Occupancy Building Permit or as a part of the recordation of a final plat.”

**Finding:** This criterion will be satisfied by Condition of Approval PDD 5

**Details of Finding:** Condition of Approval PDD 5 requires the waiver of remonstrance.

## Arterial Street Setbacks

Subsection 4.177 (.02) C. 3.

**D115. Review Criteria:** “In order to allow for potential future widening, a special setback requirement shall be maintained adjacent to all arterial streets. The minimum setback shall be 55 feet from the centerline or 25 feet from the right-of-way designated on the Master Plan, whichever is greater.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The Transportation Systems Plan does not show any arterial streets adjacent to the site.

## Street Improvement Standards-Dead End Streets

### Dead-end Streets

Subsection 4.177 (.02) D.

**D116. Review Criteria:** “Dead-end Streets. New dead-end streets or cul-de-sacs shall not exceed 200 feet in length, unless the adjoining land contains barriers such as existing buildings, railroads or freeways, or environmental constraints such as steep slopes, or major streams or rivers, that prevent future street extension and connection. A central landscaped island with rainwater management and infiltration are encouraged in cul-de-sac design. No more than 25 dwelling units shall take access to a new dead-end or cul-de-sac street unless it is determined that the traffic impacts on adjacent streets will not exceed those from a development of 25 or fewer units. All other dimensional standards of dead-end streets shall be governed by the Public Works Standards. Notification that the street is planned for future extension shall be posted on the dead-end street.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The full length of the proposed public street exceeds the 200-foot maximum for a dead-end street. However, the project does contain a private drive at the halfway point of the public street, providing an outlet and turn-around for emergency services and, while it is a dead end now, the street is designed to be extended with potential future development to the north. Only 13 lots take access from the new street or the connected private drive.

## Street Improvement Standards-Clearance

### Corner Vision Clearance

Subsection 4.177 (.02) E.

**D117. Review Criteria:** “A clear vision area which meets the Public Works Standards shall be maintained on each corner of property at the intersection of any two streets, a street and a railroad or a street and a driveway. However, the following items shall be exempt from meeting this requirement:” Listed a. through e.

**Finding:** These criteria are satisfied.

**Details of Finding:** The design of the development enables the required vision clearance to

be met.

#### Vertical Clearance

Subsection 4.177 (.02) F.

**D118. Review Criteria:** “Vertical clearance - a minimum clearance of 12 feet above the pavement surface shall be maintained over all streets and access drives.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The design of the development enables the required vertical clearance to be met.

### Street Improvement Standards- Interim Improvements

#### Interim Improvement Standards

Subsection 4.177 (.02) G.

**D119. Review Criteria:** “It is anticipated that all existing streets, except those in new subdivisions, will require complete reconstruction to support urban level traffic volumes. However, in most cases, existing and short-term projected traffic volumes do not warrant improvements to full Master Plan standards. Therefore, unless otherwise specified by the Development Review Board, the following interim standards shall apply.” Listed 1 through 3 including asphalt overlays, half-street improvements, and single-asphalt lifts.

**Finding:** These criteria are satisfied.

**Details of Finding:** No interim improvements are proposed.

### Street Improvement Standards-Sidewalks

#### Sidewalks Required

Subsection 4.177 (.03)

**D120. Review Criteria:** “Sidewalks shall be provided on the public street frontage of all development. Sidewalks shall generally be constructed within the dedicated public right-of-way, but may be located outside of the right-of-way within a public easement with the approval of the City Engineer.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Sidewalks are proposed on both sides of the proposed public street, and along the project frontage with Canyon Creek Road South.

#### Through Zone

Subsection 4.177 (.03) A.

**D121. Review Criteria:** “Sidewalk widths shall include a minimum through zone of at least five feet. The through zone may be reduced pursuant to variance procedures in Section 4.196, a waiver pursuant to Section 4.118, or by authority of the City Engineer for reasons of traffic operations, efficiency, or safety.”

**Finding:** These criteria are satisfied.



**Details of Finding:** All sidewalks are shown with a through zone of at least five feet.

Sidewalks on One Side  
Subsection 4.177 (.03) B.

**D122. Review Criteria:** “Within a Planned Development, the Development Review Board may approve a sidewalk on only one side. If the sidewalk is permitted on just one side of the street, the owners will be required to sign an agreement to an assessment in the future to construct the other sidewalk if the City Council decides it is necessary.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Sidewalks are proposed on both sides of the proposed street as well as the project’s side of Canyon Creek Road South.

### **Street Improvement Standards-Bicycle Facilities and Multiuse Paths**

Bicycle Facilities and TSP  
Subsection 4.177 (.04)

**D123. Review Criteria:** “Bicycle facilities shall be provided to implement the Transportation System Plan, and may include on-street and off-street bike lanes, shared lanes, bike boulevards, and cycle tracks. The design of on-street bicycle facilities will vary according to the functional classification and the average daily traffic of the facility.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The streets within and adjacent to the project do not require any bike facilities per the Transportation Systems Plan.

### **Street Improvements Standards- Access Drives and Driveways**

Clear Travel Lane  
Subsection 4.177 (.08) A.

**D124. Review Criteria:** “An access drive to any proposed development shall be designed to provide a clear travel lane free from any obstructions.”

**Finding:** These criteria are satisfied.

**Details of Finding:** All access drives are designed to be kept clear of obstructions and provide a clear travel lane.

Travel Lane Load Capacity  
Subsection 4.177 (.08) B.

**D125. Review Criteria:** “Access drive travel lanes shall be constructed with a hard surface capable of carrying a 23-ton load.”

**Finding:** This criterion will be satisfied by Condition of Approval PDD 6.

**Details of Finding:** The condition of approval requires all travel lanes to be built of a hard surface capable of carrying a 23-ton load.

### Emergency Vehicle Access

Subsection 4.177 (.08) C.

**D126. Review Criteria:** “Where emergency vehicle access is required, approaches and driveways shall be designed and constructed to accommodate emergency vehicle apparatus and shall conform to applicable fire protection requirements. The City may restrict parking, require signage, or require other public safety improvements pursuant to the recommendations of an emergency service provider.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The site has been designed for sufficient access for emergency vehicles and as reviewed by TVF&R.

### Emergency Access Lanes

Subsection 4.177 (.08) D.

**D127. Review Criteria:** “Secondary or emergency access lanes may be improved to a minimum 12 feet with an all-weather surface as approved by the Fire District. All fire lanes shall be dedicated easements.”

**Finding:** These criteria are satisfied.

**Details of Finding:** All access lanes meet or exceed the minimum 12 foot standard.

### Contextual Design

Subsection 4.177 (.08) E.

**D128. Review Criteria:** “Minimum access requirements shall be adjusted commensurate with the intended function of the site based on vehicle types and traffic generation.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Access is typical for single-family homes and no special consideration is needed for unique vehicle types or unique traffic generation.

### Access and Street Classifications

Subsection 4.177 (.08) F.

**D129. Review Criteria:** “The number of approaches on higher classification streets (e.g., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No access is proposed onto a collector or arterial street.

### Access Restrictions

Subsection 4.177 (.08) G.

**D130. Review Criteria:** “The City may limit the number or location of connections to a street, or impose access restrictions where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No safety or traffic operations concerns arose from the Transportation Impact Study that would necessitate a change to the street connection points.

#### Ditch and Culvert Crossings

Subsection 4.177 (.08) N.

**D131. Review Criteria:** “Where a proposed driveway crosses a culvert or drainage ditch, the City may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant applicable Public Works standards.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No ditch or culvert crossings are proposed.

#### Surfacing of Temporary Driveways

Subsection 4.177 (.08) O.

**D132. Review Criteria:** “Except as otherwise required by the applicable roadway authority or waived by the City Engineer, temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets.”

**Finding:** These criteria will be satisfied by Condition of Approval PDD 7.

**Details of Finding:** A condition of approval requires temporary construction driveway to be paved or graveled to prevent tracking of mud onto adjacent paved streets.

### Street Improvement Standards- Intersection Spacing

#### Transportation System Plan Table 3-2

Subsection 4.177 (.09) B.

**D133. Review Criteria:** “Minimum intersection spacing standards are provided in Transportation System Plan Table 3-2.”

**Finding:** These criteria are satisfied.

**Details of Finding:** All streets involved are local streets, thus access spacing is not an issue.

#### Exceptions and Adjustments

Subsection 4.177 (.10)

**D134. Review Criteria:** “The City may approve adjustments to the spacing standards of subsections (.08) and (.09) above through a Class II process, or as a waiver per Section 4.118(.03)(A.), where an existing connection to a City street does not meet the standards of the roadway authority, the proposed development moves in the direction of code compliance, and mitigation measures alleviate all traffic operations and safety concerns. Mitigation measures may include consolidated access (removal of one access), joint use driveways (more than one property uses same access), directional limitations (e.g., one-way), turning restrictions (e.g., right in/out only), or other mitigation.”

**Finding:** These criteria are satisfied.

Details of Finding: No adjustments to spacing standards are proposed.

## Request E: DB15-0112 Site Design Review

### Objectives of Site Design Review

#### Proper Functioning of the Site

Subsection 4.400 (.02) A. and Subsection 4.421 (.03)

- E1. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Assure that Site Development Plans are designed in a manner that insures proper functioning of the site"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The park and landscape area has been professionally designed with significant thought about making the areas functional and safe. In addition, by virtue of satisfying applicable functional criteria as part of the Stage II Final Plan, the design ensures proper function.

#### High Quality Visual Environment

Subsection 4.400 (.02) A. and Subsection 4.421 (.03)

- E2. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Assure that Site Development Plans are designed in a manner that . . . maintains a high quality visual environment"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Professional landscaping of the streetscape and the park meeting City standards supports a high quality visual environment.

#### Encourage Originality, Flexibility, and Innovation

Subsection 4.400 (.02) B. and Subsection 4.421 (.03)

- E3. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The design allows for a variety of plants allowing for originality and flexibility in landscape design.

#### Discourage Inharmonious Development

Subsection 4.400 (.02) C. and Subsection 4.421 (.03)

- E4. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Discourage monotonous, drab, unsightly, dreary and inharmonious developments;"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** As indicated in Finding E2 above the professional unique design of the landscaping support a high quality visual environment and thus prevent monotonous, drab, unsightly, dreary development.

#### Proper Site Relationships

Subsection 4.400 (.02) D. and Subsection 4.421 (.03)

- E5. Review Criteria:** “The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards.” “Conserve the City's natural beauty and visual character and charm by assuring that structures, signs and other improvements are properly related to their sites,”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** A professional site specific design has been developed that carefully considers the relationship of the street and homes to the parks, open space, and street scape.

#### Proper Relationships with Surroundings

Subsection 4.400 (.02) D. and Subsection 4.421 (.03)

- E6. Review Criteria:** “The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards.” “Conserve the City's natural beauty and visual character and charm by assuring that structures, signs and other improvements are properly related . . . to surrounding sites and structures,”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** A professional site specific design has been developed that carefully considers the relationship of the street and homes to the parks, open space, and street scape.

#### Regard to Natural Aesthetics

Subsection 4.400 (.02) D. and Subsection 4.421 (.03)

- E7. Review Criteria:** “The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards.” “Conserve the City's natural beauty and visual character and charm . . . with due regard to the aesthetic qualities of the natural terrain and landscaping”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The preservation of the natural forested riparian corridor along the eastern edge of the site conserves the natural beauty. The installation of a professionally designed landscape along the streets and in the park consistent with City landscaping standards increases the natural and landscaping aesthetic of the project area.

### Protect and Enhance City's Appeal

Subsection 4.400 (.02) E. and Subsection 4.421 (.03)

- E8. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Protect and enhance the City's appeal and thus support and stimulate business and industry and promote the desirability of investment and occupancy in business, commercial and industrial purposes;"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Preserving a natural area and adding professionally designed parks and streetscape enhance the design of the subdivision and thus the appeal as part of the City.

### Stabilize Property Values/Prevent Blight

Subsection 4.400 (.02) F. and Subsection 4.421 (.03)

- E9. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Stabilize and improve property values and prevent blighted areas and, thus, increase tax revenues;"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The landscape design aims to create a pleasant residential neighborhood free from blight.

### Adequate Public Facilities

Subsection 4.400 (.02) G. and Subsection 4.421 (.03)

- E10. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Insure that adequate public facilities are available to serve development as it occurs and that proper attention is given to site planning and development so as to not adversely impact the orderly, efficient and economic provision of public facilities and services."

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Any necessary facilities, particularly water service for irrigation, is available to serve the proposed landscape areas.

### Pleasing Environments and Behavior

Subsection 4.400 (.02) H. and Subsection 4.421 (.03)

- E11. **Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Achieve the beneficial influence of pleasant environments for living and working on behavioral patterns and, thus, decrease the cost of governmental services and reduce opportunities for crime through careful consideration of physical design and site layout under defensible space guidelines that clearly define all areas as either public, semi-private, or private, provide



clear identity of structures and opportunities for easy surveillance of the site that maximize resident control of behavior -- particularly crime;"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The applicant aims to create a pleasing park and open space area to be a pleasant environment supportive of positive behavioral patterns.

#### Civic Pride and Community Spirit

Subsection 4.400 (.02) I. and Subsection 4.421 (.03)

**E12. Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Foster civic pride and community spirit so as to improve the quality and quantity of citizen participation in local government and in community growth, change and improvements;"

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The landscaping aims to contribute to a subdivision where a pleasing environment bring stability and pride of place contributing to individuals desire and ability to participate in civic activities.

#### Favorable Environment for Residents

Subsection 4.400 (.02) J. and Subsection 4.421 (.03)

**E13. Review Criteria:** "The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards." "Sustain the comfort, health, tranquility and contentment of residents and attract new residents by reason of the City's favorable environment and, thus, to promote and protect the peace, health and welfare of the City."

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The landscaping aims to create an attractive residential development as an option for existing Wilsonville residents as well as attract new residents.

### **Jurisdiction and Power of the DRB for Site Design Review**

#### Development Review Board Jurisdiction

Section 4.420

**E14. Review Criteria:** The section states the jurisdiction and power of the Development Review Board in relation to site design review including the application of the section, that development is required in accord with plans, and variance information.

**Finding:** These criteria will be satisfied by Condition of Approval PDE 2.

**Details of Finding:** A condition of approval has been included to ensure construction, site development, and landscaping are carried out in substantial accord with the Development Review Board approved plans, drawings, sketches, and other documents. No building permits will be granted prior to development review board approval. No variances are requested from site development requirements.

## Design Standards

### Use of Design Standards

Subsection 4.421 (.01)

**E15. Review Criteria:** “The following standards shall be utilized by the Board in reviewing the plans, drawings, sketches and other documents required for Site Design Review. These standards are intended to provide a frame of reference for the applicant in the development of site and building plans as well as a method of review for the Board. These standards shall not be regarded as inflexible requirements. They are not intended to discourage creativity, invention and innovation. The specifications of one or more particular architectural styles is not included in these standards.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has provided sufficient information demonstrating compliance with the standards of this subsection.

### Preservation of Landscaping

Subsection 4.421 (.01) A.

**E16. Review Criteria:** “The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soils removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant proposes leaving much of the properties as a preserved forested riparian area. Where development is occurring, the applicant proposes preserving as many trees as practicable.

### Surface Water Drainage

Subsection 4.421 (.01) D.

**E17. Review Criteria:** “Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties of the public storm drainage system.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The drainage has been professionally designed showing the proper attention has been paid as shown on sheet 7 of Exhibit B2.

### Above Ground Utility Installations

Subsection 4.421 (.01) E.

**E18. Review Criteria:** “Any utility installations above ground shall be located so as to have a harmonious relation to neighboring properties and site.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No above ground utility installations are proposed.

## Screening and Buffering of Special Features

Subsection 4.421 (.01) G.

**E19. Review Criteria:** “. Exposed storage areas, exposed machinery installations, surface areas, truck loading areas, utility buildings and structures and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall be required to prevent their being incongruous with the existing or contemplated environment and its surrounding properties. Standards for screening and buffering are contained in Section 4.176.”

**Finding:** These criteria are satisfied.

**Details of Finding:** No additional screening is required for any of the listed special features.

## Applicability of Design Standards

Subsection 4.421 (.02)

**E20. Review Criteria:** “The standards of review outlined in Sections (a) through (g) above shall also apply to all accessory buildings, structures, exterior signs and other site features, however related to the major buildings or structures.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The portions of the proposed development subject to site design review and the design standards are the proposed streetscape and park area.

## Conditions of Approval

Subsection 4.421 (.05)

**E21. Review Criterion:** “The Board may attach certain development or use conditions in granting an approval that are determined necessary to insure the proper and efficient functioning of the development, consistent with the intent of the Comprehensive Plan, allowed densities and the requirements of this Code.”

**Finding:** This criterion is satisfied.

**Details of Finding:** No additional conditions of approval are recommended to ensure the proper and efficient functioning of the development.

## Color or Materials Requirements

Subsection 4.421 (.06)

**E22. Review Criterion:** “The Board or Planning Director may require that certain paints or colors of materials be used in approving applications. Such requirements shall only be applied when site development or other land use applications are being reviewed by the City.”

**Finding:** This criterion is satisfied.

**Details of Finding:** No structures requiring review of color and materials are proposed.

## Site Design Review Submission Requirements

### Submission Requirements

Section 4.440

**E23. Review Criteria:** “A prospective applicant for a building or other permit who is subject to site design review shall submit to the Planning Department, in addition to the requirements of Section 4.035, the following:” Listed A through F.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has provided a sufficiently detailed landscape plan and street tree plan to review the streetscape and park area subject to site design review.

## Time Limit on Site Design Review Approvals

### Void after 2 Years

Section 4.442

**E24. Review Criterion:** “Site design review approval shall be void after two (2) years unless a building permit has been issued and substantial development pursuant thereto has taken place; or an extension is granted by motion of the Board.

**Finding:** This criterion is satisfied.

**Details of Finding:** The Applicant has indicated that they will pursue development within two (2) years and it is understood that the approval will expire after 2 years if a building permit hasn't been issued unless an extension has been granted by the board.

## Installation of Landscaping

### Landscape Installation or Bonding

Subsection 4.450 (.01)

**E25. Review Criterion:** “All landscaping required by this section and approved by the Board shall be installed prior to issuance of occupancy permits, unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the applicant.”

**Finding:** This criterion will be satisfied by Condition of Approval PDE 3.

**Details of Finding:** The condition of approval will assure installation or appropriate

security.

Approved Landscape Plan  
Subsection 4.450 (.02)

**E26. Review Criterion:** “Action by the City approving a proposed landscape plan shall be binding upon the applicant. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, as specified in this Code.”

**Finding:** This criterion will be satisfied by Condition of Approval PDE 4.

**Details of Finding:** The condition of approval shall provide ongoing assurance this criterion is met.

Landscape Maintenance and Watering  
Subsection 4.450 (.03)

**E27. Review Criterion:** “All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered with Board approval.”

**Finding:** This criterion will be satisfied by Condition of Approval PDE 5.

**Details of Finding:** The condition of approval will ensure landscaping is continually maintained in accordance with this subsection.

Modifications of Landscaping  
Subsection 4.450 (.04)

**E28. Review Criterion:** “If a property owner wishes to add landscaping for an existing development, in an effort to beautify the property, the Landscape Standards set forth in Section 4.176 shall not apply and no Plan approval or permit shall be required. If the owner wishes to modify or remove landscaping that has been accepted or approved through the City’s development review process, that removal or modification must first be approved through the procedures of Section 4.010.”

**Finding:** This criterion will be satisfied by Condition of Approval PDE 5.

**Details of Finding:** The condition of approval shall provide ongoing assurance that this criterion is met by preventing modification or removal without the appropriate City review.

## Natural Features and Other Resources

Protection  
Section 4.171

**E29. Review Criterion:** This section provides for the protection of a number of natural features and other resources including: general terrain preparation, hillsides, trees and wooded areas, high voltage powerline easements and rights of way and petroleum pipeline

easements, earth movement hazard areas, soil hazard areas, historic resources, and cultural resources.

**Finding:** This criterion is satisfied.

**Details of Finding:** The proposed design of the site provides for protection of natural features and other resources consistent with the proposed Stage II Final Plan for the site as well as the purpose and objectives of site design review. See Findings D85-D93 under Request D.

## **Landscaping**

### Landscape Standards Code Compliance

Subsection 4.176 (.02) B.

**E30. Review Criterion:** “All landscaping and screening required by this Code must comply with all of the provisions of this Section, unless specifically waived or granted a Variance as otherwise provided in the Code. The landscaping standards are minimum requirements; higher standards can be substituted as long as fence and vegetation-height limitations are met. Where the standards set a minimum based on square footage or linear footage, they shall be interpreted as applying to each complete or partial increment of area or length”

**Finding:** This criterion is satisfied.

**Details of Finding:** The applicant has not requested any waivers or variances to landscape standards. Thus all landscaping and screening must comply with standards of this section.

### Intent and Required Materials

Subsections 4.176 (.02) C. through I.

**E31. Review Criteria:** These subsections identify the various landscaping standards, including the intent of where they should be applied, and the required materials.

**Finding:** These criteria are satisfied.

**Details of Finding:** The general landscape standard has been applied throughout different landscape areas of the site and landscape materials are proposed to meet each standard in the different areas. The applicant has requested Site Design Review concurrently with a Stage II Final Plan. The Stage II Final Plan review includes an analysis of the functional application of the landscaping standards. See Finding D99 under Request D.

### Landscape Area and Locations

Subsection 4.176 (.03)

**E32. Review Criteria:** “Not less than fifteen percent (15%) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent (10%) parking area landscaping required by section 4.155.03(B)(1) is included in the fifteen percent (15%) total lot landscaping requirement. Landscaping shall be located in at least three separate and distinct areas of the lot, one of which must be in the contiguous frontage area. Planting areas shall be encouraged adjacent to structures. Landscaping shall be used to define,



soften or screen the appearance of buildings and off-street parking areas. Materials to be installed shall achieve a balance between various plant forms, textures, and heights. The installation of native plant materials shall be used whenever practicable.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Consistent with the proposed Stage II Final Plan for the site, applicant’s sheet L1 and L2 indicates landscaping will cover well in excess of 15% of the properties, not including the private landscaping on individual lots. The applicant proposes landscaping in a variety of different areas including streetscapes throughout the development. The plans show a wide variety of plants to achieve a professional design.

### Buffering and Screening

Subsection 4.176 (.04)

**E33. Review Criteria:** “Additional to the standards of this subsection, the requirements of the Section 4.137.5 (Screening and Buffering Overlay Zone) shall also be applied, where applicable.

A. All intensive or higher density developments shall be screened and buffered from less intense or lower density developments.

B. Activity areas on commercial and industrial sites shall be buffered and screened from adjacent residential areas. Multi-family developments shall be screened and buffered from single-family areas.

C. All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.

D. All outdoor storage areas shall be screened from public view, unless visible storage has been approved for the site by the Development Review Board or Planning Director acting on a development permit.

E. In all cases other than for industrial uses in industrial zones, landscaping shall be designed to screen loading areas and docks, and truck parking.

F. In any zone any fence over six (6) feet high measured from soil surface at the outside of fenceline shall require Development Review Board approval.”

**Finding:** These criteria are satisfied.

**Details of Finding:** Screening is not required.

### Shrubs and Groundcover Materials

Subsection 4.176 (.06) A.

**E34. Review Criteria:** This subsection establishes plant material and planting requirements for shrubs and ground cover.

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDE 6.

**Details of Finding:** The condition of approval requires the detailed requirements of this subsection to be met.

Plant Materials-Trees  
Subsection 4.176 (.06) B.

**E35. Review Criteria:** This subsection establishes plant material requirements for trees.

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDE 7.

**Details of Finding:** The plants material requirements for trees will be met as follows:

- The condition of approval requires all trees to be B&B (Balled and Burlapped)
- The condition of approval requires all plant materials to conform in size and grade to "American Standard for Nursery Stock" current edition."
- The applicant's planting plan lists tree sizes meeting requirements.

Types of Plant Species  
Subsection 4.176 (.06) E.

**E36. Review Criteria:** This subsection discusses use of existing landscaping or native vegetation, selection of plant materials, and prohibited plant materials.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has provided sufficient information in their landscape plan (sheet L1 and L2) showing the proposed landscape design meets the standards of this subsection.

Tree Credit  
Subsection 4.176 (.06) F.

**E37. Review Criteria:** "Existing trees that are in good health as certified by an arborist and are not disturbed during construction may count for landscaping tree credit as follows:

Existing trunk diameter	Number of Tree Credits
18 to 24 inches in diameter	3 tree credits
25 to 31 inches in diameter	4 tree credits
32 inches or greater	5 tree credits:"

Maintenance requirements listed 1. through 2.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant is not requesting any preserved trees be counted as tree credits pursuant to this subsection.

Exceeding Plant Standards  
Subsection 4.176 (.06) G.

**E38. Review Criterion:** "Landscape materials that exceed the minimum standards of this Section are encouraged, provided that height and vision clearance requirements are met."

**Finding:** This criterion is satisfied.

**Details of Finding:** The selected landscape materials do not violate any height or vision clearance requirements.

## Landscape Installation and Maintenance

### Subsection 4.176 (.07)

**E39. Review Criteria:** This subsection establishes installation and maintenance standards for landscaping.

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDE 8.

**Details of Finding:** The installation and maintenance standards are or will be met as follows:

- Plant materials are required to be installed to current industry standards and be properly staked to ensure survival
- Plants that die are required to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City.
- Irrigation Notes on the applicant's sheet L2 provides for irrigation during the establishment period.

## Landscape Plans

### Subsection 4.176 (.09)

**E40. Review Criterion:** "Landscape plans shall be submitted showing all existing and proposed landscape areas. Plans must be drawn to scale and show the type, installation size, number and placement of materials. Plans shall include a plant material list. Plants are to be identified by both their scientific and common names. The condition of any existing plants and the proposed method of irrigation are also to be indicated."

**Finding:** This criterion is satisfied.

**Details of Finding:** Applicant's sheets L1 and L2 in Exhibit B2 provides the required information.

## Completion of Landscaping

### Subsection 4.176 (.10)

**E41. Review Criterion:** "The installation of plant materials may be deferred for a period of time specified by the Board or Planning Director acting on an application, in order to avoid hot summer or cold winter periods, or in response to water shortages. In these cases, a temporary permit shall be issued, following the same procedures specified in subsection (.07)(C)(3), above, regarding temporary irrigation systems. No final Certificate of Occupancy shall be granted until an adequate bond or other security is posted for the completion of the landscaping, and the City is given written authorization to enter the property and install the required landscaping, in the event that the required landscaping has not been installed. The form of such written authorization shall be submitted to the City Attorney for review."

**Finding:** This criterion is satisfied.

**Details of Finding:** The applicant has not requested to defer installation of plant materials.

**Request F: DB15-0113 Type C Tree Plan**

**Type C Tree Removal-General**

Review Authority

Subsection 4.610.00 (.03) B.

- F1. Review Criterion:** “Type C. Where the site is proposed for development necessitating site plan review or plat approval by the Development Review Board, the Development Review Board shall be responsible for granting or denying the application for a Tree Removal Permit, and that decision may be subject to affirmance, reversal or modification by the City Council, if subsequently reviewed by the Council.”

**Finding:** This criterion is satisfied.

**Details of Finding:** The requested removal is connected to site plan review by the Development Review Board for new development. The DRB is thus reviewing the tree removal.

Conditions of Approval

Subsection 4.610.00 (.06) A.

- F2. Review Criterion:** “Conditions. Attach to the granting of the permit any reasonable conditions considered necessary by the reviewing authority including, but not limited to, the recording of any plan or agreement approved under this subchapter, to ensure that the intent of this Chapter will be fulfilled and to minimize damage to, encroachment on or interference with natural resources and processes within wooded areas;”

**Finding:** This criterion is satisfied.

**Details of Finding:** Condition of Approval PDF 7 provides specific preservation and protection measures regarding landscaping and construction to minimize impact on existing trees, including existing trees on the adjacent property north of Lot 1.

Completion of Operation

Subsection 4.610.00 (.06) B.

- F3. Review Criterion:** “Whenever an application for a Type B, C or D Tree Removal Permit is granted, the reviewing authority shall:” “Fix a reasonable time to complete tree removal operations;”

**Finding:** This criterion is satisfied.

**Details of Finding:** It is understood the tree removal will be completed by the time construction of the subdivision is completed, a reasonable time frame for tree removal.

Security for Permit Compliance

Subsection 4.610.00 (.06) C.

- F4. Review Criterion:** “Whenever an application for a Type B, C or D Tree Removal Permit is granted, the reviewing authority shall:” “Require the Type C permit grantee to file with the City a cash or corporate surety bond or irrevocable bank letter of credit in an amount

determined necessary by the City to ensure compliance with Tree Removal Permit conditions and this Chapter. 1. This requirement may be waived by the Planning Director if the tree removal must be completed before a plat is recorded, and the applicant has complied with WC 4.264(1) of this Code.”

**Finding:** This criterion is satisfied.

**Details of Finding:** No bond is anticipated to be required to ensure compliance with the tree removal plan as a bond is required for overall landscaping.

#### Tree Removal Standards

##### Subsection 4.610.10 (.01)

**F5. Review Criteria:** “Except where an application is exempt, or where otherwise noted, the following standards shall govern the review of an application for a Type A, B, C or D Tree Removal Permit:” Listed A. through J.

**Finding:** These criteria are satisfied.

**Details of Finding:** The standards of this subsection are met as follows:

- **Standard for the Significant Resource Overlay Zone:** Trees are not proposed to be removed within the Significant Resource Overlay Zone.
- **Preservation and Conservation:** The applicant has taken tree preservation into consideration, and has limited tree removal to non-viable trees and trees necessary to remove for development.
- **Development Alternatives:** No significant wooded areas or trees would be preserved by design alternatives.
- **Land Clearing:** Land clearing is not proposed, and will not be a result of this development application.
- **Residential Development:** The proposed residential development preserves the wooded riparian area as well as additional trees on the site thus preserving trees where feasible and blending into the natural environment.
- **Compliance with Statutes and Ordinances:** The necessary tree replacement and protection is planned according to the requirements of tree preservation and protection ordinance.
- **Relocation or Replacement:** Tree removal is limited to where it is necessary for construction or to address nuisances or where the health of the trees warrants removal.
- **Limitation:** A tree survey has been provided.
- **Additional Standards:** A tree survey has been provided, and no utilities are proposed to be located where they would cause adverse environmental consequences.

#### Review Process

##### Subsection 4.610.40 (.01)

**F6. Review Criteria:** “Approval to remove any trees on property as part of a site development application may be granted in a Type C permit. A Type C permit application shall be

reviewed by the standards of this subchapter and all applicable review criteria of Chapter 4. Application of the standards of this section shall not result in a reduction of square footage or loss of density, but may require an applicant to modify plans to allow for buildings of greater height. If an applicant proposes to remove trees and submits a landscaping plan as part of a site development application, an application for a Tree Removal Permit shall be included. The Tree Removal Permit application will be reviewed in the Stage II development review process, and any plan changes made that affect trees after Stage II review of a development application shall be subject to review by DRB. Where mitigation is required for tree removal, such mitigation may be considered as part of the landscaping requirements as set forth in this Chapter. Tree removal shall not commence until approval of the required Stage II application and the expiration of the appeal period following that decision. If a decision approving a Type C permit is appealed, no trees shall be removed until the appeal has been settled."

**Finding:** These criteria are satisfied.

**Details of Finding:** Review of the plan is occurring concurrently with the Stage II Final Plan.

#### Tree Maintenance and Protection Plan

Section 4.610.40 (.02)

- F7. **Review Criteria:** "The applicant must provide ten copies of a Tree Maintenance and Protection Plan completed by an arborist that contains the following information:" Listed A. 1. through A. 7.

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant has submitted the necessary copies of a Tree Maintenance and Protection Plan. See sheet 8 of Exhibit B2.

### Replacement and Mitigation

#### Tree Replacement Requirement

Subsection 4.620.00 (.01)

- F8. **Review Criterion:** "A Type B or C Tree Removal Permit grantee shall replace or relocate each removed tree having six (6) inches or greater d.b.h. within one year of removal."

**Finding:** This criterion is satisfied.

**Details of Finding:** 33 trees 6 inches or greater d.b.h. are proposed for removal; 36 trees are proposed to be planted, exceeding a one to one ratio.

#### Basis for Determining Replacement

Subsection 4.620.00 (.02)

- F9. **Review Criteria:** "The permit grantee shall replace removed trees on a basis of one (1) tree replanted for each tree removed. All replacement trees must measure two inches (2") or more in diameter."

**Finding:** These criteria are satisfied.

**Details of Finding:** Trees will meet the minimum caliper requirement or will be required to



by Condition of Approval.

Replacement Tree Requirements  
Subsection 4.620.00 (.03)

- F10. Review Criteria:** “A mitigation or replacement tree plan shall be reviewed by the City prior to planting and according to the standards of this subsection.
- A. Replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture Nursery Grade No. 1 or better.
- B. Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee’s successors-in-interest for two (2) years after the planting date.
- C. A “guaranteed” tree that dies or becomes diseased during that time shall be replaced.
- D. Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat.”

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDF 5.

**Details of Finding:** The condition ensures the relevant requirements are met.

Replacement Tree Stock Requirements  
Subsection 4.620.00 (.04)

- F11. Review Criteria:** “All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade.”

**Finding:** These criteria are satisfied.

**Details of Finding:** A note on applicant’s sheet L2 indicates the appropriate quality.

Replacement Trees Locations  
Subsection 4.620.00 (.05)

- F12. Review Criteria:** “The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed.”

**Finding:** These criteria are satisfied.

**Details of Finding:** The applicant proposes to mitigate for all removed trees on site and in the appropriate locations for the proposed development.

## Protection of Preserved Trees

### Tree Protection During Construction Section 4.620.10

**F13. Review Criteria:** “Where tree protection is required by a condition of development under Chapter 4 or by a Tree Maintenance and Protection Plan approved under this subchapter, the following standards apply:” Listed A. through D.

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDF 6.

**Details of Finding:** The conditions of approval assure the applicable requirements of this Section will be met.

## Request G: DB15-0114 Waiver

### Waiver: Reduce Average Lot Size from 7,000 to 5,389.2 Square Feet

#### Waiver of Typical Development Standards Subsection 4.118 (.03) A.

**G1. Review Criteria:** This subsection establishes that “notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purpose and objectives of Section 4.140, and based on findings of fact supported by the record” may waive a number of typical development standards including height and yard requirements.

**Finding:** These criteria are satisfied.

**Details of Finding:** The waiver is proposed to allow a reduction of the average lot size from 7,000 to ~~5,389.2~~ **5,433.9** square feet. Minimum lot size is a typical development standard allowed to be waived. Due to the direct relationship between average and minimum lot size it is understood average lot size can also be waived. All lots exceed the minimum lot size, but due to the limited number of lots, most of which are less than 6,000 square feet, the average lot size is not met. A finding has been made regarding implementation of the purpose and objectives of Section 4.140. See below.

#### Purpose and Objectives of Planned Development Regulations Subsection 4.140 (.01) B.

**G2. Review Criteria:** This subsection establishes the purpose of the Planned Development Regulations which are as follows:

- To take advantage of advances in technology, architectural design, and functional land use design:
- To recognize the problems of population density, distribution and circulation and to allow a deviation from rigid established patterns of land uses, but controlled by defined policies and objectives detailed in the comprehensive plan;

- To produce a comprehensive development equal to or better than that resulting from traditional lot land use development.
- To permit flexibility of design in the placement and uses of buildings and open spaces, circulation facilities and off-street parking areas, and to more efficiently utilize potentials of sites characterized by special features of geography, topography, size or shape or characterized by problems of flood hazard, severe soil limitations, or other hazards;
- To permit flexibility in the height of buildings while maintaining a ratio of site area to dwelling units that is consistent with the densities established by the Comprehensive Plan and the intent of the Plan to provide open space, outdoor living area and buffering of low-density development.
- To allow development only where necessary and adequate services and facilities are available or provisions have been made to provide these services and facilities.
- To permit mixed uses where it can clearly be demonstrated to be of benefit to the users and can be shown to be consistent with the intent of the Comprehensive Plan.
- To allow flexibility and innovation in adapting to changes in the economic and technological climate.

**Finding:** These criteria are satisfied.

**Details of Finding:** Pursuant to Subsection 4.118 (.03) A. waivers must implement or better implement the purpose and objectives listed in this subsection. The average lot area supports the necessary flexibility in building and site design. As stated by the applicant, “because the site has such a large portion of SROZ area -- remaining undisturbed, all of the lots have to be contained on the western portion of the site. To achieve the density requirements, provide a viable project and preserve the SROZ area, it was necessary to decrease the average size of the lots.” See also applicant’s findings on pages 8 through 10 of their narrative in Exhibit B1.

## Request H: DB15-0115 Tentative Subdivision Plat

### Land Division Authorization

Plat Review Authority  
Subsection 4.202 (.01) through (.03)

**H1. Review Criteria:** “Pursuant to ORS Chapter 92, plans and plats must be approved by the Planning Director or Development Review Board (Board), as specified in Sections 4.030 and 4.031, before a plat for any land division may be filed in the county recording office for any land within the boundaries of the City, except that the Planning Director shall have authority to approve a final plat that is found to be substantially consistent with the tentative plat approved by the Board.

The Development Review Board and Planning Director shall be given all the powers and duties with respect to procedures and action on tentative and final plans, plats and maps of land divisions specified in Oregon Revised Statutes and by this Code.

Approval by the Development Review Board or Planning Director of divisions of land within the boundaries of the City, other than statutory subdivisions, is hereby required by virtue of the authority granted to the City in ORS 92.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The Development Review Board is reviewing the tentative subdivision plat according to this subsection. The final plat will be reviewed by the Planning Division under the authority of the Planning Director to ensure compliance with the DRB review of the tentative subdivision plat.

### Legally Lot Requirement

Subsection 4.202 (.04) A.

**H2. Review Criterion:** “No person shall sell any lot or parcel in any condominium, subdivision, or land partition until a final condominium, subdivision or partition plat has been approved by the Planning Director as set forth in this Code and properly recorded with the appropriate county.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** It is understood that no lots will be sold until the final plat has been approved by the Planning Director and recorded.

### Undersized Lots Prohibited

Subsection 4.202 (.04) B.

**H3. Review Criterion:** “It shall be a violation of this Code to divide a tract of land into a parcel smaller than the lot size required in the Zoning Sections of this Code unless specifically approved by the Development Review Board or City Council. No conveyance of any portion of a lot, for other than a public use, shall leave a structure on the remainder of the lot with less than the minimum lot size, width, depth, frontage, yard or setback requirements, unless specifically authorized through the Variance procedures of Section 4.196 or the waiver provisions of the Planned Development procedures of Section 4.118.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** No lots will be divided into a size smaller than allowed by the proposed PDR-3 zone designation with requested waivers.

### Plat Application Procedure

#### Pre-Application Conference

Subsection 4.210 (.01)

**H4. Review Criterion:** “Prior to submission of a tentative condominium, partition, or subdivision plat, a person proposing to divide land in the City shall contact the Planning Department to arrange a pre-application conference as set forth in Section 4.010.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** A pre-application conference was held in accordance with this subsection.

#### Tentative Plat Preparation

Subsection 4.210 (.01) A.

**H5. Review Criterion:** “The applicant shall cause to be prepared a tentative plat, together with improvement plans and other supplementary material as specified in this Section. The Tentative Plat shall be prepared by an Oregon licensed professional land surveyor or engineer. An affidavit of the services of such surveyor or engineer shall be furnished as part of the submittal.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** Sheet 3 of Exhibit B2 is a tentative plat submitted consistent with this subsection.

#### Tentative Plat Submission

Subsection 4.210 (.01) B.

**H6. Review Criteria:** “The design and layout of this plan plat shall meet the guidelines and requirements set forth in this Code. The Tentative Plat shall be submitted to the Planning Department with the following information:” Listed 1. through 26.

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The tentative subdivision plats have been submitted with the required information.

#### Phases to Be Shown

Subsection 4.210 (.01) D.

**H7. Review Criteria:** “Where the applicant intends to develop the land in phases, the schedule of such phasing shall be presented for review at the time of the tentative plat. In acting on an application for tentative plat approval, the Planning Director or Development Review Board may set time limits for the completion of the phasing schedule which, if not met, shall result in an expiration of the tentative plat approval.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The subdivision is proposed to be developed in a single phase.

#### Remainder Tracts

Subsection 4.210 (.01) E.

**H8. Review Criteria:** “Remainder tracts to be shown as lots or parcels. Tentative plats shall clearly show all affected property as part of the application for land division. All remainder tracts, regardless of size, shall be shown and counted among the parcels or lots of the division.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** All affected property has been incorporated into the tentative subdivision plat.

## Street Requirements for Land Divisions

### Master Plan or Map Conformance

Subsection 4.236 (.01)

**H9. Review Criteria:** “Land divisions shall conform to and be in harmony with the Transportation Master Plan (Transportation Systems Plan), the Bicycle and Pedestrian Master Plan, the Parks and Recreation Master Plan, the Official Plan or Map and especially to the Master Street Plan.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The land division allows for construction of local streets consistent with the Transportation Master Plan.

### Adjoining Streets Relationship

Subsection 4.236 (.02)

**H10. Review Criteria:** A land division shall provide for the continuation of the principal streets existing in the adjoining area, or of their proper projection when adjoining property is not developed, and shall be of a width not less than the minimum requirements for streets set forth in these regulations. Where, in the opinion of the Planning Director or Development Review Board, topographic conditions make such continuation or conformity impractical, an exception may be made. In cases where the Board or Planning Commission has adopted a plan or plat of a neighborhood or area of which the proposed land division is a part, the subdivision shall conform to such adopted neighborhood or area plan.

Where the plat submitted covers only a part of the applicant's tract, a sketch of the prospective future street system of the unsubmitted part shall be furnished and the street system of the part submitted shall be considered in the light of adjustments and connections with the street system of the part not submitted.

At any time when an applicant proposes a land division and the Comprehensive Plan would allow for the proposed lots to be further divided, the city may require an arrangement of lots and streets such as to permit a later resubdivision in conformity to the street plans and other requirements specified in these regulations.

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed public street allows for the potential future extension of the street to the north. Approximately 290 feet to the north of the dead end of the new public street McGraw Avenue dead ends at the edge of the Cross Creek subdivision. Currently two intervening 2 acre lots prevent a connection of McGraw Avenue and the planned street. The intervening lots have a Comprehensive Plan designation of 0-1 dwelling units an acre reflecting the current development. While no plans or requirements, short or long term exist to require the intervening lots to develop and connect the two dead ends it is possible that the property owners may elect to change



the Comprehensive Plan and Zone and pursue development similar to the subject lots and the Cross Creek Subdivision, and thus provision for street continuation should be provided for.

While a similar potential to develop properties to the south exists after a Comprehensive Plan Map amendment and Zone Map amendment, no plans exist for further development to the south nor is further density allowed under the currently adopted Comprehensive Plan Map designation. In addition, no street exists to the south for a potential connection over intervening properties. Thus no requirement exists to provide for street continuation to the property to the south.

Streets Standards Conformance  
Subsection 4.236 (.03)

**H11. Review Criteria:** "All streets shall conform to the standards set forth in Section 4.177 and the block size requirements of the zone."

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed plat enables the development of the streets consistent with the Stage II Final Plan and thus will conform with these listed standards and requirements for which compliance was reviewed with the Stage II Final Plan. See Request D.

Creation of Easements  
Subsection 4.236 (.04)

**H12. Review Criteria:** "The Planning Director or Development Review Board may approve an easement to be established without full compliance with these regulations, provided such an easement is the only reasonable method by which a portion of a lot large enough to allow partitioning into two (2) parcels may be provided with vehicular access and adequate utilities. If the proposed lot is large enough to divide into more than two (2) parcels, a street dedication may be required."

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No specific easements are requested pursuant to this subsection.

Topography  
Subsection 4.236 (.05)

**H13. Review Criterion:** "The layout of streets shall give suitable recognition to surrounding topographical conditions in accordance with the purpose of these regulations."

**Finding:** This criterion is satisfied.

**Explanation of Finding:** No significant topography exists affecting street layout decisions.

#### Reserve Strips

Subsection 4.236 (.06)

**H14. Review Criteria:** “The Planning Director or Development Review Board may require the applicant to create a reserve strip controlling the access to a street. Said strip is to be placed under the jurisdiction of the City Council, when the Director or Board determine that a strip is necessary:” Reasons listed A. through D.

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDH 2.

**Explanation of Finding:** A condition of approval requires a reserve strip preventing future continuation of the private drive.

#### Future Street Expansion

Subsection 4.236 (.07)

**H15. Review Criteria:** When necessary to give access to, or permit a satisfactory future division of, adjoining land, streets shall be extended to the boundary of the land division and the resulting dead-end street may be approved without a turn-around. Reserve strips and street plugs shall be required to preserve the objective of street extension.

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed public street is extended to the boundary of the land division to allow for potential future extension.

#### Additional Right-of-Way

Subsection 4.236 (.08)

**H16. Review Criteria:** “Whenever existing streets adjacent to or within a tract are of inadequate width, additional right-of-way shall conform to the designated width in this Code or in the Transportation Systems Plan.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No additional right-of-way is required for the proposed plat.

#### Street Names

Subsection 4.236 (.09)

**H17. Review Criteria:** “No street names will be used which will duplicate or be confused with the names of existing streets, except for extensions of existing streets. Street names and numbers shall conform to the established name system in the City, and shall be subject to the approval of the City Engineer.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The City Engineer has assigned a name to the new public street of SW McGraw Avenue.

## General Land Division Requirements-Blocks

### Blocks for Adequate Building Sites

Subsection 4.237 (.01) A.

**H18. Review Criteria:** “The length, width, and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated,”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The tentative subdivision plat shows blocks of the necessary size to allow for creation of residential lots and a shared open space tract.

### Blocks Consider Access and Traffic

Subsection 4.237 (.01) A.

**H19. Review Criteria:** “The length, width, and shape of blocks shall be designed with due . . . consideration of needs for convenient access, circulation, control, and safety of pedestrian, bicycle, and motor vehicle traffic,”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Blocks will be consistent with the Stage II Final Plan. See Request D.

### Blocks and Topography

Subsection 4.237 (.01) A.

**H20. Review Criteria:** “The length, width, and shape of blocks shall be designed with due . . . recognition of limitations and opportunities of topography.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The tentative subdivision plat shows blocks consistent with those proposed Stage II Final Plan. See Request D.

### Block Size

Subsection 4.237 (.01) B.

**H21. Review Criteria:** “Blocks shall not exceed the sizes and lengths specified for the zone in which they are located unless topographical conditions or other physical constraints necessitate larger blocks. Larger blocks shall only be approved where specific findings are made justifying the size, shape, and configuration.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The tentative subdivision plat shows blocks consistent with those proposed Stage II Final Plan. See Request D.

## General Land Division Requirements- Easements

### Utility Line Easements

Subsection 4.237 (.02) A.

**H22. Review Criteria:** Utility lines. Easements for sanitary or storm sewers, drainage, water mains, electrical lines or other public utilities shall be dedicated wherever necessary. Easements shall be provided consistent with the City's Public Works Standards, as specified by the City Engineer or Planning Director. All of the public utility lines within and adjacent to the site shall be installed within the public right-of-way or easement; with underground services extending to the private parcel constructed in conformance to the City's Public Works Standards. All franchise utilities shall be installed within a public utility easement. All utilities shall have appropriate easements for construction and maintenance purposes.

**Finding:** These criteria are satisfied or will be satisfied by Conditions of Approval PDH 5 and PDH 6.

**Explanation of Finding:** Many utilities will be located in the public right-of-way. A condition of approval requires public utility easements along the front of all lots and tracts for installation of franchise utilities. An additional condition of approval requires easements for any public utilities underneath private property such as the proposed private drive.

### Water Course Easements

Subsection 4.237 (.02) B.

**H23. Review Criteria:** "Water courses. Where a land division is traversed by a water course, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of the water course, and such further width as will be adequate for the purposes of conveying storm water and allowing for maintenance of the facility or channel. Streets or parkways parallel to water courses may be required."

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No easements are necessary pursuant to this subsection.

## General Land Division Requirements- Pedestrian and Bicycle Pathways

### Mid-block Pathways Requirement

Subsection 4.237 (.03)

**H24. Review Criteria:** "An improved public pathway shall be required to transverse the block near its middle if that block exceeds the length standards of the zone in which it is located.

- Pathways shall be required to connect to cul-de-sacs or to pass through unusually shaped blocks.

- Pathways required by this subsection shall have a minimum width of ten (10) feet unless they are found to be unnecessary for bicycle traffic, in which case they are to have a minimum width of six (6) feet.

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No mid-block crossings are proposed or required.

#### Pathways for Cul-de-sacs and Unusual Block Shapes

Subsection 4.237 (.03) A.

**H25. Review Criteria:** “Pathways shall be required to connect to cul-de-sacs or to pass through unusually shaped blocks.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No pathways are required pursuant to this subsection.

#### Required Pathway Width

Subsection 4.237 (.03) B.

**H26. Review Criteria:** “Pathways required by this subsection shall have a minimum width of ten (10) feet unless they are found to be unnecessary for bicycle traffic, in which case they are to have a minimum width of six (6) feet.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No pathways are proposed or required pursuant to this subsection.

### General Land Division Requirements- Tree Planting

#### Tree Plans Submitted with Land Divisions

Subsection 4.237 (.04)

**H27. Review Criteria:** “Tree planting plans for a land division must be submitted to the Planning Director and receive the approval of the Director or Development Review Board before the planting is begun.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** A landscape plan has been submitted as part of the Stage II Final Plan showing the proposed tree planting.

#### Tree Related Easements and Right-of-Entry

Subsection 4.237 (.04)

**H28. Review Criteria:** “Easements or other documents shall be provided, guaranteeing the City the right to enter the site and plant, remove, or maintain approved street trees that are located on private property.”

**Finding:** These criteria are satisfied or will be satisfied by Condition of Approval PDH 7.

**Explanation of Finding:** Street trees will be planted in the public right-of-way for lots fronting Canyon Creek Road South and the proposed Public Street. Street trees for the lots

fronting the private drive are required to be in an easement by a Condition of Approval.

## General Land Division Requirements- Lot Size and Shape

### Lot Size and Shape Appropriate

Subsection 4.237 (.05)

**H29. Review Criteria:** “The lot size, width, shape and orientation shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots shall meet the requirements of the zone where they are located.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Proposed lot sizes, widths, shapes and orientations are appropriate for the proposed single-family residential development and meet standards for the PDR-3 zone except average lot size, for which a waiver is requested. See Request G.

### Lot Size and Shape Meet Zoning Requirements

Subsection 4.237 (.05)

**H30. Review Criteria:** “Lots shall meet the requirements of the zone where they are located.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Proposed lot sizes, widths, shapes and orientations are met except as requested to be waived in Request G.

### On-Site Sewage Disposal

Subsection 4.237 (.05) A.

**H31. Review Criteria:** “In areas that are not served by public sewer, an on-site sewage disposal permit is required from the City. If the soil structure is adverse to on-site sewage disposal, no development shall be permitted until sewer service can be provided.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed residential development will be served by public sewer.

### Lot Size and Width for Planned Developments

Subsection 4.237 (.05) C.

**H32. Review Criteria:** “In approving an application for a Planned Development, the Development Review Board may waive the requirements of this section and lot size, shape, and density shall conform to the Planned Development conditions of approval.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The applicant has requested a waiver to average lot size, see Request G, and the land division enables development consistent with the proposed Stage II Final Plan.



## General Land Division Requirements- Access

### Minimum Street Frontage Subsection 4.237 (.06)

**H33. Review Criteria:** “The division of land shall be such that each lot shall have a minimum frontage on a street or private drive, as specified in the standards of the relative zoning districts. This minimum frontage requirement shall apply with the following exceptions:”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Each lot has the required frontage of at least 40 feet.

### Street Frontage Requirements for Curves and Cul-de-sacs Subsection 4.237 (.06) A.

**H34. Review Criteria:** “A lot on the outer radius of a curved street or tract with a private drive, or facing the circular end of a cul-de-sac shall have frontage of not less than twenty-five (25) feet upon a street or tract with a private drive, measured on the arc.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The proposed lots do not have limited frontage on the outer radius of a curved street or cul-de-sac.

### Waiver of Street Frontage Requirements Subsection 4.237 (.06) B.

**H35. Review Criteria:** “The Development Review Board may waive lot frontage requirements where in its judgment the waiver of frontage requirements will not have the effect of nullifying the intent and purpose of this regulation or if the Board determines that another standard is appropriate because of the characteristics of the overall development.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No waiver of lot frontage requirements is requested.

## General Land Division Requirements- Other

### Through Lots Subsection 4.237 (.07)

**H36. Review Criteria:** “Through lots shall be avoided except where essential to provide separation of residential development from major traffic arteries or adjacent non-residential activity or to overcome specific disadvantages of topography and orientation.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No lots are proposed as described in this subsection.

#### Lot Side Lines

Subsection 4.237 (.08)

**H37. Review Criteria:** “The side lines of lots, as far as practicable for the purpose of the proposed development, shall run at right angles to the street or tract with a private drive upon which the lots face.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The side lines for the parcels run at or near a right angle to the street and the front lot lines. Side lot lines for Lots 3 and 4 jog to enable to front building portion of the lots to be wider than the rear non-buildable portion of the lots.

#### Large Lot Divisions

Subsection 4.237 (.09)

**H38. Review Criteria:** “In dividing tracts which at some future time are likely to be re-divided, the location of lot lines and other details of the layout shall be such that re-division may readily take place without violating the requirements of these regulations and without interfering with the orderly development of streets. Restriction of buildings within future street locations shall be made a matter of record if the Development Review Board considers it necessary.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No future divisions of the proposed lots or tracts are planned.

#### Building Line and Built-to Line

Subsections 4.237 (.10) and (.11)

**H39. Review Criteria:** The Planning Director or Development Review Board may establish special: (.10) building setbacks to allow for the future redivision or other development of the property or for other reasons specified in the findings supporting the decision. If special building setback lines are established for the land division, they shall be shown on the final plat. (.11) build-to lines for the development, as specified in the findings and conditions of approval for the decision. If special build-to lines are established for the land division, they shall be shown on the final plat.

**Finding:** These criteria are satisfied.

**Explanation of Finding:** No building lines or built-to lines are proposed or recommended.

#### Land for Public Purposes

Subsection 4.237 (.12)

**H40. Review Criterion:** “The Planning Director or Development Review Board may require property to be reserved for public acquisition, or irrevocably offered for dedication, for a specified period of time.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** No property reservation is recommended as described in this

subsection.

#### Corner Lots

Subsection 4.237 (.13)

**H41. Review Criterion:** “Lots on street intersections shall have a corner radius of not less than ten (10) feet.”

**Finding:** This criterion is satisfied.

**Explanation of Finding:** All corner lots meet the minimum corner radius of ten (10) feet.

#### Lots of Record

##### Defining Lots of Record

Section 4.250

**H42. Review Criteria:** “All lots of record that have been legally created prior to the adoption of this ordinance shall be considered to be legal lots. Tax lots created by the County Assessor are not necessarily legal lots of record.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** The existing lots are of record as part of the plat of Bridle Trail Ranchettes, and the resulting lots will be of record.

#### Public Improvements

##### Improvements-Procedures

Section 4.260

**H43. Review Criteria:** “In addition to other requirements, improvements installed by the developer, either as a requirement of these regulations or at the developer's own option, shall conform to the requirements of this Code and improvement standards and specifications of the City. The improvements shall be installed in accordance with the City's Public Works Standards.”

**Finding:** These criteria are satisfied.

**Explanation of Finding:** All improvements will be required to conform to the Public Works Standards. See Condition of Approval PF 1 and Exhibit C1.

##### Improvements-Requirements

Section 4.262

**H44. Review Criteria:** This section establishes requirements for a number of different improvements including curbs, sidewalks, sanitary sewers, drainage, underground utility and service facilities, streetlight standards, street signs, monuments, and water.

**Finding:** These criteria are satisfied.

**Explanation of Finding:** Conformance with these requirements will be ensured through the Engineering Division's, and Building Division's, where applicable, permit and inspection process.

**Background Information:** The applicant requests approval for a zone change and comprehensive map amendment to PDR-3, along with Stage I and II Site Development Review and Planned Development approval for a 14-lot single-dwelling residential subdivision. One waiver request is included as part of this application, and that waiver is for the average lot size. The lots as presented meet the minimum lot size, but do not meet the average minimum due to almost half of the site being Significant Resource. The subject property is made up of two parcels, each with an existing house. All existing structures on the site will be removed as part of the development.

Access will take place from a new public street off of SW Canyon Creek Road South. It will extend to the northern-most edge of the site and dead-end as a stub street, as required by the City of Wilsonville (the City) for connectivity with future northern development. All of the lots will have driveways off of this new public street, with the exception of Lots 5 and 6 which will access off of a private street tract and Lot 1 which will take direct access from SW Canyon Creek Road South.

Sewer, water and storm are available from existing lines in SW Canyon Creek Road South. These lines will be extended through the new public street, with individual services provided to each lot. Storm water will be detained in LIDA planters and discharged to the creek to the east.

The site contains SROZ area on the eastern portion of the property. This area will not be disturbed or developed in any way. The site does not contain any flood plain, wetlands or fish and wildlife habitat. Care has been taken to retain all the trees in the SROZ area. Additionally, specifically four fir trees, a pine tree and a maple tree will be retained in area that is not SROZ. The adjacent property to the north has two large and healthy fir trees. The root system of these trees extends into the subject property. Throughout the development of this project, care will be taken to protect the root system of these two neighboring trees to ensure their health and viability as the subdivision is developed.

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**WILSONVILLE CODE (Code)**  
**CHAPTER 4 - PLANNING AND LAND DEVELOPMENT**

**Section 4.008**      **Application Procedures – In General**

**Response:** This application represents a request for a Stage I and Stage II Site Development Permit, Quasi-judicial zone change, Quasi-judicial change to the map of the Comprehensive Plan and a 14-lot subdivision developed as a Planned Development, with one waiver request. The subject property is 4.37 acres, which is more than 2 acres in size, and as such the requested zone is PDR- 3. The required usable and

non-usable open space is shown on Sheet 3 of the submitted plans. A traffic study was completed by DKS Associates on December 9, 2015.

**Section 4.009      Who May Initiate Applications**

**Response:** The subject site consists of two different parcels, each under separate ownership. The site addressed as 28530 SW Canyon Creek Road South is presently owned by Marvin and Karen LeWallen. The site addressed as 28500 SW Canyon Creek Road South is presently owned by Beth Boeckman. All three of the current property owners have signed the application.

**Section 4.010      How To Apply**

**Response:** Numerous contacts via emails, phone calls and two meetings have been made with the City of Wilsonville regarding this project. A pre-application conference was held on October 21, 2015 and a second pre-application conference was held on December 3, 2015. Contact has been made with Steve Adams, Kerry Rappold and Blaise Edmonds of the City of Wilsonville and Jason Arn from Tualatin Valley Fire and Rescue via emails and/or phone calls. An additional meeting with Dan Pauly was held on March 15, 2016 to discuss revisions to the layout. Phone calls and emails were exchanged between Dan Pauly and the applicant's representative between March 15 and March 18, 2016.

Phone calls and emails with the adjacent property owner to the north, Mark Kochanowski, have also been exchanged. Written letters of opposition from three property owners (Brendan and Kristen Colyer, Erin Ward, George Johnston) within the vicinity were forwarded to the applicant on March 18, 2016. As a result of public comment and additional emails, phone calls and meeting with the City staff, the originally proposed 15-lot subdivision has been reduced to 14 lots, all lots have been increased to at least 5,000 square feet in size, the waiver request for a minimum lot size reduction has been eliminated and the applicant is voluntarily increasing the minimum side setback to ten feet along the north boundary line for Lots 1 and 2.

The initial public hearing for the project was held on March 28, 2016. The Development Review Board continued the hearing to April 25, 2016 for two reasons: one, to allow Staff the opportunity to obtain from DKS two additional traffic counts from 4:00 pm to 7:00 pm at the site; and two, to allow the applicant the opportunity to revise/reduce the requested setback waiver. Staff worked with DKS to obtain the additional traffic count information. The applicant completely eliminated the side setback waiver request. All lots meet all minimum sizes and dimensions. All lots meet all minimum setbacks.

**Section 4.011      *How Applications are Processed***

**Response:** The required filing fee is \$13,106.40. Upon initial application submittal on December 23, 2015, \$9,780.00 of that total required fee was paid. The remaining portion of the required fee totaling \$3,326.40 was paid on January 22, 2016. Staff will review the application for completeness as outlined in the Code.

**Section 4.012      *Public Hearing Notices***

**Response:** Pursuant to Section 4.0102, City Staff will publish and mail the required notices and perform any required property postings.

**Section 4.013      *Hearing Procedures***

**Response:** The applicant acknowledges that public hearings are necessary for this application and that the hearing body shall approve, conditionally approve or deny the application. The applicant further acknowledges that a final decision shall be made within 120 days of the application being deemed completed.

**Section 4.014      *Burden of Proof***

**Response:** The applicant acknowledges that the burden of proving that the necessary findings of fact can be made for approval of this application rests with the applicant. The applicant feels that the materials that have been submitted as attachments to the application, along with all of the items addressed in this narrative, provide enough information that the City can make the appropriate findings to approve this application.

**Section 4.015      *Findings and Conclusions***

**Response:** The applicant acknowledges that the Findings and Conclusions may or may not contain conditions of approval and that any graphic or written information submitted or presented shall automatically be included as requirements of any approval.

**Section 4.113      *Standards Applying to Residential Developments In Any Zone***

(.01)      *Outdoor Recreational Area In Residential Developments*

5.      *Outdoor recreational area shall be considered to be part of the open space required in the following subsection.*



**Response:** The outdoor recreational area is being provided via the required open space as allowed per the subsection noted above. The preliminary site plan identifies Tract B as the open space area. Tract B is comprised of a combination of usable park area and non-usable SROZ. The usable area is 12,418.2 square feet. The usable area added to the portion of SROZ contained within Tract B totals 93,222.9 square feet. Note that there is a portion of SROZ contained within the square footages of Lots 3, 4, 5 and 6 not included in the Tract B figure. Included in the usable area is a bark path leading from the public street, through the park and through a portion of the SROZ. The portion of the bark path contained in the SROZ has been included in the calculation for usable area since the path itself will be usable even if the rest of the SROZ area is not.

(.02) *Open Space Area shall be provided in the following manner:*

**Response:** The entire developed square footage of the project is for residential use as a 14-lot single-dwelling residential subdivision. The gross acreage of the site is 4.37 acres or 190,357.20 square feet. After deducting the 21,041.8 square feet of private and public street area, the remaining net square footage of the entire site is 169,315.4 square feet. The site has 89,006.1 square feet of non-usable SROZ which equates to 52.5% of the net acreage, which is greater than the minimum 25% requirement. A usable park area outside of the SROZ is being provided in the amount of 12,418.2 square feet which exceeds the minimum ¼-acre usable park area requirement for 100 or less lots where SROZ is greater than 25% of the developable area. The entire open space area of 93,222.9 square feet includes most of the SROZ area (portions of the SROZ area are calculated into the square footages of Lots 3, 4, 5 and 6) and the usable park area which includes a bark path leading from the public sidewalk adjacent to the public street, through the usable park and through a portion of the SROZ area, ending midway through the SROZ area.

The usable park area is not intended to be a standard, generic play park with flat, lawn areas and swing sets. Rather, the intent behind the proposed park is to create an extension of the natural and native feel of the SROZ area, but in a space that can be utilized on a daily basis by residents of the subdivision for family gatherings and barbecues. The applicant proposes to provide a barbecue and table and benches in the flatter area of the park to act as a gathering area for small family events and other small neighborhood get-togethers. To preserve the native vegetation/natural feel of the park, the provided pathway extending from the public sidewalk to the pathway in the SROZ area, will be a man-made bark pathway in keeping with the pathway being provided in the SROZ area. The usable park area pathway will not be graded so as to retain the natural vegetation and natural feel of this area, as well as to provide a very small-scale "hiking trail experience" for the residents of the subdivision and their guests. There are significant grade changes in the usable park area. These are purposely being

retained, again, to provide more of a forest-type "hiking and adventure" setting for active physical activity rather than lounging on flat grass.

(.03) *Building Setbacks (for Fence Setbacks, see subsection .08)*

B. *For lots not exceeding 10,000 square feet:*

1. *Minimum front yard setback: Fifteen (15) feet, with open porches allowed to extend to within ten (10) feet of the property line.*

**Response:** The front setbacks will meet the minimum Code requirements. The fronts of the proposed houses will be a minimum of 15 feet from the front property line. Open front porches will be a minimum of ten feet from the front property line. The minimum required setbacks are reflected on the preliminary plan and will be reviewed for compliance during the building permit process.

2. *Minimum side yard setback: One story: five (5) feet; Two or more stories: seven (7) feet. In the case of a corner lot, abutting more than one street or tract with a private drive, the side yard on the street side of such lot shall be not less than ten (10) feet.*

**Response:** As per the requirements of the Code, one-story houses will meet the minimum of five feet from the side property lines, and houses two or more stories will meet the minimum required setback of seven feet.

Street side yard setbacks shall be a minimum of ten feet as per the requirement of the Code. The required side and street side setbacks are reflected on the Preliminary Plat. Continued compliance with the required setbacks will be verified through the building permit application process.

3. *In the case of a key lot, ...*

**Response:** This project does not propose any key lots.

4. *No structure shall be erected within the required setback for any future street...*

**Response:** This project does not propose any structures within any required setbacks for any future street areas.

5. *Minimum setback to garage door or carport entry: Twenty (20) feet. Wall above the garage door may project to within fifteen (15) of property line, provided that clearance to garage door is maintained.*

**Response:** All garage door and/or carport entries will be a minimum of 20 feet from the property line. Walls above the garage door will possibly project over the garage to within 15 feet of the property line, and clearance to the garage door will be maintained. The minimum setbacks are reflected on the preliminary plan and will be verified through the building permit review process.

*6. Minimum rear yard setback: One story: fifteen (15) feet. Two or more stories: Twenty (20) feet. Accessory buildings on corner lots must observe the same rear setbacks as the required side yard of the abutting lot.*

**Response:** Single-story dwellings will be at least 15 feet from the rear property line. Dwellings more than two stories will be at least 20 feet from the rear property line. No accessory buildings are proposed as part of this application. The minimum setbacks are reflected on the preliminary plan and will be verified for compliance through the building permit review process.

(.04) *Height Guidelines*

*In the R-5 District: A. The permitted residential density shall be no more than five (5) units per acre and no less than four (4) units per acres, except as permitted by Section 300-2 or by 302-6.2 below; and B. A lot shall be at least fourteen thousand (14,000) square feet in area in order to be divided.*

**Response:** The subject site does not have any scenic vistas of Mt. Hood or the Willamette River. The proposal is for a single-family residential subdivision. Multifamily dwellings are not proposed and will not be part of the development. This is not a building permit application and specific building plans have yet to be determined, but it's anticipated that the houses will be either one-story or two-story dwellings, not exceeding 35 feet in height.

(.05) *Residential uses for treatment or training*

**Response:** This project does not propose any Residential Homes or Residential Facilities. This section is not applicable.

(.06) *Off Street Parking*

**Response:** The Code requires one off-street parking space per single-residential dwelling unit. The required space will be provided via an on-site driveway on each lot which will be a minimum of 20 feet long by 12 feet wide. It is anticipated that each house will

have at least a one-car garage which will provide an additional parking space, for a total of two off-street parking spaces.

(.07) Signs

**Response:** No signage is proposed as part of this application or development.

(.08) Fences

**Response:** A three-foot tall fence is proposed along the outer western boundary separating SW Canyon Creek Road South from the subdivision lots, with the exception of Lot 1. Any fencing along the western boundary of Lot 1 will take place after the driveway and house have been constructed to make sure the fence isn't destroyed during construction and to ensure vision clearance. A six-foot tall sight-obscuring fence will be installed along the north and south outer boundary of the development. A four-foot tall open fence will be constructed on Lots 3, 4, 5 and 6 along the SROZ boundary line that is contained within these lots. No other fencing is proposed as part of this application. After construction of individual houses, lot owners may choose to erect fencing along lot lines in accordance with the rules contained in this subsection.

(.09) Corner Vision

**Response:** Proposed fencing and landscaping will meet vision clearance requirements as specified in Section 4.177.

(.10) Prohibited Uses

**Response:** This application is not for anything other than single-dwelling residential lots in a subdivision. Detached dwellings are proposed, and they are allowed in the requested zone. The proposal does not include any trailers, travel trailers or mobile coaches as residences. The development does not propose any outdoor advertising displays, advertising signs or advertising structures.

(.11) Accessory Dwelling Units

**Response:** This application is not for accessory dwelling units. None are being proposed at this time.

(.12) Reduced Setback Agreements

**Response:** Reduced setback agreements are not being proposed as part of this application. All required setbacks will be met.

(.13) *Bed and Breakfasts*

**Response:** This application does not include any proposals for any bed and breakfasts.

**Section 4.118 Standards applying to all Planned Development Zones**

(.01) *Height Guidelines: In "S" overlay zones, the solar access provisions...*

**Response:** The subject property is not located in an "S" overlay zone, therefore these standards are not applicable to this application.

(.02) *Underground Utilities shall be governed by Sections 4.300 to...*

**Response:** Sections 4.300 to 4.320 are addressed later in this narrative.

(.03) *Notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purposes and objectives of Section 4.140, and based on findings of fact supported by the record may:*

A. *Waive the following typical development standards:*

**Response:** This application only has one waiver request.

**Average lot size from 7,000 square feet to 5,433.9 square feet.** The proposed project meets the minimum density requirement for a total of 14 lots. Because the site has such a large eastern portion of SROZ area (2.04 acres) that has to be preserved, all of the required building lots to achieve minimum density have to be contained on the western portion of the site. To achieve the City's minimum lot density requirement, preserve the SROZ area, provide a public street for required access and provide the City's required usable park space, it is impossible to meet the average lot size requirement.

The numbers simply do not allow for the average lot size requirement to be met. This is why: from the gross area of 4.37 acres, after deducting the area for street right-of-way and the private street tract (20,976.5 sq ft), the required ¼-acre usable park space (10,890 sq ft) and the entire SROZ area (89,006.1 sq ft), there is a total of 69,484.6 net square feet (or 1.60 acres) for building area left out of the gross 4.37 acres. A portion of the SROZ area has been added back to the net square footage to the east portion of Lots 3 through 6 (even though this area is designated as a non-buildable conservation easement) to give an overall lot area figure of 76,075 square feet. Note that this figure does not match the net figure because a portion of the SROZ area has been added into the lot calculation so that Lots 3 through 6 meet the minimum lot size.

76,075 square feet divided by 14 lots proposed = 5,433.9 square foot average

76,075 square feet divided by 13 lots (if reduced lot count by one) = 5,851.9 square foot average

Even if the applicant eliminated one lot and reduced the number of lots in the project from 14 to 13 lots, the average lot size of 7,000 square feet still cannot be met. The only way to meet the average lot size would be to decrease the number of lots to ten.

However, the Code states in Section 4.118(.03)B.2. that the minimum density standards of residential zones shall not be waived by the Board. Therefore, it is impossible to meet the both minimum density requirement and the average lot size requirement given all the aforementioned Code requirements and property constraints. Essentially, then, the Code requirements present a conflict in that the minimum density requirement can't be met if the average lot size requirement is met, and the average lot size requirement can't be met if the minimum density requirement is met. Since the minimum density requirement can't be waived, as per Section 4.118(.03)B.2., the only available option is to request waiver of the average lot size requirement. It should be noted that this occurrence is specific to this project due to the large area of SROZ as well as the added requirement of ¼ acre of usable park and might not occur on other pieces of property that lack SROZ and/or if the ¼-acre usable park requirement was to be eliminated.

It should be emphasized that almost half of the subject site is SROZ (2.04 acres out of the total 4.37 acres), leaving not much area to devote to building lots once the square footages for public street right-of-way, the private street tract and the required 1/4-acre usable park area have been deducted. The applicant has taken great care in providing an aesthetically-pleasing layout with a beautiful and scenic entry viewpoint of the forest park, leading to the SROZ. The applicant has provided extra amenities and park area (as discussed below). The applicant is a resident of Wilsonville and has a vested interest in the City and its growth. The applicant desires to build a worthwhile project that will grow in value for the City and surrounding neighborhood over the years. Further, all the proposed lots meet the minimum lot size requirement of 5,000 square feet and all minimum setback requirements are being met in this proposal.

There is a definite need for detached single-family houses as evidenced by a letter from Marla Rumpf, principal broker for Windermere Real Estate, identified as Exhibit 4. Ms. Rumpf obtained information from the City indicating a current population of 21,484 and an availability of only 62 single-family houses on the market. The proposed layout has been reworked and revised several times to present a project that will be of value, worth and benefit to the City and provide single-family houses with options for varying



lot sizes and varying house sizes. Approving the project as presented with 14 lots with an average lot size of 5,433.9 square feet, each of which meet the minimum size, dimension and setback requirements, allows this project to go forward and provide lots at a size and price affordable for members of the community. View approval of this waiver, the only waiver being requested, in specific regard to the individual characteristics and specificities of this particular subject property, the layout being provided and the intent for lot-size diversity specific to this applicant.

The following are exceptions, specific to this application.

**New street over 200 feet in length that dead-ends without a turn-around.** The proposed public street has to be over 200 feet in length to provide connectivity with the parcel to the north for its future development. Future connectivity extensions/stub streets are required by the City. Providing a turn-around at the very end of the street would, therefore, be on the adjoining property over which the applicant has no control. The applicant did approach the adjoining northern property owner, Mark Kochanowski, regarding purchasing his parcel for inclusion in the current application. Mr. Kochanowski was not interested as he just recently purchased his property in October. Placing a turn-around at the end of the street on the subject site would result in even smaller lot sizes and a smaller lot average.

A private street for access to Lots 5 and 6 has been strategically placed, however, at the midway point of the new public street. While the project hasn't provided a turn-around at the end of the dead-end/stub street, the project has still provided a turn-around via the proposed private street tract. The turn-around happens to be located at the midway point of the public street rather than the end of the public street, but the turnaround has been provided regardless, and breaks up the length of the new public street.

The applicant feels this meets the intent of the requirement, namely providing turnaround access for emergency service vehicles and waste disposal trucks. Jason Arn at Tualatin Valley Fire and Rescue has indicated this private street is an acceptable turn-around alternative for emergency services purposes. Waste disposal trucks will not go past the curvature of the new public street. Rather, residents of Lots 2, 3 and 4 will roll their trash and recycling bins to the point of curvature. The waste disposal trucks will then empty the bins at the point of curvature and back up in the midway turn-around point provided via the private street tract.

**Street offset of less than 100 feet and not in alignment with the adjacent public street.**

The proposed public street is offset 94.3 feet from the existing SW Daybreak Street which is only very slightly less than the 100-foot offset requirement. Offsetting the additional 5.7

feet would make Lots 7 through 10 shorter by 5.7 feet and Lots 11-14 longer by 5.7 feet. As currently presented, these lots are similar in length. This 5.7-foot adjustment would make these lots disproportional in size. The lots as proposed, with the public street offset at 94.3 feet, are more consistent in size and aesthetically-pleasing.

Since SW Canyon Creek Road South is only a local street and ends shortly to the south of the proposed development, the City Engineer indicated a direct alignment with SW Daybreak Street would not be required. The traffic study indicates the project will generate 14 p.m. peak hour trips. With the lack of traffic being generated by the project, as well as the lack of continuing southerly traffic due to the dead-end nature of SW Canyon Creek Road South, queuing will not be a problem and thus the lack of alignment is justified. The proposed offset location provides guests and residents entering the development an immediate view of the naturally-vegetated forest-area park that abuts the SROZ area, thus providing a scenic entry that would otherwise not be available if the proposed public street had to be aligned with SW Daybreak Street and/or meet the 100-foot offset.

In return for the requested waivers and exceptions, the developer is making additional enhancements to the project. The minimum park area requirement is 10,890 square feet. The project is providing 12,418.2 square feet of park area which exceeds the minimum requirement.

A man-made bark pathway leading from the park to the SROZ area is being installed. This pathway provides connectivity from the sidewalk along the public street, to the park area and mid-way through the SROZ area. Eventually the City plans on installing a pathway system in this SROZ area. The applicant's proposed pathway, then, will give connection to the City's future pathway plans for the area. A table and bench will be provided at the end of the pathway to provide a resting place for residents of the development.

As part of the development, a four-foot tall open fence will be constructed on Lots 3, 4, 5 and 6 along the SROZ boundary line to provide protection to the SROZ area. Fencing will also be installed along the development's north and south perimeter boundary and the Canyon Creek Road South frontage (with the exception of the western boundary of Lot 1 until after the driveway and house construction is complete).

Amenities in the park include a gas-hookup barbecue unit and a picnic table under an existing stand of mature trees. These specific mature trees are being expressly retained to preserve the natural, forested area of the site and to enhance the intent of the usable park – which is to provide a very small-scale “forest” experience for residents of

the development. Screening landscaping will be planted along both the north and south property lines of the park.

It is further noted that the applicant has worked with Mark Kochanowski, the adjacent north property owner, by providing as a condition of approval root protection requirements during development of the subdivision to protect the two healthy fir trees that sit on Mr. Kochanowski's southwest property line but that have a root system extending into the proposed Lot 1. The application also proposes enhanced landscaping in the north side setback area of both Lot 1 and Lot 2, consisting of Blue Oat Grass, Compact Oregon Grapes and Landscape Roses. This landscaping, along with the previously-mentioned six-foot tall sight-obscuring fencing to be installed along the development's northern boundary, will serve as privacy, screening and buffering from the day-to-day residential activities that will occur on Lots 1 and 2.

- B. *The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:*
1. *Open space requirements in residential areas;*
  2. *Minimum density standards of residential zones;*
  3. *Minimum landscape, buffering and screening standards;*

**Response:** The open space requirement is being met and exceeded with approximately 12,418.2 square feet of usable park area which exceeds the minimum ¼-acre requirement. The minimum density standards of the PDR-3 zone are being met and have been addressed in detail later in this document under Section 4.124. The minimum landscape standards are all being met as shown on the Landscaping Plan.

- C. *The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways, and the action taken will not violate any applicable, federal, state or regional standards:...*

**Response:** None of these items are being requested as waivers.

- (.04) *The Planning Director and Development Review Board shall, in making their determination of compliance in attaching conditions, consider the effects of this action on availability and cost. The provisions of this section shall not be used in such a manner that additional conditions, either singularly or cumulatively, have the effect of unnecessarily increasing the cost of development. However, consideration of these factors shall not prevent the Board from imposing conditions of approval necessary to meet the minimum requirements of the Comprehensive Plan and Code.*

**Response:** The applicant acknowledges the Planning Director and Development Review Board will not attach conditions that will unnecessarily increase the cost of the development, and further acknowledges that conditions that are attached are done so to meet the minimum requirements of the Comprehensive Plan and Code.

(.05) *The Planning director, Development Review Board, or on appeal, the City Council, may as a condition of approval for any development for which an application is submitted, require that portions of the tract or tracts under consideration be set aside, improved, conveyed or dedicated for the following uses:*

- A. *Recreational Facilities: The Director, Board, or Council, as the case may be, may require that suitable area for parks or playgrounds be set aside, improved or permanently reserved for the owners, residents, employees or patrons of the development consistent with adopted Park standards and Parks and Recreation Master Plan.*
- B. *Open Space Area*
- C. *Easements*

**Response:** The proposed development does not include any recreational facilities, other than the required usable park area. The main street providing access will be a public street, dedicated to the City and under the City's jurisdiction. The required usable Open Space Area is depicted as Tract B. A public utility easement is shown on the Preliminary Plat.

(.06) *Nothing in this Code shall prevent the owner of a site that is less than two (2) acres in size from...*

**Response:** The subject property is more than two acres in size. This subsection is not applicable to the application.

(.07) *Density Transfers. In order to protect significant open space or resource areas, the Development Review Board may authorize the transfer of development densities from one portion of a proposed development to another. Such transfers may go to adjoining properties, provided that those properties are considered to be a part of the total development under consideration as a unit.*

**Response:** Because the site does contain SROZ area, a significant portion of the site is non-developable and non-buildable. This application utilizes the density transfer available pursuant to this subsection. The calculations are noted in detail later in this document under Section 4.124(.05).

(.08) *Wetland Mitigation and other mitigation for lost or damaged resources.*

**Response:** The subject property does not contain any wetlands. This section of the Code is therefore not applicable to this application.

(.09) *Habitat-Friendly Development Practices. To the extent practicable, development and construction activities of any lot shall consider the use of habitat-friendly development practices, which include:*

- A. *Minimizing grading, removal of native vegetation, disturbance and removal of native soils, and impervious area;*
- B. *Minimizing adverse hydrological impacts on water resources, ...*
- C. *Minimizing impacts on wildlife corridors and fish passage, ...*
- D. *Using the practices described...*

**Response:** The subject property does not contain any wildlife corridors or fish passages. The site does contain SROZ area which has been deemed as non-developable and non-buildable on the submitted plan set. No vegetation will be removed from the SROZ area. Grading on the site will be limited to only that necessary to install the required site improvements and construct houses. There will not be any grading in the SROZ area. Water, sewer and storm water are available and will be designed and constructed in accordance with the Code to minimize adverse impacts on the site, surrounding properties and environment.

**Section 4.120           Zones. RA-H Residential Agricultural – Holding Zone**

**Response:** The two subject parcels are currently zoned RA-H. The purpose of this zone is to preserve the future urban level development potential of the property. The City's Code states the following: "**It is the purpose of this zone to serve as a holding zone to preserve the future urban level development potential as undeveloped property designated for more intensive development. This zone has been applied to all urbanizable properties within the City which are planned for development and which have not previously received development approval in accordance with the Comprehensive Plan.**"

It is because of the stated purpose of the RA-H zone, as stated by the City, that this application is proceeding. Part of this application requests a zone change to PDR-3 to allow development of the site as a single-dwelling residential planned development and allow it to realize its full **development potential**, pursuant to Section 4.120 of the Code. The subject property is part of the original Bridle Trail Ranchetts. A review of the tax map shows that all of the original Ranchetts lots on the west side of Canyon Creek South have been developed with the PDR-3 zone, and the Ranchetts lots on the east side of Canyon Creek South that have been developed as Crosscreek have also been



developed with the PDR-3 zone. This application is not breaking new ground, setting any precedents or seeking high density zoning. In fact, this application is seeking the same zoning that has been given to the surrounding subdivisions to the west and north, namely Renaissance and Crosscreek. Additionally, the subdivision immediately adjacent to the east of the subject parcels is, in fact, a higher density zone of PDR-4. However, the applicant did not want a high density zone for this application feeling that it would not be in keeping with the character of the surroundings – even though there is precedent to the east. As stated previously, the applicant is a resident of Wilsonville and has a vested interest in the City and its growth, thus the request for the lower density zoning in keeping with the City's desires for parcels with the RA-H designation.

**Section 4.124          Standards Applying To All Planned Development Residential Zones**

(.01)          *Examples of principal uses that are typically permitted:*

**Response:** This proposal is for a 14-lot subdivision that will contain single-dwelling detached units and open space. Both of these uses are listed as examples of principal uses that are typically permitted in a planned development. The project meets this standard.

(.02)          *Permitted accessory uses to single family dwellings:*

**Response:** This application is only for single-dwellings. Accessory uses or structures are not part of this application.

(.03)          *Permitted accessory uses for multiple-family dwelling units:*

**Response:** This standard is not applicable to this application as the project will not contain any multiple-family dwelling units.

(.04)          *Uses permitted subject to Conditional Use Permit requirements:*

**Response:** This application does not include any conditional use permit requests.

(.05)          *Appropriate PDR zone based on Comprehensive Plan Density:*

**Response:** This application includes a request for a zone change to PDR-3 and a comprehensive plan density of 4-5 units per acre as per Table 1 in this subsection of the Code. The minimum and maximum densities for this project are as follows:



Total Gross Acreage: 4.37 acres  
Total SROZ: 2.04 acres  
Total Usable Acreage: 2.33 acres (gross – SROZ)

SROZ acres  $2.04 \times 4 \text{ du/ac} = 8.16 \times .50$  (50% SROZ transfer credit) = 4.08 or **4**  
SROZ acres  $2.04 \times 5 \text{ du/ac} = 10.2 \times .50$  (50% SROZ transfer credit) = 5.1 or **5**

Usable acres  $2.33 \times 4 \text{ du/ac} = 9.32$  or **9 minimum lots**  
Usable acres  $2.33 \times 5 \text{ du/ac} = 11.65$  or **11 maximum lots**

4 transfer credit lots + 9 = 13 minimum lots  
5 transfer credit lots + 11 = 16 maximum lots

The project proposes 14 lots which is more just one more than the minimum, but less than the maximum by two, thus meeting the standard.

(.06) *Block and access standards:*

**Response:** Block 1 is approximately 208 long and is separated from Block 2 and Block 3 by a public street to the south and east. The residential lot area of Block 2 is 156 feet long, with an overall length of 341 feet, and is separated from Block 1 and Block 3 by a public street and a private street to the west. Block 3 is 214 feet long and is separated from Block 1 and Block 2 by a public street to the north and a private street to the east. The proposed public street providing access to the project is 94.3 feet south of Daybreak Street. The distance between the subdivision entrance and the private street is 214 feet. Both Blocks 1 and 3 are less than 330 feet. Block 2 is 341 feet long, but contains a pedestrian pathway providing access from the street and park to the SROZ area. Additionally, the entire eastern portion of Block 2 is non-usable SROZ that will not be developed.

(.07) *Signs*

**Response:** This project is not proposing any signs at this time.

(.08) *Parking*

**Response:** The requirements of Section 4.155 will be addressed in detail later in this narrative.

(.09) *Corner Vision Clearance*

**Response:** The landscaping and fencing that is proposed as part of this application will meet all requirements of Section 4.177.

**Section 4.124.3 PDR-3**

- (.01) Average lot size: 7,000 square feet
- (.02) Minimum lot size: 5,000 square feet
- (.03) Minimum density at build out: One unit per 8,000 square feet.

**Response:** The proposed project has 14 residential lots ranging in size from 5,000 square feet to 6,258 square feet. The average lot size is 5,433.9 square feet. As proposed, the project does not meet the minimum average lot size of 7,000 square feet. However, a waiver is being requested for this item and is addressed above in the comments for Section 4.118. The square footage of the site, less the SROZ area, is 101,351.1 square feet. That square footage divided by 8,000 equals 12.67 or 12, thus the minimum density at build out requirement has been met, and exceeded by two, with a total of 14 buildable lots.

- (.04) Other standards:
  - A. Minimum lot width at building line: Forty (40) feet
  - B. Minimum street frontage of lot: Forty (40) feet
  - C. Minimum lot depth: Sixty (60) feet
  - D. Setbacks: per Section 4.113(.03)
  - E. Maximum building or structure height: Thirty-five (35) feet
  - F. Maximum lot coverage: Fifty percent (50%) for lots containing less than 7000 square feet.

**Response:** As can be seen on the submitted preliminary plat, all of the proposed lots are at least a minimum of 40 feet wide at the building line, 40 feet at the street frontage and 60 feet deep. The setbacks are shown on the submitted preliminary plat as well. All of the required setbacks are met (15-foot front; 10-foot open front porch; 20-foot garage door; 10-foot street side; 15-foot rear for single story and 20-foot rear for two or more stories; 5-foot side for single story; 7-foot side for two or more stories). Maximum building height will be 35 feet. All of the proposed lots are less than 7,000 square feet, so the maximum lot coverage will be 50% for all the proposed lots as required by the Code and so-noted on the Preliminary Plat.

**Section 4.139 Significant Resource Overlay Zone (SROZ) Ordinance**

**Response:** The subject site has an identified SROZ area. The SROZ area is on the eastern portion of the subject property and is clearly demarcated on the submitted site plans with cross-hatching. The SROZ area consists of 89,006.1 square feet. The required 25-foot

buffer area has also been shown on the submitted plans in a hatched area. There are four lots that have SROZ and SROZ-buffer area on their eastern rear portion. This entire area on each of the four lots has been designated as a non-usable, non-buildable residential conservation easement. The developer will construct a four-foot tall open fence on these lots along the SROZ boundary line. The SROZ area will not have any development. A man-made bark path will be installed from the usable park area leading into the SROZ area. None of the existing trees in the SROZ area are being removed. Since no development can or will take place in the SROZ area, the density transfer allowed pursuant to Section 4.139.11 is included as part of this project. The calculations are given earlier in this narrative under Section 4.124(.05).

**Section 4.140      *Planned Development Regulations***

- (.01)      *Purpose*
- (.02)      *Lot Qualification*
- (.03)      *Ownership*
- (.04)      *Professional Design*
- (.05)      *Planned Development Permit Process*
- (.06)      *Staff Report*
- (.07)      *Preliminary Approval (Stage One)*

**Response:** The subject property is more than two acres in size and is being zoned to PDR-3 which meets the lot qualification requirements for a Planned Development. The site is currently owned by different property owners, all of whom are listed on the application and have signed the application as the property owners. Appropriate professionals consisting of a registered landscape architect (Gretchen Vadnais), a professional planner (Anne Marie Skinner), a registered engineer (Eric Evans) and a licensed land surveyor (King Phelps) are representing this project. The professional planner (Anne Marie Skinner) has been designated to be responsible for conferring with planning staff with respect to the concept and details of the proposed plan.

The applicant acknowledges that, prior to issuance of any building permit, the approvals must be obtained for the PDR-3 zone, the planned development permit and Development Review Board/City Council approval. The applicant has had a pre-application conference, as noted earlier in this narrative. This application represents the Preliminary review of the planned development. It also represents the zone change and zone boundary amendment to PDR-3 which must be approved by City Council. City staff will review this submittal for completeness and the applicant will re-submit any revised or missing materials.

The submitted application, obtained from the City Planning Department, has been signed by the property owners. The professional design team has been noted above,



with the professional planner being the designated coordinator for the project. The development will not include any mixed uses; rather, it will be solely single-dwelling structures.

The submitted Existing Conditions Map (Sheet 2) shows the boundary and topography of the property and has been stamped and signed by King Phelps, a licensed land surveyor. Sheet 3 of the submitted plan set shows the site data as follows:

Total Site Area:	190,357.2 square feet
Public/Private Street:	20,976.5 square feet
SROZ Area:	89,006.1 square feet
Tract B non-usable:	80,804.7 square feet
Tract B usable:	12,418.2 square feet

The intention is to proceed to commence construction of the project within two years after approval of the development plan. Phasing is not proposed at this time.

The one requested waiver is for the average lot size of 7,000 square feet. All other portions of the Code requirements are being met. The detailed waiver request is discussed earlier in this document under Section 4.118.

The applicant acknowledges that a public hearing will be scheduled for this approval and that the Board may approve or disapprove the application or require changes or impose conditions of approval necessary to ensure conformity to the criteria and regulations of the Code.

**Section 4.154      On-site Pedestrian Access and Circulation**

**Response:** The subject site is only 4.37 acres in size and results in a one-phase 14-lot subdivision that is fully connected via the one public street and proposed private street tract. Public sidewalks will be provided along both sides of the proposed street and along the subject property's SW Canyon Creek Road South frontage. Sidewalk will also be provided on the east side of the private street tract, but will be located on the front of the adjacent lots in sidewalk easements. All of the proposed sidewalks will provide safe pedestrian interconnectivity for all of the lots and residents throughout the development. All lots immediately front public sidewalks.

In addition, a five-foot wide bark pathway is proposed in the park area leading from the public sidewalk, through the park, to the SROZ area and ending in the SROZ area. This pathway effectively provides a safe and usable connection for residents and guests of the subdivision to walk from their houses, to the public sidewalk, then along the

public sidewalk to the park and SROZ area. By being directly connected with the proposed sidewalks, which are directly connected to street frontage in front of houses, direct pedestrian access will be available throughout the development.

With the addition of the sidewalks on both sides of the public street, the east side of the private street tract, along the subject property's SW Canyon Creek Road South frontage and the park pathway connection to the public sidewalk system, on-site pedestrian access and circulation will safely and effectively take place.

Two crosswalks are proposed as part of this application. Both are depicted on the submitted plan set. One crosswalk will be provided at the intersection of the new proposed public street with the existing SW Canyon Creek Road South. Another crosswalk will be provided across the proposed public street, from public sidewalk to public sidewalk, where the proposed bark pathway meets the public sidewalk. This crosswalk will provide a safe crossing route for residents to cross from side to side to access the park and the pathway. The proposed crosswalks shall be clearly marked with contrasting paint, as noted on the submitted plan set.

**Section 4.155            General Regulations – Parking, Loading and Bicycle Parking**

**Response:** This project is for a detached single-dwelling residential subdivision. On-street parking is not required, but is being provided anyway on one side of the proposed public street. The side of the public street that will have parking has not yet been determined. Parking structures or parking lots are not required as required off-street parking is being provided on each lot via the driveways which will be a minimum of 20 feet long by 12 feet wide to provide one off-street parking space which meets the Code requirement of one space per dwelling unit. Additionally, proposed houses will have at least a single-car garage which provides yet another parking space. For single-dwelling residential use, there are no parking maximums and no bicycle parking requirements.

**Section 4.167            General Regulations – Access, Ingress and Egress**

**Response:** This project is for a planned development. It does not contain any building permit requests at this time, nor have house designs been chosen. At the time of requesting building permits for each lot, an individual site plan will be prepared showing the location of the house and the location and dimensions of the driveway for that specific lot. The shown defined access points on future plans will meet all Code requirements for ingress and egress and will be reviewed for compliance during the building permit process.

**Section 4.171      General Regulations – Protection of Natural Features and Other Resources**

**Response:** The site does not contain any hillside areas, flood plains or other significant landforms. There is a Significant Natural Resource Overlay zone on the eastern portion of the site which has been deemed as non-usable area in a separate tract. This area will not be disturbed at all, with the exception of native plant plantings. Topography is shown on the Existing Conditions Map, and a Preliminary Grading Plan has been included in the plan set submittal. All grading, filling and excavating done in connection with the development shall be done in accordance with the Code. The development has been designed to limit the extent of disturbance of soils. The site does not include any erosion areas, lakes, rivers, streams or fish habitats. Any wildlife habitat or wetlands are contained in the SROZ which is non-developable and non-usable. Vegetation in the SROZ will remain undisturbed. Additionally, the applicant will be added native vegetation to the SROZ area to increase the natural scenic character of the site.

The subject property does not have any slopes greater than 25%.

A Tree Preservation and Removal Plan has been included with the plan sheets showing the size, condition, location and action of all existing trees on the site as certified by an arborist. Every effort has been made to retain all trees except those that are in the way of the required frontage improvements, the new public street, the proposed private road or future dwellings. The site currently has a total of 57 existing trees. The arborist has determined that ten of those 57 existing trees are non-viable, dead, diseased or dying and, as such, should be removed. Those ten identified non-viable trees are, therefore, shown as trees being removed on the Tree Preservation and Removal Plan. All of the remaining 47 viable trees are being retained with the exception of those that will impede construction of infrastructure, street improvements, driveways and building sites. Specifically, the tree tagged as Tree #15 is a viable 26" Douglas Fir that will have to be removed. Unfortunately, there is a significant grade change between this tree and the area for the proposed street. After significant consultation with the arborist, he determined that it is not possible to protect the root zone of Tree #15 in a sufficient manner that would sustain it through the grading that will be necessary to install the public street improvements adjacent to it. Tree #14 and Tree #16 sit just far enough back that the arborist is of the opinion their root zone will be fine during the construction process and thus those two trees are being retained to enhance the natural feel of the usable "forest" park. Tree #28 and #29 are also viable trees that have to be removed because of grading. The arborist has determined, once again, that the required root zone protection area is simply not possible to maintain based upon the grading that will need to take place to construct the required street.



A Landscaping Plan has also been included with the submittal showing proposed trees and other plantings proposed for the development.

The subject property does not have any high voltage powerline easements or rights-of-way or any petroleum pipeline easements.

The site does not have any earth movement hazard areas, soil hazard areas or flood plain areas.

**Section 4.175          Public Safety and Crime Prevention**

**Response:** While this application is only a Stage I/II application, the applicant acknowledges that all addressing for future home sites and directional signage shall be done in accordance with the Code. The project does not have any parking or loading areas to trigger the need for surveillance or exterior parking lot lighting.

**Section 4.176          Landscaping, Screening, and Buffering**

**Response:** This project is a residential subdivision and does not contain any parking lots, therefore there aren't any requirements for parking lot landscaping or parking lot landscaped planter islands. The site will not contain any commercially-used waste or recycling bins, loading areas or exterior mechanical and utility equipment that will require screening from public view.

The existing SROZ area is remaining undisturbed. All existing trees and vegetation will remain to aid in conserving and protecting natural resources and any wildlife habitat that may be residing in the SROZ area.

Trees are proposed along the north and south boundaries of the usable park area to provide screening for both the houses adjacent to the park area, as well as the users of the park themselves. The usable park area will also contain a gas-hookup barbecue unit and a picnic table underneath an existing stand of mature trees. A five-foot wide bark path will be installed by hand and will lead from the public sidewalk, through the usable park area to the SROZ area ending with a table and benches.

The tree survey shown on the Tree Preservation and Removal Plan (Sheet 8) shows a total of 57 existing trees on the site. Ten of these trees are deemed non-viable and will be removed. The Street Trees plan, which is Sheet L1, shows the actual location and placement of a total of 20 street trees being added to the site in the street landscape buffer area along the site's public street area and SW Canyon Creek Road South frontage area. These trees are a combination of six Red Maple trees, nine Golden Rain

Trees and five Tupelo trees. The LIDA swale planting includes Soft Rush, Spreading Rush and Strawberry. Ground cover to be planted in the street landscape buffers will be Sand Strawberry and shrubs include Blue Oat Grass, Compact Oregon Grape and Landscape Roses. Installation, maintenance, irrigation, root barriers and tree planting details are shown on Sheet L1 and Sheet L2, with a Street Tree Planting Detail depicted on Sheet 6. The Street Tree Planting Detail notes the placement standards required by Public Works. Notes have also been placed on Sheet L1 reflecting placement requirements for the proposed street trees.

Additionally, the Preliminary Storm Water and Utilities Plan depicts the proposed location of all proposed street trees. The purpose of this depiction is to illustrate the placement of the proposed street trees in relation to proposed and existing utilities and to show the proposed placement complies with the placing requirements of the Public Works Standards. The Preliminary Plat also notes that all street tree placement shall meet the standards of Public Works Standards.

**Section 4.177      *Street Improvement Standards***

**Response:** There will be two internal streets – one a public street accessing off of SW Canyon Creek Road South and extending to the site's northern property line and ending in a stub to provide connectivity for future development to the north; and the second, a private street Tract A. Lots 5 and 6 will access off of the private street. Lot 7 may access off of either the private street or the public street depending upon house layout. In no event shall more than four lots access off of the proposed private street tract. Sidewalk will be constructed on both sides of both the proposed public street and along the east side of the private street. On-street parking will be available on one side of the public street – which side has yet to be determined. Sidewalk will be installed along the site's SW Canyon Creek Road South frontage as well. The full length of the proposed public street exceeds the 200-foot maximum for a dead-end street. However, the project does contain a private street at the halfway point of the public street, providing an outlet and turn-around for emergency services and, while it's a dead-end street now, at some point in the future it will be a through street and its connection clear to the northern-most property line is actually required to meet the Code requirements for future connectivity.

A public street is being provided, so a multiuse pathway is not being provided. Transit improvements are not required as the site is not adjacent to a major transit street. On-street bicycle facilities shall be provided as per the requirements of the Code. The proposed residential private access drive (Tract A) provides vehicular access to no more than four lots (Lots 5 and 6; possibly Lot 7). Tract A shall be constructed to meet all of the Code requirements. Access driveway and driveway approaches shall be

designed to meet all the Code requirements and shall be reviewed for compliance during the building permit process.

It should be noted that the proposed public street off of SW Canyon Creek Road South does not align with the opposite SW Daybreak Street, and it's only offset by 94.3 feet. However, the City Engineer indicated approval of the non-alignment and non-standard offset due to the dead-end nature of SW Canyon Creek Road South and not being a through street, along with the limited traffic that will result from this 14-lot subdivision. Additionally, SW Canyon Creek Road South is a local street – not a collector or arterial. This has also been requested as a waiver as per Section 4.177(.10). The applicant feels that the proposed location of the street provides a more aesthetically-pleasing view of the subdivision as vehicles entering will have a direct view of the natural, forested park area. Alignment with SW Daybreak Street would make this view impossible as the proposed park area already exists in its natural state and the existing nature and vegetation can't be moved – thus, the entrance to the subdivision has to be moved to accommodate the existing nature and topography of the site.

**Section 4.197      Zone Changes and Amendments To This Code – Procedures**

(.01)      *The following procedure shall be followed in applying for an amendment to the text of this Chapter:*

B. *In recommending approval of a proposed text amendment, the Planning Commission shall, at a minimum, adopt findings relative to the following:*

1. *That the application was submitted in compliance with the procedures set forth in Section 4.008; and*

**Response:** This application represents a request for a Site Development Permit Review, Quasi-judicial zone change, Quasi-judicial change to the map of the Comprehensive Plan and a 14-lot subdivision developed as a Planned Development, with one waiver request. The subject property is 4.37 acres, so it's over 2 acres in size and as such the requested zone is PDR- 3. The required usable and non-usable open space is shown on the site plan. A traffic study was completed by DKS Associates on December 9, 2015. Additional traffic counts were taken in March 2016 at the request of the Development Review Board.

2. *The amendment substantially complies with all applicable goals, policies and objectives set forth in the Comprehensive Plan; and*

**Response:** The narrative addresses how this proposed project meets all the requirements of the Code. The Code is developed as a method of achieving the goals and policies in

the Comprehensive Plan; therefore, compliance with the Code equals substantial compliance with the Comprehensive Plan.

3. *The amendment does not materially conflict with, nor endanger, other provisions of the text of the Code; and*

**Response:** This project only proposes a map amendment to the subject property. The project does not propose changes to any of the text of the Comprehensive Plan, nor does it propose changes to any portions of the Comprehensive Plan Map other than its own designation.

4. *If applicable, the amendment is in compliance with Statewide Land Use Planning Goals and related administrative rules; and*

**Response:** As per Oregon Revised Statute 197.013 implementation and enforcement of acknowledged comprehensive plans and land use regulations are matters of statewide concern. Oregon Revised Statute 197.005 states that cities are responsible for the development of local comprehensive plans. The City of Wilsonville has an adopted comprehensive plan which is in compliance with Oregon Planning and Goals and Guidelines. As outlined throughout this narrative, this project has been shown to be in compliance with Wilsonville's Comprehensive Plan when developed. Therefore, when developed, the project will also be in compliance with the Statewide Planning and Goals and Guidelines.

5. *If applicable, the amendment is necessary to ensure that the City's Land Use and Development Ordinance complies with mandated requirements of State or Federal laws and/or statutes.*

**Response:** As per Oregon Revised Statute 197.013 implementation and enforcement of acknowledged comprehensive plans and land use regulations are matters of statewide concern. Oregon Revised Statute 197.005 states that cities are responsible for the development of local comprehensive plans. The City of Wilsonville has an adopted comprehensive plan which is in compliance with Oregon Planning and Goals and Guidelines. As outlined throughout this narrative, this project has been shown to be in compliance with Wilsonville's Comprehensive Plan when developed. Therefore, when developed, the project will also be in compliance with the Statewide Planning and Goals and Guidelines.

(.02) *In recommending approval or denial of a proposed zone map amendment, the Planning Commission or Development Review Board shall at a minimum, adopt findings addressing the following criteria:*

- A. *That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125(.18)(B)(2) or, in the case of a Planned Development, Section 4.140; and*

**Response:** As has been previously stated in this narrative, the application was submitted in accordance with the procedures set forth in Section 4.140. The portion of the narrative under Section 4.140 addresses the application submittal in detail.

- B. *That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text; and*

**Response:** The narrative addresses how this proposed project meets all the requirements of the Code. The Code is developed as a method of achieving the goals and policies in the Comprehensive Plan; therefore, compliance with the Code equals substantial compliance with the Comprehensive Plan.

- C. *In the event that the subject property, or any portion thereof, is designated as "Residential" on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measures 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text; and*

**Response:** Implementation Measure 4.1.4.b refers to providing a variety of housing types and that adequate public facilities and services must be available in order to building and maintain a decent, safe, and healthful living environment. The City of Wilsonville is a growing area and this development will provide 14 additional detached single-family dwellings for those families and individuals seeking detached, individual housing units rather than apartments or condominiums. Sewer, water and storm are currently available in SW Canyon Creek Road South and will be extended by the developer through the new public street. The submitted Traffic Impact Analysis has indicated no adverse impacts to traffic and that the current transportation system can adequately handle the additional trips generated through this development.

Implementation Measure 4.1.4.d encourages construction and development of diverse housing types while maintaining a balance between housing types. The City of Wilsonville has an overabundance of apartment buildings and multi-family dwellings. This project will provide detached single-family dwelling that will help equalize the current housing situation. Additionally, the range of lot sizes from 5,000 square feet to 6,258 square feet provides options for those individuals seeking a larger single-family detached dwelling with some yard or little to no yard. The smaller lots provide the "little to no yard" option.



Implementing Measure 4.1.4.e discusses targets being set in order to meet the City's Goals for housing and assure compliance with State and regional standards. The project will be providing an additional 14 single-family detached dwellings to the City to assist in meeting its housing requirements for its citizens. A portion of the Comprehensive Plan states the "prevailing vacancy rates for all types of housing as of January 1987, within the City were extremely low" and that this "indicates that the demand for housing Wilsonville exceeded the supply." A letter, identified as Exhibit 4, from Marla Rumpf has been submitted as evidence that the housing situation is probably worse than it was in 1987. Ms. Rumpf provides the following statistics obtained from the City of Wilsonville:

Current population	21,484
Available single-family homes	62

Breakdown of Types of Housing Units in Wilsonville:

Single-family homes	4,420
Apartment units	4,967
Condo units	563

Of the 9,950 housing units in the City, less than half are single-family homes. This would seemingly indicate there is a need for additional single-family homes in the City. Ms. Rumpf concludes her letter with the following: "Obviously this proves that we are in desperate need of more single family homes. Hopefully the City is working on this."

Implementing Measures 4.1.4.q and 4.1.4.x refer to mobile homes, manufactured dwellings and apartments. This proposal is for single-family detached dwellings, so these portions of the comprehensive plan aren't applicable to this project.

- D. That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized; and*

**Response:** Storm, sewer and water lines currently exist in SW Canyon Creek Road South, which is the western boundary of the subject property. Extensions will take place from the main lines in SW Canyon Creek Road South through the new public street. Individual services will then be provided to each lot from the new public street. Sidewalks will be constructed along the portion of SW Canyon Creek Road South that fronts the subject site. A new public street and a new private street tract will be constructed as part of the



development, with installation of sidewalks on both sides of the new public and private street.

- E. *That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/or geologic hazard are located on or abut the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone and*

**Response:** The subject site does not contain any identified natural hazard or geologic hazard. The site does contain, however, a Significant Resource Overlay Zone area which has been delineated on all the submitted plan sheets. This area has been deemed as non-usable and non-buildable and will be preserved for open space area. The proposed lots that back up to the SROZ area will have a four-foot tall open fence constructed along the SROZ boundary line to prevent use of or construction in this area. Additionally, a no-build/non-usable conservation easement will be placed over the entire SROZ area.

- F. *That the applicant is committed to a development schedule demonstrating that development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change; and*

**Response:** The applicant intends to proceed with the development process well within two years of the initial approval of the zone change.

- G. *That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached that insure that the project development substantially conforms to the applicable development standards.*

**Response:** This narrative describes how the proposed development complies with all the standards of the Code, acknowledging compliance with any attached conditions of approval to ensure the development proceeds in a manner consistent with the City's standards and regulations. The applicant is requesting some waivers from required standards, but the applicant has added additional features to mitigate for those waivers, which are addressed in detail under the subsection of this document pertaining to waiver.

- H. *Adequate public facilities, services, and transportation networks are in place, or are planned to be provided concurrently with the development of the*

*property. The applicant shall demonstrate compliance with the Transportation Planning Rule, specifically by addressing whether the proposed amendment has a significant effect on the transportation system pursuant to OAR 660-012-0060. A Traffic Impact Analysis (TIA) shall be pursued pursuant to the requirements in Section 4.133.05.(01).*

**Response:** The proposed development will take access from an existing local street, SW Canyon Creek Road South. From this road, a new public street will be constructed. A Traffic Impact Analysis was performed by Scott Mansur of DKS on December 9, 2015. Additional traffic counts were taken by DKS in March 2016. The original analysis has been included as part of the package submittal. The data from the additional traffic counts had not been provided to the applicant as of the writing of this revised narrative to be re-submitted for consideration at the April 25<sup>th</sup> Development Review Board meeting. The summary of December 2015 analysis concluded that traffic operations for the SW Canyon Creek Road/Daybreak Street intersection met the City's operating standards and therefore did not require off-site mitigations to the study area transportation network. The analysis recommended adding sidewalks along the frontage of Canyon Creek Road South. The Preliminary Plat shows the addition of sidewalks along this frontage, with ADA ramps at each corner of the new public street.

**Section 4.198            Comprehensive Plan Changes – Adoption by the City Council**

- (.01)            *Proposals to amend the Comprehensive Plan, or to adopt new elements or sub-elements of the Plan, shall be subject to the procedures and criteria contained in the Comprehensive Plan. Each such amendment shall include findings in support of the following:*
- A. *That the proposed amendment meets a public need that has been identified;*

**Response:** The proposed project will provide 14 single-family detached houses meeting the public need for detaching housing. Each of the following exhibits provide evident relating to the need for housing.

An article from Oregon Catalyst, dated April 16, 2015 and identified as Exhibit 5, speaks to the lack of affordable housing in Oregon overall. The article states that housing stock has not kept up with demand and working families are struggling to meet their most basic needs for affordable housing.

A search on one real estate website identified only 31 homes for sale in the City of Wilsonville (included in this packet as Exhibit 6). Of those 31, ten are over \$500,000 in listing price. Of the remaining 21 listed on this particular site, seven of the homes were townhomes, condos or attached houses. One of the listing items was for bare ground.

Therefore, out of the 31 listings, that leaves 13 single-family detached houses available for sale at less than \$500,000 in listing price.

A letter, identified as Exhibit 4, from Marla Rumpf has been submitted as evidence that the housing situation needs to be addressed. Ms. Rumpf provides the following statistics obtained from the City of Wilsonville:

Current population	21,484
Available single-family homes	62

Breakdown of Types of Housing Units in Wilsonville:

Single-family homes	4,420
Apartment units	4,967
Condo units	563

Of the 9,950 housing units in the City, less than half are single-family homes. This would seemingly indicate there is a need for additional single-family homes in the City. Ms. Rumpf concludes her letter with the following: "Obviously this proves that we are in desperate need of more single family homes. Hopefully the City is working on this."

*B. That the proposed amendment meets the identified public need at least as well as any other amendment or change that could reasonably be made;*

**Response:** This application seeks a zone and comprehensive plan map amendment that would allow a minimum density of 13 lots and a maximum density of 16 lots on the subject property. Single-family detached houses will be built on each of the proposed 14 lots. The identified public need, as previously addressed, is for single-family detached housing. The requested amendment serves to satisfy this need better than requesting an amendment for a commercial or industrial designation – neither of which would address single-family housing. It is better than a high density designation which would result in attached or multi-family housing, which would not meet the identified need of single-family detached houses. It is better than the lowest density designation as the lowest density designation would provide fewer lots available for single-family detached housing, and thus not address the need as well as the requested designation.

*C. That the proposed amendment supports applicable Statewide Planning Goals, or a Goal exception has been found to be appropriate; and*

**Response:** Goal 10 of Oregon's Statewide Planning Goals is to provide for the housing needs of citizens of the State. This project addresses that goal.

D. That the proposed change will not result in conflicts with any portion of the Comprehensive Plan that is not being amended.

**Response:** The City of Wilsonville is a growing city with the general public seeking individual housing units rather than attached housing, apartments, condominiums or multi-family dwelling units. This project proposes to help meet the City's housing needs for single-dwelling structures at a higher density than would be allowed by the property's current Plan Map designation of RA-H – which only allows for one house. The proposed change will not result in conflict with any portion of the Plan as both the Comprehensive Plan and the Zoning Map are being changed as part of this request. Additionally, the City's Comprehensive Plan asked that the following factors are addressed in the proposed amendment:

- Suitability of the various areas for particular land uses and improvements – The subject property is surrounded by properties that have either had plan map and zoning designation changes or are designated as RA-H and are therefore slated for future higher density development. The subject property, then, is very suitable for the proposed use given the surrounding uses and zones.
- The land uses and improvements in the area – Again, the subject property is surrounded by housing, some at lower density and some at higher density. The proposed use of 14 lots for single-family detached housing blends with the development on both the east and west of the property and future development slated for the properties to the north and south given their current designation of RA-H.
- Trends in land development – As has been demonstrated previously in this document, there is a need for single-family detached housing units. This application addresses the trend in developing properties for use as detached houses rather than multi-family, attached townhomes or condo units.
- Density of development – As stated previously in this narrative, the proposed development meets the minimum, and does not exceed the maximum, density requirements with 14 lots. The intent is to provide a variety of lot sizes in the development, while not overwhelming with site with too many of a small size or too many of a large size.
- Property values – Housing plans have not yet been chosen for the development, but it's assumed most of the houses will be two-story homes with attached one- or two-car garages. The design of the subdivision with the proposed amenities, along with the houses that will eventually be selected, is aimed at increasing the property values of the surrounding properties by providing a quality development.
- The needs of economic enterprises in the future development of the area – As commerce and industry grow in Wilsonville, the number of employed people will increase resulting in a need for more housing in Wilsonville. This project seeks to

accommodate the anticipated economic growth by providing housing to individuals employed in Wilsonville and thus enable them to live, work and play in the same community – that community being Wilsonville.

- Transportation access – The proposed project will be installing a new public street off of the existing SW Canyon Creek Road South. There will also be a private street tract. Sidewalks are being provided on both sides of the public street and the east side of the private street. A pedestrian pathway has been included for connection with the City's future pathway plan.
- Natural resources – Most of the eastern half of the entire property is SROZ area. All of the SROZ area will remain undisturbed. The vegetation and existing trees in the SROZ area are remaining and will be protected during construction. Care has been taken to route the storm drain line around any existing trees.
- The public need for healthful, safe and aesthetic surroundings and conditions – The need for single-family detached houses has been addressed throughout this narrative. The proposed project provides sidewalks, pedestrian pathways and crosswalks. The SROZ area is remaining undisturbed and will have additional native vegetative plantings to enhance the existing vegetation. A usable park area is being provided with a small, slightly sloped pathway for a "mini" hiking opportunity within the community. The existing apple trees in the northwest corner are being retained and that area is being designated as an orchard/fruit park for the development. The location of the new street has been specifically designed such that the first view of the subdivision is the wooded park and SROZ area beyond that. The entire project, then, has been designed to provide opportunities for active recreating, while still maintaining the existing wooded, natural vegetation.

The City's Comprehensive Plan asks for certain factors to be adequately addressed in the proposed amendment. Each of these factors has been addressed above and throughout this document. Accordingly, since the applicable factors of the City's Comprehensive Plan have been adequately addressed, it stands to reason that the requested project does not conflict with any portion of the Comprehensive Plan – as applicable portions have been addressed.

**Section 4.199 Outdoor Lighting**

**Response:** This portion of the Code is applicable to lighting in public facilities, commercial, industrial and multi-family housing projects with common areas or to major additions or modifications to existing exterior lighting systems in public facilities, commercial, industrial and multi-family housing projects with common areas. The proposed project is not a public facility, a commercial project, an industrial project or a multi-family housing project; rather, the proposed development is for single-dwelling



structures in a 15-lot subdivision. Section 4.199 is, therefore, not applicable to this development.

### **LAND DIVISIONS**

#### **Section 4.210      Application Procedure**

**Response:** As has been previously noted earlier in this narrative, two pre-application conferences have been held for this project. A licensed land surveyor, King Phelps, has signed and stamped the Existing Conditions Map. A professional engineer, Eric Evans, has certified the Preliminary Plat and other plan sheets – with the exception of the tree plan prepared by a certified arborist and the landscaping plan prepared by a registered landscape architect.

The City provided the application form which has been completed and also contains the signatures of the property owners. The application fee has been submitted with the application, along with the appropriate number of copies of the plans. The applicant has not yet selected a name for the subdivision. When one is selected, it will not duplicate or resemble the name of any other subdivision in Clackamas or Washington County. Items 1 through 26 under Section 4.210(.01)B have been included as part of the submission package, are included on the plan sheets and/or have been addressed in the narrative.

#### **Section 4.236      General Requirements - Streets**

**Response:** The development proposes one public street and one private street, both of which meet the standards in Section 4.177 as addressed previously in this narrative. The public street is a 47-foot wide right-of-way area with parking on one side – the parking side as yet undetermined. The private street is 24.4 feet wide. Sidewalks are provided on both sides of both the public street, and the east side of the private street. The public street extends to the north boundary line, and dead-ends, to provide connectivity for future development. As per the Code, a turn-around has not been provided pursuant to Section 4.236(.07) which states “the resulting dead-end street may be approved without a turn-around.” At the time of development, the appropriate notification will be posted at the north end of the stub street alerting people that the street is planned for future extension. Neither the public nor the private street have yet been named; when names are chosen, they will not duplicate the names of existing streets.

#### **Section 4.237      General Requirements – Other**

**Response: Blocks** – The proposed development is made up of three blocks. Block 1 is approximately 208 feet long from west to east. Block 3 is approximately 214.30 feet long



from west to east. Block 2 slightly exceeds the 330-foot long maximum; however, a bark pedestrian pathway is being provided from the park area to the SROZ area, and Block 2 also contains the SROZ area as its eastern half, which is non-developable.

**Easements** - Proposed public utility easements are shown on the Preliminary Grading Plan and the Preliminary Storm Water and Utilities Plan. The site does not contain any water courses.

**Pedestrian and bicycle pathways** – A bark pathway has been provided leading from the proposed public sidewalk, through the park area and into the SROZ area in Block 2.

**Tree Planting** – The trees to be planted as part of this development are shown on the submitted Street Trees Plan and Park Planting Plan, Sheet L1 and Sheet L2, respectively.

**Lot Size and Shape** – The proposed lots meet the minimum lot width, depth and size standards, as well as the minimum street frontage.

**Access** – All of the proposed lots meet the minimum frontage requirement of 40 feet at the street.

**Through Lots** – The proposal does not have any through lots.

**Lot side lines** – All of the side lot lines run at right angles to the street or private street tract.

**Large lot land divisions** – The subject property is being divided to its maximum. No re-division is possible due to the proposed lot sizes and the non-developable SROZ area.

**Building line** – All of the minimum building setbacks are being met in the proposed development with the exception of the side yard setback for houses that are two or more stories. A waiver has been requested for this setback and has been addressed earlier in this narrative.

**Build-to line** – The applicant is unaware of, or proposing, any build-to lines. The applicant is proposing adherence to the Code with the exception of the aforementioned side yard setback waiver.

**Land for public purposes** – The development proposes a public street to be dedicated to the public as shown on the submitted plans.

**Corner lots** – All of the corner lots in the proposed development have a corner radius of over ten feet as shown on the submitted preliminary plat.

### **UNDERGROUND UTILITIES**

#### **Section 4.300      General**

**Response:** All utilities serving this development shall be installed underground. A note will be placed on all engineering and construction drawings and the final plat indicating installation of underground utilities shall take place in accordance with the Code requirements.

### **SITE DESIGN REVIEW**

#### **Section 4.421      Criteria and Application of Design Standards**

**Response: Preservation of Landscape** – The subject site has a large SROZ area of over one acre. This entire area is being preserved as non-usable, non-developable open space. A conservation easement is being placed on the rear of Lots 3, 4, 5 and 6 to preserve the non-usable area of those lots. The landscaping in the SROZ area will not be disturbed. The viable trees on the site that can remain, will be remaining.

**Relation of Proposed Buildings to Environment** – This application does not include proposals for any structures. Future structures will be single-unit dwellings which will meet the standards set forth in the Code and the conditions of approval for this development. Adherence to these standards will be reviewed during the building permit process.

**Drives, Parking and Circulation** – This project does not propose any commercial uses, buildings or parking lots/structures. A public street is proposed which will dead-end at the north boundary to provide connectivity for future development. Individual driveways and driveway approaches for future houses will be reviewed for compliance with the Code during the building permit process. Off-street parking requirements have been met via driveways and garages. The City does not have any on-street parking requirements, but the developer is providing parking on one side of the public street regardless.

**Surface Water Drainage** – A preliminary storm water plan and calculations have been submitted as part of this application package. LIDA planters are proposed and are shown on the preliminary storm water plan.

**Utility Service** – As has been stated previously, required public utility easements are shown on the submitted plans. Additionally, utilities for the development will be installed underground and in compliance with this Code.

**Advertising Features** – The project does not include any advertising features.

**Special Features** – The project does not include any special features.

**Section 4.440 Procedure**

**Response:** The current application is for a planned development preliminary plat, zone change and comprehensive plan map amendment. House designs, elevations and floor plans are not part of the application and have not yet been chosen or determined. A preliminary plat has been submitted with this package. A Landscape Plan has also been included as part of the submission. A Street Trees planting plan has been provided, which is Sheet L1, and shows the actual placement location of a proposed 20 street trees, being a combination of red maple, golden rain tree and tupelo. The project is not proposing any signage. Architectural drawings and a Color Board are not applicable as this application does not include any structures.

**TREE PRESERVATION AND PROTECTION**

**Section 4.600.50 Application For Tree Removal Permit**

**Response:** Section 4.600.50(.02) states that where a site is proposed for development necessitating plat review, application for a Tree Removal Permit shall be made as part of the site development application. Pursuant to this requirement, this application submittal includes the non-refundable application fee and the completed application for a Tree Removal Permit. The current application is for a planned development preliminary plat, zone change and comprehensive plan map amendment. House designs, elevations and floor plans are not part of the application and have not yet been chosen or determined. A preliminary plat has been submitted with this package. A Landscape Plan has also been included as part of the submission. The project is not proposing any signage. Architectural drawings and a Color Board are not applicable as this application does not include any structures.

**Section 4.610.10 Standards For Tree Removal, Relocation Or Replacement**

(.01) *Except where an application is exempt, or where otherwise noted, the following standards shall govern the review of an application for a Type A, B, C or D Tree Removal Permit:*

A. *Standard for the Significant Resource Overlay Zone.*

**Response:** There aren't any existing trees being removed from the Significant Resource Overlay Zone area.

B. *Preservation and Conservation.*

**Response:** The proposed development limits tree removal to only those that are non-viable or are immediately in the way of street construction, street frontage improvements or house pad sites. All trees in the SROZ area are being retained.

C. *Developmental Alternatives.*

**Response:** The proposed development limits tree removal to only those that are non-viable or are immediately in the way of street construction, street frontage improvements or house pad site. All trees in the SROZ area are being retained.

D. *Land Clearing.*

**Response:** As shown on Sheet 8, the Tree Preservation and Removal Plan, the only trees being removed in relation to land clearing are those in area of street rights-of-way, proposed building sites and other site improvements. Additionally, those trees identified as non-viable trees are being removed.

E. *Residential Development.*

**Response:** This is an application for a residential subdivision. The remaining trees have been left to provide the applicable lots with shade and tree canopy coverage.

F. *Compliance With Statutes and Ordinances.*

**Response:** The applicant acknowledges that all activity pertaining to trees will be in compliance with the applicable statutes and ordinances.

G. *Relocation or Replacement.*

**Response:** Tree replacement and protection of the remaining trees has been addressed in detail in comments for Section 4.620.00.

H. *Limitation.*

**Response:** A tree survey has been performed by a certified arborist and is part of Sheet 8, the Tree Preservation and Removal Plan. The applicant and arborist have limited tree removal to only those trees that have been identified as non-viable or those that are immediately in the way of site improvements or future building sites and, as such, will not survive grading. Care has been taken to preserve two out of three existing evergreen trees in the park area. One of these three, identified as Tree #15, is developed to the point that the roots extend to the area where grading will take place for the new public street and sidewalk. The arborist determined there wasn't any viable way to preserve this Tree #15, that it wouldn't survive the grading necessary for the required improvements. The street would have to be moved to the west, and thus, would not have the northern alignment required for connectivity with the existing street to the north. The other two, however, identified as Tree #14 and Tree #16, are just far enough to the east that, with the installation of a wall, Tree #14 and Tree #16 will be able to be preserved. Tree #7, #8, #11 and #30 are viable evergreen trees and are all being preserved with the appropriate root protection zone area depicted on the Tree Preservation and Removal Plan. There are two viable evergreen trees that are unable to be preserved due to grading necessary for the street. These are Tree #28 and Tree #29. The root protection zone area necessary to preserve these two trees is of such a size that it will be impossible to perform the required grading to install the street and stay outside of that protection zone.

It should also be noted that the neighboring property to the north has two health, viable fir trees along its southwest property line. While the trees themselves are not on the subject property, the roots of these two trees extend into the northwest property line of Lot 1. As such, protection will be provided around the root protection zone area of these two trees during the development of the subdivision.

*1. Additional Standards for Type C Permits.*

*1. Tree survey.*

**Response:** A tree survey has been provided on Sheet 8 of the submitted site plan drawings.

*2. Platted Subdivisions.*

**Response:** Sheet 8 of the submitted plan drawing set is the required Tree Removal and Preservation Plan which includes all required criteria for tree protection during construction.

*3. Utilities.*

**Response:** Only those trees that are non-viable or in the way of site improvements or future building sites are being removed. A tree survey has been performed by a

certified arborist and is part of Sheet 8, the Tree Preservation and Removal Plan. The applicant and arborist have limited tree removal to only those trees that have been identified as non-viable or those that are immediately in the way of site improvements or future building sites and, as such, will not survive grading. Care has been taken to preserve two out of three existing evergreen trees in the park area. One of these three, identified as Tree #15, is developed to the point that the roots extend to the area where grading will take place for the new public street and sidewalk. The arborist determined there wasn't any viable way to preserve this Tree #15, that it wouldn't survive the grading necessary for the required improvements. The street would have to be moved to the west, and thus, would not have the northern alignment required for connectivity with the existing street to the north. The other two, however, identified as Tree #14 and Tree #16, are just far enough to the east that, with the installation of a wall, Tree #14 and Tree #16 will be able to be preserved. Tree #7, #8, #11 and #30 are viable evergreen trees and are all being preserved with the appropriate root protection zone area depicted on the Tree Preservation and Removal Plan. There are two viable evergreen trees that are unable to be preserved due to grading necessary for the street. These are Tree #28 and Tree #29. The root protection zone area necessary to preserve these two trees is of such a size that it will be impossible to perform the required grading to install the street and stay outside of that protection zone.

**Section 4.610.40                      Type C Permit**

(.01)                      *Approval to remove any trees on property as part of a site development application may be granted in a Type C permit. A Type C permit application shall be reviewed by the standards of this subchapter and all applicable review criteria of Chapter 4. Application of the standards of this section shall not result in a reduction of square footage or loss of density, by may require an applicant to modify plans to allow for buildings of greater height. If an applicant proposes to remove trees and submits a landscaping plan as part of a site development application, an application for a Tree Removal Permit shall be included. The Tree Removal Permit application will be reviewed in the Stage II development review process, and any plan changes made that affect trees after Stage II review of a development application shall be subject to review by DRB. Where mitigation is required for tree removal, such mitigation may be considered as part of the landscaping requirements as set forth in this Chapter. Tree removal shall not commence until approval of the required Stage II application and the expiration of the appeal period following that decision. If a decision approving a Type C permit is appealed, no trees shall be removed until the appeal has been settled.*

**Response:** A Type C Tree Removal Permit has been included with this application. No trees shall be removed until after approval of this application.



(.02) The applicant must provide ten copies of a Tree Maintenance and Protection Plan completed by an arborist that contains the following information:

- A. A plan, including a topographical survey bearing the stamp and signature of a qualified, registered professional containing all the following information:
1. Property Dimensions. The shape and dimensions of the property, and the location of any existing and proposed structure or improvement.
  2. Tree survey. The survey must include:...
  3. Tree Protection.
  4. Easements and Setbacks.
  5. Grade Changes.
  6. Cost of Replacement.
  7. Tree Identification.

**Response:** Sheet 8 of the submitted plans is identified as the Tree Removal and Preservation Plan. Property shape and dimensions are included on the plan, as well as the site's topography, the tree survey, a statement regarding tree protection, easements and setbacks, contours and a statement regarding tree identification. New trees being planted are shown on Sheets L1 and L2. There is an estimated cost of \$350 per tree for each tree to be planted.

**Section 4.620.00                      Tree Relocation, Mitigation, Or Replacement**

**Response:** Tree planting will take place within one year of tree removal. There are a total of 57 trees currently existing on the site. All trees identified by the arborist as non-viable, diseased or dying are being removed to preserve the health of the viable trees that will remain. Any viable trees that are proposed to be removed are being removed because their existing location impedes installation of new streets, house pad sites or street frontage improvements. A tree survey has been performed by a certified arborist and is part of Sheet 8, the Tree Preservation and Removal Plan. The applicant and arborist have limited tree removal to only those trees that have been identified as non-viable or those that are immediately in the way of site improvements or future building sites and, as such, will not survive grading. Care has been taken to preserve two out of three existing evergreen trees in the park area. One of these three, identified as Tree #15, is developed to the point that the roots extend to the area where grading will take place for the new public street and sidewalk. The arborist determined there wasn't any viable way to preserve this Tree #15, that it wouldn't survive the grading necessary for the required improvements. The street would have to be moved to the west, and thus, would not have the northern alignment required for connectivity with the existing street to the north. The other two, however, identified as Tree #14 and Tree #16, are just far enough to the east that, with the installation of a wall, Tree #14 and Tree #16 will be able to be preserved. Tree #7, #8, #11 and #30 are viable evergreen trees and are all

being preserved with the appropriate root protection zone area depicted on the Tree Preservation and Removal Plan. There are two viable evergreen trees that are unable to be preserved due to grading necessary for the street. These are Tree #28 and Tree #29. The root protection zone area necessary to preserve these two trees is of such a size that it will be impossible to perform the required grading to install the street and stay outside of that protection zone.

The Street Trees plan, which is Sheet L1, shows 20 trees that are 2" or more in diameter being planted as street tree replacements for the trees being removed. The narrative submitted by the certified arborist as Exhibit 1 references the fact that all trees will be nursery stock meeting requirements of the American Association of Nurserymen American Standards for Nursery Stock for top grade. New tree planting locations are indicated on the submitted Sheet L1 and Sheet L2. As can be seen on Sheet L2, there are 16 trees being planted around the park area – ten trees along the north border of the park consisting of eight Weeping Alaska Cedars and two Douglas Firs, and seven trees along the south border of the park consisting of four Weeping Alaska Cedars and three Douglas Firs. Two existing Ponderosa Pine trees will remain in the park area to provide shade to the barbecue unit and picnic table.

**Section 4.620.10**                      **Tree Protection During Construction**

**Response:** Refer to Sheet 8 of the submitted site plans for notes contained therein stating that all trees being retained will be identified by numbered metal tags with the numbers identified in the site's tree survey and that they will be clearly identified on all construction documents. Remaining trees will be protected during construction through use of a six-foot high chain link fence secured to the ground with eight-foot metal posts driven into the ground.

It should also be noted that the neighboring property to the north has two health, viable fir trees along its southwest property line. While the trees themselves are not on the subject property, the roots of these two trees extend into the northwest property line of Lot 1. As such, protection will be provided around the root protection zone area of these two trees during the development of the subdivision. The following measures shall be taken for preservation and protection of retaining trees, including the two trees overhanging Lot 1 from the property to the north.

- Landscaping and irrigation beneath the dripline of preserved trees shall be compatible with the trees. Turf grass and other water intensive plantings are typically not appropriate.
- All privacy fence installation within the drip line of the trees shall be hand dug under the supervision of a certified arborist. If tree roots are encountered, adjust

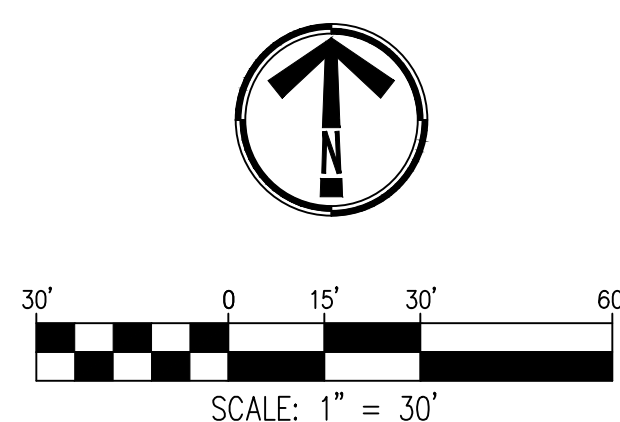
the location of post holes to avoid root impacts. Mix concrete away from tree protection area and transport using buckets or a wheel barrow. Boards shall be stockpiled outside of protected tree driplines.

- Encroachment of home foundations and walls within tree driplines is only allowed under the guidance of a certified arborist. Any necessary root and canopy pruning shall follow accepted professional practices under supervision of a certified arborist and shall not damage the overall health of the trees. Particularly for the trees overhanging Lot 1 from the property to the north, special care shall be taken in canopy pruning to maintain a symmetrical canopy.









CANYON CREEK SUBDIVISION  
 TAX LOTS 0900 AND 01000  
 TAX MAP 31W13B  
 NW 1/4 OF SEC. 13, T.3S R.1W W.M.  
 WILSONVILLE, OREGON

**EXISTING CONDITIONS  
 MAP**

NO.	DATE	DESCRIPTION
1	1/26/16	REVISIONS FROM INCOMPLETE LETTER DATED 1/21/16
2	3/18/16	REDUCED NUMBER OF LOTS FROM 15 TO 14
3	3/30/16	SETBACK LINE ADJUSTMENTS

**EMERIO**  
*Design*

8285 SW ANIBUS AVE, SUITE 180  
 BEAVERTON, OREGON 97008  
 PHONE: (503) 639-9992  
 FAX: (503) 639-9992  
 www.emeriodesign.com

REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR

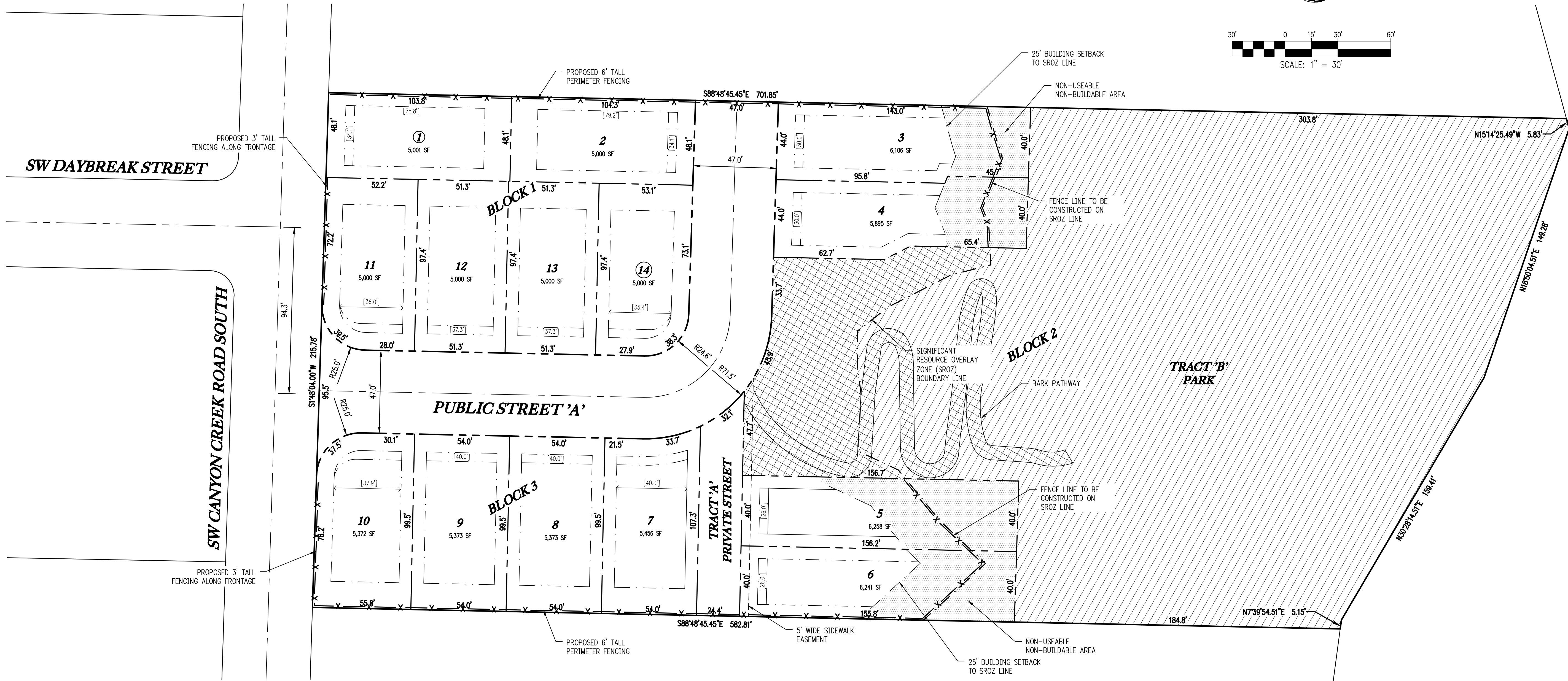
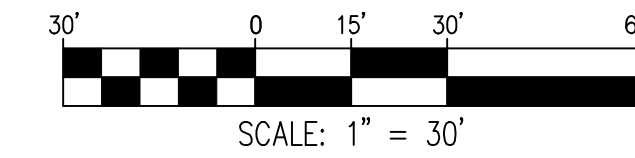
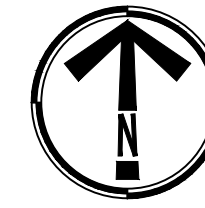
OREGON  
 JANUARY 19, 1993  
 EDWARD KING PHELPS  
 2586  
 EXPIRES 12-31-16

SHEET  
**2**  
 OF  
**8**

ORIGINAL SUBMISSION 12/22/2015

FILE: P:\500-015 Canyon Creek South Long Term\500-015\_02\topo, Layout: 2 EXISTING CONDITIONS MAP, Plot Date: 4/6/2016 1:46 PM, by: Doug Thomas





**LEGEND**

- RESIDENTIAL CONSERVATION EASEMENT ON LOTS 3, 4, 5 AND 6
- NON-USABLE AREA
- USABLE AREA
- 7' SIDE SETBACK LINES
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- LOT LINE
- PROPOSED FENCE

**TRACT 'B' DATA**

USABLE AREA: 0.29 ACRES (12,418.2 SQ. FT.)  
 NON-USABLE AREA: 1.86 ACRES (80,804.7 SQ. FT.)

**PARCEL DATA**

AREA: 4.37 Ac.  
 PROPOSED ZONING: PDR-3  
 TAX MAP: 31W13B  
 TAX LOTS: 09000 AND 01000  
 NO. OF LOTS: 14

**MINIMUM SETBACKS**

FRONT: 15'  
 OPEN FRONT PORCH: 10'  
 SIDE: 5' FOR 1 STORY  
 7' FOR TWO OR MORE STORIES  
 STREET SIDE: 10'  
 GARAGE DOOR: 20'  
 REAR: 15' SINGLE STORY  
 20' TWO OR MORE STORIES  
 MAX HEIGHT: 35'  
 MAX LOT COVERAGE: 50%

**SITE DATA**

ZONE: PDR-3  
 TOTAL SITE AREA: 4.37 ACRES (190,357.2 SQ. FT.)  
 PUBLIC/PRIVATE STREET SROZ AREA: 0.48 ACRES (20,976.5 SQ. FT.)  
 SROZ AREA: 2.04 ACRES (89,006.1 SQ. FT.)  
 14 LOTS  
 MINIMUM LOT SIZE: 5,000 SQ. FT.  
 MAXIMUM LOT SIZE: 6,258 SQ. FT.  
 AVG. LOT SIZE: 5,433.9 SQ. FT.

**NOTES:**

1. SW CANYON CREEK ROAD SOUTH AND SW DAYBREAK STREET ARE PUBLIC STREETS UNDER THE JURISDICTION OF THE CITY OF WILSONVILLE. THE PROPOSED PUBLIC STREET 'A' WILL ALSO BE UNDER WILSONVILLE'S JURISDICTION.
2. FOLLOWING PLANNING APPROVAL AND PREPARATION AND APPROVAL OF REQUIRED CONSTRUCTION DRAWINGS THE FOLLOWING IMPROVEMENTS WILL BE INSTALLED: PUBLIC STREET 'A', PRIVATE STREET, SIDEWALKS ALONG ALL STREET FRONTAGES, TREE PLANTINGS AND LANDSCAPING SHOWN ON THE LANDSCAPING PLAN, AMENITIES IN PARK AS SHOWN ON LANDSCAPING PLAN AND BARK PATHWAY, ASSOCIATED UTILITIES.
3. UNDERGROUND INSTALLATION OF UTILITIES SHALL TAKE PLACE IN ACCORDANCE WITH WILSONVILLE'S CODE REQUIREMENTS.
4. CROSSWALKS (WHERE A PATHWAY CROSSES A PARKING AREA OR DRIVEWAY) SHALL BE CLEARLY MARKED WITH CONTRASTING PAINT OR PAVING MATERIALS (e.g. PAVERS, LIGHT-COLOR CONCRETE INLAY BETWEEN ASPHALT, OR SIMILAR CONTRAST).
5. ALL STREET TREE PLACEMENT SHALL MEET THE STANDARDS OF PUBLIC WORKS STANDARDS.

**PRELIMINARY PLAT**

NO.	DATE	DESCRIPTION
1	1/26/16	REVISIONS FROM INCOMPLETE LETTER DATED 1/21/16
2	3/18/16	REDUCED NUMBER OF LOTS FROM 15 TO 14
3	3/30/16	SETBACK LINE ADJUSTMENTS



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**PRELIMINARY NOT FOR CONSTRUCTION**

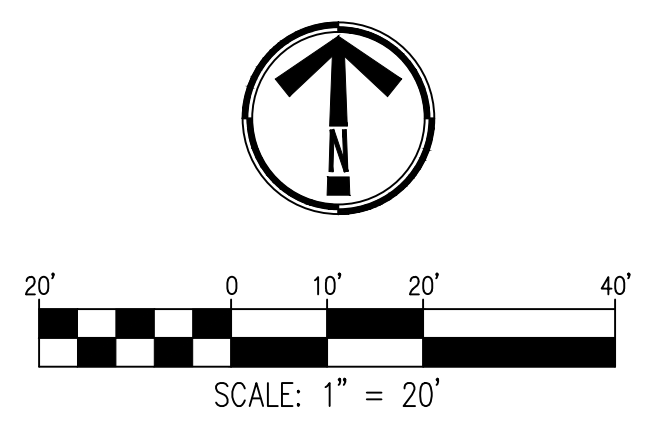
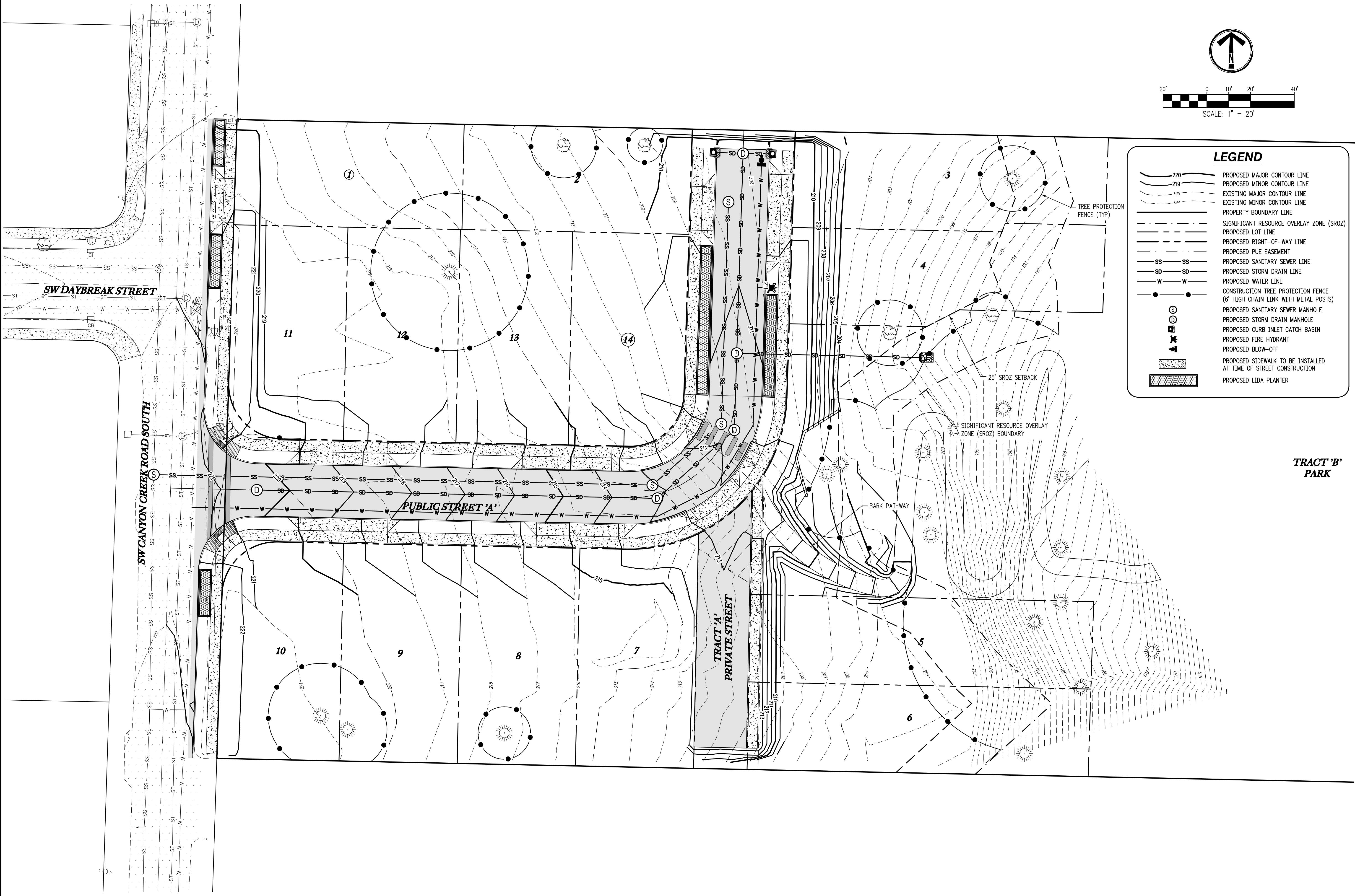
SHEET 3 OF 8

**CANYON CREEK SUBDIVISION  
 TAX LOTS 0900 AND 01000  
 TAX MAP 31W13B  
 NW 1/4 OF SEC. 13, T.3S R.1W W.M.  
 WILSONVILLE, OREGON**

CANYON CREEK ROAD SOUTH SUBDIVISION 800-015

FILE P: \500-015 Canyon Creek South\mp\plan\500-015\_03.dwg, Layout: 3 PRELIMINARY PLAT, Plot Date: 4/6/2016 1:46 PM, by: Doug Thomas





**LEGEND**

	220	PROPOSED MAJOR CONTOUR LINE
	219	PROPOSED MINOR CONTOUR LINE
	195	EXISTING MAJOR CONTOUR LINE
	194	EXISTING MINOR CONTOUR LINE
		PROPERTY BOUNDARY LINE
		SIGNIFICANT RESOURCE OVERLAY ZONE (SROZ)
		PROPOSED LOT LINE
		PROPOSED RIGHT-OF-WAY LINE
		PROPOSED PUE EASEMENT
		PROPOSED SANITARY SEWER LINE
		PROPOSED STORM DRAIN LINE
		PROPOSED WATER LINE
		CONSTRUCTION TREE PROTECTION FENCE (6' HIGH CHAIN LINK WITH METAL POSTS)
		PROPOSED SANITARY SEWER MANHOLE
		PROPOSED STORM DRAIN MANHOLE
		PROPOSED CURB INLET CATCH BASIN
		PROPOSED FIRE HYDRANT
		PROPOSED BLOW-OFF
		PROPOSED SIDEWALK TO BE INSTALLED AT TIME OF STREET CONSTRUCTION
		PROPOSED LIDA PLANTER

**TRACT 'B' PARK**

**CANYON CREEK SUBDIVISION**  
**TAX LOTS 0900 AND 01000**  
**TAX MAP 31W13B**  
**NW 1/4 OF SEC. 13, T.3S R.1W W.M.**  
**WILSONVILLE, OREGON**  
 CANYON CREEK ROAD SOUTH SUBDIVISION 500-015

**PRELIMINARY GRADING PLAN**

NO.	DATE	REVISIONS
1	1/26/16	DESCRIPTION FROM INCOMPLETE LETTER DATED 1/21/16
2	3/18/16	REDUCED NUMBER OF LOTS FROM 15 TO 14
3	3/30/16	SETBACK LINE ADJUSTMENTS

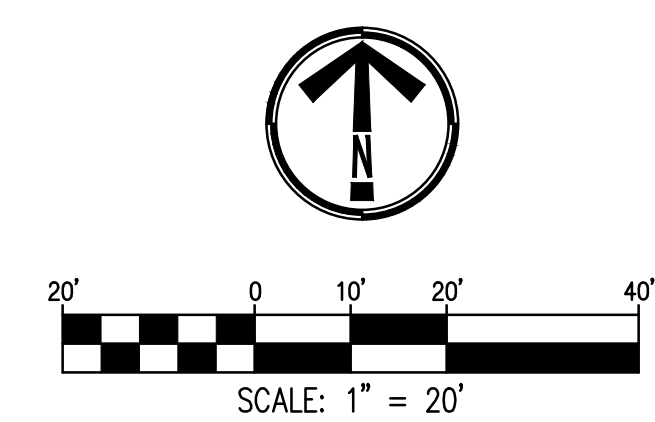
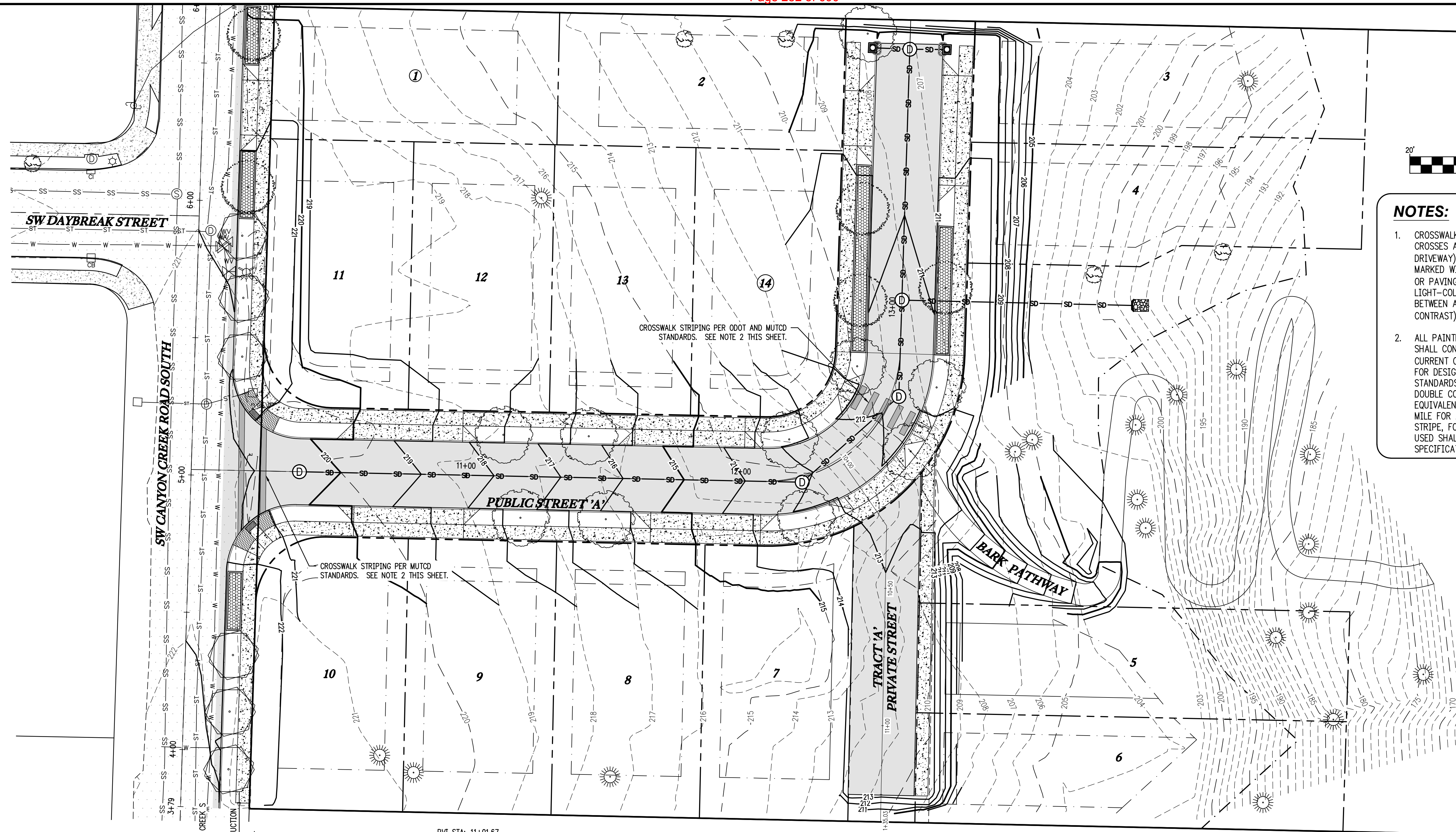
**EMERIO Design**  
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**PRELIMINARY NOT FOR CONSTRUCTION**

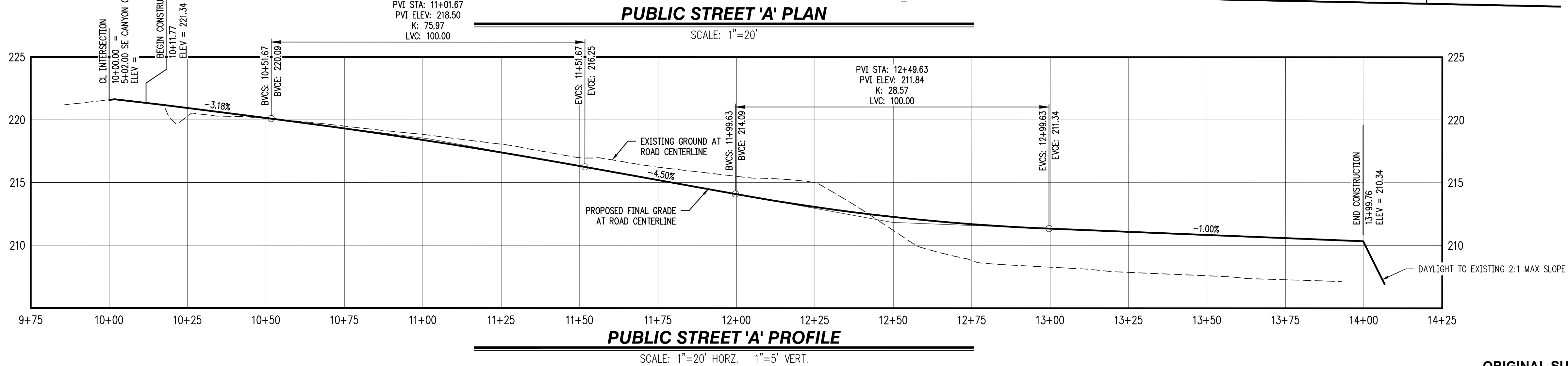
SHEET **4** OF **8**

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**PUBLIC STREET 'A' PLAN**  
SCALE: 1"=20'



CANYON CREEK SUBDIVISION  
TAX LOTS 0900 AND 01000  
TAX MAP 31W13B  
NW 1/4 OF SEC. 13, T.3S R.1W W.M.  
WILSONVILLE, OREGON  
CANYON CREEK ROAD SOUTH SUBDIVISION 800-015

**STREET 'A' PLAN AND PROFILE**

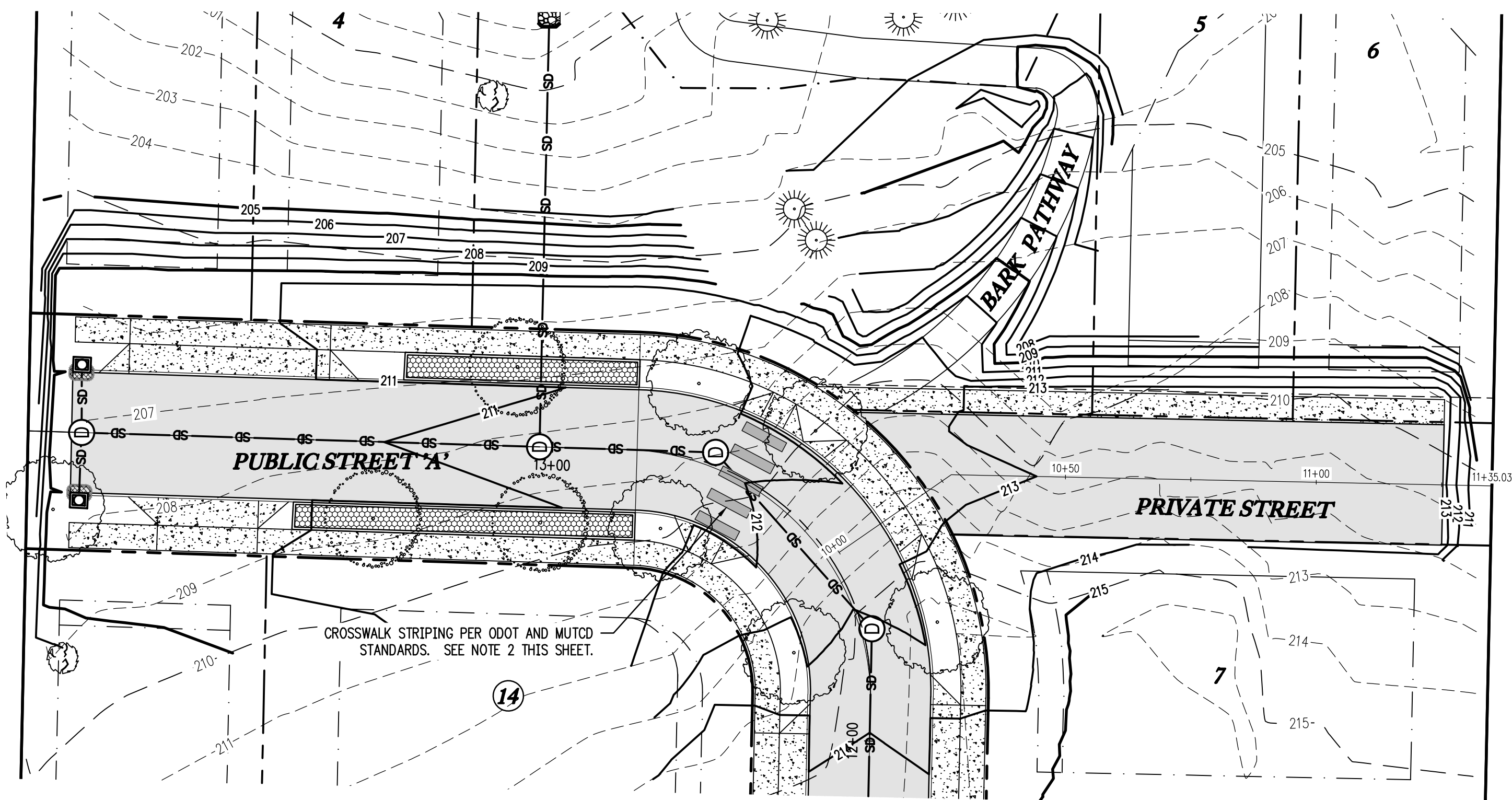
NO.	DATE	DESCRIPTION
1	1/26/16	REVISIONS FROM INCOMPLETE LETTER DATED 1/21/16
2	3/18/16	REDUCED NUMBER OF LOTS FROM 15 TO 14
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**PRELIMINARY NOT FOR CONSTRUCTION**

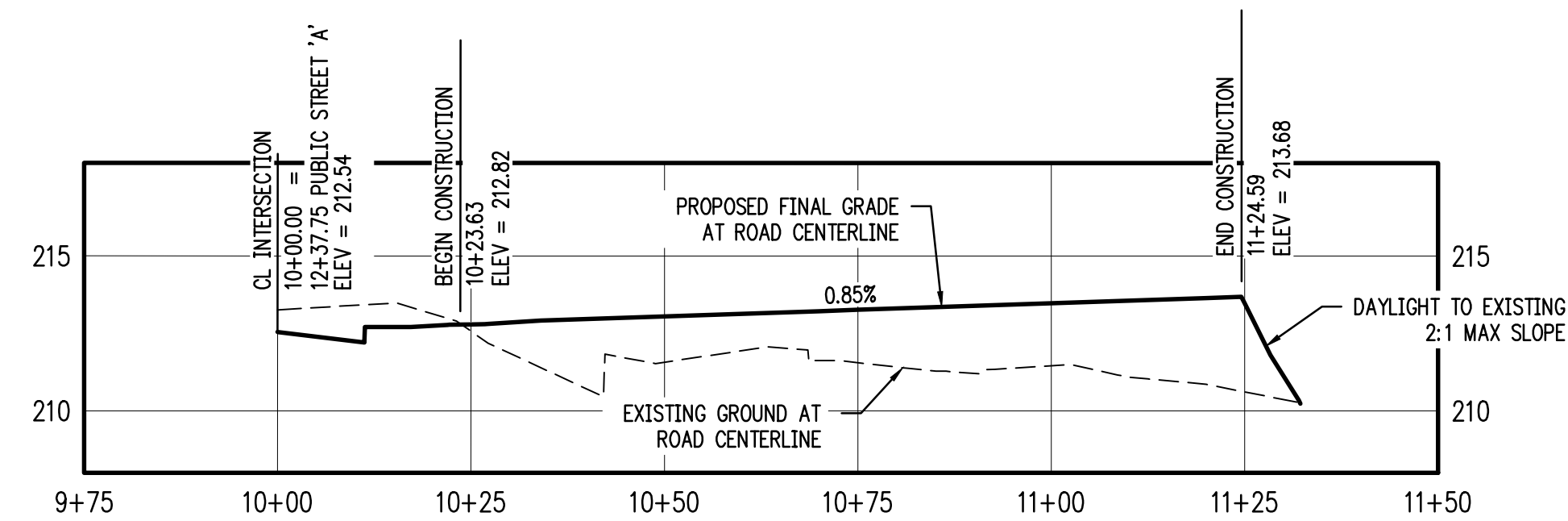
SHEET **5** OF **8**





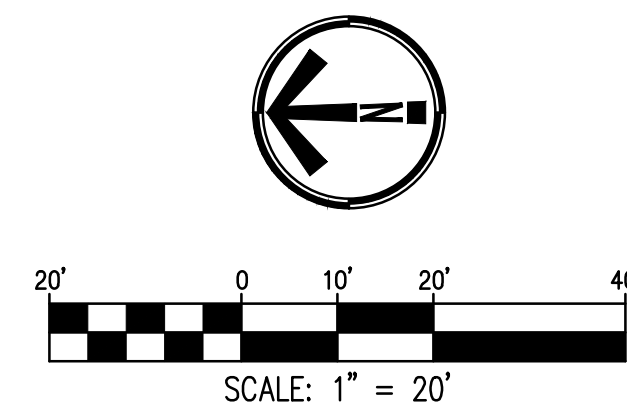
**PRIVATE STREET PLAN**

SCALE: 1"=20'



**PRIVATE STREET PROFILE**

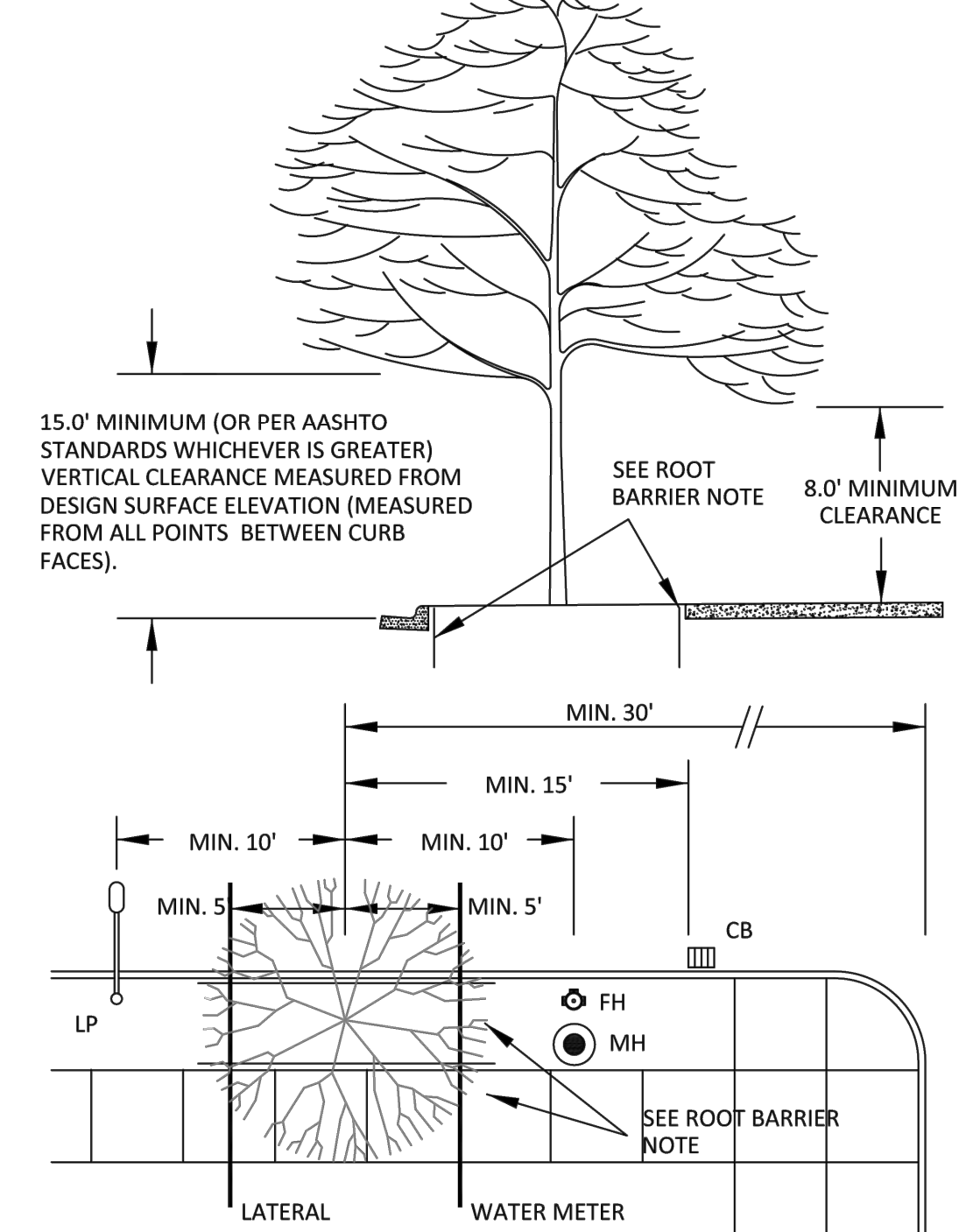
SCALE: 1"=20' HORIZ. 1"=5' VERT.



**NOTES:**

- CROSSWALKS (WHERE A PATHWAY CROSSES A PARKING AREA OR DRIVEWAY) SHALL BE CLEARLY MARKED WITH CONTRASTING PAINT OR PAVING MATERIALS (e.g. PAVERS, LIGHT-COLOR CONCRETE INLAY BETWEEN ASPHALT, OR SIMILAR CONTRAST).
- ALL PAINTED PAVEMENT MARKINGS SHALL CONFORM TO THE MOST CURRENT ODOT/APWA STANDARDS FOR DESIGN AND CONSTRUCTION STANDARDS. ALL PAINT SHALL BE DOUBLE COATED AT 15-MILS WET, EQUIVALENT TO 17-GALLONS PER MILE FOR A 4-INCH WIDE SOLID STRIPE, FOR EACH COAT. PAINT USED SHALL MEET ODOT STANDARD SPECIFICATION 00865.

*This Detail Drawing may not be altered or changed in any manner except by the City Engineer. It is the responsibility of the user to acquire the most current version.*



- NOTES:**
- 5' MINIMUM CLEARANCE FROM UNDERGROUND UTILITIES AND LATERALS. LANDSCAPE DESIGN OF TREES AND ENGINEERING DESIGN OF UNDERGROUND SERVICES SHALL BE COORDINATED.
  - TREES SHALL BE CENTERED BETWEEN CURB AND SIDEWALK.
  - CITY APPROVED ROOT BARRIER METHOD TO BE USED FOR ALL STREET TREES LOCATED WITHIN 8 FEET OF ALL CURBS AND SIDEWALKS. ROOT BARRIER SHALL EXTEND TO A DISTANCE OF 20" CENTERED WITH THE TREE BASE. BARRIER SHALL BE 2"-4" FROM CURB OR SIDEWALK AND EXTEND A MINIMUM OF 24" IN DEPTH.
  - WHEN TREES ARE WITHIN TREE WELLS, ROOT BARRIER SHALL BE PLACED ON ALL SIDES.
  - PARALLEL PARKING: LOCATE TREE BETWEEN ON-STREET PARKING SPACES. THIS LOCATION PRECLUDES DOORS OPENING ONTO TREES AND PASSENGERS EXITING IN CONFLICT WITH TREE PLACEMENT.
  - DIAGONAL PARKING: LOCATE TREE MINIMUM 3' AWAY FROM LEFT STALL LINE TOWARD THE CENTER OF THE PARKING SPACE. THIS LOCATION ATTEMPTS TO AVOID THE FRONT END OF THE PARKED CAR OVERHANGING THE CURB.

Street Tree Location and Clearances			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1240	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1240.DWG	APPROVED BY: NK	DATE: 12/31/14	

REVISIONS	
NO.	DESCRIPTION
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**PRELIMINARY NOT FOR CONSTRUCTION**

SHEET **6** OF **8**

**CANYON CREEK SUBDIVISION**  
**TAX LOTS 0900 AND 01000**  
**TAX MAP 31W13B**  
**NW 1/4 OF SEC. 13, T.3S R.1W W.M.**  
**WILSONVILLE, OREGON**

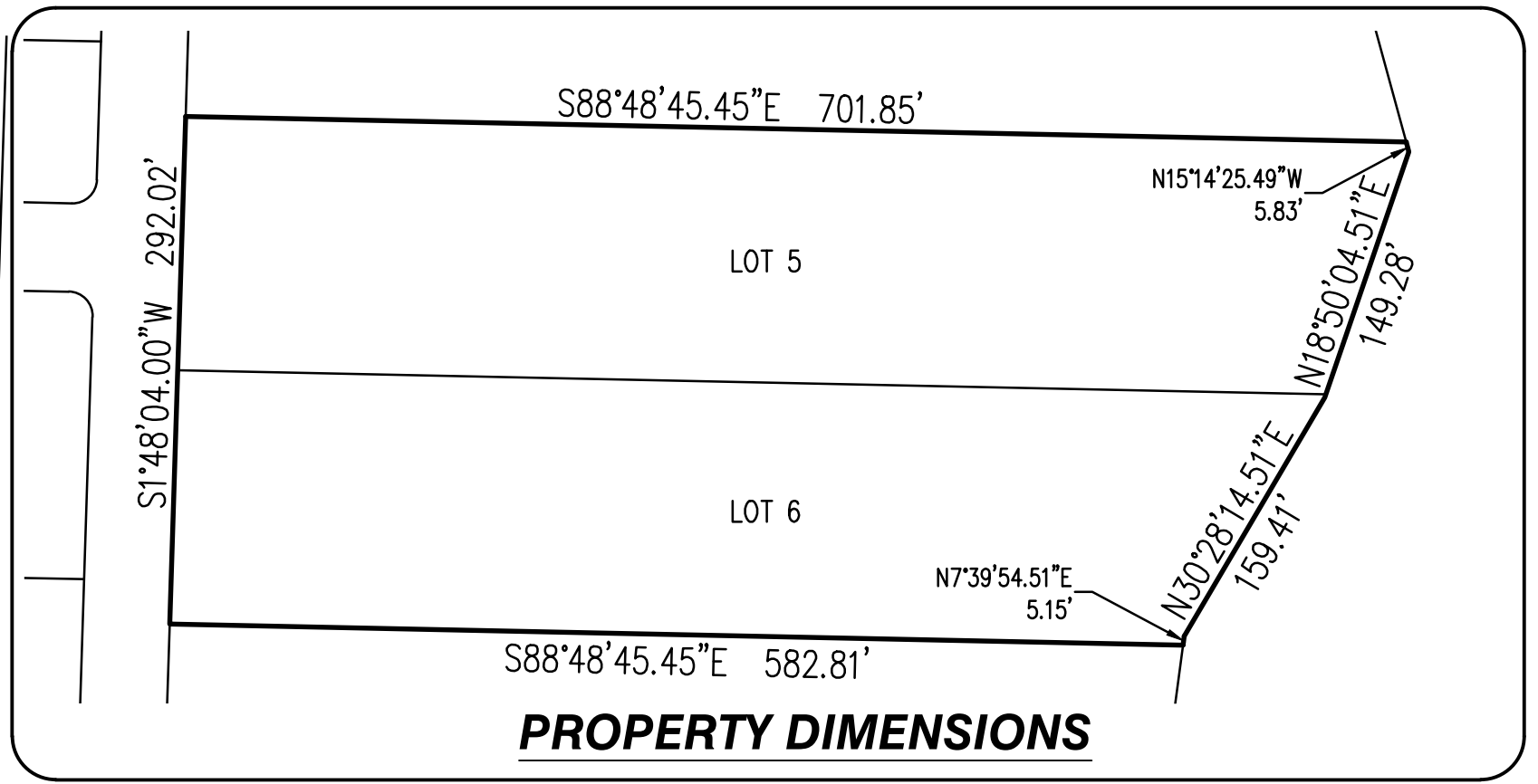
CANYON CREEK ROAD SOUTH SUBDIVISION 800-015

FILE P: \500-015 Canyon Creek\South\Jung\Jung.dwg | 500-015\_05street, Layout: 6 PRIVATE STREET PLAN AND PROFILE, Plot Date: 4/6/2016 1:47 PM, by: Doug Thomas





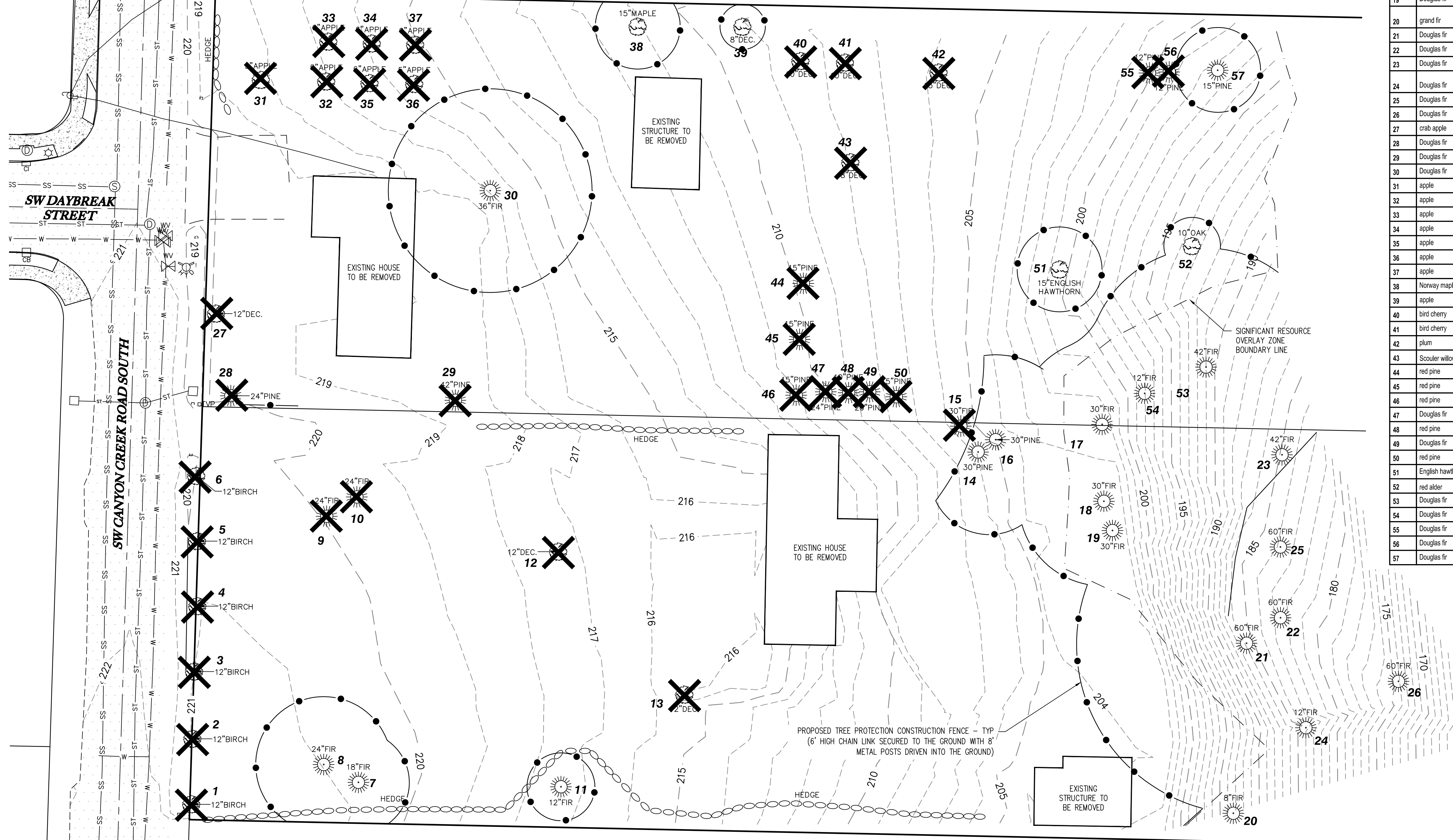
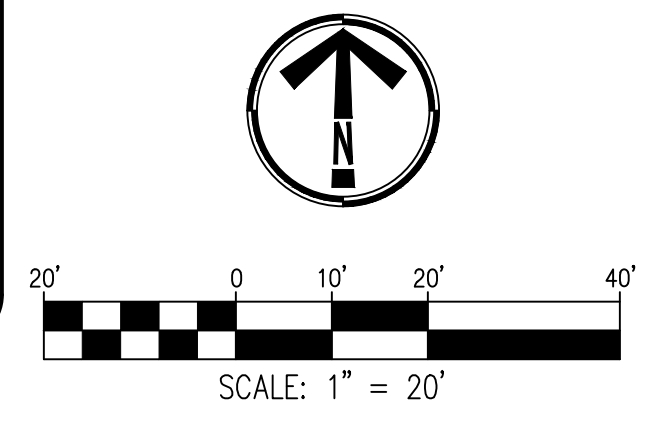




**NOTES:**

- ALL TREES BEING RETAINED WILL BE IDENTIFIED BY NUMBERED METAL TAGS WITH THE NUMBERS KEYED TO THIS TREE SURVEY MAP. THEY SHALL ALSO BE CLEARLY IDENTIFIED ON CONSTRUCTION DOCUMENTS.
- REMAINING TREES WILL BE PROTECTED DURING DEVELOPMENT WITH A 6 FOOT HIGH CHAIN LINK FENCE SECURED TO THE GROUND WITH 8\"/>

Tree Caliper Summary Table	
Total Caliper on site	1069
Total non-viable removed	113
Total viable removed	346
Total removed	459
Total protected	610



1	paper birch	14	20	terminal decline due to wood borers	remove
2	paper birch	12	20	terminal decline due to wood borers	remove
3	paper birch	11	22	terminal decline due to wood borers	remove
4	paper birch	12	20	terminal decline due to wood borers	remove
5	paper birch	11	16	terminal decline due to wood borers	remove
6	paper birch	13	18	terminal decline due to wood borers	remove
7	grand fir	12	30	viable	
8	grand fir	14	30	viable	
9	grand fir	15	22	viable	remove
10	grand fir	15	24	viable	remove
11	grand fir	13	30	viable	
12	paper birch	11	16	terminal decline due to wood borers	remove
13	paper birch	11	18	terminal decline due to wood borers	remove
14	ponderosa pine	37	70	viable	
15	Douglas fir	26	70	viable	remove
16	ponderosa pine	25	70	viable	
17	Douglas fir	27	75	viable	
18	Douglas fir	22	60	viable	
19	Douglas fir	30	75	viable	
20	grand fir	8	40	viable; size estimated; no tag; blackberries at base	
21	Douglas fir	51	130	viable	
22	Douglas fir	48	120	viable	
23	Douglas fir	64	140	viable	
24	Douglas fir	14	45	viable; size estimated; no tag; blackberries at base	
25	Douglas fir	40	130	viable	
26	Douglas fir	58	150	viable	
27	crab apple	11	15	viable	remove
28	Douglas fir	20	45	viable	remove
29	Douglas fir	42	60	viable	remove
30	Douglas fir	36	70	viable	
31	apple	6	12	viable, topped	remove
32	apple	5	12	viable, topped	remove
33	apple	5	12	viable, topped	remove
34	apple	6	12	viable, topped	remove
35	apple	7	12	viable, topped	remove
36	apple	7	12	viable, topped	remove
37	apple	5	12	viable, topped	remove
38	Norway maple	15	18	viable	
39	apple	7	16	viable, topped	
40	bird cherry	9	16	trunk decay	remove
41	bird cherry	9	18	trunk decay	remove
42	plum	6	14	viable	remove
43	Scouler willow	28	26	viable	remove
44	red pine	19	44	viable	remove
45	red pine	19	36	viable	remove
46	red pine	16	28	viable	remove
47	Douglas fir	24	50	viable	remove
48	red pine	9	30	viable	remove
49	Douglas fir	18	50	viable	remove
50	red pine	16	42	viable	remove
51	English hawthorn	9	18	viable	
52	red alder	10	18	viable	
53	Douglas fir	46	90	viable	
54	Douglas fir	12	36	viable; added to map	
55	Douglas fir	11	20	viable	remove
56	Douglas fir	10	22	viable	remove
57	Douglas fir	12	22	viable	

**CANYON CREEK SUBDIVISION  
TAX LOTS 0900 AND 01000  
TAX MAP 31W13B  
NW 1/4 OF SEC. 13, T.3S R.1W W.M.  
WILSONVILLE, OREGON**

**TREE PRESERVATION AND  
REMOVAL PLAN**

REVISIONS		
NO.	DATE	DESCRIPTION
1	1/26/16	REVISIONS FROM INCOMPLETE LETTER DATED 1/21/16
2	3/18/16	REDUCED NUMBER OF LOTS FROM 15 TO 14
3	3/30/16	SETBACK LINE ADJUSTMENTS

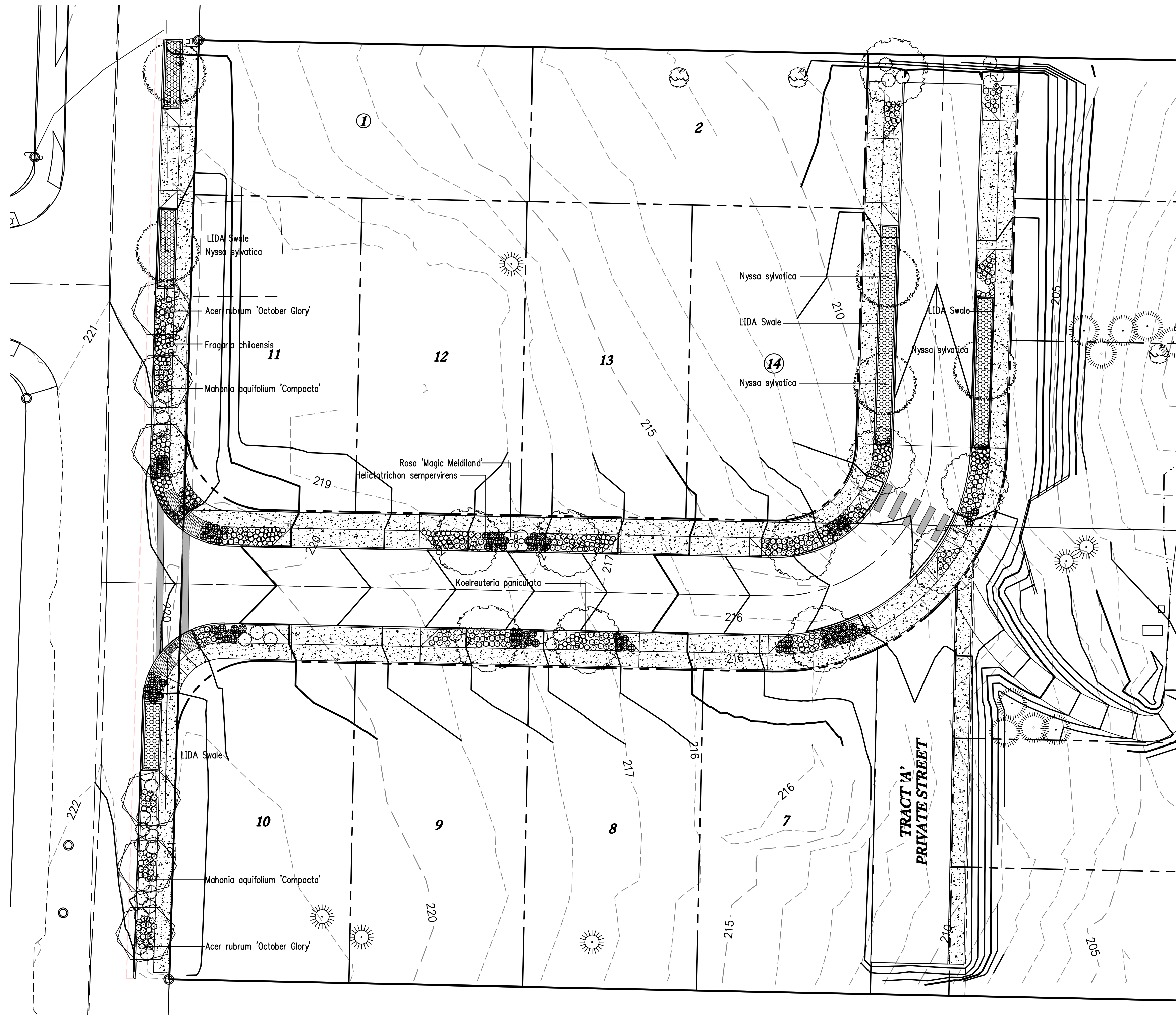
**EMERIO  
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FILE P: \\500-015 Canyon Creek South\proj\plan\500-015\_08trees\_Layout: 8 TREE PRESERVATION AND REMOVAL PLAN, Plot Date: 4/6/2016 1:47 PM, by: Doug Thomas

SHEET **8** OF **8**





**STREET TREES LOCATION NOTES**

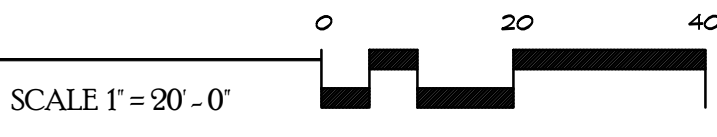
- 5' MINIMUM CLEARANCE FROM UNDERGROUND UTILITIES AND LATERALS. LANDSCAPE DESIGN OF TREES AND ENGINEERING DESIGN OF UNDERGROUND SERVICES SHALL BE COORDINATED.
- TREES SHALL BE CENTERED BETWEEN CURB AND SIDEWALK.
- CITY APPROVED ROOT BARRIER METHOD TO BE USED FOR ALL STREET TREES LOCATED WITHIN 8 FEET OF ALL CURBS AND SIDEWALKS. ROOT BARRIER SHALL EXTEND TO A DISTANCE OF 20" CENTERED WITH THE TREE BASE. BARRIER SHALL BE 2"-4" FROM CURB OR SIDEWALK AND EXTEND A MINIMUM OF 24" IN DEPTH.
- WHEN TREES ARE WITHIN TREE WELLS, ROOT BARRIER SHALL BE PLACED ON ALL SIDES.
- PARALLEL PARKING: LOCATE TREE BETWEEN ON-STREET PARKING SPACES. THIS LOCATION PRECLUDES DOORS OPENING ONTO TREES AND PASSENGERS EXITING IN CONFLICT WITH TREE PLACEMENT.

- NOTES:**
- SEE CIVIL SHEET 6 FOR STREET TREE PLANTING DETAIL.
  - TRACT 'A' WILL BE PLANTED WITH BLUE OAT GRASS, COMPACT OREGON GRAPES AND LANDSCAPE ROSES ALONG ITS NORTH, SOUTH AND EAST BOUNDARY. ADDITIONAL APPLE TREES WILL BE PLANTED AS SPACING ALLOWS.

**STREET TREES**

SYMBOL	(QUANTITY) SIZE	SCIENTIFIC NAME COMMON NAME
<b>TREES</b>		
	2" (6) Caliper	<i>Acer rubrum</i> 'October Glory' "O.G." Red Maple
	2" (9) Caliper	<i>Koelreuteria paniculata</i> Golden Rain Tree
	2" (5) Caliper	<i>Nysa sylvatica</i> Tupelo
<b>SHRUBS</b>		
	(110) 1 gallon	<i>Helictotrichon sempervirens</i> Blue Oat Grass
	(395) 1 gallon	<i>Mahonia aquifolium</i> 'Compacta' Compact Oregon Grape
	(42) 1 gallon	<i>Rosa</i> 'Magic Meidiland' 'M.M.' Landscape Rose
<b>GROUND COVER</b>		
	(200) 1 gallon	<i>Fragaria chiloensis</i> Sand Strawberry
<b>LIDA SWALE PLANTING</b>		
	(350) 1 gallon	<i>Juncus effusus</i> Soft Rush
	(350) 1 gallon	<i>Juncus patens</i> Spreading Rush
	(145) 1 gallon	<i>Fragaria chiloensis</i> Strawberry

**NOTE:**  
ALL STREET TREE PLACEMENT SHALL MEET THE STANDARDS OF PUBLIC WORKS STANDARDS.



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I.L.C.  
12115 nw old quarry rd  
portland, or 97232  
503.646.3517

December 21, 2015  
ORIGINAL SUBMISSION 12/22/2015

CANYON CREEK SUBDIVISION  
TAX LOTS 0900 AND 01000  
TAX MAP 31W13B  
NW 1/4 OF SEC. 13, T.3S R.1W W.M.  
WILSONVILLE, OREGON

**STREET TREES**

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SHEET  
**L1**  
OF  
**2**



PARK PLANTING

SYMBOL	(QUANTITY) SIZE	SCIENTIFIC NAME COMMON NAME
<b>TREES</b>		
	(11) 8"	<i>Chamaecyparis nootkatensis 'Pendula'</i> Weeping Alaska Cedar
	2" (5) Caliper	<i>Pseudotsuga menziesii</i> Douglas-fir
<b>SEEDING</b>		
Pro Time Companion in disturbed areas 7 lbs. per 1,000 sq. ft.		



MITIGATION PLANTING

Areas disturbed by the construction of the bark path are to be mitigation in accordance with section 4.139.07 of the Development Code for the City of Wilsonville. No trees will be removed. Shrubs removed shall be replaced at a rate of 25 shrubs per 500 square feet of disturbance. Shrubs to be 1 gallon in size and a minimum of 12" in height.

Shrubs to be: *Symphoricarpos albus* (Snowberry), *Rubus parvifolia* (Thimbleberry) and *Gaultheria shallon* (Salal).

PLANTING NOTES

Final rough grades will be established by the General Contractor, fine finish grades by the Landscape Contractor. Top of mulch at all planting beds to be 1" below top of curbs or adjacent paving.

Plant material: All plant material shall be nursery grown under climatic conditions similar to or harder than those at the site. All plants shall be of normal habit of growth, healthy, vigorous, and free of disease, insects, insect eggs and larvae.

Trees: All trees shall be healthy grown nursery stock, be a minimum of 1-1/2" caliper at 6 inches above ground level, and be at least 8-10 feet high conforming in size and grade with the standard for nursery stock ANSI Z60.1-1990 1990 ed. All trees shall have a single straight trunk, a well developed leader with tops and roots characteristic of the species, cultivar or variety. All trees must be free of insects, diseases, mechanical injury, and other objectionable features when planted. Bare root stock shall leave a root system sufficient to insure survival and healthy growth. Balled and burlap (B&B) stock shall leave a natural sound ball sufficient to insure survival and healthy growth. All trees which are grafted are to be grafted at a minimum height of 7 feet above ground level.

Topsoil: Backfill for planting holes to be 2/3 topsoil, 1/3 textural soil amendment. Shrub beds to have 6" of topsoil and 2" of textural soil amendment. Lawn areas to have minimum 4" topsoil. Any imported topsoil used is to be fertile, friable, and free of noxious weeds and debris. Textural soil amendments may be well rotted manure or commercial compost. Landscape architect shall field inspect prepared topsoil prior to any planting being done.

Fertilizer: 10-15-10 slow release on shrubs, trees, and groundcovers. All plants to receive applications of fertilizer according to manufacturer's recommendation.

Mulch: Minimum 2" medium grind, well-rotted bark mulch or commercial compost.

Planting: Stones, mortar, rubbish, and any material harmful to plant life are all to be removed from all planting areas.

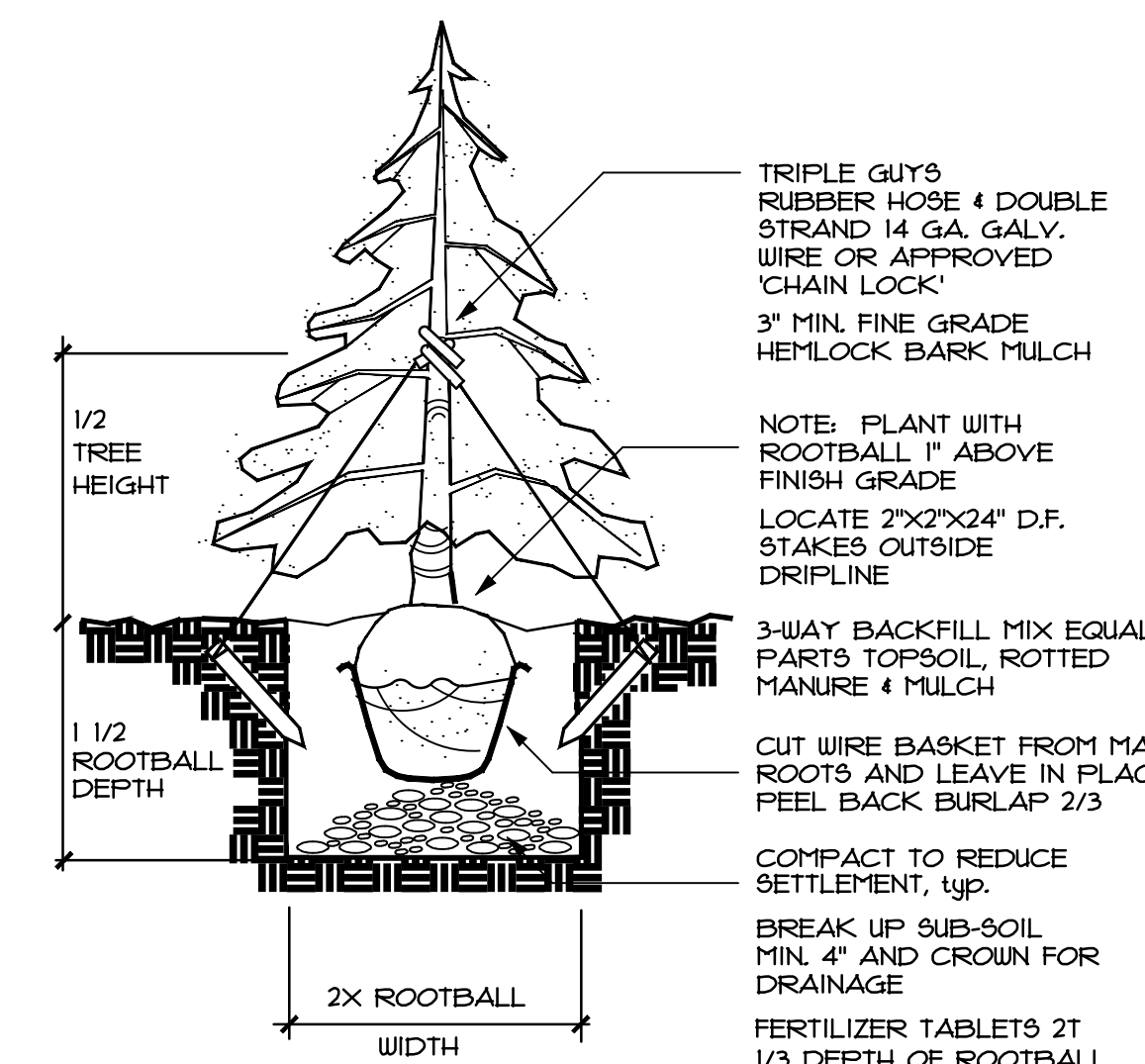
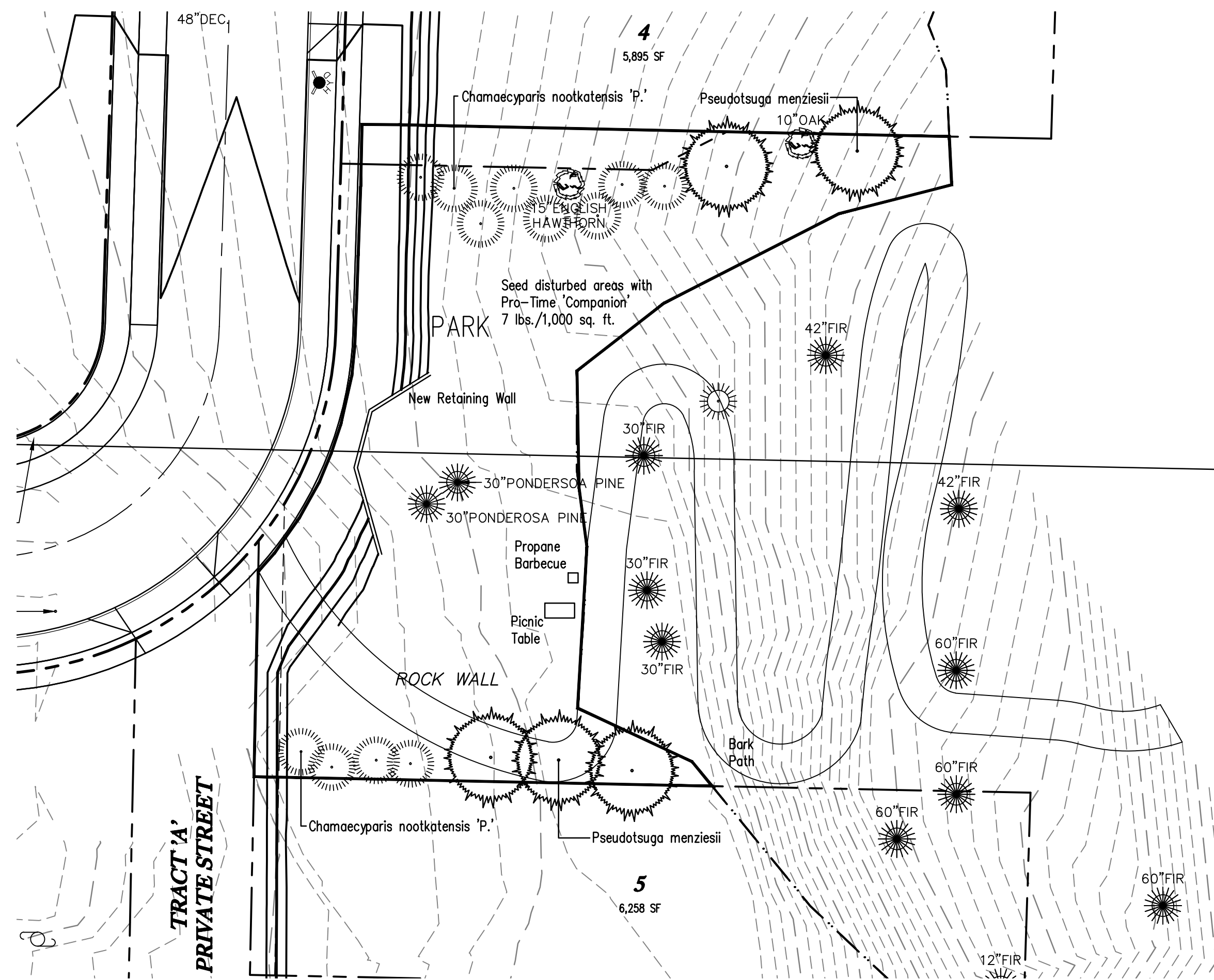
- All planting areas to be raked smooth prior to planting. Lawn areas to be raked smooth and rolled prior to planting.
- Sod areas to be watered prior to placement of sod.
- All planting holes are to be twice the diameter of the plant root ball or system. Sides and bottom of holes are to be broken up.
- All plants to be watered in when the planting holes have been half filled with soil. The irrigation system is not to be used to water plants in.
- Apply fertilizer when the planting hole is 3/4 full.
- Finished planting level of plants to be at or slightly above level grown in nursery.
- Landscape Architect shall inspect all planting and give written approval before owner will accept the landscaping work (from the general contractor) as being complete.

Maintenance: Begin maintenance immediately after each shrub and tree is planted. Protect and maintain plantings for a period of 60 days after acceptance. Water, weed, cultivate, maintain mulch, and reset plants to proper grades and upright positions as required.

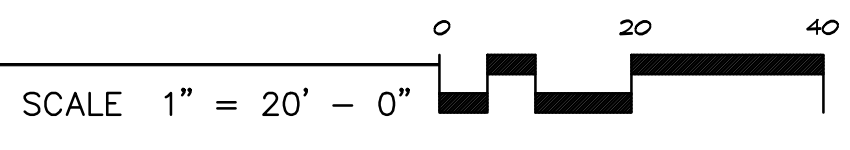
Guarantee: Guarantee all plant material after final acceptance for duration of two full growing seasons or for two years, whichever is longer. Replace plant materials not surviving or in poor condition: except only loss or damage due to freezing, vandalism, or acts and neglects on the part of others.

IRRIGATION NOTES

Irrigation to be by watering truck through the guarantee period.



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1  
L2  
EVERGREEN TREE PLANTING DETAIL  
SECTION  
N.T.S.

December 21, 2015  
ORIGINAL SUBMISSION 12/22/2015

CANYON CREEK SUBDIVISION  
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 CANYON CREEK ROAD SOUTH SUBDIVISION 500-015

PARK PLANTING

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REGISTERED  
 138  
 Gretchen Vadnais  
 OREGON  
 6/16/82  
 LANDSCAPE ARCHITECT

SHEET  
**L2**  
 OF  
**2**

FILE P: \500-015 Canyon Creek South [wkg] \scsp\Canyon Creek South\park-L2 Layout: L2 PARK PLANTING, Plot Date: 4/6/2016 1:48 PM, by: Doug Thomas

**ORDINANCE NO. 789**

**AN ORDINANCE OF THE CITY OF WILSONVILLE APPROVING A MINOR AMENDMENT TO WILSONVILLE'S 2013 TRANSPORTATION SYSTEMS PLAN (2016 TSP AMENDMENT).**

WHEREAS, the City of Wilsonville desires to use best professional practices to ensure land development contributes to creating a safe and attractive transportation network that supports Wilsonville's economy and quality of life; and

WHEREAS, the City of Wilsonville adopted the 2013 Transportation System Plan on June 17, 2013; and

WHEREAS, the Wilsonville Planning Commission held a work session on March 9, 2016 and a public hearing on April 13, 2016 to discuss and take public testimony on the proposed amendments; and

WHEREAS, the Wilsonville City Council held a public hearings on May 2, 2016 and May 16, 2016 to discuss and take public testimony on the proposed amendments; and

WHEREAS, the City provided Public Hearing Notices to 1,002 property owners within the City limits, a list of interested parties and agencies, and posted the Notice in three locations throughout the City and on the City website; and

WHEREAS, the Wilsonville Planning Commission approved Resolution LP16-0001 recommending adoption of the proposed amendments at the public hearing on April 13, 2016; and

WHEREAS, the City Council having conducted public hearings on the proposed amendments on May 2, 2016 and May 16, 2016, and duly considering the entire record, herein finds that the proposed minor amendments to the TSP are in the best interest of the community by providing for development to contribute to the creation of a safe and multi-modal transportation network;

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

1. FINDINGS.

The above-recited findings and those findings and conclusions in **Exhibit A**, attached hereto and incorporated by reference herein, are hereby adopted as findings of fact and conclusions of law.



2. DETERMINATION.

Based upon such findings, the City Council hereby adopts the amendment to Wilsonville's 2013 Transportation System Plan (2016 TSP Amendment), attached hereto as **Exhibit B** and incorporated by reference herein.

SUBMITTED to the Wilsonville City Council and read for the first time at a regular meeting thereof on May 2, 2016, and scheduled for a second reading at a regular meeting of the Council on May 16, 2016, commencing at the hour of 7:00 P.M. at the Wilsonville City Hall.

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

ENACTED by the City Council on the XX day of May, 2016 by the following votes:

Yes:-X-

No: -X-

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

DATED and signed by the Mayor this \_\_\_\_ day of \_\_\_\_, 2016.

\_\_\_\_\_  
TIM KNAPP, Mayor

SUMMARY OF VOTES:

Mayor Knapp -  
Council President Starr -  
Councilor Fitzgerald -  
Councilor Stevens -  
Councilor Lehan -

EXHIBITS:

EXHIBIT A: Staff Report with the following attachments:

Attachment 1: Conclusionary findings dated April 13, 2016

Attachment 2: April 18, 2016 DKS Memorandum, Wilsonville Transportation System Plan (TSP) Amendment Summary

Attachment 3: Planning Commission Hearing Record

EXHIBIT B: 2016 Transportation System Plan Amendment

CONCLUSIONARY FINDINGS

April 13, 2016

In support of Approval of Ordinance 789  
2013 Transportation System Plan Amendments

*Section 4.032. Authority of the Planning Commission.*

*(.01) As specified in Chapter 2 of the Wilsonville Code, the Planning Commission sits as an advisory body, making recommendations to the City Council on a variety of land use and transportation policy issues. The Commission also serves as the City's official Committee for Citizen Involvement and shall have the authority to review and make recommendations on the following types of applications or procedures:*

*B. Legislative changes to, or adoption of new elements or sub-elements of, the Comprehensive Plan;*

**Response:** The TSP is a sub-element of the Comprehensive Plan. The Planning Commission conducted a worksession on the proposed amendments on March 9<sup>th</sup>, and then conducted a public hearing on April 13<sup>th</sup>, after which will provide the City Council with a recommendation.. The City Council will conduct additional public hearings following the conclusion of the Commission portion of the process. The City Council is the final local authority on this Master Plan. **These criteria are satisfied.**

*Section 4.033. Authority of City Council.*

*(.01) Upon appeal, the City Council shall have final authority to act on all applications filed pursuant to Chapter 4 of the Wilsonville Code, with the exception of applications for expedited land divisions, as specified in Section 4.232. Additionally, the Council shall have final authority to interpret and enforce the procedures and standards set forth in this Chapter and shall have final decision-making authority on the following:*

*B. Applications for amendments to, or adoption of new elements or sub-elements to, the maps or text of the Comprehensive Plan, as authorized in Section 4.198.*

*E. Consideration of the recommendations of the Planning Commission.*

**Response:** Following the public hearing before the Planning Commission, the City Council will receive a recommendation from the Planning Commission on the proposed TSP amendments. The City Council is the final local authority regarding adoption of the TSP, which will be adopted via Ordinance as a sub-element of the City's Comprehensive Plan. **These criteria are satisfied.**

*(.02) When a decision or approval of the Council is required, the Planning Director shall schedule a public hearing pursuant to Section 4.013. At the public hearing the*

*staff shall review the report of the Planning Commission or Development Review Board and provide other pertinent information, and interested persons shall be given the opportunity to present testimony and information relevant to the proposal and make final arguments why the matter shall not be approved and, if approved, the nature of the provisions to be contained in approving action.*

*(.03) To the extent that a finding of fact is required, the Council shall make a finding for each of the criteria applicable and in doing so may sustain or reverse a finding of the Planning Commission or Development Review Board. The Council may delete, add or modify any of the provisions pertaining to the proposal or attach certain development or use conditions beyond those warranted for compliance with standards in granting an approval if the Council determines the conditions are appropriate to fulfill the criteria for approval.*

**Response:** Following the public hearing before the Planning Commission, the Planning Director scheduled additional public hearings before the City Council at which time the Council will review the findings and recommendations provided by the Planning Commission. **At conclusion of the public hearing process, these criteria will be satisfied.**

#### STATEWIDE PLANNING GOALS

**Statewide Planning Goal #1 - Citizen Involvement (OAR 660-015-0000(1)):** *To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.*

**Response:** A work session was held on March 13<sup>th</sup>, 2016 with the Planning Commission. The City of Wilsonville has provided notice of public hearings before the Planning Commission consistent with the Planning and Land Development Ordinance requirements. Such notices were posted in the newspaper, and were provided to property owners in each area of the community where a project was being modified, a list of interested agencies, and were posted in three locations throughout the City and on the City's website. At the April 13 public hearing, the public was afforded an opportunity to provide public testimony to the Planning Commission. The public will also be provided the opportunity to provide public testimony to City Council at the May 2<sup>nd</sup> City Council hearing.

Significant public outreach was also conducted by the City of Wilsonville as part of the Frog Pond Area plan. This outreach helped form the recommended TSP project amendments in the Frog Pond west neighborhood that are currently proposed for inclusion in the TSP. **This goal is met.**

**Statewide Planning Goal #2 - Land Use Planning (OAR 660-015-0000(2)):** *To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such*

*decisions and actions.*

**Response:** This goal is implemented through the applicable Goals and Policies in the Land Use and Development section of the Wilsonville Comprehensive Plan. Because the TSP is a sub-element of the City's Comprehensive Plan, the application to adopt the TSP was processed pursuant to the legislative decision process outlined in Section 4.032 and Section 4.033 of the Development Code. The TSP amendment document and its recommended improvements, project modifications and proposed funding sources are based on a series of analyses and evaluations that were prepared as part of developing the original TSP update, including the existing conditions report, future conditions report, and solutions analysis and funding package.

The proposed TSP update and associated amendments are consistent with Statewide Planning Goal 2. **This goal is met.**

**Statewide Planning Goal #5 – Natural Resources, Scenic and Historic Areas, and Open Spaces (OAR 660-015-0000(5)):** *To protect natural resources and conserve scenic and historic areas and open spaces.*

**Response:** This goal is implemented through the applicable Park/Recreation/Open Space Goals and Policies in the Public Facilities and Services section of the Comprehensive Plan. The City code contains specific review criteria for uses within a Significant Resource Overlay Zone (Development Code Section 4.139.00, SROZ Ordinance) to ensure that designated Goal 5 resources are appropriately considered when development is proposed.

The TSP amendment document details the stages of the Capital Project Process (Figure 6-1), which includes an environmental assessment. An environmental assessment may be required at the time of project development pursuant to applicable federal, regional, and/or local regulations. **This goal is met.**

**Statewide Planning Goal # 6 – Air, Water and Land Resource Quality (OAR 660-015-0000(6)):** *To maintain and improve the quality of the air, water and land resources of the state.*

**Response:** Air, water and land resources have been considered in the development of the planned transportation system to ensure that impacts on these resources are minimized. Appropriate measures will be taken at the time of project development on a site-specific basis to ensure that applicable state and federal regulations are met. **This goal is met.**

**Statewide Planning Goal # 7 – Areas Subject to Natural Disasters and Hazards:** *To protect people and property from natural hazards.*

**Response:** Areas subject to natural disasters and hazards, such as floodplains, have been considered in the development of the planned transportation system to ensure that impacts on these areas are minimized. Improvements related to implementation of the



system will need to conform to environmental regulations. **This goal is met.**

**Statewide Planning Goal # 8 – Recreation Needs (OAR 660-015-0000(8)):** *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.*

**Response:** While Goal 8 is not directly applicable to this action, safe and convenient access to parks and other areas planned for recreational needs was considered in the development of the TSP. The amended TSP was informed by the 2007 Parks and Recreation Master Plan, a plan for achieving a comprehensive and interrelated system of parks, recreation, and natural areas that in turn promote connectivity throughout the City and support the 2006 Bicycle and Pedestrian Master Plan. Numerous proposed projects contained in the TSP amendment will implement the City's planned trail system and will enhance access to the City's parks and open spaces (TSP Chapter 5). **This goal is met.**

**Statewide Planning Goal #9 – Public Facilities and Services (OAR 660-015-0000(9)):** *To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.*

**Response:** Adopting the updated TSP will ensure that transportation improvements will be available to support the planned uses in the City's employment and residential areas, consistent with other local economic development goals.

The amended recommended list of transportation projects that will improve or complete the transportation system through 2035 is based largely on past plans, but includes updated solutions. The amendments in the proposed TSP provide projects that support economic development in the City and include employers and future development areas such as Republic Services, Xerox, Frog Pond residential, future West Linn/Wilsonville schools, and Coffee Creek industrial areas that rely on that roadway by improving mobility and removing conflicts between freight movement and pedestrians and cyclists. **This goal is met.**

**Statewide Planning Goal #10 – Housing (OAR 660-015-0000(10)):** *To provide for the housing needs of citizens of the state.*

**Response:** The needs and improvements identified in the original 2013 TSP were developed in part by forecasting growth in residential development and the trips expected to be generated by growth over the next 20 years. Adoption of the TSP update will ensure the orderly extension and improvement of transportation facilities to accommodate the projected growth envisioned in the City's Comprehensive Plan, which includes a variety of housing types. **This goal is met.**

**Statewide Planning Goal #11 – Public Facilities and Services (OAR 660-015-0000(11)):** *It is the purpose of Goal 11 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. Cities are required to develop public facilities plans for their*

UGBs.

**Response:** Transportation facilities are considered a primary public facility in the City. The amended TSP documents existing conditions and future needs for the transportation system in Wilsonville and recommended improvements and implementation strategies have been developed to address those needs.

In particular, proposed transit improvements, filling sidewalk gaps, and improving crosswalks and bicycle facilities and Safe Routes to School planning will result in increased safety and access within residential areas of the City, as well as improve connections to other uses and services in the City. **This goal is met.**

**Statewide Planning Goal #12 – Transportation (OAR 660-015-0000(12)):** *To provide and encourage a safe, convenient and economic transportation system.*

**Response:** The original TSP established City transportation policy related to multimodal transportation, access and mobility, safety, equity, economy, health and the environment, and goods movement. These policies and associated implementation measures guided the development of the TSP, the development of standards, and the selection of the amended recommended improvements. **This goal is met.**

**Statewide Planning Goal #13 Energy Conservation (OAR 660-015-0000(13)):** *To conserve energy.*

**Response:** The multimodal transportation system and improvements proposed in the TSP amendment will support efficient use of land within the City limits and UGB based on existing adopted Comprehensive Plan and zoning designations. The TSP will ensure that the City can provide timely, orderly and efficient transportation improvements where it is efficient to promote higher intensity land uses and avoid leap-frog development. **This goal is met.**

## STATE AND REGIONAL PLANS

The current TSP amendment meets the findings of the original adopted 2013 TSP that the proposed TSP and recommended projects are consistent with goals and policies of the Oregon Transportation Plan, Regional Transportation Plan, Oregon Highway Plan and Transportation Planning Rule.

## GENERAL CONCLUSIONARY SUMMARY OF FINDINGS

- The TSP amendment is consistent with applicable Statewide Planning Goals. .
- The TSP amendment is consistent with the Oregon Transportation Plan, Regional Transportation Functional Plan, Comprehensive Plan goals and policies, and Oregon Highway Plan.
- The list of amended transportation projects is based largely on the 2013 adopted

- plan but includes modifications to support land use planning and development.
- The draft TSP amendments include revised transportation improvement projects (Chapter 5) to address the City's transportation needs and accommodate growth through the 2035 planning horizon.

As is evidenced by the staff report and findings contained herein, the proposal to amend the City's TSP is consistent with the applicable statewide planning goals, other applicable state and regional standards and the criteria contained in the Comprehensive Plan.



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# MEMORANDUM

**DATE:** April 18, 2016

**TO:** Project Management Team

**FROM:** Scott Mansur, P.E., PTOE  
Jordin Ketelsen, EIT

**SUBJECT:** **Wilsonville Transportation System Plan (TSP) Amendment Summary** P15125-003

---

This memorandum discusses necessary amendments to the City of Wilsonville's Transportation System Plan (TSP) since the prior TSP was adopted in 2013. These changes include the following project modifications:

- Delete the minor arterial segment for Kinsman Road between Ridder Road and Day Road, including associated truck route and bicycle route designations and delete associated Capital Improvement Project RE-07.
- Add the proposed east to west Java Road collector, including bicycle route designations and update Capital Improvements Project SI-01 accordingly.
- Add Garden Acres Road as a three-lane collector designation, including truck route and bicycle route designations. Prepare a cost estimate and project description for inclusion as a Higher Priority Project.
- Add the designated collector roadways and update the proposed trail locations from the recently adopted Frog Pond Area Plan.<sup>1</sup>
- Provide updated information for project UU-01 (Boeckman Road Dip Improvements) based on the recent OBEC bridge study.<sup>2</sup>
- Add the Printer Parkway collector, including the proposed bicycle facilities. Prepare cost estimate and project description for inclusion as a Higher Priority Project.
- Add the collector roadways and site improvements associated with the proposed Advance Middle School site.

---

<sup>1</sup> *Frog Pond Area Plan*, Angelo Planning Group, DKS Associates, November 2015.

<sup>2</sup> Boeckman Dip Reconstruction Option A Preliminary Cost Estimate, OBEC.



- Update the City's urban growth boundary (UGB) to include the area surrounding the proposed Meridian Creek Middle School and City Park site.
- Extend Capital Improvement Project BW-P2 to include sidewalk infill on Boones Ferry Road from Commerce Circle Loop to Day Road.

The following sections provide more detail for the specific proposed modifications to the TSP.

## PROPOSED AMENDMENTS FOR TSP COMPLIANCE

The discussion of recommended revisions is generally organized by reference to the applicable chapter(s) of the TSP. In all chapters, revisions to existing TSP language are presented with deletions shown in ~~striketrough~~ and additions or new code shown as underlined. The revised TSP figures, referenced in the sections below, are attached at the end of this memorandum. The revisions identified in this memorandum will also be addressed in a final amended TSP document once the revisions are approved by the Planning Commission and City Council.

### Executive Summary

The following changes are recommended to the Executive Summary of the City of Wilsonville's TSP.

#### ***Higher Priority Projects Figure*** (Page iv)

See the recommended changes to this figure in Chapter 5 (page 4 of this memorandum).

#### ***Higher Priority Projects Table*** (Page v)

Remove the following projects from this table:

- ~~Project RE-07 Kinsman Road Extension (North)~~
- ~~Project BW-11 Frog Pond Trails~~
- ~~Project RT-02 Frog Pond Trail~~
- ~~SI-01 Clutter Road Intersection Improvements with Realignment or Grade Lowering~~

Add or update the following projects to this table:

- UU-08 Garden Acres Road Urban Upgrade
- UU-09 Printer Parkway Urban Upgrade
- UU-10 Advance Road Urban Upgrade
- RE-11 Meridian Creek Middle School Collector Roadways
- RE-12A Frog Pond West Neighborhood Collector Roads
- RE-12B Frog Pond South Neighborhood Collector Road
- RE-13 Java Road Connection and Signal
- RT-07 Revised Frog Pond Regional Trail
- BW-15 Property Acquisitions for Bike/Ped Connectivity





## Chapter 3: The Standards

The following changes are recommended to Chapter 3 of the City of Wilsonville's TSP.

### **Figure 3-2: Functional Class Designations** (Page 3-5)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Meridian Creek Middle School and include 63<sup>rd</sup> Avenue and Hazel Street as collector roadways.
- Show Advance Road as a collector road to 60<sup>th</sup> Avenue.
- Remove the Kinsman Road extension between Day Road and Ridder Road.
- Modify the functional classification of Garden Acres Road from a local street to a collector.
- Add the future collector roadways proposed in the adopted Frog Pond Area Plan.
- Modify the functional classification of Printer Parkway from a private local street to a collector.
- Modify the functional classification of 60<sup>th</sup> Avenue adjacent to the proposed Advance Middle School site to a collector.
- Add the future Java Road collector.

### **Figure 3-4: Freight Routes** (Page 3-9)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Meridian Creek Middle School.
- Remove the Kinsman Road extension.
- Classify Garden Acres Road as a truck route.

### **Figure 3-5: Bicycle Routes** (Page 3-11)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Meridian Creek Middle School and show bike lanes on 63<sup>rd</sup> Avenue and Hazel Street.
- Update to show bike lanes on Advance Road to 60<sup>th</sup> Avenue.
- Remove the Kinsman Road extension and update the alignment of the proposed future shared use paths in the area.
- Add the planned bike lanes on the future Java Road collector.
- Show the planned future bike lanes on Garden Acres Road.
- Show the planned future bike facilities on Printer Parkway.
- Update the bicycle facilities and shared used paths in the Frog Pond area as designated in the Frog Pond Area Plan.



## Chapter 4: The Needs

The following changes are recommended to Chapter 4 of the City of Wilsonville's TSP.

### **Figure 4-1: Roadway Cross-Section Deficiencies** (Page 4-5)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Meridian Creek Middle School.
- Highlight Garden Acres Road as experiencing existing collector cross-section deficiencies.
- Highlight Printer Parkway as experiencing existing collector cross-section deficiencies.
- Highlight Advance Road between Stafford Road and 60<sup>th</sup> Avenue as experiencing collector cross-section deficiencies.
- Highlight 60<sup>th</sup> Avenue adjacent to the proposed Meridian Creek Middle School site as experiencing collector cross-section deficiencies.

### **Figure 4-2: Future 2035 Capacity Deficiencies** (Page 4-7)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Meridian Creek Middle School.
- Remove the Kinsman Road extension.

## Chapter 5: The Projects

The following changes are recommended to Chapter 5 of the City of Wilsonville's TSP.

### **Figure 5-2: Higher Priority Projects** (Page 5-5)

Remove the following projects:

- ~~RE-07 Kinsman Road Extension~~
- ~~BW-11 Frog Pond Trails~~
- ~~RT-02 Frog Pond Trail~~

Add the following projects:

- UU-08 Garden Acres Road Urban Upgrade
- UU-09 Printer Parkway Urban Upgrade
- RE-11 Meridian Creek Middle School Collector Roads
- UU-10 Advance Road Urban Upgrade
- RE-12A Frog Pond West Neighborhood Collector Roads
- RE-12B Frog Pond South Neighborhood Collector Road
- RE-13 Java Road Connection and Signal
- RT-07 Revised Frog Pond Regional Trail



**Table 5-2: Higher Priority Projects (Northwest Quadrant) (Page 5-6)**

Remove the following projects:

- ~~RE-07 Kinsman Road Extension~~
- ~~SI-01 Clutter Road Intersection Improvements with Realignment or Grade Lowering~~

Add the following projects and their associated costs and descriptions:

- UU-08 Garden Acres Road Urban Upgrade (\$14,260,000)

*Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade the Garden Acres Road/Day Road intersection to either a signal or a roundabout. Realign Ridder Road to Garden Acres Road. Close the existing Clutter Road connection to Grahams Ferry Road after completion of Project RE-13. Close the existing Coffee Creek Correctional Facility driveway to Grahams Ferry Road and relocate the driveway to Cahalin Road.*

- RE-13 Java Road Connection and Signal (\$1,500,000)

*Construct Java Road with collector designation between Grahams Ferry Road and Garden Acres Road with a signal at the Java Road/Grahams Ferry Road intersection and disconnect Clutter Street from Grahams Ferry Road.*

Update the description and cost of the following project:

- RW-02 Day Road Widening (\$6,600,000-\$5,900,000)

*Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road and Day Road/Grahams Ferry Road intersections*

**Figure 5-3: Higher Priority Projects (Northwest Quadrant) (Page 5-7)**

Update this figure based on the changes made in the northwest quadrant of Figure 5-2 outlined above.

**Table 5-3: Higher Priority Projects (Northeast Quadrant) (Page 5-8)**

Update the costs of the following projects:

- UU-01 Boeckman Road Dip Improvements (-\$5,850,000 \$12,220,000)
- UU-06 Stafford Road Urban Upgrade (\$3,900,000 \$4,200,000)
- RT-01A Boeckman Creek Trail (North) (\$800,000 \$850,000)

Remove the following projects:

- ~~BW-11 Frog Pond Trails~~
- ~~RT-02 Frog Pond Trail~~



Add the following projects and their associated costs and descriptions:

- UU-09 Printer Parkway Urban Upgrade (\$3,600,000)  
*Upgrade Printer Parkway to a three-lane collector with bicycle lanes and multiuse path*
- UU-10 Advance Road Urban Upgrade (\$3,175,000)  
*Upgrade Advance Road to collector standards starting at Stafford Road to the proposed 63<sup>rd</sup> Avenue (entrance to proposed Meridian Creek Middle School)*
- RE-11 Meridian Creek Middle School Site Improvements (\$1,600,000)  
*Construct the collector roadways and site improvements associated with the proposed Meridian Creek Middle School site*
- RE-12A Frog Pond West Neighborhood Collector Roads (\$9,510,000)  
*Construct the collector roadways within the west neighborhood as identified in the Frog Pond Area Plan*
- RE-12B Frog Pond South Neighborhood Collector Roads (\$2,650,000)  
*Construct the collector roadways within the south neighborhood as identified in the Frog Pond Area Plan*
- RT-07 Revised Frog Pond Regional Trail (\$700,000)  
*Construct the regional trail identified in the Frog Pond Area Plan*

**Figure 5-4: Higher Priority Projects (Northeast Quadrant) (Page 5-9)**

Update this figure based on the changes made in the northeast quadrant of Figure 5-2 outlined above.

**Table 5-6: Higher Priority Projects (Citywide) (Page 5-14)**

Add the following project and associated costs and descriptions:

- BW-15 Property Acquisitions for Bike/Ped Connectivity (\$1,000,000)  
*Provide set-aside funds to allow purchase of strategically located properties that can facilitate bicycle and pedestrian connections as these properties become available.*

**Figure 5-7: Additional Planned Projects (Page 5-17)**

Summary of changes:

- Update project BW-P2 Commerce Circle Loop Sidewalk Infill to include sidewalk infill on Boones Ferry Road from Commerce Circle to Day Road.
- Delete project UU-P1 Advance Road Urban Upgrade.



**Table 5-9: Additional Planned Projects (Northwest Quadrant)** (Page 5-18)

Update the following project and the associated cost and description:

- BW-P2 Commerce Circle Loop and Boones Ferry Road Sidewalk Infill (\$100,000-\$150,000)

*Fill in gaps in the sidewalks network on Commerce Circle Loop and Boones Ferry Road*

**Figure 5-8: Additional Planned Projects (Northwest Quadrant)** (Page 5-19)

Update this figure based on the changes made in the northwest quadrant of Figure 5-7 outlined above.

**Table 5-10: Additional Planned Projects (Northeast Quadrant)** (Page 5-20)

Remove Project UU-P1 Advance Road Urban Upgrade.

**Figure 5-9: Additional Planned Projects (Northeast Quadrant)** (Page 5-25)

Update this figure based on the changes made in the northeast quadrant of Figure 5-7 outlined above.

**Table 5-12: Additional Planned Projects (Southeast Quadrant)** (Page 5-24)

Add the following projects and their associated costs and descriptions:

- LT-P7 School Connection Trail (\$460,000)

*Construct the School Connection Trail identified in the Frog Pond Area Plan.*

*Medium priority due to existing connections; will become important when school and park are constructed.*

- LT-P8 60<sup>th</sup> Avenue Trail (\$240,000)

*Construct the 60<sup>th</sup> Avenue Trail identified in the Frog Pond Area Plan.*

*Medium priority due to existing connections; will become important when school and park are constructed.*

**Figure 5-11: Additional Planned Projects (Southeast Quadrant)** (Page 5-25)

Update this figure based on the changes made in the southeast quadrant of Figure 5-2 outlined above.



**NOTICE OF DECISION**

**PLANNING COMMISSION**

**RECOMMENDATION OF APPROVAL TO CITY  
COUNCIL**

**FILE NO.:** LP16-0001

**APPLICANT:** City of Wilsonville

**REQUEST:** A Wilsonville Planning Commission Resolution  
Recommending That The Wilsonville City Council Adopt  
an Ordinance Approving Minor Amendments To  
Wilsonville's 2013 Transportation System Plan (TSP).

After conducting a public hearing on April 13, 2016, the Planning Commission voted to recommend this action to the City Council by passing Resolution No. LP16-0001.

The City Council is scheduled to conduct a Public Hearing on this matter on May 2, 2016, at 7:00 p.m., at the Wilsonville City Hall, 29799 SW Town Center Loop East.

For further information, please contact the Wilsonville Planning Division, 29799 SW Town Center Loop East, or telephone (503) 682-4960.

**PLANNING COMMISSION  
RESOLUTION NO. LP16-0001**

**A WILSONVILLE PLANNING COMMISSION RESOLUTION RECOMMENDING THAT THE WILSONVILLE CITY COUNCIL ADOPT AN ORDINANCE APPROVING MINOR AMENDMENTS TO WILSONVILLE'S 2013 TRANSPORTATION SYSTEM PLAN (TSP).**

WHEREAS, the City of Wilsonville desires to use best professional practices to ensure land development contributes to creating a safe and attractive transportation network that supports Wilsonville's economy and quality of life; and

WHEREAS, the City of Wilsonville adopted the 2013 Transportation System Plan on June 17, 2013; and

WHEREAS, the Wilsonville Planning Commission held a work session on March 9, 2016 to discuss and take public testimony concerning proposed revisions to Wilsonville's 2013 Transportation System Plan (TSP); and

WHEREAS, the Wilsonville Planning Director, taking into consideration input and suggested revisions provided by the Planning Commission members and the public, submitted proposed minor amendments to Wilsonville's 2013 Transportation System Plan (TSP) to the Planning Commission, along with a Staff Report, in accordance with the public hearing and notice procedures that are set forth in Sections 4.008, 4.010, 4.011 and 4.012 of the Wilsonville Code (WC); and

WHEREAS, the Planning Commission, after Public Hearing Notices were provided to property owners, a list of affected agencies, interested parties, and were posted at three City owned properties, in the local newspaper, and on the City website, held a Public Hearing on April 13, 2016 to review proposed minor amendments to Wilsonville's 2013 Transportation System Plan (TSP) and to gather additional testimony and evidence regarding the proposal; and

WHEREAS, the Planning Commission has afforded all interested parties an opportunity to be heard on this subject and has entered all available evidence and testimony into the public record of their proceeding; and

WHEREAS, the Planning Commission has duly considered the subject, including the staff recommendations and all the exhibits and testimony introduced and offered by all interested parties.

NOW, THEREFORE, BE IT RESOLVED that the Wilsonville Planning Commission does hereby adopt the Staff Report, as presented at the April 13, 2016 public hearing, including the findings and recommendations contained therein and does hereby recommend to the Wilsonville City Council approval of the proposed minor amendments; and

BE IT RESOLVED that this Resolution shall be effective upon adoption.

ADOPTED by the Planning Commission of the City of Wilsonville at a regular meeting thereof this 13th day of April, 2016 and filed with the Planning Administrative Assistant on April 14, 2016.

  
Wilsonville Planning Commission Chair

Attest:

  
Tami Bergeron, Administrative Assistant III

SUMMARY of Votes:

Chair Jerry Greenfield	<u>yes</u>
Commissioner Peter Hurley	<u>yes</u>
Commissioner Al Levit	<u>yes</u>
Commissioner Kamran Mesbah	<u>yes</u>
Commissioner Phyllis Millan	<u>yes</u>
Commissioner Eric Postma	<u>yes</u>
Commissioner Simon Springall	<u>yes</u>

**PLANNING COMMISSION  
WEDNESDAY, APRIL 13, 2016  
6:00 P.M.**

**Wilsonville City Hall  
29799 SW Town Center Loop East  
Wilsonville, Oregon**

**MOTIONS**

---

**V. CONSIDERATION OF THE MINUTES**

A. Consideration of the March 9, 2016 Planning Commission minutes  
The March 9, 2016 Planning Commission minutes were accepted as presented.

**VI. PUBLIC HEARING**

A. LP16-0001 -- Transportation System Plan (TSP) Amendments (Mende)

The following items were distributed to the Planning Commission at the dais:

- Attachment G: Memorandum dated April 12, 2016 from DKS Associates regarding Wilsonville TSP Additional Bike/Ped Project Amendment, identified as Page 113 of 113.
- Attachment I: Memorandum dated April 13, 2016, from DKS Associates regarding Wilsonville TSP Additional Bike/Ped Project Amendment, identified as Page 1 of 1. Attachment I replaced Attachment G.
- Attachment H: Email dated April 13, 2016 with attachments from Planning Director Chris Neamtzu to Commissioner Peter Hurley.

**Commissioner Postma moved to adopt LP16-0001 with the addition of Attachment I, which replaced Attachment G, and excluding Attachment H. Commissioner Levit seconded the motion, which passed unanimously.**

**PLANNING COMMISSION  
WEDNESDAY, APRIL 13, 2016  
6:00 P.M.**

**Wilsonville City Hall  
29799 SW Town Center Loop East  
Wilsonville, Oregon**

**Minutes  
LP16-0001 – TSP Amendments Excerpt**

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**I. CALL TO ORDER - ROLL CALL**

Chair Jerry Greenfield called the meeting to order at 6:00 p.m. Those present:

Planning Commission: Jerry Greenfield, Eric Postma, Peter Hurley, Al Levit, Phyllis Millan, and Kamran Mesbah. Simon Springall arrived after Roll Call. City Councilor Charlotte Lehan was absent.

City Staff: Chris Neamtzu, Michael Kohlhoff, Nancy Kraushaar, Miranda Bateschell, Stephan Lashbrook, and Jen Massa Smith

**II. PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was recited.

**III. CITIZEN'S INPUT** - This is an opportunity for visitors to address the Planning Commission on items not on the agenda. There was none.

**IV. CITY COUNCIL LIAISON REPORT**

Chris Neamtzu, Planning Director, stated Councilor Lehan was not able to attend the meeting, so he was asked to give the report on her behalf. He reported City Council's last meeting had a light agenda, but a considerable amount of time was spent discussing affordable housing during their work session. Council received a briefing from Community Relations Coordinator John Gale and City Attorney Barbara Jacobson regarding different programs that could be utilized by the City. Mr. Gale had many years of extensive experience with affordable housing and non-profits. Materials presented at that work session could be provided to the Planning Commission upon request. Council wanted more time for discussion and decided to continue the affordable housing discussion to a future meeting.

- He asked if the Planning Commission was interested in having Mr. Gale present some of affordable housing the programs to the Commission, noting Councilor Lehan also proposed having a joint City Council/Planning Commission work session to discuss the topic. Council was very interested in the topic from a renter, no-fault eviction point of view, about which the City has received correspondence. He added Commissioner Springall had brought forward several concerns about that issue, as well as first-time homebuyer programs, in general.

Chair Greenfield noted he had talked with several community members about this topic last night and there was considerable concern. One resident, who had become more active in the city, described how he was being priced out of his apartment in Wilsonville. He was concerned that Wilsonville would lose the man to another community because he could not find affordable housing in Wilsonville. Everyone was aware of the housing crisis in Portland, but affordable housing was a nationwide crisis. He supported holding a joint meeting with City Council.

The Planning Commission consented to holding a joint work session with City Council.



Commissioner Postma added he was uncertain about his role because his law firm was currently involved in an organization that had taken a role in the affordable housing process. He agreed nothing prohibited him from sitting in to listen.

Commissioner Millan suggested conducting a work session first to update the Commission on what the City Council had already seen. She added that although the affordable housing issue seemed like an abstract issue, she was meeting and talking to people actually affected by the problem. She suggested at least having the Council's materials available to review if a preliminary work session was not held.

Commissioner Springall noted that after reading the City Council packet with Mr. Gale's and the City Attorney's reports, he had some concerns that the focus was on home buying and not the need for short- and near-term rentals, which was the most critical, pressing issue. Obviously, home affordability was a long-term issue that needed work, but there was a crisis that needed to be addressed.

Mr. Neamtzu agreed to distribute the Council's materials to the Commission and talk to Council about scheduling a joint work session.

**V. CONSIDERATION OF THE MINUTES**

A. Consideration of the March 9, 2016 Planning Commission minutes  
The March 9, 2016 Planning Commission minutes were accepted as presented.

**VI. PUBLIC HEARING**

A. LP16-0001 -- Transportation System Plan (TSP) Amendments (Mende)

The following items were distributed to the Planning Commission at the dais:

- Attachment G: Memorandum dated April 12, 2016 from DKS Associates regarding Wilsonville TSP Additional Bike/Ped Project Amendment, identified as Page 113 of 113.
- Attachment I: Memorandum dated April 13, 2016, from DKS Associates regarding Wilsonville TSP Additional Bike/Ped Project Amendment, identified as Page 1 of 1. Attachment I replaced Attachment G.
- Attachment H: Email dated April 13, 2016 from Planning Director Chris Neamtzu to Commissioner Peter Hurley with attachments.

Chair Greenfield read the legislative hearing procedure into the record and opened the public hearing at 6:10 pm.

Chris Neamtzu, Planning Director, noted the Planning Commission conducted a work session last month on what were considered to be fairly minor amendments to the Transportation Systems Plan (TSP), adopted in 2013 after a significant amount of work by the Planning Commission and City Council in 2012 and 2013.

- A lot of planning work had been done in various areas of the community, such as in Frog Pond and Coffee Creek, and projects had emerged from those additional planning efforts that were the focus of the proposed minor amendments, which were minor updates to the TSP.
- He noted some exhibits had been distributed to the Planning Commission, but he was uncertain whether Commissioner Hurley's comments (Attachment H) belonged in the TSP record. He realized late in the day that assumption might be incorrect, but he had been unable to talk about it with Commissioner Hurley.

Commissioner Hurley confirmed the documents were not meant to be added to the TSP record, but were intended for discussion by the Planning Commission at a later date, though they were fostered by the creation of the TSP.

Eric Mende, Capital Projects Engineering Manager, stated tonight's presentation would be the same given to the Planning Commission last month; however, due to the public hearing, it needed to be presented again for the benefit of the public.

- As indicated in the Staff report, the public hearing was noticed to potentially affected individual property owners, as well as Metro, Washington County and Tualatin Valley Fire and Rescue.
- He noted the scope of the TSP Amendment was limited and that full updates to the TSP usually occurred on an eight to ten year schedule. Minor amendments in between the major updates were common when ongoing planning efforts created a need to include additional or revised projects into the overall TSP, as was the case with this amendment.
  - The City's Capital Improvement Plan was directly linked to the City's adopted master plans, which were part of the City's overall Comprehensive Plan. In general, expenditures for major infrastructure projects must first be identified in a master plan before the City could spend any significant money on them. The TSP, along with the Sewer, Water, and Stormwater Master Plans, were the four big master plans that drove the Capital Program.
  - For the subject amendment, Staff was in the process of reevaluating the City's road system development charges (SDCs) and having an accurate and adopted list of projects was important to that effort.
- The scope and timing of the proposed amendment was driven by the City's planning efforts, primarily for the Coffee Creek Industrial Area, located south of Day Rd, and for the Frog Pond/Advanced Rd area, which was north and east of Boeckman Rd and Wilsonville Rd.
  - In the Coffee Creek area, the City was moving forward with development of district boundaries, a project list, and a financing plan for a future Urban Renewal District (URD). Staff had refined the transportation network and project cost estimates needed to support the URD. The proposed TSP would incorporate the refined URD project list.
  - There was also a pending development with the Republic Services property on Ridder Rd that was in direct conflict with the current TSP. The development application for the Republic Services property had been submitted but could not move forward without an amendment to the TSP. Testimony included in the Planning Commission packets from a Republic Services representative stated they were in favor of the adoption of the proposed amendment.
  - In the Frog Pond/Advanced Rd area, the Frog Pond Concept Plan had been completed and the Meridian Creek Middle School application had been approved. The proposed TSP Amendment incorporated roadway and trail designation changes to make the project list consistent with the Frog Pond Plan.
  - There were also a couple discreet development projects that warranted minor revisions to the TSP projects list, which included the Printer Parkway redesignation and the sidewalk infill project on Boones Ferry Rd that was associated with the Universal Health Project.
  - All of the projects modifications were described in the summary memo from DKS Associates included in the Planning Commission packet and within the amendment. Wilsonville continues to grow and the City's planning efforts were bearing fruit more rapidly than anticipated, and the proposed TSP Amendment was necessary to proactively stay ahead of the growth in Wilsonville.

Scott Mansur, Transportation Planning Consultant, DKS Associates, noted the one-page memorandum (Attachment I) that was distributed to the Planning Commission regarding an additional project that had been added in relation to bicycle and pedestrian connectivity, which he would discuss in his presentation. He presented the Wilsonville TSP Amendment via PowerPoint with these additional comments:

- TSP amendments were needed because things were always changing with regard to long-term, adopted system plans, so it was important to be flexible and update funding information accessible for transportation funding. The TSP needed to be current with state and regional transportation policies as well as updated based on rapidly changing development and local conditions.
- The deliverables provided included a memorandum that identified which sections and figures of the TSP would have modified projects. As mentioned, the modifications were related to changing local conditions, which he reviewed as follows:
  - The adoption of the Frog Pond Master Plan was the first project to warrant TSP modifications.

- Portions of the West Linn-Wilsonville School District, as well as a city park, were added within the City's urban growth boundary (UGB).
- The City had done some additional engineering work on the Boeckman Road Dip and now had updated cost estimates and engineering information that needed to be updated within the TSP.
- Transportation changes within the Coffee Creek Industrial Area mostly related to replacing the Kinsman Road Extension, north of Ridder Rd, with Garden Acres as a collector roadway.
- The ongoing transportation analysis and evaluation of Basalt Creek.
- Xerox's desire to make Printer Parkway a public street.
- He reviewed the recommended modifications to the 2013 TSP (Slides 5 through 8) with these additional comments:
  - Replace the Kinsman Road Extension north of Ridder Rd with Garden Acres Rd as a collector roadway.
  - There was still ongoing work regarding whether the future intersection at Day Rd and Garden Acres Rd would have a traffic signal or be a roundabout. This was discussed by the Planning Commission during work session.
  - Within Frog Pond, add a north-south collector in the west neighborhood, as well as an east-west collector between the future collector and Stafford Rd.
  - Related to the Advance Middle School, now called Meridian Creek Middle School, designate 63<sup>rd</sup> Ave and Hazel Rd future collectors, as well as Advanced Rd between Wilsonville Rd and 60<sup>th</sup> Ave since they were now in the UGB and would be adjacent to the future city park and middle school sites.
  - Update Project UU-O1, which was the Boeckman Road Dip.
  - Extend Commerce Circle Loop Sidewalk Infill on Boones Ferry Rd to Day Rd.
- Functional designation changes were also modified on TSP Figure 3-2 to reflect the recommended changes that he had reviewed. (Slides 9 and 10) He added that Printer Parkway would be designated as a collector between Parkway Ave and Canyon Creek Rd.
- Proposed modifications to the Freight Routes (Figure 3-4) included replacing Kinsman Rd, which was previously designated as a freight route, with Garden Acres as the north-south connection between Ridder Rd and Day Rd.
  - The UGB was updated on Figure 3-4 as well.
- The recommended bicycle route modifications (Figure 3-5; Slide 12) were noted with these comments:
  - For the Meridian Creek Middle School, add bicycle facilities including bike lanes on Advanced Rd, 60<sup>th</sup> Ave, 63<sup>rd</sup> Ave and Hazel Rd.
  - Bicycle facilities were also added to Garden Acres Rd, which would replace Kinsman Rd.
  - Add bicycle facilities on Java Rd. In the future, Java Rd would replace the existing connection of Clutter Rd to Grahams Ferry Rd to address the site distance and safety issues.
  - Bicycle facilities were identified on Printer Parkway that included bike lanes on the street and a multi-use path along the eastern portion of that project.
  - Bicycle facilities were also identified for Frog Pond.
- Based on the projects described, cross-section deficiencies were identified to determine what road modifications were needed to meet current cross sectional standards based on the roadway classifications discussed. (Figure 4-1)
- He reviewed the recommended changes in the Higher Priority Projects List (Figure 5-2) with these key comments:
  - Replace Project BW-11, which was a Frog Pond Trail, with a new trail.
  - Replace Project RT-02, the Frog Pond Trail, with the following projects:
    - UU-08, Garden Acres Road Urban Upgrade
    - UU-09, Urban Upgrade of Printer Parkway
    - RR-11, Advanced Middle School Collector Roads
    - UU-10, Advanced Road Urban Upgrade between Wilsonville Rd and 60<sup>th</sup> Ave
    - RE-12A, Frog Pond West Neighborhood Collector Road

- RE-12B, Frog Pond South Neighborhood Collector Road
- RE-13, Java Rd Connector and Signal. He reminded that Java Rd was intended to be the future replacement of the Clutter Rd intersection where an additional traffic signal would be added.
- RT-O7, Revised Frog Pond Regional Trail.
- Other Additional Planned Projects (Figure 5-7; Slide 15) not on the Higher Priority Projects List included Project BW-P2, the Commerce Circle Loop Sidewalk Infill on Boones Ferry Rd from Commerce Circle to Day Rd.
  - Project UU-P1, the Advanced Road Urban Upgrade between Wilsonville Rd and the old UGB, was deleted.
- An additional project had been added since the last Planning Commission meeting to be consistent with the City Council Goals 4, 9 and 10, which regarded the desire to set aside funds to strategically purchase properties that could facilitate future bicycle and pedestrian connectivity between neighborhoods or other properties. A planning level cost estimate of \$1 million had been identified for BW-15 (Slide 16) and the intent was to support policy areas discussed in Chapter 2 of the existing TSP. These policy areas included looking at system design to provide a well-connected system; connectivity by adding bicycle and pedestrian connections between neighborhoods; and at active transportation to encourage transportation options within the city. Information about this added project was provided in the supplemental information distributed to the Commission. (Attachments G and I)

Chair Greenfield asked when the \$1 million dollar estimated planning cost would be budgeted.

- Mr. Mende replied that was undefined at this point. If a property were to become available that would qualify for meeting this goal, Staff would have to budget for it or submit a supplemental budget if it occurred in a current year. The estimate had not yet been added to the Capital Improvement Plan.

Commissioner Postma noted on Page 44 of 112 of the TSP, Figure 3-4 Freight Routes was incorrect because it was identical to Figure 3-5, which was the Bicycle Route map.

- Mr. Mansur assured that correction would be made.

Commissioner Springall asked why the TSP was not being updated with projects that had been completed, such as the Barber Street Bridge or Canyon Creek Road Extension, which were still showing as needs in some cases or connectivity gaps in the TSP.

- Mr. Mende confirmed that was the intent and explained that with a minor amendment, Staff did not change everything in the existing TSP. Projects that had been completed would stay in the overall TSP until the next major update, and only the amendments discussed this evening would be reflected in this process.

Commissioner Levit:

- Noticed that none of the maps indicated the intent to close Clutter Rd at Grahams Ferry Rd with an X and suggested Staff make the correction.
  - Commissioner Springall understood the proposed amendments stopped short of specifying the project to close Clutter Rd, though it was an intended project. He agreed it was a point of confusion.
  - Mr. Mende clarified that project would be incorporated in the next major TSP update.
- Asked if the planning level cost estimate of \$1 million was just for planning costs or acquisition. (Slide 16)
  - Michael Kohlhoff, Special Projects City Attorney, suggested Staff rephrase the wording as it could be misinterpreted.
  - Mr. Mende confirmed the \$1 million was just for the acquisition of property and not planning costs. The amount was based on the acquisition of two properties at \$500,000 each.
- Asked how the City became aware of the availability of properties.
  - Mr. Mende replied the City found available properties like everyone else, through a real estate listing or a sign displayed on the street. He did not believe the City had any active plan to go out and research properties that might or might not be coming available on the market.

Chair Greenfield called for public testimony in favor of, opposed, and neutral to the proposed TSP amendments.

Ben Altman, Pioneer Design Group, 9020 SW Washington Square Rd, Suite 170, Portland, OR, 97223, stated he was representing Republic Services, which currently had a submitted application for a project that was pending a design review hearing next month. There were two pieces to the project, which included annexing some property, but the primary development application was for SORT Bioenergy which was an anaerobic digestion facility designed to process food waste and create usable energy from the methane gas that was a by-product, as well as some soil amendment by-product and items from the processing.

- The Kinsman Rd right-of-way was discussed at the first preapplication meeting with the City and posed a problem. The information he submitted laid out the road alignment. With a typical alignment, half of the road was expected to be on your site. The City had already talked with Bonneville Power Administration (BPA), which was the adjacent property to the east and they opposed having a road in their right-of-way. As a result, 100 percent of the right-of-way would be on Republic Services' property, which was bad enough, but the crux of the issue was that alignment would have closed the east driveway of Republic Services, which was the primary access for all their trucks, which would essentially shut down the operation because all the trucks come in across the scales located on the east side, dump their load in the material recovery building, and come back out over the scales. The site was not designed to move those scales anywhere. Locating the road there would force an entire redesign of the whole facility, which obviously was not feasible from both the City's and Republic Service's perspective.
  - At the workshop last month, Mr. Mende noted that because of BPA's adjacency on the east side, the alignment on Kinsman Rd would have been a one-side, loaded street clear to Day Rd for the industrial properties, making it a very expensive road; mostly likely the most expensive road in the State once finished.
- Adding the modification related to Garden Acres Rd replacing Kinsman Rd to the TSP amendments made sense. Republic Services supported that change since it worked better for the public and also resolved the conflict with Republic's operations. As the analysis showed, it still provided a functional, albeit not the most ideal, collector alignment that functioned reasonably in comparison with regard to the operational capacity of the Kinsman Rd alignment by moving the collector to Garden Acres. This would salvage Republic Services' operation and kept the transportation system whole in terms of function. Republic Services strongly supported that modification in the TSP amendment.

Chair Greenfield closed the public hearing at 6:38 pm.

Mr. Neamtzu clarified that Attachment H was not part of the TSP record and that Attachment I, dated April 13, 2016, replaced Attachment G dated April 12, 2016.

**Commissioner Postma moved to adopt LP16-0001 with the addition of Attachment I, which replaced Attachment G, and excluding Attachment H. Commissioner Levit seconded the motion, which passed unanimously.**

**VII. WORK SESSION**

- A. Transit Master Plan Update (Massa Smith)

**VIII. OTHER BUSINESS**

- A. 2016 Planning Commission Work Program
- B. Annual Housing Report

**IX. ADJOURNMENT**



Respectfully submitted,

By Paula Pinyerd of ABC Transcription Services, Inc. for  
Tami Bergeron, Administrative Assistant-Planning



**PLANNING COMMISSION  
WEDNESDAY, APRIL 13, 2016**

**VI. PUBLIC HEARING**

A. LP16-0001 – Transportation System Plan (TSP) Amendments (Mende)



**PLANNING COMMISSION PUBLIC HEARING  
STAFF REPORT**

<b>Meeting Date:</b> April 13, 2016		<b>Subject: Resolution LP16-001:</b> Proposed minor amendments to the 2013 Transportation System Plan (TSP).  <b>Staff Member:</b> Eric Mende, Capital Projects Manager <b>Department:</b> Community Development	
<b>Action Required</b>		<b>Advisory Board/Commission Recommendations</b>	
<input checked="" type="checkbox"/> Motion  <input checked="" type="checkbox"/> Public Hearing Date: 04.13.16  <input checked="" type="checkbox"/> Resolution <input type="checkbox"/> Information or Direction <input type="checkbox"/> Information Only <input type="checkbox"/> Council Direction <input type="checkbox"/> Consent Agenda		<b>Comments: N/A</b>	
<b>Staff Recommendation:</b> Approve Resolution LP16-001 forwarding a recommendation to City Council for adoption of the 2016 Transportation System Plan minor amendments.			
<b>Recommended Language for Motion:</b> I move to approve Resolution LP16-001 forwarding a recommendation to City Council for adoption of the 2016 Transportation System Plan minor amendments.			
<b>PROJECT / ISSUE RELATES TO:</b>			
<input checked="" type="checkbox"/> Council Goals/Priorities Ensure efficient, cost effective and sustainable development and infrastructure. Multi-modal transportation.	<input checked="" type="checkbox"/> Adopted Master Plan(s) 2013 Transportation Systems Plan,	<input type="checkbox"/> Not Applicable	

**ISSUE BEFORE THE PLANNING COMMISSION:**

The issue before the Planning Commission is approval of a Planning Commission Resolution forwarding a recommendation to City Council for approval and adoption of minor amendments (2016 TSP Amendment) to the 2013 TSP, as a sub-element of the City’s Comprehensive Plan. The Planning Commission may choose to forward a recommendation for approval of the

Amendment as presented, approval with changes, or may choose to forward a recommendation not to approve.

**EXECUTIVE SUMMARY:**

The TSP is the City's long-term policy and planning document for transportation improvements (vehicular, bicycle, pedestrian, transit and freight) and includes a list (TSP Chapter 5) of higher priority projects that will be implemented over a 20-year timeframe through the City's Capital Improvement Program (CIP), development review process, and occasionally by other agencies. The TSP identifies the City's transportation system goals, objectives and projects needed to provide efficient transportation choices for all users, design standards for a system that operates reliably and safely, and is complementary to surrounding land uses.

In addition, having a TSP in place is essential for the City to compete for federal, state and regional funding for transportation projects. This TSP Amendment, once adopted, will update and replace the Executive Summary and Chapters 2, 3, and 5 of the 2013 TSP. The proposed revised Executive Summary and proposed Chapters 2, 3, and 5 are attached, as is a Summary Memorandum from DKS Associates dated 03/14/16 documenting the pertinent changes.

Wilsonville, like other cities in the region, needs to update its TSP to keep current with changes in state and regional transportation policy as well as to address rapidly changing local conditions. Major Updates to TSPs typically occur on an 8 - 10 year schedule. Minor Amendments are common, and occur as needed between major updates. The key changes driving these Amendments include completion of concept planning for the Frog Pond/Advance Road area, and development of revised planning documents for a proposed Urban Renewal District for the Coffee Creek Industrial Area.

The Amendments incorporate input received to date from City Council, Planning Commission, and the public. The information and recommendations contained in the Amendment document have been previously presented to Planning Commission and state mandated public notices have been distributed. As of the date of this staff report, approximately six requests for information have been made, and responded to, however, written comments have been received from only one party - Republic Services (in support, please refer to Attachment E).

**EXPECTED RESULTS:**

Adoption of the Amendment will result in continued compliance with Statewide Planning Goal 12, the Transportation Planning Rule and Metro's Regional Transportation Functional Plan, providing a sound, integrated planning document that will continue to guide the next 20-years of transportation projects and policies.

**TIMELINE:**

After this Hearing at Planning Commission, the Amendments will be heard by City Council at their May 2<sup>nd</sup> regular meeting (Public Hearing and 1<sup>st</sup> Reading). If Council approves at 1<sup>st</sup> Reading, 2<sup>nd</sup> Reading and Adoption is scheduled for May 16<sup>th</sup>. The Amendment would become effective 30 days following second reading and adoption of the Ordinance.

**CURRENT YEAR BUDGET IMPACTS:**

Other than staff time for Community Development personnel and Consulting Services provided by DKS Associates for technical evaluation and document preparation, there are no expected implementation costs. These costs are currently budgeted (FY 15/16). The project is on schedule and within budget.

**FINANCIAL REVIEW / COMMENTS:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**LEGAL REVIEW / COMMENT:**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMUNITY INVOLVEMENT PROCESS:**

Adoption of the 2013 TSP included a substantial public engagement process over the course of two years with numerous opportunities for input and community dialog. The Planning Commission spent considerable time and energy shaping the Plan and the corresponding Comprehensive Plan text amendments.

For this minor Amendment, Staff created a broad property owner notification that targeted all owners in the general vicinity of the proposed changes reflected in the Amendment. Key target areas included the Coffee Creek area and Commerce Circle businesses, and the Canyon Creek, Meadows, and Landover residential areas. Businesses and residences outside City limits but potentially impacted by the Amendment were notified, and potentially affected governmental entities such as Metro, Washington County, and Tualatin Valley Fire and Rescue were also provided notice, as required by law. The City received very few inquiries as a result of the notification, and only one set of written comments. (Attachment E).

**POTENTIAL IMPACTS or BENEFIT TO THE COMMUNITY:**

The TSP and this proposed Amendment identify projects and policies that set the framework for the next 20 years of transportation improvements in all modes. These projects are intended to support community livability and economic development by providing a wide variety of transportation choices that connect the community both internally as well as externally.

**ALTERNATIVES:**

The Planning Commission can forward a recommendation to Council for approval of the Amendment as presented, as presented but with changes, or may choose to forward a recommendation not to approve. Planning Commission can also direct Staff to modify the policies, projects, or programs recommended in the draft Amendment, and bring it back for further hearing.

**CITY MANAGER COMMENT:**



**ATTACHMENTS:**

- A: Conclusionary findings dated March 31, 2016.
- B. Transportation System Plan (TSP) Amendment Summary Memo dated March 14, 2016.
- C: Revised TSP Chapters (Executive Summary and Chapters 2, 3, and 5)
- D: Resolution LP16-001
- E: Written Comments from Ben Altman on behalf of Republic Services in support of proposed amendments dated March 23, 2016.
- F: Draft Ordinance No 789 for CC

Any written comments received after the Planning Commission Hearing packet is distributed will be copied and provided at the April 18<sup>th</sup> meeting.

Attachment A, Exhibit 1:

CONCLUSIONARY FINDINGS

April 13, 2016

In support of Approval of Application #LP16-0001  
2013 Transportation System Plan Amendments

*Section 4.032. Authority of the Planning Commission.*

*(.01) As specified in Chapter 2 of the Wilsonville Code, the Planning Commission sits as an advisory body, making recommendations to the City Council on a variety of land use and transportation policy issues. The Commission also serves as the City's official Committee for Citizen Involvement and shall have the authority to review and make recommendations on the following types of applications or procedures:*

*B. Legislative changes to, or adoption of new elements or sub-elements of, the Comprehensive Plan;*

**Response:** The TSP is a sub-element of the Comprehensive Plan. The Planning Commission conducted a worksession on the proposed amendments on March 9<sup>th</sup>, and then conducted a public hearing on April 13<sup>th</sup>, after which will provide the City Council with a recommendation.. The City Council will conduct additional public hearings following the conclusion of the Commission portion of the process. The City Council is the final local authority on this Master Plan. **These criteria are satisfied.**

*Section 4.033. Authority of City Council.*

*(.01) Upon appeal, the City Council shall have final authority to act on all applications filed pursuant to Chapter 4 of the Wilsonville Code, with the exception of applications for expedited land divisions, as specified in Section 4.232. Additionally, the Council shall have final authority to interpret and enforce the procedures and standards set forth in this Chapter and shall have final decision-making authority on the following:*

*B. Applications for amendments to, or adoption of new elements or sub-elements to, the maps or text of the Comprehensive Plan, as authorized in Section 4.198.*

*E. Consideration of the recommendations of the Planning Commission.*

**Response:** Following the public hearing before the Planning Commission, the City Council will receive a recommendation from the Planning Commission on the proposed TSP amendments. The City Council is the final local authority regarding adoption of the TSP, which will be adopted via Ordinance as a sub-element of the City's Comprehensive Plan. **These criteria are satisfied.**

*(.02) When a decision or approval of the Council is required, the Planning Director shall schedule a public hearing pursuant to Section 4.013. At the public hearing the*

*staff shall review the report of the Planning Commission or Development Review Board and provide other pertinent information, and interested persons shall be given the opportunity to present testimony and information relevant to the proposal and make final arguments why the matter shall not be approved and, if approved, the nature of the provisions to be contained in approving action.*

*(.03) To the extent that a finding of fact is required, the Council shall make a finding for each of the criteria applicable and in doing so may sustain or reverse a finding of the Planning Commission or Development Review Board. The Council may delete, add or modify any of the provisions pertaining to the proposal or attach certain development or use conditions beyond those warranted for compliance with standards in granting an approval if the Council determines the conditions are appropriate to fulfill the criteria for approval.*

**Response:** Following the public hearing before the Planning Commission, the Planning Director scheduled additional public hearings before the City Council at which time the Council will review the findings and recommendations provided by the Planning Commission. **At conclusion of the public hearing process, these criteria will be satisfied.**

## STATEWIDE PLANNING GOALS

**Statewide Planning Goal #1 - Citizen Involvement (OAR 660-015-0000(1)):** *To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.*

**Response:** A work session was held on March 13<sup>th</sup>, 2016 with the Planning Commission. The City of Wilsonville has provided notice of public hearings before the Planning Commission consistent with the Planning and Land Development Ordinance requirements. Such notices were posted in the newspaper, and were provided to property owners in each area of the community where a project was being modified, a list of interested agencies, and were posted in three locations throughout the City and on the City's website. At the upcoming public hearing, the public will be afforded an opportunity to provide public testimony to the Planning Commission, and then following the recommendation, the City Council.

Significant public outreach was also conducted by the City of Wilsonville as part of the Frog Pond Area plan. This outreach helped form the recommended TSP project amendments in the Frog Pond west neighborhood that are currently proposed for inclusion in the TSP. **This goal is met.**

**Statewide Planning Goal #2 - Land Use Planning (OAR 660-015-0000(2)):** *To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.*

**Response:** This goal is implemented through the applicable Goals and Policies in the Land Use and Development section of the Wilsonville Comprehensive Plan. Because the TSP is a sub-element of the City's Comprehensive Plan, the application to adopt the TSP was processed pursuant to the legislative decision process outlined in Section 4.032 and Section 4.033 of the Development Code. The TSP amendment document and its recommended improvements, project modifications and proposed funding sources are based on a series of analyses and evaluations that were prepared as part of developing the original TSP update, including the existing conditions report, future conditions report, and solutions analysis and funding package.

The proposed TSP update and associated amendments are consistent with Statewide Planning Goal 2. **This goal is met.**

**Statewide Planning Goal #5 – Natural Resources, Scenic and Historic Areas, and Open Spaces (OAR 660-015-0000(5)):** *To protect natural resources and conserve scenic and historic areas and open spaces.*

**Response:** This goal is implemented through the applicable Park/Recreation/Open Space Goals and Policies in the Public Facilities and Services section of the Comprehensive Plan. The City code contains specific review criteria for uses within a Significant Resource Overlay Zone (Development Code Section 4.139.00, SROZ Ordinance) to ensure that designated Goal 5 resources are appropriately considered when development is proposed.

The TSP amendment document details the stages of the Capital Project Process (Figure 6-1), which includes an environmental assessment. An environmental assessment may be required at the time of project development pursuant to applicable federal, regional, and/or local regulations. **This goal is met.**

**Statewide Planning Goal # 6 – Air, Water and Land Resource Quality (OAR 660-015-0000(6)):** *To maintain and improve the quality of the air, water and land resources of the state.*

**Response:** Air, water and land resources have been considered in the development of the planned transportation system to ensure that impacts on these resources are minimized. Appropriate measures will be taken at the time of project development on a site-specific basis to ensure that applicable state and federal regulations are met. **This goal is met.**

**Statewide Planning Goal # 7 – Areas Subject to Natural Disasters and Hazards:** *To protect people and property from natural hazards.*

**Response:** Areas subject to natural disasters and hazards, such as floodplains, have been considered in the development of the planned transportation system to ensure that impacts on these areas are minimized. Improvements related to implementation of the system will need to conform to environmental regulations. **This goal is met.**

**Statewide Planning Goal # 8 – Recreation Needs (OAR 660-015-0000(8)):** *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.*

**Response:** While Goal 8 is not directly applicable to this action, safe and convenient access to parks and other areas planned for recreational needs was considered in the development of the TSP. The amended TSP was informed by the 2007 Parks and Recreation Master Plan, a plan for achieving a comprehensive and interrelated system of parks, recreation, and natural areas that in turn promote connectivity throughout the City and support the 2006 Bicycle and Pedestrian Master Plan. Numerous proposed projects contained in the TSP amendment will implement the City's planned trail system and will enhance access to the City's parks and open spaces (TSP Chapter 5). **This goal is met.**

**Statewide Planning Goal #9 – Public Facilities and Services (OAR 660-015-0000(9)):** *To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.*

**Response:** Adopting the updated TSP will ensure that transportation improvements will be available to support the planned uses in the City's employment and residential areas, consistent with other local economic development goals.

The amended recommended list of transportation projects that will improve or complete the transportation system through 2035 is based largely on past plans, but includes updated solutions. The amendments in the proposed TSP provide projects that support economic development in the City and include employers and future development areas such as Republic Services, Xerox, Frog Pond residential, future West Linn/Wilsonville schools, and Coffee Creek industrial areas that rely on that roadway by improving mobility and removing conflicts between freight movement and pedestrians and cyclists. **This goal is met.**

**Statewide Planning Goal #10 – Housing (OAR 660-015-0000(10)):** *To provide for the housing needs of citizens of the state.*

**Response:** The needs and improvements identified in the original 2013 TSP were developed in part by forecasting growth in residential development and the trips expected to be generated by growth over the next 20 years. Adoption of the TSP update will ensure the orderly extension and improvement of transportation facilities to accommodate the projected growth envisioned in the City's Comprehensive Plan, which includes a variety of housing types. **This goal is met.**

**Statewide Planning Goal #11 – Public Facilities and Services (OAR 660-015-0000(11)):** *It is the purpose of Goal 11 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. Cities are required to develop public facilities plans for their UGBs.*



**Response:** Transportation facilities are considered a primary public facility in the City. The amended TSP documents existing conditions and future needs for the transportation system in Wilsonville and recommended improvements and implementation strategies have been developed to address those needs.

In particular, proposed transit improvements, filling sidewalk gaps, and improving crosswalks and bicycle facilities and Safe Routes to School planning will result in increased safety and access within residential areas of the City, as well as improve connections to other uses and services in the City. **This goal is met.**

**Statewide Planning Goal #12 – Transportation (OAR 660-015-0000(12)):** *To provide and encourage a safe, convenient and economic transportation system.*

**Response:** The original TSP established City transportation policy related to multimodal transportation, access and mobility, safety, equity, economy, health and the environment, and goods movement. These policies and associated implementation measures guided the development of the TSP, the development of standards, and the selection of the amended recommended improvements. **This goal is met.**

**Statewide Planning Goal #13 Energy Conservation (OAR 660-015-0000(13)):** *To conserve energy.*

**Response:** The multimodal transportation system and improvements proposed in the TSP amendment will support efficient use of land within the City limits and UGB based on existing adopted Comprehensive Plan and zoning designations. The TSP will ensure that the City can provide timely, orderly and efficient transportation improvements where it is efficient to promote higher intensity land uses and avoid leap-frog development. **This goal is met.**

## STATE AND REGIONAL PLANS

The current TSP amendment meets the findings of the original adopted 2013 TSP that the proposed TSP and recommended projects are consistent with goals and policies of the Oregon Transportation Plan, Regional Transportation Plan, Oregon Highway Plan and Transportation Planning Rule.

## GENERAL CONCLUSIONARY SUMMARY OF FINDINGS

- The TSP amendment is consistent with applicable Statewide Planning Goals. .
- The TSP amendment is consistent with the Oregon Transportation Plan, Regional Transportation Functional Plan, Comprehensive Plan goals and policies, and Oregon Highway Plan.
- The list of amended transportation projects is based largely on the 2013 adopted plan but includes modifications to support land use planning and development.

- The draft TSP amendments include revised transportation improvement projects (Chapter 5) to address the City's transportation needs and accommodate growth through the 2035 planning horizon.

As is evidenced by the staff report and findings contained herein, the proposal to amend the City's TSP is consistent with the applicable statewide planning goals, other applicable state and regional standards and the criteria contained in the Comprehensive Plan.



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## DRAFT MEMORANDUM

**DATE:** March 14, 2016

**TO:** Project Management Team

**FROM:** Scott Mansur, P.E., PTOE  
Jordin Ketelsen, EIT

**SUBJECT:** **Wilsonville Transportation System Plan (TSP) Amendment Summary**

P15125-003

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This memorandum discusses necessary amendments to the City of Wilsonville’s Transportation System Plan (TSP) since the prior TSP was adopted in 2013. These changes include the following project modifications:

- Delete the minor arterial segment for Kinsman Road between Ridder Road and Day Road, including associated truck route and bicycle route designations and delete associated Capital Improvement Project RE-07.
- Add the proposed east to west Java Road collector, including bicycle route designations and update Capital Improvements Project SI-01 accordingly.
- Add Garden Acres Road as a three-lane collector designation, including truck route and bicycle route designations. Prepare a cost estimate and project description for inclusion as a Higher Priority Project.
- Add the designated collector roadways and update the proposed trail locations from the recently adopted Frog Pond Area Plan.<sup>1</sup>
- Provide updated information for project UU-01 (Boeckman Road Dip Improvements) based on the recent OBEC bridge study.<sup>2</sup>
- Add the Printer Parkway collector, including the proposed bicycle facilities. Prepare cost estimate and project description for inclusion as a Higher Priority Project.
- Add the collector roadways and site improvements associated with the proposed Advance Middle School site.
- Update the City’s urban growth boundary (UGB) to include the area surrounding the proposed Advance Road Middle School and City Park site.

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<sup>1</sup> *Frog Pond Area Plan*, Angelo Planning Group, DKS Associates, November 2015.

<sup>2</sup> Boeckman Dip Reconstruction Option A Preliminary Cost Estimate, OBEC.



- Extend Capital Improvement Project BW-P2 to include sidewalk infill on Boones Ferry Road from Commerce Circle Loop to Day Road.

The following sections provide more detail for the specific proposed modifications to the TSP.

## PROPOSED AMENDMENTS FOR TSP COMPLIANCE

The discussion of recommended revisions is generally organized by reference to the applicable chapter(s) of the TSP. In all chapters, revisions to existing TSP language are presented with deletions shown in ~~strikethrough~~ and additions or new code shown as underlined. The revised TSP figures, referenced in the sections below, are attached at the end of this memorandum. The revisions identified in this memorandum will also be addressed in a final amended TSP document once the revisions are approved by the Planning Commission and City Council.

### Executive Summary

The following changes are recommended to the Executive Summary of the City of Wilsonville's TSP.

#### ***Higher Priority Projects Figure*** (Page iv)

See the recommended changes to this figure in Chapter 5 (page 4 of this memorandum).

#### ***Higher Priority Projects Table*** (Page v)

Remove the following projects from this table:

- ~~Project RE-07 Kinsman Road Extension (North)~~
- ~~Project BW-11 Frog Pond Trails~~
- ~~Project RT-02 Frog Pond Trail~~
- ~~SI-01 Clutter Road Intersection Improvements with Realignment or Grade Lowering~~

Add or update the following projects to this table:

- UU-08 Garden Acres Road Urban Upgrade
- UU-09 Printer Parkway Urban Upgrade
- UU-10 Advance Road Urban Upgrade
- RE-11 Advance Road Middle School Collector Roadways
- RE-12A Frog Pond West Neighborhood Collector Roads
- RE-12B Frog Pond South Neighborhood Collector Road
- RE-13 Java Road Connection and Signal
- RT-07 Revised Frog Pond Regional Trail



## Chapter 3: The Standards

The following changes are recommended to Chapter 3 of the City of Wilsonville's TSP.

### **Figure 3-2: Functional Class Designations** (Page 3-5)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Advance Road Middle School and include 63<sup>rd</sup> Avenue and Hazel Street as collector roadways.
- Show Advance Road as a collector road to 60<sup>th</sup> Avenue.
- Remove the Kinsman Road extension between Day Road and Ridder Road.
- Modify the functional classification of Garden Acres Road from a local street to a collector.
- Add the future collector roadways proposed in the adopted Frog Pond Area Plan.
- Modify the functional classification of Printer Parkway from a private local street to a collector.
- Modify the functional classification of 60<sup>th</sup> Avenue adjacent to the proposed Advance Middle School site to a collector.
- Add the future Java Road collector.

### **Figure 3-4: Freight Routes** (Page 3-9)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Advance Road Middle School.
- Remove the Kinsman Road extension.
- Classify Garden Acres Road as a truck route.

### **Figure 3-5: Bicycle Routes** (Page 3-11)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Advance Road Middle School and show bike lanes on 63<sup>rd</sup> Avenue and Hazel Street.
- Update to show bike lanes on Advance Road to 60<sup>th</sup> Avenue.
- Remove the Kinsman Road extension and update the alignment of the proposed future shared use paths in the area.
- Add the planned bike lanes on the future Java Road collector.
- Show the planned future bike lanes on Garden Acres Road.
- Show the planned future bike facilities on Printer Parkway.
- Update the bicycle facilities and shared used paths in the Frog Pond area as designated in the Frog Pond Area Plan.





## Chapter 4: The Needs

The following changes are recommended to Chapter 4 of the City of Wilsonville's TSP.

### **Figure 4-1: Roadway Cross-Section Deficiencies** (Page 4-5)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Advance Road Middle School.
- Highlight Garden Acres Road as experiencing existing collector cross-section deficiencies.
- Highlight Printer Parkway as experiencing existing collector cross-section deficiencies.
- Highlight Advance Road between Stafford Road and 60<sup>th</sup> Avenue as experiencing collector cross-section deficiencies.
- Highlight 60<sup>th</sup> Avenue adjacent to the proposed Advance Road Middle School site as experiencing collector cross-section deficiencies.

### **Figure 4-2: Future 2035 Capacity Deficiencies** (Page 4-7)

Summary of changes:

- Update the UGB to include the area surrounding the proposed Advance Road Middle School.
- Remove the Kinsman Road extension.

## Chapter 5: The Projects

The following changes are recommended to Chapter 5 of the City of Wilsonville's TSP.

### **Figure 5-2: Higher Priority Projects** (Page 5-5)

Remove the following projects:

- ~~RE-07 Kinsman Road Extension~~
- ~~BW-11 Frog Pond Trails~~
- ~~RT-02 Frog Pond Trail~~

Add the following projects:

- UU-08 Garden Acres Road Urban Upgrade
- UU-09 Printer Parkway Urban Upgrade
- RE-11 Advance Road Middle School Collector Roads
- UU-10 Advance Road Urban Upgrade
- RE-12A Frog Pond West Neighborhood Collector Roads
- RE-12B Frog Pond South Neighborhood Collector Road
- RE-13 Java Road Connection and Signal
- RT-07 Revised Frog Pond Regional Trail



**Table 5-2: Higher Priority Projects (Northwest Quadrant) (Page 5-6)**

Remove the following projects:

- ~~RE-07 Kinsman Road Extension~~
- ~~SI-01 Clutter Road Intersection Improvements with Realignment or Grade Lowering~~

Add the following projects and their associated costs and descriptions:

- UU-08 Garden Acres Road Urban Upgrade (\$14,260,000)

Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade the Garden Acres Road/Day Road intersection to either a signal or a roundabout. Realign Ridder Road to Garden Acres Road. Close the existing Clutter Road connection to Grahams Ferry Road after completion of Project RE-13. Close the existing Coffee Creek Correctional Facility driveway to Grahams Ferry Road and relocate the driveway to Cahalin Road.

- RE-13 Java Road Connection and Signal (\$1,500,000)

Construct Java Road with collector designation between Grahams Ferry Road and Garden Acres Road with a signal at the Java Road/Grahams Ferry Road intersection

Update the description and cost of the following project:

- RW-02 Day Road Widening (~~\$6,600,000~~ \$5,900,000)

*Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road and Day Road/Grahams Ferry Road intersections*

**Figure 5-3: Higher Priority Projects (Northwest Quadrant) (Page 5-7)**

Update this figure based on the changes made in the northwest quadrant of Figure 5-2 outlined above.

**Table 5-3: Higher Priority Projects (Northeast Quadrant) (Page 5-8)**

Update the costs of the following projects:

- UU-01 Boeckman Road Dip Improvements (~~-\$5,850,000~~ \$12,220,000)
- UU-06 Stafford Road Urban Upgrade (~~\$3,900,000~~ \$4,200,000)
- RT-01A Boeckman Creek Trail (North) (~~\$800,000~~ \$850,000)

Remove the following projects:

- ~~BW-11 Frog Pond Trails~~
- ~~RT-02 Frog Pond Trail~~



Add the following projects and their associated costs and descriptions:

- UU-09 Printer Parkway Urban Upgrade (\$3,600,000)

*Upgrade Printer Parkway to a three-lane collector with bicycle lanes and multiuse path*

- UU-10 Advance Road Urban Upgrade (\$3,175,000)

*Upgrade Advance Road to collector standards starting at Stafford Road to the proposed 63<sup>rd</sup> Avenue (entrance to proposed Advance Road Middle School)*

- RE-11 Advance Road Middle School Site Improvements (\$1,600,000)

*Construct the collector roadways and site improvements associated with the proposed Advance Road Middle School site*

- RE-12A Frog Pond West Neighborhood Collector Roads (\$9,510,000)

*Construct the collector roadways within the west neighborhood as identified in the Frog Pond Area Plan*

- RE-12B Frog Pond South Neighborhood Collector Roads (\$2,650,000)

*Construct the collector roadways within the south neighborhood as identified in the Frog Pond Area Plan*

- RT-07 Revised Frog Pond Regional Trail (\$700,000)

*Construct the regional trail identified in the Frog Pond Area Plan*

**Figure 5-4: Higher Priority Projects (Northeast Quadrant)** (Page 5-9)

Update this figure based on the changes made in the northeast quadrant of Figure 5-2 outlined above.

**Figure 5-7: Additional Planned Projects** (Page 5-17)

Summary of changes:

- Update project BW-P2 Commerce Circle Loop Sidewalk Infill to include sidewalk infill on Boones Ferry Road from Commerce Circle to Day Road.
- Delete project UU-P1 Advance Road Urban Upgrade.

**Table 5-9: Additional Planned Projects (Northwest Quadrant)** (Page 5-18)

Update the following project and the associated cost and description:

- BW-P2 Commerce Circle Loop and Boones Ferry Road Sidewalk Infill (\$100,000-\$150,000)

*Fill in gaps in the sidewalks network on Commerce Circle Loop and Boones Ferry Road*



**Figure 5-8: Additional Planned Projects (Northwest Quadrant)** (Page 5-19)

Update this figure based on the changes made in the northwest quadrant of Figure 5-7 outlined above.

**Table 5-10: Additional Planned Projects (Northeast Quadrant)** (Page 5-20)

Remove Project UU-P1 Advance Road Urban Upgrade.

**Figure 5-9: Additional Planned Projects (Northeast Quadrant)** (Page 5-25)

Update this figure based on the changes made in the northeast quadrant of Figure 5-7 outlined above.

**Table 5-12: Additional Planned Projects (Southeast Quadrant)** (Page 5-24)

Add the following projects and their associated costs and descriptions:

- LT-P7 School Connection Trail (\$460,000)

Construct the School Connection Trail identified in the Frog Pond Area Plan.

Medium priority due to existing connections; will become important when school and park are constructed.

- LT-P8 60<sup>th</sup> Avenue Trail (\$240,000)

Construct the 60<sup>th</sup> Avenue Trail identified in the Frog Pond Area Plan.

Medium priority due to existing connections; will become important when school and park are constructed.

**Figure 5-11: Additional Planned Projects (Southeast Quadrant)** (Page 5-25)

Update this figure based on the changes made in the southeast quadrant of Figure 5-2 outlined above.

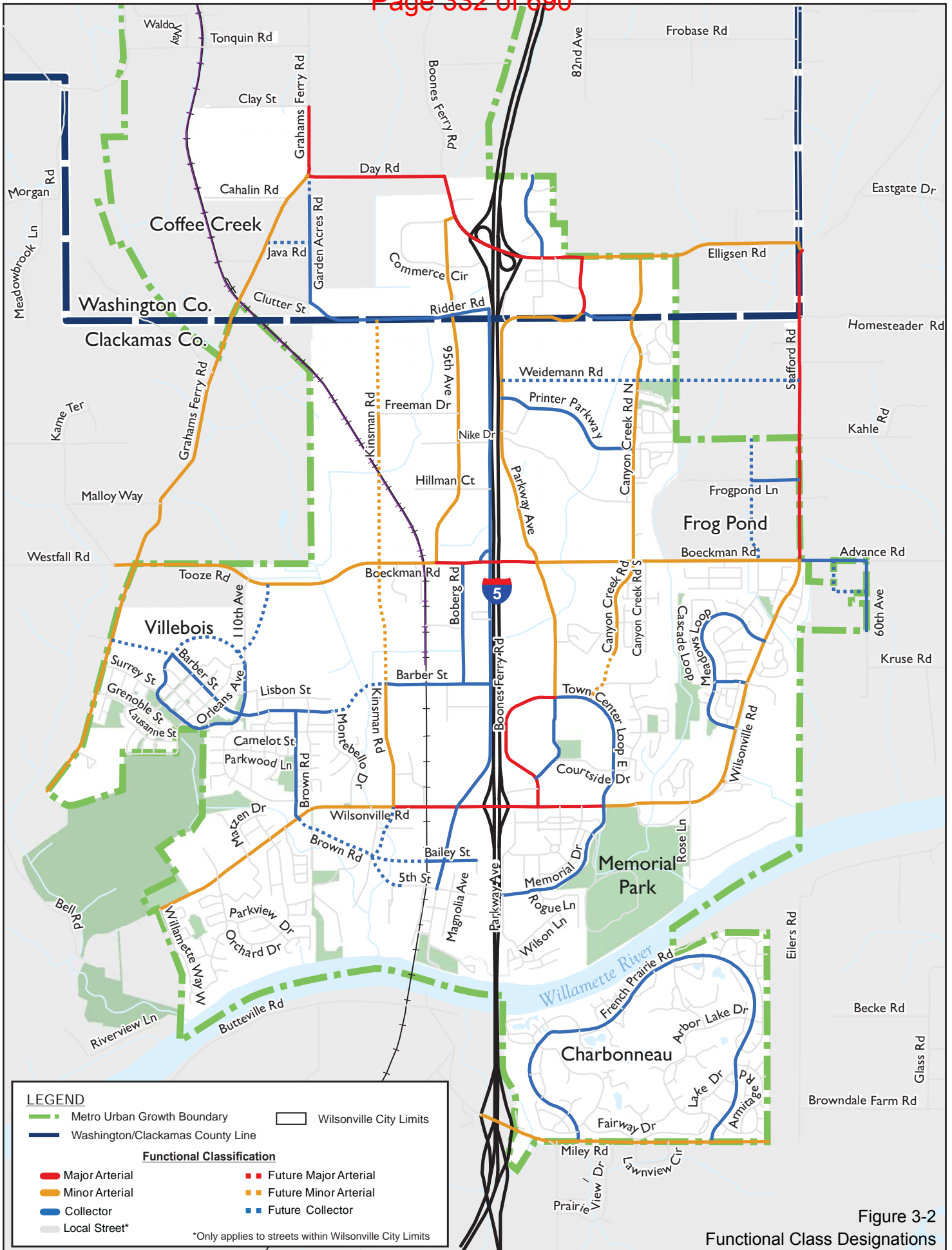


Figure 3-2  
Functional Class Designations



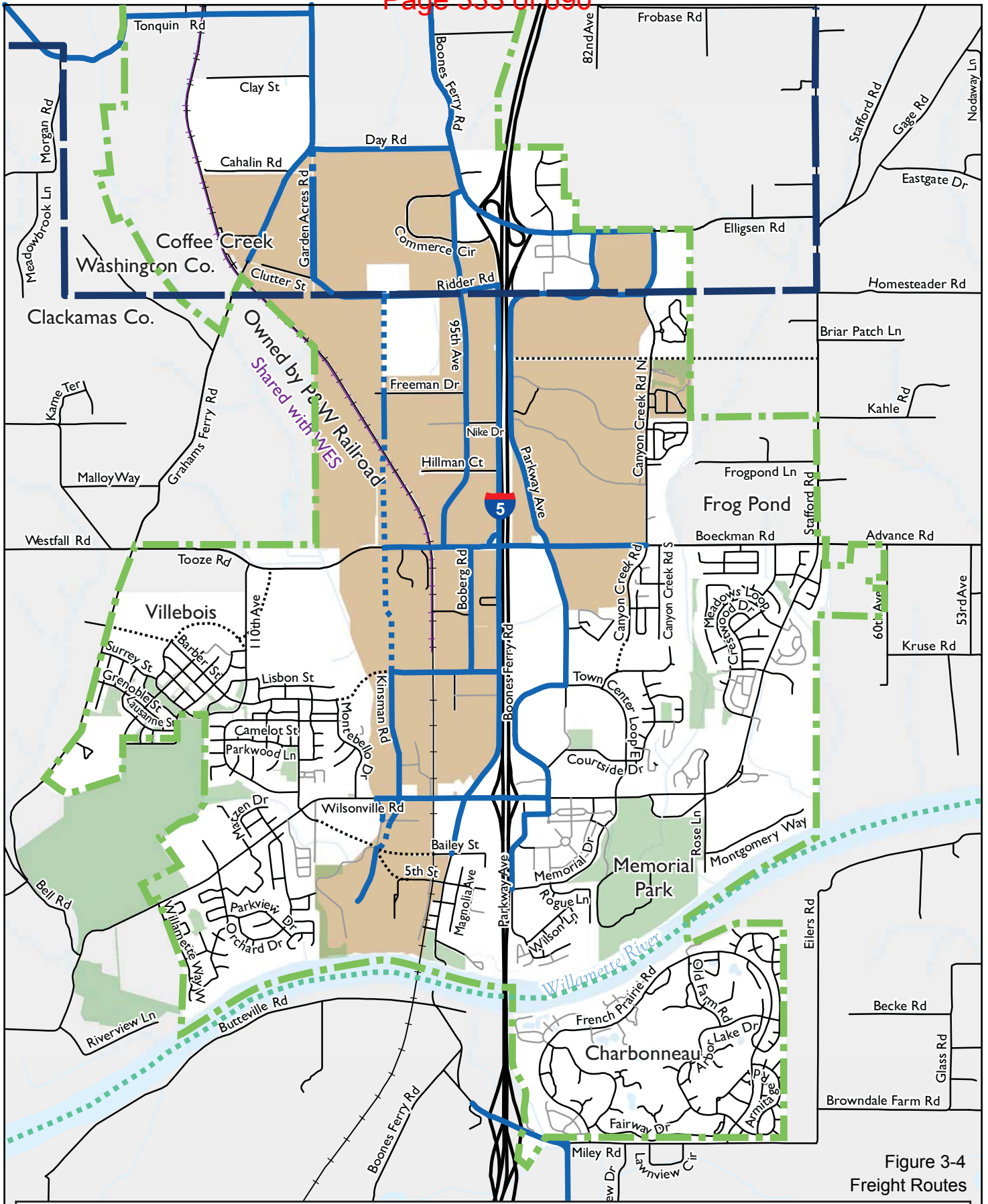


Figure 3-4  
Freight Routes

LEGEND		Freight Route	
	Wilsonville City Limits		Truck Route (Existing Road)
	Industrial-Zoned Land		Truck Route (Future Road)
	WES Commuter Rail		Water Route
	Metro Urban Growth Boundary		P&W Railroad
	Washington/Clackamas County Line		

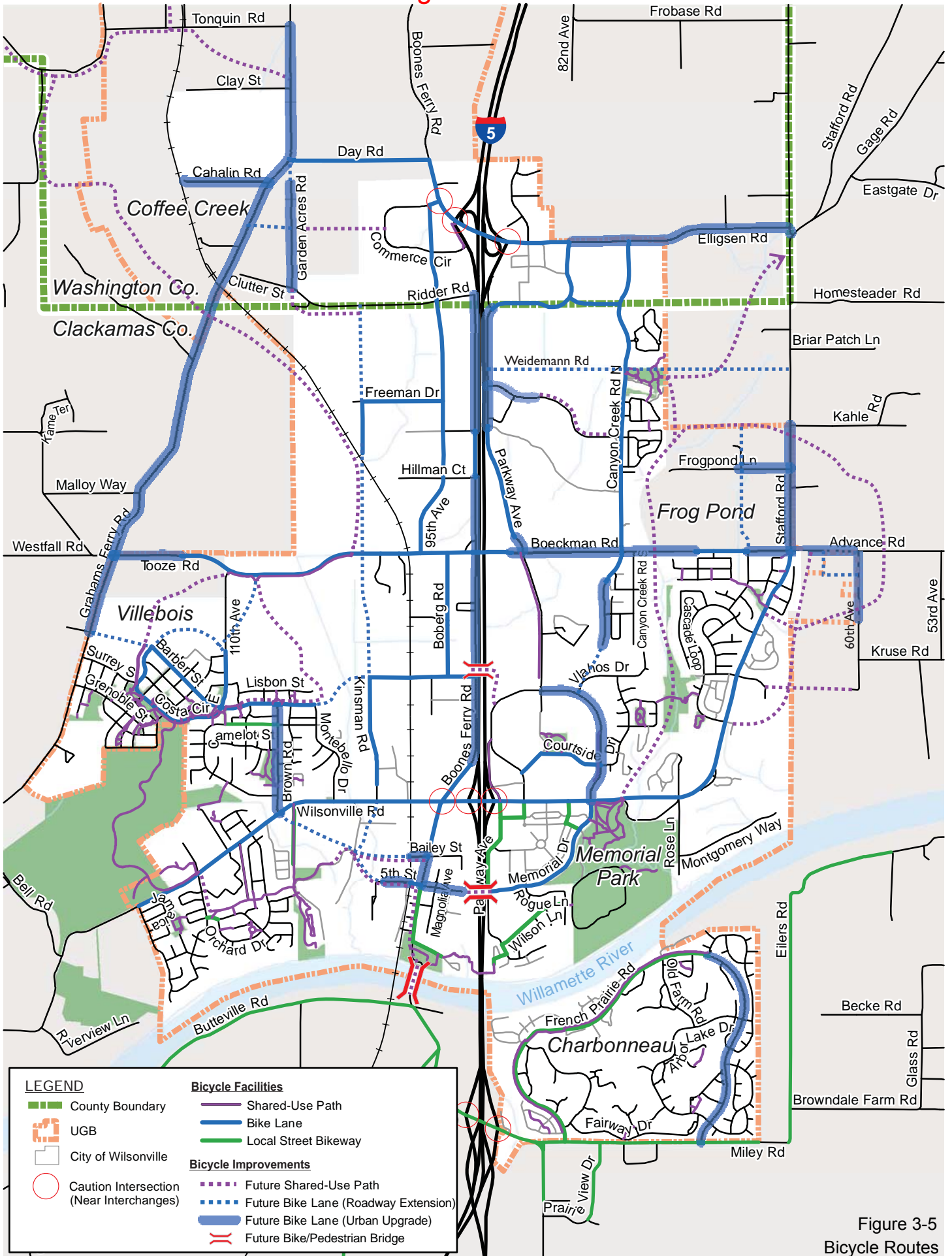


Figure 3-5  
Bicycle Routes

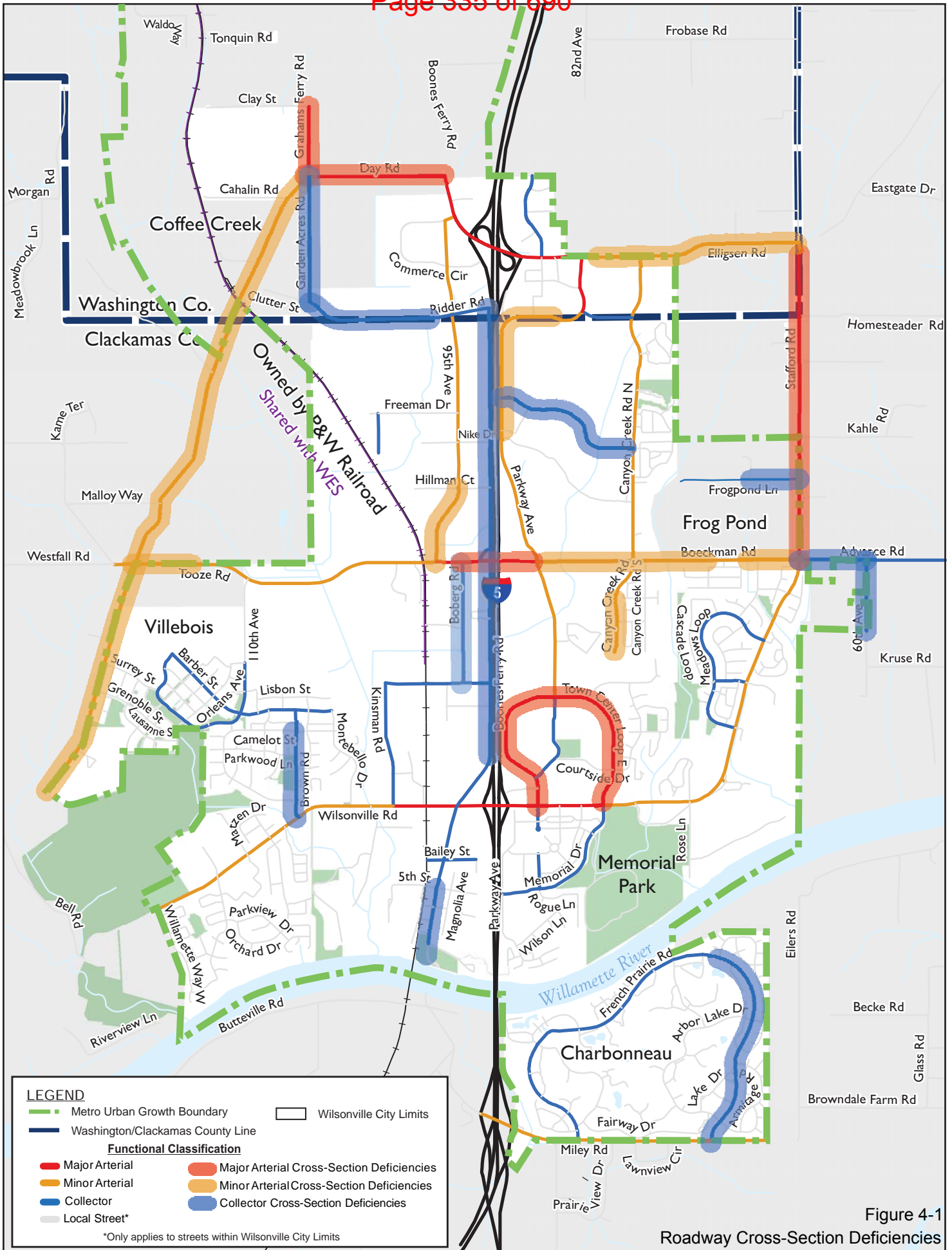


Figure 4-1  
Roadway Cross-Section Deficiencies



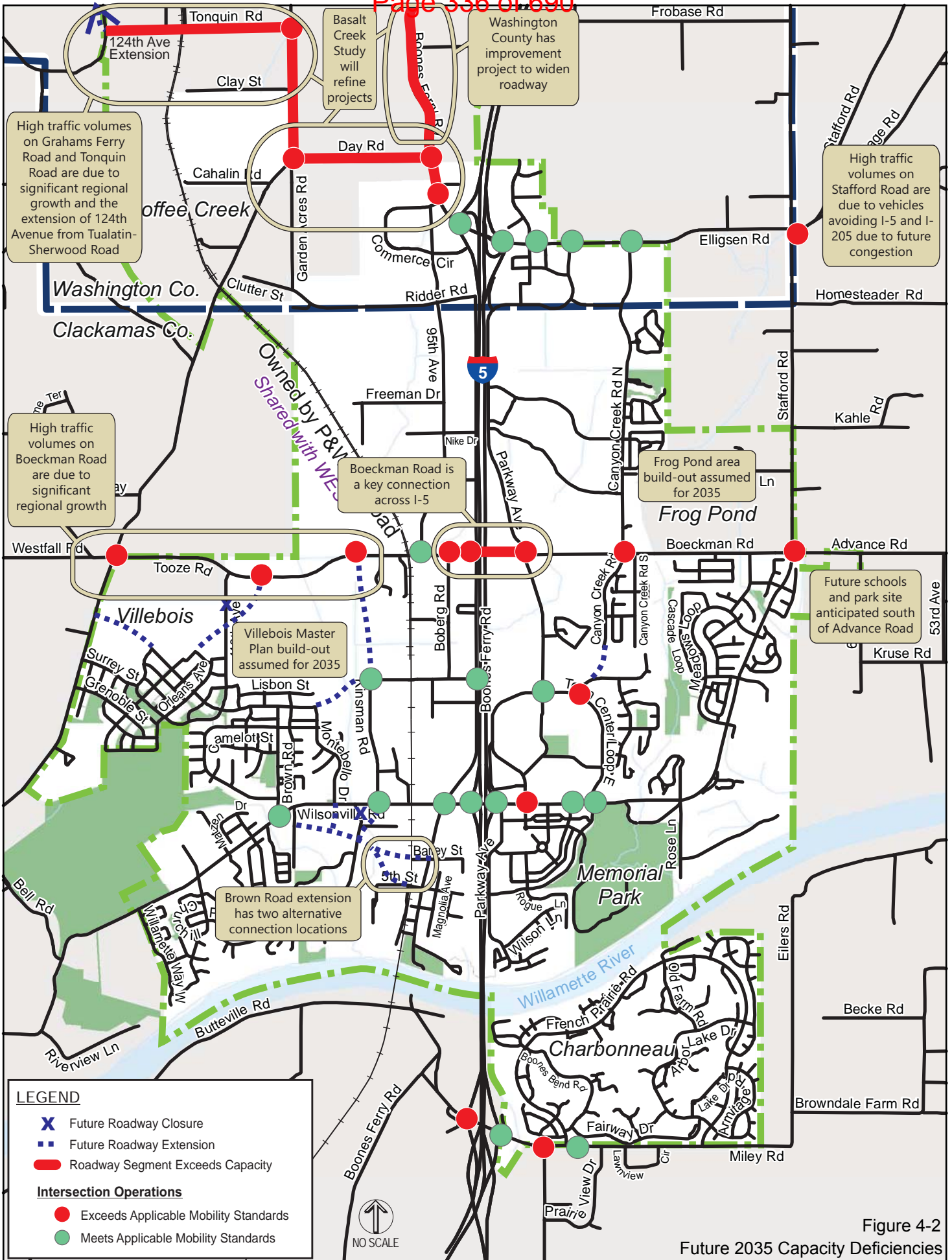


Figure 4-2  
Future 2035 Capacity Deficiencies

124th Ave Extension  
from Tualatin-Sherwood Rd  
(Washington County Project)

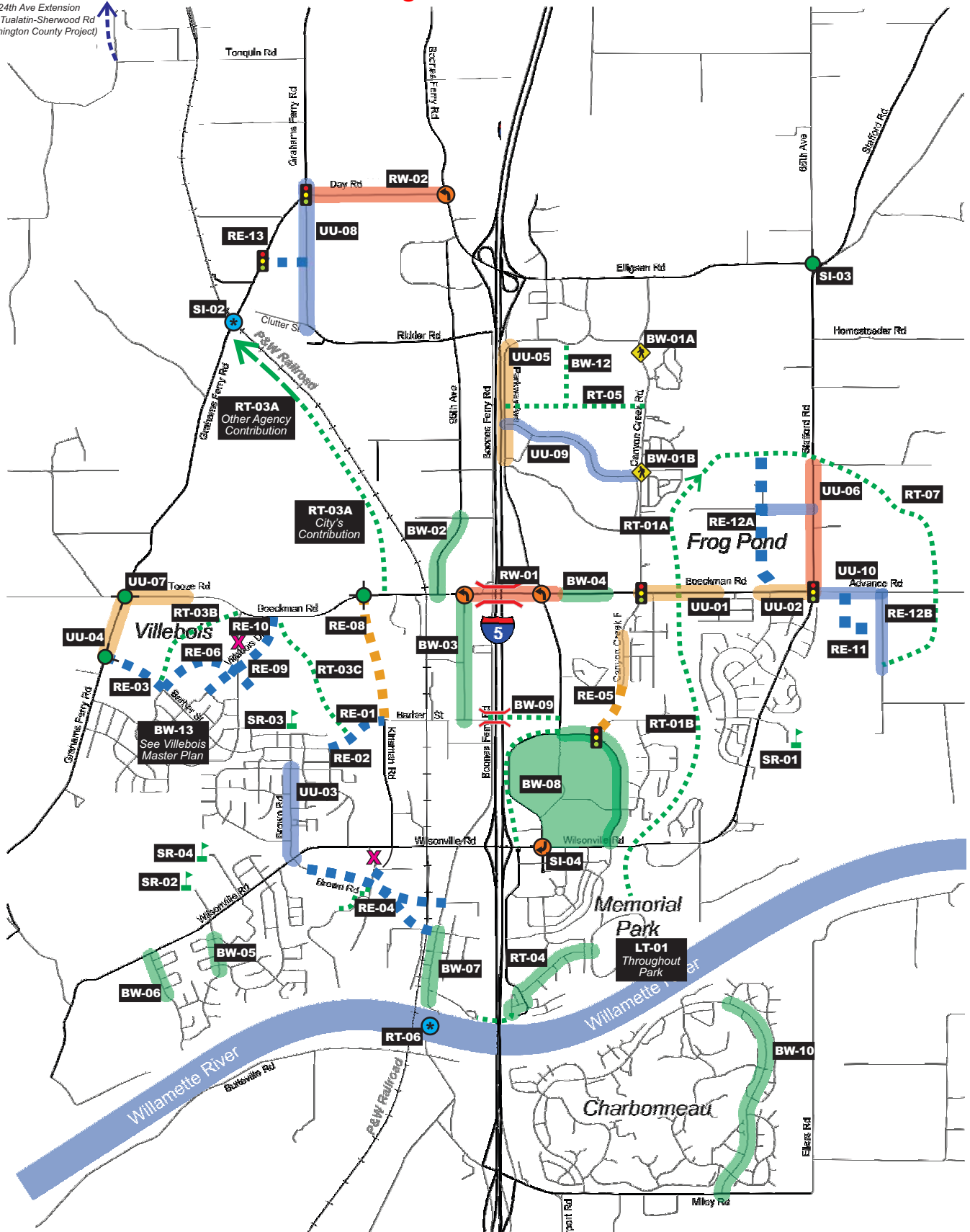
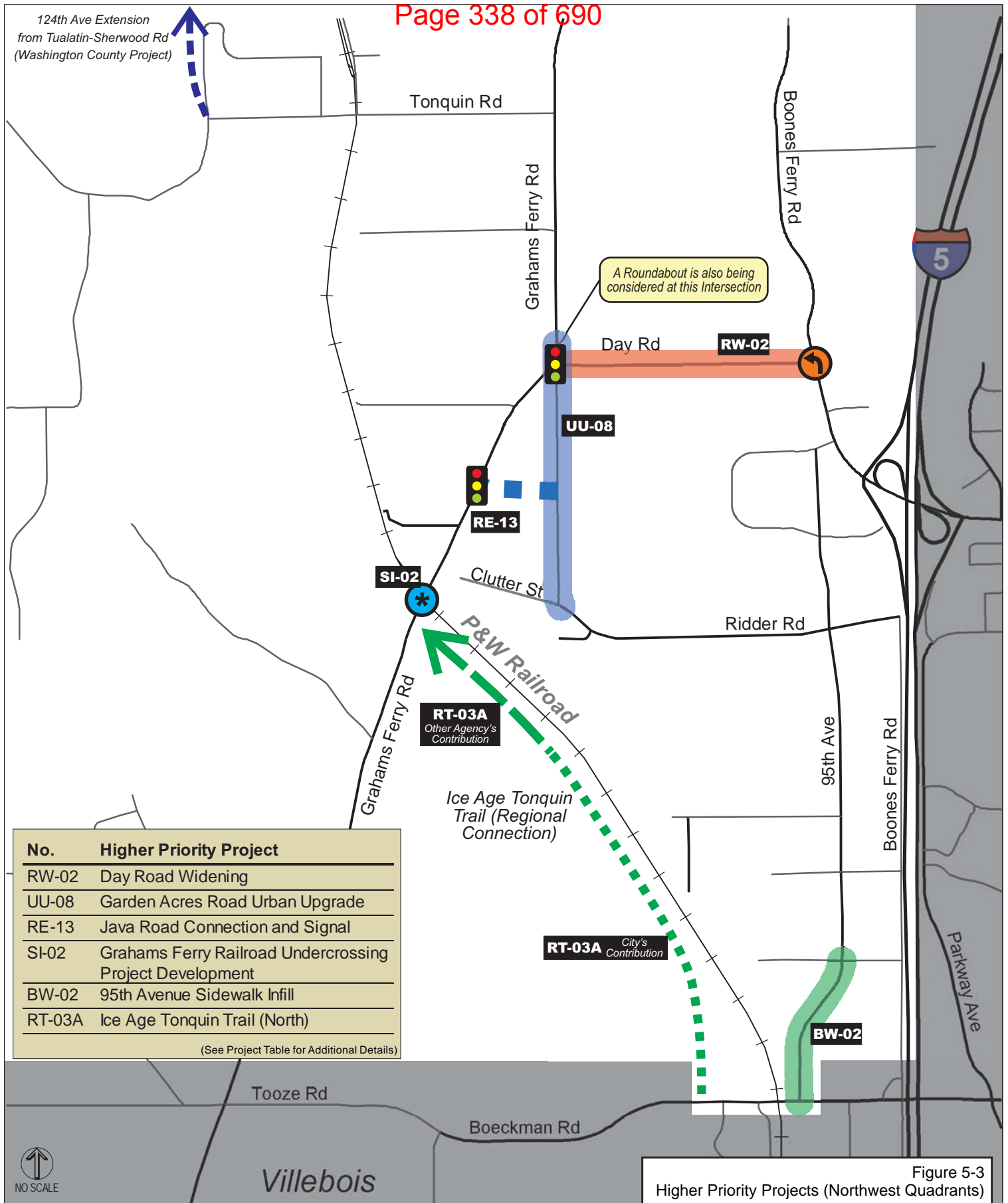


Figure 5-2  
Higher Priority Projects

LEGEND		Standalone Bike/Pedestrian Improvement	
<b>Roadway Widening/Upgrade</b>	<b>Roadway Extensions</b>	<b>Spot Improvements</b>	<b>Standalone Bike/Pedestrian Improvement</b>
Major Arterial	Major Arterial	New Traffic Signal	Enhanced Pedestrian Crossing
Minor Arterial	Minor Arterial	New Roundabout	Shared-Use Trail (City)
Collector	Collector	Additional Turn Lanes	Shared-Use Trail (County)
		Project Development	Bikeway/Walkway
			Safe Routes to School
			Road Closure
			Bridge Work
			Project Type and Number



124th Ave Extension  
from Tualatin-Sherwood Rd  
(Washington County Project)



No.	Higher Priority Project
RW-02	Day Road Widening
UU-08	Garden Acres Road Urban Upgrade
RE-13	Java Road Connection and Signal
SI-02	Grahams Ferry Railroad Undercrossing Project Development
BW-02	95th Avenue Sidewalk Infill
RT-03A	Ice Age Tonquin Trail (North)

(See Project Table for Additional Details)

Figure 5-3  
Higher Priority Projects (Northwest Quadrants)

LEGEND		Standalone Bike/Pedestrian Improvement	
<b>Roadway Widening/Upgrade</b>	<b>Roadway Extensions</b>	Enhanced Pedestrian Crossing	Road Closure
Major Arterial	Major Arterial	Shared-Use Trail (City)	Bridge Work
Minor Arterial	Minor Arterial	Shared-Use Trail (County)	Project Type and Number
Collector	Collector	Bikeway/Walkway	
New Traffic Signal	New Roundabout	Safe Routes to School	
Additional Turn Lanes	Project Development		

No.	Higher Priority Project
RW-01	Boeckman Road Bridge and Corridor Improvements
RE-11	Advance Road Middle School Site Improvements
RE-12A	Frog Pond West Neighborhood Collector Roads
RE-12B	Frog Pond South Neighborhood Collector Roads
UU-01	Boeckman Road Dip Improvements
UU-02	Boeckman Road Urban Upgrade
UU-05	Parkway Avenue Urban Upgrade
UU-06	Stafford Road Urban Upgrade
UU-09	Printer Parkway Urban Upgrade
UU-10	Advance Road Urban Upgrade
SI-03	Stafford Road/65th Avenue Intersection Improvements
BW-01	Canyon Creek Road Enhanced Pedestrian Crossing
BW-04	Boeckman Road Bike Lanes and Sidewalk Infill
BW-12	Parkway Center Trail Connector
RT-01A	Boeckman Creek Trail (North)
RT-07	Revised Frog Pond Regional Trail
RT-05	Wiedeman Road Trail

(See Project Table for Additional Details)

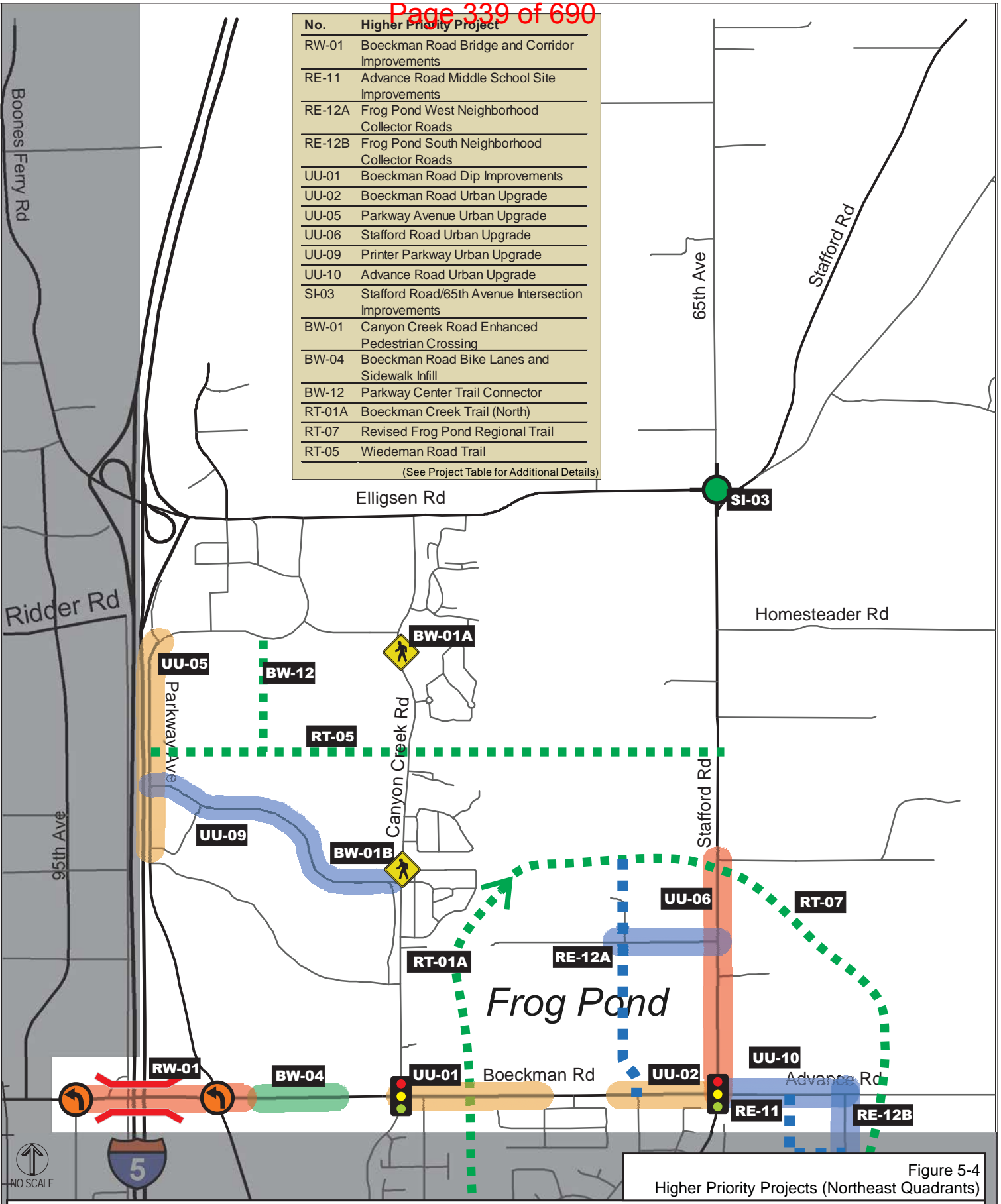


Figure 5-4  
Higher Priority Projects (Northeast Quadrants)

LEGEND		Standalone Bike/Pedestrian Improvement	
<b>Roadway Widening/Upgrade</b>	<b>Roadway Extensions</b>	<b>Spot Improvements</b>	<b>Standalone Bike/Pedestrian Improvement</b>
Major Arterial	Major Arterial	New Traffic Signal	Enhanced Pedestrian Crossing
Minor Arterial	Minor Arterial	New Roundabout	Shared-Use Trail (City)
Collector	Collector	Additional Turn Lanes	Shared-Use Trail (County)
		Project Development	Bikeway/Walkway
			Safe Routes to School
			Road Closure
			Bridge Work
			Project Type and Number

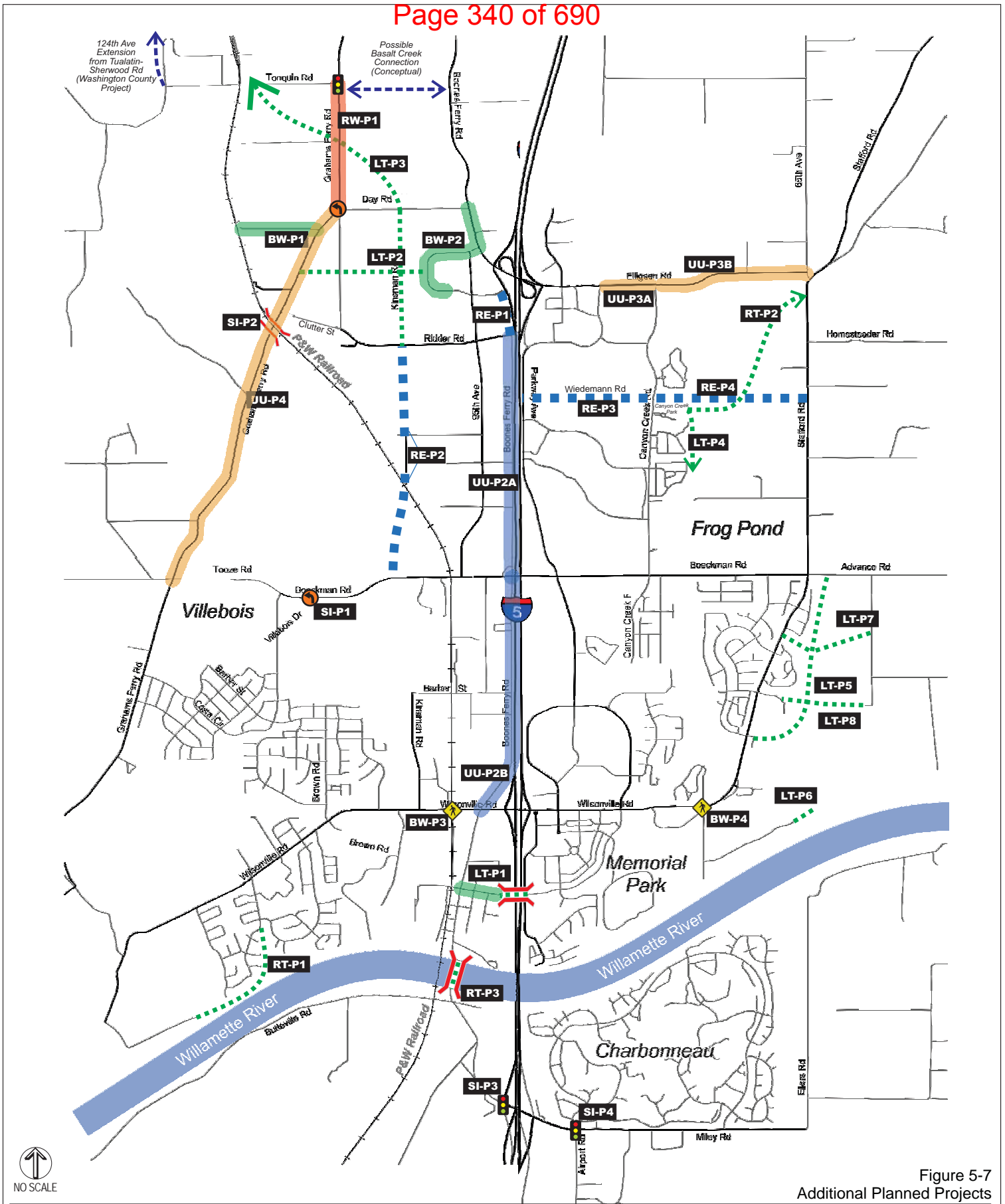


Figure 5-7  
Additional Planned Projects

**LEGEND**

**Roadway Widening/Upgrade**

- Major Arterial
- Minor Arterial
- Collector

**Roadway Extensions**

- Major Arterial
- Minor Arterial
- Collector

**Spot Improvements**

- New Traffic Signal
- New Roundabout
- Additional Turn Lanes
- Project Development

**Standalone Bike/Pedestrian Improvement**

- Enhanced Pedestrian Crossing
- Shared-Use Trail (City)
- Shared-Use Trail (County)
- Bikeway/Walkway
- Safe Routes to School

- Road Closure
- Bridge Work
- AA-##** Project Type and Number



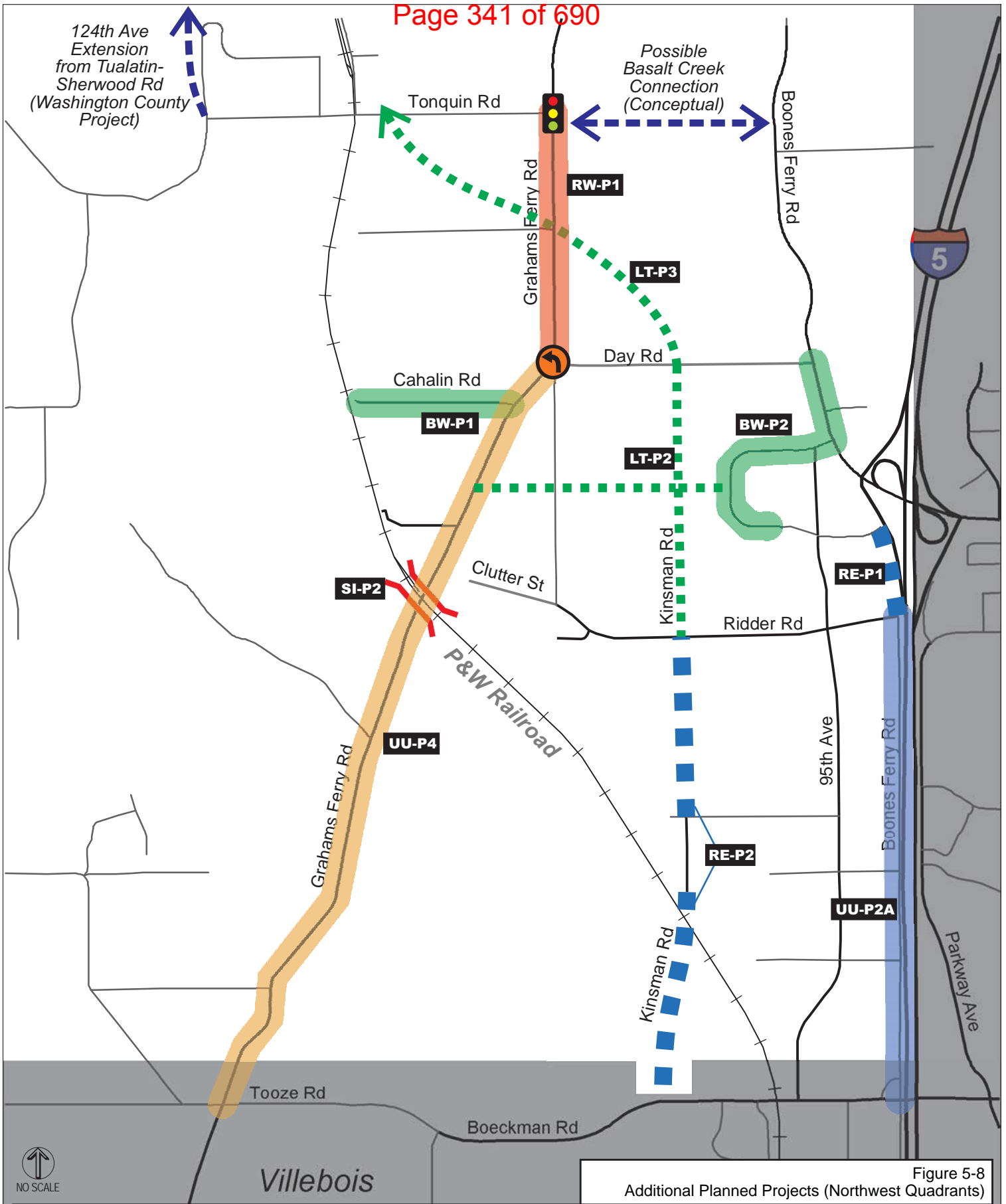


Figure 5-8  
Additional Planned Projects (Northwest Quadrants)

**LEGEND**

**Roadway Widening/Upgrade**

- Major Arterial
- Minor Arterial
- Collector

**Roadway Extensions**

- - - Major Arterial
- - - Minor Arterial
- - - Collector

**Spot Improvements**

- New Traffic Signal
- New Roundabout
- Additional Turn Lanes
- Project Development

**Standalone Bike/Pedestrian Improvement**

- Enhanced Pedestrian Crossing
- - - Shared-Use Trail (City)
- Shared-Use Trail (County)
- Bikeway/Walkway
- Safe Routes to School

**Road Closure**

- Road Closure
- Bridge Work
- AA-##** Project Type and Number



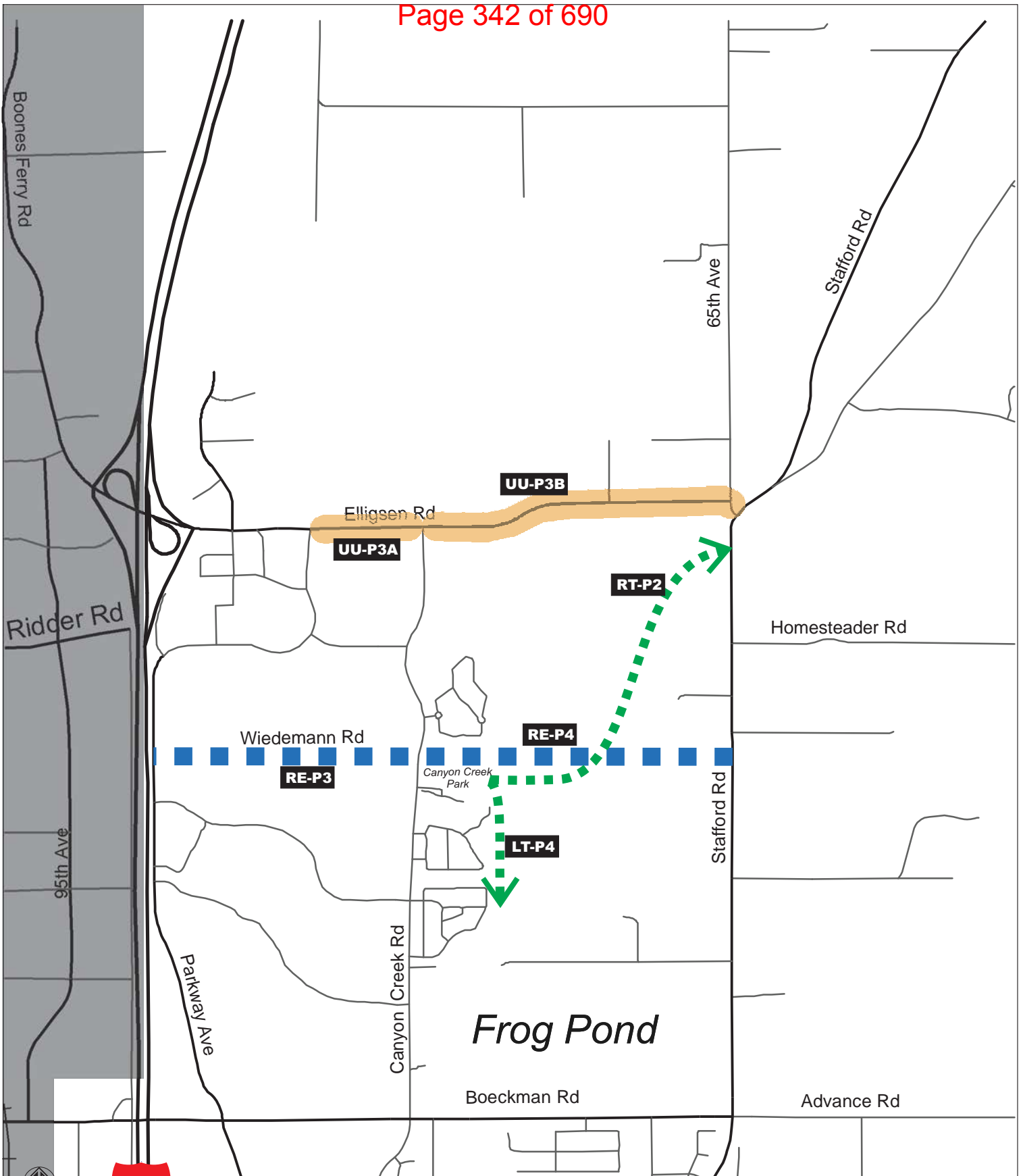


Figure 5-9  
Additional Planned Projects (Northeast Quadrants)

LEGEND		Standalone Bike/Pedestrian Improvement	
<b>Roadway Widening/Upgrade</b>	<b>Roadway Extensions</b>	<b>Spot Improvements</b>	<b>Standalone Bike/Pedestrian Improvement</b>
Major Arterial	Major Arterial	New Traffic Signal	Enhanced Pedestrian Crossing
Minor Arterial	Minor Arterial	New Roundabout	Shared-Use Trail (City)
Collector	Collector	Additional Turn Lanes	Shared-Use Trail (County)
		Project Development	Bikeway/Walkway
			Safe Routes to School
			Road Closure
			Bridge Work
			Project Type and Number





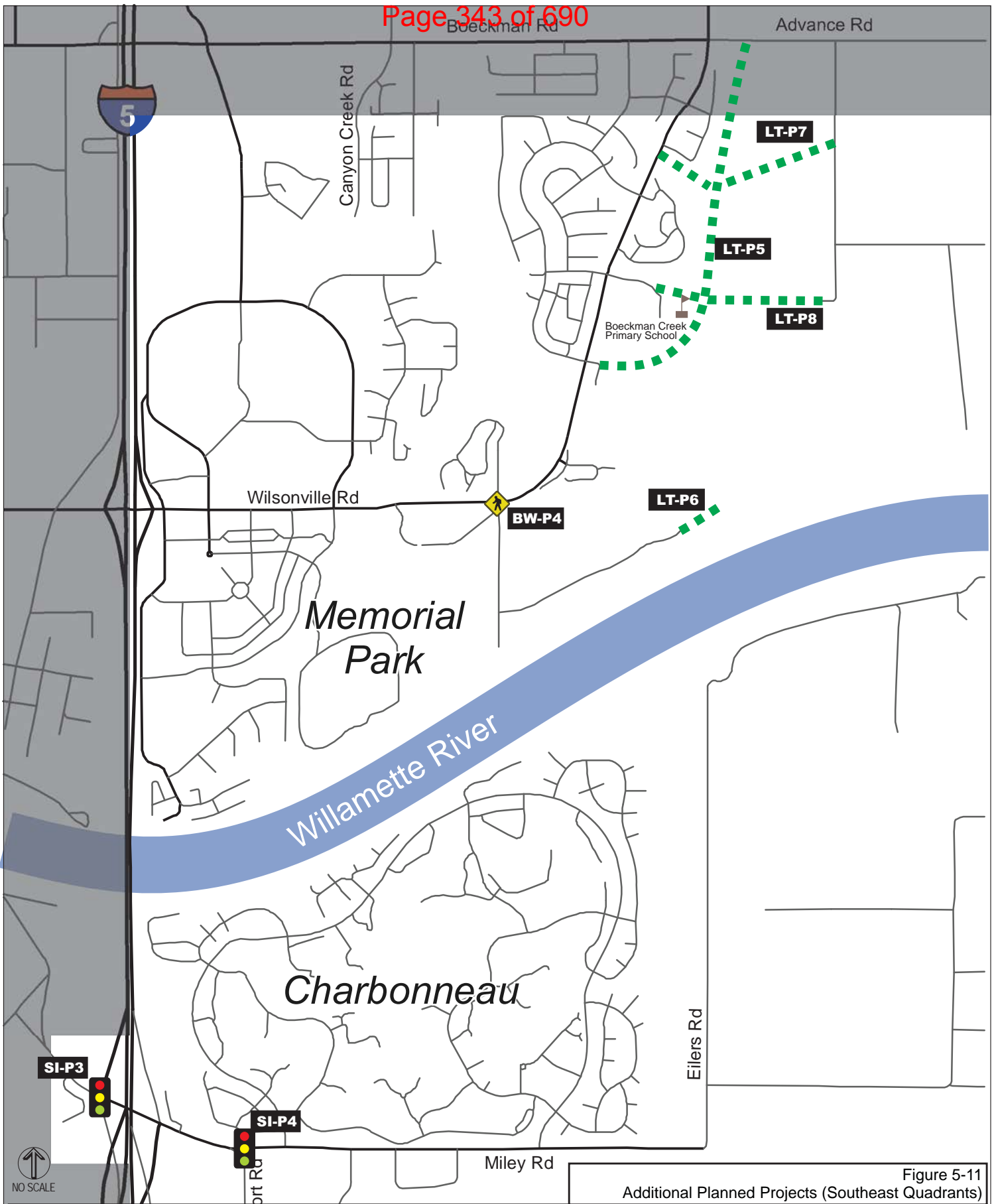


Figure 5-11  
Additional Planned Projects (Southeast Quadrants)

**LEGEND**

**Roadway Widening/Upgrade**

- Major Arterial
- Minor Arterial
- Collector

**Roadway Extensions**

- - - Major Arterial
- - - Minor Arterial
- - - Collector

**Spot Improvements**

- New Traffic Signal
- New Roundabout
- Additional Turn Lanes
- Project Development

**Standalone Bike/Pedestrian Improvement**

- Enhanced Pedestrian Crossing
- Shared-Use Trail (City)
- Shared-Use Trail (County)
- Bikeway/Walkway
- Safe Routes to School

**Road Closure**

- Road Closure
- Bridge Work

**AA-##** Project Type and Number

NO SCALE

# Executive Summary



## INTRODUCTION

The Wilsonville Transportation System Plan (TSP) is the City's long-term transportation plan and is an element of its Comprehensive Plan. It includes policies, projects, and programs that could be implemented through the City's Capital Improvement Plan, development requirements, or grant funding. The TSP's transportation planning story is outlined in the box at right, and the key findings of each TSP chapter are highlighted below.

## THE CONTEXT (SEE CHAPTER 1)

The 2013 TSP process built upon two decades of community planning to create a complete community transportation plan that integrates all travel modes. This update is needed to account for changing economic and social circumstances and to ensure consistency with state and regional planning policies. It also ensures the City will be prepared to support land use growth within the urban growth boundary through the 2035 planning horizon.

Most of the policies and projects come from prior adopted plans, including the Comprehensive Plan, 2003 TSP, 2006 Bicycle and Pedestrian Master Plan, and 2008 Transit Master Plan. While the TSP replaces the 2003 TSP in its entirety, it updates and builds upon the 2006 Bicycle and Pedestrian Master Plan and 2008 Transit Master Plan. Where these documents may be in conflict, the new TSP takes precedence.

The City's future financial outlook was also evaluated to identify the City's forecasted resources and financial limitations. The City draws upon multiple funding sources to manage, operate, and improve its transportation system. For capital improvement projects, the City relies heavily on developer contributions and fees (including system development charges) and urban

## A TRANSPORTATION PLANNING STORY

The TSP chapters tell a story of how the City's planning efforts are helping the community achieve its desired transportation system:

- **Chapter 1: The Context** provides the background of the City's transportation planning efforts.
- **Chapter 2: The Vision** shares the City's visions of its desired transportation system.
- **Chapter 3: The Standards** outlines the standards the City is implementing to ensure ongoing progress towards its vision.
- **Chapter 4: The Needs** identifies the existing and anticipated needs of the transportation system through the 2035 planning horizon.
- **Chapter 5: The Projects** explains the transportation improvement projects that will allow the City to meet its infrastructure needs.
- **Chapter 6: The Programs** describes the ongoing transportation programs that help the City manage its transportation system.
- **Chapter 7: The Performance** lists the performance measures to be considered in subsequent TSP updates to determine if its planning efforts are leading to the desired outcomes.

renewal funds, which are primarily associated with new growth areas. With ongoing planning and investment in its transportation system, the City can continue to serve its residents, businesses, and the region.

**THE VISION (SEE CHAPTER 2)**

As Wilsonville grows, it is essential for the community to work collaboratively toward its shared vision, which is summarized in the call-out box at right.

Transportation goals and policies form the bases for how the local transportation system will be developed and maintained through the TSP’s 2035 horizon year. Wilsonville’s seven transportation goals are identified in the table below. The City’s vision and goals support a multimodal approach to transportation, which means that the system accommodates users of all travel modes.

**WILSONVILLE’S TRANSPORTATION VISION**

*Wilsonville’s coordinated multimodal transportation system is strategically designed and collaboratively built. Our system provides mode and route choices, delivering safe and convenient local accessibility to assure that Wilsonville retains its high levels of quality of life and economic health. Neighborhoods, employment centers, schools, shopping, and parks are connected by a network of streets and pathways that give residents options to easily get around town.*

*Our local accessibility is further enhanced through arterial connectivity with our neighboring communities, thereby providing excellent intercity and interstate mobility serving our residential and business needs. The system is designed, built and maintained to be cost effective and to maximize the*

**Wilsonville’s Transportation Goals**

Goals	Description
1 <b>Safe</b>	Follow current safety practices for design, operations, and maintenance of transportation facilities.
2 <b>Connected and Accessible</b>	Provide all users with access to integrated facilities and services that connect Wilsonville’s neighborhoods, parks, schools, employment centers, and retail areas to each other and to the surrounding region.
3 <b>Functional and Reliable</b>	Provide, manage, and maintain sufficient transportation infrastructure and services throughout Wilsonville to ensure functional and reliable multimodal and freight operations as development occurs.
4 <b>Cost Effective</b>	Utilize diverse and stable funding sources to implement transportation solutions that provide the greatest benefit to Wilsonville residents and businesses, while mitigating impacts to the city’s social, economic, and environmental resources.
5 <b>Compatible</b>	Develop and manage a transportation system that is consistent with the City’s Comprehensive Plan and coordinates with other local, regional, and state jurisdictions.
6 <b>Robust</b>	Encourage and support the availability of a variety of transportation choices for moving people and goods.
7 <b>Promotes Livability</b>	Design and construct transportation facilities in a manner that enhances the livability of Wilsonville and health of its residents.

## THE STANDARDS (SEE CHAPTER 3)

Wilsonville’s transportation standards ensure the City develops and operates consistent with its goals and vision. Wilsonville’s six types of transportation standards are listed in the call-out box at right.

How well a street serves its users ultimately depends upon which elements are included, their dimensions, and how they relate to each other (all of which are informed by the City’s standards). For example, streets designed consistent with adjacent land uses can contribute to the identity and character of a neighborhood and increase property values. They can also affect traffic speeds, reduce environmental impacts, and allow for safe multimodal use.

## THE NEEDS (SEE CHAPTER 4)

Wilsonville’s transportation standards and policies serve as a benchmark for determining what needs exist throughout the city. The city’s needs are categorized as gaps (missing connections or barriers in the transportation network) or deficiencies (shortcomings of the existing system). The TSP identifies the gaps and deficiencies that currently exist or are anticipated to arise through the 2035 horizon year as additional local and regional development occurs.

## THE PROJECTS (SEE CHAPTER 5)

Many of the city’s existing and future transportation needs can be addressed through capital improvement projects. The projects needed through 2035 were principally based on prior City plans.

Constructing all identified transportation projects would cost approximately \$218.2 million, which exceeds the \$123.4 million forecasted to be available through 2035. Therefore, the transportation projects were separated into two lists:

- The “Higher Priority” project list includes the recommended projects reasonably expected to be funded through 2035. These are the highest priority projects and will inform the City’s yearly

## WILSONVILLE’S TRANSPORTATION STANDARDS

Wilsonville’s six types of transportation standards support its management of an effective multimodal transportation system:

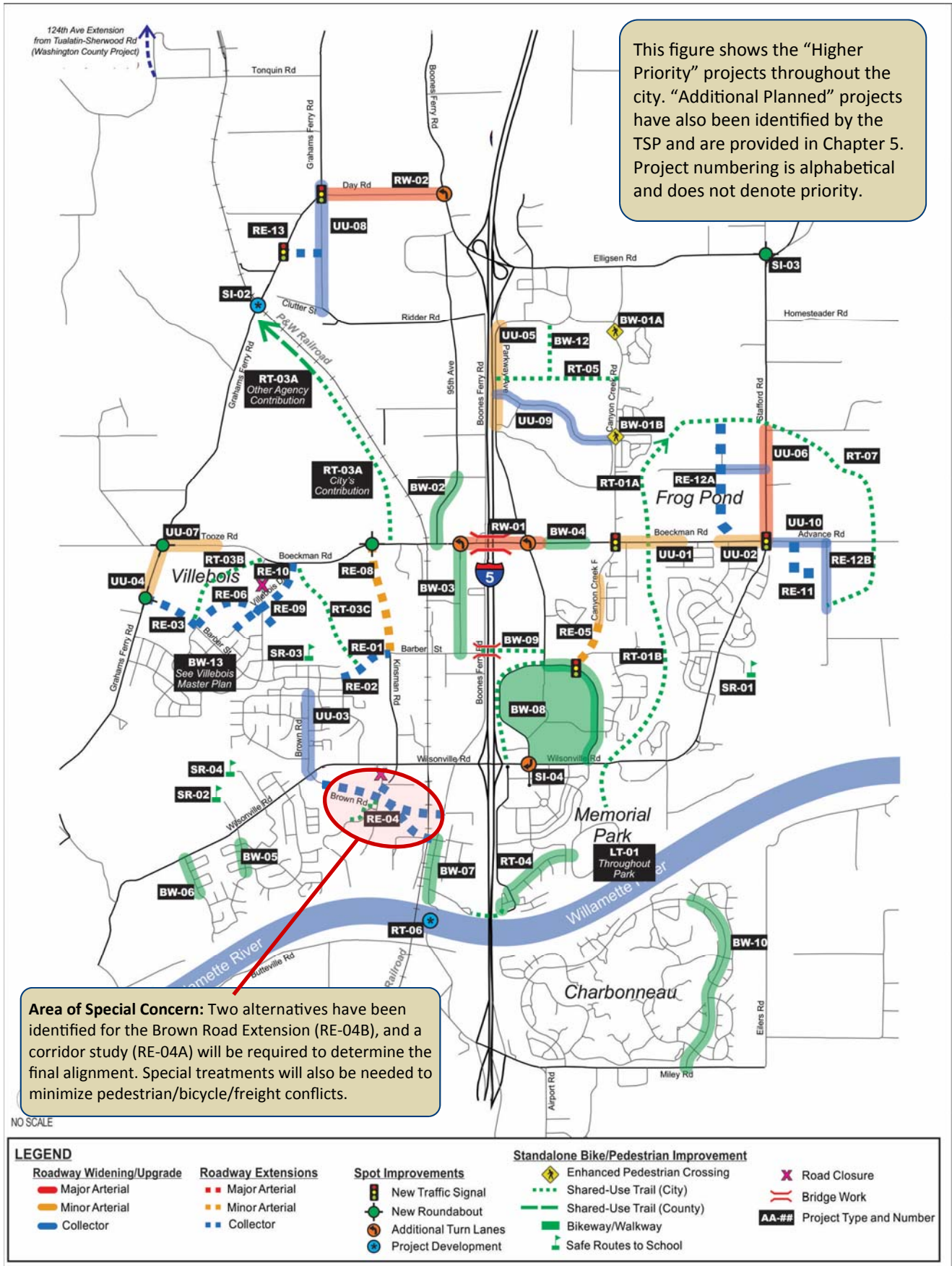
- **Functional Classifications** provide a hierarchy for determining how streets should function and which street design elements to include.
- **Connectivity and Facility Spacing Standards** ensure that direct routes and travel options are available for all transportation users.
- **Freight Routes** connect the city’s industrial and commercial sites with I-5 and other regional facilities and improve coordination between freight and other travel modes.
- **Bicycle Routes** connect neighborhoods, schools, parks, community centers, business districts, and natural resource areas to support bicycle travel by residents of varying physical capabilities, ages, and skill levels.
- **Cross-Section Standards** provide guidance for selecting and sizing various design elements to serve intended users’ needs.
- **Access Management** balances the transportation system’s need to provide safe, efficient, and timely travel with the need to allow access to individual properties.

budget and 5-year Capital Improvement Plan (CIP). These projects are identified in the following figure (page v) and table (page vi).

- The “Additional Planned” project list includes those projects that would contribute to the City’s desired transportation system through 2035 but that are not considered “Higher Priority” projects due to estimated funding limitations. These projects are identified in Chapter 5 and should be pursued as funding opportunities are available.



HIGHER PRIORITY PROJECTS



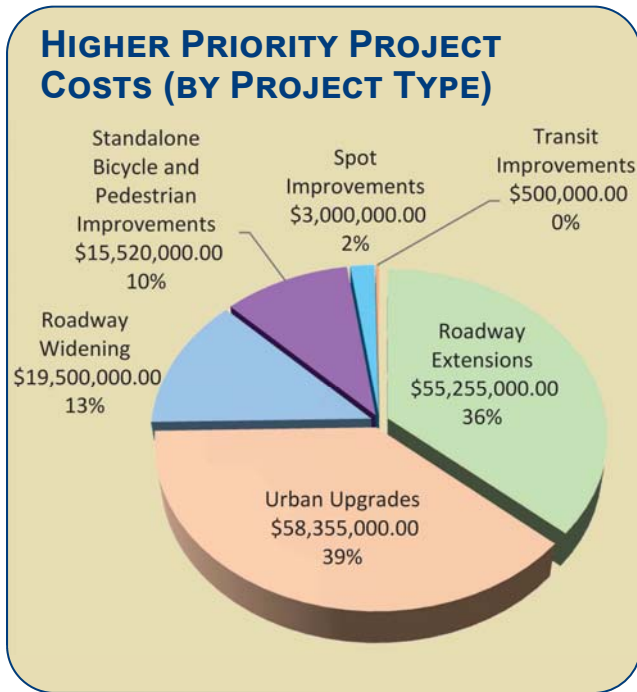


## HIGHER PRIORITY PROJECTS (LISTED ALPHABETICALLY BY IMPROVEMENT)

No.	Higher Priority Project
<b>Roadway Extensions (Multimodal Connectivity)</b>	
RE-01	Barber Street Extension
RE-02	Barber Street Extension (Part 2)
RE-03	Barber Street through Villebois
RE-04A	Corridor Study for Brown Road Extension
RE-04B	Brown Road Extension (with Bailey Street or 5th Street Connection)
RE-05	Canyon Creek Road Extension
RE-06	Costa Circle Loop Extension
RE-08	Kinsman Road Extension (South)
RE-09	Villebois Drive Extension
RE-10	Villebois Drive Extension (Part 2)
RE-11	Advance Road Middle School Improvements
RE-12A	Frog Pond West Neighborhood Collector Roads
RE-12B	Frog Pond South Neighborhood Collector Road
RE-13	Java Road Connection and Signal
<b>Roadway Widening (Capacity)</b>	
RW-01	Boeckman Road Bridge and Corridor Improvements
RW-02	Day Road Widening
<b>Urban Upgrades (Multimodal Connectivity and Safety)</b>	
UU-01	Boeckman Road Dip Improvements
UU-02	Boeckman Road Urban Upgrade
UU-03	Brown Road Upgrades
UU-04	Grahams Ferry Urban Upgrade
UU-05	Parkway Avenue Urban Upgrade
UU-06	Stafford Road Urban Upgrade
UU-07	Tooze Road Urban Upgrade
UU-08	Garden Acres Road Urban Upgrade
UU-09	Printer Parkway Urban Upgrade
UU-10	Advance Road Urban Upgrade
<b>Spot Improvements (Transportation System Management/Operations)</b>	
SI-02	Grahams Ferry Railroad Undercrossing Project Development
SI-03	Stafford Road/65th Avenue Intersection Improvements
SI-04	Wilsonville Rd/Town Center Loop West Intersection Improvements
<b>Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements)</b>	
BW-01 A/B	Canyon Creek Road Enhanced Pedestrian Crossings

No.	Higher Priority Project
<b>Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements) . . . Continued</b>	
BW-02	95th Avenue Sidewalk Infill
BW-03	Boberg Road Sidewalk Infill
BW-04	Boeckman Road Bike Lanes and Sidewalk Infill
BW-05	Willamette Way East Sidewalk Infill
BW-06	Willamette Way West Sidewalk Infill
BW-07	Boones Ferry Road Sharrows
BW-08	Town Center Loop Pedestrian, Bicycle, and Transit Improvements
BW-09	Town Center Loop Bike/Pedestrian Bridge
BW-10	French Prairie Drive Pathway
BW-12	Parkway Center Trail Connector
BW-13	Villebois Loop Trail
BW-14	Wayfinding Signage
<b>Safe Routes to School (Standalone Pedestrian and Bicycle Improvements)</b>	
SR-01	Boeckman Creek Primary Safe Routes to School Improvements
SR-02	Boones Ferry Primary Safe Routes to School Improvements
SR-03	Lowrie Primary Safe Routes to School Improvements
SR-04	Wood Middle School Safe Routes to School Improvements
<b>Local Trails (Standalone Pedestrian and Bicycle Improvements)</b>	
LT-01	Memorial Park Trail Improvements
<b>Regional Trails (Standalone Pedestrian and Bicycle Improvements/Safety)</b>	
RT-01A	Boeckman Creek Trail (North)
RT-01B	Boeckman Creek Trail (South)
RT-03A	Tonquin Trail (North)
RT-03B/C	Tonquin Trail (Villebois)
RT-04	Waterfront Trail Improvements
RT-05	Wiedeman Road Trail
RT-06	Willamette River Bike/Pedestrian/Emergency Bridge Project Dev.
RT-07	Revised Frog Pond Trail
<b>Transit Improvements</b>	
TI-01	Pedestrian Access to Transit
TI-02	Transit Street Improvements

Wilsonville’s “Higher Priority” project list includes several project types. The pie chart below provides the cost breakdown by project type. The highest costs would be incurred for the three roadway improvement types, which include facility improvements for all travel modes.



**Estimated Funding Available through 2035 for Capital Improvements**

Funding Source	Estimated Capital Funding through 2035
Street System Development Charges (SDCs)	\$42 million
Developer Contributions	\$30 million
West Side Plan – Urban Renewal District (URD)	\$27 million
Year 2000 Plan – Urban Renewal District (URD)	\$5 million
Park System Development Charges (SDCs)	\$0.7 million
Local/Regional Partnerships	\$2.9 million
Grants	\$3.2 million
State and Federal Funding	\$12.6 million
<b>Total Funds</b>	<b>\$123.4 million</b>

To fund its capital improvements projects, the City relies heavily on developer contributions and fees (including system development charges) and urban renewal funds, which are primarily associated with new growth areas. The table to the lower left lists the estimated funding available for capital improvements through the 2035 planning horizon year.

**THE PROGRAMS (SEE CHAPTER 6)**

Wilsonville’s transportation programs (listed below) also play an important role in the City’s ongoing efforts to provide a coordinated, cost-effective, multimodal transportation system. Well-run programs help extend the service life of the City’s infrastructure improvements and increase the value of transportation investments. The City’s Community Development and SMART Transit departments are responsible for managing the majority of its transportation programs.

**TRANSPORTATION PROGRAMS**

Wilsonville has various transportation programs that support ongoing operations and services:

- Capital Improvement Program (CIP)
- Safety (Proposed)
- Safe Routes to School
- ADA Comprehensive Access (Proposed)
- SMART Transit
- SMART Options and Transportation Demand Management (TDM)
- Intelligent Transportation System (ITS)
- Bike Smart and Walk Smart

**THE PERFORMANCE (SEE CHAPTER 7)**

Wilsonville’s Transportation System Plan (TSP) provides policies, standards, projects, and programs that, when put into action, will improve the city’s transportation system. By tracking appropriate performance measures in future TSP updates, the City can evaluate their progress.

# The Standards

## Chapter 3



Wilsonville's transportation standards ensure the city develops consistent with its vision of supporting a multimodal transportation system that is strategically designed for optimum community function and benefit. A street's design determines how it will look and function. How a street looks and functions is ultimately dependent upon which street elements are included, their dimensions, and how they relate to each other.

The standards are intended to ensure appropriate design and create a consistent approach throughout the city as development and redevelopment occurs. Since the design of a street is so closely tied to how it performs and how people experience the city, it is important for Wilsonville to carefully consider how it wants its streets to look and function and then to design them accordingly.

### OTHER CITY DOCUMENTS WITH TRANSPORTATION STANDARDS

The transportation standards in this chapter cover a variety of areas that help inform other City documents:

- Standard Detail Drawings
- Public Works Standards
- Planning and Land Development Ordinance

*Standards support the vision of a multimodal transportation system that is . . .*

- *Strategically designed and*
- *Collaboratively built,*

*Resulting in . . .*

- *Mode and route choices,*
- *Safe and convenient local accessibility, and*
- *Quality of life and economic health.*





## HOW STANDARDS BENEFIT THE TRANSPORTATION SYSTEM

The transportation standards included in this chapter support the City's management of an effective multimodal transportation system:

- **Functional Classifications** provide a hierarchy for managing public roadways practically and cost effectively. They provide a framework for identifying which street elements to include in a street's design.
- **Connectivity and Facility Spacing Standards** ensure that direct routes and travel options are available for all transportation users.
- **Freight Routes** connect the city's industrial and commercial sites with I-5 and other regional facilities and improve the coordination between freight and other travel modes.
- **Bicycle Routes** connect neighborhoods, schools, parks, community centers, business districts, and natural resource areas to support bicycle travel by residents of varying physical capabilities, ages, and skill levels.
- **Cross-Section Standards** provide guidance for selecting and sizing various design elements to serve intended users' needs.
- **Access Management** balances the transportation system's need to provide safe, efficient, and timely travel with the need to allow access to individual properties.

*Looking north at Boones Ferry Road north of Day Road. Washington County recently received jurisdiction of this roadway from ODOT and will be constructing improvements that include roadway widening, bike lanes, and sidewalks.*

## ROADWAY JURISDICTION

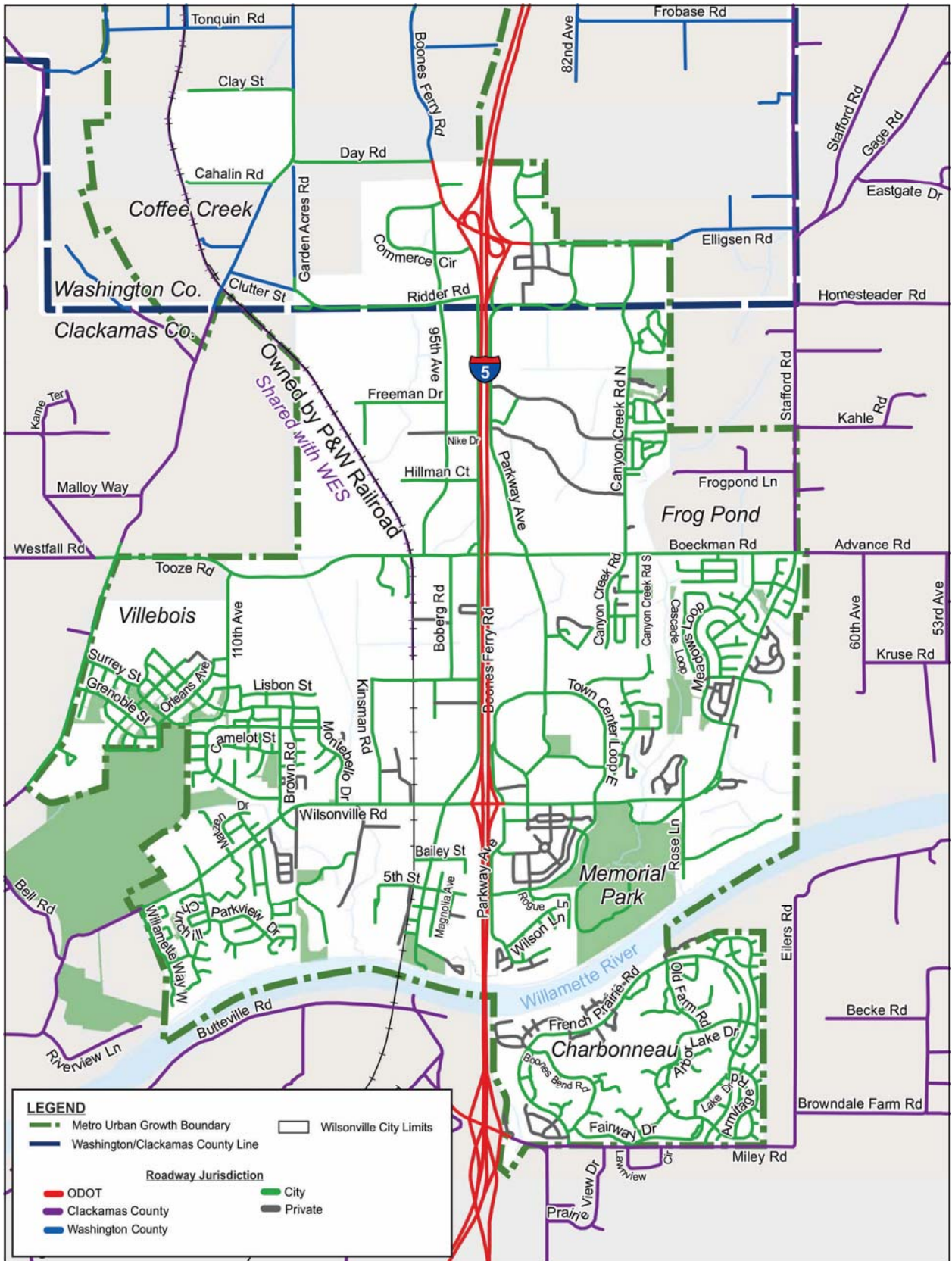
A roadway's jurisdiction affects who will have the ultimate authority over improvements and what standards apply. In the Wilsonville vicinity, there are four agencies with jurisdiction:

- **City of Wilsonville** has the majority of roadways within City limits.
- **Washington County** roadways are on the outskirts to the north of the city.
- **Clackamas County** roadways are on the outskirts to the east, west, and south of the city.
- **ODOT** has jurisdiction of Interstate-5, the corresponding interchange ramps, the portions of Elligsen Road and Boones Ferry Road between the Parkway Avenue and Day Road, and Wilsonville Road between Town Center Loop West and Boones Ferry Road.

As the City expands, it is expected that the county roadways in the immediate vicinity of the city will transfer jurisdictions to the City of Wilsonville. These roadways include Stafford Road, Advance Road, Elligsen Road, Frog Pond Lane, Clutter Street, and Grahams Ferry Road.



FIGURE 3-1. ROADWAY JURISDICTION





## FUNCTIONAL CLASSIFICATION

The City's street functional classification system is an important tool for managing public roadways. It is based on a hierarchical system of roads (see diagram at right) where streets with a higher classification, such as arterial streets, emphasize a higher level of mobility for through-movement. They look and function very differently than a street with a lower classification, such as local streets, which emphasize the land access function.

Wilsonville has four functional classes:

- **Major Arterials** primarily connect the I-5 interchanges with major activity centers (i.e., Town Center and Argyle Square) but also include the key connections requiring additional travel lanes (i.e., Boeckman Road bridge over I-5 and Stafford Road). They generally have four or more travel lanes, bicycle lanes, and limited access (preferably connecting with minor arterials).
- **Minor Arterials** serve as the direct connections through town and usually do not penetrate identifiable neighborhoods. They generally have two or three travel lanes, bicycle lanes, and consolidated access to larger developed areas and neighborhoods.
- **Collectors** provide traffic circulation within residential, commercial, and industrial areas and serve to funnel traffic from neighborhoods to the arterial street network. They have two or three travel lanes, bicycle lanes, optional on-street parking, and minor access restrictions.
- **Local Streets** are located within residential, commercial, and industrial areas and discourage through movement. They allow on-street parking and ensure that every parcel is accessible for all modes.

The roadway classifications throughout the city are shown in Figure 3-2. These classifications provide a vision of how these roadways should be designed and constructed as improvements are made.

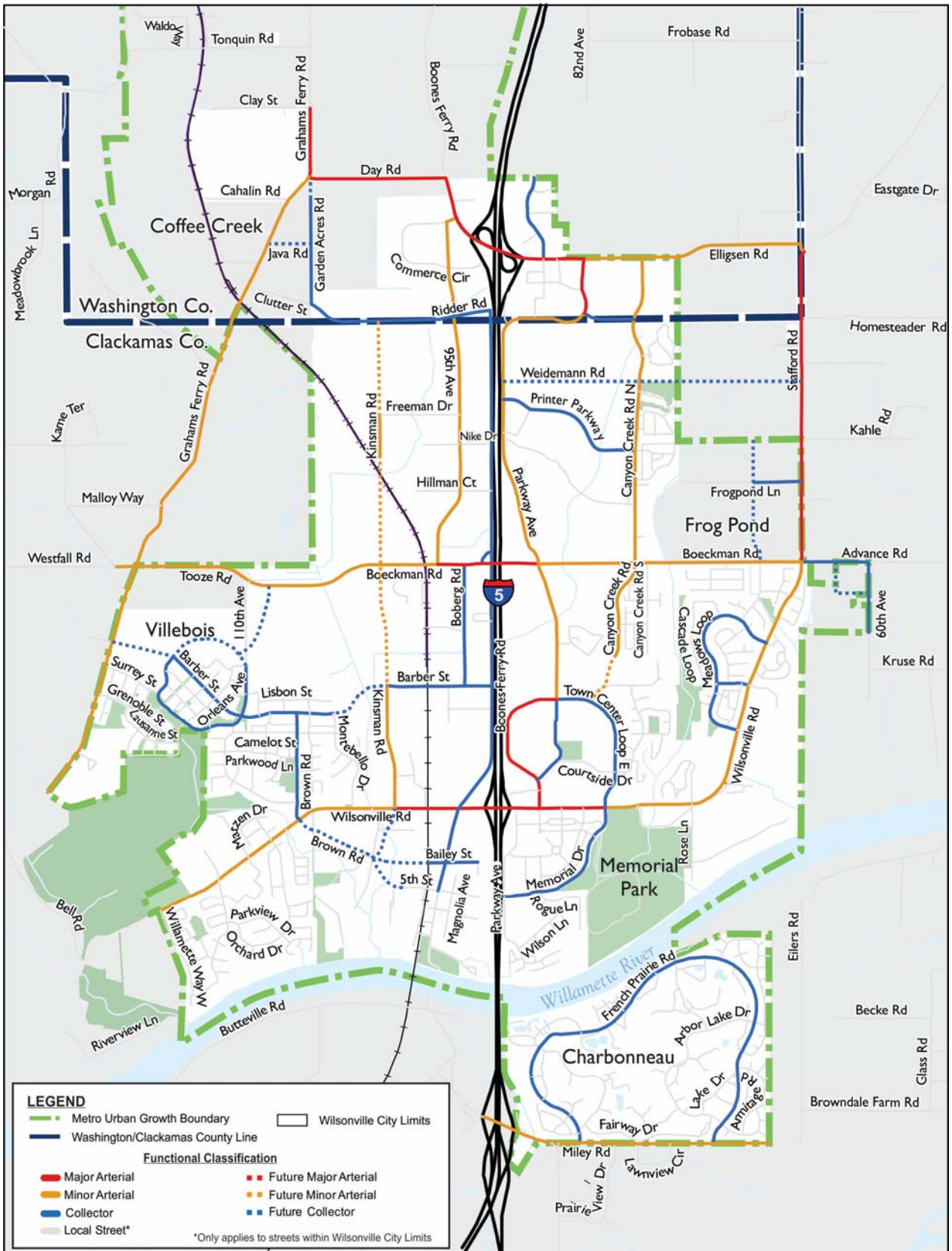


## FUNCTIONAL CLASSIFICATION AS A FRAMEWORK FOR STANDARDS

Functional classification provides a helpful framework for managing the City's transportation system and supporting the following standards:

- **Connectivity and Spacing Standards** indicate how far apart roadways of different functional classifications should be spaced to ensure a balanced approach to mobility and land access throughout the city.
- **Freight Routes and Transit Streets** primarily use higher classification roads to serve freight and/or transit vehicles due to the wider cross-sections and greater focus on mobility.
- **Cross-Section Standards** vary by functional classification to meet user needs. However, functional class is not the only factor in determining street design.
- **Access Management Standards** are more stringent for higher class roadways, which are intended to emphasize mobility.

FIGURE 3-2. FUNCTIONAL CLASS DESIGNATIONS



### CONNECTIVITY AND SPACING

One of Wilsonville’s goals is to improve connectivity by constructing parallel facilities spaced at regular intervals throughout the city. These facilities provide multiple alternatives and more direct routes between both local and regional destinations, including neighborhoods, parks, schools, employment centers, and retail areas.

Table 3-1 lists the desired spacing of each facility type throughout Wilsonville to ensure a high level of connectivity. Figure 3-3 illustrates the desired spacing for the arterial and collector street network. Deviations to these guidelines may be needed in locations where there are significant barriers, such as topography, rail lines, freeways, existing development, and the presence of natural areas.

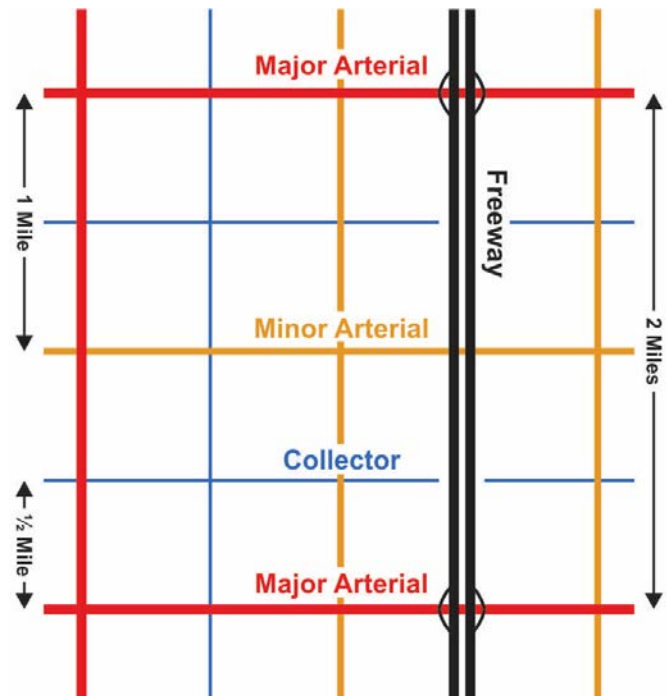
Bicyclists and pedestrians benefit the most from closely spaced facilities because they are the most affected by distance. By providing walking and biking facilities spaced less than 300 feet apart, Wilsonville will support walking and biking use within and between its neighborhoods. In addition, these connections can improve access to transit.

**Table 3-1. Facility Spacing Guidelines**

Facility Type	Desired Spacing <sup>a</sup>
Major Arterial	1 - 2 mi
Minor Arterial	1 mi
Collector	1/4 - 1/2 mi
Local Street	300 - 500 ft
Bicycle and Pedestrian Facilities	300 ft

<sup>a</sup> Desired Spacing refers to distance between facilities with same or higher functional classification.

**FIGURE 3-3. DESIRED FACILITY**



### BENEFITS OF CONNECTIVITY

Connectivity provides all transportation system users with multiple benefits:

- Increased mobility by distributing traffic over multiple connected streets rather than forcing all traffic onto the City’s arterial street system
- More equitable access for all businesses and neighborhoods throughout the city

- Improved walking, biking, and transit use due to more direct connections and less out of direction travel between neighborhoods, schools, transit stops, retail centers, employment centers, and recreational areas
- Reduction in short auto trips between adjacent neighborhoods and land uses





*Villebois Village Master Plan was designed to provide a high level of connectivity for all travel modes using short blocks arranged in a grid pattern, numerous pathways, and a diversity of land use.*

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*“Connectivity is important because you want to be able to have options for how you move through your community. I don’t personally always want to drive my car places, especially when I have my children with me. I want us to get out and be active and to be able to bike to the store. We have stores that are really close to us, but it’s not always safe and convenient for us to ride our bike there. Which is why having bike lanes and sidewalks that are designed to accommodate these other options are critical to enhance our livability.”*

*Marta McGuire  
Planning Commission*

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## FREIGHT ROUTES

Wilsonville’s freight routes connect the city’s industrial and commercial sites with I-5 and other regional facilities. Figure 3-4 identifies the City’s freight routes, which include truck routes, railroads, and waterways. Improvement projects should be coordinated to facilitate freight needs while balancing the needs of other users.

Some of the key truck routes that provide important truck connections to Washington County include Boones Ferry Road, Kinsman Road, and Tonquin Road. In addition, the Portland and Western Railroad runs through Wilsonville and serves freight traffic, and the Willamette River has the potential for handling barge traffic. These routes are identified in *Metro’s Regional Freight Plan* (June 2010).

As a major employment center and industry hub along I-5, Wilsonville will benefit from ensuring that its freight routes are designed to accommodate the needs of its industrial and commercial sites. At the same time, Wilsonville’s residential neighborhoods should be protected from freight traffic. The call-out box at right lists multiple freight coordination improvements resulting from having freight routes.

## IMPROVED FREIGHT COORDINATION

By having designated freight routes, various City efforts regarding freight and non-freight users will be improved:

- **Roadway and Intersection Improvements** can be designed for freight vehicles with adjustments for turn radii, sight distance, lane widths, turn pocket lengths, and pavement design.
- **Bicycle and Pedestrian Improvements**—such as buffered bike lanes, enhanced pedestrian crossings, and other safety improvements—can be identified to reduce freight impacts to other users (particularly along bikeways and walkways).
- **Roadway Durability** can be increased by using concrete instead of asphalt.
- **Railroad Connections** can be coordinated to support businesses that ship goods by rail, particularly in areas where railroad sidings can be provided along the Portland and Western Railroad track.
- **Willamette River Port** can be considered to support businesses that ship goods using barges on the Willamette River.
- **Coordination with Businesses and Adjacent Jurisdictions** can ensure that local and regional freight traffic uses the City’s freight routes to travel

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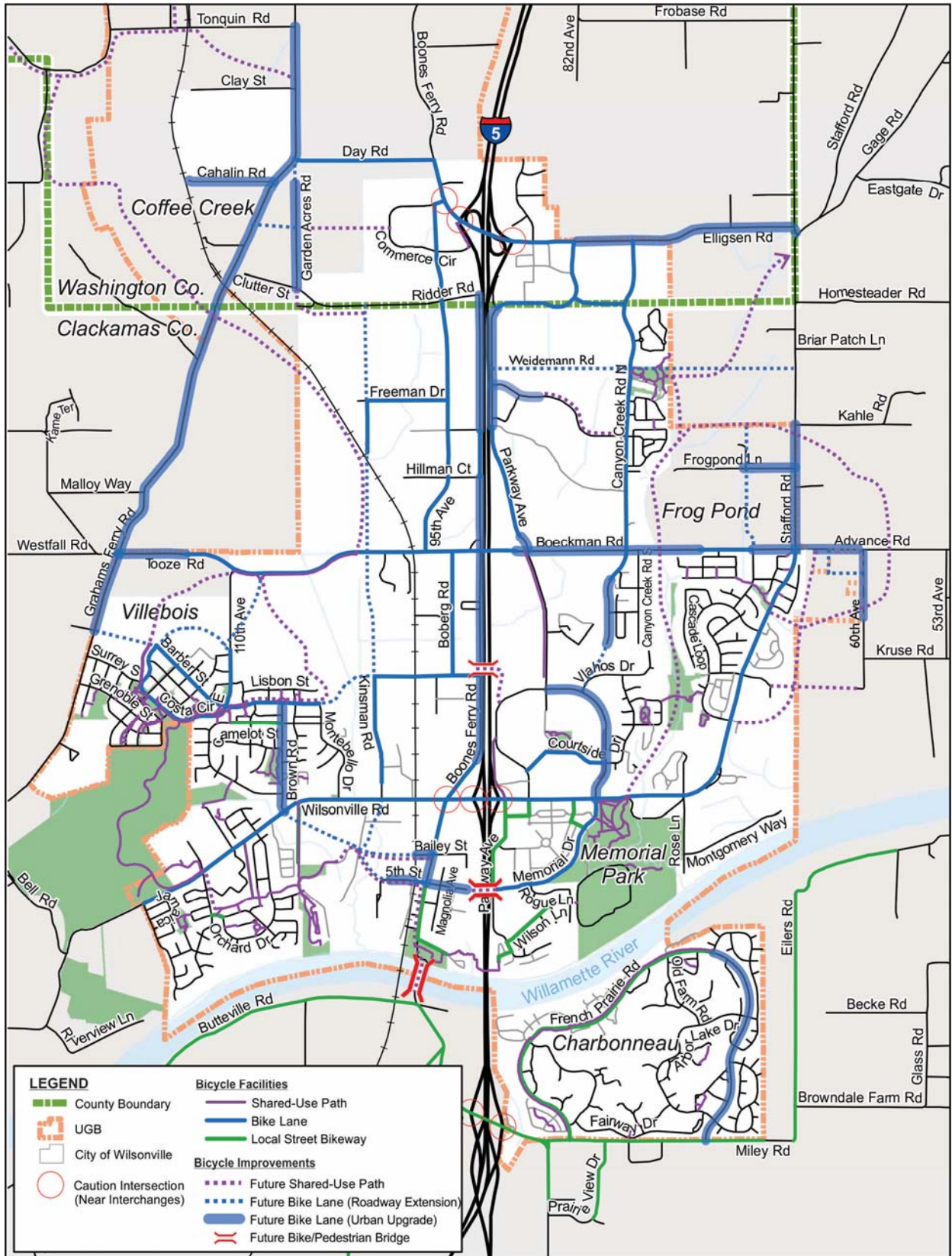
*“We have a significant number of large manufacturing companies because we have an efficient freight mobility process where our trucks can get in and out of town with the least amount of interference from local traffic. For the part of the transporter, that’s very important in as much as it costs money for these trucks, even when they are not moving. Secondly, the local resident doesn’t want to have to be disrupted by freight transportation.”*

*Ray Phelps  
Planning Commission*

---



FIGURE 3-4. FREIGHT ROUTES



## BICYCLE ROUTES

Bicycle routes are provided throughout Wilsonville and connect to neighborhoods, schools, parks, community centers, business districts, and natural resource areas. The City's bicycle network serves multiple users of varying physical capabilities, ages, and skill levels.

Figure 3-5 identifies the City's bicycle routes, which include three facility types:

- **Shared-Use Paths** are 10-foot to 12-foot wide pathways that have minimal conflicts with automobile traffic and may have their own right-of-way (cross-section standards shown in Figure 3-11). Shared-use paths serve multiple non-motorized users: bicyclists, pedestrians, wheelchair users, skaters, and others. Many of the shared-use paths throughout Wilsonville are part of the regional trail network, which traverses large sections of the city and connects to neighboring jurisdictions and regionally significant destinations. These regional trails are designed to meet state and federal guidelines, which make them eligible for state and federal transportation funding.
- **Bike Lanes** are provided on Arterial and Collector streets throughout Wilsonville. They are usually 6-feet wide and adjacent to motor vehicle travel lanes (cross-section standards shown in Figures 3-6, 3-7, and 3-8). Buffered bike lanes and one-way or two-way cycle tracks may be used instead of bike lanes and include buffers between the bike and motor vehicle travel lanes (cross-section standards shown in Figure 3-12).
- **Local Street Bikeways** are streets designated as important bicycle connections where bicyclists share the travel lane with motor vehicle traffic. Even though all Local Streets allow bicyclists to share the travel lane (cross-section standards shown in Figures 3-9 and 3-10), Local Street Bikeways are intended to serve a greater number

of bicyclists. They typically are provided on low-volume, low-speed residential streets that serve as important connections to nearby bike lanes, shared-use paths, and key destinations.

Modifications—such as sharrows, traffic calming devices, or wayfinding signage—may be made to these streets to emphasize their use as bicycling facilities and increase the comfort and confidence of bicyclists.

### KEY BICYCLE FACILITIES

The following existing and future bicycle facilities (which are included in Figure 3-5) provide important connections throughout the city:

#### Regional Trails

- Ice Age Tonquin Trail (through West Wilsonville with connections to Tualatin and Sherwood)
- Waterfront Trail (along the Willamette River)
- Boeckman Creek Trail (along Boeckman Creek in East Wilsonville)
- Stafford Spur Trail (connecting to regional destinations in Northeast Wilsonville)

#### Shared-Use Paths

- Primarily near schools, parks, transit hubs, retail centers, and other pedestrian areas

#### Bike Lanes

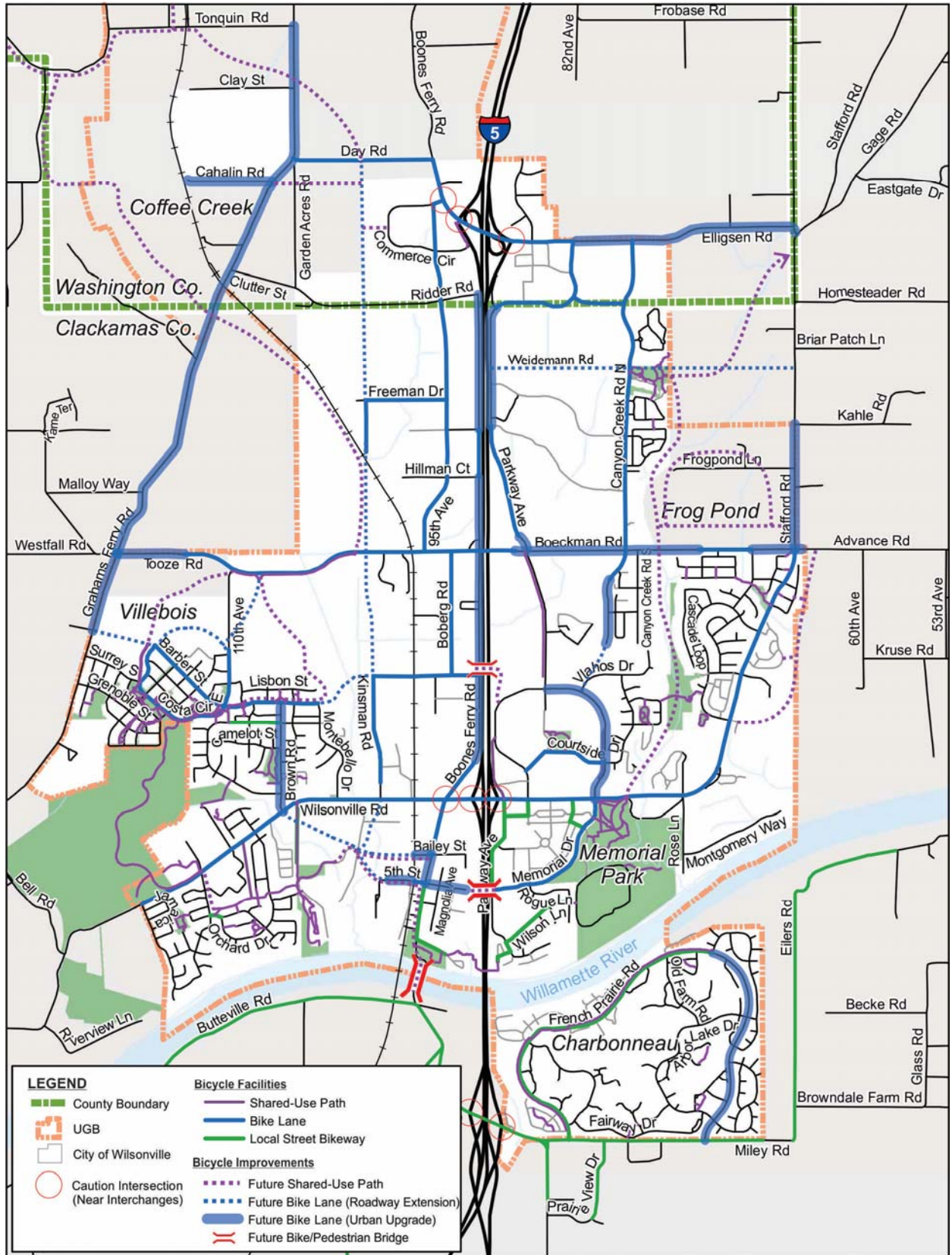
- On Arterial and Collector streets

#### Local Street Bikeways

- Boones Ferry Road south of 5th Street to connect to future Willamette River bridge
- Parkway Avenue connecting to Wilsonville Road to the nearby neighborhood
- Wilson Lane, Metolius Lane, and Kalyca Drive connecting Memorial Park to the Waterfront Trail near where it passes underneath the I-5 Boone Bridge



FIGURE 3-5. BICYCLE ROUTES



## STREET CROSS-SECTION DESIGN

Since different streets serve different purposes, a functional classification system—which is a hierarchy of street designations—provides a framework for identifying the size and type of various street elements to consider including in a street's design. Not all elements are included on all streets and so they must be carefully selected based on multimodal needs.

While a street's functional classification does not dictate which street elements to include, it does facilitate the selection of multimodal facilities and widths that will help ensure the roadway can meet its intended multimodal function. Adjacent land uses and available right-of-way width also influence which elements are included in a specific segment.

Roadway cross-section design elements include travel lanes, curbs, planter strips, sidewalks on both sides of the road, and bicycle facilities consistent with designated bikeways, walkways, and shared-use trails. Low impact development (LID) standards may also be used throughout the City at the City's discretion.

### FACILITY TYPES

Cross-section standards are provided for the following facilities:

- Major Arterials
- Minor Arterials
- Collectors
- Local Streets
- Low Impact Development (LID) Local Streets (similar modifications may be made to other streets regardless of classification)
- Shared-Use Paths and Trails
- Bicycle Facility Design Options



*Example of a Major Arterial - Boeckman Road looking west towards Boberg Road and 95th Avenue*



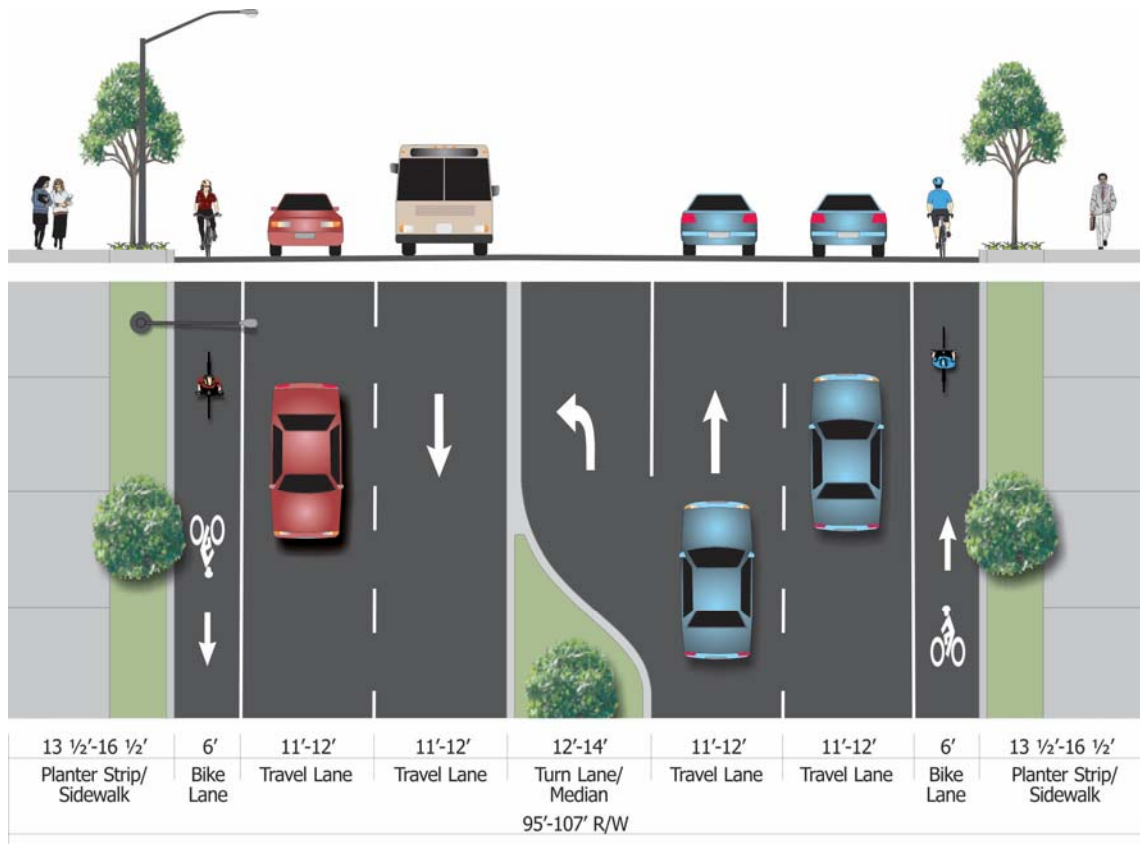
*Example of a Collector - Barber Street looking east near SMART Central at Wilsonville Station transit center*



*Example of a Local Street - Rogue Lane looking east near Memorial Park*



FIGURE 3-6. MAJOR ARTERIAL CROSS-SECTION

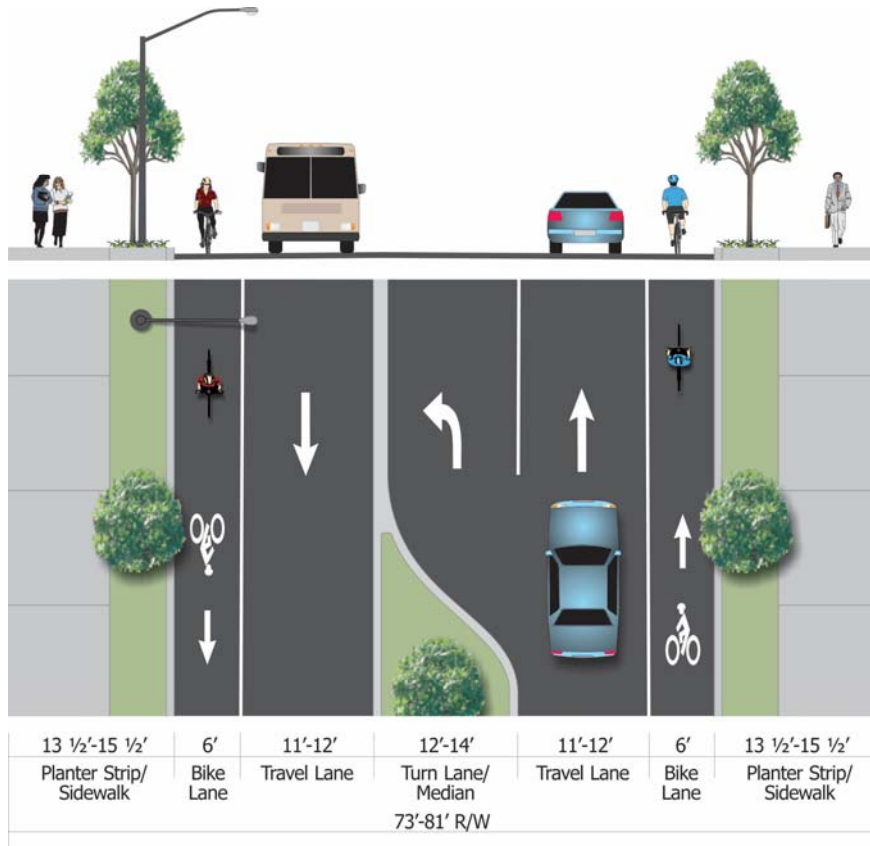


## Notes:

1. Travel lane and turn lane/median widths as determined by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 13½ to 16½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb width of ½-foot is included in the sidewalk/planter strip width.
4. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
5. Striping and signage as required in the PW Standards.
6. On-street parking is not allowed.
7. Transit stop locations to be determined by Transit Director.
8. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
9. New streets shall incorporate low impact development design as practicable.
10. Allow for separation for bikes on major arterials (especially freight routes).



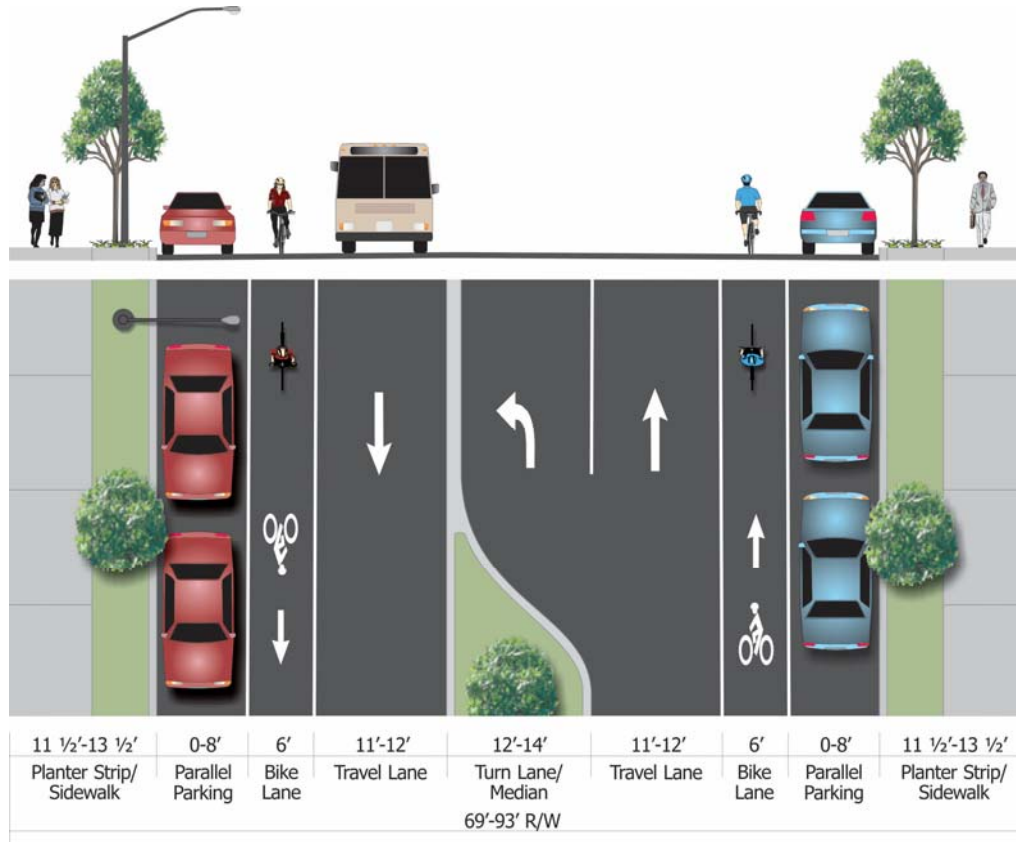
**FIGURE 3-7. MINOR ARTERIAL CROSS-SECTION**



Notes:

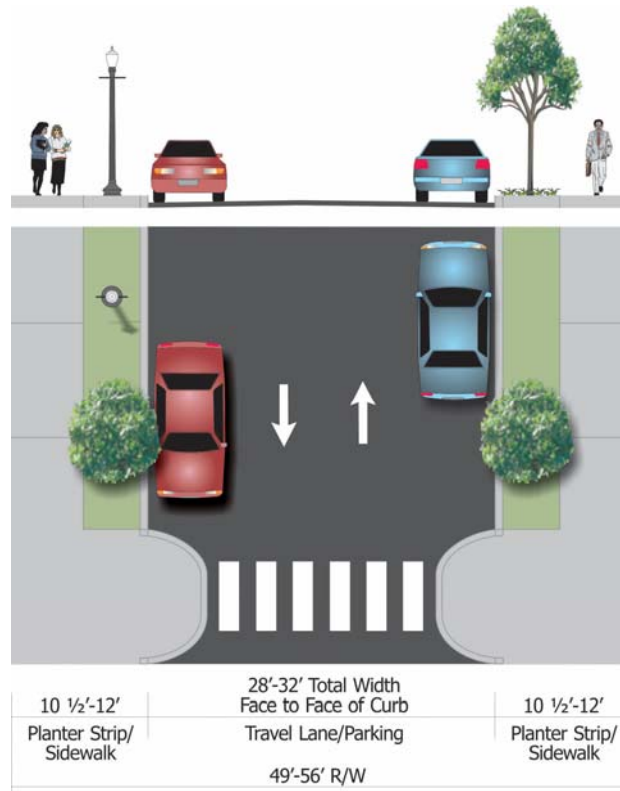
1. Travel lane and turn lane/median widths as determined by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 13½ to 15½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb width of ½ foot is included in the sidewalk/planter strip width.
4. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
5. Striping and signage as required in the PW Standards.
6. On-street parking is not allowed.
7. Transit stop locations to be determined by Transit Director.
8. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
9. New streets shall incorporate low impact development design as practicable.
10. Allow for separation for bikes on minor arterials (especially freight routes).

FIGURE 3-8. COLLECTOR CROSS-SECTION



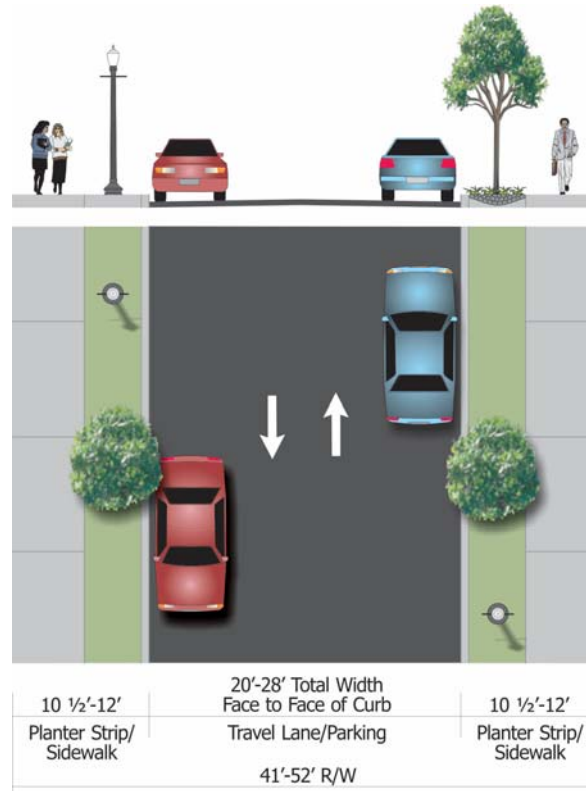
## Notes:

1. Collector right-of-way varies between 59 to 89 feet as determined by Community Development Director based on surrounding planned development of residential, commercial or industrial and need for on-street parking and/or turn lane/median.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 11½ to 13½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb and sidewalk bulb-outs at crosswalks or street intersections as determined by Community Development Director.
4. Curb width of ½ foot is included in the sidewalk/planter strip width.
5. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
6. Travel lane and turn lane/median widths as determined by Community Development Director. Turn lane/median may be eliminated.
7. Striping and signage as required in the PW Standards.
8. On-street parking on one or both sides is allowed.
9. Transit stop locations to be determined by Transit Director.
10. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
11. New streets shall incorporate low impact development design as practicable.

**FIGURE 3-9. LOCAL STREET CROSS-SECTION****Notes:**

1. Minimum right-of-way width of 47 feet (parking on one side) and 51 feet (parking on both sides). Providing parking on both sides is preferred unless constraints exist.
2. Minimum sidewalk width is 5 feet; minimum planter strip width is 5 feet.
3. Curb width of 1/2 foot is included in the planter strip width.
4. Curb and sidewalk bulb-outs at crosswalks or street intersections as determined by Community Development Director.
5. Street lights shall be located within the planter strip as required in the PW Standards.
6. No lane striping on street. Signage as required.
7. New streets shall incorporate low impact development design as practicable.

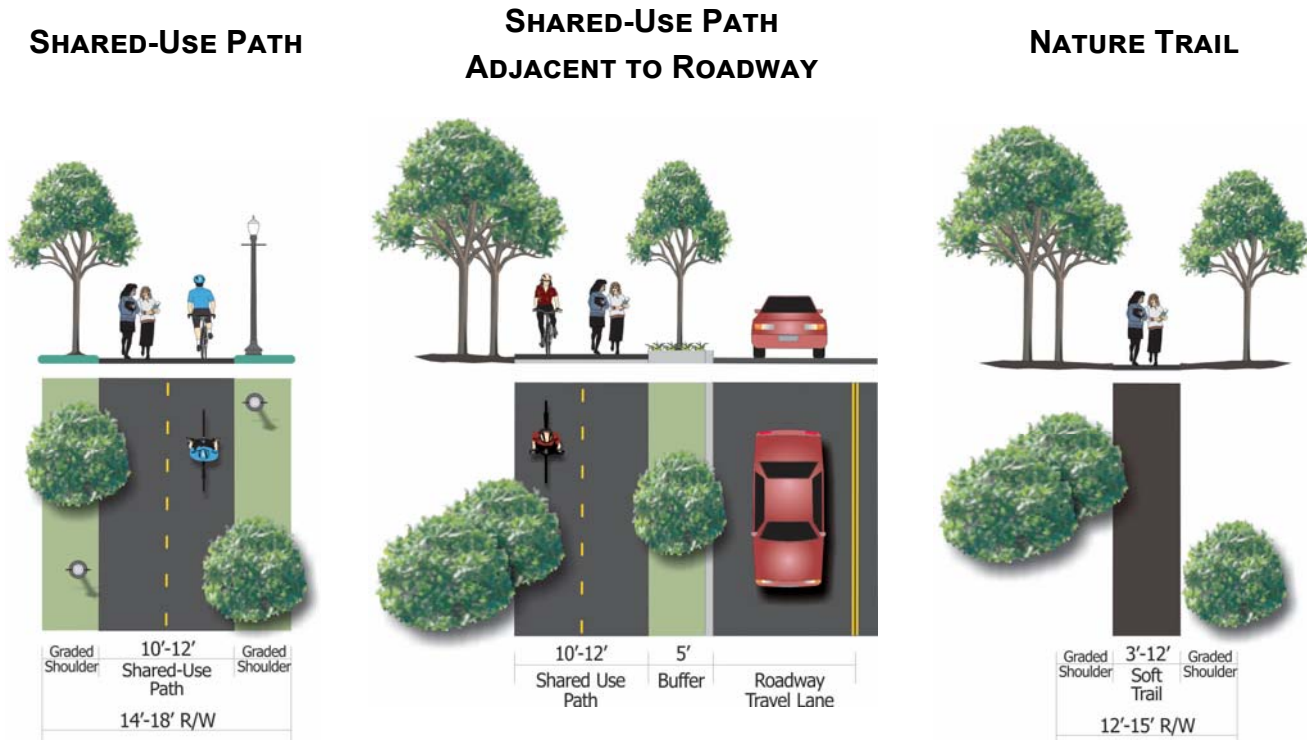
**FIGURE 3-10. LOW IMPACT DEVELOPMENT (LID) LOCAL STREET CROSS-**



**Notes:**

1. LID streets located as approved by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director.
3. Minimum landscape width of 6½ feet where a water quality swale is proposed.
4. Curb width of ½ foot is included in the planter strip width.
5. Stormwater control as required in the PW Standards.
6. Use of pervious surfaces as determined by Community Development Director.
7. Narrower streets as approved by Community Development Director and as permitted in the PW Standards.
8. 28-foot curb-to-curb street is intended to allow on-street parking on both sides.
9. 24-foot curb-to-curb street is intended to allow on-street parking on one side.
10. 20-foot curb-to-curb street would not allow on-street parking on either side.

**FIGURE 3-11. SHARED-USE PATH AND TRAIL CROSS-SECTIONS**



**Notes:**

1. Trail types and widths as approved by Community Development Director.
2. Typical cross section of shared-use path is 12 feet wide with 2-foot-wide compacted crushed stone shoulders.
3. Vertical separation between shared-use path and roadway may be used instead of 5' buffer as approved by Community Development Director.
4. Cross-section standards identified in the Ice Age Tonquin Trail Master Plan are required along the Ice Age Tonquin Trail.
5. Additional design standards are available in the Bicycle and Pedestrian Master Plan.



**FIGURE 3-12. BICYCLE FACILITY DESIGN OPTIONS**

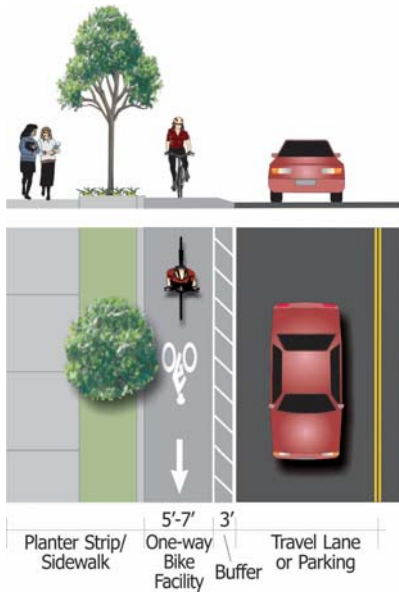
**BUFFERED BIKE LANES AND CYCLE TRACKS**

Buffered bike lanes (buffer between travel lane and bike lane) and cycle tracks (parking and/or other buffer between travel lane and one- or two-way bike facility) are two alternate bicycle facility options that are gaining popularity throughout the United States and have been implemented in other parts of the Portland Metro area. Therefore, the design options shown below have been provided to allow the City flexibility to consider these bicycle treatments on their Arterial and Collector streets in place of typical bike lanes.

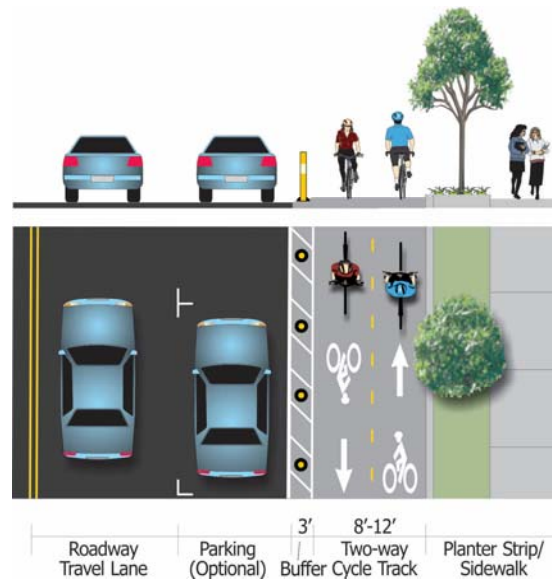


*One-Way Cycle Track on Cully Boulevard in Northeast Portland. Cycle tracks are typically protected from motor vehicle traffic by parked cars, raised curbs, or other physical buffers.*

**BUFFERED BIKE LANE OR ONE-WAY CYCLE TRACK**



**TWO-WAY CYCLE TRACK**



Notes:

1. Design option locations, widths, separation buffer features, and adjacent parking as approved by Community Development Director.
2. Additional design guidance can be obtained from the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide

### ACCESS MANAGEMENT

Access management refers to the broad set of techniques that are used to balance safe, efficient, and timely travel with the ability to allow access to individual properties. Access is an important component of the city’s transportation infrastructure and significantly affects system operations and safety.

Wilsonville should continue to manage roadway access to improve traffic flow and safety. By limiting access to higher classification roadways (especially Major and Minor Arterials), conflicts between vehicles entering and exiting driveways and vehicles on the roadway are reduced. Pedestrians and bicyclists also benefit from reduced conflicts with vehicles entering and exiting the roadway.

Table 3-2 lists the City’s access spacing standards. Because there are existing non-conforming accesses, these standards will primarily guide access layout of future development consistent with the strategies listed in the call-out box at right. ODOT also has access spacing standards that apply to the I-5 interchange areas and to the section of Boones Ferry Road that is under ODOT jurisdiction (i.e., between Parkway Avenue and Day Road). The I-5/Wilsonville Road Interchange Area Management Plan (IAMP) should also be consulted when considering access needs near the Wilsonville Road interchange.



Looking east to the I-5/Wilsonville Road interchange. Interchange areas have the most restrictive access spacing standards to ensure safety and mobility.

### ACCESS MANAGEMENT STRATEGIES

The City can use various access management strategies to help improve mobility and safety:

- **Interchange Areas:** Eliminate or consolidate accesses within one-quarter mile of the I-5 interchanges as opportunities arise.
- **Adjacent to High Volume Intersections:** Pursue appropriate treatments at accesses adjacent to high volume intersections, particularly when queues block access.
- **Existing Driveways:** Evaluate accesses that do not conform to the City’s access spacing standard and consider modifications as practicable, while maintaining reasonable access to each property.
- **Ongoing Development Review:** Manage new driveway locations and spacing on a case-by-case basis. Where driveways do not meet spacing standards, consider mitigation treatments, such as consolidating accesses or restricting turn movements to right-in/right-out.

Table 3-2. Access Spacing Standards

Functional Classification	Access Spacing Standards <sup>a</sup>	
	Desired <sup>b</sup>	Minimum
Near Interchanges	ODOT Requires 1,320 ft	
Major Arterial	1,320 ft	1,000 ft
Minor Arterial	1,000 ft	600 ft
Collector	300 ft	100 ft
Local Street	Access Permitted to Each Lot	

<sup>a</sup> Spacing is measured from centerline to centerline on Major Arterials and Minor Arterials and between adjacent curb returns on Collectors and Local Streets

<sup>b</sup> Desired Access Spacing shall be adhered to unless otherwise approved by the City Engineer. Reasons for deviating from Desired Access Spacing include aligning with existing driveways, topography, property limitations, and other safety related issues as identified in a transportation study.

**FIGURE 3-13. ACCESS MANAGEMENT INTEREST AREAS**







*A colorful row of street trees along Wilsonville Road near Boones Ferry Primary School during a fall day. Street trees can provide both aesthetic and safety benefits. They improve the walking environment by creating a pleasing buffer between the motor vehicle and pedestrian facilities. They also provide visual cues to drivers that can result in reduced traffic speeds.*

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*“The City needs to have a Transportation System Plan to make sure we are prepared for how we get around the city in the future. This includes automobiles, freight, bikes, and pedestrians.”*

*Nancy Kraushaar  
Community Development Director*

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As a growing community, Wilsonville faces the challenge of addressing new and ongoing transportation system needs. These needs are categorized as either gaps (missing connections or barriers in the transportation network) or deficiencies (shortcomings of the existing system). The City's transportation policies (see Chapter 2) and standards (see Chapter 3) serve as a framework for determining what gaps and deficiencies currently exist or are anticipated to arise through the 2035 horizon year as additional development occurs throughout the city and the region. The City's transportation improvement projects (see Chapter 5) and programs (see Chapter 6) address these needs and ensure Wilsonville's continued growth and prosperity.

### GAPS AND DEFICIENCIES

- **System Gaps** are missing connections or barriers in the urban transportation system that functionally prohibit travel for a given mode. While a gap generally means a connection does not exist, it could also be the result of a physical barrier (such as I-5, the Willamette River, other natural feature, or existing development) or a social barrier (including lack of information, language, education, and/or limited resources).
- **System Deficiencies** are performance, design, or operational constraints that limit travel by a given mode. Examples may include unsafe designs, bicycle and pedestrian connections that contain obstacles, inadequate intersection or roadway capacity, insufficient bus frequency, and congestion.

*Wilsonville's transportation needs include . . .*

- *Gaps (missing connections or barriers)*
- *Deficiencies (shortcomings)*

*These needs will be addressed by . . .*

- *Improvement projects (Chapter 5)*
- *Programs (Chapter 6)*



Header Photo Source: OBEC

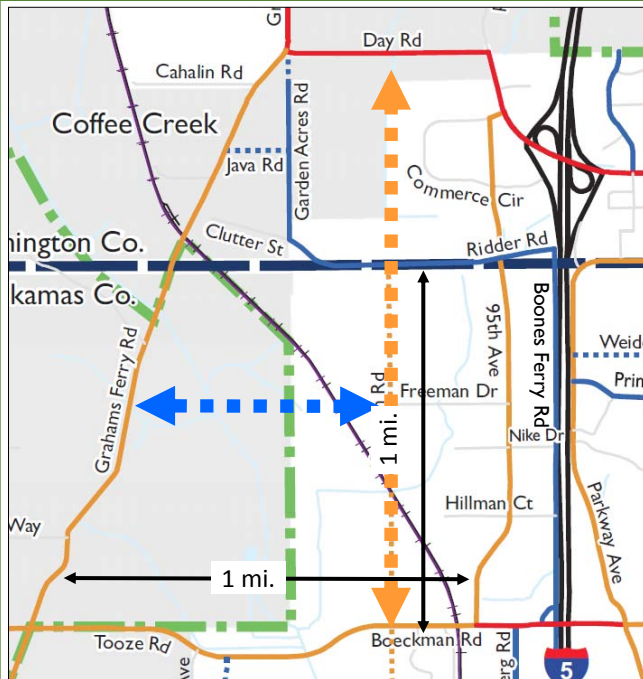


### MULTIMODAL CONNECTIVITY GAPS

Providing a well connected transportation system is one of the City’s goals. In order to ensure this goal is achieved, the City has developed facility spacing standards to provide direct routes and travel options

for system users. Based on the street connectivity guidelines set forth in Chapter 3, there are system gaps in each of the city’s four quadrants. However, there are also constraints and barriers that may make some connections infeasible.

#### Northwest Quadrant Connectivity

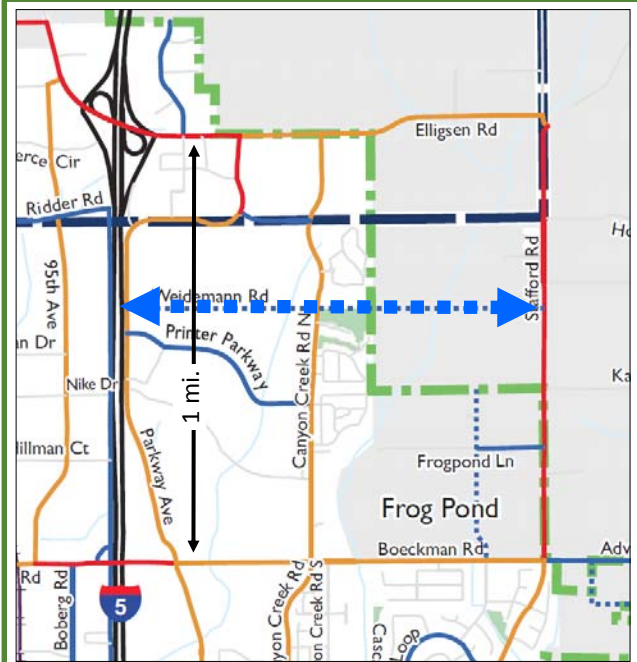


Two connectivity gaps exist in this quadrant:

- A north-south gap exists between Day Road and Boeckman Road that increases congestion at the 95th Avenue/Elligsen Road intersection and the nearby I-5 interchange.
- An east-west gap exists between 95th Avenue and Grahams Ferry Road.

**North/south Minor Arterial and east/west Collector** would be needed as future development occurs to fill these gaps, provide additional travel options, and allow access to future development. However, these roads will be difficult to construct due to the P&W railroad track and Metro green space in this quadrant that are barriers. The new north/south roadway should be considered after 95th Avenue between Boeckman Road and Ridder Road no longer sufficiently serves this function.

#### Northeast Quadrant Connectivity



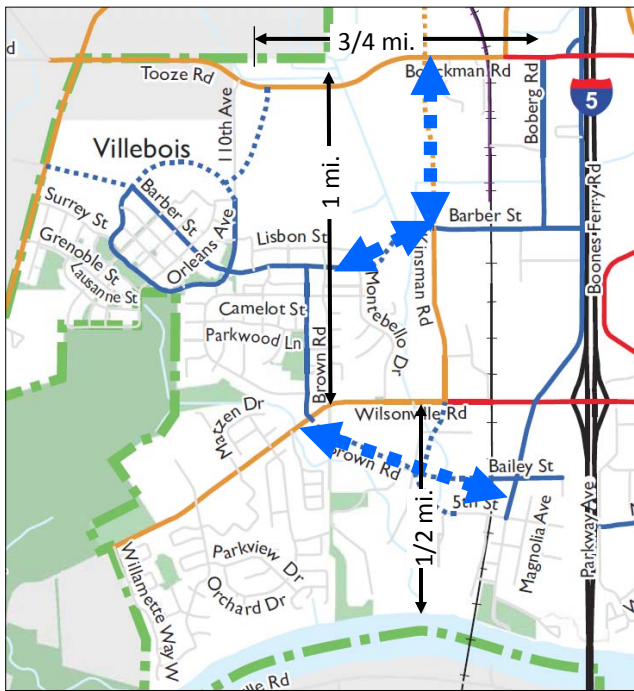
There is a gap in the east west connectivity between Elligsen Road and Boeckman Road.

**An east/west Collector** from Parkway Avenue to Stafford Road would be needed to fill this gap. The City currently owns partial right-of-way along the west end of Wiedemann Road, which is a single-lane gravel road that runs east/west for a short distance east of Parkway Avenue.

The following legend applies to each of the four quadrant images.

LEGEND	
Functional Classification	New Connection Needed
Major Arterial	Minor Arterial
Minor Arterial	Collector
Collector	
Local Street*	

### Southwest Quadrant Connectivity



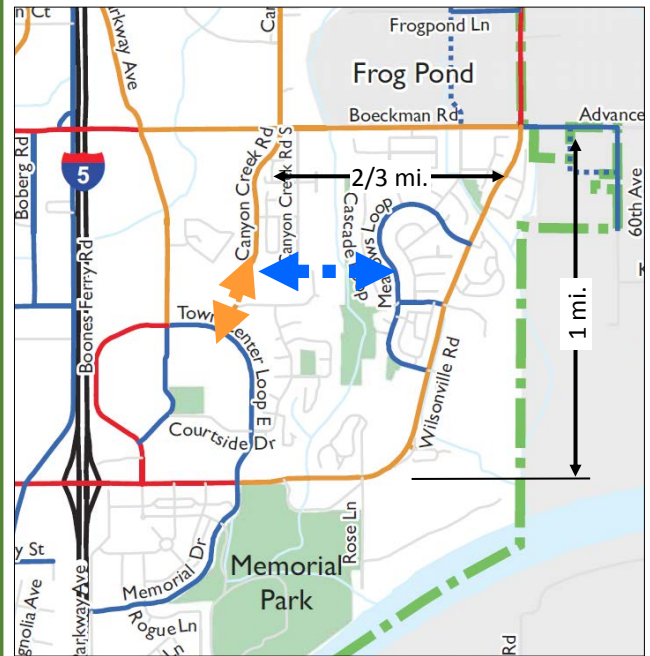
There are several gaps in east-west and north-south connectivity as follows:

- North/south and east-west gap exists between Wilsonville Road and Boeckman Road and between the Villebois development and the WES station.
- An east-west gap exists between the Willamette River and Wilsonville Road.

**North/south Minor Arterial and east/west Collector (north of Wilsonville Road)** streets are needed to fill these gaps. The Barber Street and Kinsman Road extensions are currently in the design phase that would satisfy these needs.

**An east/west Collector (south of Wilsonville Road)** would be needed as development occurs to provide the necessary connectivity. This roadway would also provide a secondary access option to and from Old Town (that is needed today), and the likely connection options are either 5th Street or Bailey Street.

### Southeast Quadrant Connectivity



There are two existing gaps in this quadrant as follows:

- A north-south gap exists between Boeckman Road and Town Center Loop that leads to additional traffic on Parkway Avenue and Wilsonville Road.
- An east-west gap exists between Canyon Creek Road and Meadows Loop.

**North/south Minor Arterial** extension of Canyon Creek Road is needed as soon as funding is available and would provide the connection to Town Center Loop. A major portion of this connection has already been constructed by adjacent development.

**An east/west Collector** from Canyon Creek Road to Meadows Loop would provide the connectivity needed. However, there are topographical, environmental, and development constraints that make this connection difficult. An existing trail and bridge provide pedestrian and bicycle connectivity.

## CROSS-SECTION DEFICIENCIES

To ensure Wilsonville’s roadways adequately serve all modes, the City has cross-section standards that guide roadway design based on the street’s functional classification with the acknowledgement that design elements shall be matched with the adjacent land use to provide safe transportation choices for users. The functional classifications and cross-section standards include number of motor vehicle travel lanes, sidewalks on both sides of the street, planter strips, and curbs (see Chapter 3: The Standards). In addition, the higher classification roadways also include bicycle facilities.

Building roads that provide facilities for all travel modes and meet applicable cross-section standards is critical to assure a safe and well connected transportation system. If bike lanes and sidewalks are

missing, the users of these facilities are likely using other portions of the roadway (motor vehicle travel lanes or shoulders) that may be unsafe.

Figure 4-1 shows which City roadways do not meet their applicable cross-section standards. In some instances, all that is needed are sidewalks for improved pedestrian connectivity. In other instances, roadways may need to be widened to include center turn lanes or bike lanes. Many of these roads are adjacent to rural areas and will be brought up to meet standards as adjacent parcels develop. Others will require standalone improvement projects. Depending on the situation, these roadway sections will require urban upgrades, sidewalk infill, or bike lane infill improvements.

*Freeman Drive between 95th Avenue and businesses lacks sidewalks on the south side.*



*Parkway Avenue near the Xerox campus is a Minor Arterial but does not include bike lanes. There is a sidewalk on the east side, but it ends at the boundary with the vacant parcel to the north.*




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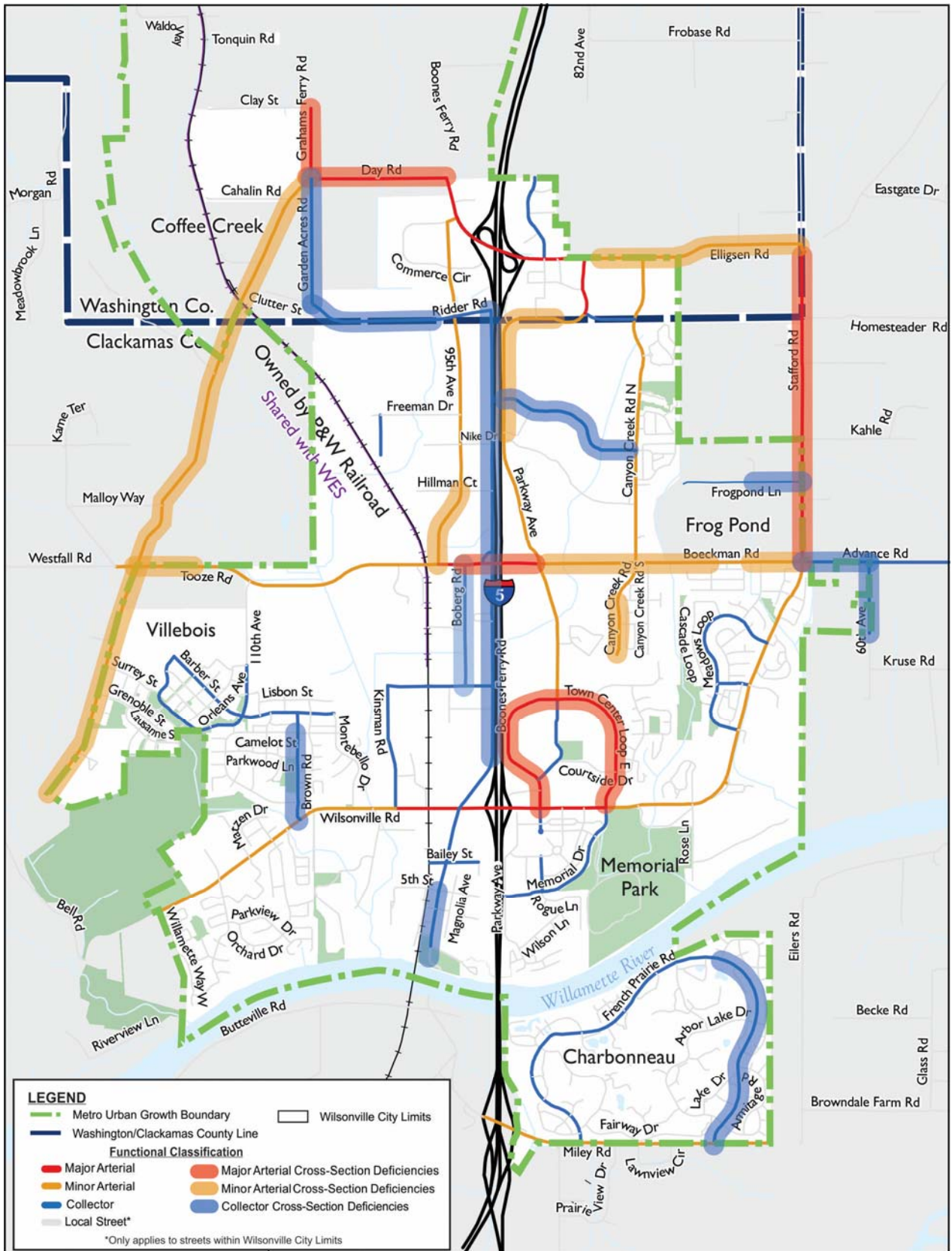
*“I-5 poses some challenges because it serves as a barrier in between the east and west sides of town. This puts a lot of pressure on the few existing connections that make it harder for people to walk between one place and another.”*

*Katie Mangle  
Long Range Planning Manager*

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FIGURE 4-1. ROADWAY CROSS-SECTION DEFICIENCIES



## CAPACITY DEFICIENCIES

Capacity deficiencies for motor vehicles were identified throughout Wilsonville by evaluating traffic operations for a 2035 future scenario. The traffic forecasts were performed using a travel demand model based on Metro regional land use with the transportation network refined specifically for Wilsonville.

Due to the high level of detail, the Wilsonville travel demand model was able to more accurately represent local routing choices while also forecasting traffic pattern changes resulting from varying levels of congestion and delay expected for 2035. The model also assumed the completion of seven key roadway extensions (listed in the call-out box at right), as well as land use growth based on regional population and employment forecasts for the 2035 horizon year.

Figure 4-2 shows the 20 study intersections and five roadway segments that would not meet adopted mobility standards under the 2035 baseline scenario. These roadway capacity improvements would primarily be needed when the vacant land in their vicinity is developed.

The majority of the intersection and roadway deficiencies were identified in prior planning efforts and already included associated improvement projects. Therefore, many of the City's planned projects only required minor revisions, refinements, and prioritization adjustments. Along with minor changes to existing projects, a few new projects are also needed to meet the city's long term capacity needs.

## 2035 BASELINE ROADWAY EXTENSION ASSUMPTIONS

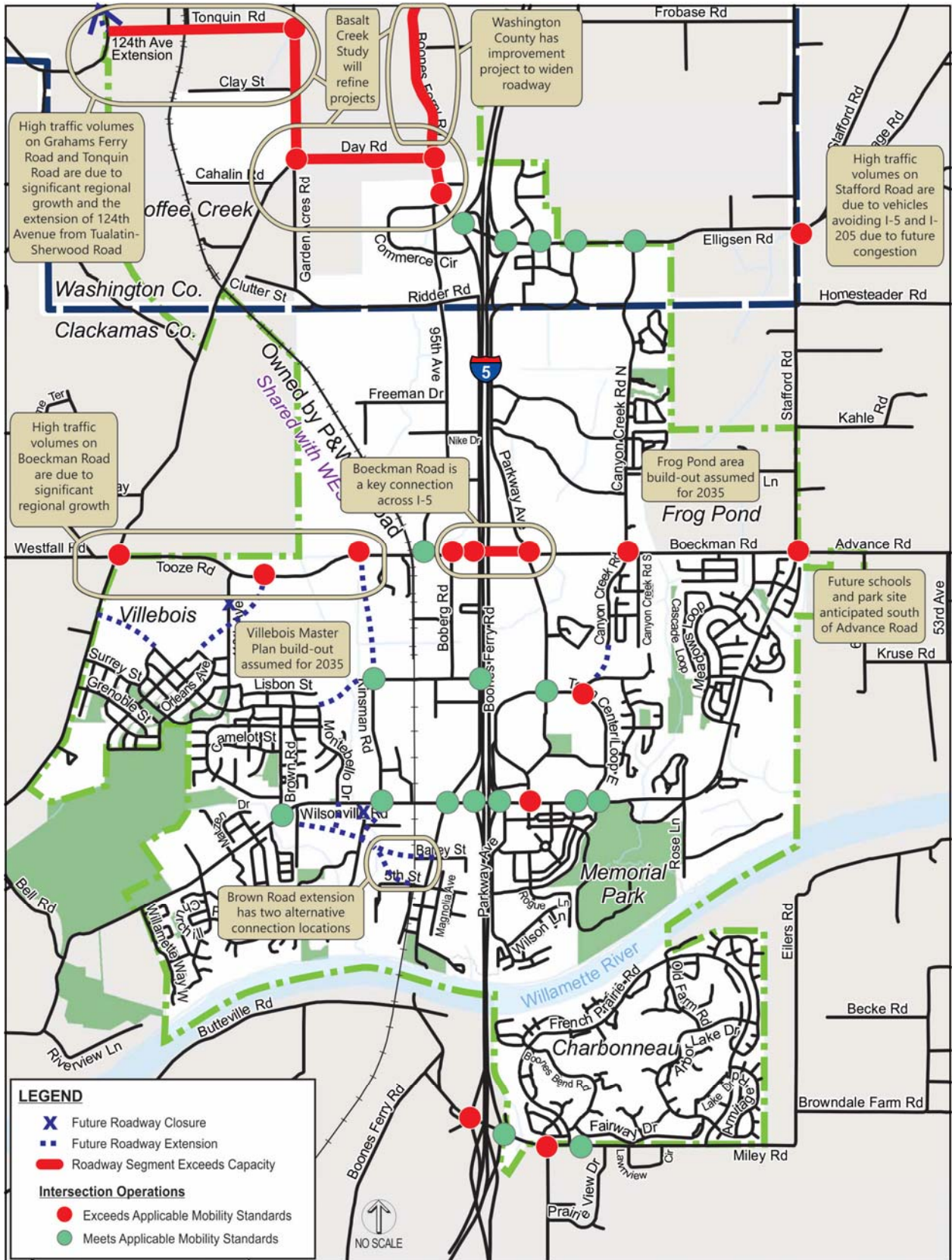
Various roadway extensions throughout the city satisfy critical connectivity needs and would be constructed as development occurs. To account for the resulting traffic patterns, the 2035 baseline capacity analysis assumed the completion of these projects:

- **Barber Street Extension** from Kinsman Road to Montebello Drive, connecting the WES Station to Villebois (Regional Transportation Plan Project 10153, design plans are currently in process)
- **Barber Street Extension** to Grahams Ferry Road (Key roadway in Villebois Master Plan Area)
- **Villebois Drive Extension** to Boeckman Road (Key roadway in Villebois Master Plan Area to replace existing 110th connection)
- **Kinsman Road Extension** from Barber Street to Boeckman Road (Regional Transportation Plan Project 10130; design plans are currently in process)
- **Kinsman Road Extension** from Ridder Road to Day Road (Regional Transportation Plan Project 10853; key roadway in Coffee Creek Master Plan Area)
- **Brown Road Extension** (Currently has partial preliminary design plans for two alternatives)
- **Canyon Creek Road Extension** to Town Center Loop East (Small segment remains to finish connection; eligible as one of final projects using East Side Urban Renewal funding)

These roadway improvements are included in Figure 4-2, which also shows with the 2035 capacity



FIGURE 4-2. FUTURE 2035 CAPACITY DEFICIENCIES



## FREIGHT-RELATED DEFICIENCIES

In the past, Wilsonville relied on county and Metro designated freight routes. As a major employment center and industry hub along Interstate-5 (I-5), the city and its freight community will benefit from adopting a local freight plan and freight routes. Wilsonville's residential areas will also benefit from designating freight routes that avoid neighborhoods. The community would also benefit from increased marine freight traffic on the Willamette River.

The plan is a result of outreach to identify the city roadways used by freight carriers, as well as the freight-related deficiencies and problem locations on these roadways. This outreach included distribution of surveys to the city's major freight carriers, and a meeting with the Allied Waste commercial and

residential drivers, who service the entire city and have a particularly extensive understanding of the city's freight needs.

Figure 4-3 identifies the key gaps and deficiencies that were identified based on the feedback received. It also identifies the streets where freight vehicles are present, though not all of these should become designated freight routes.

The following feedback, which is more general in nature, was also provided by the freight carriers:

- Flashing yellow left-turn arrows at traffic signals are the preferable design treatment for protective/permissive phasing.
- Where possible, it is important to separate trucks from pedestrians and bicycles (especially on roadways and at tight intersection corners).
- There are inconsistent speeds on similar functioning roadways (for example, Boones Ferry Road versus Parkway Avenue).
- Trucks block traffic when they must wait off-site to access busy on-site loading docks.
- Improved loading areas and site access at retail establishments would aid delivery.
- There are limited direct routes for freight that exist between north and south Wilsonville.

### FREIGHT CARRIER OUTREACH

Multiple freight carriers provided feedback on freight routes and deficiencies:

- Allied Waste Services of Wilsonville
- Coca-Cola Bottling of Oregon
- Eaton Corporation
- FLIR Systems, Inc.
- Mentor Graphics Corp
- OrePac Building Products
- Owens & Minor Distribution Inc
- Parker Johnstone's Wilsonville Honda
- Rite Aid Distribution Center
- Rockwell Collins Head-Up Guidance Systems
- SYSCO Food Services of Portland
- Tyco Electronics Medical Products/Precision Interconnect Corp.
- US Crane & Hoist, Inc.
- Vision Plastics, Inc.
- Wilsonville Concrete
- Wilsonville Toyota
- Xerox Corporation



*Roadway congestion and queuing on Elligsen Road leads to increased delay to freight movement.*





## BICYCLE AND PEDESTRIAN NEEDS

Bicycle and pedestrian facilities support complete community connectivity and opportunities for work, play, shopping, and exercise. They also help reduce traffic congestion, vehicle-miles traveled, and greenhouse gas emissions, while increasing the vibrancy and connectedness of communities and improving the health of city residents.

Figure 4-4 shows the major bicycle and pedestrian gaps and deficiencies in Wilsonville. These needs are due to the various barriers in the system relating to natural areas, topography, and existing development.

There is also a need for improved street cleaning and related maintenance to remove debris from the I-5 interchange areas on Wilsonville Road and Elligsen Road, which are under ODOT jurisdiction. These facilities serve as primary connections over the city's



*The lack of continuous bike lanes on Brown Road north of Wilsonville Road requires cyclists to use the travel lane.*

## SAFE ROUTES TO SCHOOL

Additional bicycle and pedestrian gaps and deficiencies were identified as part of the Safe Routes to School assessment that the City performed in collaboration with the West Linn-Wilsonville School District and each of the city's primary and middle school. These needs are identified in Chapter 6: The Programs.

two most significant barriers (i.e., Interstate-5 and the Willamette River).

Another pedestrian and bicycle need that affects Wilsonville is regional access to the nearby communities. The Ice Age Tonquin Trail and Boones Ferry Road improvements north of Day Road are two examples of facilities that will provide regional connectivity. In addition, Clackamas County has identified the need to provide bicycle facilities on Stafford Road and 65th Avenue to the north and east of Wilsonville. A connection to the south over the Willamette River is also a critical need to link to Charbonneau and the Willamette River Heritage Area (including Champoeg State Park and the Willamette Valley Scenic Bikeway).

To further enhance regional connectivity, the City should continue to coordinate with Clackamas County and Washington County to ensure that bicycle and pedestrian improvements on county roadways are identified in their county TSP updates and that these facilities connect to the city's bicycle and pedestrian systems.

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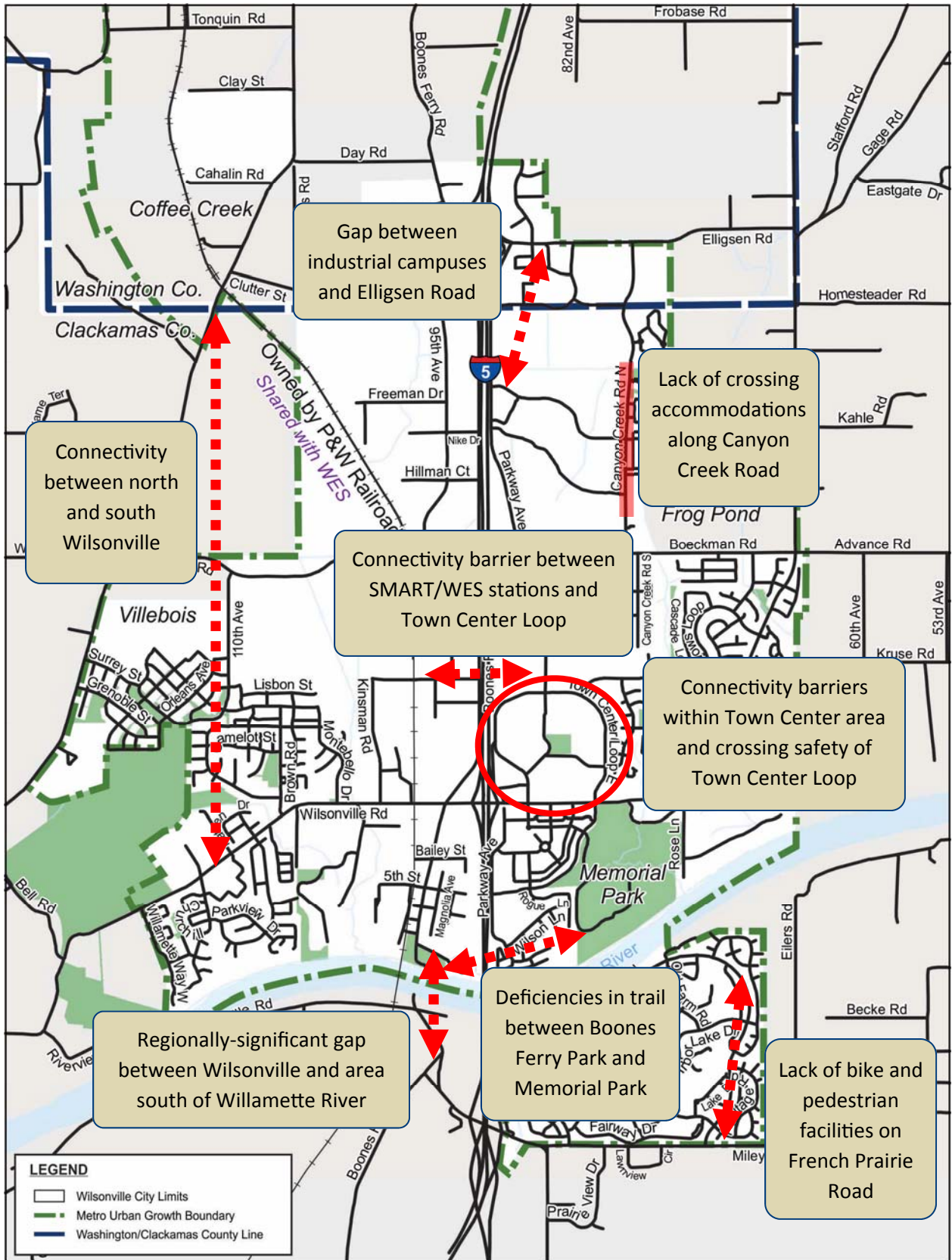
*“Right now there are many gaps where sidewalks end or cross into areas where there are no receiving facilities for them. So, the transportation system plan is looking at those gaps and will be trying to fill them.”*

*Al Levit  
Planning Commission*

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FIGURE 4-4. MAJOR BICYCLE AND PEDESTRIAN NEEDS





## TRANSIT NEEDS

Wilsonville is unique among the cities within the Portland Metro area because it has its own transit system. While the rest of Metro is served by TriMet, Wilsonville has been operating South Metro Area Regional Transit (SMART) since it withdrew from TriMet's service district in 1988.

A locally run transit system provides many benefits for Wilsonville's residents and employees. Because it is not dependent upon another agency, SMART is able to determine its own bus routes, frequencies, and fares. It currently provides fare-free service within Wilsonville and supports other programs unique to Wilsonville, such as the SMART Options program. SMART is financially supported by payroll taxes from its strong employment base.

SMART also experiences various challenges, including six key transit needs:

- **Regional Transit Connections** are important for SMART due to Wilsonville's central location between two metropolitan areas (Portland Metro and Salem-Keizer) and its large employment base. While it has existing connections to TriMet (Portland Metro) and Cherriots (Salem-Keizer), these connections should be improved as opportunities arise. For example, expanded service hours and express service to downtown Portland would benefit a larger population of employees and residents of Wilsonville.
- **Service Coverage and Bus Frequency** require ongoing adjustments as demand and resources change. SMART should provide transit service within 1/4-mile of land uses throughout the city. Currently, there are only a few areas that do not fall within the 1/4-mile coverage radius, including Wilson Lane on the east, Willamette Way and Orchard Drive on the west, and the majority of Charbonneau. SMART will need to be responsive

to the desires of the public and all affected neighbors before providing or removing service from a given neighborhood. SMART will also need to expand its service as new development occurs in the areas of Coffee Creek, Villebois, and Frog Pond. To expand coverage and service, SMART may require additional buses.

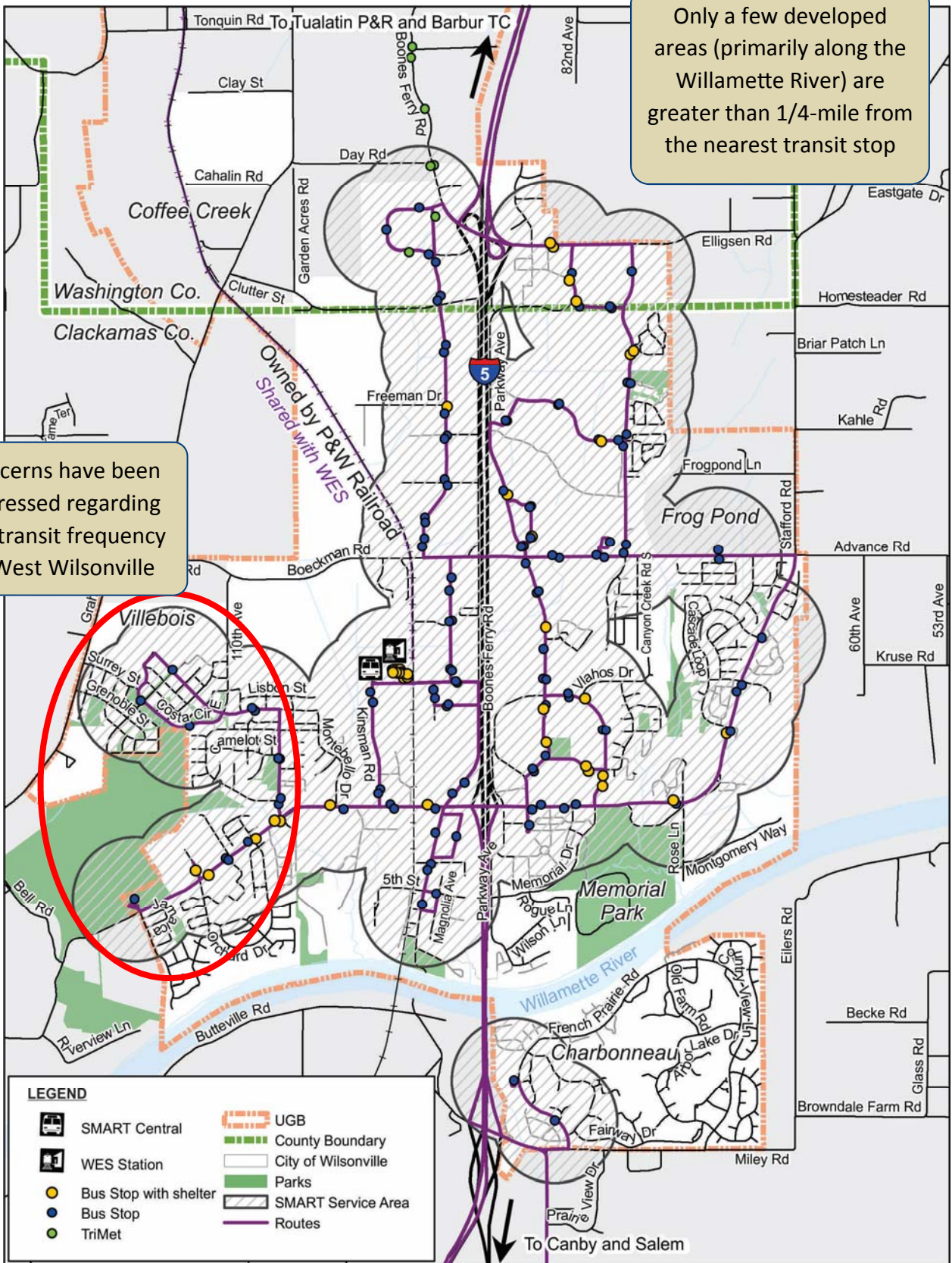
- **Pedestrian and Bicycle Access to Transit** can help improve transit service by providing safe and convenient connections at either end of transit trips. Pedestrian and bicycle networks that provide access to transit stops and good connectivity to all destinations throughout the city are important. They encourage increased use of transit, walking, and bicycling, which are

## RECENT TRANSIT IMPROVEMENTS

Since the prior 2008 Transit Master Plan was adopted, three major transit system improvements have been implemented that provide a backbone to the city's transit service:

- **SMART Central at Wilsonville Station** was constructed to act as SMART's main transportation hub and includes a 400 space park and ride lot, twelve bus bays, a new facility with an operator break room and public restrooms, shelters, and a clock tower with security cameras.
- **TriMet's Westside Express Service (WES) Commuter Rail** service began operating out of its new station located adjacent to the SMART Central at Wilsonville Station transit center.
- **SMART Bus Routes** changed to coordinate with WES train departures and arrivals.
- **SMART Operations Center** was built to house fleet and operations facilities, including administration offices, maintenance bays, and a bus parking area.

**FIGURE 4-5. TRANSIT SERVICE COVERAGE GAPS**





complementary travel modes and often used as part of the same trip. Some of the most important locations for access improvements include the Town Center Loop area and the Barber Street connection between Villebois Village and the SMART Central transit center. Other needs throughout the city should be addressed on an ongoing basis.

- **New Buses** are needed for SMART to maintain a quality transit fleet. Many of its buses are aging and require a greater amount of maintenance to keep them in operation. SMART can lower the amount of its budget that it spends on maintenance costs by replacing these buses. Additional buses will also be needed as growth occurs throughout the city. When possible, new buses should use alternative fuels, such as compressed natural gas. This will help SMART to reduce fuel costs and help meet regional and statewide goals for reducing greenhouse gas emissions.
- **Development Review** should address transit needs to ensure that transit users are accommodated as new development occurs in the city. SMART should be involved in the development review process to ensure that existing transit stops are improved and new stops, amenities or routes are provided as needed. In addition, when a new employment or commercial development occurs near a major transit stop, it should locate its building close to the transit stop.
- **Rider Education and Outreach** are ongoing needs that support and encourage transit ridership. One particular area where improvement is needed is adapting to new technology. This includes passenger access to ‘real time’ transit data and improved on-board amenities. Rider safety education is also an ongoing need.

## ENVIRONMENTAL JUSTICE

As stated by the Environmental Protection Agency, “Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (U.S. EPA, Environmental Justice, Compliance and Enforcement, Website, 2007).

Within the context of the TSP, Environmental Justice is an effort to identify underserved and vulnerable populations so the City can improve transportation services while reduce future inequalities. Two areas of particular need are Charbonneau (due to the higher proportion of elderly residents) and a small area on the southern edge of Villebois (due to lower income housing).

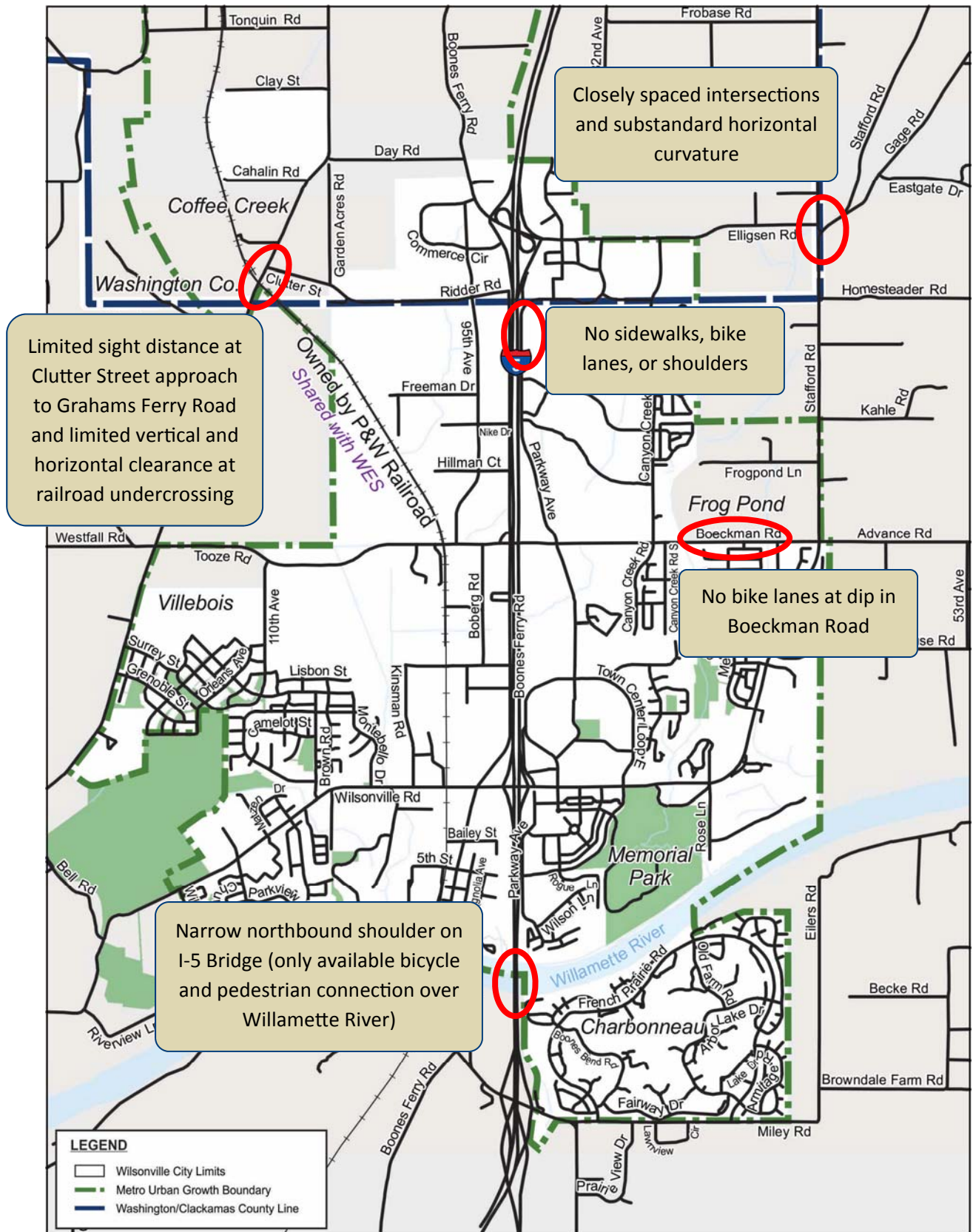
## SAFETY NEEDS

While there are no high-collision locations within Wilsonville, various safety-related deficiencies exist. Figure 4-6 shows five primary locations where there are existing safety concerns. Topography, roadway curvature, and nearby barriers (including I-5 and the railroad track) are key contributors.



*The railroad bridge over Grahams Ferry Road has limited horizontal and vertical clearance. This creates a safety hazard, particularly for bicyclists, pedestrians, and freight traffic.*

FIGURE 4-6. SAFETY DEFICIENCIES



## RAIL NEEDS

The primary rail-related deficiency in Wilsonville is the limited vertical and horizontal clearance that the railroad bridge over Grahams Ferry Road causes for trucks. This is also a safety deficiency.

ODOT Rail has a policy of not granting new at-grade crossings. Crossings may be relocated (i.e., a new one is provided but only if an old one is removed). Therefore, railroad tracks can pose a significant barrier to the transportation system due to the high cost of grade separated crossings. The primary location in Wilsonville where the railroad contributes to a roadway system gap is the potential Kinsman Road extension in the northwest quadrant (see the prior Multimodal Connectivity Gaps discussion in this chapter).

Another future item that may affect Wilsonville is that ODOT Rail is studying the feasibility of improving intercity rail service between Eugene and Portland (with the potential for developing a high-speed rail line). Portland and Western's Oregon Electric rail



*Portland and Western's Oregon Electric rail line runs north/south through Wilsonville and serves as an important freight and commuter rail corridor. However, it also creates a barrier to travel for other modes due to limited crossing locations.*

line, which runs through Wilsonville, is one of the existing rail alignments being studied. Depending on the outcome of this study, there may be additional passenger rail trains traveling through Wilsonville that would increase gate down time and rail related congestion for all modes of travel.

## AIR NEEDS

The City of Wilsonville has no direct jurisdictional control or responsibility for managing the Aurora Airport. However, the City, concerned citizens, and local businesses have participated in the Oregon Department of Aviation's (ODA) development of an updated Master Plan for the airport. The City acknowledges the adoption of the Master Plan by ODA and will continue to monitor planned improvements at the airport and coordinate with ODA and Marion County, who have jurisdictional responsibilities.

The City also has two, potentially conflicting interests that must be balanced related to the airport. These include noise sensitivity for city residents and the reliance local businesses have on the airport for corporate travel.

## WATER NEEDS

The City of Wilsonville has no direct jurisdictional control or responsibility for managing activities on the Willamette River. However, it supports efforts by Corps of Engineers to maintain the following two activities, which are essential for the river to function over time as a viable transportation facility:

- Periodic dredging to maintain channel depth to support applicable river traffic
- Maintenance of the Locks at Oregon City

## PIPELINE SYSTEM

A high-pressure natural gas mainline pipe exists in the vicinity of the Interstate-5 corridor. The location of this pipeline may impact a project's feasibility or limit available improvement options in its vicinity.



## TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS NEEDS

Transportation System Management and Operations (TSMO) improvements include integrated operations solutions that incorporate advanced technologies.

Due to the regional significance of TSMO improvements, Clackamas County and Metro have prepared their own plans. Some key needs include:

- **Arterial Corridor Management** for Boones Ferry Road, Elligsen Road, 65<sup>th</sup> Avenue, Wilsonville Road, and Stafford Road to improve reliability and traveler information along the corridors. Arterial Corridor Management includes installing fiber optic cable to allow communication with the ODOT/County Transportation Management and Operations Center as well as other intelligent transportation devices such as variable message signs, CCTV cameras, traveler information and adaptive traffic signal systems.
- **Transportation Demand Management (TDM)** by supporting the SMART Options Program, which works with Wilsonville area employers and residents to promote transit and other transportation options that reduce traffic congestion, such as carpool, vanpool, bike, walk, and telecommute.
- **Regional Fiber Network Connections** between Wilsonville's traffic signals and Clackamas County's fiber network (Clackamas County currently maintains and operates the City's traffic signals on its behalf).

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*"We have a new beautiful interchange with much more capacity, but we don't want to use up the capacity just to get from one side of town to the other."*

*Ben Altman, Chair  
Planning Commission*

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- **Adaptive Signal Timing** and associated video monitoring cameras and vehicle detection equipment (to collect traffic counts and speeds) on Wilsonville Road from Brown Road to Town Center Loop East.
- **Closed Circuit Television Cameras** at the key locations along Wilsonville Road and I-5.
- **Video Monitoring Cameras and Vehicle Detection Equipment** (to collect traffic counts and speeds) on Elligsen Road from Day Road to Canyon Creek Road.
- **Railroad Crossing Alert System** at Portland and Western at-grade railroad crossings.

### RECENT TSMO PROJECTS

Through a collaborative effort by Wilsonville, Clackamas County, and ODOT, the following TSMO projects have already been implemented:

- **Wilsonville Road Traffic Signal Communications** were improved as part of the Wilsonville Road Interchange Improvements to help manage traffic operations.
- **I-5 Interchange Area CCTV Cameras** were installed by ODOT and linked to the ODOT Trip Check website to provide real time information to drivers traveling within and through Wilsonville.
- **Discover Wilsonville** was a one-year program to make sure every Wilsonville resident has all the information they need to use whatever travel options interest them.
- **Sunday Streets** was a special event focusing on connecting neighborhoods, parks, and people. Bicyclists, walkers, runners, seniors, adults, and children enjoyed traffic-free streets filled with physical activities, fun and

## ALTERNATIVE FUEL NEEDS

Within Wilsonville and throughout the Portland Metro area, there is an increasing need to provide infrastructure to support vehicles that use alternative fuels (i.e., electrical and compressed natural gas vehicles). These vehicles help to reduce greenhouse gas emissions and are becoming more popular and affordable. SMART already has a compressed natural gas fueling station that it will use for its bus fleet.

The City could consider identifying various electrical vehicle stations at strategic locations that serve both residential and business users. Level II charging stations (input voltage of 240 volts, which requires two to four hours for charging) already exist at City Hall (2 stations) and the Fred Meyer parking lot (2 stations). Additional locations that may be considered for Level II charging stations are the SMART Central transit center and Town Center Loop.

The City of Wilsonville could also take advantage of its location at the southern tip of the Portland Metropolitan area to install (or coordinate with a willing business to install) a Level III (480 volt) fast charging station, which require only 20 to 40 minutes to complete the charge. An ideal location would be near one of the I-5 interchanges.

Another option to be ready for the transition to electric transportation would be to include provisions in residential, commercial, and industrial building codes for supporting the required infrastructure. It would be less expensive to require new buildings and parking lots to have the required electrical wiring and outlets to support future electric vehicle charging stations than it would be to retrofit older buildings and parking lots. By taking this preliminary step in preparing its infrastructure, a smoother transition could be made to alternative fuels for vehicles.



*Electric vehicle charging stations, such as those located at Fred Meyer (shown above) and Wilsonville City Hall (shown below), allow patrons, employees, and visitors to charge their vehicles while working, shopping, and visiting Wilsonville.*



# The Projects

## Chapter 5



Wilsonville is responsible for managing an efficient and effective transportation system that supports the quality of life of its residents and the economic vitality of its businesses. This is no easy task, but the City can succeed by implementing programs and projects that provide three primary benefits:

- Reduce rush hour traffic
- Improve operations and safety
- Make strategic investments in new and expanded facilities to serve all modes.

Wilsonville should be engaged in these three activities simultaneously through a balanced effort of programs and projects to receive the greatest value from its infrastructure expenditures. This balanced approach can also guard against over-building roadway capacity.

The list of transportation projects that will repair or complete the transportation system through 2035 is based largely on past plans, but includes updated solutions. Constructing all of the identified transportation solutions would cost approximately \$218.2 million, which exceeds \$123.4 million, which is forecasted to be available through 2035 from both City and other funding sources. Therefore, Wilsonville must choose how to invest its limited resources to provide the greatest benefit to Wilsonville residents and businesses. The highest priority solutions to meet the most important transportation system needs are included in the “Higher Priority” project list, while all other projects are included in the “Planned” project list.

*Wilsonville will . . .*

- *Improve system efficiency,*
- *Reduce congestion, and*
- *Save money*

*By implementing programs and projects that . . .*

1. *Reduce rush hour traffic,*
2. *Improve operations and safety, and*
3. *Make strategic investments in new and expanded facilities to serve all modes*



### SYSTEM IMPROVEMENT PRIORITIES

Most of the transportation system improvement projects needed to address gaps and deficiencies in the system were identified in prior City plans, including its 2003 Transportation Systems Plan, 2006 Bicycle and Pedestrian Master Plan, 2008 Transit Master Plan, and multiple development master plans (see Chapter 1: The Context). The City’s prior transportation projects were reconsidered, integrated, and revised to address updated information and prepare for the 2035 planning horizon.

Because transportation funding is limited, Wilsonville recognizes the importance of being fiscally responsible in managing and improving its transportation system. The diagram at right illustrates cost-effective steps and associated solution areas to resolving transportation needs by following a multimodal, network-wide approach. These five steps were considered from top to bottom when evaluating Wilsonville’s transportation projects:

- **Manage** the performance of congested locations with strategies that reduce traffic conflicts, increase safety, and encourage more efficient usage of the transportation system. Intersection operational improvements are considered to fall under this category.
- **Reduce** the driving demand at congested locations by ensuring safe and available walking, biking, and transit options.
- **Revisit** land use decisions and congestion thresholds to support shorter driving trips or modified travel decisions.
- **Extend** streets to increase connectivity and create parallel routes that reduce the driving demand on congested facilities.
- **Expand** existing streets or intersections to increase the driving capacity of congested facilities.

### COST-EFFECTIVE STEPS TO RESOLVING TRANSPORTATION NEEDS

FIGURE 5-1. IMPROVEMENT PRIORI-



*“We want to create a transportation system that has multiple choices . . . That way we are not heavily reliant on the car, which will still stay a key element to the system. But we want to make sure we are providing options for bicycles, pedestrians, and transit.”*

*Ben Altman, Chair  
Planning Commission*



## PRIORITIZED SOLUTION AREAS

As illustrated in Figure 5-1, the City can best manage its transportation system by having plans, programs, and/or projects that address each of the following solution areas:

1. **Transportation System Management and Operations (TSMO)** strategies that improve the safety and efficiency of the current system, including Transportation Demand Management (TDM)
2. **Bicycle, Pedestrian, and Transit** system improvements that target key system gaps and safely accommodate all transportation users
3. **Land Use and Development Strategies** that (1) provide equal accessibility and connectivity to those users who choose to travel by transit, bicycle, and pedestrian modes and (2) utilize the City's functional classification hierarchy to reduce out-of-direction travel and manage congestion on arterials
4. **Connectivity** improvements that include motor vehicle, pedestrian, bicycle, and transit facilities to provide more direct routes for all transportation users between neighborhoods, schools, parks, and retail/industrial areas
5. **Motor Vehicle Capacity** improvements upon a demonstration that the other strategies are not appropriate or cannot adequately address identified transportation needs

General preference should be given to those listed first, but only to the degree to which they are more cost-effective at supporting the City's vision and goals (i.e., a transportation system that is safe, connected and accessible, functional and reliable, cost effective, compatible, robust, and promotes livability). Many of the City's projects include elements that address multiple solutions.

## PROJECT EVALUATION PROCESS

Wilsonville's transportation improvement projects were also evaluated and prioritized to help select which projects to include in the Higher Priority project list. Many projects had been evaluated and prioritized in recently adopted mode-specific transportation plans. As a result, the TSP evaluation process varied for the different modes:

- **Motor Vehicle Projects:** The projects were ranked according to a point-based technical scoring methodology using evaluation criteria consistent with the City's transportation goals. This allowed for a consistent method to understand how well the projects would meet the City's transportation goals and policies. In addition, community input was considered when prioritizing the projects.
- **Bicycle, Pedestrian, and Transit Projects:** The project priorities in the 2006 Bicycle and Pedestrian Master Plan and 2008 Transit Master Plan were reviewed, and a few changes were made based on City staff and public input. The majority of the higher priority bicycle and pedestrian projects were included in the Higher Priority project list, even if it would require them to be constructed separately from associated motor vehicle projects.

Prioritizing the projects in this way allowed for them to be separated into two lists: the "Higher Priority" project list includes the highest priority solutions to meet the City's most important transportation system needs, while the "Additional Planned" project list includes all of the other projects.



## HIGHER PRIORITY PROJECTS

The “Higher Priority” project list includes the recommended projects reasonably expected to be funded through 2035. These are the highest priority solutions to meet the City’s most important needs. These projects will inform the City’s yearly budget and 5-year Capital Improvement Plan (CIP). As shown in Table 5-1, the Higher Priority projects would cost a total of \$118.0 million, which is consistent with forecast available funding through 2035.

Figures 5-2 through 5-6 show locations of the projects, and corresponding project details are included in Tables 5-1 through 5-5 (project numbering is alphabetical). Some of the City’s Higher Priority projects are not associated with a specific location but instead will be applied citywide as needed. These projects are listed in Table 5-6. Additional project details are included in the appendix (where they are sorted by project type).

**Table 5-1. Higher Priority Project Costs<sup>a</sup>**

Project Type	2011 Cost Estimate
Roadway Extensions	\$55,255,000
Roadway Widening	\$19,500,000
Urban Upgrades	\$58,355,000
Spot Improvements	\$3,000,000
Standalone Bicycle and Pedestrian Improvements	\$15,520,000
Transit Improvements	\$500,000
<b>Total Higher Priority Project Costs</b>	<b>\$152,130,000</b>

<sup>a</sup> See Tables 5-2, 5-3, 5-4, 5-5, and 5-6 for individual

### PROJECT TYPES

**RE – Roadway Extensions (Multimodal Connectivity):**

New transportation facilities in Wilsonville will connect neighborhoods to one another and to other important destinations. Many of the bicycle and pedestrian improvements related to roadway extensions will fill important system gaps so that neighborhoods have improved non-motorized connectivity, while roadway extension projects are the key motor vehicle improvements that provide increased connectivity in Wilsonville. The roadway extensions help the City to meet the one-mile arterial and half-mile collector spacing standards, consistent with City and regional policy.

**RW – Roadway Widening (Capacity):** The roadway widening projects increase roadway capacity.

**UU – Urban Upgrades (Multimodal Connectivity and Safety):** The urban upgrade projects complete existing roadways, and often improve connectivity by adding bike lanes, sidewalks, and turn lanes that accommodate access to adjacent neighborhoods.

These projects improve the roadways to meet the City’s cross-section standards.

**SI – Spot Improvements (Transportation System Management and Operations):** Spot improvements consist of isolated intersection improvements and safety improvements throughout the city.

**BW, SR, LT, and RT – Standalone Bicycle and Pedestrian Improvements (Multimodal Connectivity and Safety):** While many bicycle and pedestrian facilities will be constructed as elements of roadway extension and widening projects, there are a number of projects that the City should construct separately or as part of future development. These include the highest priority bikeways/walkways (**BW**), Safe Routes to School projects (**SR**), local trails (**LT**), and regional trails (**RT**).

**TI – Transit Improvements:** Transit projects are needed throughout the city to provide bus stop amenities and improve bicycle and pedestrian access to

FIGURE 5-2. HIGHER PRIORITY PROJECTS

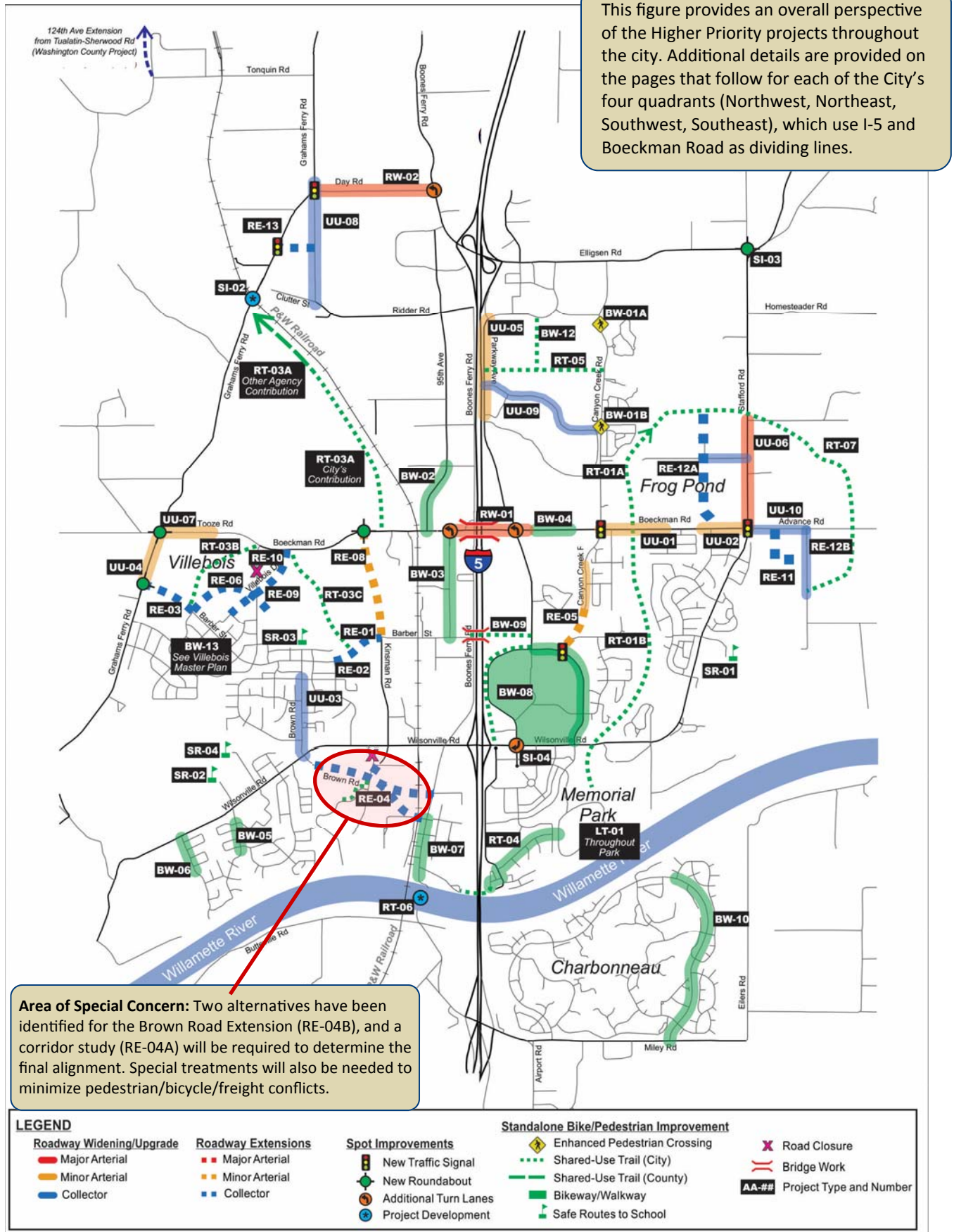


Table 5-2. Higher Priority Projects (Northwest Quadrant)

Project	Description	Cost
<b>Roadway Extensions</b>		
RE-13 Java Road Connection and Signal	Construct Java Road from Boones Ferry Road to Grahams Ferry Road and Garden Acres Road with a signal at the Java Road/Grahams Ferry Road intersection.	\$1,500,000
<b>Urban Upgrades</b>		
UU-08 Garden Acres Road Urban Upgrade	Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade the Garden Acres Road/Day Road intersection to either a signal or a roundabout. Realign Ridder Road to Garden Acres Road. Close the existing Clutter Road connection to Grahams Ferry Road after completion of Project RE-13. Close the existing Coffee Creek Correctional Facility driveway to Grahams Ferry Road and relocate the driveway to Cahalin Road.	\$14,260,000
<b>Roadway Widening</b>		
RW-02 Day Road Widening	Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road intersection.	\$5,900,000
<b>Spot Improvements</b>		
SI-02 Grahams Ferry Railroad Undercrossing Project Development	Perform preliminary analysis to determine needs, feasibility, etc.	\$500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-02 95th Avenue Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of 95th Avenue from Boeckman Road to Hillman Court, and construct transit stop improvements.	\$85,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>		
RT-03A Ice Age Tonquin Trail (North)	Construct sections of the Ice Age Tonquin Trail north of Boeckman Road; City to construct portion within City limits (approximately \$750,000) and coordinate portion farther north with Washington County and neighboring cities.	\$2,040,000 (Partial Regional funding)

**FIGURE 5-3. HIGHER PRIORITY PROJECTS (NORTHWEST QUADRANT)**

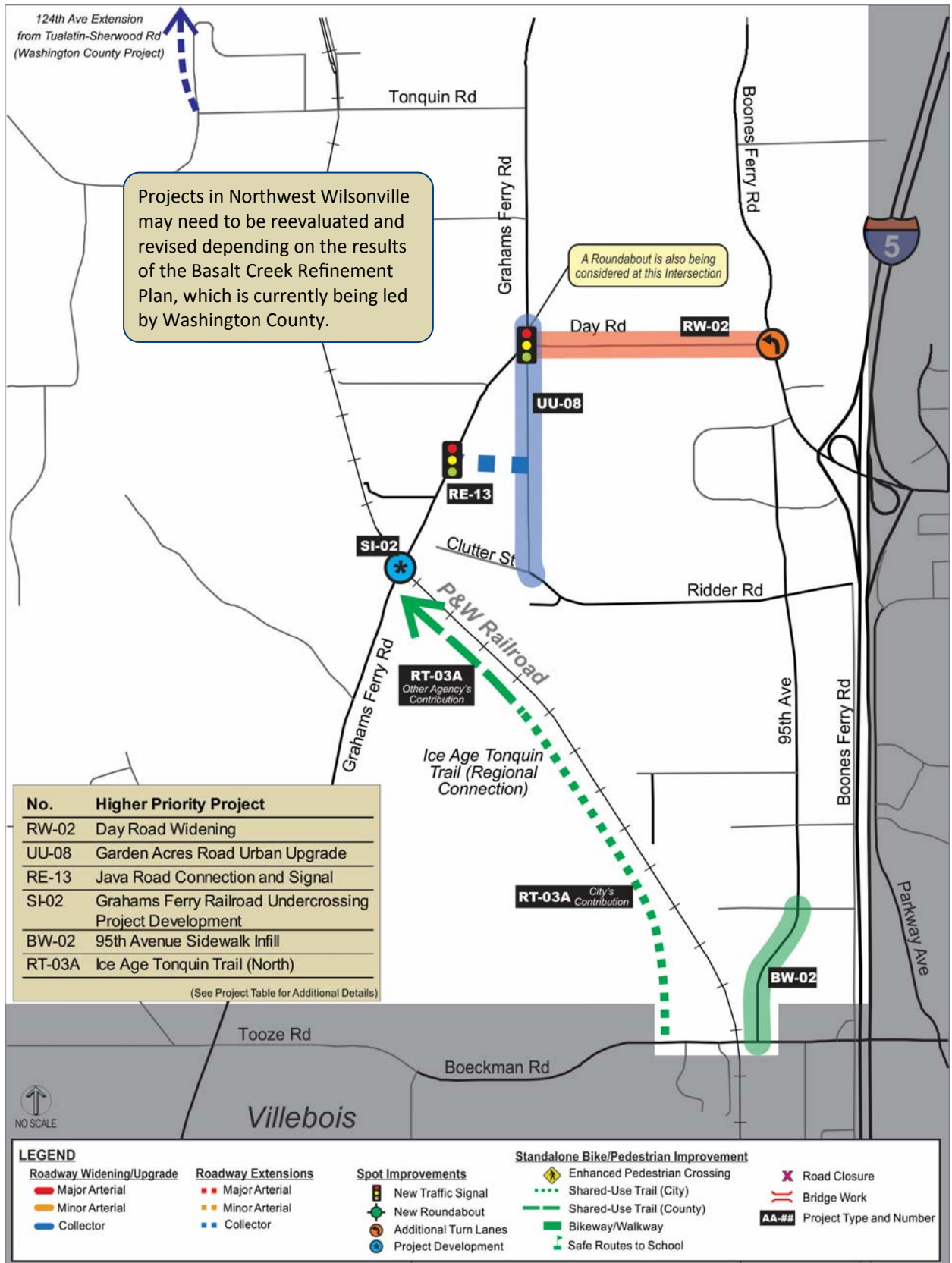




Table 5-3. Higher Priority Projects (Northeast Quadrant)

Project	Description	Cost
<b>Roadway Extensions</b>		
RE-11 Advance Road Middle School Site Improvements	Construct the collector roadways and site improvements associated with the proposed Advance Road Middle School site	\$1,600,000
RE-12A Frog Pond West Neighborhood Collector Roads	Construct the collector roadways within the west neighborhood as identified in the Frog Pond Area Plan	\$9,510,000
RE-12B Frog Pond South Neighborhood Collector Roads	Construct the collector roadways within the south neighborhood as identified in the Frog Pond Area Plan	\$2,650,000
<b>Roadway Widening</b>		
RW-01 Boeckman Road Bridge and Corridor Improvements	Widen Boeckman Road from Boberg Road to 500 feet east of Parkway Avenue to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes reconstruction of the bridge over I-5 and improvements at Boeckman Road/Boberg Road and Boeckman Road/Parkway Avenue intersections and adjacent transit stops	\$13,600,000
<b>Urban Upgrades</b>		
UU-01 Boeckman Road Dip Improvements	Upgrade at vertical curve east of Canyon Creek Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); options should also be considered to make connections to the regional trail system and to remove the culvert and install a bridge	\$12,220,000
UU-02 Boeckman Road Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); project includes a traffic signal or roundabout at the Boeckman Road-Advance Road/Stafford Road-Wilsonville Road Intersection	\$2,100,000
UU-05 Parkway Avenue Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements)	\$5,000,000
UU-06 Stafford Road Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements)	\$4,200,000
UU-09 Printer Parkway Urban Upgrade	Upgrade Printer Parkway to a three-lane collector with bicycle lanes and multiuse path	\$3,600,000
UU-10 Advance Road Urban Upgrade	Upgrade Advance Road to collector standards starting at Stafford Road to the proposed 63 <sup>rd</sup> Avenue (entrance to proposed Advance Road Middle School)	\$3,175,000
<b>Spot Improvements</b>		
SI-03 Stafford Road/65th Avenue Intersection Improvements	Improve turn radii, sight distance and grade differential by combining intersections as either a roundabout or traffic signal	\$2,000,000 (Partial County funding)
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-01 Canyon Creek Road Enhanced A/B Pedestrian Crossings	Install two new pedestrian crossings of Canyon Creek Road that include rectangular rapid flashing beacons (RRFBs), center pedestrian median island, signage, etc. (final locations to be determined)	\$130,000
BW-04 Boeckman Road Bike Lanes and Sidewalk Infill	Construct bike lanes (both sides of street) and sidewalks (south side of street) from Parkway Avenue to Canyon Creek Road	\$515,000
BW-12 Parkway Center Trail Connector	Construct shared-use path as development occurs; with connection to proposed regional trail (Wiedeman Road Trail) on the south	\$120,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>		
RT-01A Boeckman Creek Trail (North)	Construct north-south trail through east Wilsonville following Boeckman Creek, with connections to neighborhoods, parks, and intersecting roads (may need a boardwalk for various sections and would require a comprehensive public process)	\$850,000
RT-05 Wiedeman Road Trail	Construct east-west trail in north Wilsonville near the Xerox campus with City responsible for portion through developed land and future developer responsible for portion on future development site	\$340,000
RT-07 Revised Frog Pond Regional Trail	Construct the regional trail identified in the Frog Pond Area Plan	\$700,000



FIGURE 5-4. HIGHER PRIORITY PROJECTS (NORTHEAST QUADRANT)

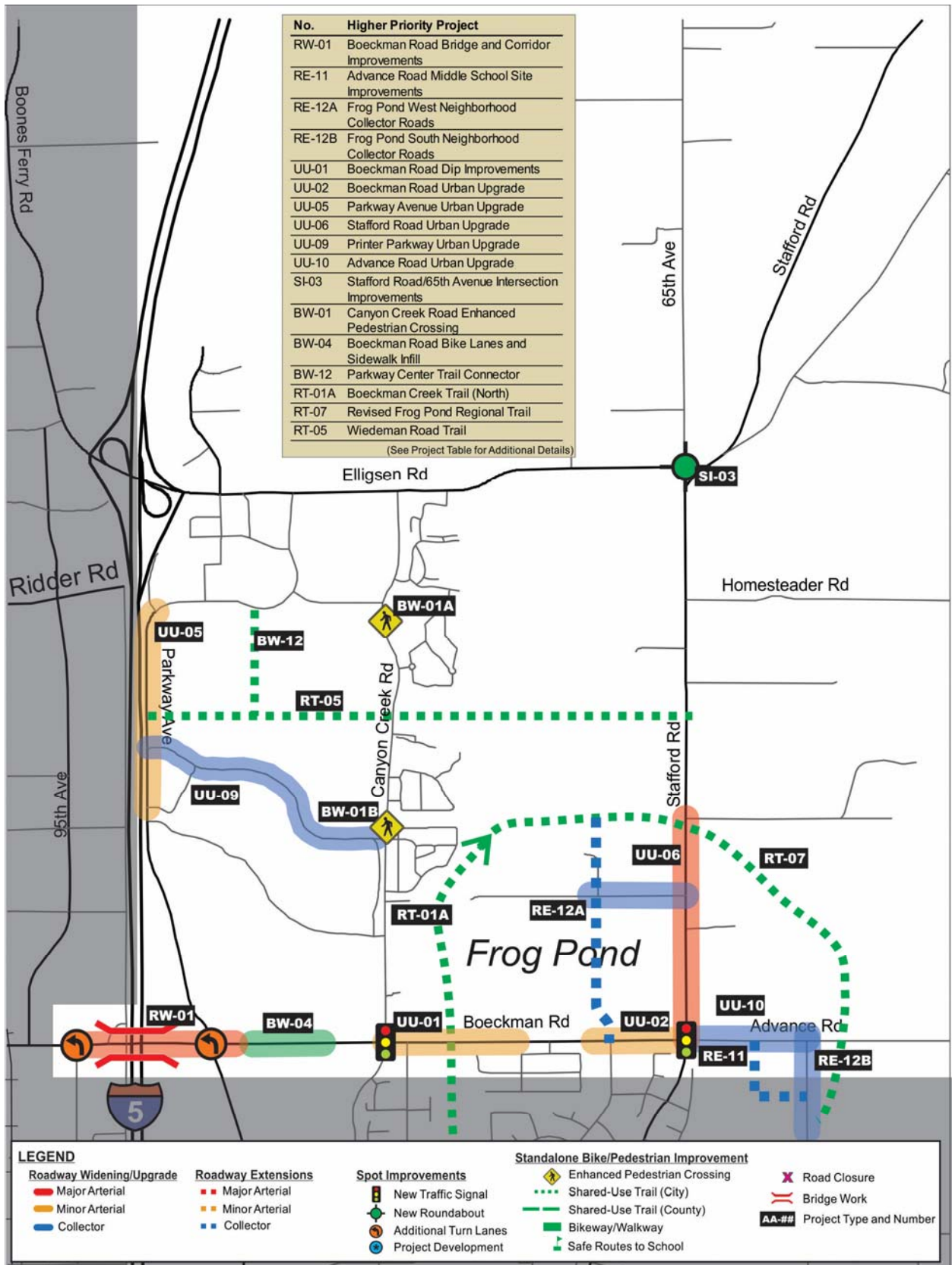


Table 5-4. Higher Priority Projects (Southwest Quadrant)

Project		Description	Cost
<b>Roadway Extensions</b>			
RE-01	Barber Street Extension	Construct 2-lane roadway with bridge, bike lanes, sidewalks, and transit stop improvements from Kinsman Road to Coffee Lake Drive to facilitate access and circulation to WES Station and Villebois	\$8,315,000
RE-02	Barber Street Extension (Part 2)	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Coffee Lake Drive to Montebello Drive to facilitate access and circulation to WES Station and Villebois	\$400,000
RE-03	Barber Street through Villebois	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Monte Carlo Avenue to Grahams Ferry Road	\$520,000
RE-04A	Corridor Study for Brown Road Extension	Perform a corridor study to determine the recommended Brown Road extension alignment (i.e., connection at either Bailey Street or 5th Street)	\$20,000
RE-04B	Brown Road Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Wilsonville Road to Boones Ferry Road (connect at either Bailey Street or 5th Street); includes roadway connection to Kinsman Road (with bike lanes and sidewalks), portion of Ice Age Tonquin Trail connecting to trial terminus on Arrowhead Creek Lane, and Brown Road/Kinsman Road intersection	\$15,200,000
RE-06	Costa Circle Loop Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Villebois Drive to Mont Blanc Street	\$3,000,000
RE-08	Kinsman Road Extension (South)	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Boeckman Road; project also includes a roundabout at Kinsman Road/Boeckman Road intersection	\$8,400,000
RE-09	Villebois Drive Extension	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Costa Circle to Coffee Lake Drive	\$390,000
RE-10	Villebois Drive Extension (Part 2)	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Coffee Lake Drive to Boeckman Road	\$250,000
<b>Urban Upgrades</b>			
UU-03	Brown Road Upgrades	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stops)	\$3,500,000
UU-04	Grahams Ferry Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Barber Street intersection	\$2,400,000
UU-07	Tooze Road Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Tooze Road intersection	\$7,900,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>			
BW-03	Boberg Road Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of the roadway from Boeckman Road to Barber Street, and construct transit stop improvements	\$375,000
BW-05	Willamette Way East Sidewalk Infill	Fill in gaps in the sidewalk network on the west side of the roadway from Chantilly to south of Churchill (part of Ice Age Tonquin Trail)	\$50,000
BW-06	Willamette Way West Sidewalk Infill	Construct a new sidewalk on west side of the roadway from Wilsonville Road to Paulina Drive	\$50,000
BW-07	Boones Ferry Road Sharrows	Stripe sharrows (shared travel lanes) from 5th Street to Boones Ferry Park; this will connect Ice Age Tonquin Trail (once the portion along the Brown Road Extension is completed) to Waterfront Trail	\$5,000
BW-13	Villebois Loop Trail	Construct shared-use path as part of Villebois development; include connections to Villebois Greenway, the Ice Age Tonquin Trail, and the Village Center	\$180,000
<b>Standalone Pedestrian and Bicycle Improvements (Safe Routes to School)</b>			
SR-02	Boones Ferry Primary Safe Routes to School Improvements	Construct shared-use path between Boones Ferry Primary and Wood Middle School, a bicycle parking shelter near the school, and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road	\$200,000
SR-03	Lowrie Primary Safe Routes to School Improvements	Construct shared-use path from existing connection of Lowrie Primary School to Barber Street as part of Villebois development; include connections to new school, Ice Age Tonquin Trail, and Barber Street To future connections	\$150,000
SR-04	Wood Middle School Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road; also widen and stripe the Park at Merryfield Trail, which connects Wood Middle School to Camelot Street to the north	\$150,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>			
RT-03	Ice Age Tonquin Trail B/C (Villebois)	Construct the remaining sections of the Ice Age Tonquin Trail within Villebois Village in conjunction with development and adjacent roadway improvements	\$560,000
RT-06	Willamette River Bike/Pedestrian and Emergency Bridge Project Development	Perform feasibility study and project development for bike/pedestrian/emergency bridge over the Willamette River to provide a non-motorized alternative to the I-5 freeway deck	\$1,380,000 (Partial Regional funding)

FIGURE 5-5. HIGHER PRIORITY PROJECTS (SOUTHWEST QUADRANT)

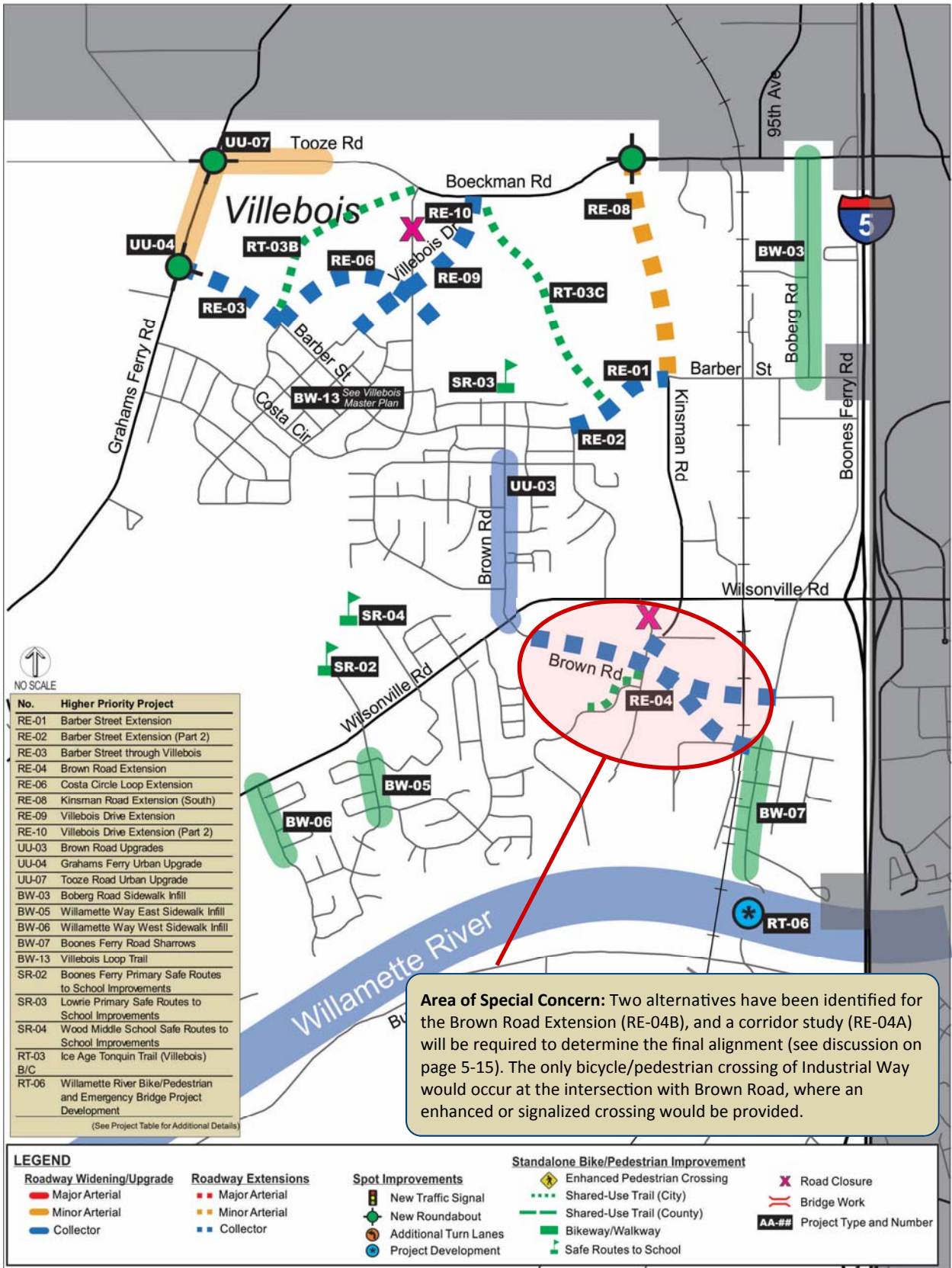
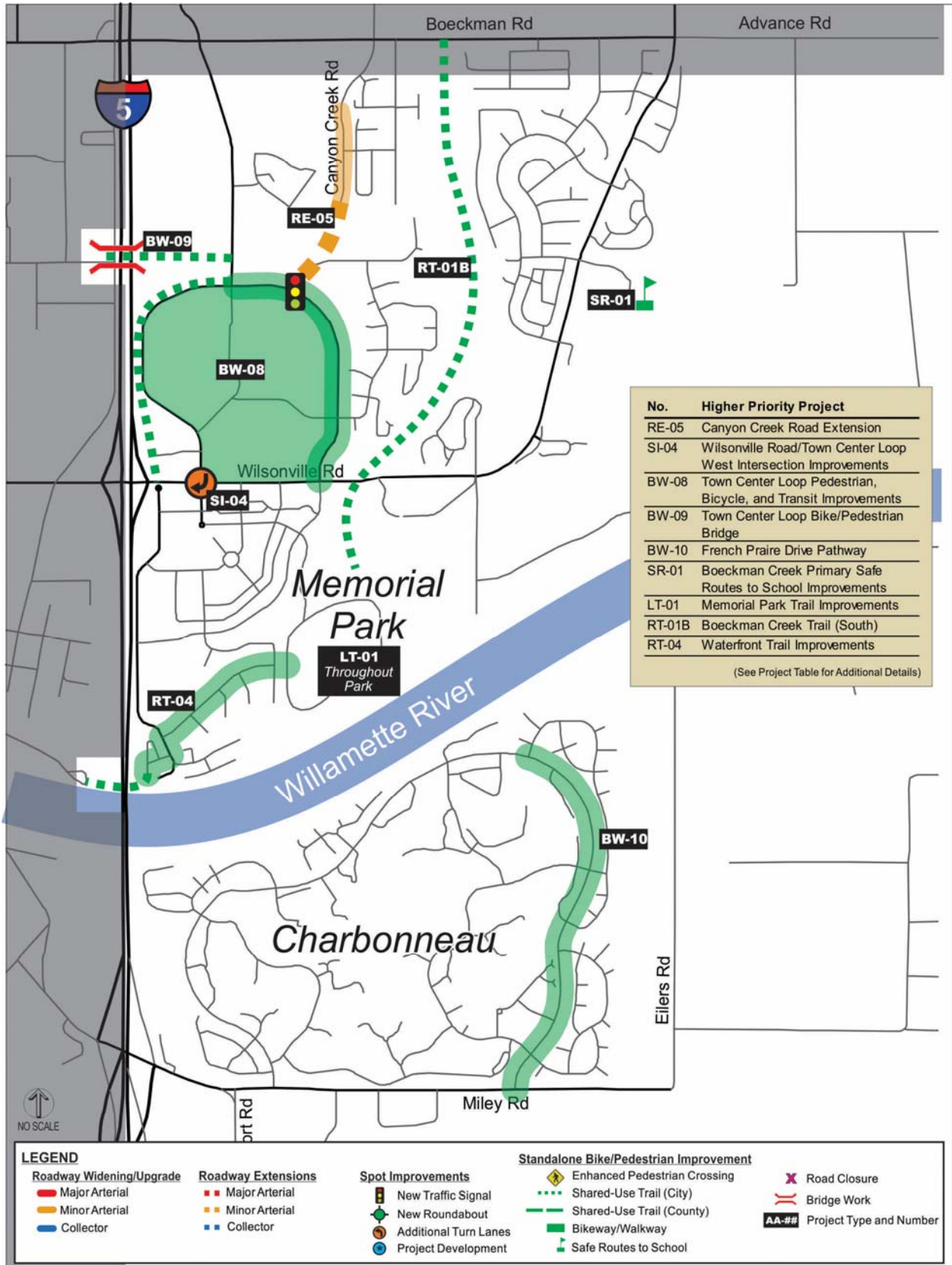


Table 5-5. Higher Priority Projects (Southeast Quadrant)

Project	Description	Cost
<b>Roadway Extensions</b>		
RE-05 Canyon Creek Road Extension	Construct remaining 3-lane roadway with bike lanes, sidewalks, and transit stop improvements from existing terminus to Town Center Loop East; project also includes realigning a portion of Vlahos Drive (so it intersects Canyon Creek Road) and installing a traffic signal at the Town Center Loop East/Canyon Creek Road intersection	\$3,500,000
<b>Spot Improvements</b>		
SI-04 Wilsonville Road/Town Center Loop West Intersection Improvements	Widen the north leg of the intersection and install a second southbound right-turn lane (dual lanes)	\$500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-08 Town Center Loop Pedestrian, Bicycle, and Transit Improvements	Create more direct connections between destinations within Town Center area, improve accessibility to civic uses and transit stops, retrofit sidewalks with curb ramps, highlight crosswalks with colored pavement, and construct other similar treatments that support pedestrian, bicycle, and transit access and circulation; also construct shared-use path along Town Center Loop West from Wilsonville Road to Parkway Avenue and restripe Town Center Loop East from Wilsonville Road to Parkway Avenue to a three-lane cross-section with bike facilities	\$500,000
BW-09 Town Center Loop Bike/Pedestrian Bridge	Construct bike/pedestrian bridge over I-5 approximately aligned with Barber Street to improve connectivity of Town Center area with businesses and neighborhoods on west side of I-5; include aesthetic design treatments	\$4,000,000
BW-10 French Prairie Drive Pathway	Construct 10-foot wide shared-use path along French Prairie Drive from Country View Lane to Miley Road or reconfigure existing roadway to remove a travel lane in each direction and add bicycle and pedestrian facilities	\$1,140,000
<b>Standalone Pedestrian and Bicycle Improvements (Safe Routes to School)</b>		
SR-01 Boeckman Creek Primary Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a new 10 to 12-foot bike path on the south side of the existing sidewalk that meanders south of the tree line and connects to the existing marked crosswalk near the school parking lot	\$65,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>		
LT-01 Memorial Park Trail Improvements	Construct trails throughout Memorial Park, including the Memorial Park Center Loop Trail, the River Trail, Kolbe Homestead Trail, and Klein Homestead Trail	\$595,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>		
RT-01B Boeckman Creek Trail (South)	Construct north-south trail through east Wilsonville following Boeckman Creek, with connections to neighborhoods, parks, and intersecting roads (may need a boardwalk for various sections and would require a comprehensive public process)	\$1,150,000 (Partial Regional funding)
RT-04 Waterfront Trail Improvements	Improve the condition of the shared-use path as it passes underneath the I-5 Boone Bridge by removing the Jersey barriers, installing bollards, widening the trail, adding appropriate pedestrian features such as benches and lighting, and altering the grade of the path underneath the underpass to make it more easily accessible	\$125,000



**FIGURE 5-6. HIGHER PRIORITY PROJECTS (SOUTHEAST QUADRANT)**





**Table 5-6. Higher Priority Projects (Citywide)**

Project	Description	Cost
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-14 Wayfinding Signage	Provide bicycle, pedestrian, and transit wayfinding signage directing users to/from the Ice Age Tonquin Trail, the SMART and WES transit center, and other points of interest throughout the city	\$65,000
<b>Transit Improvements</b>		
TI-01 Pedestrian Access to Transit	Construct sidewalk and curb ramp improvements at SMART stops throughout the city to meet ADA requirements, create safe street crossings, and connect new development with transit (includes retrofits at substandard stops)	\$200,000
TI-02 Transit Street Improvements	Widen roadways or construct sidewalk extensions on a case-by-case basis to improve transit on-time performance and passenger/pedestrian safety; may involve on-site bus turnarounds with property owner approval	\$300,000

Table 5-7 provides a side-by-side comparison of the estimated funding sources available and how much they would contribute to the Higher Priority projects. Additional cost information is provided in the

appendix. The planning level project costs are intended to cover a moderate level of unanticipated costs that may arise at the time the projects are constructed.

**Table 5-7. Higher Priority Project Funding Sources and Contributions**

Project Type	Capital Improvement Funding Estimates through 2035	
	Approximate Funding Available	Contributions to Higher Priority Projects
Street System Development Charges (SDCs)	\$72 million	\$68.6 million
West Side Plan – Urban Renewal District	\$27 million	\$26.6 million
Year 2000 Plan – Urban Renewal District	\$5 million	\$3.5 million
Park System Development Charges (SDCs)	\$0.7 million <sup>a</sup>	\$0.7 million
Local/Regional Partnerships	\$2.9 million <sup>a</sup>	\$2.9 million
Grants	\$3.2 million <sup>a</sup>	\$3.2 million
State and Federal Funding	\$12.6 million <sup>a</sup>	\$12.6 million
<b>Total</b>	<b>\$123.4 million<sup>a</sup></b>	<b>\$118.1 million</b>

<sup>a</sup> The approximate funding levels estimated for various sources were considered to be equal to the contributions due to the prior experience of how the City has been able to fund transportation projects. If the City is unable to obtain local/regional partnerships, grants, and/or state and federal funding, then the associated projects that assume these funding sources may have to be put on hold until other funding becomes available.

## BROWN ROAD EXTENSION ALTERNATIVES

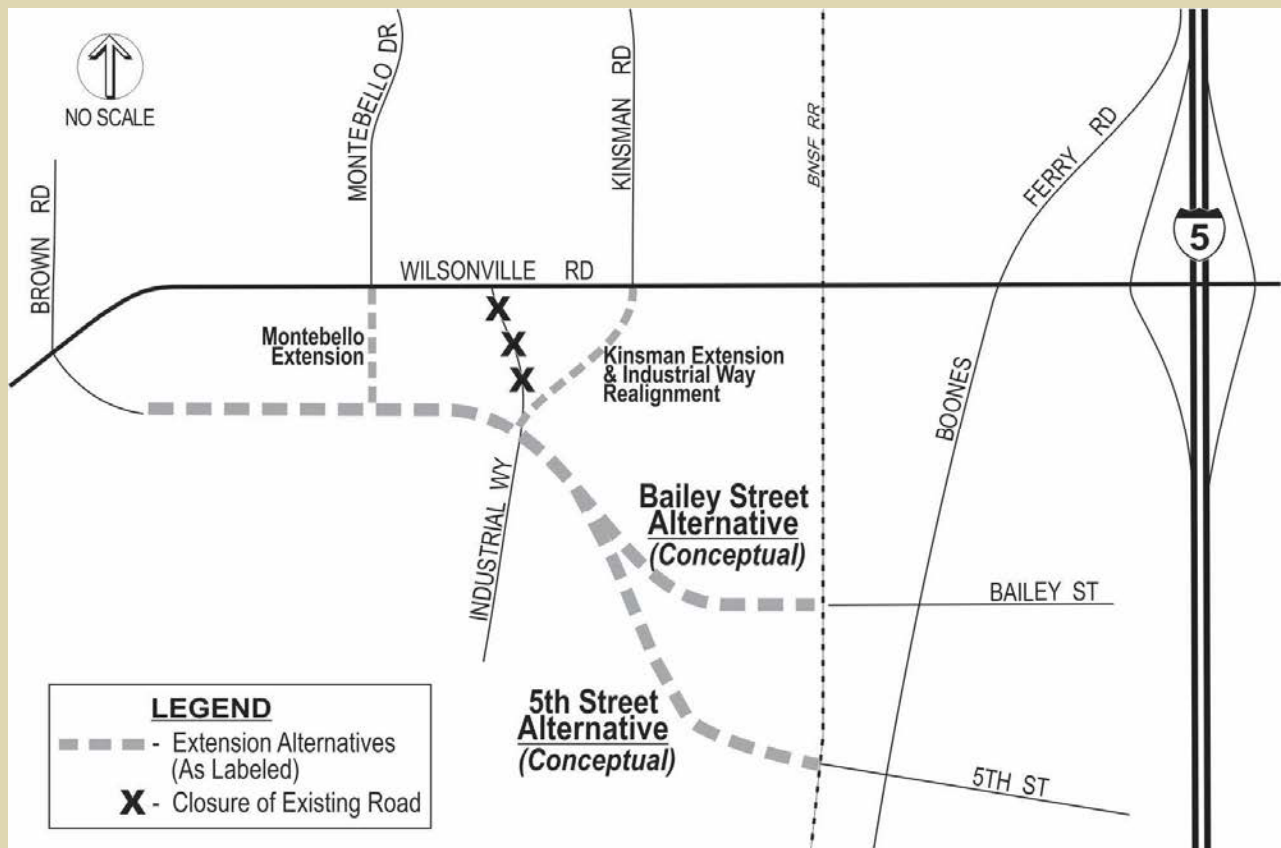
From a transportation planning standpoint, both Brown Road extension alternatives would provide comparable benefits to the transportation network. Selection of an alignment should be made during or prior to the master planning process for the large area south of Wilsonville Road and west of the railroad tracks.

The following factors should be considered as part of selecting a future alignment:

- Access
- Bicycle and pedestrian network connections
- Environmental impacts
- Freight benefits/impacts
- Future development plans and land use changes in the two areas most impacted by

the roadway extension: (1) west of the railroad tracks south of Wilsonville Road and (2) in Old Town, specifically along Boones Ferry Road

- Motor vehicle capacity
- Neighborhood/commercial connectivity
- Private property impacts
- Project costs
- Public input
- Railroad crossings
- Small business impacts
- Timing
- Traffic diversion
- Water and sewer utility issues



### ADDITIONAL PLANNED PROJECTS

The “Additional Planned” project list includes those projects that would contribute to the City’s desired transportation system through 2035 but that were not included as “Higher Priority” projects due to estimated funding limitations. This list represents a coordinated transportation network and adequate facilities to serve the community through 2035.

The State stipulates that projects listed in the TSP form the legal basis for exacting developer-provided improvements. Together, the “Higher Priority” and “Additional Planned” project lists document all the City’s desired projects so that it is clear what improvements are needed to ensure that the City’s transportation network fully supports its continued growth.

Even though the City should primarily focus on the projects included in the Higher Priority Solutions Package, it should look for opportunities to pursue these remaining projects as funding opportunities become available, including grant funding.

As shown in Table 5-8, the “Additional Planned” projects would cost a total of \$100.1 million. Figures 5-7 through 5-11 show locations of the projects, and corresponding project details are included in Tables 5-8 through 5-12. Some of the City’s Additional Planned projects are not associated with a specific location but instead will be applied citywide as needed. These projects are listed in Table 5-13.

**Table 5-8. Additional Planned Project Costs<sup>a</sup>**

Project Type	2011 Cost Estimate
Roadway Extensions	\$27,200,00
Roadway Widening	\$7,000,000
Urban Upgrades	\$19,800,000
Spot Improvements	\$6,500,000
Standalone Bicycle and Pedestrian Improvements	\$25,610,000
Transit Improvements	\$14,450,000
<b>Total Additional Planned Project Costs</b>	<b>\$100,560,000</b>

<sup>a</sup> See Tables 5-9, 5-10, 5-11, 5-12, and 5-13 for individual project costs.



*Trees provide an aesthetically pleasing environment and shade along a street in Charbonneau, a private planned community in Wilsonville surrounding a 27-hole golf course. Because Charbonneau is on the southern bank of the Willamette River, it is separated from the remainder of the city and would benefit from a dedicated bicycle and pedestrian bridge.*

FIGURE 5-7. ADDITIONAL PLANNED PROJECTS

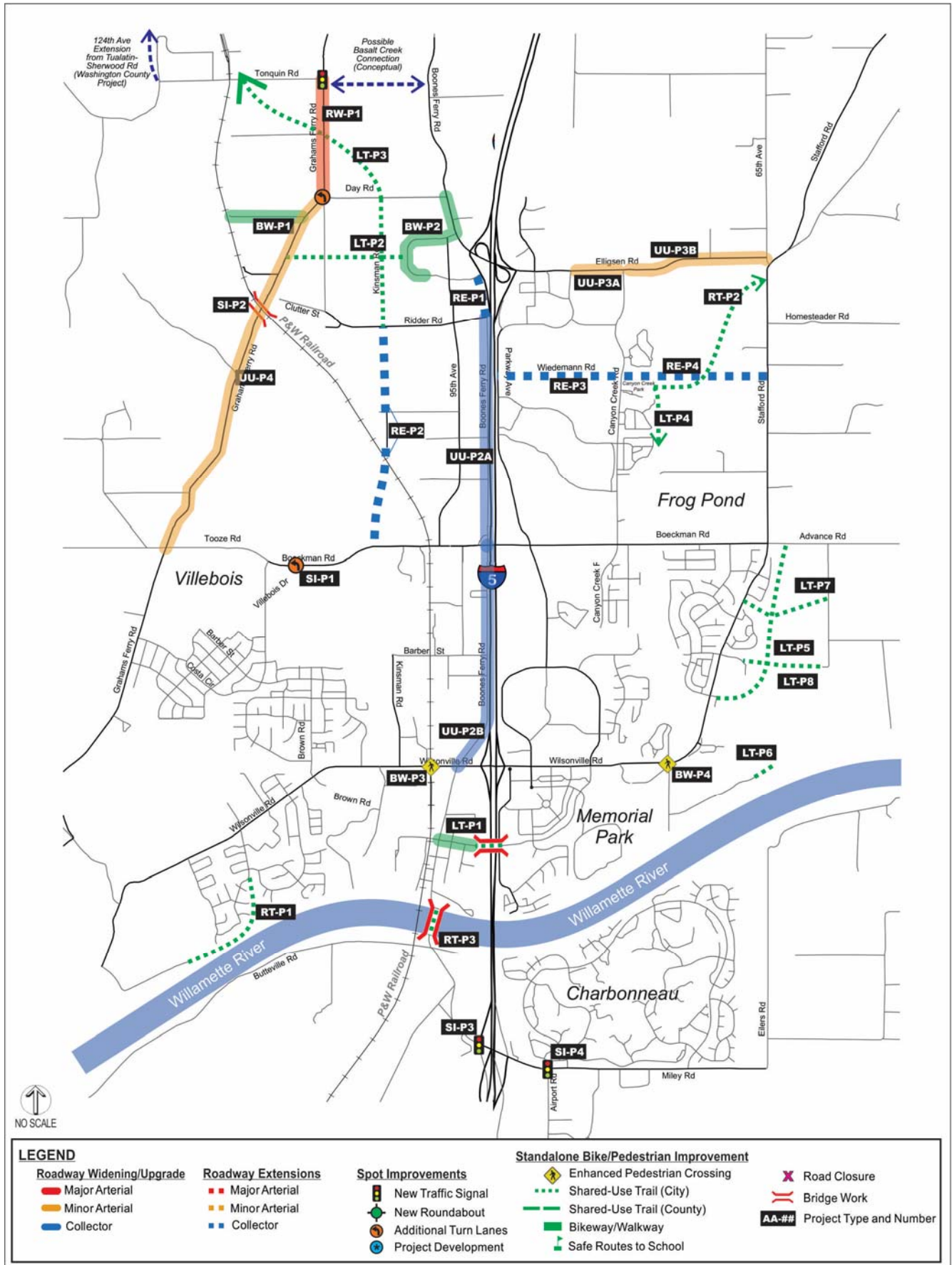


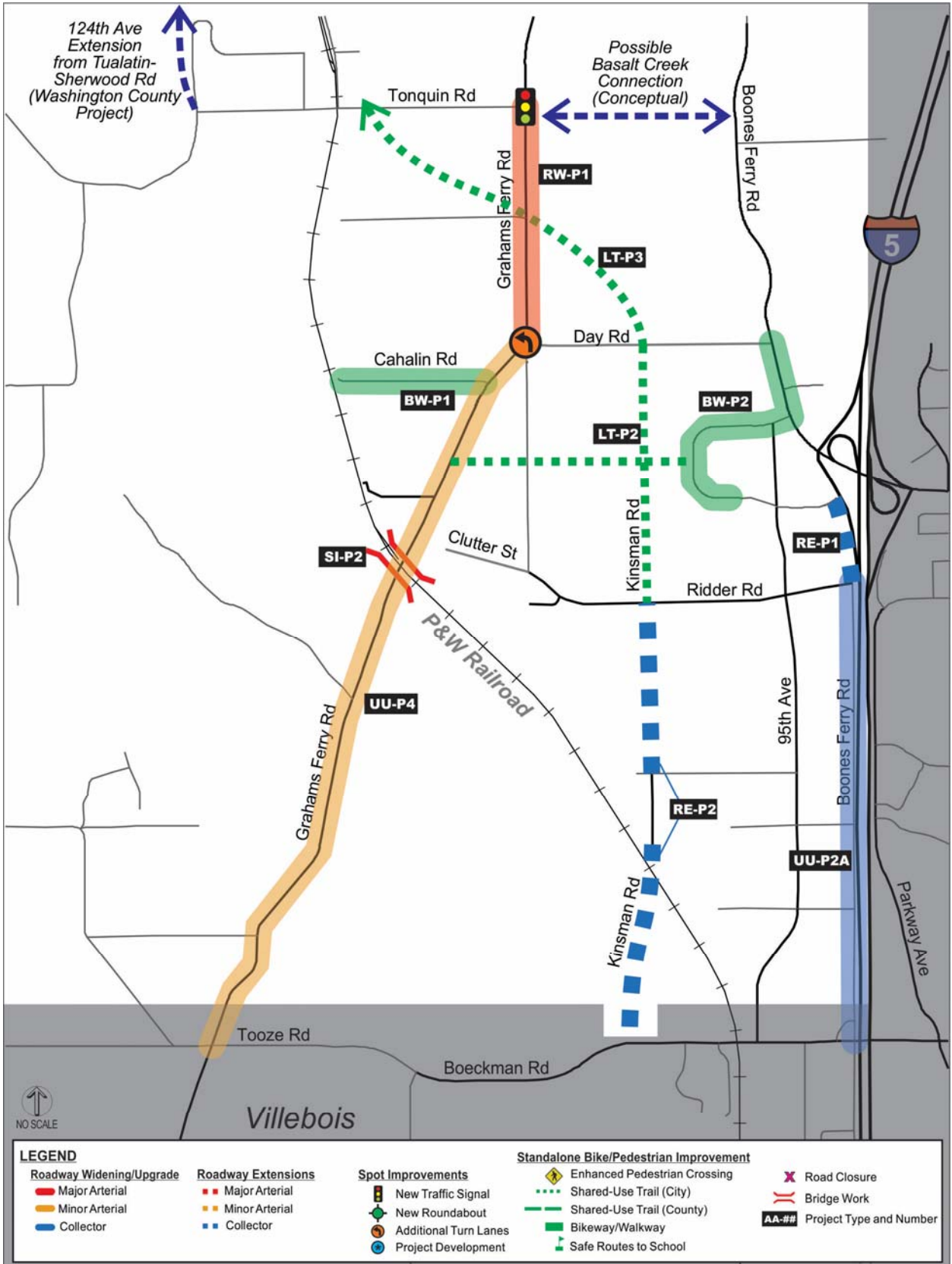


Table 5-9. Additional Planned Projects (Northwest Quadrant)

Project	Description	Why Not Higher Priority?	Cost
<b>Roadway Extensions</b>			
RE-P1 Boones Ferry Road Extension	Construct 2-lane roadway from Ridder Road to Commerce Circle with bike lanes, sidewalks, and transit improvements to facilitate access and circulation in the area surrounding Ridder Road and 95th Avenue	Identified as potentially helpful freight connection, but not a critical need at this time	\$2,100,000
RE-P2 Kinsman Road Extension (Central)	Construct 2/3-lane roadway from Boeckman Road to Ridder Road with bike lanes and sidewalks	High cost due to grade-separated RR crossing and construction across Metro lands; alternative route (95th Avenue) is available	\$12,000,000
<b>Roadway Widening</b>			
RW-P1 Grahams Ferry Road Widening	Widen Grahams Ferry Road from Tonquin Road to Day Road to four lanes with bike lanes, sidewalks, and transit improvements; acquire the full five-lane right-of-way width to accommodate future left-turn lanes; also provide additional left-turn lanes at Tonquin Road and Day Road intersections	Located within Washington County and is only needed under certain scenarios of the pending Basalt Creek Refinement Plan	\$7,000,000
<b>Urban Upgrades</b>			
UU-P2A Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	High cost with limited connectivity benefit alternative parallel routes exist	\$5,900,000
UU-P4 Grahams Ferry Road Urban Upgrade	Upgrade Grahams Ferry Road from Day Road to Tooze Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit improvements)	Grahams Ferry Road is primarily a rural road and Ice Age Tonquin Trail is a preferred option for providing north-south connection through this part of Wilsonville	\$2,000,000
<b>Spot Improvements</b>			
SI-P2 Grahams Ferry Road Undercrossing Improvements at Railroad Bridge	Reconstruct existing railroad under-crossing to City of Wilsonville Minor Arterial standards; Higher Priority project list includes project development portion of this project (costs are separate)	Located within Washington County jurisdiction, and it is an important safety-related project with particular benefits for freight travel; however, it comes with high cost and freight traffic has alternate travel routes	\$4,500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>			
BW-P1 Cahalin Road Bike Lanes and Sidewalks	Construct bike lanes and sidewalks from Kinsman Road extension to Ice Age Tonquin Trail	High cost due to railroad crossing barrier	\$700,000
BW-P2 Commerce Circle Loop and Boones Ferry Road Sidewalk Infill	Fill in gaps in the sidewalk network on Commerce Circle Loop and Boones Ferry Road	Industrial area with no connectivity to other facilities	\$150,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>			
LT-P2 Area 42 Trail	Shared Use Path from Kinsman Road to Day Road	To be constructed as Coffee Lake Creek Master Plan Area Redevelops	\$220,000
LT-P3 BPA Power Line Trail	Shared Use Path from Day Road to Ice Age Tonquin Trail providing trail users to City's northern industrial area	Ice Age Tonquin Trail provides key connection to north (more critical when Coffee Lake Creek develops)	\$500,000



FIGURE 5-8. ADDITIONAL PLANNED PROJECTS (NORTHWEST QUADRANT)



**Table 5-10. Additional Planned Projects (Northeast Quadrant)**

Project		Description	Why Not Higher Priority?	Cost
<b>Roadway Extensions</b>				
RE-P3	Wiedeman Road Extension (West)	Construct 2/3-lane roadway from Parkway Avenue to Canyon Creek Road with bike lanes and sidewalks	Limited impact on system capacity; money better spent upgrading Boeckman Road and Elligsen Road	\$4,300,000
RE-P4	Wiedeman Road Extension (East)	Construct 2/3-lane roadway from Canyon Creek Road to Stafford Road with bike lanes and sidewalks; would require construction over Boeckman Creek	Only needed with future development on land east of Canyon Creek Road; costly (especially over wetlands) and has limited impact on system capacity; and money better spent upgrading Boeckman Road and Elligsen Road	\$8,800,000
<b>Urban Upgrades</b>				
UU-P3 A/B	Elligsen Road Urban Upgrade	Upgrade Elligsen Road from Parkway Center to Stafford Road to meet applicable cross-section standards including bike lanes, sidewalks, and transit improvements	Much of the land is in Clackamas County; significant slopes from Parkway Center Drive to Canyon Creek Road would likely require retaining walls (higher costs) and large oak trees would be impacted	\$6,000,000 (Partial Federal funding)
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>				
LT-P4	Canyon Creek Trail	Shared Use Path from Canyon Creek Park to Boeckman Creek Trail providing connectivity to neighborhoods to the south	Low priority as it needed after the Boeckman Creek Trail is constructed	\$200,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>				
RT-P2	Stafford Spur Trail	Shared-Use Path from Canyon Creek Park to Stafford Road	High cost project that provides limited connectivity to land uses in Clackamas County	\$1,640,000

FIGURE 5-9. ADDITIONAL PLANNED PROJECTS (NORTHEAST QUADRANT)

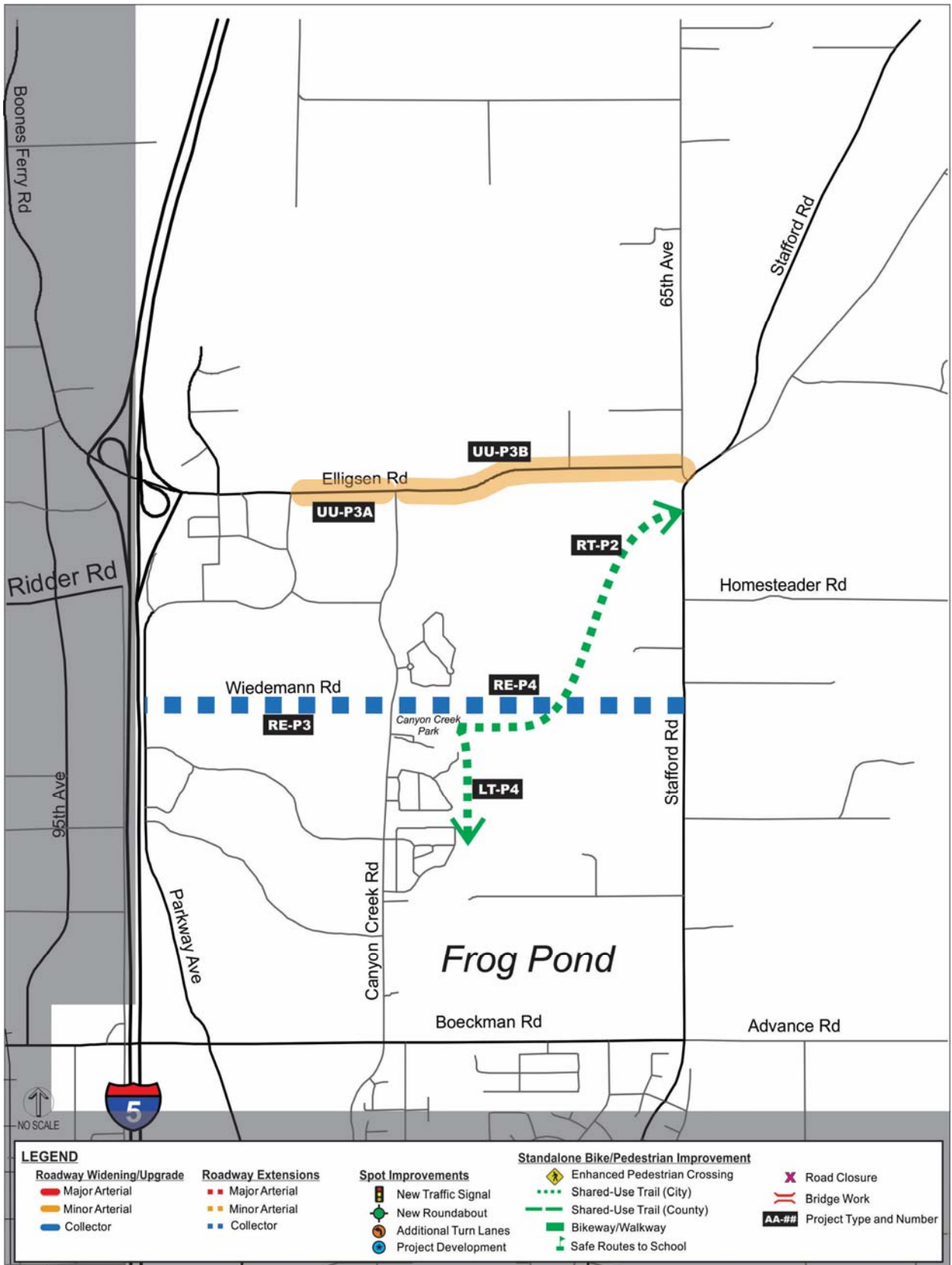


Table 5-11. Additional Planned Projects (Southwest Quadrant)

Project	Description	Why Not Higher Priority?	Cost
<b>Urban Upgrades</b>			
UU-P2B Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	High cost with limited additional connectivity benefits due to alternative parallel routes (i.e., Kinsman Road extension); project would become more beneficial once bike and pedestrian bridge is built over I-5 connecting Barber Street to Town Center Loop West	\$5,900,000
<b>Spot Improvements</b>			
SI-P1 Boeckman Road/Villebois Drive Roundabout Widening	Expand roundabout by adding a westbound slip lane to accommodate two westbound travel lanes on Boeckman Road	Potential improvement need expected to be triggered by future regional traffic traveling east-west through Wilsonville	\$500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>			
BW-P3 Wilsonville Road Enhanced Pedestrian Crossing at Railroad Track	Install new pedestrian crossing adjacent to the railroad tracks that includes rectangular rapid flashing beacons (RRFBs), center pedestrian median island, signage, etc.	Not critical until land south of Wilsonville Road Develops	\$70,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>			
LT-P1 5th Street Bike/Pedestrian Bridge and Connections	Construct bike/pedestrian bridge over I-5 approximately aligned with 5 <sup>th</sup> Street; also construct bike lanes and sidewalks on 5 <sup>th</sup> Street connecting the new bridge to Boones Ferry Road	High cost and recent improvements to Wilsonville Road Interchange have improved East/West pedestrian connectivity	\$6,400,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>			
RT-P1 Rivergreen Trail	Natural Trail from Ice Age Tonquin Trail/SW Willamette Way to Waterfront Trail	Low priority as it is needed after other critical trail and pathway connections are completed (i.e. Ice Age Tonquin Trail)	\$260,000
RT-P3 Willamette River Bike/Pedestrian and Emergency Bridge	Construct bridge over Willamette River for bike, pedestrian, and emergency access to provide an alternative to the I-5 freeway deck; Higher Priority project list includes project development portion of this project (costs are separate)	High cost; next step is to determine feasibility within planning horizon	\$14,000,000

FIGURE 5-10. ADDITIONAL PLANNED PROJECTS (SOUTHWEST QUADRANT)

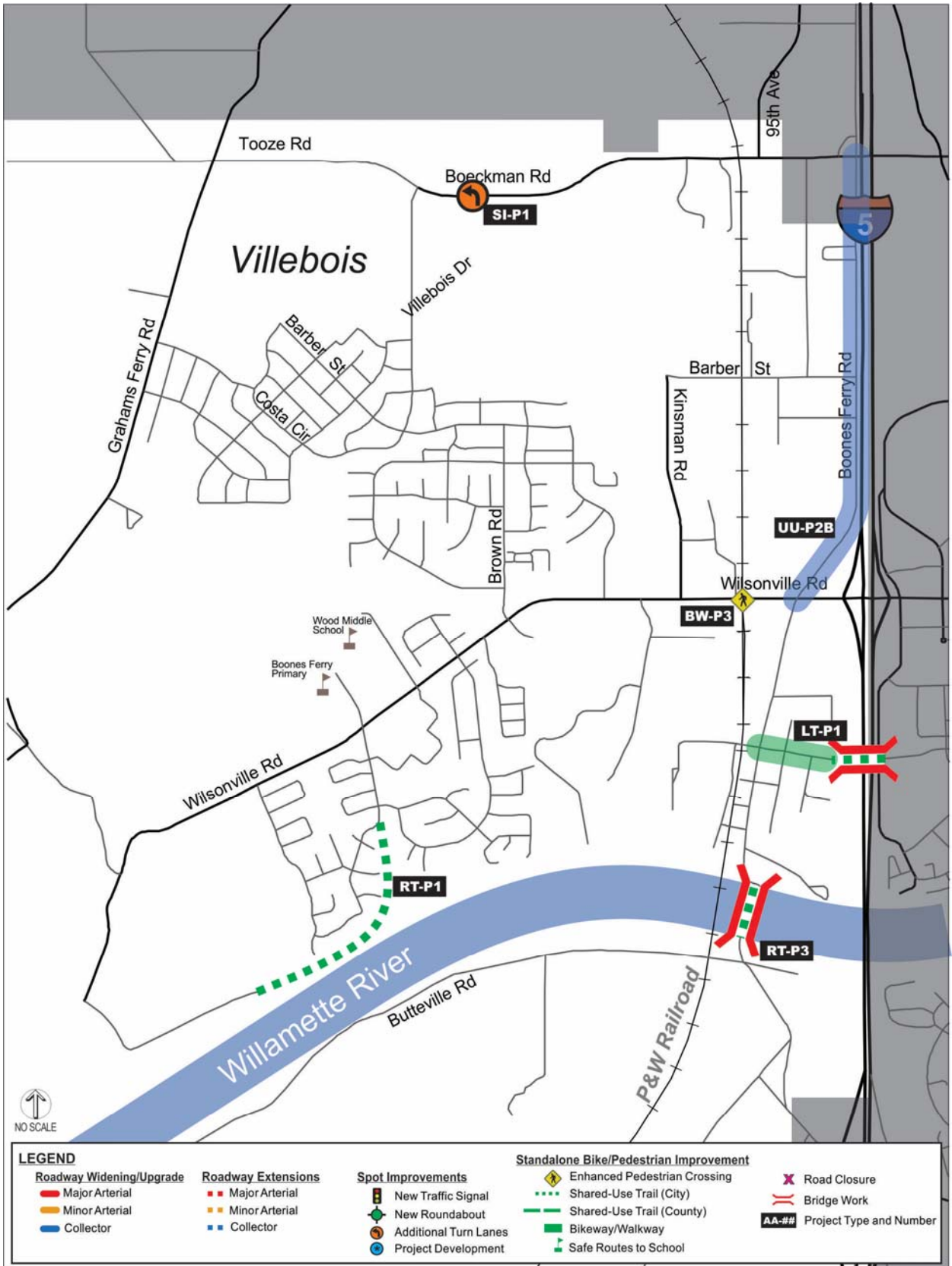




Table 5-12. Additional Planned Projects (Southeast Quadrant)

Project	Description	Why Not Higher Priority?	Cost	
<b>Spot Improvements</b>				
SI-P3	Miley Road/I-5 Southbound Ramp Improvements	Install traffic signal and southbound left-turn lane	Outside City's jurisdiction (ODOT facility) and no future Wilsonville growth expected; improvement needs would be triggered primarily by regional traffic	\$750,000
SI-P4	Miley Road/Airport Road Intersection Improvements	Install traffic signal and northbound left-turn lane	Outside City's jurisdiction (Clackamas County facility) and no future Wilsonville growth expected; improvement needs would be triggered primarily by regional traffic	\$750,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>				
BW-P4	Wilsonville Road Enhanced Pedestrian Crossing at Rose Lane	Install new pedestrian crossing adjacent to Rose Lane and nearby transit stops; potential crossing treatments include, but are not limited to, rectangular rapid flashing beacons (RRFBs), signage, etc.	Crossing need at this location is considered low at this time, and there is an existing pedestrian crossing and flasher to the west at Kolbe Lane that provides more direct access to Memorial Park and the Boeckman Creek Trail	\$50,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>				
LT-P5	New School Site Trail	Shared Use Path from Boeckman Creek Elementary School to planned school and park site, with possible connections to adjacent neighborhoods	Medium priority due to existing connections; will become important when school and park are constructed	\$700,000
LT-P6	Park Access Trail	Low Volume Roadway accessed from Montgomery Way; would require extensive public process	Lower priority until after other critical trail and pathway connections are completed	\$20,000
LT-P7	School Connection Trail	Construct the School Connection Trail identified in the Frog Pond Area Plan	Medium priority due to existing connections; will become important when school and park are constructed	\$460,000
LT-P8	60 <sup>th</sup> Avenue Trail	Construct the 60 <sup>th</sup> Avenue Trail identified in the Frog Pond Area Plan	Medium priority due to existing connections; will become important when school and park are constructed	\$240,000

FIGURE 5-11. ADDITIONAL PLANNED PROJECTS (SOUTHEAST QUADRANT)

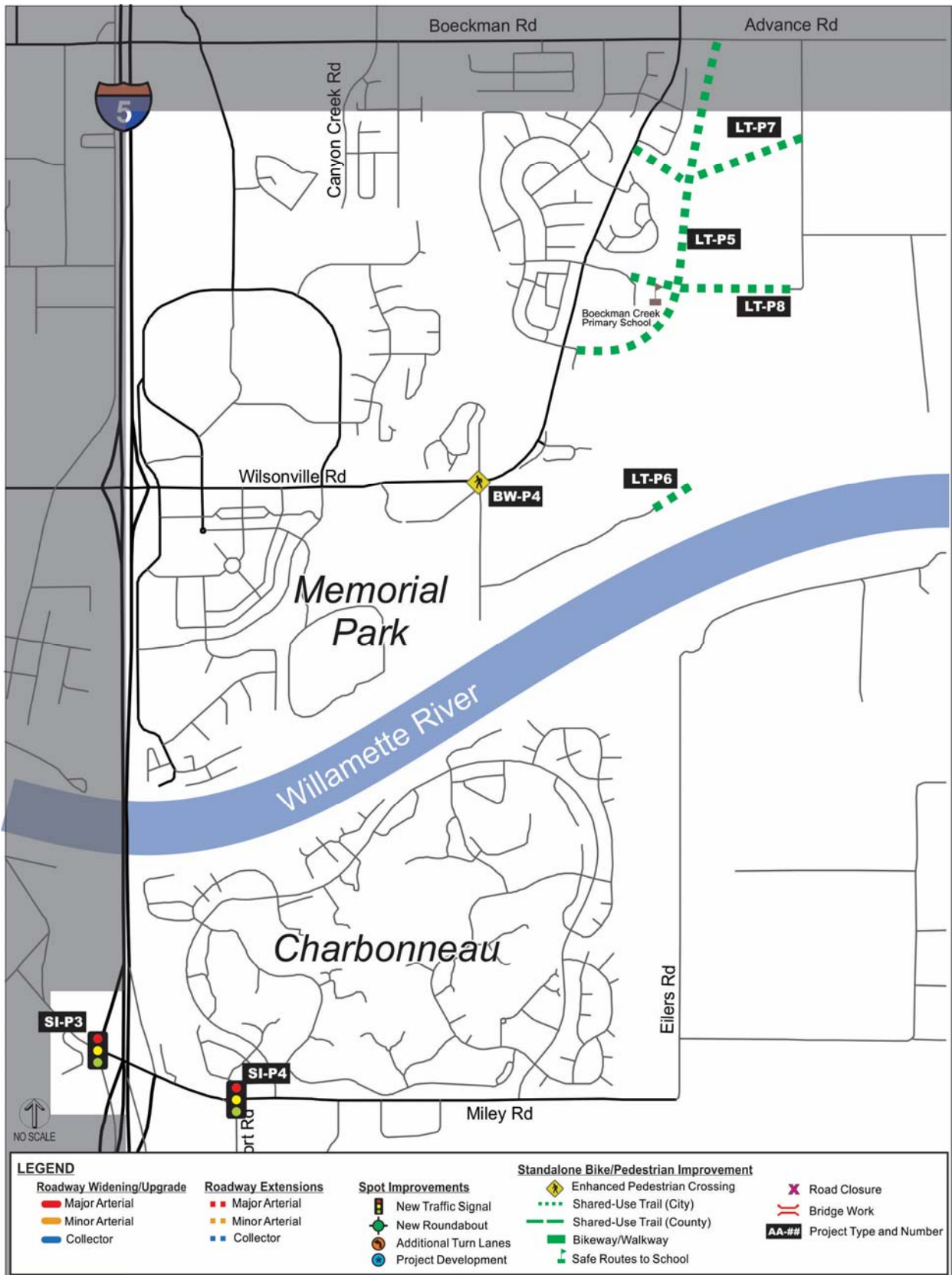


Table 5-13. Additional Planned Projects (Citywide)

Project		Description	Why Not Higher Priority?	Cost
<b>Spot Improvements</b>				
TI-P1	Bus Stop Amenities	Install bus shelters, benches, and bus seat poles on a case-by-case basis as needs are identified and funds are available	Funding has not been identified	\$450,000
TI-P2	SMART Buses	Replace old buses; also outfit each bus with a tracking system and provide real-time display boards at the SMART Central station and other key routes	Funding has not been identified	\$14,000,000

---

*“It is very important we prepare now so that we don’t have congestion in the future—or can at least manage the congestion. We can also prepare for connectivity so we can get places conveniently.”*

*Nancy Kraushaar  
Community Development Director*

---

**PLANNING COMMISSION  
RESOLUTION NO. LP16-0001**

**A WILSONVILLE PLANNING COMMISSION RESOLUTION RECOMMENDING THAT THE WILSONVILLE CITY COUNCIL ADOPT AN ORDINANCE APPROVING MINOR AMENDMENTS TO WILSONVILLE'S 2013 TRANSPORTATION SYSTEM PLAN (TSP).**

WHEREAS, the City of Wilsonville desires to use best professional practices to ensure land development contributes to creating a safe and attractive transportation network that supports Wilsonville's economy and quality of life; and

WHEREAS, the City of Wilsonville adopted the 2013 Transportation System Plan on June 17, 2013; and

WHEREAS, the Wilsonville Planning Commission held a work session on March 9, 2016 to discuss and take public testimony concerning proposed revisions to Wilsonville's 2013 Transportation System Plan (TSP); and

WHEREAS, the Wilsonville Planning Director, taking into consideration input and suggested revisions provided by the Planning Commission members and the public, submitted proposed minor amendments to Wilsonville's 2013 Transportation System Plan (TSP) to the Planning Commission, along with a Staff Report, in accordance with the public hearing and notice procedures that are set forth in Sections 4.008, 4.010, 4.011 and 4.012 of the Wilsonville Code (WC); and

WHEREAS, the Planning Commission, after Public Hearing Notices were provided to property owners, a list of affected agencies, interested parties, and were posted at three City owned properties, in the local newspaper, and on the City website, held a Public Hearing on April 13, 2016 to review proposed minor amendments to Wilsonville's 2013 Transportation System Plan (TSP) and to gather additional testimony and evidence regarding the proposal; and

WHEREAS, the Planning Commission has afforded all interested parties an opportunity to be heard on this subject and has entered all available evidence and testimony into the public record of their proceeding; and

WHEREAS, the Planning Commission has duly considered the subject, including the staff recommendations and all the exhibits and testimony introduced and offered by all interested parties.

NOW, THEREFORE, BE IT RESOLVED that the Wilsonville Planning Commission does hereby adopt the Staff Report, as presented at the April 13, 2016 public hearing, including the findings and recommendations contained therein and does hereby recommend to the Wilsonville City Council approval of the proposed minor amendments; and

BE IT RESOLVED that this Resolution shall be effective upon adoption.

ADOPTED by the Planning Commission of the City of Wilsonville at a regular meeting thereof this 13th day of April, 2016 and filed with the Planning Administrative Assistant on April 14, 2016.

---

Wilsonville Planning Commission Chair

Attest:

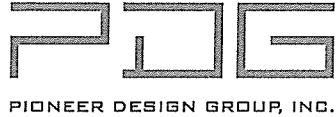
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Tami Bergeron, Administrative Assistant III

SUMMARY of Votes:

Chair Jerry Greenfield	_____
Commissioner Peter Hurley	_____
Commissioner Al Levit	_____
Commissioner Kamran Mesbah	_____
Commissioner Phyllis Millan	_____
Commissioner Eric Postma	_____
Commissioner Simon Springall	_____





CIVIL LAND USE PLANNING SURVEY  
P 503.643.8286 F 844.715.4743 www.pd-grp.com  
9020 SW Washington Square Rd Suite 170  
Portland, Oregon 97223

March 23, 2016

Wilsonville Planning Commission  
29799 SW Town Center Loop E.  
Wilsonville, OR 97070

**RE: Republic Services – Testimony Supporting TSP Amendment File LP16-0001 – Replacement of Collector Extension north of Ridder Road from Kinsman Road (RE-07) to Garden Acres Road (UU-08).**

On behalf of Republic Services, I, Ben Altman, Pioneer Design Group, present this testimony in support of the proposed TSP Amendment, specifically the amendments related to Kinsman and Garden Acres Roads.

Republic Services owns property at the northeast corner of Ridder Road and Garden Acres Road. The existing Republic site was initially developed in 1995 by United Disposal (then local franchised hauler) and Willamette Resources, Inc. (WRI), a subsidiary of Waste Control, the parent company out of Albany, Oregon. Subsequently United (Waste Control) was acquired by Allied Waste, who was later acquired by Republic Services.

WRI is now a wholly-owned subsidiary of Republic Services. WRI is the currently registered owner of Tax Lots 600, 601, as well as 1400, Map T3S R1W 2C. While WRI is the land owner, the following narrative generally refers to Republic Services as the applicant/petitioner.

Republic's property has frontage along Ridder and Garden Acres Roads, and has excellent collector street access. Republic's existing facilities has two access drives off of Ridder Road.

We have recently submitted a land use development application on behalf of Republic Services (property owner) and SORT Bioenergy, LLC (applicant). SORT Bioenergy is proposing to develop a commercial and industrial organic waste recovery facility (anaerobic digester) on property owned by Republic Services.

This proposed facility is a partnership between SORT Bioenergy, LLC and Republic Services, Inc. to initiate new programs with new technologies to help protect the environment through landfill diversion, energy recovery and nutrient recycling, see attached Preliminary Site Plan.

Based on the pre-application discussions regarding the proposed SORT Facility and further alternatives analysis, the City has determined this original planned Kinsman alignment is not financially or practically feasible given a series of property and topographic conflicts. As part of their annexation application, Republic's consultants provided the City with the attached drawing, which reflects the on-site impacts of the Kinsman Road extension.

Given the conflicts, the City (Kittelson & Associates) has analyzed alternative collector alignments. The most probable alternative for Kinsman Road is Garden Acres Road. Consequently, based on their analysis, the City has agreed to process a TSP Amendment to incorporate this new road alignment, and eliminate the Kinsman alignment.

The proposed TSP amendment to classify Garden Acres Road as a Collector, replacing the Kinsman alignment will further enhance collector circulation in this area, without creating significant impacts to adjacent properties.

The following is a summary of Staff and Traffic Engineer Consultant's comments at 3-9-16 Planning Commission Work Session:

- The TSP alignment for Kinsman Road is between the BPA Substation and Republic Services properties. BPA outright rejected any road improvements within their right-of-way. Consequently this would force a shift of 100% of the right-of-way onto Republic's property.
- The shift of alignment would create substantial impacts to Republic, resulting in excessively expensive sight redevelopment.
- Because of the BPA Substation and Right-of-way, Kinsman Road would be a single-loaded street, which would add significant public costs for ½ street acquisition of right-of-way.
- The re-evaluation of alignment concluded that the Garden Acres alignment would provide reasonably comparable collector flows, at a much reduced cost (public & private) and would also minimize impacts to private properties.
- The TSP amendment will allow for improved financial options, including SDC credits, etc.

### **General Back Ground**

The following information is provided as back ground, so the Commission understands the history related to Republic's property, prior development and related road improvements. Republic has a strong history of working with the City on resolving traffic related issues while seeking to minimize on-site impacts.

#### Ridder Road

Ridder Road is designated as a Collector street (2013 TSP).

Ridder Road currently intersects with 95<sup>th</sup> Avenue, approximately one half mile to the east. 95<sup>th</sup> Avenue intersects with SW Boones Ferry Road (arterial) just under a half mile to the north, and with Boeckman Road (arterial) about one mile to the south.

Republic's current operations (tl 1400) have frontage on SW Ridder Road, with two access driveways. These two access points meet collector street standards for access separation of 100-300 feet:

The eastern driveway is primarily for trucks entering and leaving the site, as all trucks must cross the scales (in & out). It is noted that the proposed SORT facility will also access and exit through Republic's scales, via this eastern driveway. Administrative and MRF employees and customers also use this eastern access. Customer access is very limited, but a few do come to the site to pay their bills, and also for the public recycling.

The western access is used for the long-haul compactor trucks & trailers that haul waste from the MRF to the landfill. There is a separate scale for these long-haul trucks, which are weighed before leaving the site. The maintenance employees also currently use this western entrance.

### Prior Dedications and Improvements

When the MRF and Administrative offices were originally constructed (1995) WRI dedicated right-of-way to the 60 foot standard (1990 TSP); and provided street improvements, consistent with City standards at that time. The improvements included realignment of Ridder/Clutter Roads through the site (Partition 1995-101). This realignment formed a continuous east/west street section between 95<sup>th</sup> Avenue and Grahams Ferry Road. The realignment provided urban design horizontal curve, replacing the prior double 90 degree corners. These improvements were funded, in part, by State Lottery Special Projects Funds (off-site improvements) and a local improvement district, with WRI as the major contributor.

With the 2014 maintenance shop addition, Republic dedicated 11.5 feet of additional right-of-way along Ridder Road to meet current City road standards (2013 TSP). The timing for completing required frontage improvements is being coordinated with the City, linked with the pending Coffee Creek Urban Renewal District. This coordination is being formalized in the form of a Development Agreement between Republic and the City.

Subsequently, as part of the 2014 land use approvals, Republic dedicated 11.5 feet for additional right-of-way along the site frontages on both Ridder and Garden Acres Roads, but with frontage improvements deferred to a later phase. This additional dedication was provided consistent with the update 2013 TSP, which changed the design cross-section for Collector streets.

Most recently, in preliminary discussions with the City regarding a proposed food waste processing facility (SORT), Republic was informed that the 2013 TSP required an extension of Kinsman Rod north of Ridder Road, and that the development would be required to dedicate right-of-way. The Kinsman extension is shown in the TSP as running up the eastern boundary of Republic's property.

Preliminary evaluation of this proposed alignment concluded that the close proximity of this future road to Republic's existing eastern driveway would force closure of that driveway. Closure of that driveway directly and significantly affects on-site circulation, as it would force relocation of the truck scales, which subsequently would force other major site modifications, including the truck entry into the material recovery building. And, it was emphasized that Republic does not need any access from Kinsman Road. Essentially this road extension would substantially hurt the property more than it would provide any net public benefit.

Garden Acres Road

Garden Acres Road is designated as a Collector street (2013 TSP).

The developed portion of the site (tl 1400) as well as the area being annexed (tl 600 consolidated), also have frontage on SW Garden Acres Road. There currently is no site access from Garden Acres. However, with the planning collector alignment of Ridder/Garden Acres Road, the Stage I Master Plan now anticipates a third access from Garden Acres, instead of the original concept from Ridder Road. With the new road alignment, the 3<sup>rd</sup> Ridder access would not meet sight distance requirements. In addition, the future access from Garden Acres will provide for better maintenance/operations employee access separation from the heavily used truck accesses.

With the 2014 maintenance shop addition, Republic (WRI) dedicated 11.5 feet of additional right-of-way along Garden Acres Road to meet current City road standards (2013 TSP). No street improvements have been made, to date. Republic currently does not have any access from this street, but likely will as the annexed property is developed, as noted.

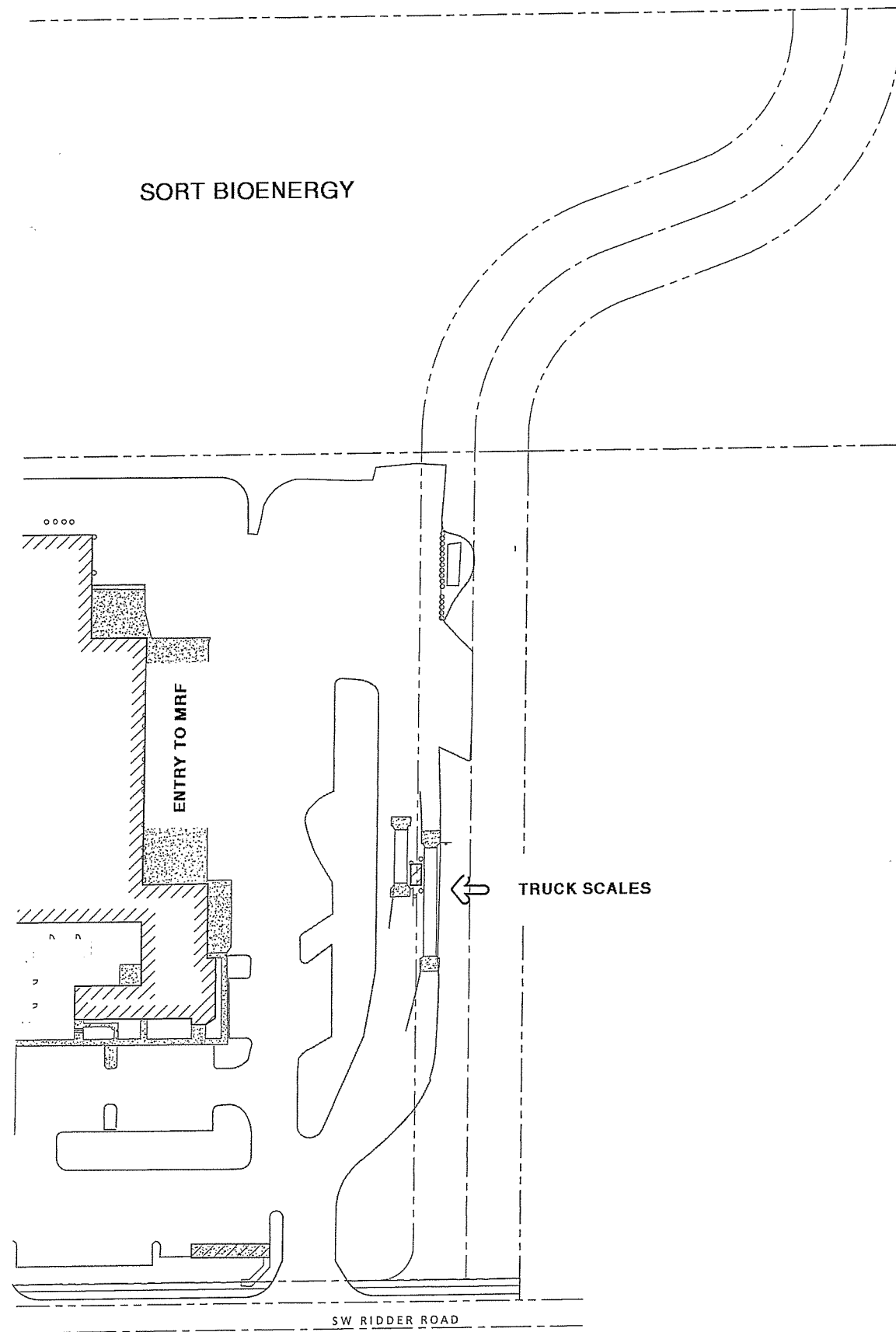
With pending TSP revisions, Garden Acres Road is expected to become the major north/south link, replacing the Kinsman Road to Day Road alignment. This amendment will result in a re-alignment of the intersections of Ridder and Garden Acres Roads, with cul-de-sac for Clutter Road. This new alignment is anticipated to only result in minor site impacts, particularly in the southwest corner of TL 1400.

Kinsman Road Extension – To be Eliminated

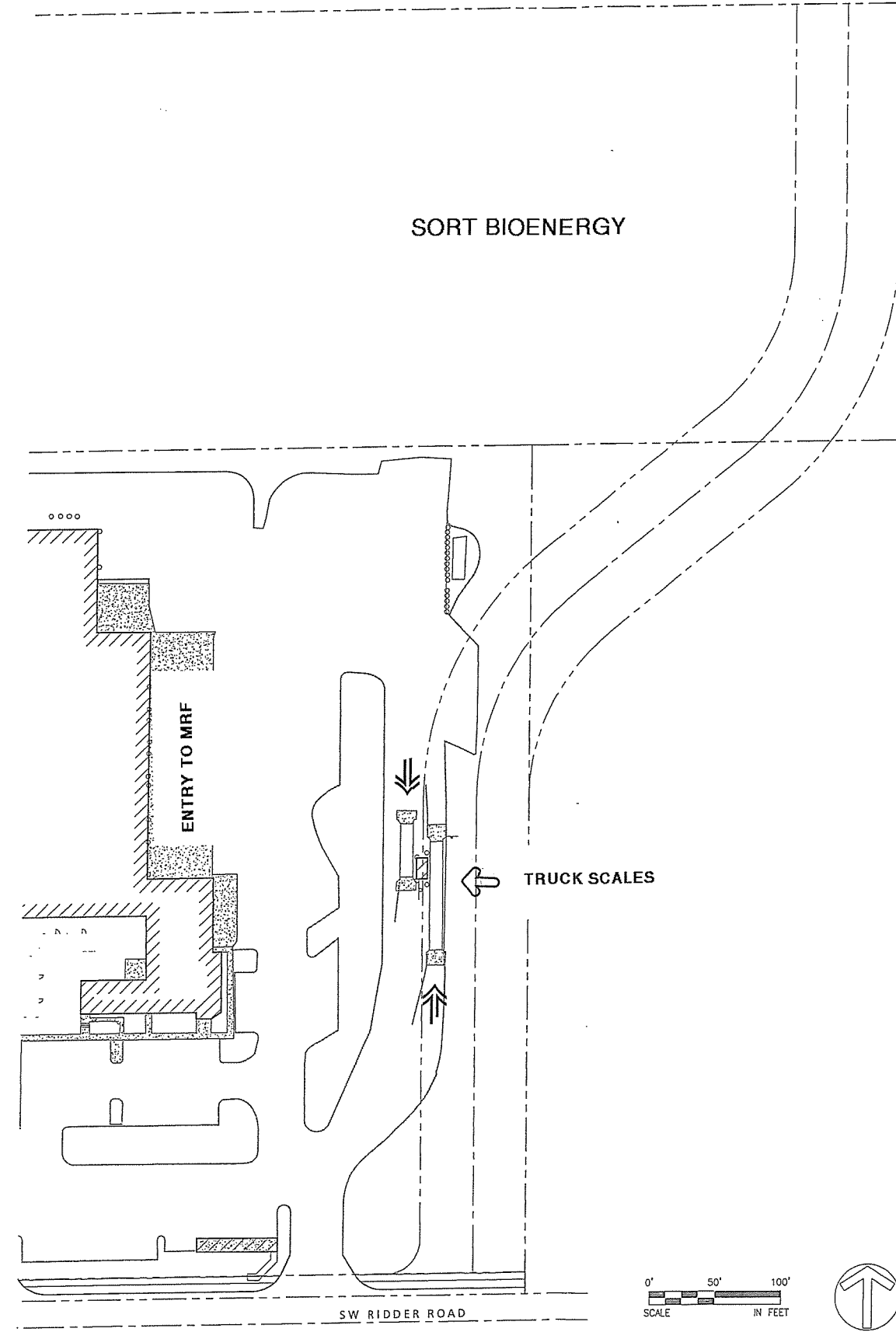
The 2013 TSP designates Kinsman Road as a Minor Arterial, and currently calls for its extension north of Boeckman Road to complete an arterial link with Day Road. The current anticipated alignment of this street extension is up the east side of Republic's properties. The applicant has initiated discussions with the City, as this alignment would result in significant site impacts, to the degree that it would force a complete reconfiguration of access and on-site circulation. There are two site impact issues associated with the Kinsman Road extension:

1. A significant portion of the existing operations, as well as the eastern portion of tl 600 would be lost to right-of-way. This is further compounded by the possibility that the City would shift the entire right-of-way onto Republic, in order to avoid impacts to the BPA substation.
2. The location of the Kinsman Road extension would force closure of Republic's eastern driveway. This driveway directly serves the scales, which all trucks entering and leaving the site must cross. From the scales, the trucks go directly to the MRF to off-load, and then back across the scales upon exit.

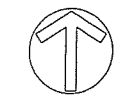
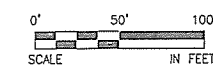
Consequently, if the eastern access were closed, the scales would have to be moved. The relocation of the scales would then force a complete reconfiguration of on-site access, as including to access in to and out of the MRF. But, such a reconfiguration would likely result in complete reconstruction of the MRF.



**KINSMAN RD EXTENSION - VERSION 2**  
 HORZ. 1"=50'



**KINSMAN RD EXTENSION - VERSION 1**  
 HORZ. 1"=50'



**ANNEXATION**

REPUBLIC SERVICES - PDI STAGE I  
 WASHINGTON COUNTY, OR

Designed by	SFG	Date	06/15/15
Drawn by	SFG	Date	06/15/15
Reviewed by	BEF	Date	06/15/15
Project No.	999-153	REF.	
Horiz. Scale:	1"=50'		
Vert. Scale:	99158 DJANNK		

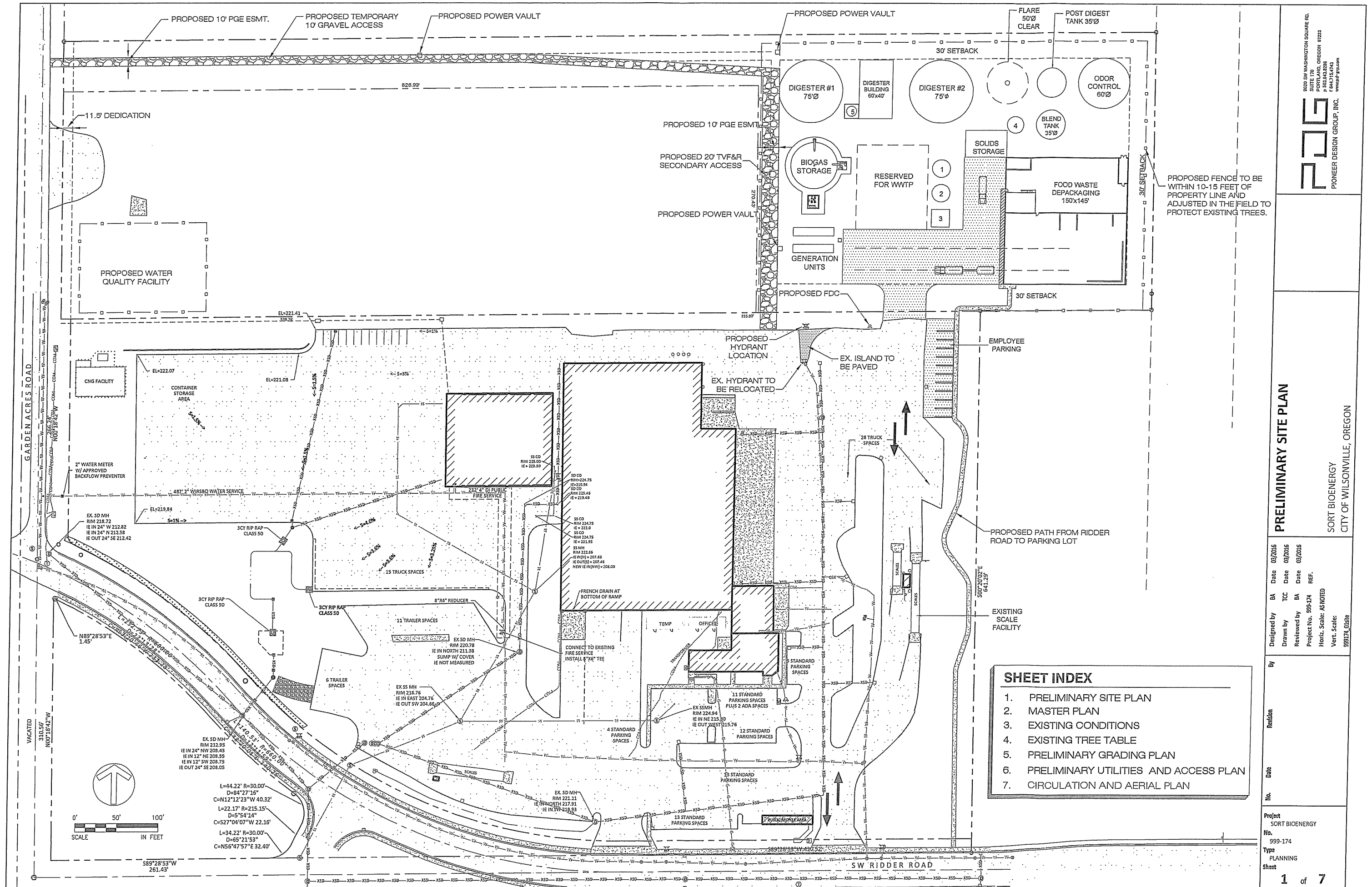
By	
Revision	
Date	
No.	

Project	REPUBLIC SERVICES
No.	999-153
Type	PLANNING
Sheet	<b>1</b> of <b>1</b>

9000 SW WASHINGTON SQUARE RD.  
 SUITE 170  
 PORTLAND, OREGON 97223  
 P 503.638.2888  
 F 503.638.2889  
 WWW.PDI.COM

PIONEER DESIGN GROUP, INC.





**PRELIMINARY SITE PLAN**

9200 SW WASHINGTON SQUARE RD.  
SUITE 170  
PORTLAND, OREGON 97223  
503.251.1842  
www.pdg.com

**PIONEER DESIGN GROUP, INC.**

Designed by	BA	Date	03/2016
Drawn by	TCC	Date	03/2016
Reviewed by	BA	Date	03/2016
Project No.	999-174	REF.	
Horiz. Scale:	AS NOTED		
Vert. Scale:	999174_0161e		

By	
Revision	
Date	

Project  
SORT BIOENERGY  
No. 999-174  
Type PLANNING  
Sheet  
**1** of 7

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2.	MASTER PLAN
3.	EXISTING CONDITIONS
4.	EXISTING TREE TABLE
5.	PRELIMINARY GRADING PLAN
6.	PRELIMINARY UTILITIES AND ACCESS PLAN
7.	CIRCULATION AND AERIAL PLAN

**ORDINANCE NO. 789**

**AN ORDINANCE OF THE CITY OF WILSONVILLE APPROVING A MINOR AMENDMENT TO WILSONVILLE'S 2013 TRANSPORTATION SYSTEM PLAN (TSP).**

WHEREAS, the City of Wilsonville desires to use best professional practices to ensure land development contributes to creating a safe and attractive transportation network that supports Wilsonville's economy and quality of life; and

WHEREAS, the City of Wilsonville adopted the 2013 Transportation System Plan on June 17, 2013; and

WHEREAS, the Wilsonville City Council held a work session on May 16, 2016 and public hearings on May 2, 2016 and May 16, 2016 to discuss and take public testimony on the proposed amendments; and

WHEREAS, the Wilsonville Planning Commission held a work session on March 9, 2016 and a public hearing on April 13, 2016 to discuss and take public testimony on the proposed amendments; and

WHEREAS, the City provided Public Hearing Notices to 1,002 property owners within the City limits, a list of interested parties and agencies, and posted the Notice in three locations throughout the City and on the City website; and

WHEREAS, the Wilsonville Planning Commission approved Resolution LP16-0001 recommending adoption of the proposed amendments at the public hearing on April 13, 2016; and

WHEREAS, the City Council having conducted public hearings on the proposed amendments on May 2, 2016 and May 16, 2016, and duly considering the entire record, herein finds that the proposed minor amendments to the TSP are in the best interest of the community by providing for development to contribute to the creation of a safe and multi-modal transportation network;

NOW, THEREFORE, BE IT RESOLVED, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

1. FINDINGS.

The above-recited findings and those findings and conclusions in the attached staff report, attached hereto as Exhibit A, are hereby adopted as findings of fact and conclusions of law.

2. DETERMINATION.

Based upon such findings, the City Council hereby adopts the amendment to Wilsonville's 2013 Transportation System Plan as shown in Exhibit B.

SUBMITTED to the Wilsonville City Council and read for the first time at a regular meeting thereof on May 2, 2016, and scheduled for a second reading at a regular meeting of the Council on May 16, 2016, commencing at the hour of 7:00 P.M. at the Wilsonville City Hall.

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

ENACTED by the City Council on the XX day of May, 2016 by the following votes:

Yes:-X-

No: -X-

\_\_\_\_\_  
Sandra C. King, MMC, City Recorder

DATED and signed by the Mayor this \_\_\_\_ day of \_\_\_\_, 2016.

\_\_\_\_\_  
TIM KNAPP, Mayor

SUMMARY OF VOTES:

Mayor Knapp -

Council President Starr -

Councilor Goddard -

Councilor Fitzgerald -

Councilor Stevens -

EXHIBITS:

- A. Staff Report
- B. Proposed Amendments to the 2013 Wilsonville TSP

DRAFT



117 Commercial Street NE  
 Suite 310  
 Salem, OR 97301  
 503.391.8773  
 www.dksassociates.com

## DRAFT MEMORANDUM

**DATE:** April 12, 2016

**TO:** Eric Mende, Capital Projects Engineer  
 Chris Neamtzu, Planning Director

**FROM:** Scott Mansur, P.E., PTOE  
 Jordin Ketelsen, EIT

**SUBJECT:** **Wilsonville TSP Additional Bike/Ped Project Amendment**

P15125-003

This memorandum discusses an additional project to be included in the Wilsonville Transportation System Plan (TSP) Amendment. This project would be categorized as a bicycle/pedestrian project and would entail providing set-aside funds to allow the City of Wilsonville to purchase strategically located properties that can facilitate future bicycle and pedestrian connections as these properties become available. The remainder of this memorandum outlines support for the inclusion of this project in the Wilsonville TSP Amendment as well as the necessary changes to the existing TSP document if the project was incorporated.

As outlined in Chapter 2 of the existing TSP document, policy areas including system design, connectivity, and active transportation support the addition of the aforementioned project. This project would help provide a safe, well-connected, and efficient system for all travel modes by adding pedestrian and bicycle connections throughout the city's transportation system. It would also improve access between neighborhoods, serve new development, and manage system performance as well as provide facilities that allow more people to walk and bike, not only as low-impact transportation choices, but also to benefit the health and economy of the community.

If this project is approved to be included in the city's TSP amendment, the following changes would be necessary. Revisions to existing TSP language are presented with deletions shown in ~~strikethrough~~ and additions or new code shown as underlined.

### ***Higher Priority Projects Table*** (Page v)

Add the following projects to this table:

- BW-15 Property Acquisitions for Bike/Ped Connectivity

### ***Table 5-6: Higher Priority Projects (Citywide) (Page 5-14)***

Add the following project and associated costs and descriptions:

- BW-15 Property Acquisitions for Bike/Ped Connectivity (\$1,000,000)

Provide set-aside funds to allow purchase of strategically located properties that can facilitate bicycle and pedestrian connections as these properties become available.



**From:** [Neamtzu, Chris](#)  
**To:** [Peter Hurley](#)  
**Cc:** [Kraushaar, Nancy](#); [Mende, Eric](#); [Bergeron, Tami](#)  
**Subject:** RE: PC meeting info.  
**Date:** Wednesday, April 13, 2016 12:50:34 PM  
**Attachments:** [FRED MEYER TIS FINAL 2008-08-19.pdf](#)  
[Adopted TRANSPORTATION Budget FY2015-16.pdf](#)

---

Hello Commissioner Hurley,

The original Master Plan from 2003 projected 2,390 units. The 2013 Villebois Village Master Plan shows 2,645 dwelling units at build-out. There have been numerous iterations of the master plan over the past decade which have affected the total master plan unit count. There were revisions related to moving the school to the north, then back to the east, there were revisions made to add the Grande Pointe/former LEC site as well. The governing legislatively adopted state statute requires not less than 2,300 dwelling units at build out. Since the project is not complete, and there are still significant parcels that have yet to obtain entitlements, a final unit count compared to the master plan is not obtainable. As of December 31, 2015 the city's records show that 1,562 units have been built.

Many of the individual phases request refinements as additional details are gathered from the SAP to the PDP. The more recent trend has been to detach units in the Village Center which has resulted in slightly fewer units when compared to the SAP. The most recent approval that changed unit numbers (PDP 4 North), which also reflected other refinements approved by DRB/Council since 2013, shows a current build-out projection of 2,593 units. The projection includes built and approved units, and density reflecting the Master Plan where land use approvals haven't been approved to establish final unit counts. Most the remaining areas awaiting final unit calculations as part of land use approvals are in the Village Center, where we anticipate some additional reduction in unit numbers.

Also attached are the FY 15-16 adopted budget pages for SMART.

Based on your follow up email, I have also attached the traffic analysis for the Fred Meyer shopping center. What that report will not show you is the ramp metering set by ODOT at 1,260 vehicles per hour. The problems all start with traffic backing up from the southbound ramp meter, or when I-5 south is stacked and vehicles cannot merge quickly enough into the stagnant flow of traffic.

Please let me know what other specific questions there may be.

Thank you,

**Chris Neamtzu, AICP**

Planning Director

City of Wilsonville | Community Development Department

503-570-1574 | [neamtzu@ci.wilsonville.or.us](mailto:neamtzu@ci.wilsonville.or.us)

**From:** Peter Hurley [<mailto:pkhurley1@gmail.com>]  
**Sent:** Sunday, April 10, 2016 12:54 PM  
**To:** Neamtzu, Chris  
**Subject:** PC meeting info.

Hey Chris, for the upcoming Wed. PC there are two things that I am interested in getting info. on; and I don't need it before the meeting. I want us all to be able to look at these numbers and talk about them if others are interested.

1. What are the original housing numbers proposed for Villebois when it very first passed city council? What are the current housing numbers built and under construction? What does this put the final projected number? And finally how many of the development permits were done with variances that either added or subtracted dwelling units?
2. The full current SMART budget.

Thanks.

--

Peter Hurley  
[pkhurley1@gmail.com](mailto:pkhurley1@gmail.com)  
503-349-4168



# Fred Meyer

## Transportation Impact Study



Prepared by

**DKS Associates**  
TRANSPORTATION SOLUTIONS

**August 2008**

August 19, 2008

Steve Adams, P.E.  
Deputy City Engineer  
City of Wilsonville  
29799 Town Center Loop East  
Wilsonville, OR 97070

**Subject: Wilsonville Fred Meyer Transportation Impact Study**

P08015-009-000

Dear Steve,

DKS Associates is pleased to submit this traffic impact study for the proposed Fred Meyer development located on the northeast corner of Boones Ferry Road and Bailey Street in the City of Wilsonville, Oregon. One reproducible copy has been included for your use. Please feel free to call if you have any questions or comments regarding this study.

Sincerely,

**DKS Associates**  
A Corporation



Scott Mansur, P.E., P.T.O.E.  
Transportation Engineer



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## CHAPTER 1: INTRODUCTION AND SUMMARY

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This study evaluates the transportation impacts for the proposed Fred Meyer development located on the northeast corner of Boones Ferry Road and Bailey Street in the City of Wilsonville, Oregon. It also recommends mitigation measures to offset the impacts.

The currently proposed development includes a 155,881 square-foot Fred Meyer building (which includes the Fred Meyer store as well as 10,100 square feet of additional tenant space<sup>1</sup>), six other buildings (which include 50,879 square feet of retail/office use and a 3,316 square-foot restaurant), and 60 residential apartment units.<sup>2</sup> The site has four access points to the public street system: two on SW Boones Ferry Road and two on SW Bailey Street.

The study area for the project is shown in Figure 1 and was determined based on discussions with City staff. Within the study area, there are seven study intersections where traffic operations are analyzed:

- Boones Ferry Road/Wilsonville Road
- I-5 Southbound Ramps/Wilsonville Road
- I-5 Northbound Ramps/Wilsonville Road
- Town Center Loop West/Wilsonville Road
- Boones Ferry Road/Fred Meyer north access
- Boones Ferry Road/Fred Meyer south access
- Boones Ferry Road/Bailey Street

Project traffic impacts were evaluated at the study intersections for the weekday PM peak hour. The impact analysis includes trip generation, trip distribution, PM peak hour project trips through the two City of Wilsonville I-5 interchange areas, and future traffic operating conditions. The analysis also accounts for developments in the area that have Stage II approval, including those under construction but not yet occupied. Recommended mitigations are then described and analyzed. Included in the mitigations section of Chapter 3 is a conceptual cross-section layout for Boones Ferry Road between Bailey Road and Wilsonville Road (see Figure 5).

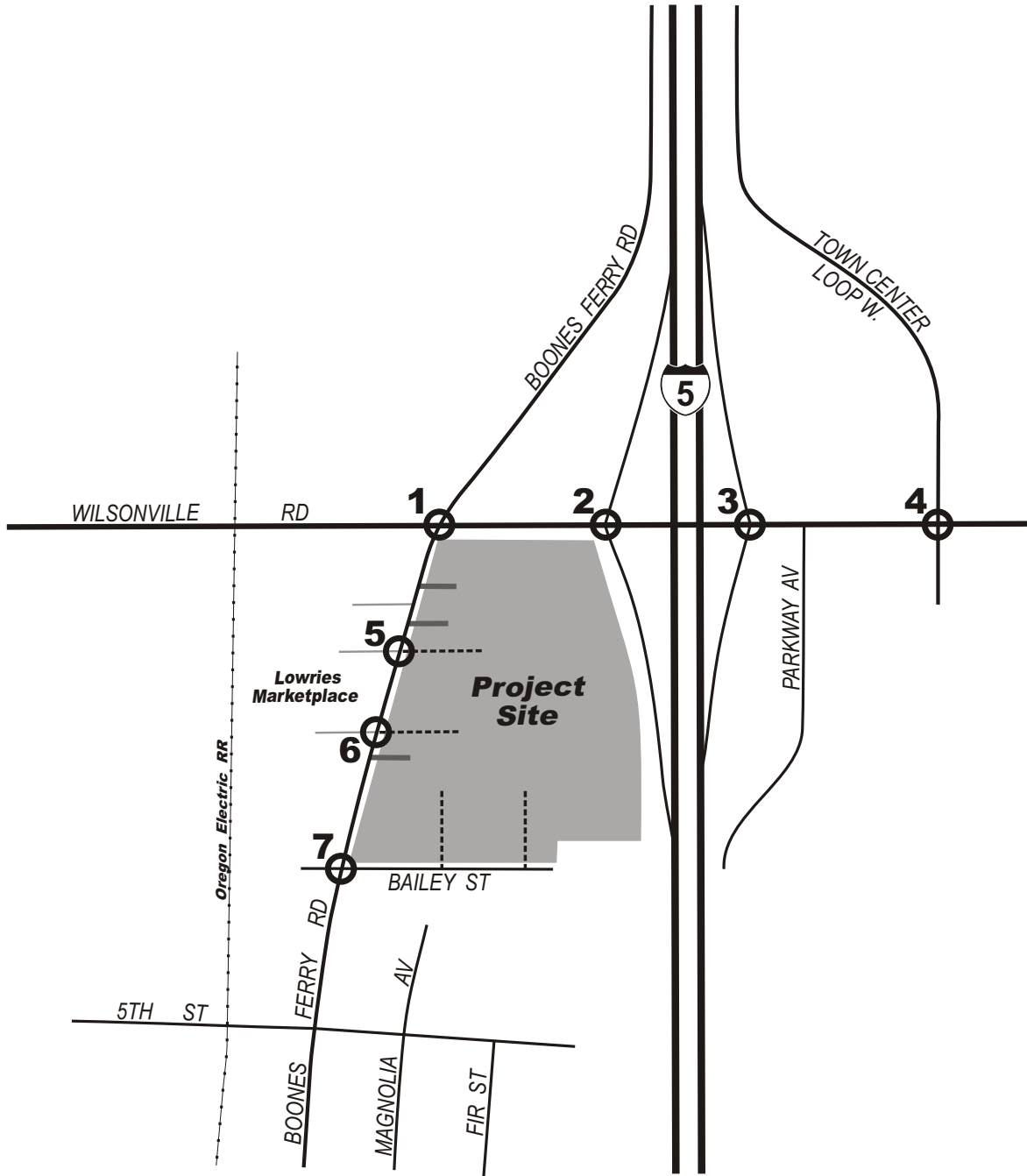
Other issues addressed in this report include Saturday peak hour safety analysis and a project site evaluation (which addresses access location and spacing), sight distance, project frontage adjustments, traffic signal warrants, internal circulation, and parking. At the end of the report, a summary is presented of the recommended transportation mitigation measures that are expected to offset the negative transportation impacts of future traffic growth.

Table 1 lists important characteristics of the study area and proposed project.

---

<sup>1</sup> Tenant space within a Fred Meyer building is typically occupied by businesses providing additional goods or services, such as coffee shops or banks.

<sup>2</sup> Email from Christine McKelvey, Group Mackenzie, July 2, 2008.



- LEGEND**
- 1** ○ - Study Intersection & Number
  - - Proposed Fred Meyer Driveway
  - - Existing Lowries Driveway
  - - Existing Driveway to be Removed

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**Figure 1**

**STUDY AREA**



**TABLE 1: Study Area and Proposed Project Characteristics**

<b><u>Study Area</u></b>	
<b>Number of Study Intersections</b>	7
<b>Analysis Periods</b>	Weekday PM Peak (4:00 p.m. to 6:00 p.m.) Saturday Midday Peak (11:00 a.m. to 1:00 p.m.)
<b><u>Proposed Development</u></b>	
<b>Total Weekday PM Peak Hour Project Trips</b>	1,255 (627 in, 628 out)
<b>Non Pass-by<sup>a</sup> Weekday PM Peak Hour Project Trips</b>	937 (468 in, 469 out)
<b>Net New Weekday PM Peak Hour Project Trips</b>	488 (244 in, 244 out)
<b>Estimated Weekday PM Peak Hour Project Trips Through I-5/Wilsonville Road Interchange<sup>b</sup></b>	612 (768 new trips – 156 grandfathered trips)
<b>Estimated Weekday PM Peak Hour Project Trips Through I-5/Elligsen Road Interchange</b>	2
<b>Vehicle Access Points</b>	Four full access points: two on SW Boones Ferry Road and two on SW Bailey Street.
<b><u>Project Vicinity</u></b>	
<b>Pedestrian Facilities</b>	Sidewalks to be constructed along project frontage of Boones Ferry and Bailey Street with connection to Wilsonville Road.
<b>Bicycle Facilities</b>	Sidewalks and bike lanes on Boones Ferry Road and Wilsonville Road
<b>Nearest Transit Stop</b>	Boones Ferry Road (SMART Routes 1X and 203)

<sup>a</sup> Non-Pass-by project trips account for pass-by and internal trip reductions.

<sup>b</sup> The Wilsonville Road interchange area includes the Boones Ferry Road/Wilsonville Road intersection. Some of the new project trips that pass through this intersection are diverted trips.

## Project Traffic Impact

To determine project impact at the study intersections, traffic operating conditions were analyzed at the study intersections during the weekday PM peak hour for the following four scenarios:

- Existing Conditions
- Existing plus Project
- Existing plus Stage II
- Existing plus Project plus Stage II

The study intersection operating conditions (assuming the existing roadway network) for the “Existing,” “Existing plus Stage II,” and “Existing plus Project plus Stage II” scenarios are listed in Table 2. Under existing conditions, all study intersections meet the City of Wilsonville LOS “D” standard and the Oregon Department of Transportation (ODOT) 0.99 volume-to-capacity (V/C) standard during the PM peak hour. With the addition of stage II traffic, both northbound and southbound ramps exceed operating standards. When project traffic is also added, all four study intersections on Wilsonville Road exceed operating standards. In addition, the two Fred Meyer development accesses on Boones Ferry Road operate below desired levels.

**TABLE 2: Study Intersection Operating Conditions (PM Peak Hour)**

Intersection	Operating Standard	Existing Conditions			Existing + Stage II			Existing + Stage II + Project		
		Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C
<b>Signalized</b>										
Boones Ferry Rd / Wilsonville Rd	LOS D	36.0	D	0.77	44.5	D	0.89	>80	<b>F</b>	>1.0
I-5 SB Ramps / Wilsonville Rd	LOS D, 0.99 V/C	36.1	D	0.90	79.1	<b>E</b>	<b>&gt;1.0</b>	>80	<b>F</b>	<b>&gt;1.0</b>
I-5 NB Ramps / Wilsonville Rd	LOS D, 0.99 V/C	37.2	D	0.91	70.9	<b>E</b>	<b>&gt;1.0</b>	>80	<b>F</b>	<b>&gt;1.0</b>
Town Center Loop W / Wilsonville Rd	LOS D	37.7	D	0.80	51.2	D	0.94	56.2	<b>E</b>	0.97
<b>Unsignalized</b>										
Boones Ferry Rd / North Project Access	-	12.7	A/B	0.13	13.9	A/B	0.18	>50	A/F	>1.0
Boones Ferry Rd / South Project Access	-	11.9	A/B	0.14	12.4	A/B	0.15	>50	A/F	0.71
Boones Ferry Rd / Bailey St	LOS D	10.9	A/B	0.06	11.6	A/B	0.06	13.8	A/B	0.12
<b>Signalized intersections:</b> Delay = Average Stopped Delay per Vehicle (sec) for All Movements LOS = Level of Service of Intersection V/C = Volume-to-Capacity Ratio of Intersection <b>Bold Underlined</b> values do not meet standards.					<b>Unsignalized intersections:</b> Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement LOS = Level of Service of Major Street/Minor Street V/C = Volume-to-Capacity Ratio of Worst Movement <b>Bold Underlined</b> values do not meet standards.					

## Planned Wilsonville Road Improvements

Due to capacity constraints at the I-5/Wilsonville Road interchange, improvements are planned that will provide additional capacity along Wilsonville Road between Boones Ferry Road and Town Center Loop West. Recently, the City has signed an intergovernmental agreement to construct the first phase of improvements, which will consist of a Wilsonville Road 6-lane enhanced alternative that focuses on ramp improvements and on adjustments to intersection lane configurations.

For the four study intersections on the Wilsonville Road corridor, a Synchro™ model of the improved Wilsonville Road cross-section was used to analyze intersection operating conditions for each of the three

future PM peak hour traffic scenarios (i.e., “Existing plus Project”, “Existing plus Stage 2”, and “Existing plus Project plus Stage 2”). The results of the analysis are listed in Table 3. As shown in the table, all four study intersections on Wilsonville Road comply with the City of Wilsonville LOS D operating standard for each of the three scenarios. The two I-5 ramps also meet the Oregon Department of Transportation (ODOT) 0.99 volume-to-capacity (V/C) standard.

**TABLE 3: Future Operating Conditions of Wilsonville Road Intersections with Six-Lane Enhanced Alternative Improvements (PM Peak Hour)**

Intersection	Operating Standard	Existing + Project + Improvements			Existing + Stage II + Improvements			Existing + Project + Stage II + Imps.		
		Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C
<b>Signalized</b>										
Boones Ferry Rd / Wilsonville Rd	LOS D	37.7	D	0.66	31.1	C	0.67	39.3	D	0.75
I-5 SB Ramps / Wilsonville Rd	LOS D	20.6	C	0.64	22.0	C	0.72	22.7	C	0.76
I-5 NB Ramps / Wilsonville Rd	LOS D	22.9	C	0.64	23.6	C	0.74	24.7	C	0.78
Town Center Loop W / Wilsonville Rd	LOS D	35.7	D	0.66	40.3	D	0.75	43.2	D	0.78
Delay = Average Stopped Delay per Vehicle (sec) LOS = Level of Service of Intersection		V/C = Volume-to-Capacity Ratio of Intersection <b><u>Bold Underlined</u></b> values do not meet standards.								

### Project Impact Mitigations

To mitigate impacts at the north and south project accesses onto Boones Ferry Road, three Boones Ferry Road site frontage improvements are needed (these are in addition to the planned improvements to Boones Ferry Road that are shown on the Fred Meyer site plan):

- At the north Fred Meyer access, install a median along Boones Ferry Road to restrict movements to right-in/right-out for both the Lowries Marketplace and Fred Meyer developments; this will increase safety by removing turn lane needs at this access and will provide for better traffic flow (i.e. queuing spillback that impact Wilsonville Road). It will also accommodate turn lane placement and storage needs for the Boones Ferry Road/Wilsonville Road intersection’s northbound approach traffic. Also, if desired, the north Fred Meyer access may be converted to a right-out only driveway and narrowed to one lane, which would allow additional space on the project site that could be used to increase a building pad size, the number of parking stalls, etc.
- Between the north and south Fred Meyer accesses, extend the second northbound through lane (which becomes a right turn lane at the Wilsonville Road intersection) to ensure approximately 600 feet of storage is provided for the northbound right turn lane at Wilsonville Road. This distance meets the short-term Fred Meyer needs and the long-term 20-year Wilsonville Road Interchange design needs.
- At the south Fred Meyer access, install a traffic signal to facilitate egress movements from the Lowries and Fred Meyer developments. There should also be two egress lanes (i.e., a right turn lane and a through-left lane). It is expected that warrants will be met in the near future due to the

addition of nearby developments. Installing the traffic signal with the Boones Ferry Road improvements will assure continuity between the improvements and the traffic signal construction. The signal should be coordinated with the Boones Ferry Road/Wilsonville Road signal. To enable the coordination, interconnect conduit and cable will need to be installed between the signals.

A conceptual layout of Boones Ferry Road that shows all improvements and mitigations is presented in Figure 5, which can be found in Chapter 3: Impact Analysis. The mitigated analysis results are listed in Table 4 for the north Fred Meyer access and the Boones Ferry Road/Bailey Street intersection and in Table 5 for both traffic control options at the south access (i.e., a traffic signal and four-way stop control). As shown in the tables, the three intersections have good operation levels and the two traffic control options for the south access are comparable to one another. The main benefits from the installation of the traffic signal are the ability to service platoon flow from the Boones Ferry Road/Wilsonville Road intersection and increased future capacity that will be available.

**TABLE 4: Boones Ferry Road Mitigated Future Operating Conditions (PM Peak Hour)**

Intersection	Operating Standard	Existing + Project + Stage II + Mitigated		
		Delay	LOS	V/C
<b>Unsignalized – Two-way Stop Control</b>				
Boones Ferry Rd / North Project Access	-	13.8	A/B	0.41
Boones Ferry Rd / Bailey St	LOS D	17.0	A/C	0.15
Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement LOS = Level of Service of Major Street/Minor Street		V/C = Volume-to-Capacity Ratio of Worst Movement <b><u>Bold Underlined</u></b> values do not meet standards.		

**TABLE 5: South Project Access Mitigated Future Operating Conditions (PM Peak Hour)**

Traffic Control at South Project Access	Existing + Project + Mitigated			
	Delay	LOS	V/C	
Signalized (Option 1)	22.0	C	0.49	
Four-way Stop Control (Option 2)	20.1	C	0.75	
Delay = Average Stopped Delay per Vehicle (sec) for All Movements LOS = Level of Service of Intersection		V/C = Volume-to-Capacity Ratio of Intersection <b><u>Bold Underlined</u></b> values do not meet standards.		

### Additional Project Oriented Transportation Mitigations

In addition to the Boones Ferry Road mitigations, the following project related measures would typically be required as conditions of approval if the project were approved:

**Site Accesses**

- The south Fred Meyer access on Boones Ferry Road should be aligned with the south Lowries Marketplace driveway (i.e., near Albertsons). In addition, regarding the Fred Meyer accesses on Bailey Street, the east access should be aligned with the driveway on the south side of the street and the west access should be located in a manner that it does not create conflicting turn movements with any nearby driveways on the south side of the street.
- The radius for the right-out movement at the north access on Boones Ferry Road should be designed to allow trucks to perform a right turn without encroaching on neighboring lanes.

**Intersection Alignment**

- Improvements to the Boones Ferry Road/Bailey Street intersection should be constructed to ensure that the east and west legs of Bailey Street are properly aligned (these legs currently are offset).

**Sight Distance**

- All proposed site driveways should meet American Association of State Highway and Transportation Officials (AASHTO) sight distance requirements<sup>3</sup>, and prior to occupancy, sight distance at the access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.
- The sight triangle at each driveway should be clear of objects (large signs, landscaping, parked cars, etc.) that could potentially limit vehicle sight distance.

**Boones Ferry Road Adjustments**

- The Fred Meyer development site frontage will require adjustments to accommodate the increased cross-section on Boones Ferry Road (as shown in Figure 5, which is found in Chapter 3: Impact Analysis). Adjustments at the southwest corner of the site may also be needed to ensure that the east and west legs of the Boones Ferry Road/Bailey Street intersection are properly aligned (currently, these legs are offset). Because the site plan does not show the curb locations on the west side of Boones Ferry Road or south side of Bailey Street, it is not clear what exact adjustments are needed.

**Internal Circulation**

- Site plan changes are recommended to convert the south access into the main access. One optional method for making the conversion is presented in Figure 8 (found in Chapter 5: Site Evaluation), which shows two conceptual changes: (1) realigning the internal roadways so that priority is given to vehicles coming and going to the south access and (2) installing four-way stop-control at the internal intersection near the south access.
- The site plan is not clear in the vicinity of the buildings, but it appears that the site would provide adequate pedestrian circulation. It should be ensured that the site indeed provides pedestrian access to the buildings and to the nearby crosswalks and paths (in particular, to the paths on the north side of the site that connect to Wilsonville Road).
- All sidewalks within the site should conform to ADA requirements.<sup>4</sup>

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<sup>3</sup> *Geometric Design of Highways and Streets*, AASHTO, 2004; Case B1, p. 661.

<sup>4</sup> *ADA Accessibility Guidelines for Buildings and Facilities*, Department of Justice, January 1998.



**Traffic Signal Warrants**

- Though signal warrants are not met at any unsignalized study intersection for the “Existing plus Project plus Stage II” scenario, it was determined that the peak hour warrant will be met in the near future at the south Fred Meyer access; therefore, a traffic signal should be installed in conjunction with the Fred Meyer development. This will assure continuity between the Boones Ferry Road improvements and the traffic signal construction. The signal should be coordinated with the Boones Ferry Road/Wilsonville Road signal. To enable the coordination, interconnect conduit and cable will need to be installed between the signals.

**Parking**

- The proposed site provides only 885 parking stalls. This is not sufficient to meet City of Wilsonville code requirements, which specifies that a minimum of 962 stalls should be provided (based on the types of uses and the total building square footage of each use). During peak parking periods (such as holiday shopping periods), not meeting code requirements may cause parking demand to exceed the number of available stalls and oblige vehicles to park in adjacent commercial and/or residential areas; therefore, either 962 parking stalls should be provided to reduce potential off site parking impacts or a parking management plan should be prepared outlining how peak parking demand needs shall be met.
- The 138 bicycle parking spaces meet City code requirements and should be distributed throughout the development and should be located near building entrances in order to provide convenient access to each building.

## CHAPTER 2: EXISTING CONDITIONS

The proposed Fred Meyer development is located on the northeast corner of Boones Ferry Road and Bailey Street in the City of Wilsonville, Oregon. The majority of the site is currently vacant, except for a church and a bank on the west edge. The church currently has one access to Boones Ferry Road and the bank has two accesses to Boones Ferry Road.

In consultation with City staff, seven existing study intersections were selected for analysis.

- Boones Ferry Road/Wilsonville Road
- I-5 Southbound Ramps/Wilsonville Road
- I-5 Northbound Ramps/Wilsonville Road
- Town Center Loop West/Wilsonville Road
- Boones Ferry Road/Fred Meyer north access
- Boones Ferry Road/Fred Meyer south access
- Boones Ferry Road/Bailey Street

The following sections summarize the current roadway network, traffic volumes, traffic operating conditions, collision history, and public transit service in the study area, with supporting detail (i.e. traffic counts and level of service calculations) provided in the appendix.

### Roadway Network

Key characteristics of the study area roadways are listed in Table 6.

**TABLE 6: Study Area Roadway Network Summary**

Roadway	Wilsonville Classification <sup>5</sup>	Cross Section	Posted Speed	On-Street Parking	Sidewalks	Bike Lanes
Interstate-5 (I-5)	Freeway	6 Lanes	65 mph	No	No	No
Wilsonville Rd	Major Arterial	5 Lanes	25-35 mph	No	Yes	Yes
Boones Ferry Rd <sup>a</sup>	Major Collector	2 to 3 Lanes	35 mph	No	West Side	West side
Town Center Lp W <sup>a</sup>	Major Arterial	5 Lanes	35 mph	No	Yes	No
Bailey Street	Local Street	2 Lanes	Not Posted	No	South Side	No

<sup>a</sup> The City's *Bicycle and Pedestrian Master Plan*<sup>6</sup> designates the portions of Boones Ferry Road and Wilsonville Road adjacent to the Fred Meyer site as community walkways and bikeways.

### PLANNED IMPROVEMENTS

The City of Wilsonville Transportation System Plan (TSP) identifies potential future improvements to the I-5 Wilsonville Road Interchange, which currently has insufficient capacity to meet the demand of future

<sup>5</sup> *City of Wilsonville Transportation Systems Plan*, Figure 4.8, Adopted by City Council on June 2, 2003.

<sup>6</sup> *Bicycle and Pedestrian Master Plan*, Alta Planning and Design, Adopted December 2006; replaces Chapter 5 of City of Wilsonville Transportation System Plan.

developments.<sup>7</sup> The City has signed an intergovernmental agreement to construct the first phase of improvements, which consists of a Wilsonville Road 6-lane enhanced alternative that focuses on ramp improvements and on adjustments to intersection lane configurations.

## Existing Traffic Volumes

Traffic counts were conducted at study area intersections during the weekday PM and Saturday peak periods.<sup>8</sup> The existing PM peak hour traffic volumes are shown in Figure 2, and the Saturday peak hour traffic volumes are discussed later in Chapter 4: Weekend Safety Analysis. Detailed traffic counts are included in the appendix.

## Existing Traffic Operating Conditions

Existing traffic operating conditions were analyzed at the existing study intersections. Intersections are the focus of the traffic analysis because they are the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is nearly always diminished in their vicinity. Before the analysis results of the study intersections are presented, discussion is provided for two important analysis issues: (1) intersection performance measures (definitions of typical measures) and (2) required operating standards (per roadway, as specified by the agency with roadway jurisdiction).

### INTERSECTION PERFORMANCE MEASURES

Level of service (LOS) ratings and volume-to-capacity (V/C) ratios are two commonly used performance measures that provide a good picture of intersection operations. In addition, they are often incorporated into agency mobility standards. Descriptions are given below:

- **Level of service (LOS):** A “report card” rating (A through F) based on the average delay experienced by vehicles at the intersection.<sup>9</sup> LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. LOS D and E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity. This condition is typically evident in long queues and delays.
- **Volume-to-capacity (V/C) ratio:** A decimal representation (typically between 0.00 and 1.00) of the proportion of capacity that is being used (i.e., the saturation) at a turn movement, approach leg, or intersection. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases and performance is reduced. If the ratio is greater than 1.00, the turn movement, approach leg, or intersection is oversaturated and usually results in excessive queues and long delays.

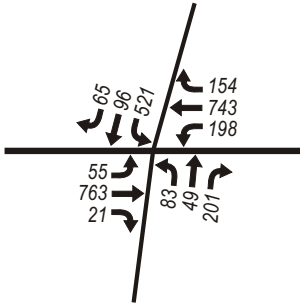
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<sup>7</sup> *City of Wilsonville Transportation Systems Plan*, Entranco, Adopted June 2, 2003; Tables 4.g and 4.k, Project C-30

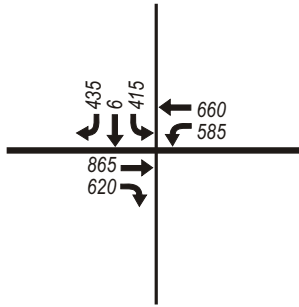
<sup>8</sup> PM peak hour turn movement counts were collected at the study intersections from 4:00 p.m. to 6:00 p.m. on January 29, 2008; June 24, 2008; or July 1, 2008. Count dates are shown in detailed turn movement count sheets in appendix. Saturday peak hour counts were collected on July 12, 2008.

<sup>9</sup> A description of Level of Service (LOS) is provided in the appendix and includes a list of the delay values (in seconds) that correspond to each LOS designation.

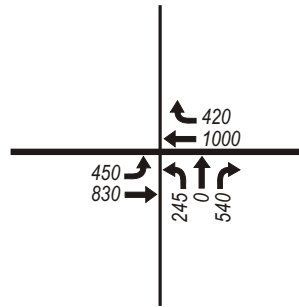
**1. WILSONVILLE RD @ BOONES FERRY RD**



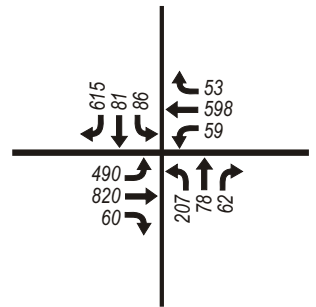
**2. WILSONVILLE RD @ I-5 SB ON/OFF RAMP**



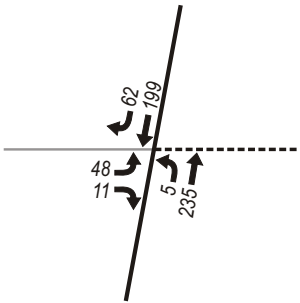
**3. WILSONVILLE RD @ I-5 NB ON/OFF RAMP**



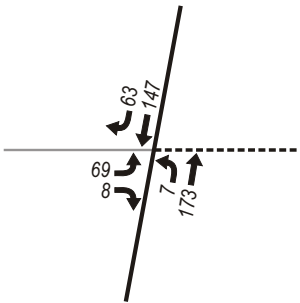
**4. WILSONVILLE RD @ TOWN CENTER LOOP W.**



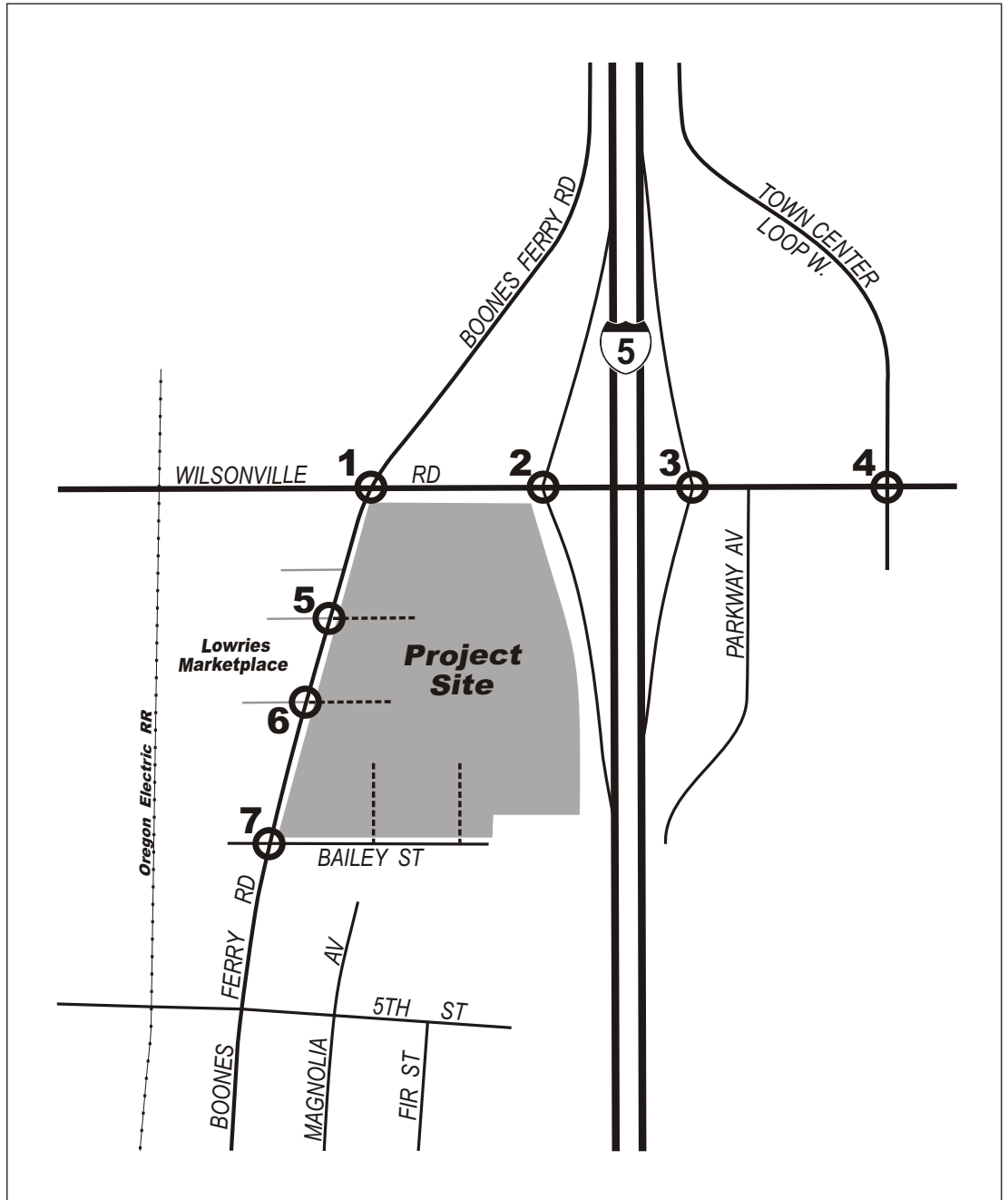
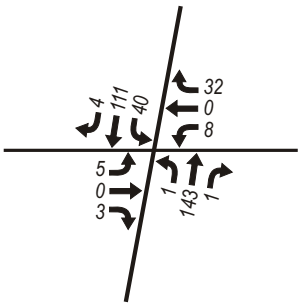
**5. BOONES FERRY RD @ LOWRIES/N. PROJECT DRIVEWAY**



**6. BOONES FERRY RD @ LOWRIES/S. PROJECT DRIVEWAY**



**7. BOONES FERRY RD @ BAILEY ST**



**LEGEND**

- 1** - Study Intersection & Number
- Proposed Fred Meyer Driveway
- Existing Lowries Driveway
- ← 00 - PM Peak Hour Traffic Volume

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**Figure 2**

**2008 EXISTING  
PM PEAK HOUR  
TRAFFIC VOLUMES**

## REQUIRED OPERATING STANDARDS

All study intersections of public streets are required to meet the City of Wilsonville's operating standard. For peak periods, the City's minimum acceptable level of service (LOS) is LOS D.<sup>10</sup> It should be noted that while project driveways are not required to meet the City's LOS standard, it is still highly encouraged.

## EXISTING OPERATING CONDITIONS

The existing traffic operating conditions at the study intersections were determined for the PM peak hour based on the *2000 Highway Capacity Manual* methodology<sup>11</sup> for signalized and unsignalized intersections. The conditions include the estimated average delay, level of service (LOS), and volume-to-capacity (V/C) ratio of each study intersection and are listed in Table 7. As shown in the table, all study intersections currently comply with the City of Wilsonville LOS D operating standard.

**TABLE 7: Existing Operating Conditions (PM Peak Hour)**

Intersection	Operating Standard	Existing Conditions		
		Delay	LOS	V/C
<b>Signalized</b>				
Boones Ferry Rd / Wilsonville Rd	LOS D	36.0	D	0.77
I-5 SB Ramps / Wilsonville Rd	LOS D, 0.99 V/C	36.1	D	0.90
I-5 NB Ramps / Wilsonville Rd	LOS D, 0.99 V/C	37.2	D	0.91
Town Center Loop W / Wilsonville Rd	LOS D	37.7	D	0.80
<b>Unsignalized</b>				
Boones Ferry Rd / North Project Access	-	12.7	A/B	0.13
Boones Ferry Rd / South Project Access	-	11.9	A/B	0.14
Boones Ferry Rd / Bailey St	LOS D	10.9	A/B	0.06
<b>Signalized intersections:</b>		<b>Unsignalized intersections:</b>		
Delay = Average Stopped Delay per Vehicle (sec) for All Movements		Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement		
LOS = Level of Service of Intersection		LOS = Level of Service of Major Street/Minor Street		
V/C = Volume-to-Capacity Ratio of Intersection		V/C = Volume-to-Capacity Ratio of Worst Movement		
<b><u>Bold Underlined</u></b> values do not meet standards.		<b><u>Bold Underlined</u></b> values do not meet standards.		

## EXISTING QUEUING OBSERVATIONS

Currently, the vehicle queues in the westbound through lanes on Wilsonville Road at the I-5 southbound ramp exceed the available storage.<sup>12</sup> Queues routinely spill back into the Wilsonville Road/Town Center Loop West intersection due to large demand of westbound left turning vehicles destined for I-5

<sup>10</sup> *City of Wilsonville Code*, City of Wilsonville Section 4.140, p.163.

<sup>11</sup> *Guidelines for the Preparation of Transportation Impact Analyses*, City of Salem, Effective December 28, 1994.

<sup>12</sup> Field observations by DKS Associates, May 2008.



southbound. The westbound through vehicle queues on Wilsonville Road at Town Center Loop West currently fill the existing storage to Rebekah Street.

## Collision History

The collision histories of the study intersections were obtained for 2004 through 2006 from the Oregon Department of Transportation (ODOT) Crash Analysis and Reporting Unit. Based on the collision data and peak hour traffic counts, collision rates were estimated at the study intersections. A rate greater than or equal to 1.0 collision per million entering vehicles (MEV) generally indicates a higher than average collision rate. As shown in Table 8, none of the study intersections have collision rates above 1.0. The table also lists the breakdown of collisions by severity. As shown, between 2004 and 2006, most collisions caused property damage only, and there were no fatal collisions reported.

**TABLE 8: Study Area Intersection Collisions (2005-2007)**

Intersection	Collisions (by Severity)				Collisions Per year	Collision Rate <sup>b</sup>
	Fatal	Injury	PDO <sup>a</sup>	Total		
<b>Signalized Intersections</b>						
Boones Ferry Rd / Wilsonville Rd	0	0	5	5	1.7	0.15
I-5 SB Ramps / Wilsonville Rd	0	3	8	11	3.7	0.29
I-5 NB Ramps / Wilsonville Rd	0	6	7	13	4.3	0.34
Town Center Lp W / Wilsonville Rd	0	5	5	10	3.3	0.30
<b>Unsignalized Intersections</b>						
Boones Ferry Rd / Bailey St	0	0	0	0	0.0	0.00

<sup>a</sup> PDO = Property damage only.

<sup>b</sup> Collision rate = average annual collisions per million entering vehicles (MEV); MEV estimates based on PM peak-hour traffic count.

<sup>c</sup> One collision at Bridge Street involved a bicyclist who was injured.

## Public Transit Service

South Metro Area Rapid Transit (SMART) operates several fixed routes that serve Wilsonville and the surrounding area.<sup>13</sup> The SMART bus stop closest to the project site is located on Boones Ferry Road adjacent to the Lowries Marketplace; it is between the two proposed Fred Meyer access driveways. The bus stop includes a shelter and bus pullout. This stop services Route 204, which connects the east and west City limits. There is also a bus stop to the northwest of the project site at the Wilsonville Road/Boones Ferry Road intersection; this stop services Route 203.

<sup>13</sup> SMART operates several fixed routes that serve Wilsonville and make connections to TriMet in Portland, Cherriots in Salem, and Canby Area Transit. The main transfer locations are Commerce Circle (Route 203, which provides service within Wilsonville from the City Hall Park and Ride to Commerce Circle via Boones Ferry Road and 95<sup>th</sup> Avenue), Tualatin Park and Ride (Route 201), Barbur Blvd. Transit Center (Route 201), Salem Transit Center (Route 1X, which provides service throughout Wilsonville and connects to the Salem Transit Mall), and Canby Transit Center. In addition, Route 204 provides service on Wilsonville Road and Town Center Loop connecting the east and west city limits. SMART also operates a dial-a-ride system that operates on a demand-responsive basis; SMART Web Page: <http://www.ridesmart.com>.

## CHAPTER 3: IMPACT ANALYSIS

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This chapter reviews the impact that the proposed Fred Meyer would have on the study area transportation system in the City of Wilsonville. Although the development would generate traffic throughout the week, the weekday PM peak hour was the main period analyzed since this is when the greatest impact is expected (the sum of project traffic and traffic on adjacent streets is generally greatest during this period).

The PM peak hour analysis includes PM peak hour trip generation, trip distribution, capacity analysis of study intersections, and queuing analysis. First, the proposed development is described.

### Proposed Development

The Fred Meyer development is located on the northeast corner of Boones Ferry Road and Bailey Street in the City of Wilsonville, Oregon. The project site is currently vacant except for two buildings: (1) an existing church building that will remain and may serve as a community center or retail space and (2) a U.S. Bank building that will be removed in conjunction with the development.

The proposed development includes a 155,881 square-foot Fred Meyer building (which includes the Fred Meyer store as well as 10,100 square feet of additional tenant space<sup>14</sup>), six other buildings (which include 50,879 square feet of retail/office use and a 3,316 square-foot restaurant), and 60 residential apartment units.<sup>15</sup> A site plan is included in the appendix. Compared to the proposed uses analyzed in the 2004 Fred Meyer traffic study<sup>16</sup>, the current proposal has a Fred Meyer building that is 11,206 square feet smaller, a total of 41,879 more square feet of retail space (spread among six buildings instead of the previous four buildings), 2,684 less square feet of restaurant space, and 60 residential apartment units (no residential uses were included in the previous site plan).

The currently proposed site has four access points to the public street system: two on SW Boones Ferry Road and two on SW Bailey Street. The SW Boones Ferry Road accesses are on the west side of the development and would be aligned with the existing Lowries Marketplace driveways (see Figure 1, 2, or 3). The SW Bailey Street accesses are on the south side of the development and it is uncertain whether they are aligned with the existing apartment driveways. Based on the current site plan and the site location, the north driveway on Boones Ferry Road appears to serve as the development's main entrance.

### Trip Generation

Trip generation is the method used to estimate the number of vehicles that are added to the site driveways and study intersections by the development during a specified period (i.e. such as the peak hour). The PM peak hour trip generation for the proposed retail and restaurant uses on the Fred Meyer site was performed using similar assumptions and methodology as the 2004 Fred Meyer traffic study<sup>17</sup>. Because residential units were not part of the previous study, new trip assumptions were made regarding the proposed 60 residential units.

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<sup>14</sup> Tenant space within a Fred Meyer building is typically occupied by businesses providing additional goods or services, such as coffee shops or banks.

<sup>15</sup> Email from Christine McKelvey, Group Mackenzie, July 2, 2008.

<sup>16</sup> *The Fred Meyer Development Transportation Impact Study*, DKS Associates, November 2004.

<sup>17</sup> *The Fred Meyer Development Transportation Impact Study*, DKS Associates, November 2004.

Because the Fred Meyer development includes mixed-uses, its trip generation includes the calculation of many types of trips: total, internal, pass-by, diverted, and primary trips. In addition, Fred Meyer purchased the U.S. Bank pad (currently still in operation) and gas station pad (has already been removed). Both of these pads have grandfathered trips that will be subtracted from the Fred Meyer trip generation estimates to obtain the total number of net-new trips that are being added by the development to the street network. The methodology used and resulting estimates of each of these trips are explained in the following sections.

## TOTAL TRIPS

Total trips include all trips made to and from each proposed land use (including between land uses) within the development. The land uses include the Fred Meyer store (including the attached tenant space), retail (“shopping center”), office, restaurant (“high turnover, sit-down”), and condos/apartments. To allow for flexibility of future conversion of the office space to retail use, the office space was analyzed as retail use (this is the worst-case trip impact). In addition, the project sponsor has not yet determined the type of apartments, condos, or townhomes that will be constructed; to provide flexibility for a future decision, the highest apartment/condo/townhome trip generation rate was assumed (this is the worst-case trip impact).

As in the 2004 study, the total trips were estimated using trip rates provided in the Institute of Transportation Engineers (ITE) *Trip Generation, 7<sup>th</sup> Edition*<sup>18</sup> manual as well as a Fred Meyer trip rate that was based on historical trip surveys of existing Fred Meyer stores<sup>19</sup>. The rates assume that each land use is a free-standing site. Because multi-use developments do not have free-standing land uses, the total trip generation is only a starting point for trip generation (i.e., internal trip reductions are necessary, in addition to pass-by and diverted trip reductions). The total trips for each proposed land use are shown in Table 9. In addition, Table 9 also shows that all the proposed land uses combined would generate a total of 1,255 (627 in, 628 out) PM peak hour trips.

**TABLE 9: Total Trip Generation for the Fred Meyer Development (PM Peak Hour)**

Land Use (ITE Code)	Size	Trip Rate	PM Peak Hour Trips		
			In	Out	Total
Fred Meyer and Tenant Space	155.7 KSF	4.95 trips/KSF <sup>a</sup>	386	385	771
Shopping Center (820) <sup>b</sup>	50.9 KSF	7.88 trips/KSF	192	209	401
High-Turnover (sit-down) Restaurant (932)	3.3 KSF	10.92 trips/KSF	22	14	36
<u>Apartments/Condos/Townhouses<sup>c</sup></u>	<u>60 units</u>	<u>0.78 trips/unit</u>	<u>27</u>	<u>20</u>	<u>47</u>
<b>Total Trips</b>			<b>627</b>	<b>628</b>	<b>1,255</b>

<sup>a</sup> Fred Meyer trip rate based on surveyed Fred Meyer stores in Oregon and Washington.

<sup>b</sup> Office space analyzed as retail to allow for future conversion (retail is the higher trip rate).

<sup>c</sup> Residential apartment units analyzed using "Low-Rise Residential Condominium/Townhouse" (231) ITE trip rate, which is the highest rate for any type of apartment, townhouse, or condominium.

<sup>18</sup> *Trip Generation, 7<sup>th</sup> Edition*, Institute of Transportation Engineers, 2003.

<sup>19</sup> *Fred Meyers PM Peak Hour Trip Generation Summary*, DKS Associates, December 17, 2003.

## INTERNAL TRIPS

Internal trips occur in multi-use developments and are specified as those trips taken between the different uses of the site. These trips are made by vehicles that stop at more than one use within the development (for example, a patron enters the site to shop at Fred Meyer and then continues to shop at one of the other retail pads). Internal trips make use of the private street and/or pedestrian path network of the development; therefore, internal trips do not impact public roads, public intersections, or site driveways and can be subtracted from the total trips to determine the number of driveway trips that the site generates.

Internal trips between the retail and restaurant land uses (i.e., all land uses except residential) were estimated at 10%, which is the same percentage used in the 2004 study. In addition, internal trips to and from the residential units were estimated using the ITE methodology specified in the *ITE Trip Generation Handbook*.<sup>20</sup> With the addition of the residential land use, the total internal capture increased from 10% to 12.5%. The total internal trips are listed in Table 10, and a diagram showing the internal capture rates and trips between the residential units and the remaining land uses is provided in the appendix.

**TABLE 10: Internal Trip Generation for the Fred Meyer Development (PM Peak Hour)**

Trip Type	PM Peak Hour Trips		
	<i>In</i>	<i>Out</i>	<i>Total</i>
Internal Trips between all Retail/Restaurant Uses (10% of Total trips)	60	60	120
Internal Trips to and from Residential Units <sup>a</sup>			
Residential Trip Ends	8	11	19
<u>Retail/Restaurant Trip Ends</u>	<u>11</u>	<u>8</u>	<u>19</u>
<b>Total Internal Trips</b>	<b>79</b>	<b>79</b>	<b>158</b>

<sup>a</sup> Internal trips originate and terminate in the development; therefore, the 19 internal residential trips (8 in, 11 out) are accounted for as 19 additional internal retail/restaurant trips (11 out, 8 in).

## PASS-BY TRIPS

Pass-by trips are project trips made by vehicles already on the adjacent roadway (i.e., any roadway with access to the site). These vehicles do not consider the site as their primary destination; instead, they are stopping by on their way to another destination (e.g., Old Town).<sup>21</sup> Because these vehicles are already on the adjacent roadway, they are not considered new traffic to the street system; however, pass-by trips are new to the project driveways and therefore still impact those intersections used for site access due to the increased number of turn movements.

<sup>20</sup> *Trip Generation Handbook, 2<sup>nd</sup> Edition*, Institute of Transportation Engineers, June 2004; Chapter 7. This methodology consists of assuming internal capture rates, calculating unconstrained internal demand volumes, and estimating the balanced demand volumes between land use types. This methodology is based on the assumption that a land uses can only “give” a certain number of internal trips to another land use, which can in turn can only “receive” a certain number of internal trips. Balancing consists of assuming that the smaller of the “give” and “receive” amounts is the actual number of internal trips made.

<sup>21</sup> Some example land uses that typically attract high numbers of pass-by trips are fast-food restaurants and gas stations, where a significant number of vehicles stop by on their way to other destinations; in addition to these land uses, most other retail developments also attract pass-by trips.

For the proposed Fred Meyer development, 15% of the retail and restaurant driveway trips<sup>22</sup> were assumed to be pass-by trips; this is the same percentage that was used in the 2004 study. In total, there are an estimated 160 (80 in, 80 out) pass-by trips. All of these trips access the site from Boones Ferry Road. The pass-by trips are listed in Table 11, which is included after the discussions of diverted and primary trips. A figure showing the pass-by trips broken down by turn movement at the study intersections is included in the appendix.

### DIVERTED TRIPS

Diverted trips are project trips made by vehicles already in the project study area that must change their routes to access the site. Like pass-by trips, diverted trips do not consider the site as their primary destination; however, diverted trips have a greater impact than pass-by trips because they increase traffic volumes on the adjacent roadways and at critical study intersection movements. In addition, those trips diverted from Interstate-5 now enter the City of Wilsonville street system when they otherwise would not.

For the proposed Fred Meyer development, 42% of the retail and restaurant driveway trips<sup>23</sup> were assumed to be diverted trips; this is the same percentage that was used in the 2004 study. In total, there are an estimated 449 (224 in, 225 out) diverted trips. The diverted trips are listed in Table 11, which is presented following the discussion of primary trips. The trip distribution of the diverted trips is discussed in a later section of this chapter. A figure showing the diverted trips broken down by turn movement at the study intersections is included in the appendix.

### PRIMARY TRIPS

Primary trips are the new trips added to the study area roadways by the proposed development; these are vehicles whose primary destination is the development. The primary trips make up the remaining driveway trips (i.e., all driveway trips that are not pass-by or diverted trips).

For the proposed Fred Meyer development, there are an estimated 488 (244 in, 244 out) primary trips; these are listed in Table 11. A figure showing the primary trips broken down by turn movement at the study intersections is included in the appendix.

**TABLE 11: Driveway Trips for the Fred Meyer Development (PM Peak Hour)**

Trip Type	PM Peak Hour Trips		
	<i>In</i>	<i>Out</i>	<i>Total</i>
Pass-by Trips (15% of Retail/Restaurant)	80	80	160
Diverted Trips (42% of Retail/Restaurant)	224	225	449
<u>Primary Trips</u>	<u>244</u>	<u>244</u>	<u>488</u>
<b>Total Driveway Trips</b>	<b>548</b>	<b>549</b>	<b>1,097</b>

<sup>22</sup> No residential driveway trips were considered to be pass-by trips.

<sup>23</sup> No residential driveway trips were considered to be diverted trips.



### GRANDFATHERED TRIPS

Since the 2004 study was prepared, it is our understanding that the gas station and bank properties have been purchased by Fred Meyer. Because the uses will be removed in conjunction with site development (the U.S. Bank pad currently exists and will be removed and the gas station pad has already been removed), trips corresponding to these uses are considered “grandfathered” trips and should be subtracted from project trips when determining development impacts and fees.

The primary, pass-by, and diverted trips generated by the U.S. Bank and the gas station were documented in 2005 in a memorandum by DKS Associates<sup>24</sup> and correspond to the existing driveway volumes analyzed in the 2004 Fred Meyer Transportation Impact Study<sup>25</sup>. The grandfathered primary, pass-by, and diverted trips for the bank and gas station are shown in Table 12. It should be noted that since the U.S. Bank is still in operation, the bank trips were deducted from the added project traffic for future analysis scenarios since the existing counts included existing bank trips.

**TABLE 12: Grandfathered Trips for the Fred Meyer Development (PM Peak Hour)**

Trip Type	PM Peak Hour Trips		
	<i>In</i>	<i>Out</i>	<i>Total</i>
<b>Grandfathered U.S. Bank Trips</b>			
Pass-by Trips	8	8	16
Diverted Trips	46	52	98
<u>Primary Trips</u>	<u>18</u>	<u>20</u>	<u>38</u>
<b>Total</b>	<b>72</b>	<b>80</b>	<b>152</b>
<b>Grandfathered Gas Station Trips</b>			
Pass-by Trips	7	6	13
Diverted Trips	29	31	60
<u>Primary Trips</u>	<u>6</u>	<u>7</u>	<u>13</u>
<b>Total</b>	<b>42</b>	<b>44</b>	<b>86</b>
<b>Total Grandfathered Trips (U.S. Bank and Gas Station)</b>			
Pass-by Trips	15	14	29
Diverted Trips	75	83	158
<u>Primary Trips</u>	<u>24</u>	<u>27</u>	<u>51</u>
<b>Total</b>	<b>114</b>	<b>124</b>	<b>238</b>

### TRIP GENERATION SUMMARY

The trip generation summary for the Fred Meyer development is listed in Table 13. As shown in the table, the proposed Fred Meyer development is expected to generate 1,255 (627 in, 628 out) total PM peak hour land use trips and 1,097 (548 in, 549 out) total PM peak hour driveway trips. The grandfathered trips that

<sup>24</sup> *Fred Meyers Transportation Issues Letter Review*, DKS Associates, April 19, 2005.

<sup>25</sup> *The Fred Meyer Development Transportation Impact Study*, DKS Associates, November 2004.

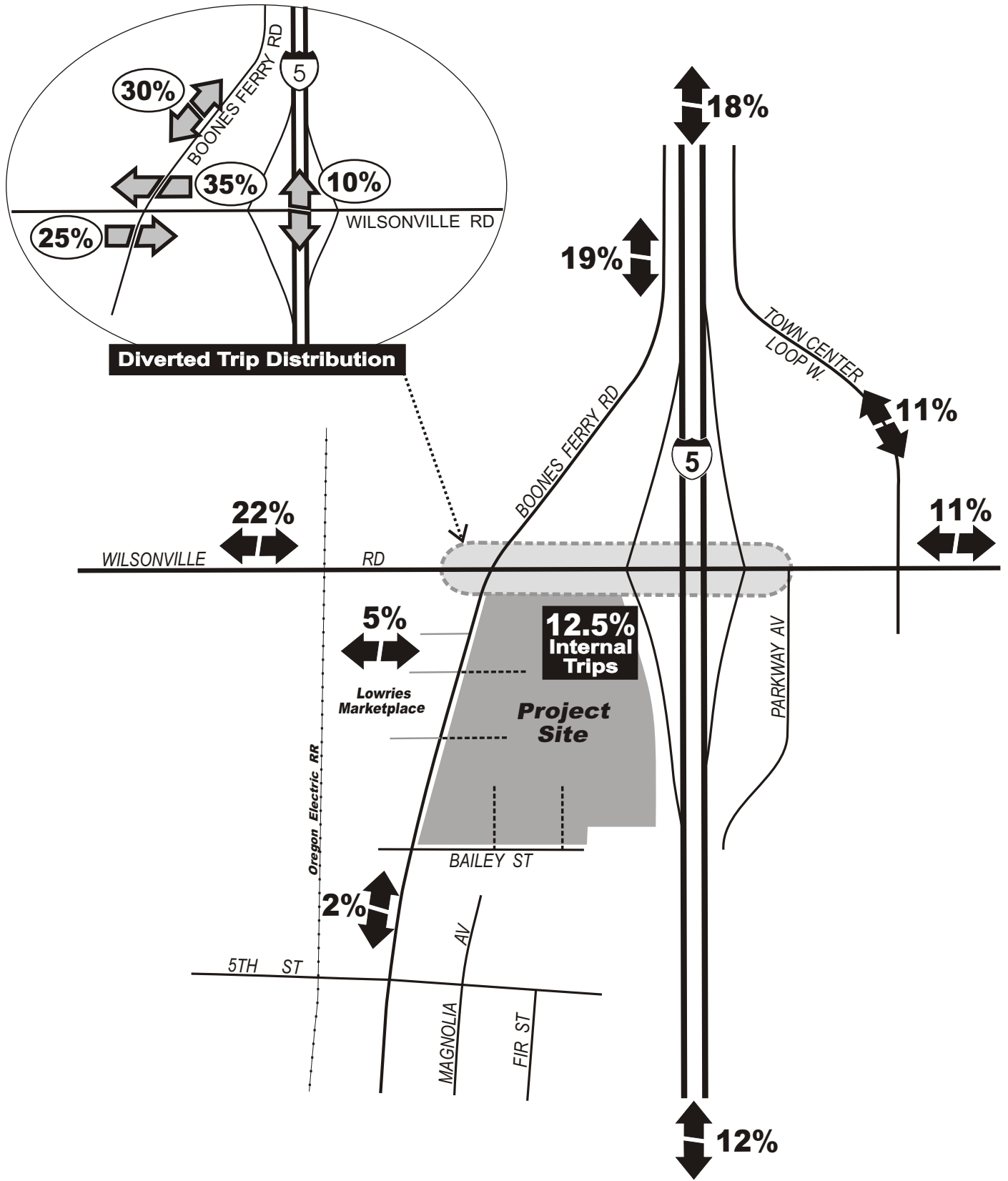
would be credited to the Fred Meyer development include 238 (114 in, 124 out) PM peak hour trips; this accounts for both the gas station and the U.S. Bank.

**TABLE 13: Trip Generation Summary for the Fred Meyer Development (PM Peak Hour)**

Trip Type	PM Peak Hour Trips		
	<i>In</i>	<i>Out</i>	<i>Total</i>
<b>Proposed Fred Meyer Development Trips</b>			
Total Internal Trips	79	79	158
<u>Total Driveway Trips</u>	<u>548</u>	<u>549</u>	<u>1,097</u>
<b>Total Proposed Trips</b>	<b>627</b>	<b>628</b>	<b>1,255</b>
<b>Grandfathered Trips</b>			
Total Grandfathered Trips	114	124	238

### Trip Distribution

Trip distribution percentages used for routing project trips through the study area were based on the trip distribution assumptions used in the 2004 study, with the exception of one adjustment. This adjustment includes a 5% distribution of traffic to the Lowries Marketplace development, which is located across the street on the west side of Boones Ferry Road. The Lowries development was not constructed at the time the 2004 Fred Meyer traffic study was prepared. Figure 3 shows the trip distribution percentages used for the primary and diverted trips.



**LEGEND**

- 00% - Trip Distribution Percentage
- Primary Trips
- Diverted Trips

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**Figure 3**

**TRIP DISTRIBUTION**



NO SCALE

## New Trips through City of Wilsonville Interchange Areas

The number of new PM peak hour trips that pass through the two Wilsonville I-5 interchange areas were estimated based on results from the trip generation and distribution. The two interchange areas are at Wilsonville Road (which includes the Boones Ferry Road/Wilsonville Road intersection) and at Elligsen Road. Both the primary and diverted trips that are added to the interchange areas are accounted for. As shown in Table 14, the Fred Meyer development would generate 768 total PM peak hour trips through the Wilsonville Road interchange area and 2 net new PM peak hour trips through the Elligsen Road interchange area.

Since the Fred Meyer development has purchased the gas station and bank pads, grandfathered trips through the interchange areas were estimated (in a previous memorandum<sup>26</sup>) and were deducted from the new project trips in order to determine net-new PM peak hour trips through the interchange areas. The resulting net-new PM peak hour trips through the I-5/Wilsonville Road and the I-5/Elligsen Road-Boones Ferry Road interchange areas are listed in Table 14. As shown in the table, the proposed Fred Meyer development would generate 612 net-new PM peak hour trips through the I-5/Wilsonville Road interchange area and 2 net-new PM peak hour trips through the I-5/Elligsen Road-Boones Ferry Road area.

**TABLE 14: Net-New Fred Meyer Trips through Interchange Areas (PM Peak Hour)**

Trip Type	PM Peak Trips through I-5 Interchange Areas	
	<i>Wilsonville Road Area</i>	<i>Elligsen Road Area</i>
<b>Proposed Fred Meyer Trips</b>		
Diverted Trips	314	N/A
<u>Primary Trips</u>	<u>454</u>	<u>2</u>
<b>Total Fred Meyer Trips through Interchange</b>	<b>768</b>	<b>2</b>
<b>Grandfathered Trips</b>		
Grandfathered Diverted Trips	-114	N/A
Grandfathered Primary Trips	<u>-42</u>	<u>-0</u>
<b>Total Grandfathered Trips through Interchange</b>	<b>-156</b>	<b>0</b>
<b>Net-New PM Peak Trips through Interchange Area</b>	<b>612</b>	<b>2</b>

## Future Traffic Operating Conditions

Future traffic operating conditions, consisting of intersection performance and queuing, were analyzed at the study intersections to determine if the transportation network can support the additional development traffic. Intersections are the focus of the analysis because they are the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is nearly always diminished in their vicinity. If City of Wilsonville operating standards are not met or expected queues exceed storage length at the study intersections, then mitigations are required to improve network performance.

<sup>26</sup> *Fred Meyers Transportation Issues Letter Review*, DKS Associates, April 19, 2005; see figures.

## FUTURE ANALYSIS SCENARIOS

Future PM peak hour traffic operations were analyzed at the study intersections for three operating scenarios:

- Existing plus Project (includes Fred Meyer development traffic and removes the existing U.S. Bank traffic)
- Existing plus Stage II (includes traffic from other developments in the project vicinity that have Stage II approval and assumes continued operation of the U.S. Bank)
- Existing plus Project plus Stage II (includes traffic from Fred Meyer as well as from Stage II approved developments and removes the existing U.S. Bank traffic)

These operating scenarios include various combinations of three types of traffic: existing, project, and stage II traffic. Existing and project traffic have both been explained previously. Stage II traffic levels were estimated based on the list of currently approved Stage II developments, which was provided by City staff.<sup>27</sup> This list and the corresponding PM peak hour trip generation estimates for these developments are included in the appendix. The weekday PM peak hour traffic volumes used to analyze the “Existing plus Stage II” and the “Existing plus Project plus Stage II” scenarios are shown in Figure 4.

## FUTURE ANALYSIS WITH EXISTING WILSONVILLE ROAD CROSS-SECTION

The first future scenario intersection analysis was performed assuming the existing cross-section on Wilsonville Road and the site frontage improvements along Boones Ferry Road (as shown on the current Fred Meyer site plan, which is included in the appendix). The analysis was performed using *2000 Highway Capacity Manual* methodology<sup>28</sup> for signalized and unsignalized intersections. For the four study intersections on the Wilsonville Road corridor, a Synchro™ model of the existing Wilsonville Road cross-section was used to analyze traffic operating conditions because it accounts for signal coordination and the resulting traffic flow patterns.

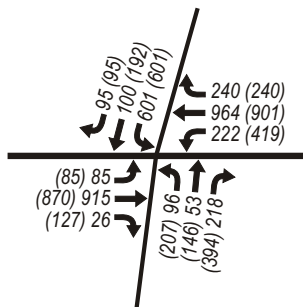
The intersection operating conditions for each of the three future PM peak hour traffic scenarios are listed in Table 15. As shown in the table, all four study intersections on Wilsonville Road exceed operating standards under the “Existing plus Project plus Stage II” scenario. Both northbound and southbound ramps also exceed operating standards under the “Existing plus Stage II” scenario. In addition, the two Fred Meyer development accesses on Boones Ferry Road operate below desired levels for the two scenarios that include project traffic (i.e., “Existing plus Project” and “Existing plus Project plus Stage II”). The detailed analysis output sheets corresponding with these results are included in the appendix.

<sup>27</sup> Email from Blaise Edmonds, City of Wilsonville, July 1, 2008 (see appendix for Stage II list).

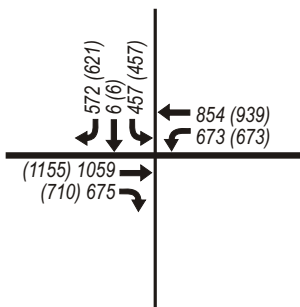
<sup>28</sup> *Guidelines for the Preparation of Transportation Impact Analyses*, City of Salem, Effective December 28, 1994.



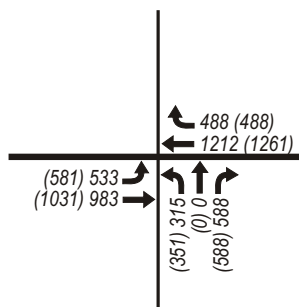
**1. WILSONVILLE RD @ BOONES FERRY RD**



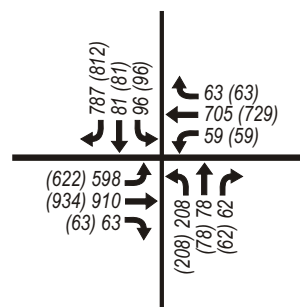
**2. WILSONVILLE RD @ I-5 SB ON/OFF RAMP**



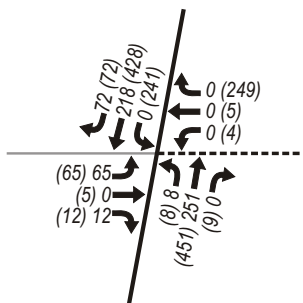
**3. WILSONVILLE RD @ I-5 NB ON/OFF RAMP**



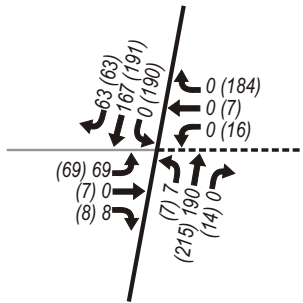
**4. WILSONVILLE RD @ TOWN CENTER LOOP W.**



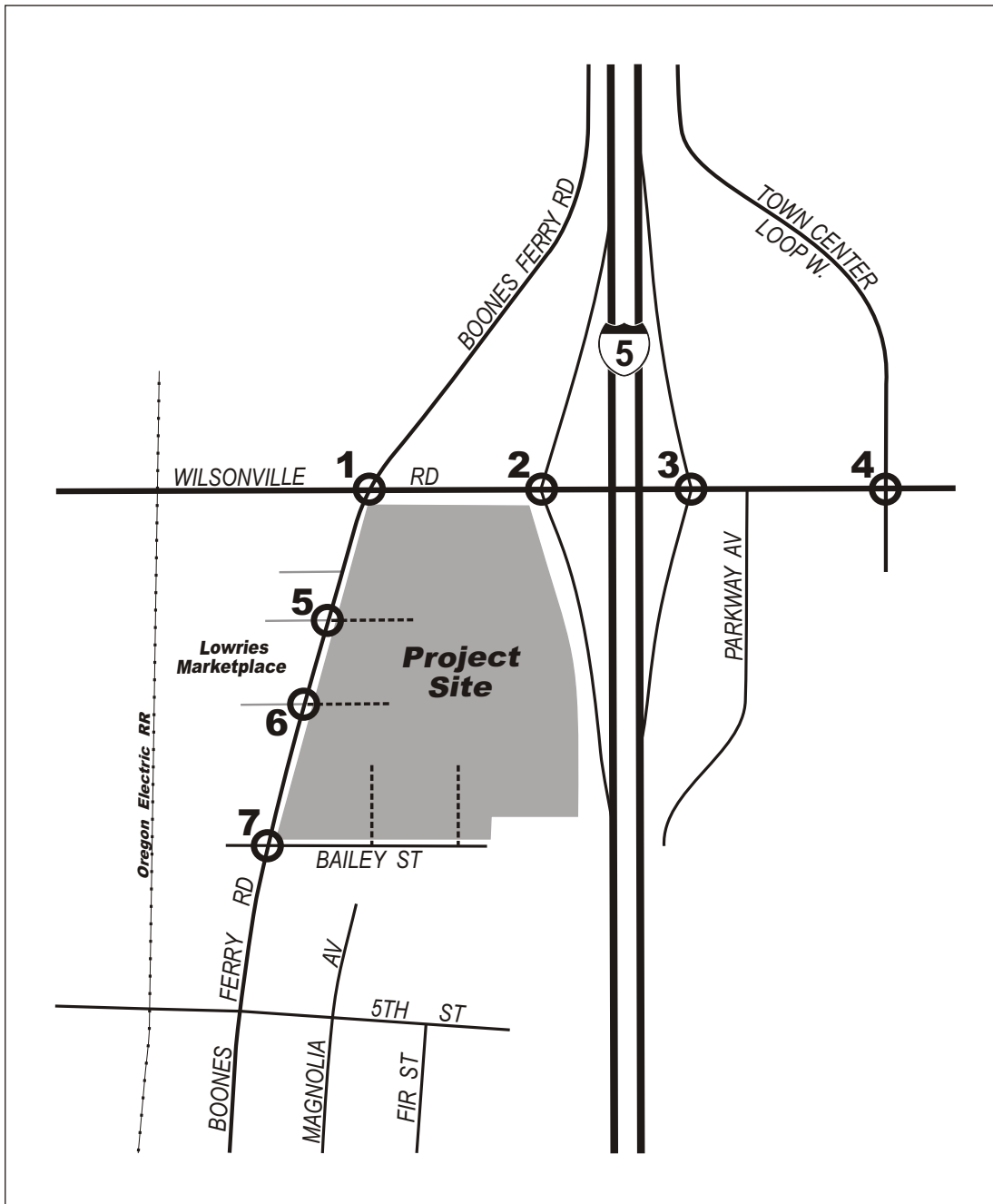
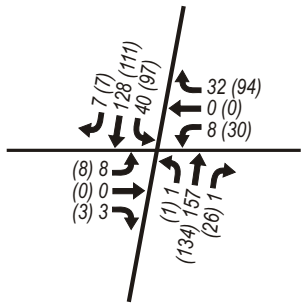
**5. BOONES FERRY RD @ LOWRIES/N. PROJECT DRIVEWAY**



**6. BOONES FERRY RD @ LOWRIES/S. PROJECT DRIVEWAY**



**7. BOONES FERRY RD @ BAILEY ST**



**LEGEND**

- 1** - Study Intersection & Number
- - Proposed Fred Meyer Driveway
- - Existing Lowries Driveway
- ← 00 (00) - Exist.+Stage II (Exist.+Stage II+Proj.) PM Peak Hour Traffic Volumes

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**Figure 4**

**EXISTING+STAGE II+PROJECT  
PM PEAK HOUR  
TRAFFIC VOLUMES**

**TABLE 15: Future Operating Conditions (PM Peak Hour)**

Intersection	Operating Standard	Existing + Project			Existing + Stage II			Existing + Project + Stage II		
		Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C
<b>Signalized</b>										
Boones Ferry Rd / Wilsonville Rd	LOS D	36.0	D	0.77	44.5	D	0.89	>80	<b><u>F</u></b>	>1.0
I-5 SB Ramps / Wilsonville Rd	LOS D, 0.99 V/C	36.1	D	0.90	79.1	<b><u>E</u></b>	<b><u>&gt;1.0</u></b>	>80	<b><u>F</u></b>	<b><u>&gt;1.0</u></b>
I-5 NB Ramps / Wilsonville Rd	LOS D, 0.99 V/C	37.2	D	0.91	70.9	<b><u>E</u></b>	<b><u>&gt;1.0</u></b>	>80	<b><u>F</u></b>	<b><u>&gt;1.0</u></b>
Town Center Loop W / Wilsonville Rd	LOS D	37.6	D	0.80	51.2	D	0.94	56.2	<b><u>E</u></b>	0.97
<b>Unsignalized</b>										
Boones Ferry Rd / North Project Access	-	>50	A/F	>1.0	13.9	A/B	0.18	>50	A/F	>1.0
Boones Ferry Rd / South Project Access	-	>50	A/F	0.66	12.4	A/B	0.15	>50	A/F	0.71
Boones Ferry Rd / Bailey St	LOS D	12.6	A/B	0.12	11.6	A/B	0.06	13.8	A/B	0.12
<b>Signalized intersections:</b> Delay = Average Stopped Delay per Vehicle (sec) for All Movements LOS = Level of Service of Intersection V/C = Volume-to-Capacity Ratio of Intersection <b><u>Bold Underlined</u></b> values do not meet standards.					<b>Unsignalized intersections:</b> Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement LOS = Level of Service of Major Street/Minor Street V/C = Volume-to-Capacity Ratio of Worst Movement <b><u>Bold Underlined</u></b> values do not meet standards.					

### FUTURE ANALYSIS WITH PLANNED WILSONVILLE ROAD CROSS-SECTION

Due to capacity constraints at the I-5/Wilsonville Road interchange, improvements are planned that will provide additional capacity along Wilsonville Road between Boones Ferry Road and Town Center Loop West. Recently, the City has signed an intergovernmental agreement to construct the first phase of improvements, which will consist of a Wilsonville Road 6-lane enhanced alternative that focuses on ramp improvements and on adjustments to intersection lane configurations.

For the four study intersections on the Wilsonville Road corridor, a Synchro™ model of the improved Wilsonville Road cross-section was used to analyze intersection operating conditions for each of the three future PM peak hour traffic scenarios (i.e., “Existing plus Project”, “Existing plus Stage 2”, and “Existing plus Project plus Stage 2”). The results of the analysis are listed in Table 16. As shown in the table, all four study intersections on Wilsonville Road comply with the City of Wilsonville LOS D operating standard for each of the three scenarios. The two I-5 ramps also meet the Oregon Department of Transportation (ODOT) 0.99 volume-to-capacity (V/C) standard.

**TABLE 16: Future Operating Conditions of Wilsonville Road Intersections with Six-Lane Enhanced Alternative Improvements (PM Peak Hour)**

Intersection	Operating Standard	Existing + Project + Improvements			Existing + Stage II + Improvements			Existing + Project + Stage II + Imps.		
		Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C
<b>Signalized</b>										
Boones Ferry Rd / Wilsonville Rd	LOS D	37.7	D	0.66	31.1	C	0.67	39.3	D	0.75
I-5 SB Ramps / Wilsonville Rd	LOS D	20.6	C	0.64	22.0	C	0.72	22.7	C	0.76
I-5 NB Ramps / Wilsonville Rd	LOS D	22.9	C	0.64	23.6	C	0.74	24.7	C	0.78
Town Center Loop W / Wilsonville Rd	LOS D	35.7	D	0.66	40.3	D	0.75	43.2	D	0.78
Delay = Average Stopped Delay per Vehicle (sec) LOS = Level of Service of Intersection		V/C = Volume-to-Capacity Ratio of Intersection <b><u>Bold Underlined</u></b> values do not meet standards.								

### QUEUING ANALYSIS

Queuing analysis was performed for the “Existing plus Project plus Stage II” scenario for both Wilsonville Road and Boones Ferry Road. These are discussed separately.

#### **Wilsonville Road Queuing**

The queuing analysis for Wilsonville Road was performed using SimTraffic™, which provides a system wide assessment of network performance and includes the estimation of the 95<sup>th</sup> percentile queue for each intersection approach movement. The 95<sup>th</sup> percentile queue length is the queue length at a given intersection movement that has only a 5% chance of being exceeded during the peak traffic hour. When compared with the movement’s available storage length, queue blockage issues can be determined. The queuing analysis was performed assuming the construction of the Wilsonville Road 6-lane enhanced alternative, which focuses on ramp improvements and on adjustments to intersection lane configurations.

The Oregon Department of Transportation’s access spacing criteria requires 1,320 feet between a freeway ramp and the nearest traffic signal. The City has a 1,000-foot access spacing requirement for major arterials, which applies to Wilsonville Road. The current spacing of traffic signals on Wilsonville Road adjacent to I-5 does not meet ODOT or City access spacing standards. Table 17 lists the available storage on Wilsonville Road.

Table 17 also lists the results of the vehicle queuing analysis based on the recommended improvements (see Chapter 1). At the northbound and southbound ramps, the available storage length satisfies the 95<sup>th</sup> percentile queues for each turn movement. At Boones Ferry Road, the storage lengths available for the northbound left turn and right turn movements are dependent upon Boones Ferry Road improvements as shown in Figure 5. For the northbound right turn lane, the expected queues with the addition of the Fred Meyer development show the need for a separate right turn lane with minimum queue storage of 300 feet; however, long-term needs required as part of the 20-year interchange area capacity needs will require approximately 600 feet of vehicle storage. This means that the northbound right turn lane would need to

extend past the north Fred Meyer access. For the northbound left turn lane, 300 feet of storage is needed to service expected queues (both with Fred Meyer traffic and long-term traffic needs).

**TABLE 17: Wilsonville Road Queuing (Existing + Project + Stage II + Improvements)**

Intersection on Wilsonville Road	Intersection Approach <sup>a</sup>	Available Vehicle Storage <sup>b</sup>	95 <sup>th</sup> Percentile Queue <sup>c</sup> (PM Peak Hour)
Boones Ferry Road	EB Through	1,240 ft	400 ft
	WB Left	400 ft	275 ft
	WB Through	480 ft	450 ft
	NB Left	TBD <sup>d</sup>	300 ft
	NB Right	TBD <sup>d</sup>	300 ft <sup>f</sup>
I-5 Southbound Ramp	EB Through	500 ft	300 ft
	EB Right	500 ft	300 ft
	WB Left	420 ft	350 ft
	WB Through	420 ft	350 ft
	SB Left	400/975 ft <sup>e</sup>	250 ft
	SB Right	400/975 ft <sup>e</sup>	250 ft
I-5 Northbound Ramp	EB Left	420 ft	350 ft
	EB Through	420 ft	350 ft
	WB Through	625 ft	575 ft
	NB Left	360/760 ft <sup>e</sup>	225 ft
	NB Right	360/760 ft <sup>e</sup>	250 ft

<sup>a</sup> EB=Eastbound; WB=Westbound; NB=Northbound; SB=Southbound

<sup>b</sup> Available vehicle storage = distance from stop bar to upstream intersection crosswalk/stop bar

<sup>c</sup> 95<sup>th</sup> percentile queues are rounded to nearest 25 feet

<sup>d</sup> TBD = To be determined . . . the available storage lengths at these movements are dependent upon the improvements that are constructed in conjunction with the Fred Meyer site development.

<sup>e</sup> x/x = available turn lane storage/distance from stop bar to mainline freeway.

<sup>f</sup> It should be noted that the long-term right turn needs for this movement extend to 600 ft.

### **Boones Ferry Road Queuing**

Queuing analysis was also performed for the unsignalized left turn movements at the study intersections on Boones Ferry Road (i.e., at the Fred Meyer site accesses and at Bailey Street) and assumes the Boones Ferry Road cross-section shown on the site plan and full site access at both Fred Meyer driveways on Boones Ferry Road.<sup>29</sup> The results of the analysis are shown in Table 18 and indicate a potential queuing conflict for the southbound left turn at the north Fred Meyer access. Because Wilsonville Road and the north Fred Meyer access are only separated by 370 feet, there is not enough space to install both a 300-foot northbound left turn lane at Wilsonville Road and a 175-foot southbound left turn lane at the north access; therefore, additional mitigation is required, including restricting the north access to right-in/right-out movements (additional details are provided in the Boones Ferry Road Mitigation section that follows).

<sup>29</sup> Analysis was performed using the John T. Gard unsignalized queue length calculation method: "Young Consultant's Award Paper: Estimation of Maximum Queue Lengths at Unsignalized Intersection", John T. Gard, ITE Journal, November 2001.

**TABLE 18: Boones Ferry Road Existing + Project + Stage II Queuing (PM Peak Hour)**

Section of Boones Ferry Road	Intersection Movement <sup>a</sup>	95 <sup>th</sup> Percentile Queue <sup>b</sup> (PM Peak Hour)	Available Vehicle Storage
Between Wilsonville Road and North Fred Meyer Access	NB Left at Wilsonville Road	300 ft	
	SB Left at North Fred Meyer Access	175 ft	
	<b>Total</b>	<b>475 ft<sup>c</sup></b>	<b>370 ft<sup>c</sup></b>
Between North and South Fred Meyer Accesses	NB Left at North Fred Meyer Access	50 ft	
	SB Left at South Fred Meyer Access	150 ft	
	<b>Total</b>	<b>200 ft</b>	250 ft
Between South Fred Meyer Access and Bailey Street	NB Left at South Fred Meyer Access	50 ft	
	SB Left at Bailey Street	125 ft	
	<b>Total</b>	<b>175 ft</b>	400 ft

<sup>a</sup> EB=Eastbound; WB=Westbound; NB=Northbound; SB=Southbound

<sup>b</sup> 95<sup>th</sup> percentile queues are rounded to nearest 25 feet

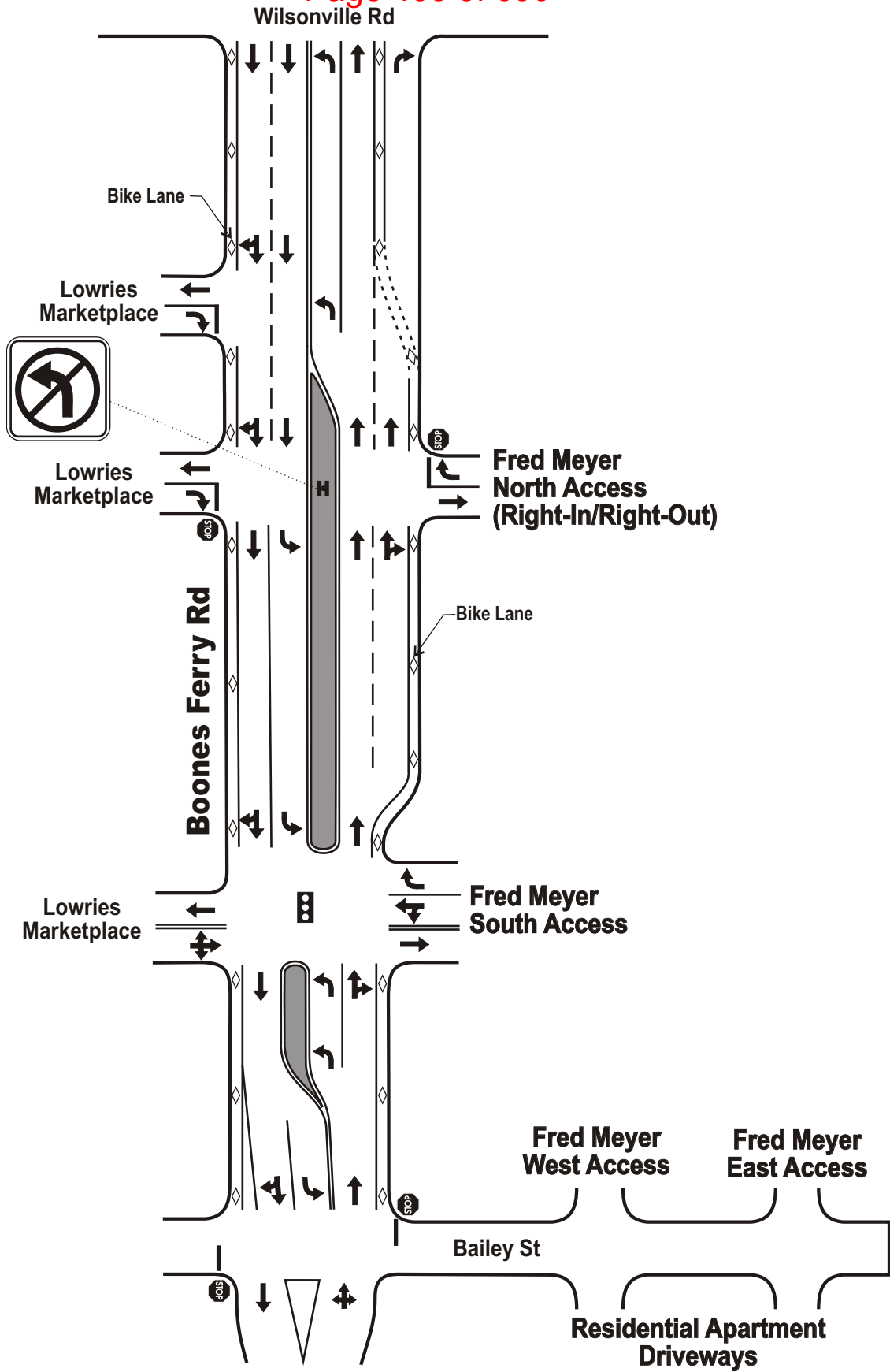
<sup>c</sup> Total of left turn queues exceeds available storage.

### BOONES FERRY ROAD MITIGATIONS

Mitigations are needed on Boones Ferry Road due to intersection operation and queuing impacts from the Fred Meyer development. Both the north and south Fred Meyer accesses are higher than the City's operating standards, and insufficient storage distance is available for the southbound left turn queues at the north access; therefore, cross-section and traffic control improvements are needed on Boones Ferry Road. A conceptual layout of Boones Ferry Road is presented in Figure 5. There are three mitigations:

- At the north Fred Meyer access, install a median along Boones Ferry Road to restrict movements to right-in/right-out for both the Lowries Marketplace and Fred Meyer developments; this will increase safety by removing turn lane needs at this access and will provide for better traffic flow (i.e., queuing spillback from Wilsonville Road). It will also accommodate turn lane placement and storage needs for the Boones Ferry Road/Wilsonville Road intersection's northbound approach traffic. Also, if desired, the north Fred Meyer access may be converted to a right-out only driveway and narrowed to one lane, which would allow additional space on the project site that could be used to increase a building pad size, the number of parking stalls, etc.
- Between the north and south Fred Meyer accesses, extend the second northbound through lane (which becomes a right turn lane at the Wilsonville Road intersection) to ensure approximately 600 feet of storage is provided for the northbound right turn lane at Wilsonville Road. This distance meets the short-term Fred Meyer needs and the long-term 20-year Wilsonville Road Interchange design needs.
- At the south Fred Meyer access, install a traffic signal to facilitate egress movements from the Lowries and Fred Meyer developments. There should also be two egress lanes (i.e., a right turn lane and a through-left lane). It is expected that warrants will be met in the near future due to the addition of nearby developments. Installing the traffic signal with the Boones Ferry Road improvements will assure continuity between the improvements and the traffic signal construction. The signal should be coordinated with the Boones Ferry Road/Wilsonville Road signal. To enable the coordination, interconnect conduit and cable will need to be installed between the signals.





**LEGEND**

- ← - Lane Configuration
- STOP - Stop Sign
- ⬆ - Traffic Signal

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NO SCALE

**Figure 5**

**CONCEPTUAL LAYOUT FOR  
BOONES FERRY ROAD**

These mitigations would improve the operations at the two Fred Meyer accesses (which are also Lowries Marketplace accesses) on Boones Ferry Road. Because left turns would be prohibited at the north access, all southbound Fred Meyer traffic and northbound Lowries Marketplace traffic would be required to access their respective developments from either the south access or from Bailey Street, thus increasing left turn volumes at these intersections. The adjusted traffic volumes resulting from the mitigations are shown in Figure 6. In addition, if the north access is converted to right-out only, then right turn volumes into the Fred Meyer development would also be shifted to the south access.

Intersection operations analysis was performed for the Boones Ferry Road intersections (i.e., at the two site accesses and at Bailey Street) for the mitigated conditions. Analysis results are shown in Table 19 for the north Fred Meyer access and the Boones Ferry Road/Bailey Street intersection. Table 20 lists the analysis results for both traffic control options at the south access (i.e., a traffic signal and four-way stop control). As shown in the tables, the three intersections have good operation levels and the two traffic control options for the south access are comparable to one another. The main benefits from the installation of the traffic signal are the ability to service platoon flow from the Boones Ferry Road/Wilsonville Road intersection and increase intersection capacity that would be provided.

**TABLE 19: Boones Ferry Road Mitigated Future Operating Conditions (PM Peak Hour)**

Intersection	Operating Standard	Existing + Project + Stage II + Mitigated		
		Delay	LOS	V/C
<b>Unsignalized – Two-way Stop Control</b>				
Boones Ferry Rd / North Project Access	-	13.8	A/B	0.41
Boones Ferry Rd / Bailey St	LOS D	17.0	A/C	0.15
Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement LOS = Level of Service of Major Street/Minor Street		V/C = Volume-to-Capacity Ratio of Worst Movement <b><u>Bold Underlined</u></b> values do not meet standards.		

**TABLE 20: South Project Access Mitigated Future Operating Conditions (PM Peak Hour)**

Traffic Control at South Project Access	Existing + Project + Mitigated			
	Delay	LOS	V/C	
Signalized (Option 1)	22.0	C	0.49	
Four-way Stop Control (Option 2)	20.1	C	0.75	
Delay = Average Stopped Delay per Vehicle (sec) for All Movements LOS = Level of Service of Intersection		V/C = Volume-to-Capacity Ratio of Intersection <b><u>Bold Underlined</u></b> values do not meet standards.		

1. WILSONVILLE RD @  
BOONES FERRY RD

SAME AS  
UNMITIGATED

2. WILSONVILLE RD @  
I-5 SB ON/OFF RAMP

SAME AS  
UNMITIGATED

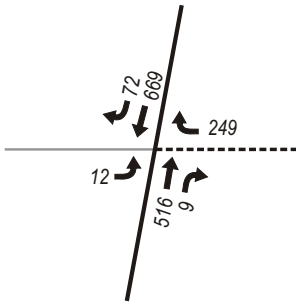
3. WILSONVILLE RD @  
I-5 NB ON/OFF RAMP

SAME AS  
UNMITIGATED

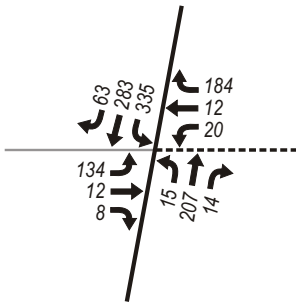
4. WILSONVILLE RD @  
TOWN CENTER LOOP W.

SAME AS  
UNMITIGATED

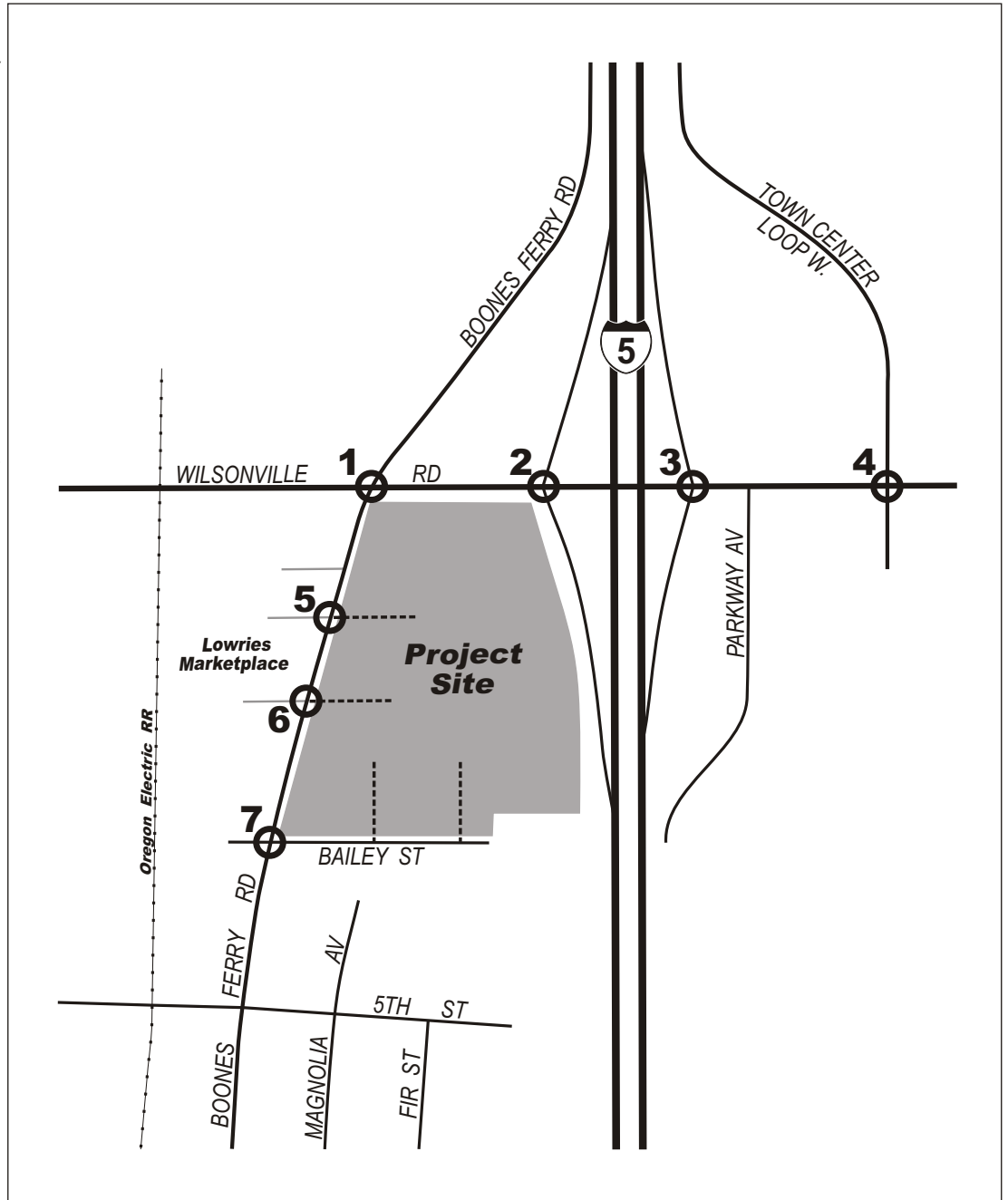
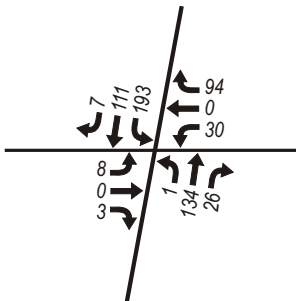
5. BOONES FERRY RD @  
LOWRIES/N. PROJECT DRIVEWAY



6. BOONES FERRY RD @  
LOWRIES/S. PROJECT DRIVEWAY



7. BOONES FERRY RD @  
BAILEY ST



**LEGEND**

- 1○ - Study Intersection & Number
- - Proposed Fred Meyer Driveway
- - Existing Lowries Driveway
- ← 00 - Mitigated Exist.+Stage II +Proj. PM Peak Hour Traffic Volumes

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**Figure 6**

**MITIGATED PM PEAK HOUR  
TRAFFIC VOLUMES  
(EXISTING+PROJ+STG 2)**



Additional queuing analysis was performed for the mitigated conditions (which include the recommended traffic signal at the south Fred Meyer access). SimTraffic™ was utilized, and the results of the analysis are given in Table 21. As shown in the table, all queues are within the available storage; in other words, there are no longer any storage lane conflicts between left turn movements (i.e., available vehicle storage is greater than the sum of competing 95<sup>th</sup> percentile queues for every section of Boones Ferry Road). The traffic signal timing can be adjusted to ensure that queuing can be reduced at key movements.

**TABLE 21: Mitigated Boones Ferry Road Ex. +Proj. + Stage II Queuing (PM Peak Hour)**

Intersection on Boones Ferry Road	Intersection Approach <sup>a</sup>	Available Vehicle Storage <sup>b</sup>	95 <sup>th</sup> Percentile Queue <sup>c</sup>
Wilsonville Road	NB Left	350 ft	300 ft
	NB Right	525 ft	600 ft <sup>d</sup>
South Fred Meyer Access	NB Left	175 ft	50 ft
	SB Left	275 ft	200 ft
Bailey Street	SB Left	150 ft	50 ft

<sup>a</sup> EB=Eastbound; WB=Westbound; NB=Northbound; SB=Southbound

<sup>b</sup> Available vehicle storage = distance from stop bar to upstream intersection crosswalk/stop bar

<sup>c</sup> 95<sup>th</sup> percentile queues are rounded to nearest 25 feet

<sup>d</sup> Based on long-term needs for this movement.

## CHAPTER 4: WEEKEND SAFETY ANALYSIS

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Since the peak hour for the proposed Fred Meyer development does not occur on a weekday, but instead occurs during the Saturday midday peak hour (11:00 a.m. and 1:00 p.m.), separate trip generation and intersection safety analysis was conducted to determine if there are any weekend safety related impacts. Because Saturday peak hour conditions may also be similar to other seasonal peak hours of operation, such as holiday shopping periods, there is further reason to analyze operations during this period.

The weekend analysis focuses on traffic operations (i.e., intersection analysis and queuing analysis) at the following five<sup>30</sup> weekend scenario study intersections:

- I-5 Southbound Ramps/Wilsonville Road
- I-5 Northbound Ramps/Wilsonville Road
- Boones Ferry Road/Fred Meyer north access
- Boones Ferry Road/Fred Meyer south access
- Boones Ferry Road/Wilsonville Road

The analysis at these intersections includes a determination of Saturday peak hour project trip generation and trip distribution, exiting traffic volumes, future (existing plus project) capacity analysis of study intersections, and queuing analysis.

### Saturday Trip Generation and Trip Distribution

Saturday peak hour trip generation and trip distribution were estimated for the proposed Fred Meyer development using the same assumptions and methodology as the 2004 Fred Meyer traffic study<sup>31</sup>.

#### TRIP GENERATION

In the 2004 study, it was determined that Saturday peak hour trip generation for a free-standing discount superstore (land use code 813) and shopping center (land use code 820) is approximately 30 percent higher than the weekday PM peak hour trip generation. In addition, the 2004 study determined that the reduction percentages for pass-by and diverted trips were found to be similar during both the weekday PM and Saturday peak hours. Therefore, to estimate Saturday peak hour project trips for the currently proposed site, the weekday PM peak hour trip generation estimates for all types of project trips (as discussed in Chapter 3) were increased by 30 percent.

Because the closure of the U.S. Bank building will correlate with the proposed Fred Meyer development, Saturday peak hour trip generation estimates for the bank were subtracted from the Fred Meyer development traffic to determine the overall traffic added by the development to the street network during the Saturday peak hour. The 2004 study did not include this subtraction, so new assumptions were made following the same methodology of comparing Saturday peak hour and weekday PM peak hour trip generation rates as found in the ITE *Trip Generation, 7<sup>th</sup> Edition*<sup>32</sup> publication. Based on the published ITE rates for a drive-in bank (land use code 912), Saturday peak hour trip generation is approximately

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<sup>30</sup> Two of the PM peak hour study intersections are not included in the weekend analysis.

<sup>31</sup> *The Fred Meyer Development Transportation Impact Study*, DKS Associates, November 2004.

<sup>32</sup> *Trip Generation, 7<sup>th</sup> Edition*, Institute of Transportation Engineers, 2003.



20% less than the weekday PM peak hour trip generation; therefore, the weekday PM peak hour trips for the U.S. Bank were reduced by 20% to estimate the Saturday peak hour trips.

The estimated internal, driveway, and total trips for the proposed Fred Meyer development during the Saturday peak hour are listed in Table 22. Then in Table 23, the driveway trips are broken down by pass-by, diverted, and primary trips. In addition, Table 23 lists the U.S. Bank driveway trips and the total development trips that would be added to the street network during the Saturday peak hour.

**TABLE 22: Saturday Peak Hour Trip Generation for the Fred Meyer Development**

Trip Type	PM Peak Hour Trips		
	<i>In</i>	<i>Out</i>	<i>Total</i>
Fred Meyer Internal Trips	103	103	206
<u>Fred Meyer Driveway Trips</u>	<u>712</u>	<u>713</u>	<u>1,425</u>
<b>Total Fred Meyer Trips</b>	<b>815</b>	<b>816</b>	<b>1,631</b>

**TABLE 23: Saturday Peak Hour Trips Added to Network**

Trip Type	PM Peak Hour Trips		
	<i>In</i>	<i>Out</i>	<i>Total</i>
<b>Fred Meyer Driveway Trips</b>			
Pass-by Trips	104	104	208
Diverted Trips	291	292	583
<u>Primary Trips</u>	<u>317</u>	<u>317</u>	<u>634</u>
<b>Total Fred Meyer Driveway Trips</b>	<b>712</b>	<b>713</b>	<b>1,425</b>
<b>U.S. Bank Trips</b>			
Pass-by Trips	-6	-6	-12
Diverted Trips	-37	-42	-79
<u>Primary Trips</u>	<u>-15</u>	<u>-16</u>	<u>-31</u>
<b>Total U.S. Bank Trips</b>	<b>-58</b>	<b>-64</b>	<b>-122</b>
<b>Total Trips Added to Network<sup>a</sup></b>	<b>654</b>	<b>649</b>	<b>1,303</b>

<sup>a</sup> Total trips added to network during Saturday peak hour = Fred Meyer driveway trips – Total U.S. Bank trips; however, all Fred Meyer driveway trips are added to the project driveways.

## TRIP DISTRIBUTION

Saturday peak hour trip distribution was assumed to be the same as the weekday PM peak hour trip distribution. The weekday PM peak hour trip distribution is shown previously in Figure 3.

## Saturday Peak Hour Traffic Volumes

Intersection turn movement counts were conducted at the five weekend scenario study intersections during the Saturday mid-day peak (11:00 a.m. to 1:00 p.m.). Based on the traffic counts, the Saturday peak hour at the study intersections occurs from approximately 12:00 p.m. to 1:00 p.m. and the associated traffic volumes are approximately 30 percent lower than typical weekday PM peak hour volumes. The Saturday peak hour traffic volumes are shown in Figure 7, and detailed traffic counts are included in the appendix.

Because it is assumed that the peak hour of operation at the proposed Fred Meyer development would coincide with the Saturday traffic peak hour, the Saturday peak hour project trips were added to the existing counts. The total (i.e., existing plus project) volumes were used for the Saturday peak hour safety analysis and are shown in Figure 7.

## Saturday Traffic Operating Conditions

Saturday peak hour traffic operating conditions, consisting of intersection performance and queuing, were analyzed at the study intersections to determine if the planned transportation network (i.e., the existing network plus planned improvements at the I-5/Wilsonville Road interchange) would be able to safely accommodate the weekend peak hour development traffic. If City of Wilsonville operating standards are not met or expected queues exceed storage length at the study intersections, then mitigations are recommended to improve network safety and performance.

As in the PM peak hour future analysis, the Saturday peak hour future analysis (i.e., the “Existing plus Project” scenario) was performed assuming the site frontage improvements along Boones Ferry Road (as are shown on the site plan, which is included in the appendix) as well as the Boones Ferry Road mitigations. In addition, the analysis assumed the installation of the first phase of improvements to at the I-5/Wilsonville Road interchange (i.e., a 6-lane enhanced alternative, which focuses on ramp improvements and on adjustments to intersection lane configurations). A Synchro™ model of the Wilsonville Road improvements was used to provide a system wide assessment of traffic operating conditions for the four study intersections on the Wilsonville Road corridor. This model utilizes Highway Capacity Manual (HCM) methodologies and evaluates system level traffic operating conditions so as to account for queuing between intersections.

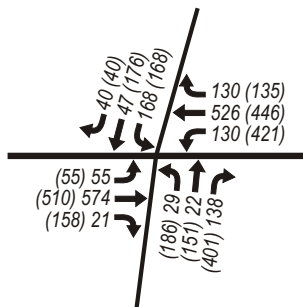
## INTERSECTION OPERATIONS

Future Saturday peak hour traffic operations were analyzed at the study intersection for two operating scenarios:

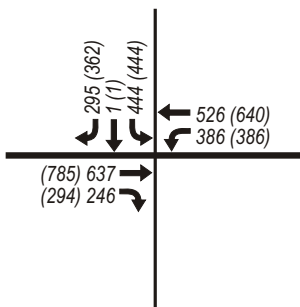
- Existing Conditions
- Existing plus Project (includes Fred Meyer traffic and removes the existing U.S. Bank traffic)

The intersection operating conditions resulting from the analysis are listed in Table 24 and Table 25, and detailed analysis output is included in the appendix. As shown in the two tables, all study intersections comply with operating standards. In addition, at the south Fred Meyer access, a traffic signal would provide better service than four-way stop control.

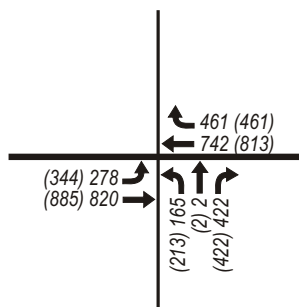
**1. WILSONVILLE RD @ BOONES FERRY RD**



**2. WILSONVILLE RD @ I-5 SB ON/OFF RAMP**



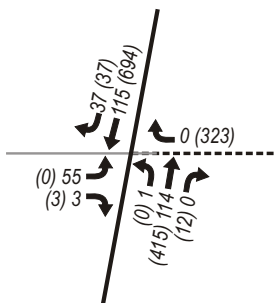
**3. WILSONVILLE RD @ I-5 NB ON/OFF RAMP**



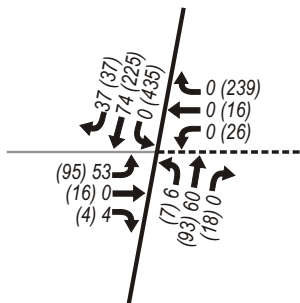
**4. WILSONVILLE RD @ TOWN CENTER LOOP W.**



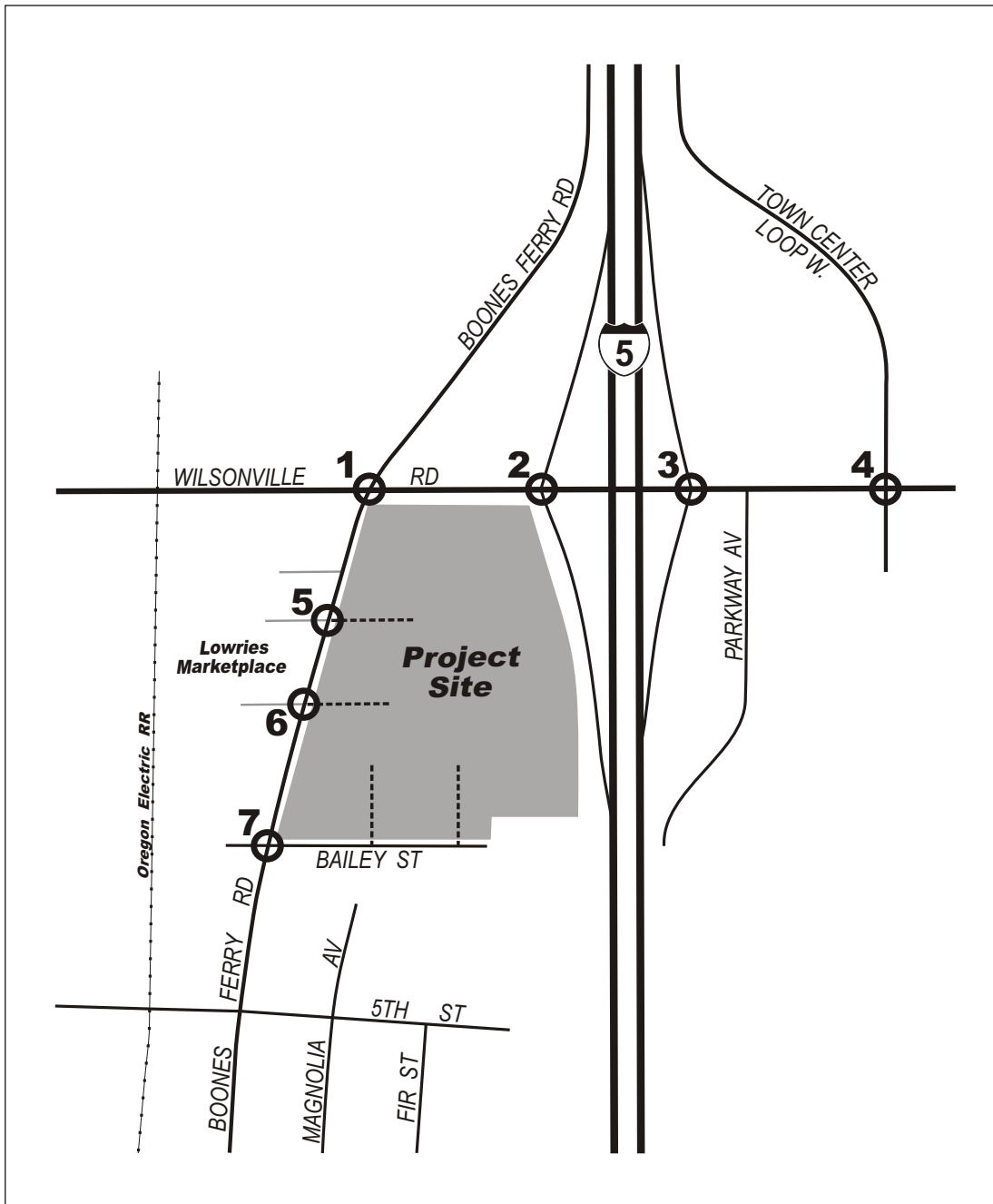
**5. BOONES FERRY RD @ LOWRIES/N. PROJECT DRIVEWAY**



**6. BOONES FERRY RD @ LOWRIES/S. PROJECT DRIVEWAY**



**7. BOONES FERRY RD @ BAILEY ST**



**LEGEND**

- 1** ○ - Study Intersection & Number
- - Proposed Fred Meyer Driveway
- - Existing Lowries Driveway
- ← 00 (00) - Existing (Existing + Project) PM Peak Hour Traffic Volumes

**DKS Associates**  
 TRANSPORTATION SOLUTIONS



**Figure 7**

**SATURDAY PEAK HOUR  
 EXISTING + PROJECT  
 TRAFFIC VOLUMES**

**TABLE 24: Future Operating Conditions (Saturday Peak Hour)**

Intersection	Operating Standard	Existing			Existing + Project + Mitigated		
		Delay	LOS	V/C	Delay	LOS	V/C
<b>Signalized</b>							
Boones Ferry Rd / Wilsonville Rd	LOS D	23.7	C	0.49	33.3	C	0.59
I-5 SB Ramps / Wilsonville Rd	LOS D	22.9	C	0.73	19.7	B	0.54
I-5 NB Ramps / Wilsonville Rd	LOS D	14.3	B	0.63	17.7	B	0.52
<b>Unsignalized – Two-way Stop Control</b>							
Boones Ferry Rd / North Project Access	LOS D	10.2	A/B	0.06	55.8	A/F	0.50
Boones Ferry Rd / South Project Access <sup>a</sup>	LOS D	9.8	A/B	0.08	<u>a</u>	<u>a</u>	<u>a</u>
<b>Signalized and Four-way Stop Control:</b>				<b>Two-way Stop Control:</b>			
Delay = Average Stopped Delay per Vehicle (sec) for All Movements				Delay = Average Stopped Delay per Vehicle (sec) at Worst Movement			
LOS = Level of Service of Intersection				LOS = Level of Service of Major Street/Minor Street			
V/C = Volume-to-Capacity Ratio of Intersection				V/C = Volume-to-Capacity Ratio of Worst Movement			
<b><u>Bold Underlined</u></b> values do not meet standards.				<b><u>Bold Underlined</u></b> values do not meet standards.			

<sup>a</sup> The south Fred Meyer access currently has two-way stop control and is analyzed as such for the existing conditions. Mitigations recommend the south access be converted either to four-way stop control or to a traffic signal; both of these options were analyzed and the operating conditions are listed in the following table.

**TABLE 25: South Project Access Mitigated Future Operating Conditions (Saturday Peak)**

Traffic Control at South Project Access	Existing + Project + Mitigated		
	Delay	LOS	V/C
Signalized (Option 1)	10.2	B	0.54
Four-way Stop Control (Option 2)	22.7	C	0.88
Delay = Average Stopped Delay per Vehicle (sec) for All Movements LOS = Level of Service of Intersection	V/C = Volume-to-Capacity Ratio of Intersection <b><u>Bold Underlined</u></b> values do not meet standards.		

**QUEUING**

Queuing analysis was performed for the Saturday peak hour for the “Existing plus Project” scenario using SimTraffic™, which provides a system wide assessment of network performance and includes the estimation of the 95<sup>th</sup> percentile queue for each intersection approach movement. The 95<sup>th</sup> percentile queue length is the queue length at a given intersection movement that has only a 5% chance of being exceeded during the peak traffic hour. When compared with the movement’s available storage length, queue blockage issues can be determined. The queuing analysis was performed assuming the Boones Ferry Road mitigations as well as the construction of the Wilsonville Road 6-lane enhanced alternative, which focuses on ramp improvements and on adjustments to intersection lane configurations.

The available storage on Wilsonville Road is listed in Table 26 along with the results of the Saturday peak hour vehicle queuing analysis, and the results of the queuing analysis for Boones Ferry Road are given in Table 27. As shown in the tables, the available storage is sufficient to meet the 95<sup>th</sup> percentile queues for all intersection approaches. In addition, a comparison of the Saturday and PM peak hour northbound right and left turn queues at Boones Ferry Road indicate that the PM peak hour queues are longer; therefore, no additional mitigations beyond those recommended based on the PM peak hour are needed on Boones Ferry Road.

**TABLE 26: Wilsonville Road Queuing – Ex. + Proj. + Improvements (Saturday Peak Hour)**

Intersection on Wilsonville Road	Intersection Approach <sup>a</sup>	Available Vehicle Storage <sup>b</sup>	95 <sup>th</sup> Percentile Queue <sup>c</sup> (Saturday Peak Hour)
Boones Ferry Road	EB Through	1,240 ft	200 ft
	WB Left	400 ft	250 ft
	WB Through	480 ft	150 ft
	NB Left	TBD <sup>d</sup>	250 ft
	NB Right	TBD <sup>d</sup>	125 ft
I-5 Southbound Ramp	EB Through	500 ft	225 ft
	EB Right	500 ft	100 ft
	WB Left	420 ft	100 ft
	WB Through	420 ft	175 ft
	SB Left	400/975 ft <sup>e</sup>	200 ft
	SB Right	400/975 ft <sup>e</sup>	125 ft
I-5 Northbound Ramp	EB Left	420 ft	50 ft
	EB Through	420 ft	50 ft
	WB Through	625 ft	300 ft
	NB Left	360/760 ft <sup>e</sup>	125 ft
	NB Right	360/760 ft <sup>e</sup>	125 ft

<sup>a</sup> EB=Eastbound; WB=Westbound; NB=Northbound; SB=Southbound

<sup>b</sup> Available vehicle storage = distance from stop bar to upstream intersection crosswalk/stop bar

<sup>c</sup> 95<sup>th</sup> percentile queues are rounded to nearest 25 feet

<sup>d</sup> TBD = To be determined . . . the available storage lengths at these movements are dependent upon the improvements that are constructed in conjunction with the Fred Meyer site development

<sup>e</sup> x/x = available turn lane storage/distance from stop bar to mainline freeway



**TABLE 27: Boones Ferry Rd Queuing – Ex. +Proj. + Stg. II + Mitigated (Saturday Peak Hr.)**

Intersection on Boones Ferry Road	Intersection Approach <sup>a</sup>	Available Vehicle Storage <sup>b</sup>	95 <sup>th</sup> Percentile Queue <sup>c</sup>	
			Option 1 <sup>d</sup>	Option 2 <sup>e</sup>
Wilsonville Road	NB Left	350 ft	225 ft	225 ft
	NB Right	525 ft	125 ft	125 ft
South Fred Meyer Access	NB Left	175 ft	50 ft	50 ft
	SB Left	275 ft	225 ft	225 ft

<sup>a</sup> EB=Eastbound; WB=Westbound; NB=Northbound; SB=Southbound

<sup>b</sup> Available vehicle storage = distance from stop bar to upstream intersection crosswalk/stop bar

<sup>c</sup> 95<sup>th</sup> percentile queues are rounded to nearest 25 feet

<sup>d</sup> Option 1 = Signal at South Fred Meyer Access

<sup>e</sup> Option 2 = Four-way Stop Control at South Fred Meyer Access

## CHAPTER 5: SITE EVALUATION

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The site plan provided for the proposed Fred Meyer development<sup>33</sup> was evaluated with consideration for site access and circulation issues, including: access, sight distance, project frontage adjustments, internal circulation, traffic signal warrants at the site access points, internal pedestrian network, and parking.

### Access

The proposed Fred Meyer site has four access points to the public street system: two on SW Boones Ferry Road and two on SW Bailey Street. The two access points on Boones Ferry Road are located approximately 370 feet (main access) and 670 feet south of Wilsonville Road. The proposed access points on Bailey Street are located approximately 300 feet and 525 feet east of Boones Ferry Road.

Because Boones Ferry Road is classified as a major collector, its accesses (including all intersections and driveways) are required to be spaced at least 100 feet apart.<sup>34</sup> Both of the proposed Fred Meyer site accesses on Boones Ferry Road meet these spacing requirements. In addition, the accesses should be aligned with the Lowries Marketplace driveways on the opposite side of the street; because the site plan does not show the curb locations on the west side of Boones Ferry Road, it is uncertain whether the accesses are aligned. In addition, the radius at the north access for the right-out movement should be designed to allow trucks to perform a right turn without encroaching on neighboring lanes.

As a local street, Bailey Street does not have access spacing requirements; instead, each lot is permitted an access. Therefore, the two Fred Meyer site accesses on Bailey Street are not limited due to spacing concerns; however, the east access should be aligned with the driveway on the south side of the street and the west access should be located in a manner that it does not create conflicting turn movements with any nearby driveways on the south side of the street.

### Sight Distance

The sight triangle at each driveway should be clear of objects (large signs, landscaping, parked cars, etc.) that could potentially limit vehicle sight distance. In addition, all proposed site driveways should meet American Association of State Highway and Transportation Officials (AASHTO) sight distance requirements<sup>35</sup> as measured from 15 feet back from the edge of pavement. The site driveways on Boones Ferry Road would require a minimum of 390 feet of sight distance based on a 35 mph posted speed. The site driveways on Bailey Street would require a minimum of 280 feet of sight distance based on a 25 mph speed limit. Prior to occupancy, sight distance at the access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.

### Site Frontage Adjustments along Boones Ferry Road

The Fred Meyer development site frontage will require adjustments to accommodate the increased cross-section on Boones Ferry Road (as shown in Figure 5, which is found in Chapter 3: Impact Analysis). Adjustments at the southwest corner of the site may also be needed to ensure that the east and west legs of the Boones Ferry Road/Bailey Street intersection are properly aligned (currently, these legs are offset).

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<sup>33</sup> The site plan that was provided is included in the appendix.

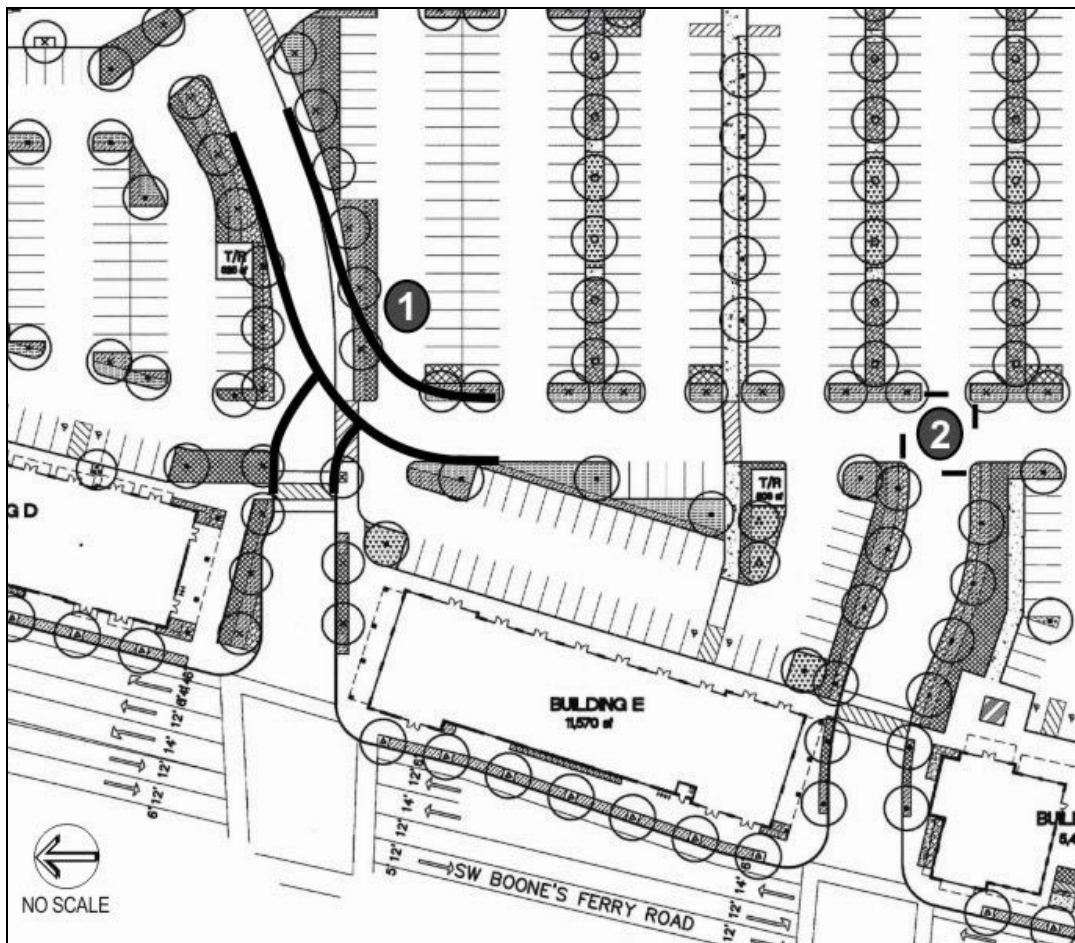
<sup>34</sup> *Transportation System Plan*, City of Wilsonville, by Entranco, June 2, 2003, Page 4-69, Table 4.o.

<sup>35</sup> *Geometric Design of Highways and Streets*, AASHTO, 2004; Case B1, p. 661.

Because the site plan does not show the curb locations on the west side of Boones Ferry Road or south side of Bailey Street, it is not clear what exact adjustments are needed.

### Internal Vehicular Circulation

If full access was allowed at both Fred Meyer driveways onto Boones Ferry Road, the proposed interior roadway network shown on the site plan would be expected to provide adequate vehicular and pedestrian circulation. Because queuing and operational issues require the prohibition of left-in movements at the north access, site plan changes are recommended to convert the south access into the main access. One optional method for making the conversion is presented in Figure 8, which shows two conceptual changes: (1) realigning the internal roadways so that priority is given to vehicles coming and going to the south access and (2) installing four-way stop-control at the internal intersection near the south access.



**FIGURE 8: Conceptual Internal Circulation Adjustments**

### Signal Warrants

Signal warrants were evaluated at the unsignalized study intersections on Boones Ferry Road for the PM peak hour “Existing plus Project plus Stage II” traffic scenario and for the Saturday peak hour “Existing

plus Project” traffic scenario. Based on the evaluation, no signal warrants were met for either scenario but the south Fred Meyer access is approaching warrants. Approximately 15% additional major street traffic is needed to meet peak hour warrants at the south Fred Meyer access.

Warrants were also evaluated with the expected future retail and residential developments located south of Fred Meyer’s. With the addition of the retail development, the MUTCD peak hour warrant #3 would be met for both the weekday PM peak period and the Saturday peak period. It is expected that the retail and residential developments would be reasonably expected to be approved and constructed within the next three years. Furthermore, the Brown Road extension project specified in the City of Wilsonville Transportation System Plan<sup>36</sup> would further solidify the need for the traffic signal; therefore, it is recommended that a traffic signal be installed in conjunction with the Boones Ferry Road street improvements that are identified in Figure 5. This will assure continuity between the street improvements and the traffic signal equipment. The traffic signal warrants are summarized in Table 28 and the signal warrants are attached in the appendix.

**TABLE 28: Fred Meyer South Access Traffic Signal Warrant Result Summary**

Scenario	Warrant Met?
Existing + Project + Stage II (Weekday PM Peak Hour)	No
Existing + Project + Stage II (Weekend Peak Hour)	No
Existing + Project + Stage II + Other (Weekday PM Peak Hour)	Yes
Existing + Project + Stage II + Other (Weekend Peak Hour)	Yes

With the installation of a traffic signal at the south Boones Ferry Road access, traffic signal conduit and interconnect cable will be needed between the controllers at Boones Ferry Road/Wilsonville Road and Boones Ferry Road/Fred Meyer’s south access in order to coordinate the traffic signals.

## Internal Pedestrian Network

The proposed interior pedestrian pathway network shown on the site plan should provide adequate pedestrian circulation. This conclusion assumes that the unshaded areas shown on the site plan immediately around and between the buildings are concrete slabs that accommodate pedestrian access to the buildings and to the nearby crosswalks and paths (in particular, to the paths on the north side of the site that connect to Wilsonville Road).

## Parking

The Fred Meyer development is required to comply with City of Wilsonville code for the number of vehicular parking stalls and bicycle parking spaces that are provided.<sup>37</sup> The requirements are based on the types of uses and the total building square footage of each use.

Regarding vehicular parking, the project sponsor has indicated that there are a total of 885 parking stalls planned for the site and that City of Wilsonville code requires a minimum of 962 parking stalls be

<sup>36</sup> City of Wilsonville Transportation System Plan, Entranco, Adopted June 2, 2003; Project C-17

<sup>37</sup> City of Wilsonville, Planning and Land Development Ordinance, Sections 4.154-4.198, Updated Feb. 2004.

provided on the site.<sup>38</sup> Table 29 lists the breakdown of parking stalls by land use. As shown in the table, the City code requirements are consistent with weekday peak parking demand data published by the Institute of Transportation Engineers (ITE) for shopping center, high-turnover restaurant, and apartment land uses,<sup>39</sup> which were also used in the 2004 study and which estimate that the currently proposed site will have a parking demand of approximately 983 parking stalls. During peak parking periods (such as holiday shopping periods), not meeting code requirements or expected demand may cause impacts to adjacent commercial and/or residential areas due to parking spillover; therefore, either 962 parking stalls should be provided to reduce potential off site parking impacts, the proposed land use could be reduced, or a parking management plan should be prepared outlining how peak parking demand needs will be met.

**TABLE 29: Vehicular Parking for Fred Meyer Development**

Land Use	Size	Stalls Provided	Estimated Demand	Spaces Required by City Code <sup>a</sup>	
				Minimum	Maximum
Fred Meyer <sup>b</sup>	155.7 KSF	<sup>c</sup>	654	639	966
Shopping Center	50.9 KSF	<sup>c</sup>	214	195	298
Restaurant	3.3 KSF	<sup>c</sup>	37	51	76
<u>Apartments</u>	<u>60 units</u>	<u><sup>c</sup></u>	<u>78</u>	<u>77</u>	<u>N/A</u>
<b>Total</b>		<b>885</b>	<b>983</b>	<b>962</b>	<b>N/A</b>

<sup>a</sup> City of Wilsonville, Planning and Land Development Ordinance, Sections 4.154-4.198, Updated Feb. 2004.

<sup>b</sup> Fred Meyer land use includes tenant spaces "J" and "K".

<sup>c</sup> Most parking lots are shared between buildings, with 802 dedicated retail stalls, 35 dedicated residential stalls, and 48 shared stalls.

For bicycle parking, the project sponsor has indicated that 138 parking spaces are planned for the site and that City of Wilsonville code requires a minimum of 112 total bicycle parking spaces for the proposed uses.<sup>40</sup> Table 30 lists the breakdown of bicycle parking spaces by land use. These spaces should be distributed throughout the development and located near building entrances in order to provide convenient access to each building.

**TABLE 30: Bicycle Parking for Fred Meyer Development**

Land Use	Size	Bicycle Parking Spaces Provided	Bicycle Parking Spaces Required by City Code <sup>a</sup>
Fred Meyer <sup>b</sup>	155.7 KSF	48	39
Shopping Center and Restaurant	54.2 KSF	30	17
<u>Apartments</u>	<u>60 units</u>	<u>60</u>	<u>60</u>
<b>Total</b>		<b>138</b>	<b>116</b>

<sup>a</sup> City of Wilsonville, Planning and Land Development Ordinance, Sections 4.154-4.198, Updated Feb. 2004.

<sup>b</sup> Fred Meyer land use includes tenant spaces "J" and "K".

<sup>38</sup> Letter by Lee D. Leighton, Westlake Consultants, July 2, 2008.

<sup>39</sup> *Parking Generation*, 3rd Edition, Institute of Transportation Engineers, 2003.

<sup>40</sup> Letter by Lee D. Leighton, Westlake Consultants, July 2, 2008.



## CHAPTER 6: PROJECT MITIGATIONS

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In order to preserve the performance of the study area roadways and to provide safe access to the medical office site and surrounding land uses, it is recommended that a series of transportation mitigation measures be performed.

### Project Impact Mitigations

To mitigate impacts at the north and south project accesses onto Boones Ferry Road, three Boones Ferry Road site frontage improvements are needed (these are in addition to the planned improvements to Boones Ferry Road that are shown on the Fred Meyer site plan):

- At the north Fred Meyer access, install a median along Boones Ferry Road to restrict movements to right-in/right-out for both the Lowries Marketplace and Fred Meyer developments; this will increase safety by removing turn lane needs at this access and will provide for better traffic flow (i.e. queuing spillback that impact Wilsonville Road). It will also accommodate turn lane placement and storage needs for the Boones Ferry Road/Wilsonville Road intersection's northbound approach traffic. Also, if desired, the north Fred Meyer access may be converted to a right-out only driveway and narrowed to one lane, which would allow additional space on the project site that could be used to increase a building pad size, the number of parking stalls, etc.
- Between the north and south Fred Meyer accesses, extend the second northbound through lane (which becomes a right turn lane at the Wilsonville Road intersection) to ensure approximately 600 feet of storage is provided for the northbound right turn lane at Wilsonville Road. This distance meets the short-term Fred Meyer needs and the long-term 20-year Wilsonville Road Interchange design needs.
- At the south Fred Meyer access, install a traffic signal to facilitate egress movements from the Lowries and Fred Meyer developments. There should also be two egress lanes (i.e., a right turn lane and a through-left lane). It is expected that warrants will be met in the near future due to the addition of nearby developments. Installing the traffic signal with the Boones Ferry Road improvements will assure continuity between the improvements and the traffic signal construction. The signal should be coordinated with the Boones Ferry Road/Wilsonville Road signal. To enable the coordination, interconnect conduit and cable will need to be installed between the signals.

A conceptual layout of Boones Ferry Road that shows all improvements and mitigations is presented in Figure 5, which can be found in Chapter 3: Impact Analysis.

### Additional Project Oriented Transportation Mitigations

In addition to the Boones Ferry Road mitigations, the following project related measures would typically be required as conditions of approval if the project were approved:

#### Site Accesses

- The south Fred Meyer access on Boones Ferry Road should be aligned with the south Lowries Marketplace driveway (i.e., near Albertsons). In addition, regarding the Fred Meyer accesses on Bailey Street, the east access should be aligned with the driveway on the south side of the street

and the west access should be located in a manner that it does not create conflicting turn movements with any nearby driveways on the south side of the street.

- The radius for the right-out movement at the north access on Boones Ferry Road should be designed to allow trucks to perform a right turn without encroaching on neighboring lanes.

#### **Intersection Alignment**

- Improvements to the Boones Ferry Road/Bailey Street intersection should be constructed to ensure that the east and west legs of Bailey Street are properly aligned (these legs currently are offset).

#### **Sight Distance**

- All proposed site driveways should meet American Association of State Highway and Transportation Officials (AASHTO) sight distance requirements<sup>41</sup>, and prior to occupancy, sight distance at the access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.
- The sight triangle at each driveway should be clear of objects (large signs, landscaping, parked cars, etc.) that could potentially limit vehicle sight distance.

#### **Boones Ferry Road Adjustments**

- The Fred Meyer development site frontage will require adjustments to accommodate the increased cross-section on Boones Ferry Road (as shown in Figure 5, which is found in Chapter 3: Impact Analysis). Adjustments at the southwest corner of the site may also be needed to ensure that the east and west legs of the Boones Ferry Road/Bailey Street intersection are properly aligned (currently, these legs are offset). Because the site plan does not show the curb locations on the west side of Boones Ferry Road or south side of Bailey Street, it is not clear what exact adjustments are needed.

#### **Internal Circulation**

- Site plan changes are recommended to convert the south access into the main access. One optional method for making the conversion is presented in Figure 8 (found in Chapter 5: Site Evaluation), which shows two conceptual changes: (1) realigning the internal roadways so that priority is given to vehicles coming and going to the south access and (2) installing four-way stop-control at the internal intersection near the south access.
- The site plan is not clear in the vicinity of the buildings, but it appears that the site would provide adequate pedestrian circulation. It should be ensured that the site indeed provides pedestrian access to the buildings and to the nearby crosswalks and paths (in particular, to the paths on the north side of the site that connect to Wilsonville Road).
- All sidewalks within the site should conform to ADA requirements.<sup>42</sup>

#### **Traffic Signal Warrants**

- Though signal warrants are not met at any unsignalized study intersection for the “Existing plus Project plus Stage II” scenario, it was determined that the peak hour warrant will be met in the near future at the south Fred Meyer access; therefore, a traffic signal should be installed in

<sup>41</sup> *Geometric Design of Highways and Streets*, AASHTO, 2004; Case B1, p. 661.

<sup>42</sup> *ADA Accessibility Guidelines for Buildings and Facilities*, Department of Justice, January 1998.

conjunction with the Fred Meyer development. This will assure continuity between the Boones Ferry Road improvements and the traffic signal construction. The signal should be coordinated with the Boones Ferry Road/Wilsonville Road signal. To enable the coordination, interconnect conduit and cable will need to be installed between the signals.

**Parking**

- The proposed site provides only 885 parking stalls. This is not sufficient to meet City of Wilsonville code requirements, which specifies that a minimum of 962 stalls should be provided (based on the types of uses and the total building square footage of each use). During peak parking periods (such as holiday shopping periods), not meeting code requirements may cause parking demand to exceed the number of available stalls and oblige vehicles to park in adjacent commercial and/or residential areas; therefore, either 962 parking stalls should be provided to reduce potential off site parking impacts or a parking management plan should be prepared outlining how peak parking demand needs shall be met.
- The 138 bicycle parking spaces meet City code requirements and should be distributed throughout the development and should be located near building entrances in order to provide convenient access to each building.

# Appendix

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**Site Information**

**Wilsonville Stage II Project List**

**Weekday Traffic Counts**

**Saturday Traffic Counts**

**Level of Service Descriptions**

**HCM Intersection Analysis - Unmitigated**

**HCM Intersection Analysis - Mitigated**

**HCM Intersection Analysis - Saturday**

**Queuing Analysis**

**Warrant Analysis**

**Trip Generation and Distribution**

## Site Information

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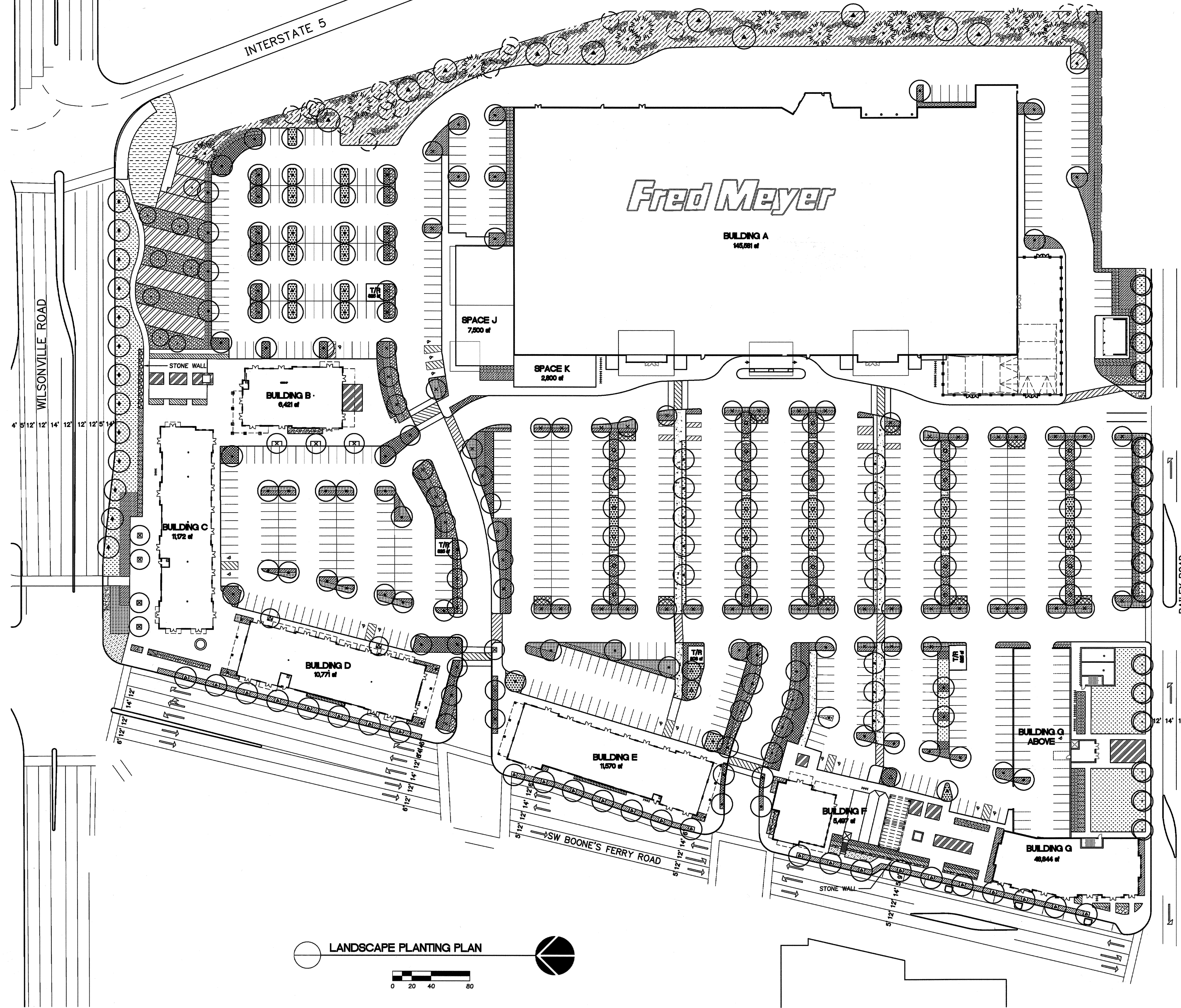


PLANT MATERIAL SCHEDULE

SYMBOL	BOTANICAL NAME - COMMON NAME	SIZE / SPACING
<b>TREES</b>		
⊙	ZELKOVA SERRATA 'GREEN VASE' 'GREEN VASE' ZELKOVA	2" CAL AS SHOWN
⊗	PYRUS CALLERYANA 'GLEN'S FORM' CHANTICLEER PEAR	2" CAL AS SHOWN
⊕	ACER RUBRUM 'BOWHALL' BOWHALL RED MAPLE	2" CAL AS SHOWN
⊙	MALUS 'PRAIRIFIRE' PRAIRIFIRE CRABAPPLE	2" CAL AS SHOWN
⊕	ACER RUBRUM 'RED SUNSET' 'RED SUNSET' RED MAPLE	2" CAL AS SHOWN
⊙	TILIA CORDATA LITTLELEAF LINDEN	2" CAL AS SHOWN
⊙	PYRUS CALLERYANA 'BRADFORD' BRADFORD PEAR	2" CAL AS SHOWN
⊕	QUERCUS GARRYANA OREGON WHITE ASH	2" CAL AS SHOWN
☼	PSEUDOTSUGA MENZIESII DOUGLAS FIR	8' HT. B&B AS SHOWN
⊙	ACER RUBRUM 'RED SUNSET' 'RED SUNSET' RED MAPLE	2" CAL AS SHOWN
⊙	EXISTING CONIFER TREE TO REMAIN	
⊙	EXISTING DECIDUOUS TREE TO REMAIN	
<b>SHRUBS</b>		
⊙	PHORMIUM TENAX 'ATROPURPUREUM' NEW ZEALAND FLAX	2 GAL. CONT. AS SHOWN
⊙	ILEX X MESERVEAE BLUE HOLLY	2 GAL. CONT. AS SHOWN
⊙	CORNUS STOLONIFERA REDTWIG DOGWOOD	2 GAL. CONT. AS SHOWN
⊙	MYRICA CALIFORNICA PACIFIC WAX MYRTLE	2 GAL. CONT. AS SHOWN
⊙	ROSA NUTKANA NOOTKA ROSE	2 GAL. CONT. AS SHOWN
⊙	MISCANTHUS SINENSIS 'YAKUSHIMA' DWARF MAIDEN GRASS	2 GAL. CONT. 36" O.C.
⊙	SPIRAEA JAPONICA 'GOLDMOUND' GOLDMOUND SPIRAEA	2 GAL. CONT. 30" O.C.
⊙	VIBURNUM DAVIDII DAVID'S VIBURNUM	2 GAL. CONT. 30" O.C.
⊙	CORNUS SERICEA 'KELSEY' DWARF REDTWIG DOGWOOD	2 GAL. CONT. 30" O.C.
⊙	BERBERIS THUNBERGII 'CRIMSON PYGMY' CRIMSON PYGMY BARBERRY	2 GAL. CONT. 30" O.C.
⊙	BUXUS MICROPHYLLA JAPONICA 'GREEN BEAUTY' GREEN BEAUTY 'JAPANESE BOXWOOD'	1 GAL. CONT. 30" O.C.
⊙	PERENNIALS (TO BE SELECTED)	1 GAL. CONT. 24" O.C.
⊙	HELICTOTRICHON SEMPERVIRENS BLUE OAT GRASS	1 GAL. CONT. 24" O.C.
⊙	FESTUCA RUBRA RUBRA RED FESCUE	SEED
⊙	PENNISETUM ALOPECUROIDES DWARF FOUNTAIN GRASS	1 GAL. CONT. 24" O.C.
⊙	CAREX ELATA 'BOWLES GOLDEN' BOWLES GOLDEN SEDGE	1 GAL. CONT. 24" O.C.
⊙	ERICA 'KRAMER'S RED' DARLEY DALE HEATH	1 GAL. CONT. 24" O.C.
⊙	LAWN SUNMARK SUN MIX	SEED
⊙	ARCTOSTAPHYLOS UVA-URSI KINKYBERRY	1 GAL. CONT. 24" O.C.
⊙	JUNCUS PATENS CALIFORNIA GRAY RUSH	1 GAL. CONT. 24" O.C.
⊙	EXISTING LANDSCAPE TO REMAIN	
<b>STORMWATER PLANTING</b>		
⊙	33% CORNUS SERICEA 'KELSEY' DWARF REDTWIG DOGWOOD	1 GAL. CONT. 30" O.C.
⊙	33% CAREX MUSKINGUMENSIS 'OEHME' VAREGATED PALM SEDGE	1 GAL. CONT. 30" O.C.
⊙	34% JUNCUS PATENS CALIFORNIA GRAY RUSH	1 GAL. CONT. 24" O.C.

GENERAL NOTES

1. INSTALLATION MUST FULLY COMPLY WITH ALL LANDSCAPE CODE REQUIREMENTS AND ANY CITY OF WILSONVILLE CONDITIONS OF APPROVAL.
2. FOR SIZES AND SPECIES OF EXISTING TREES TO REMAIN, SEE ARBORIST REPORT AND CIVIL PLANS.



LANDSCAPE PLANTING PLAN

WILSONVILLE TOWN CENTER DESIGN REVIEW

WILSONVILLE, OREGON



GR-L1



**III. DEVELOPMENT PLAN OVERVIEW**

The proposed development includes:

- A 145,581 square foot (SF) Fred Meyer store, with two attached complementary retail spaces encompassing 10,100 square feet;
- Five smaller buildings containing approximately 56,075 SF of space for a mix of complementary commercial uses that can include retail shopping, restaurants, and offices; and
- A 40,080 SF housing component. The housing component will provide up to 60 units of housing with secure parking and an open space courtyard for residents, located adjacent to Bailey Road.
- Retention of the existing 2,150 SF wood frame church building on the site; Fred Meyer is exploring possible reuse options with the City of Wilsonville.
- (Note: throughout this document, all building square footage figures are estimates based on preliminary architectural plans and the building footprints illustrated on the site plan. For any individual building, the figures are expected to be accurate to within plus-or-minus five percent (5%) of overall floor area for the buildings in final form.)

The following provides an overview of the key elements of the project.

**A. FRED MEYER**

The main building within the project is the Fred Meyer retail store located in the eastern half of the site. This building encloses approximately 135,000 square feet; an attached Garden Center, which has a greenhouse-type roof and semi-open walls, encloses about 95,000 square feet, for a total of 145,581 square feet of retail space.

236,581  
10,100  
135,000  
FM

The location and architectural design of the Fred Meyer building, along with the pad buildings and a high degree of landscaping, is intended to mask the large size of the structure. A motorist or pedestrian will see only glimpses of the Fred Meyer building from Boones Ferry Road, between the church, retail buildings, and landscaping along the street frontage. New proposed buildings and landscaping, including retention of existing trees, will partially screen the view from Wilsonville Road. More of the building will be visible at a glance from Bailey Street and from Interstate 5. In such cases an observer will notice that all four elevations are divided by varying material, mass, color, and texture, designed to resemble a series of individual buildings with linkages, as opposed to a single large mass. The resulting experience will be in context with the historic nature of the site and its surroundings.

The buildings are designed to create an interesting and varied pedestrian experience close to the buildings. A variety of materials, including natural stone, tumbled brick, board and batten siding or lap siding are used to increase texture and giving the building a sense of authenticity and permanence.

Building lights have been chosen to complement different portions of the building, accenting the composition day or night. Old town lights on ornate brackets punctuate features of the building, which visually terminate main drive aisles and the pedestrian connection from Wilsonville Road. Elegant sconces contribute to the safe lighting of the entries.

**B. DEVELOPMENT PADS**

The proposed plan includes the Fred Meyer store with attached Garden Center and Spaces J and K, as well as development of six "pad" buildings along the northern and eastern perimeter of the site, designated on the site plan as Buildings B, C, D, E, F and G. All of these buildings are designed as a series of spaces for

multiple tenants; the multiple spaces within each building can be combined for a larger user if needed. Buildings B through F are intended for retail or small restaurant use. Building G is unique in that the ground floor, facing Boones Ferry Road, is intended for retail, with two floors of housing above. In order to achieve a satisfactory ratio of building square footage to on-site parking, Building G is the only multi-story building on the site; however, some of the buildings along the Wilsonville and Boones Ferry frontages have tall interior spaces, creating the appearance and exterior form of two-story buildings. The following is a summary of the sizes and uses of each of the pad buildings:

Building Designation	Size (square feet)	Anticipated Use	Maximum Number of Tenant Spaces
B	6,421	Retail	Up to 4 (1 likely)
C	11,172	Retail	Up to 9
D	11,035	Retail	Up to 8
E	11,584	Retail	Up to 8
F	3,488 (new)	Restaurant	1
	2,150 (existing)	Retail	1
G	8,764	Office/retail	Up to 7
	40,080	Residential	60 units
J	7,500	Retail	Up to 4
K	2,600	Retail	Up to 4

52,469

**Scale**

Taking cues from the historical buildings along Boones Ferry Road, the pad buildings will emphasize the pedestrian scale. The size of the buildings is similar to historic buildings like the existing church. Where footprints of the pads are larger than historic buildings, the facades will be visually divided to give the appearance of multiple buildings. Although the buildings will be functionally single story, parapets and roofs will project higher to resemble the proportions and fenestration of historic buildings.

**Materials**

The designs for pad buildings fronting on SW Boones Ferry Road are based on the historic roots of the surrounding neighborhood. The materials selected are combined to provide a design that is in context with its historic surroundings. Materials such as natural stone, tumbled brick, textured masonry, wood siding, and standing-seam metal roofing are combined to create interesting and rich building facades at pedestrian level, as well as from a distance. Varied wall materials, massing, texture, and color will be combined with varied roof forms, awnings, canopies, and streetscape amenities that provide a small town historic feel. The architectural design of the buildings and finishes is intended to comply with the Old Town Design Standards.

The exterior finish materials used on each of the six pad buildings and the Fred Meyer building are shown graphically and in text in the building elevation renderings contained in Exhibits 4 and 5.

**Design Consistency**

The buildings will be designed to have visual interest on all sides so that the pleasing pedestrian experience is consistent well into the site. Landscape, walks, and plazas will surround the pads. Old Town-style benches, lights, and other furniture will punctuate the plazas. Screen walls, fences, or landscaping will minimize the visibility of loading, trash, recycling, and service areas.

**Cover**

Buildings will be designed with awnings at entrances and along plazas to provide sun and rain cover for pedestrians.

**C. STREETScape**

The streetscape design along Boones Ferry Road will include parallel parking south of the southern driveway access; north of that point, parallel parking movements would conflict with adequate and safe functioning of the Boones Ferry/Wilsonville Road intersection. Sidewalks will front buildings of similar scale and material to other historic buildings in the area. Between the buildings, landscaped plazas will provide pleasant stopping areas for pedestrians.

Pedestrian connections enter the site from Boones Ferry Road at the two driveway entrances as well as at two pedestrian plazas. Within the site, a sidewalk runs alongside the primary drive aisle leading to the north end of the Fred Meyer Store building, and two pedestrian paths through the main parking area align directly with a pair of formal building entrances, characteristic of newer Fred Meyer stores throughout the region.

**D. LANDSCAPE**

The development plan is designed to protect in place the existing Douglas fir grove at the northeast corner of the site, as well as existing landscape trees on the east side of the existing church building. The submitted landscaping plan shows how several east-west rows of trees in the central parking area (west of the Fred Meyer building) will provide shade while reinforcing the direction of movement between the main building and the plazas and shops along Boones Ferry Road.

The landscape development along Boones Ferry Road proposes an enhanced pedestrian environment, with sidewalks linked to plazas and seating areas at the community building, and future retail stores and restaurants. Pedestrian connectivity into the site is provided at several points along Boones Ferry Road, and a pedestrian path into the site also is provided from Wilsonville Road.

A fully automatic underground irrigation system will be installed to establish the landscape and provide supplemental water during extended dry periods. Away from public street frontages where a "Main Street" look and feel is the goal, the plan proposes substantial perimeter screening utilizing conifer trees and large broadleaf evergreen shrubs. Extensive plantings of deciduous canopy trees provide parking lot shading.

**E. UTILITIES**

**Sanitary Sewer**

An 8" Public sewer line will be extended up Boones Ferry Road from Bailey Street. The new line will connect to the existing public sewer on the commercial development site to the west, across Boones Ferry Road, specifically in the new driveway across from Bailey Street. The pad sites will connect to the new main line in Boones Ferry with a 4" or 6" service lateral. The Fred Meyer sewer will be an 8" private line connecting the new sewer in Boones Ferry Road at the main entrance to the site. The new 8" Public line is being extended up Boones Ferry so that lateral connections will not have to cross the new development across the street.

**Storm Drainage**

The storm system on site is all privately owned and maintained by Fred Meyer. The pipes range in size from 6" to 36", draining to the southwest corner of the site and being treated before entering a piped system on SW Boones Ferry Road. A new storm drain line will be constructed from this corner to an outlet point at the Willamette River. It is estimated that a 36" diameter pipe will be required; Fred Meyer will provide a drainage report with calculations to ascertain the required pipe size, for approval by the City Engineer.

**Water**

An 8" fire line will be looped through the site, having connection points on Boones Ferry Road and Bailey Street. The Fire Department Connection is being proposed at the new driveway located on Bailey Street. There are six proposed fire hydrants on site. A 3" domestic water line will be extended from Bailey to the back side of the proposed building. The Pad sites will be served by individual water services sized to the appropriate usage.

**F. SITE ANALYSIS**

The following chart summarizes the proposed development:

	Square Feet	As %
Total Site Area (Net of Right-of-Way Dedications)	784,554	100.0 %
Buildings	251,836	32.1 %
Fred Meyer Store	145,581	18.5 %
Other Non-Residential (Pad Sites)	66,175	8.4 %
Residential (* on multiple floors)	40,080 *	5.1 % *
Parking & Circulation Area	407,662	51.9 %
Landscaping	125,056	15.9 %
Parking Lot Landscaping (** % of Parking & Circulation Area)	41,874	5.3 % **
Other Landscaping	83,182	10.6 %
	Total	
Parking Spaces	Regular Spaces	ADA Spaces
Retail/Restaurant	885	21
Residential	802 dedicated, 48 shared	19 dedicated, 2 shared
	35 dedicated, 48 shared	1 dedicated, 2 shared
Overall Non-Residential Parking Ratio	4.01 spaces per 1000 SF	



Fred Meyer Mixed Use Development - Off-Street Parking Summary									
	Proposed use	Bldg. SF	Parking requirement per 1000 square feet		Parking required		Bicycle Parking Requirement	Bicycle Parking Required	Bicycle Parking Provided
			Min.	Max.	Min.	Max.	Minimum	Minimum	Minimum
Building A (Fred Meyer)	Retail	145,581	4.1	6.2	597	903	1 per 4000	36	40
Building B	Retail	6,421	4.1	6.2	26	40	1 per 4000	2	4
Building C	Retail	12,245	4.1	6.2	50	76	1 per 4000	3	6
Building D	Retail	10,771	4.1	6.2	44	67	1 per 4000	3	4
Building E	Retail	12,377	4.1	6.2	51	77	1 per 4000	3	6
Building F	Retail (church)	2,181	4.1	6.2	9	14	1 per 4000	1	6
	Restaurant (addition)	3,316	15.3	23	51	76	1 per 4000	1	
Building G	Office	8,764	2.7	4.1	24	36	1 per 4000	2	4
	Residential - 60 Units	40,080	See Notes Below		77		1 per D.U.	60	60
Building J	Retail	7,500	4.1	6.2	31	47	1 per 4000	2	4
Building K	Retail	2,600	4.1	6.2	11	16	1 per 4000	1	4
<b>TOTAL</b>		<b>251,836</b>			<b>970</b>	<b>1427</b>		<b>113</b>	<b>138</b>
Parking Provided:					885 (includes all residential parking plus 10 on-street spaces)				
ADA Spaces:					21				
Compact Spaces:					179				
Total Pad Space:			66,175 square feet						
Total Retail Space + Restaurant Space:			211,756 square feet						
Total Parking available for retail/restaurant:			850 (total - 35 dedicated residential spaces)						
Total Provided Parking Ratio for Retail & Restaurant:			4.01 per 1000 s.f.						
Residential Parking Ratios:			Residential Parking Provided: 35 Dedicated						
1.25 per D.U. (1 bdrm)			48						
1.5 per D.U. (2 bdrm)									
1.75 per D.U. (3 bdrm)									

Pedestrian circulation through the parking areas to all building entrances is provided. As shown on the site plan, internal sidewalks are provided to ensure that pedestrians can walk to and from all portions of the development.

The parking lot landscaping exceeds the minimum requirement (10 percent) with 10.3 percent of the parking and circulation area landscaped. Total landscaping across the entire development equates to 16% of the site.

**Waiver**

This application requests a waiver to the minimum number of required parking spaces. As shown in the above chart, the uses proposed on site require a minimum of 970 spaces. The proposed development plan proposes 885 spaces, or 91.2 percent of the required minimum spaces.

The site contains several large fir trees in the northeastern portion of the site. The site layout was configured to preserve and protect as many of these large trees as possible. The main Fred Meyer building was shifted to the west and to the south, and the garden center was redesigned to provide adequate truck maneuvering while preserving the majority of the large fir trees in this area. In addition, the streetscape along Boones Ferry Road is designed with significant public plazas and landscaping, in addition to the buildings, to emphasize the "Main Street" design. As such, areas that could have been utilized for parking remain undeveloped to protect large canopy trees, or to provide an attractive, pedestrian-oriented streetscape along Boones Ferry Road.

The Applicant has presented a Trip Generation Estimate by Brett Ahrend, P.E. of Group Mackenzie, which treats the retail and office portions of the proposed development as a shopping center, taking into account the high proportion of shared trips a mixed-use center typically achieves. Similarly, because many visitors to a mixed-use center will park once to visit a number of individual businesses with the center, a high ratio of shared parking can also be achieved, allowing the parking ratio to be reduced (as compared to adding up the required minimum parking for all uses as if they were on isolated, separate sites).

Significant effort has been made to provide pedestrian and bicycle access to and from the site, and bus service to the site is provided along Boones Ferry Road. These alternative transportation methods and the number of parking spaces provided are sufficient to serve the proposed development.

All dimensional and surface standards for off-street parking are met as indicated on the site plan. Additionally, ADA parking and bicycle parking locations are designated on the site plan.

Bicycle parking is distributed throughout the site at locations convenient to each of the proposed buildings, as demonstrated on the attached site plan (see Exhibit 2, Sheet GR-S1 and Exhibit 6, Sheet CE-5). A group of bike racks is proposed near each of the main entrances into the Fred Meyer building, which will provide parking for 50 bikes. The western grouping will also serve Buildings J and K. Other smaller groups of bike racks are located in the following places: to the east of Building B in the pedestrian plaza; on the west side of Building C; at the eastern end of Building D; on the south side of Building E; and on the north side of Building F. Each group will provide parking for 4 to 6 bikes, as needed according to the size of each building. Dedicated bicycle parking for the residential component of this plan is located on the ground level of Building G, adjacent to the parking lot. All of the bicycle parking spaces are designed and located so that they are convenient to the building they will serve, are protected from vehicles, and do not conflict with other retail activities such as shopping cart storage.

- (.04) Minimum Off-Street Loading Requirements:
  - A. Every building that is erected or structurally altered to increase the floor area, and which will require the receipt or distribution of materials or merchandise by truck or similar vehicle, shall provide off-street loading berths on the basis of minimum requirements as follows:
    - 1. Commercial, industrial, and public utility uses which have a gross floor area of 5,000 square feet or more, shall provide truck loading or unloading berths in accordance with the following tables:

## **Wilsonville Stage II Project List**

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Wilsonville Planning Division  
Stage II Approved, Vested, and Other Projects

July 1, 2008

Stage II Approved Project	Land Use (ITE Code)	Size	PM Peak Trips	IN/OUT	% Pass-By/Divert
Ash Meadows	MFDU	22	21	14/7	
TC Anchor	RET	31.0 KSF	136	43/43	37/28
Rivergreen (Phase 3)	SFDU	4	6	4/2	
Mercedes Benz (Phase 2)	AUTO		46	20/26	
I-5 Corporate Park (In Focus) (Under construction)	Office bldg W-1 (2 story)	70.0 KSF	97	17/80	
	Office bldg. W-2 (constructed, unoccupied)	124.5 KSF	173	144/29	
	<b>Total</b>		<b>270</b>	<b>46/224</b>	
Argyle Square	Retail – Service station	10 fueling positions	47	23/24	29/30
Town Center Ph III	Commercial	2.1 KSF	9	4/5	
	Office (under construction)	44.0 KSF	104	18/86	
	Miller Paint Store	5.0 KSF	14	7/7	
	Bank (approved)	3.63 KSF	90	45/45	
	Fast Food #1	2.5 KSF	34	18/16	
	Fast Food #2	2.5 KSF	34	18/16	
	High Turnover Restaurant	7.5 KSF	41	25/17	
	<b>Total Approved</b>			<b>326</b>	<b>134/192</b>
Shefrin Mixed-Use	Retail/Office	8,000 Mixed-Use	10	2/8	
Lowries (vested trips)	Sequoia Office Building	17.8 KSF	61	31/30	
	Sonic fast food restaurant	1,800 SF w/drive-thru			
Commuter Rail – Park & Ride, bus terminal, train shed. (95% Constructed)	Public Transit	400 Stalls	306	76/230	

Wilsonville Planning Division  
Stage II Approved, Vested, and Other Projects

July 1, 2008

Stage II Approved Project	Land Use (ITE Code)	Size	PM Peak Trips	IN/OUT	% Pass-By/Divert
Cross Creek Subdivision (Lots for sale)	Residential	13 lots	11	7/4	
Hydro-Temp	Office/Flex-Space/Cafe	60.8 KSF	90	44/46	
Copper Creek (Mike Madrid) (Lots for sale)	Residential	26 dwelling units	23	15/8	
Chad Ward building on Kinsman	Manufacturing, warehouse, office and 5,000 SF retail bldg.	25,360 SF Total	52	11/41	
Joe Angel's retail (Wilsonville Retail) on Boones Ferry Rd	Retail	11,166 SF North Bldg	131	66/65	26/44
	Bank	3,165 SF South Bldg.	111	53/58	26/58
	<b>Total</b>		<b>242</b>	<b>119/123</b>	
Sysco Foods warehouse expansion (Under construction)	Warehouse/Office building	71,972 SF Total (for expansion)	40	15/25	
Providence Medical Clinic	Offices	25,000 SF	93	25/68	
US Crane & Hoist (Under construction)	Industrial	1,920 SF	2		
Wilsonville Auto Body	Convert existing Diatron Building to an Auto Body facility	39,606 SF			
Wilsonvillage – Old Town	Residential – Phase 1	2 lots plus 2 accessory units			

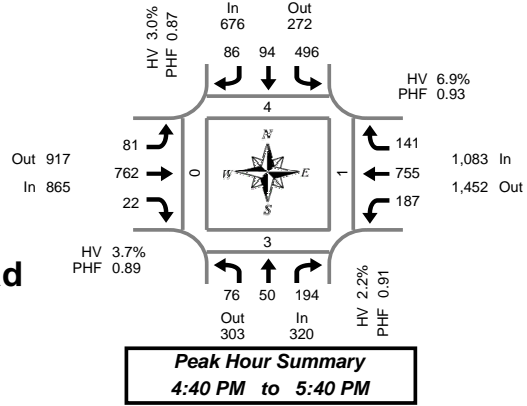
Vested Projects (Trips through WV IC Area)					
Vested Project	Land Use (ITE Code)	Size	PM Peak Trips	IN/OUT	% Pass-By/Divert
Villebois	Mixed Use	N/A	309 WVIC	266/144	
The Villebois approved projects as shown below are part of the 410 vested trips through the WV Road Interchange Area as shown above (309 trips based on occupied units in SAP-South Phases 1,2, and 3)					
Villebois SAP-South Phases 2 and 3	Residential	121 units	115	74/41	
Villebois SAP-East Phase 1	Residential	190 units			
Villebois SAP-Central Phase 1	Residential	394 units			
Villebois SAP-Central Phase 2	Residential/5,000 sf commercial	114- 134 (mid 124)			
Villebois SAP-South Phase 5	Residential	25 units			
Villebois SAP-North	Residential				

Projects Without Stage II Approval (“Other” Projects)					
Other Project	Land Use (ITE Code)	Size	PM Peak Trips	IN/OUT	% Pass-By/Divert
Wilsonvillage – Old Town	Residential – Phase 2	8 lots plus 8 accessory units			
Shefrin Mixed-Use (other portions of development are approved)	Residential	<del>25</del> 16 Townhomes (trip generation estimates may change)	19	13/6	
Coca-Cola Warehouse Expansion	Industrial	160,000 SF	28	6/22	
Abele-Renaissance Subdivision	Residential	33 single-family dwelling units	33	21/12	

# **Weekday Traffic Counts**

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**Total Vehicle Summary**



**SW Boones Ferry Rd & SW Wilsonville Rd**

Tuesday, January 29, 2008

4:00 PM to 6:00 PM

**5-Minute Interval Summary**

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	7	6	16	0	43	7	3	0	5	55	1	0	14	53	5	0	215	0	0	0	0
4:05 PM	6	4	12	0	37	8	2	0	5	58	1	0	17	64	7	0	221	0	0	0	0
4:10 PM	6	2	21	0	45	7	5	0	6	55	1	0	20	55	10	0	233	0	0	0	0
4:15 PM	7	3	20	0	38	6	8	0	3	62	2	0	17	52	10	0	228	0	0	0	0
4:20 PM	5	3	17	0	35	5	2	0	6	73	2	0	13	64	11	0	236	0	0	0	1
4:25 PM	5	4	18	0	32	7	4	0	6	72	2	0	16	62	9	0	237	0	1	0	0
4:30 PM	7	5	15	0	40	6	9	0	6	58	2	1	17	52	12	1	229	0	0	1	0
4:35 PM	8	5	17	0	44	9	4	0	7	58	1	0	11	54	14	0	232	1	0	0	0
4:40 PM	11	3	18	0	43	7	5	0	8	59	1	0	13	56	9	0	233	1	0	0	0
4:45 PM	7	7	16	0	41	6	11	0	12	57	3	0	15	59	12	0	246	0	0	0	0
4:50 PM	6	3	17	0	39	5	6	0	7	69	2	0	17	59	10	0	240	0	1	0	0
4:55 PM	6	5	15	0	37	7	6	0	4	64	1	0	20	59	12	0	236	0	1	0	0
5:00 PM	5	6	17	0	36	8	12	1	6	69	2	0	16	56	10	0	243	0	0	0	0
5:05 PM	7	5	18	0	40	9	5	0	10	67	1	0	16	60	13	0	251	0	0	0	0
5:10 PM	5	3	13	0	50	9	12	0	8	79	2	0	13	76	14	0	284	1	1	0	0
5:15 PM	7	3	16	0	46	10	7	0	5	60	1	0	14	62	10	0	241	1	0	0	0
5:20 PM	6	5	18	0	44	8	8	0	4	56	2	0	20	59	13	0	243	0	0	1	0
5:25 PM	6	4	17	0	43	12	5	0	3	60	2	0	16	62	11	0	241	0	0	0	0
5:30 PM	4	4	13	0	37	6	4	0	5	58	2	0	11	74	15	0	233	1	0	0	0
5:35 PM	6	2	16	0	40	7	5	0	9	64	3	0	16	73	12	0	253	0	0	0	0
5:40 PM	5	5	18	0	41	6	4	0	4	50	2	0	9	63	14	0	221	0	0	0	0
5:45 PM	6	3	15	0	35	4	6	0	8	49	4	0	14	70	15	0	229	1	0	0	0
5:50 PM	5	2	16	0	28	5	7	0	5	50	2	0	12	73	13	0	218	0	0	0	0
5:55 PM	6	4	16	0	31	3	4	0	3	51	3	0	9	67	13	0	210	0	0	0	0
Total Survey	149	96	395	0	945	167	144	1	145	1,453	45	1	356	1,484	274	1	5,653	6	4	2	1

**15-Minute Interval Summary**

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	19	12	49	0	125	22	10	0	16	168	3	0	51	172	22	0	669	0	0	0	0
4:15 PM	17	10	55	0	105	18	14	0	15	207	6	0	46	178	30	0	701	0	1	0	1
4:30 PM	26	13	50	0	127	22	18	0	21	175	4	1	41	162	35	1	694	2	0	1	0
4:45 PM	19	15	48	0	117	18	23	0	23	190	6	0	52	177	34	0	722	0	2	0	0
5:00 PM	17	14	48	0	126	26	29	1	24	215	5	0	45	192	37	0	778	1	1	0	0
5:15 PM	19	12	51	0	133	30	20	0	12	176	5	0	50	183	34	0	725	1	0	1	0
5:30 PM	15	11	47	0	118	19	13	0	18	172	7	0	36	210	41	0	707	1	0	0	0
5:45 PM	17	9	47	0	94	12	17	0	16	150	9	0	35	210	41	0	657	1	0	0	0
Total Survey	149	96	395	0	945	167	144	1	145	1,453	45	1	356	1,484	274	1	5,653	6	4	2	1

**Peak Hour Summary**

4:40 PM to 5:40 PM

By Approach	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	320	303	623	0	676	272	948	1	865	917	1,782	0	1,083	1,452	2,535	0	2,944	4	3	1	0
%HV	2.2%				3.0%				3.7%				6.9%				4.6%				
PHF	0.91				0.87				0.89				0.93				0.95				

By Movement	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total				
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total					
Volume	76	50	194	320	496	94	86	676	81	762	22	865	187	755	141	1,083	2,944				
%HV	2.6%	0.0%	2.6%	2.2%	3.2%	0.0%	4.7%	3.0%	3.7%	3.4%	13.6%	3.7%	1.1%	7.3%	12.8%	6.9%	4.6%				
PHF	0.79	0.78	0.95	0.91	0.89	0.78	0.74	0.87	0.75	0.89	0.79	0.89	0.88	0.90	0.90	0.93	0.95				

**Rolling Hour Summary**

4:00 PM to 6:00 PM

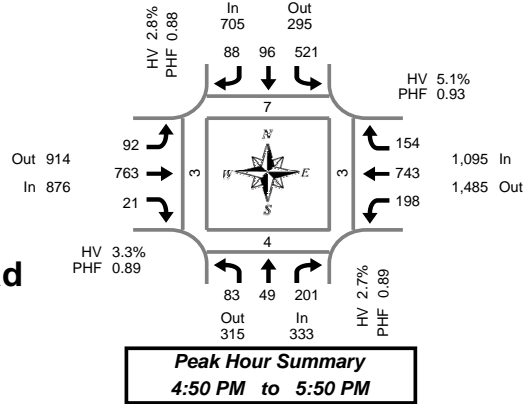
Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	81	50	202	0	474	80	65	0	75	740	19	1	190	689	121	1	2,786	2	3	1	1
4:15 PM	79	52	201	0	475	84	84	1	83	787	21	1	184	709	136	1	2,895	3	4	1	1
4:30 PM	81	54	197	0	503	96	90	1	80	756	20	1	188	714	140	1	2,919	4	3	2	0
4:45 PM	70	52	194	0	494	93	85	1	77	753	23	0	183	762	146	0	2,932	3	3	1	0
5:00 PM	68	46	193	0	471	87	79	1	70	713	26	0	166	795	153	0	2,867	4	1	1	0



**Total Vehicle Summary**



Clay Carney  
(503) 833-2740



**SW Boones Ferry Rd & SW Wilsonville Rd**

Tuesday, June 24, 2008

4:00 PM to 6:00 PM

**5-Minute Interval Summary**

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	7	2	11	0	34	8	7	0	7	64	2	0	18	51	12	0	223	0	0	0	0
4:05 PM	6	3	9	0	42	6	5	0	6	49	4	0	15	54	10	0	209	1	0	0	0
4:10 PM	6	5	13	0	47	5	4	0	6	52	3	0	22	55	13	0	231	0	0	2	0
4:15 PM	5	6	20	0	33	11	5	0	5	70	2	0	17	56	15	0	245	0	0	0	0
4:20 PM	4	3	16	0	38	5	4	0	8	56	0	0	15	64	9	0	222	0	2	0	0
4:25 PM	9	2	14	0	45	2	6	2	4	62	2	0	19	66	7	0	238	0	0	0	0
4:30 PM	5	4	21	0	34	3	9	0	4	59	5	0	23	61	15	0	243	2	0	0	0
4:35 PM	10	7	17	0	42	5	6	0	7	63	0	0	16	46	11	0	230	0	0	0	0
4:40 PM	3	2	15	2	29	7	9	0	7	65	1	0	19	63	14	0	234	0	0	0	0
4:45 PM	5	3	10	0	44	6	5	0	6	73	2	0	12	65	8	1	239	0	0	0	0
4:50 PM	7	2	12	0	47	12	6	0	7	67	3	0	16	58	10	0	247	0	3	0	0
4:55 PM	8	4	20	0	38	7	6	0	5	54	1	0	17	68	12	0	240	4	0	1	0
5:00 PM	4	5	15	0	32	8	5	0	16	73	4	0	18	50	17	0	247	0	0	0	0
5:05 PM	5	7	23	0	50	8	11	0	5	70	1	0	20	61	10	0	271	0	0	0	0
5:10 PM	6	1	14	0	52	7	11	0	11	64	1	0	14	50	8	0	239	0	0	0	0
5:15 PM	10	1	13	0	48	6	7	0	3	64	1	0	15	70	18	0	256	0	0	1	3
5:20 PM	5	5	16	0	42	11	7	0	9	60	0	0	15	65	12	0	247	0	0	0	0
5:25 PM	11	7	15	0	49	5	5	1	6	51	4	0	13	71	16	0	253	0	0	0	0
5:30 PM	5	5	22	0	45	6	6	0	6	63	2	0	20	61	11	0	252	0	0	0	0
5:35 PM	4	2	19	0	43	8	9	0	8	74	1	0	19	66	15	0	268	0	0	0	0
5:40 PM	13	9	15	0	36	10	6	0	7	63	1	0	15	55	16	0	246	3	1	0	0
5:45 PM	5	1	17	0	39	8	9	0	9	60	2	0	16	68	9	0	243	0	0	1	0
5:50 PM	6	2	18	0	41	6	8	0	8	56	3	0	19	64	13	0	244	0	0	0	0
5:55 PM	5	4	12	0	31	6	7	0	6	63	1	0	13	58	10	1	216	0	0	0	0
Total Survey	154	92	377	2	981	166	163	3	166	1,495	46	0	406	1,446	291	2	5,783	10	6	5	3

**15-Minute Interval Summary**

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	19	10	33	0	123	19	16	0	19	165	9	0	55	160	35	0	663	1	0	2	0
4:15 PM	18	11	50	0	116	18	15	2	17	188	4	0	51	186	31	0	705	0	2	0	0
4:30 PM	18	13	53	2	105	15	24	0	18	187	6	0	58	170	40	0	707	2	0	0	0
4:45 PM	20	9	42	0	129	25	17	0	18	194	6	0	45	191	30	1	726	4	3	1	0
5:00 PM	15	13	52	0	134	23	27	0	32	207	6	0	52	161	35	0	757	0	0	0	0
5:15 PM	26	13	44	0	139	22	19	1	18	175	5	0	43	206	46	0	756	0	0	1	3
5:30 PM	22	16	56	0	124	24	21	0	21	200	4	0	54	182	42	0	766	3	1	0	0
5:45 PM	16	7	47	0	111	20	24	0	23	179	6	0	48	190	32	1	703	0	0	1	0
Total Survey	154	92	377	2	981	166	163	3	166	1,495	46	0	406	1,446	291	2	5,783	10	6	5	3

**Peak Hour Summary**

4:50 PM to 5:50 PM

By Approach	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	333	315	648	0	705	295	1,000	1	876	914	1,790	0	1,095	1,485	2,580	0	3,009	7	4	3	3
%HV	2.7%				2.8%				3.3%				5.1%				3.8%				
PHF	0.89				0.88				0.89				0.93				0.97				

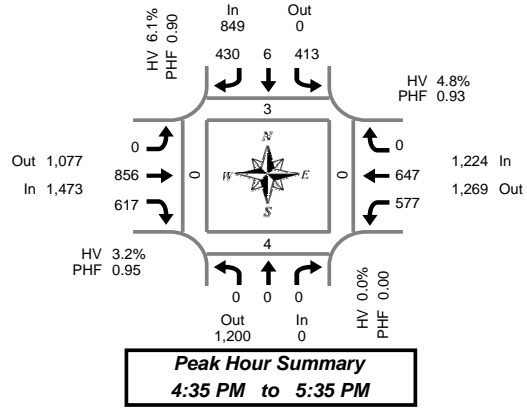
By Movement	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total				
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total					
Volume	83	49	201	333	521	96	88	705	92	763	21	876	198	743	154	1,095	3,009				
%HV	2.4%	2.0%	3.0%	2.7%	2.7%	1.0%	5.7%	2.8%	5.4%	2.6%	19.0%	3.3%	2.0%	4.2%	13.6%	5.1%	3.8%				
PHF	0.80	0.72	0.87	0.89	0.87	0.89	0.76	0.88	0.72	0.92	0.66	0.89	0.90	0.90	0.84	0.93	0.97				

**Rolling Hour Summary**

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	75	43	178	2	473	77	72	2	72	734	25	0	209	707	136	1	2,801	7	5	3	0
4:15 PM	71	46	197	2	484	81	83	2	85	776	22	0	206	708	136	1	2,895	6	5	1	0
4:30 PM	79	48	191	2	507	85	87	1	86	763	23	0	198	728	151	1	2,946	6	3	2	3
4:45 PM	83	51	194	0	526	94	84	1	89	776	21	0	194	740	153	1	3,005	7	4	2	3
5:00 PM	79	49	199	0	508	89	91	1	94	761	21	0	197	739	155	1	2,982	3	1	2	3

**Total Vehicle Summary**



**I-5 SB Ramps & SW Wilsonville Rd**

Tuesday, January 29, 2008  
4:00 PM to 6:00 PM

**5-Minute Interval Summary**  
4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	34	0	39	0	0	73	51	0	43	51	0	0	291	0	0	0	0
4:05 PM	0	0	0	0	27	0	34	0	0	65	48	0	45	48	0	0	267	0	0	0	0
4:10 PM	0	0	0	0	36	1	34	0	0	69	51	0	43	63	0	0	297	0	0	0	0
4:15 PM	0	0	0	0	32	0	24	0	0	66	47	0	43	40	0	0	252	1	0	0	0
4:20 PM	0	0	0	0	28	2	32	0	0	76	49	0	36	58	0	0	281	1	0	0	0
4:25 PM	0	0	0	0	32	1	33	0	0	65	41	0	40	52	0	0	264	0	0	0	0
4:30 PM	0	0	0	0	41	0	38	0	0	64	42	0	56	49	0	0	290	0	0	0	0
4:35 PM	0	0	0	0	29	0	33	0	0	88	57	0	44	55	0	1	306	0	0	0	0
4:40 PM	0	0	0	0	35	0	23	0	0	62	63	0	42	52	0	0	277	0	0	0	0
4:45 PM	0	0	0	0	34	2	38	0	0	72	46	0	43	53	0	0	288	0	1	0	0
4:50 PM	0	0	0	0	23	0	29	0	0	63	54	0	48	46	0	0	263	0	0	0	0
4:55 PM	0	0	0	0	32	1	43	0	0	81	39	0	53	66	0	0	315	0	0	0	0
5:00 PM	0	0	0	0	38	0	28	0	0	73	51	0	56	50	0	0	296	0	0	0	0
5:05 PM	0	0	0	0	36	0	33	0	0	67	56	0	47	56	0	2	295	0	2	0	0
5:10 PM	0	0	0	0	45	0	31	0	0	71	58	0	43	59	0	0	307	0	0	0	0
5:15 PM	0	0	0	0	34	0	46	0	0	66	50	0	47	62	0	0	305	2	1	0	0
5:20 PM	0	0	0	0	33	1	37	0	0	77	49	0	48	55	0	0	300	0	0	0	0
5:25 PM	0	0	0	0	39	2	39	0	0	67	51	0	49	50	0	0	297	1	0	0	0
5:30 PM	0	0	0	0	35	0	50	0	0	69	43	1	57	43	0	0	297	0	0	0	0
5:35 PM	0	0	0	0	51	0	27	0	0	66	51	0	46	55	0	0	296	0	0	0	0
5:40 PM	0	0	0	0	45	1	32	0	0	67	36	0	45	54	0	0	280	0	0	0	0
5:45 PM	0	0	0	0	30	0	29	0	0	54	36	0	46	56	0	0	251	0	0	0	0
5:50 PM	0	0	0	0	30	2	33	0	0	62	35	0	39	50	0	0	251	0	0	0	0
5:55 PM	0	0	0	0	34	0	29	0	0	46	33	0	42	48	0	0	232	0	0	0	0
Total Survey	0	0	0	0	833	13	814	0	0	1,629	1,137	1	1,101	1,271	0	3	6,798	5	4	0	0

**15-Minute Interval Summary**  
4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	97	1	107	0	0	207	150	0	131	162	0	0	855	0	0	0	0
4:15 PM	0	0	0	0	92	3	89	0	0	207	137	0	119	150	0	0	797	2	0	0	0
4:30 PM	0	0	0	0	105	0	94	0	0	214	162	0	142	156	0	1	873	0	0	0	0
4:45 PM	0	0	0	0	89	3	110	0	0	216	139	0	144	165	0	0	866	0	1	0	0
5:00 PM	0	0	0	0	119	0	92	0	0	211	165	0	146	165	0	2	898	0	2	0	0
5:15 PM	0	0	0	0	106	3	122	0	0	210	150	0	144	167	0	0	902	3	1	0	0
5:30 PM	0	0	0	0	131	1	109	0	0	202	130	1	148	152	0	0	873	0	0	0	0
5:45 PM	0	0	0	0	94	2	91	0	0	162	104	0	127	154	0	0	734	0	0	0	0
Total Survey	0	0	0	0	833	13	814	0	0	1,629	1,137	1	1,101	1,271	0	3	6,798	5	4	0	0

**Peak Hour Summary**  
4:35 PM to 5:35 PM

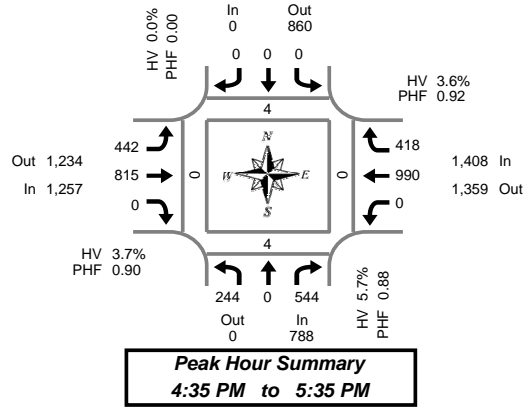
By Approach	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	1,200	1,200	0	849	0	849	0	1,473	1,077	2,550	1	1,224	1,269	2,493	3	3,546	3	4	0	0
%HV	0.0%				6.1%				3.2%				4.8%				4.5%				
PHF	0.00				0.90				0.95				0.93				0.97				

By Movement	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	413	6	430	849	0	856	617	1,473	577	647	0	1,224	3,546
%HV	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	9.3%	6.1%	0.0%	3.7%	2.4%	3.2%	3.8%	5.7%	0.0%	4.8%	4.5%
PHF	0.00	0.00	0.00	0.00	0.87	0.50	0.85	0.90	0.00	0.96	0.93	0.95	0.92	0.91	0.00	0.93	0.97

**Rolling Hour Summary**  
4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	383	7	400	0	0	844	588	0	536	633	0	1	3,391	2	1	0	0
4:15 PM	0	0	0	0	405	6	385	0	0	848	603	0	551	636	0	3	3,434	2	3	0	0
4:30 PM	0	0	0	0	419	6	418	0	0	851	616	0	576	653	0	3	3,539	3	4	0	0
4:45 PM	0	0	0	0	445	7	433	0	0	839	584	1	582	649	0	2	3,539	3	4	0	0
5:00 PM	0	0	0	0	450	6	414	0	0	785	549	1	565	638	0	2	3,407	3	3	0	0

Total Vehicle Summary



I-5 NB Ramps & SW Wilsonville Rd

Tuesday, January 29, 2008

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	12	0	27	0	0	0	0	0	34	61	0	0	0	89	39	0	262	0	0	0	0
4:05 PM	14	0	32	0	0	0	0	0	34	64	0	0	0	68	33	0	245	0	0	0	0
4:10 PM	15	0	33	0	0	0	0	0	42	63	0	0	0	79	43	0	275	1	1	0	0
4:15 PM	15	0	26	0	0	0	0	0	38	67	0	0	0	71	29	0	246	0	0	0	0
4:20 PM	26	0	27	0	0	0	0	0	32	63	0	0	0	79	32	0	259	0	0	0	0
4:25 PM	22	0	50	0	0	0	0	0	31	73	0	0	0	65	35	0	276	0	0	0	0
4:30 PM	18	0	40	0	0	0	0	0	37	65	0	0	0	72	41	0	273	0	0	0	0
4:35 PM	18	0	44	0	0	0	0	0	45	69	0	0	0	74	37	1	287	1	1	0	0
4:40 PM	19	0	48	0	0	0	0	0	35	64	0	0	0	87	29	0	282	0	0	0	0
4:45 PM	19	0	49	0	0	0	0	0	29	61	0	0	0	74	33	0	265	0	0	0	0
4:50 PM	17	0	33	0	0	0	0	0	28	83	0	0	0	78	34	0	273	0	0	0	0
4:55 PM	19	0	34	0	0	0	0	0	34	58	0	0	0	84	35	0	264	0	0	0	0
5:00 PM	17	0	37	0	0	0	0	0	35	70	0	0	0	85	41	0	285	0	0	0	0
5:05 PM	22	0	46	0	0	0	0	0	42	71	0	0	0	93	37	2	311	0	2	0	0
5:10 PM	19	0	56	0	0	0	0	0	51	82	0	0	0	94	33	0	335	2	0	0	0
5:15 PM	28	0	38	0	0	0	0	0	34	63	0	0	0	85	31	0	279	0	0	0	0
5:20 PM	23	0	53	0	0	0	0	0	47	60	0	0	0	77	46	0	306	0	1	0	0
5:25 PM	24	0	55	0	0	0	0	0	29	67	0	1	0	76	25	0	276	1	0	0	0
5:30 PM	19	0	51	0	0	0	0	0	33	67	0	0	0	83	37	0	290	0	0	0	0
5:35 PM	20	0	45	0	0	0	0	0	43	74	0	0	0	73	27	0	282	2	0	0	0
5:40 PM	18	0	39	0	0	0	0	0	27	70	0	0	0	66	46	0	266	1	0	0	0
5:45 PM	23	0	42	0	0	0	0	0	32	57	0	0	0	85	27	0	266	0	0	0	0
5:50 PM	22	0	31	0	0	0	0	0	32	56	0	0	0	72	22	0	235	0	0	0	0
5:55 PM	21	0	42	0	0	0	0	0	29	71	0	0	0	75	31	0	269	1	0	0	0
Total Survey	470	0	978	0	0	0	0	0	853	1,599	0	1	0	1,884	823	3	6,607	9	5	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	41	0	92	0	0	0	0	0	110	188	0	0	0	236	115	0	782	1	1	0	0
4:15 PM	63	0	103	0	0	0	0	0	101	203	0	0	0	215	96	0	781	0	0	0	0
4:30 PM	55	0	132	0	0	0	0	0	117	198	0	0	0	233	107	1	842	1	1	0	0
4:45 PM	55	0	116	0	0	0	0	0	91	202	0	0	0	236	102	0	802	0	0	0	0
5:00 PM	58	0	139	0	0	0	0	0	128	223	0	0	0	272	111	2	931	2	2	0	0
5:15 PM	75	0	146	0	0	0	0	0	110	190	0	1	0	238	102	0	861	1	1	0	0
5:30 PM	57	0	135	0	0	0	0	0	103	211	0	0	0	222	110	0	838	3	0	0	0
5:45 PM	66	0	115	0	0	0	0	0	93	184	0	0	0	232	80	0	770	1	0	0	0
Total Survey	470	0	978	0	0	0	0	0	853	1,599	0	1	0	1,884	823	3	6,607	9	5	0	0

Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	788	0	788	0	0	860	860	0	1,257	1,234	2,491	1	1,408	1,359	2,767	3	3,453	4	4	0	0
%HV	5.7%				0.0%				3.7%				3.6%				4.1%				
PHF	0.88				0.00				0.90				0.92				0.93				

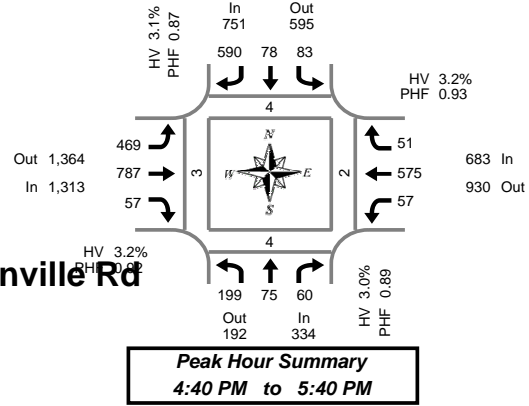
By Movement	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	244	0	544	788	0	0	0	0	442	815	0	1,257	0	990	418	1,408	3,453
%HV	9.8%	0.0%	3.9%	5.7%	0.0%	0.0%	0.0%	0.0%	5.0%	2.9%	0.0%	3.7%	0.0%	4.0%	2.6%	3.6%	4.1%
PHF	0.81	0.00	0.86	0.88	0.00	0.00	0.00	0.00	0.84	0.91	0.00	0.90	0.00	0.91	0.92	0.92	0.93

Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	214	0	443	0	0	0	0	0	419	791	0	0	0	920	420	1	3,207	2	2	0	0
4:15 PM	231	0	490	0	0	0	0	0	437	826	0	0	0	956	416	3	3,356	3	3	0	0
4:30 PM	243	0	533	0	0	0	0	0	446	813	0	1	0	979	422	3	3,436	4	4	0	0
4:45 PM	245	0	536	0	0	0	0	0	432	826	0	1	0	968	425	2	3,432	6	3	0	0
5:00 PM	256	0	535	0	0	0	0	0	434	808	0	1	0	964	403	2	3,400	7	3	0	0

**Total Vehicle Summary**



**SW Town Center Loop West & SW Wilsonville Rd**

Tuesday, January 29, 2008

4:00 PM to 6:00 PM

**Peak Hour Summary**  
4:40 PM to 5:40 PM

**5-Minute Interval Summary**

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Town Center Loop West				Southbound SW Town Center Loop West				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	14	5	2	0	4	6	44	0	38	48	2	0	2	43	2	0	210	0	0	0	1
4:05 PM	20	4	3	0	3	5	45	0	26	48	3	0	3	46	4	0	210	0	1	0	0
4:10 PM	16	5	3	0	4	6	44	0	27	62	4	0	2	59	3	0	235	1	0	1	0
4:15 PM	9	3	6	0	5	3	39	0	42	50	7	1	1	47	7	0	219	1	0	1	1
4:20 PM	18	10	3	0	5	3	44	0	29	48	4	0	3	50	4	0	221	1	0	2	0
4:25 PM	14	3	2	0	5	4	43	0	37	58	9	0	4	55	9	0	243	1	2	0	2
4:30 PM	17	6	6	0	5	6	48	0	45	48	5	0	3	43	4	0	236	1	1	1	0
4:35 PM	15	4	5	0	4	6	47	0	33	55	5	0	9	55	3	0	241	0	1	0	0
4:40 PM	15	10	4	0	10	6	46	0	40	70	5	0	3	49	8	1	266	0	0	0	0
4:45 PM	10	6	7	0	5	5	43	0	41	61	4	0	3	60	5	0	250	0	0	0	0
4:50 PM	16	5	6	0	5	4	53	0	41	55	8	0	6	35	3	0	237	0	1	0	1
4:55 PM	17	5	4	0	6	11	52	0	38	60	3	0	3	44	6	0	249	0	1	0	0
5:00 PM	19	11	9	0	8	5	59	0	34	64	9	0	4	60	4	0	286	0	0	1	0
5:05 PM	20	6	3	0	9	7	59	0	48	61	3	0	8	49	4	0	277	0	1	0	1
5:10 PM	17	7	2	0	6	5	42	0	39	70	2	0	3	47	4	0	244	1	0	0	1
5:15 PM	17	8	6	0	7	11	45	0	29	59	6	0	3	52	1	0	244	0	0	0	0
5:20 PM	16	3	5	0	8	5	44	0	50	79	4	0	6	42	4	0	266	0	0	0	0
5:25 PM	15	4	5	0	6	6	44	0	40	64	3	0	4	42	5	0	238	2	0	1	0
5:30 PM	19	6	5	0	8	6	53	0	38	73	4	0	9	45	2	0	268	0	1	0	0
5:35 PM	18	4	4	0	5	7	50	0	31	71	6	0	5	50	5	0	256	1	0	0	0
5:40 PM	20	3	2	0	5	7	48	0	35	61	4	0	4	44	5	0	238	0	1	0	1
5:45 PM	14	3	4	0	5	4	38	0	34	71	3	0	3	41	6	0	226	0	1	0	0
5:50 PM	16	4	5	0	4	8	47	0	35	64	5	0	8	55	7	0	258	0	0	0	0
5:55 PM	16	4	2	0	6	6	41	0	31	64	5	0	2	44	6	0	227	0	0	0	0
Total Survey	388	129	103	0	138	142	1,118	0	881	1,464	113	1	101	1,157	111	1	5,845	9	11	7	8

**15-Minute Interval Summary**

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Town Center Loop West				Southbound SW Town Center Loop West				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	50	14	8	0	11	17	133	0	91	158	9	0	7	148	9	0	655	1	1	1	1
4:15 PM	41	16	11	0	15	10	126	0	108	156	20	1	8	152	20	0	683	3	2	3	3
4:30 PM	47	20	15	0	19	18	141	0	118	173	15	0	15	147	15	1	743	1	2	1	0
4:45 PM	43	16	17	0	16	20	148	0	120	176	15	0	12	139	14	0	736	0	2	0	1
5:00 PM	56	24	14	0	23	17	160	0	121	195	14	0	15	156	12	0	807	1	1	1	2
5:15 PM	48	15	16	0	21	22	133	0	119	202	13	0	13	136	10	0	748	2	0	1	0
5:30 PM	57	13	11	0	18	20	151	0	104	205	14	0	18	139	12	0	762	1	2	0	1
5:45 PM	46	11	11	0	15	18	126	0	100	199	13	0	13	140	19	0	711	0	1	0	0
Total Survey	388	129	103	0	138	142	1,118	0	881	1,464	113	1	101	1,157	111	1	5,845	9	11	7	8

**Peak Hour Summary**

4:40 PM to 5:40 PM

By Approach	Northbound SW Town Center Loop West				Southbound SW Town Center Loop West				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	334	192	526	0	751	595	1,346	0	1,313	1,364	2,677	0	683	930	1,613	1	3,081	4	4	2	3
%HV	3.0%				3.1%				3.2%				3.2%				3.1%				
PHF	0.89				0.87				0.92				0.93				0.95				

By Movement	Northbound SW Town Center Loop West				Southbound SW Town Center Loop West				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	199	75	60	334	83	78	590	751	469	787	57	1,313	57	575	51	683	3,081
%HV	3.5%	2.7%	1.7%	3.0%	3.6%	6.4%	2.5%	3.1%	2.8%	3.3%	5.3%	3.2%	0.0%	3.8%	0.0%	3.2%	3.1%
PHF	0.89	0.78	0.79	0.89	0.90	0.85	0.87	0.87	0.92	0.91	0.71	0.92	0.75	0.92	0.80	0.93	0.95

**Rolling Hour Summary**

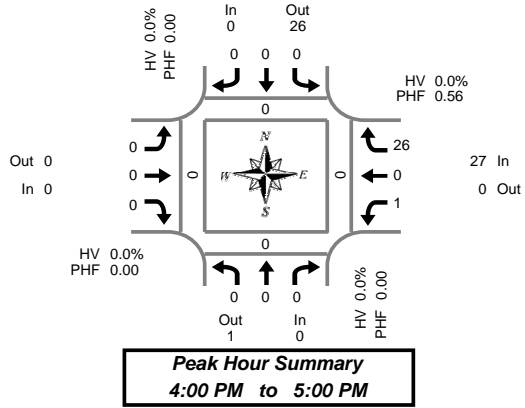
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Town Center Loop West				Southbound SW Town Center Loop West				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	181	66	51	0	61	65	548	0	437	663	59	1	42	586	58	1	2,817	5	7	5	5
4:15 PM	187	76	57	0	73	65	575	0	467	700	64	1	50	594	61	1	2,969	5	7	5	6
4:30 PM	194	75	62	0	79	77	582	0	478	746	57	0	55	578	51	1	3,034	4	5	3	3
4:45 PM	204	68	58	0	78	79	592	0	464	778	56	0	58	570	48	0	3,053	4	5	2	4
5:00 PM	207	63	52	0	77	77	570	0	444	801	54	0	59	571	53	0	3,028	4	4	2	3

Total Vehicle Summary



Clay Carney  
(503) 833-2740



Boones Ferry & North Bank Access

Tuesday, July 01, 2008  
4:00 PM to 6:00 PM

5-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Bank Access				Westbound North Bank Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0		
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	5	0	0		
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0		
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0		
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0		
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	0		
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0		
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0		
Total Survey	0	0	0	0	0	0	0	0	0	0	0	0	3	0	35	0	38	0	0	0	

15-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Bank Access				Westbound North Bank Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	7	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0		
Total Survey	0	0	0	0	0	0	0	0	0	0	0	0	3	0	35	0	38	0	0		

Peak Hour Summary  
4:00 PM to 5:00 PM

By Approach	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Bank Access				Westbound North Bank Access				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	1	1	0	0	26	26	0	0	0	0	0	27	0	27	0	27	0	0	0	
%HV	0.0%				0.0%				0.0%				0.0%				0.0%	0.0%			
PHF	0.00				0.00				0.00				0.56				0.56	0.56			

By Movement	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Bank Access				Westbound North Bank Access				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	26	27	27
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.59	0.56	0.56

Rolling Hour Summary  
4:00 PM to 6:00 PM

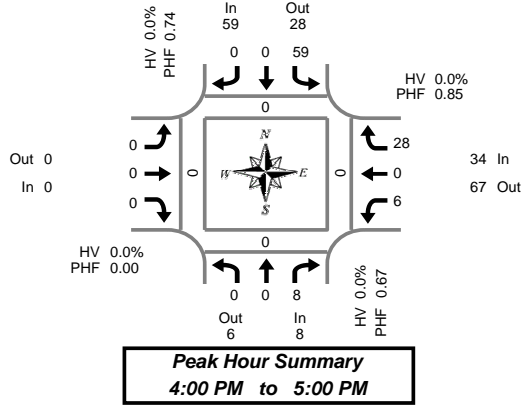
Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Bank Access				Westbound North Bank Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	26	0	27	0	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	23	0	24	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	18	0	20	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	14	0	16	0	0		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9	0	11	0	0		



Total Vehicle Summary



Clay Carney  
(503) 833-2740



Boones Ferry & South Bank Access

Tuesday, July 01, 2008  
4:00 PM to 6:00 PM

5-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound South Bank Access				Westbound South Bank Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	2	0	6	0	0	0	0	0	0	0	1	0	3	0	12	0	0	0	0
4:05 PM	0	0	0	0	7	0	0	0	0	0	0	0	0	0	4	0	11	0	0	0	0
4:10 PM	0	0	1	0	5	0	0	0	0	0	0	0	0	1	0	7	0	0	0	0	
4:15 PM	0	0	0	0	7	0	0	0	0	0	0	0	1	0	1	0	9	0	0	0	0
4:20 PM	0	0	1	0	8	0	0	0	0	0	0	0	0	4	0	13	0	0	0	0	
4:25 PM	0	0	1	0	4	0	0	0	0	0	0	0	0	2	0	7	0	0	0	0	
4:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	6	0	0	0	0	
4:35 PM	0	0	0	0	6	0	0	0	0	0	0	0	1	0	1	0	8	0	0	0	0
4:40 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	2	0	6	0	0	0	0	
4:45 PM	0	0	0	0	5	0	0	0	0	0	0	0	2	0	3	0	10	0	0	0	0
4:50 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	5	0	0	0	0	
4:55 PM	0	0	1	0	4	0	0	0	0	0	0	0	1	0	1	0	7	0	0	0	0
5:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	5	0	7	0	0	0	0	0
5:05 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	5	0	0	0	0	0
5:10 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	5	0	0	0	0	0
5:15 PM	0	0	0	0	4	0	0	0	0	0	0	1	0	1	0	6	0	0	0	0	0
5:20 PM	0	0	0	0	5	0	0	0	0	0	0	0	0	2	0	7	0	0	0	0	0
5:25 PM	0	0	0	0	1	0	0	0	0	0	0	1	0	3	0	5	0	0	0	0	0
5:30 PM	0	0	1	0	3	0	0	0	0	0	0	0	0	2	0	6	0	0	0	0	0
5:35 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0
5:40 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
5:45 PM	0	0	1	0	2	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0
5:50 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	0
5:55 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0
Total Survey	0	0	10	0	86	0	0	0	0	0	0	8	0	52	0	156	0	0	0	0	0

15-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound South Bank Access				Westbound South Bank Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	3	0	18	0	0	0	0	0	0	1	0	8	0	30	0	0	0	0	0
4:15 PM	0	0	2	0	19	0	0	0	0	0	0	1	0	7	0	29	0	0	0	0	0
4:30 PM	0	0	2	0	10	0	0	0	0	0	0	1	0	7	0	20	0	0	0	0	0
4:45 PM	0	0	1	0	12	0	0	0	0	0	0	3	0	6	0	22	0	0	0	0	0
5:00 PM	0	0	0	0	6	0	0	0	0	0	0	0	0	11	0	17	0	0	0	0	0
5:15 PM	0	0	0	0	10	0	0	0	0	0	0	2	0	6	0	18	0	0	0	0	0
5:30 PM	0	0	1	0	6	0	0	0	0	0	0	0	0	3	0	10	0	0	0	0	0
5:45 PM	0	0	1	0	5	0	0	0	0	0	0	0	0	4	0	10	0	0	0	0	0
Total Survey	0	0	10	0	86	0	0	0	0	0	0	8	0	52	0	156	0	0	0	0	0

Peak Hour Summary  
4:00 PM to 5:00 PM

By Approach	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound South Bank Access				Westbound South Bank Access				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	8	6	14	0	59	28	87	0	0	0	0	34	67	101	0	101	0	0	0	0	0
%HV	0.0%				0.0%				0.0%				0.0%				0.0%				
PHF	0.67				0.74				0.00				0.85				0.84				

By Movement	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound South Bank Access				Westbound South Bank Access				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	8	8	59	0	0	59	0	0	0	0	6	0	28	34	101
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PHF	0.00	0.00	0.67	0.67	0.74	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.50	0.00	0.70	0.85	0.84

Rolling Hour Summary  
4:00 PM to 6:00 PM

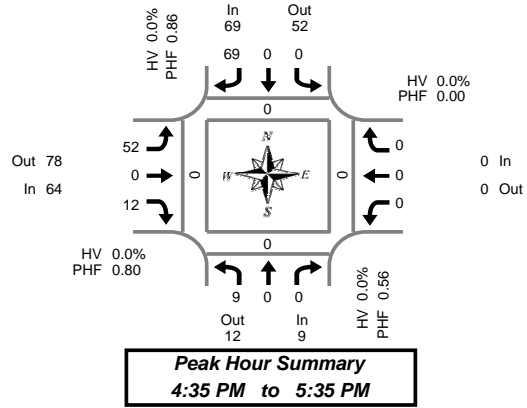
Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound South Bank Access				Westbound South Bank Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	8	0	59	0	0	0	0	0	0	0	6	0	28	0	101	0	0	0	0
4:15 PM	0	0	5	0	47	0	0	0	0	0	0	0	5	0	31	0	88	0	0	0	0
4:30 PM	0	0	3	0	38	0	0	0	0	0	0	0	6	0	30	0	77	0	0	0	0
4:45 PM	0	0	2	0	34	0	0	0	0	0	0	0	5	0	26	0	67	0	0	0	0
5:00 PM	0	0	2	0	27	0	0	0	0	0	0	0	2	0	24	0	55	0	0	0	0



Total Vehicle Summary



Clay Carney  
(503) 833-2740



Boones Ferry & North Access

Tuesday, July 01, 2008  
4:00 PM to 6:00 PM

5-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Access				Westbound North Access				Interval Total	Pedestrians Crosswalk							
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West				
4:00 PM	2	0	0	0	0	0	4	0	7	0	1	0	0	0	0	0	0	0	0	0	14	0	0	0	0
4:05 PM	1	0	0	0	0	0	7	0	2	0	1	0	0	0	0	0	0	0	0	0	11	0	0	0	0
4:10 PM	0	0	0	0	0	0	8	0	6	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0
4:15 PM	0	0	0	0	0	0	3	0	5	0	1	0	0	0	0	0	0	0	0	0	9	0	0	0	0
4:20 PM	0	0	0	0	0	0	2	0	2	0	3	0	0	0	0	0	0	0	0	0	7	0	0	0	0
4:25 PM	1	0	0	0	0	0	8	0	6	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0
4:30 PM	0	0	0	0	0	0	6	0	1	0	2	0	0	0	0	0	0	0	0	0	9	0	0	0	0
4:35 PM	2	0	0	0	0	0	10	0	7	0	1	0	0	0	0	0	0	0	0	0	20	0	0	0	0
4:40 PM	0	0	0	0	0	0	5	0	2	0	2	0	0	0	0	0	0	0	0	0	9	0	0	0	0
4:45 PM	0	0	0	0	0	0	4	0	5	0	1	0	0	0	0	0	0	0	0	0	10	0	0	0	0
4:50 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
4:55 PM	0	0	0	0	0	0	7	0	1	0	2	0	0	0	0	0	0	0	0	0	10	0	0	0	0
5:00 PM	1	0	0	0	0	0	5	0	6	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0
5:05 PM	1	0	0	0	0	0	6	0	2	0	1	0	0	0	0	0	0	0	0	0	10	0	0	0	0
5:10 PM	1	0	0	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0
5:15 PM	0	0	0	0	0	0	2	0	7	0	2	0	0	0	0	0	0	0	0	0	11	0	0	0	0
5:20 PM	0	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
5:25 PM	3	0	0	0	0	0	9	0	5	0	1	0	0	0	0	0	0	0	0	0	18	0	0	0	0
5:30 PM	1	0	0	0	0	0	7	0	6	0	2	0	0	0	0	0	0	0	0	0	16	0	0	0	0
5:35 PM	0	0	0	0	0	0	6	0	2	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
5:40 PM	0	0	0	0	0	0	2	0	3	0	2	0	0	0	0	0	0	0	0	0	7	0	0	0	0
5:45 PM	1	0	0	0	0	0	5	0	2	0	1	0	0	0	0	0	0	0	0	0	9	0	0	0	0
5:50 PM	0	0	0	0	0	0	9	0	7	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0
5:55 PM	0	0	0	0	0	0	7	0	1	0	1	0	0	0	0	0	0	0	0	0	9	0	0	0	0
Total Survey	14	0	0	0	0	0	136	0	96	0	24	0	0	0	0	0	0	0	0	0	270	0	0	0	0

15-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Access				Westbound North Access				Interval Total	Pedestrians Crosswalk							
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West				
4:00 PM	3	0	0	0	0	0	19	0	15	0	2	0	0	0	0	0	0	0	0	0	39	0	0	0	0
4:15 PM	1	0	0	0	0	0	13	0	13	0	4	0	0	0	0	0	0	0	0	0	31	0	0	0	0
4:30 PM	2	0	0	0	0	0	21	0	10	0	5	0	0	0	0	0	0	0	0	0	38	0	0	0	0
4:45 PM	0	0	0	0	0	0	13	0	8	0	3	0	0	0	0	0	0	0	0	0	24	0	0	0	0
5:00 PM	3	0	0	0	0	0	19	0	16	0	1	0	0	0	0	0	0	0	0	0	39	0	0	0	0
5:15 PM	3	0	0	0	0	0	15	0	13	0	3	0	0	0	0	0	0	0	0	0	34	0	0	0	0
5:30 PM	1	0	0	0	0	0	15	0	11	0	4	0	0	0	0	0	0	0	0	0	31	0	0	0	0
5:45 PM	1	0	0	0	0	0	21	0	10	0	2	0	0	0	0	0	0	0	0	0	34	0	0	0	0
Total Survey	14	0	0	0	0	0	136	0	96	0	24	0	0	0	0	0	0	0	0	0	270	0	0	0	0

Peak Hour Summary  
4:35 PM to 5:35 PM

By Approach	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Access				Westbound North Access				Total	Pedestrians Crosswalk						
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West			
Volume	9	12	21	0	69	52	121	0	64	78	142	0	0	0	0	0	0	0	0	142	0	0	0	0
%HV	0.0%				0.0%				0.0%				0.0%				0.0%							
PHF	0.56				0.86				0.80				0.00				0.91							

By Movement	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Access				Westbound North Access				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	9	0	0	9	0	0	69	69	52	0	12	64	0	0	0	0	142
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PHF	0.56	0.00	0.00	0.56	0.00	0.00	0.86	0.86	0.76	0.00	0.75	0.80	0.00	0.00	0.00	0.00	0.91

Rolling Hour Summary  
4:00 PM to 6:00 PM

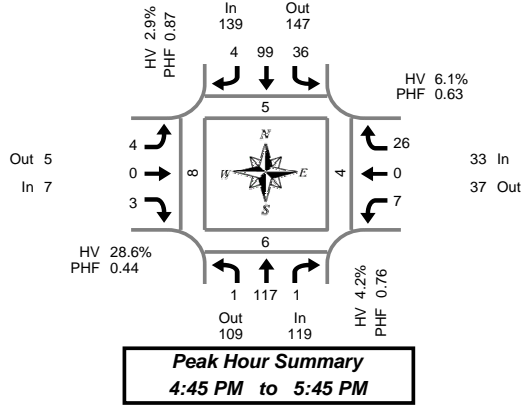
Interval Start Time	Northbound Boones Ferry				Southbound Boones Ferry				Eastbound North Access				Westbound North Access				Interval Total	Pedestrians Crosswalk						
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West			
4:00 PM	6	0	0	0	0	0	66	0	46	0	14	0	0	0	0	0	132	0	0	0	0	0	0	0
4:15 PM	6	0	0	0	0	0	66	0	47	0	13	0	0	0	0	0	132	0	0	0	0	0	0	0
4:30 PM	8	0	0	0	0	0	68	0	47	0	12	0	0	0	0	0	135	0	0	0	0	0	0	0
4:45 PM	7	0	0	0	0	0	62	0	48	0	11	0	0	0	0	0	128	0	0	0	0	0	0	0
5:00 PM	8	0	0	0	0	0	70	0	50	0	10	0	0	0	0	0	138	0	0	0	0	0	0	0



Total Vehicle Summary



Clay Carney  
(503) 833-2740



SW Boones Ferry Rd & SW Bailey St

Tuesday, June 24, 2008  
4:00 PM to 6:00 PM

5-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Bailey St				Westbound SW Bailey St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	12	0	0	2	8	0	0	0	0	0	0	0	0	2	0	24	3	0	0	0
4:05 PM	0	9	0	1	4	9	0	0	0	0	0	0	2	0	3	0	27	0	0	0	0
4:10 PM	0	12	0	2	1	13	1	0	2	0	0	1	0	1	0	31	0	3	0	0	
4:15 PM	0	8	0	0	3	5	0	0	0	0	0	0	0	0	4	0	20	1	0	1	0
4:20 PM	0	7	0	0	4	13	0	1	0	0	0	0	0	0	0	24	0	0	0	3	
4:25 PM	0	8	0	0	3	6	2	0	2	1	0	0	0	0	2	0	24	0	0	2	0
4:30 PM	0	10	0	0	1	2	1	0	0	0	1	0	0	0	2	0	17	0	0	0	0
4:35 PM	0	5	1	0	1	3	0	0	0	0	0	0	0	0	1	0	11	0	0	0	0
4:40 PM	0	5	1	0	4	5	0	0	0	0	0	0	1	0	1	0	17	1	0	0	0
4:45 PM	0	13	0	0	4	4	0	0	0	0	0	0	0	0	5	0	26	0	0	1	0
4:50 PM	0	7	0	0	1	10	0	0	0	0	1	0	0	0	0	19	0	0	0	2	
4:55 PM	0	6	0	0	2	7	0	0	0	0	0	0	0	0	4	0	19	0	0	0	0
5:00 PM	1	12	0	0	5	6	0	0	2	0	0	0	1	0	2	0	29	1	0	0	1
5:05 PM	0	8	0	0	1	12	0	1	0	0	0	0	2	0	4	0	27	0	2	0	0
5:10 PM	0	15	0	0	2	11	0	1	0	0	0	0	0	0	1	0	29	2	0	0	4
5:15 PM	0	14	0	0	3	9	2	0	0	0	0	0	0	0	2	0	30	0	0	0	0
5:20 PM	0	9	1	0	5	6	1	0	0	0	0	0	1	0	0	0	23	0	3	3	0
5:25 PM	0	6	0	1	4	9	0	0	0	0	2	0	0	0	4	0	25	1	0	0	0
5:30 PM	0	7	0	0	1	11	0	0	1	0	0	0	2	0	2	0	24	0	0	0	0
5:35 PM	0	11	0	0	2	9	0	0	1	0	0	0	1	0	1	0	25	1	1	0	1
5:40 PM	0	9	0	0	6	5	1	0	0	0	0	0	0	0	1	0	22	0	0	0	0
5:45 PM	0	10	1	0	2	7	1	0	0	1	0	0	0	0	2	0	24	0	0	0	1
5:50 PM	1	6	0	0	1	6	0	0	0	0	0	0	1	0	0	0	15	0	0	0	0
5:55 PM	0	9	0	0	4	8	0	0	0	0	0	0	0	0	1	0	22	0	0	0	0
Total Survey	2	218	4	4	66	184	9	3	8	2	4	0	12	0	45	0	554	10	9	7	12

15-Minute Interval Summary  
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Bailey St				Westbound SW Bailey St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	33	0	3	7	30	1	0	2	0	0	0	3	0	6	0	82	3	3	0	0
4:15 PM	0	23	0	0	10	24	2	1	2	1	0	0	0	0	6	0	68	1	0	3	3
4:30 PM	0	20	2	0	6	10	1	0	0	0	1	0	1	0	4	0	45	1	0	0	0
4:45 PM	0	26	0	0	7	21	0	0	0	0	1	0	0	0	9	0	64	0	0	1	2
5:00 PM	1	35	0	0	8	29	0	2	2	0	0	0	3	0	7	0	85	3	2	0	5
5:15 PM	0	29	1	1	12	24	3	0	0	0	2	0	1	0	6	0	78	1	3	3	0
5:30 PM	0	27	0	0	9	25	1	0	2	0	0	0	3	0	4	0	71	1	1	0	1
5:45 PM	1	25	1	0	7	21	1	0	0	1	0	0	1	0	3	0	61	0	0	0	1
Total Survey	2	218	4	4	66	184	9	3	8	2	4	0	12	0	45	0	554	10	9	7	12

Peak Hour Summary  
4:45 PM to 5:45 PM

By Approach	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Bailey St				Westbound SW Bailey St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	119	109	228	1	139	147	286	2	7	5	12	0	33	37	70	0	298	5	6	4	8
%HV	4.2%				2.9%				28.6%				6.1%				4.4%				
PHF	0.76				0.87				0.44				0.63				0.87				

By Movement	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Bailey St				Westbound SW Bailey St				Total				
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total					
Volume	1	117	1	119	36	99	4	139	4	0	3	7	7	0	26	33	298				
%HV	0.0%	4.3%	0.0%	4.2%	0.0%	3.0%	25.0%	2.9%	50.0%	0.0%	0.0%	28.6%	0.0%	0.0%	7.7%	6.1%	4.4%				
PHF	0.25	0.77	0.25	0.76	0.75	0.77	0.33	0.87	0.50	0.00	0.38	0.44	0.58	0.00	0.65	0.63	0.87				

Rolling Hour Summary  
4:00 PM to 6:00 PM

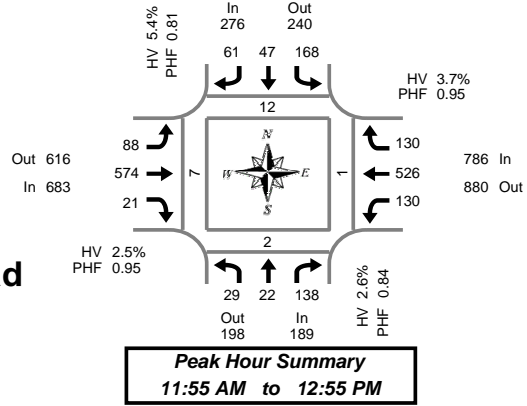
Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Bailey St				Westbound SW Bailey St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	102	2	3	30	85	4	1	4	1	2	0	4	0	25	0	259	5	3	4	5
4:15 PM	1	104	2	0	31	84	3	3	4	1	2	0	4	0	26	0	262	5	2	4	10
4:30 PM	1	110	3	1	33	84	4	2	2	0	4	0	5	0	26	0	272	5	5	4	7
4:45 PM	1	117	1	1	36	99	4	2	4	0	3	0	7	0	26	0	298	5	6	4	8
5:00 PM	2	116	2	1	36	99	5	2	4	1	2	0	8	0	20	0	295	5	6	3	7



# Saturday Traffic Counts

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**Total Vehicle Summary**



**SW Boones Ferry Rd & SW Wilsonville Rd**

Saturday, July 12, 2008  
11:00 AM to 1:00 PM

**5-Minute Interval Summary**  
11:00 AM to 1:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	3	4	9	0	12	4	4	0	3	46	2	0	9	35	10	0	141	0	0	0	0
11:05 AM	2	1	11	0	9	2	5	0	8	51	1	0	10	38	9	0	147	1	0	0	0
11:10 AM	3	1	13	0	16	5	6	0	3	38	3	0	11	33	5	0	137	0	0	0	2
11:15 AM	1	0	10	0	11	1	1	0	3	63	1	0	10	48	6	0	155	0	0	0	0
11:20 AM	1	3	10	0	18	3	6	0	3	42	2	0	10	36	6	0	140	0	0	0	1
11:25 AM	2	6	11	0	10	3	5	0	9	42	4	0	13	51	10	0	166	1	0	0	0
11:30 AM	3	3	11	0	13	3	6	0	2	42	2	0	7	36	12	0	140	0	0	0	2
11:35 AM	0	4	9	0	15	4	7	0	7	42	1	0	12	44	8	0	153	0	0	0	0
11:40 AM	4	3	12	0	11	5	5	0	7	45	4	0	9	38	8	0	151	0	0	0	0
11:45 AM	2	0	14	0	10	2	2	0	5	52	5	0	8	35	13	0	148	0	0	0	0
11:50 AM	0	3	9	0	10	3	5	0	9	43	2	0	9	40	16	0	149	2	0	1	0
11:55 AM	2	4	12	0	15	5	2	0	11	52	1	0	14	47	8	0	173	0	0	0	1
12:00 PM	1	2	13	0	13	4	5	0	8	48	4	0	8	51	7	0	164	0	0	0	1
12:05 PM	4	1	8	0	18	8	5	0	12	41	2	0	11	46	11	0	167	1	0	0	0
12:10 PM	3	1	12	0	18	5	9	0	11	43	1	0	8	38	10	0	159	0	0	0	0
12:15 PM	1	4	9	0	10	5	6	0	8	54	2	0	3	51	14	0	167	1	0	0	0
12:20 PM	2	3	7	0	11	5	5	0	6	50	3	0	11	43	15	0	161	0	0	0	0
12:25 PM	3	1	13	0	7	1	4	0	7	41	1	0	9	37	8	0	132	2	0	0	0
12:30 PM	5	2	11	0	13	2	7	0	7	53	2	0	13	45	12	0	172	0	0	1	0
12:35 PM	2	1	6	0	15	4	5	0	2	61	1	0	11	37	11	0	156	0	0	0	2
12:40 PM	2	1	17	0	16	5	3	0	1	48	2	0	15	42	10	0	162	2	0	0	0
12:45 PM	2	1	12	0	17	2	6	0	3	41	1	0	15	44	12	0	156	5	2	0	3
12:50 PM	2	1	18	0	15	1	4	0	12	42	1	0	12	45	12	0	165	1	0	0	0
12:55 PM	1	3	12	0	14	0	6	0	9	38	2	0	16	45	9	0	155	0	1	0	0
Total Survey	51	53	269	0	317	82	119	0	156	1,118	50	0	254	1,005	242	0	3,716	16	3	2	12

**15-Minute Interval Summary**  
11:00 AM to 1:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	8	6	33	0	37	11	15	0	14	135	6	0	30	106	24	0	425	1	0	0	2
11:15 AM	4	9	31	0	39	7	12	0	15	147	7	0	33	135	22	0	461	1	0	0	1
11:30 AM	7	10	32	0	39	12	18	0	16	129	7	0	28	118	28	0	444	0	0	0	2
11:45 AM	4	7	35	0	35	10	9	0	25	147	8	0	31	122	37	0	470	2	0	1	1
12:00 PM	8	4	33	0	49	17	19	0	31	132	7	0	27	135	28	0	490	1	0	0	1
12:15 PM	6	8	29	0	28	11	15	0	21	145	6	0	23	131	37	0	460	3	0	0	0
12:30 PM	9	4	34	0	44	11	15	0	10	162	5	0	39	124	33	0	490	2	0	1	2
12:45 PM	5	5	42	0	46	3	16	0	24	121	4	0	43	134	33	0	476	6	3	0	3
Total Survey	51	53	269	0	317	82	119	0	156	1,118	50	0	254	1,005	242	0	3,716	16	3	2	12

**Peak Hour Summary**  
11:55 AM to 12:55 PM

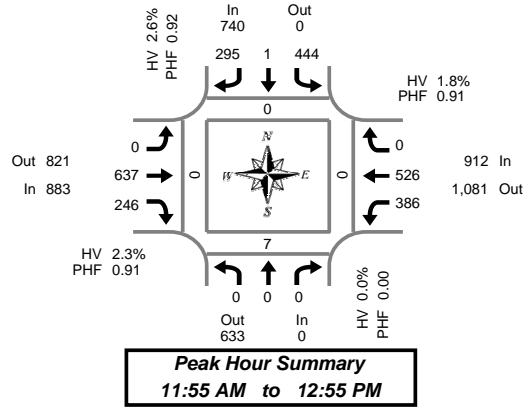
By Approach	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	189	198	387	0	276	240	516	0	683	616	1,299	0	786	880	1,666	0	1,934	12	2	1	7
%HV	2.6%				5.4%				2.5%				3.7%				3.4%				
PHF	0.84				0.81				0.95				0.95				0.96				

By Movement	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	29	22	138	189	168	47	61	276	88	574	21	683	130	526	130	786	1,934
%HV	3.4%	9.1%	1.4%	2.6%	3.6%	6.4%	9.8%	5.4%	2.3%	2.6%	0.0%	2.5%	1.5%	3.6%	6.2%	3.7%	3.4%
PHF	0.73	0.69	0.73	0.84	0.86	0.65	0.76	0.81	0.71	0.89	0.75	0.95	0.77	0.91	0.83	0.95	0.96

**Rolling Hour Summary**  
11:00 AM to 1:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	23	32	131	0	150	40	54	0	70	558	28	0	122	481	111	0	1,800	4	0	1	6
11:15 AM	23	30	131	0	162	46	58	0	87	555	29	0	119	510	115	0	1,865	4	0	1	5
11:30 AM	25	29	129	0	151	50	61	0	93	553	28	0	109	506	130	0	1,864	6	0	1	4
11:45 AM	27	23	131	0	156	49	58	0	87	586	26	0	120	512	135	0	1,910	8	0	2	4
12:00 PM	28	21	138	0	167	42	65	0	86	560	22	0	132	524	131	0	1,916	12	3	1	6

**Total Vehicle Summary**



**I-5 SB Ramps & SW Wilsonville Rd**

Saturday, July 12, 2008  
11:00 AM to 1:00 PM

**5-Minute Interval Summary**  
11:00 AM to 1:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	0	0	0	0	23	0	27	0	0	38	18	0	36	34	0	0	176	0	1	0	0
11:05 AM	0	0	0	0	45	0	19	0	0	58	24	0	29	32	0	0	207	0	0	0	0
11:10 AM	0	0	0	0	32	1	22	0	0	53	25	0	32	46	0	0	211	0	0	0	0
11:15 AM	0	0	0	0	30	0	20	0	0	69	11	2	25	36	0	0	191	0	0	0	0
11:20 AM	0	0	0	0	47	0	23	0	0	40	15	0	28	56	0	0	209	0	0	0	0
11:25 AM	0	0	0	0	37	0	21	0	0	54	21	0	23	42	0	0	198	0	2	0	0
11:30 AM	0	0	0	0	56	0	23	0	0	47	14	0	34	28	0	0	202	0	3	0	0
11:35 AM	0	0	0	0	37	0	22	0	0	50	17	0	41	37	0	0	204	0	0	0	0
11:40 AM	0	0	0	0	40	0	16	0	0	61	17	0	44	34	0	0	212	2	1	0	0
11:45 AM	0	0	0	0	54	0	21	0	0	52	21	0	37	48	0	0	233	0	1	0	0
11:50 AM	0	0	0	0	47	0	24	0	0	48	26	0	31	35	0	1	211	0	0	0	0
11:55 AM	0	0	0	0	32	0	34	0	0	44	27	0	42	36	0	0	215	0	0	0	0
12:00 PM	0	0	0	0	38	0	23	0	0	44	14	0	33	35	0	0	187	0	1	0	0
12:05 PM	0	0	0	0	32	0	28	0	0	50	10	0	38	42	0	0	200	0	0	0	0
12:10 PM	0	0	0	0	32	0	19	0	0	61	19	0	24	49	0	0	204	0	0	0	0
12:15 PM	0	0	0	0	24	0	21	0	0	49	19	0	24	46	0	0	183	0	0	0	0
12:20 PM	0	0	0	0	50	0	23	0	0	45	22	0	24	53	0	0	217	0	1	0	0
12:25 PM	0	0	0	0	44	0	26	0	0	57	29	0	36	32	0	0	224	0	0	0	0
12:30 PM	0	0	0	0	36	0	22	0	0	49	31	0	35	38	0	0	211	0	1	0	0
12:35 PM	0	0	0	0	34	0	25	0	0	57	13	0	27	48	0	0	204	0	0	0	0
12:40 PM	0	0	0	0	41	0	25	0	0	63	21	0	36	52	0	0	238	0	0	0	0
12:45 PM	0	0	0	0	39	0	19	0	0	59	22	0	35	49	0	0	223	0	2	0	0
12:50 PM	0	0	0	0	42	1	30	0	0	59	19	0	32	46	0	0	229	0	2	0	0
12:55 PM	0	0	0	0	42	0	30	0	0	33	15	0	45	38	0	0	203	0	0	0	0
Total Survey	0	0	0	0	934	2	563	0	0	1,240	470	2	791	992	0	1	4,992	2	15	0	0

**15-Minute Interval Summary**  
11:00 AM to 1:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	0	0	0	0	100	1	68	0	0	149	67	0	97	112	0	0	594	0	1	0	0
11:15 AM	0	0	0	0	114	0	64	0	0	163	47	2	76	134	0	0	598	0	2	0	0
11:30 AM	0	0	0	0	133	0	61	0	0	158	48	0	119	99	0	0	618	2	4	0	0
11:45 AM	0	0	0	0	133	0	79	0	0	144	74	0	110	119	0	1	659	0	1	0	0
12:00 PM	0	0	0	0	102	0	70	0	0	155	43	0	95	126	0	0	591	0	1	0	0
12:15 PM	0	0	0	0	118	0	70	0	0	151	70	0	84	131	0	0	624	0	1	0	0
12:30 PM	0	0	0	0	111	0	72	0	0	169	65	0	98	138	0	0	653	0	1	0	0
12:45 PM	0	0	0	0	123	1	79	0	0	151	56	0	112	133	0	0	655	0	4	0	0
Total Survey	0	0	0	0	934	2	563	0	0	1,240	470	2	791	992	0	1	4,992	2	15	0	0

**Peak Hour Summary**  
11:55 AM to 12:55 PM

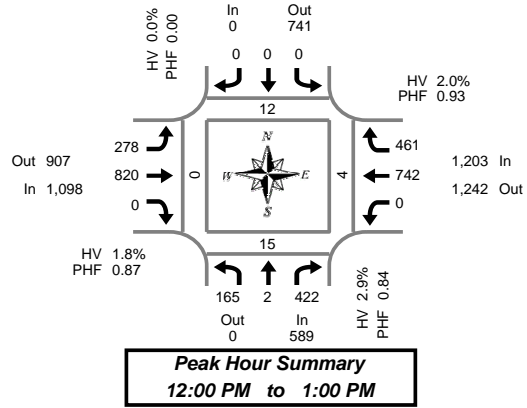
By Approach	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	633	633	0	740	0	740	0	883	821	1,704	0	912	1,081	1,993	0	2,535	0	7	0	0
%HV	0.0%				2.6%				2.3%				1.8%				2.2%				
PHF	0.00				0.92				0.91				0.91				0.92				

By Movement	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	444	1	295	740	0	637	246	883	386	526	0	912	2,535
%HV	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	4.7%	2.6%	0.0%	1.6%	4.1%	2.3%	0.8%	2.5%	0.0%	1.8%	2.2%
PHF	0.00	0.00	0.00	0.00	0.85	0.25	0.87	0.92	0.00	0.88	0.75	0.91	0.85	0.88	0.00	0.91	0.92

**Rolling Hour Summary**  
11:00 AM to 1:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	0	0	0	0	480	1	272	0	0	614	236	2	402	464	0	1	2,469	2	8	0	0
11:15 AM	0	0	0	0	482	0	274	0	0	620	212	2	400	478	0	1	2,466	2	8	0	0
11:30 AM	0	0	0	0	486	0	280	0	0	608	235	0	408	475	0	1	2,492	2	7	0	0
11:45 AM	0	0	0	0	464	0	291	0	0	619	252	0	387	514	0	1	2,527	0	4	0	0
12:00 PM	0	0	0	0	454	1	291	0	0	626	234	0	389	528	0	0	2,523	0	7	0	0

Total Vehicle Summary



I-5 NB Ramps & SW Wilsonville Rd

Saturday, July 12, 2008  
11:00 AM to 1:00 PM

5-Minute Interval Summary  
11:00 AM to 1:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	12	0	30	0	0	0	0	0	20	55	0	0	0	57	37	0	211	0	0	1	0
11:05 AM	7	0	42	0	0	0	0	0	29	70	0	0	0	50	36	0	234	0	0	0	0
11:10 AM	12	0	26	0	0	0	0	0	24	68	0	0	0	64	30	0	224	1	0	0	0
11:15 AM	13	1	38	0	0	0	0	0	34	52	0	2	0	51	49	0	238	0	0	0	0
11:20 AM	10	0	34	0	0	0	0	0	32	64	0	0	0	63	49	0	252	0	0	0	0
11:25 AM	19	0	37	0	0	0	0	0	25	56	0	0	0	54	42	0	233	1	0	0	0
11:30 AM	13	0	40	0	0	0	0	0	27	72	0	0	0	52	38	0	242	0	0	0	0
11:35 AM	19	0	28	0	0	0	0	0	28	67	0	0	0	69	42	0	253	1	0	0	0
11:40 AM	9	0	27	0	0	0	0	0	27	73	0	0	0	64	33	0	233	1	0	0	0
11:45 AM	17	0	34	0	0	0	0	0	19	83	0	0	0	59	38	1	250	2	0	0	0
11:50 AM	8	0	38	0	0	0	0	0	20	77	0	0	0	59	30	0	232	2	0	0	0
11:55 AM	9	0	46	0	0	0	0	0	28	51	0	0	0	72	31	0	237	0	0	0	0
12:00 PM	9	0	40	0	0	0	0	0	13	73	0	0	0	55	40	0	230	0	2	0	0
12:05 PM	17	0	39	0	0	0	0	0	23	61	0	0	0	60	33	0	233	0	2	0	0
12:10 PM	16	0	37	0	0	0	0	0	24	71	0	0	0	56	35	0	239	1	3	0	0
12:15 PM	16	0	51	0	0	0	0	0	23	47	0	0	0	56	30	0	223	1	0	0	0
12:20 PM	18	1	36	0	0	0	0	0	26	71	0	0	0	69	32	0	253	0	2	0	0
12:25 PM	15	0	29	0	0	0	0	0	21	79	0	0	0	49	51	0	244	1	1	4	0
12:30 PM	7	0	29	0	0	0	0	0	27	70	0	0	0	63	38	0	234	1	0	0	0
12:35 PM	14	1	25	0	0	0	0	0	24	55	0	0	0	52	49	0	220	2	1	0	0
12:40 PM	16	0	36	0	0	0	0	0	29	78	0	0	0	71	40	0	270	3	0	0	0
12:45 PM	12	0	32	0	0	0	0	0	27	75	0	0	0	65	36	0	247	2	0	0	0
12:50 PM	14	0	33	0	0	0	0	0	26	79	0	0	0	69	35	0	256	0	3	0	0
12:55 PM	11	0	35	0	0	0	0	0	15	61	0	0	0	77	42	0	241	1	1	0	0
Total Survey	313	3	842	0	0	0	0	0	591	1,608	0	2	0	1,456	916	1	5,729	20	15	5	0

15-Minute Interval Summary  
11:00 AM to 1:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	31	0	98	0	0	0	0	0	73	193	0	0	0	171	103	0	669	1	0	1	0
11:15 AM	42	1	109	0	0	0	0	0	91	172	0	2	0	168	140	0	723	1	0	0	0
11:30 AM	41	0	95	0	0	0	0	0	82	212	0	0	0	185	113	0	728	2	0	0	0
11:45 AM	34	0	118	0	0	0	0	0	67	211	0	0	0	190	99	1	719	4	0	0	0
12:00 PM	42	0	116	0	0	0	0	0	60	205	0	0	0	171	108	0	702	1	7	0	0
12:15 PM	49	1	116	0	0	0	0	0	70	197	0	0	0	174	113	0	720	2	3	4	0
12:30 PM	37	1	90	0	0	0	0	0	80	203	0	0	0	186	127	0	724	6	1	0	0
12:45 PM	37	0	100	0	0	0	0	0	68	215	0	0	0	211	113	0	744	3	4	0	0
Total Survey	313	3	842	0	0	0	0	0	591	1,608	0	2	0	1,456	916	1	5,729	20	15	5	0

Peak Hour Summary  
12:00 PM to 1:00 PM

By Approach	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	589	0	589	0	0	741	741	0	1,098	907	2,005	0	1,203	1,242	2,445	0	2,890	12	15	4	0
%HV	2.9%				0.0%				1.8%				2.0%				2.1%				
PHF	0.84				0.00				0.87				0.93				0.93				

By Movement	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	165	2	422	589	0	0	0	0	278	820	0	1,098	0	742	461	1,203	2,890
%HV	3.6%	0.0%	2.6%	2.9%	0.0%	0.0%	0.0%	0.0%	3.6%	1.2%	0.0%	1.8%	0.0%	2.0%	2.0%	2.0%	2.1%
PHF	0.83	0.50	0.83	0.84	0.00	0.00	0.00	0.00	0.85	0.88	0.00	0.87	0.00	0.88	0.84	0.93	0.93

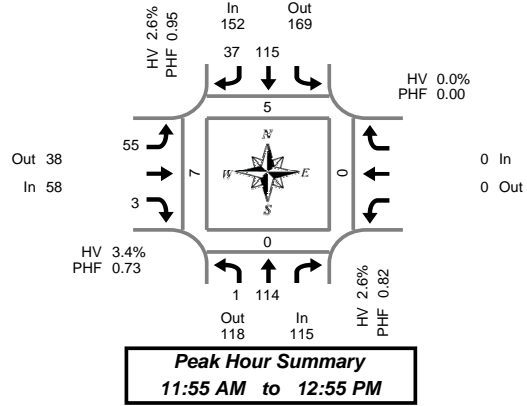
Rolling Hour Summary  
11:00 AM to 1:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound SW Wilsonville Rd				Westbound SW Wilsonville Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
11:00 AM	148	1	420	0	0	0	0	0	313	788	0	2	0	714	455	1	2,839	8	0	1	0
11:15 AM	159	1	438	0	0	0	0	0	300	800	0	2	0	714	460	1	2,872	8	7	0	0
11:30 AM	166	1	445	0	0	0	0	0	279	825	0	0	0	720	433	1	2,869	9	10	4	0
11:45 AM	162	2	440	0	0	0	0	0	277	816	0	0	0	721	447	1	2,865	13	11	4	0
12:00 PM	165	2	422	0	0	0	0	0	278	820	0	0	0	742	461	0	2,890	12	15	4	0

Total Vehicle Summary



Clay Carney  
(503) 833-2740



SW Boones Ferry Rd & North Access

Saturday, July 12, 2008  
11:00 AM to 1:00 PM

5-Minute Interval Summary  
11:00 AM to 1:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd			Eastbound North Access			Westbound North Access			Interval Total	Pedestrians Crosswalk			
	L	T	Bikes	T	R	Bikes	L	R	Bikes			Bikes		North	South	East	West
11:00 AM	0	8	0	7	1	0	4	0	0			0	20	1	0	0	1
11:05 AM	0	4	0	5	5	0	4	0	1	0		0	19	0	0	0	0
11:10 AM	0	11	0	6	3	0	8	0	0	0		0	28	0	0	0	2
11:15 AM	0	8	0	7	2	0	2	0	0	0		0	19	0	0	0	0
11:20 AM	0	10	0	10	1	0	2	0	0	0		0	23	0	0	0	0
11:25 AM	0	11	0	11	1	0	5	0	0	0		0	28	0	0	0	0
11:30 AM	0	7	0	6	1	0	3	0	0	0		0	17	0	0	0	0
11:35 AM	0	3	0	6	7	1	3	0	0	0		0	19	0	0	0	0
11:40 AM	0	6	0	6	5	0	8	0	0	0		0	25	0	0	0	2
11:45 AM	0	11	0	7	1	0	4	0	0	0		0	23	0	0	0	0
11:50 AM	0	8	0	7	2	0	6	0	0	0		0	23	0	0	0	2
11:55 AM	0	11	0	11	5	0	3	0	0	0		0	30	0	0	0	2
12:00 PM	0	7	0	7	1	0	7	2	0	0		0	24	0	0	0	2
12:05 PM	0	3	1	13	3	0	7	0	0	0		0	26	0	0	0	0
12:10 PM	0	9	0	6	2	0	4	0	0	0		0	21	0	0	0	0
12:15 PM	0	10	0	8	3	0	5	0	0	0		0	26	0	0	0	0
12:20 PM	0	11	0	12	4	0	1	0	0	0		0	28	0	0	0	0
12:25 PM	0	14	0	10	3	0	4	0	0	0		0	31	0	0	0	0
12:30 PM	0	8	0	6	5	1	5	0	0	0		0	24	0	0	0	0
12:35 PM	0	12	0	11	2	0	2	1	0	0		0	28	0	0	0	0
12:40 PM	0	7	0	10	4	0	7	0	0	0		0	28	0	0	0	0
12:45 PM	1	9	0	8	3	0	5	0	0	0		0	26	5	0	0	3
12:50 PM	0	13	0	13	2	0	5	0	0	0		0	33	0	0	0	0
12:55 PM	0	12	0	6	2	0	4	0	0	0		0	24	0	0	0	1
Total Survey	1	213	1	199	68	2	108	4	0	0		0	593	6	0	0	15

15-Minute Interval Summary  
11:00 AM to 1:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd			Eastbound North Access			Westbound North Access			Interval Total	Pedestrians Crosswalk			
	L	T	Bikes	T	R	Bikes	L	R	Bikes			Bikes		North	South	East	West
11:00 AM	0	23	0	18	9	0	16	1	0			0	67	1	0	0	3
11:15 AM	0	29	0	28	4	0	9	0	0			0	70	0	0	0	0
11:30 AM	0	16	0	18	13	1	14	0	0			0	61	0	0	0	2
11:45 AM	0	30	0	25	8	0	13	0	0			0	76	0	0	0	4
12:00 PM	0	19	1	26	6	0	18	2	0			0	71	0	0	0	2
12:15 PM	0	35	0	30	10	0	10	0	0			0	85	0	0	0	0
12:30 PM	0	27	0	27	11	1	14	1	0			0	80	0	0	0	0
12:45 PM	1	34	0	27	7	0	14	0	0			0	83	5	0	0	4
Total Survey	1	213	1	199	68	2	108	4	0	0		0	593	6	0	0	15

Peak Hour Summary  
11:55 AM to 12:55 PM

By Approach	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd			Eastbound North Access			Westbound North Access			Total	Pedestrians Crosswalk							
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total		North	South	East	West				
Volume	115	118	233	1	152	169	321	1	58	38	96	0	0	0	0	0	325	5	0	0	7
%HV	2.6%			2.6%			3.4%			0.0%			2.8%								
PHF	0.82			0.95			0.73			0.00			0.93								

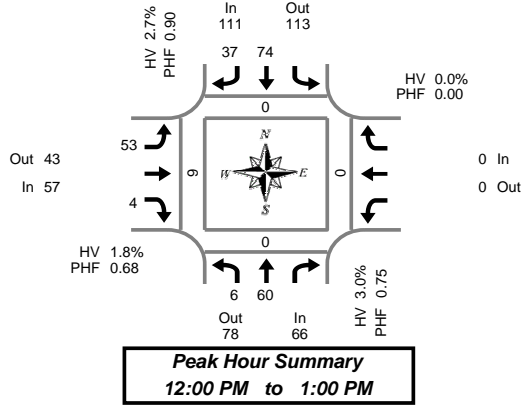
By Movement	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd			Eastbound North Access			Westbound North Access			Total	
	L	T	Total	T	R	Total	L	R	Total			Total		
Volume	1	114	115	115	37	152	55	3	58			0	325	
%HV	0.0%	2.6%	NA	2.6%	2.7%	2.6%	3.6%	NA	0.0%	3.4%	NA	NA	0.0%	2.8%
PHF	0.25	0.81	0.82	0.93	0.77	0.95	0.76	0.38	0.73			0.00	0.93	

Rolling Hour Summary  
11:00 AM to 1:00 PM

Interval Start Time	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd			Eastbound North Access			Westbound North Access			Interval Total	Pedestrians Crosswalk			
	L	T	Bikes	T	R	Bikes	L	R	Bikes			Bikes		North	South	East	West
11:00 AM	0	98	0	89	34	1	52	1	0			0	274	1	0	0	9
11:15 AM	0	94	1	97	31	1	54	2	0			0	278	0	0	0	8
11:30 AM	0	100	1	99	37	1	55	2	0			0	293	0	0	0	8
11:45 AM	0	111	1	108	35	1	55	3	0			0	312	0	0	0	6
12:00 PM	1	115	1	110	34	1	56	3	0			0	319	5	0	0	6



**Total Vehicle Summary**



**SW Boones Ferry Rd & South Access**

Saturday, July 12, 2008  
11:00 AM to 1:00 PM

**5-Minute Interval Summary  
11:00 AM to 1:00 PM**

Interval Start Time	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd				Eastbound South Access			Westbound South Access			Interval Total	Pedestrians Crosswalk			
	L	T	Bikes	T	R	Bikes	L	R	Bikes			Bikes	North		South	East	West	
11:00 AM	0	12	0	4	4	0	4	0	0	0	0	0	0	24	0	0	0	0
11:05 AM	0	2	0	2	3	0	4	0	1	0	0	0	0	12	0	0	0	1
11:10 AM	1	5	0	6	1	0	5	0	0	0	0	0	0	18	0	0	0	0
11:15 AM	0	5	0	4	4	0	1	1	0	0	0	0	0	15	0	0	0	2
11:20 AM	0	3	0	8	1	0	4	0	0	0	0	0	0	16	0	0	0	0
11:25 AM	1	8	0	7	4	0	4	0	0	0	0	0	0	24	0	0	0	0
11:30 AM	2	8	0	3	4	0	2	0	0	0	0	0	0	19	0	0	0	0
11:35 AM	1	5	0	4	3	0	1	0	0	0	0	0	0	14	0	0	0	1
11:40 AM	1	4	0	7	0	0	0	2	0	0	0	0	0	14	0	0	0	0
11:45 AM	0	3	0	4	2	0	5	1	0	0	0	0	0	15	0	0	0	0
11:50 AM	2	6	0	5	2	0	4	1	0	0	0	0	0	20	0	0	0	2
11:55 AM	0	3	0	6	4	0	3	2	0	0	0	0	0	18	0	0	0	2
12:00 PM	1	7	0	6	4	0	7	0	0	0	0	0	0	25	0	0	0	4
12:05 PM	1	2	1	4	3	0	2	0	0	0	0	0	0	12	0	0	0	0
12:10 PM	0	2	0	7	3	0	3	0	0	0	0	0	0	15	0	0	0	0
12:15 PM	0	4	0	8	2	0	3	0	0	0	0	0	0	17	0	0	0	1
12:20 PM	0	9	0	3	4	0	4	0	0	0	0	0	0	20	0	0	0	0
12:25 PM	2	6	0	7	4	0	5	1	0	0	0	0	0	25	0	0	0	0
12:30 PM	0	5	0	6	2	0	6	0	0	0	0	0	0	19	0	0	0	1
12:35 PM	1	2	0	6	1	0	5	1	0	0	0	0	0	16	0	0	0	0
12:40 PM	1	4	0	9	4	0	9	0	0	0	0	0	0	27	0	0	0	0
12:45 PM	0	4	0	6	2	0	4	0	0	0	0	0	0	16	0	0	0	3
12:50 PM	0	5	0	6	4	0	2	0	0	0	0	0	0	17	0	0	0	0
12:55 PM	0	10	0	6	4	0	3	2	0	0	0	0	0	25	0	0	0	0
Total Survey	14	124	1	134	69	0	90	12	0	0	0	0	0	443	0	0	0	17

**15-Minute Interval Summary  
11:00 AM to 1:00 PM**

Interval Start Time	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd				Eastbound South Access			Westbound South Access			Interval Total	Pedestrians Crosswalk			
	L	T	Bikes	T	R	Bikes	L	R	Bikes			Bikes	North		South	East	West	
11:00 AM	1	19	0	12	8	0	13	1	0	0	0	0	0	54	0	0	0	1
11:15 AM	1	16	0	19	9	0	9	1	0	0	0	0	0	55	0	0	0	2
11:30 AM	4	17	0	14	7	0	3	2	0	0	0	0	0	47	0	0	0	1
11:45 AM	2	12	0	15	8	0	12	4	0	0	0	0	0	53	0	0	0	4
12:00 PM	2	11	1	17	10	0	12	0	0	0	0	0	0	52	0	0	0	4
12:15 PM	2	19	0	18	10	0	12	1	0	0	0	0	0	62	0	0	0	1
12:30 PM	2	11	0	21	7	0	20	1	0	0	0	0	0	62	0	0	0	1
12:45 PM	0	19	0	18	10	0	9	2	0	0	0	0	0	58	0	0	0	3
Total Survey	14	124	1	134	69	0	90	12	0	0	0	0	0	443	0	0	0	17

**Peak Hour Summary  
12:00 PM to 1:00 PM**

By Approach	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound South Access			Westbound South Access			Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out		Total	North	South	East
Volume	66	78	144	1	111	113	224	0	57	43	100	0	0	0	0	0	0	0	9
%HV	3.0%				2.7%				1.8%			0.0%			2.6%				
PHF	0.75				0.90				0.68			0.00			0.91				

By Movement	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd				Eastbound South Access			Westbound South Access			Total			
	L	T	Total	T	R	Total	L	R	Total			Total					
Volume	6	60	66	7	37	111	53	4	57			0	234				
%HV	0.0%	3.3%	NA	3.0%	NA	4.1%	0.0%	2.7%	1.9%	NA	0.0%	1.8%	NA	NA	NA	0.0%	2.6%
PHF	0.50	0.75	0.75	0.88	0.93	0.90	0.66	0.50	0.68			0.00	0.91				

**Rolling Hour Summary  
11:00 AM to 1:00 PM**

Interval Start Time	Northbound SW Boones Ferry Rd			Southbound SW Boones Ferry Rd				Eastbound South Access			Westbound South Access			Interval Total	Pedestrians Crosswalk			
	L	T	Bikes	T	R	Bikes	L	R	Bikes			Bikes	North		South	East	West	
11:00 AM	8	64	0	60	32	0	37	8	0	0	0	0	209	0	0	0	8	
11:15 AM	9	56	1	65	34	0	36	7	0	0	0	0	207	0	0	0	11	
11:30 AM	10	59	1	64	35	0	39	7	0	0	0	0	214	0	0	0	10	
11:45 AM	8	53	1	71	35	0	56	6	0	0	0	0	229	0	0	0	10	
12:00 PM	6	60	1	74	37	0	53	4	0	0	0	0	234	0	0	0	9	

## **Level of Service Descriptions**

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## TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of *level of service* has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Level of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D as the minimum acceptable level of service for peak hour operation and plan for level of service C or better for all other times of the day. The *Highway Capacity Manual* provides level of service calculation methodology for both intersections and arterials.<sup>1</sup> The following two sections provide interpretations of the analysis approaches.

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<sup>1</sup> 2000 *Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2000, Chapters 16 and 17.

**UNSIGNALIZED INTERSECTIONS (Two-Way Stop Controlled)**

Unsignalized intersection level of service is reported for the major street and minor street (generally, left turn movements). The method assesses available and critical gaps in the traffic stream which make it possible for side street traffic to enter the main street flow. The *2000 Highway Capacity Manual* describes the detailed methodology. It is not unusual for an intersection to experience level of service E or F conditions for the minor street left turn movement. It should be understood that, often, a poor level of service is experienced by only a few vehicles and the intersection as a whole operates acceptably.

Unsignalized intersection levels of service are described in the following table.

Level of Service	Expected Delay	(Sec/Veh)
A	Little or no delay	0-10.0
B	Short traffic delay	>10.1-15.0
C	Average traffic delays	>15.1-25.0
D	Long traffic delays	>25.1-35.0
E	Very long traffic delays	>35.1-50.0
F	Extreme delays potentially affecting other traffic movements in the intersection	> 50

Source: 2000 *Highway Capacity Manual*, Transportation Research Board Washington, D.C.

## SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. Control delay (or signal delay) includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. In previous versions of this chapter of the HCM (1994 and earlier), delay included only stopped delay. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The *2000 Highway Capacity Manual* provides the basis for these calculations.

Level of Service	Delay (secs.)	Description
A	$\leq 10.00$	<b>Free Flow/Insignificant Delays:</b> No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	10.1-20.0	<b>Stable Operation/Minimal Delays:</b> An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	20.1-35.0	<b>Stable Operation/Acceptable Delays:</b> Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, and the number of vehicles stopping is significant.
D	35.1-55.0	<b>Approaching Unstable/Tolerable Delays:</b> The influence of congestion becomes more noticeable. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. The proportion of vehicles not stopping declines, and individual cycle failures are noticeable.
E	55.1-80.0	<b>Unstable Operation/Significant Delays:</b> Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	$\geq 80.0$	<b>Forced Flow/Excessive Delays:</b> Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and v/c ratios approaching 1.0 may contribute to these high delay levels.

Source: *2000 Highway Capacity Manual*, Transportation Research Board, Washington D.C.



# **HCM Intersection Analysis - Unmitigated**

HCM Signalized Intersection Capacity Analysis  
1: Wilsonville Rd & I-5 SB

WV Fred Meyer TIA  
Existing PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑					↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95						0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00						1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00						1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (prot)	2600	1534	1920	3406						1640	1640	1482
Flt Permitted	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (perm)	2600	1534	1920	3406						1640	1640	1482
Volume (vph)	0	865	620	585	660	0	0	0	0	415	0	435
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	892	639	603	680	0	0	0	0	428	0	448
RTOR Reduction (vph)	0	0	307	0	0	0	0	0	0	0	0	246
Lane Group Flow (vph)	0	892	332	603	680	0	0	0	0	214	214	202
Confl. Peds. (#/hr)	3		4	4		3						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	0%	4%	2%	4%	6%	0%	0%	0%	0%	3%	0%	9%
Turn Type		Perm	Prot							Perm	Perm	
Protected Phases	2		1		6						4	
Permitted Phases		2			6					4		4
Actuated Green, G (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Effective Green, g (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Actuated g/C Ratio	0.39	0.39	0.28	0.71						0.21	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Grp Cap (vph)	1014	598	538	2418						344	344	311
v/s Ratio Prot	c0.34		c0.31	0.20								
v/s Ratio Perm		0.22								0.13	0.13	c0.14
v/c Ratio	0.88	0.56	1.12	0.28						0.62	0.62	0.65
Uniform Delay, d1	28.3	23.8	36.0	5.3						35.9	35.9	36.1
Progression Factor	0.97	1.34	0.28	0.04						1.00	1.00	1.00
Incremental Delay, d2	7.2	2.3	57.0	0.1						8.2	8.2	10.1
Delay (s)	34.6	34.2	67.1	0.3						44.1	44.1	46.3
Level of Service	C	C	E	A						D	D	D
Approach Delay (s)	34.5			31.7			0.0			45.2		
Approach LOS	C			C			A			D		

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
2: Wilsonville Rd & Boones Ferry Rd

WV Fred Meyer TIA  
Existing PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑	↑	↓	↑↑	↑	↓	↓	↓	↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	0.98	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	1.00	0.85	1.00	0.88	1.00	1.00	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3030	1770	3240	1383	1770	1599	3400	1721			
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3030	1770	3240	1383	1770	1599	3400	1721			
Volume (vph)	55	763	21	198	743	154	83	49	201	521	96	65
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	787	22	204	766	159	86	51	207	537	99	67
RTOR Reduction (vph)	0	2	0	0	0	0	0	89	0	0	25	0
Lane Group Flow (vph)	57	807	0	204	766	159	86	169	0	537	141	0
Confl. Peds. (#/hr)	7		4	4		7	3		3	3		3
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	5%	3%	19%	2%	4%	14%	2%	2%	3%	3%	1%	6%
Turn Type	Prot			Prot	Free	Split				Split		
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases		6			Free							
Actuated Green, G (s)	5.6	34.5		12.5	41.4	100.0	8.7	8.7		19.3	19.3	
Effective Green, g (s)	7.6	37.5		14.5	44.4	100.0	10.7	10.7		21.3	21.3	
Actuated g/C Ratio	0.08	0.38		0.14	0.44	1.00	0.11	0.11		0.21	0.21	
Clearance Time (s)	6.0	7.0		6.0	7.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	131	1136		257	1439	1383	189	171		724	367	
v/s Ratio Prot	0.03	c0.27		c0.12	0.24		0.05	c0.11		c0.16	0.08	
v/s Ratio Perm						0.11						
v/c Ratio	0.44	0.71		0.79	0.53	0.11	0.46	0.99		0.74	0.38	
Uniform Delay, d1	44.1	26.6		41.3	20.2	0.0	41.9	44.6		36.8	33.7	
Progression Factor	1.00	1.00		1.08	0.64	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	3.8		13.8	1.3	0.1	1.7	64.3		4.1	0.7	
Delay (s)	46.5	30.4		58.5	14.3	0.1	43.7	108.9		40.9	34.4	
Level of Service	D	C		E	B	A	D	F		D	C	
Approach Delay (s)		31.5			20.3			92.6			39.4	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
15: Wilsonville Rd & I-5 NB

WV Fred Meyer TIA  
Existing PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00	0.97		1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	2000	3505			2700	1380		1650	1760			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	2000	3505			2700	1380		1650	1760			
Volume (vph)	450	830	0	0	1000	420	245	0	540	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	484	892	0	0	1075	452	263	0	581	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	289	0	0	316	0	0	0
Lane Group Flow (vph)	484	892	0	0	1075	163	0	263	265	0	0	0
Confl. Peds. (#/hr)	4		4	4		4						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	5%	3%	0%	0%	4%	3%	10%	0%	4%	0%	0%	0%
Turn Type	Prot				Perm	Perm		Perm				
Protected Phases	5	2			6			8				
Permitted Phases		2				6	8		8			
Actuated Green, G (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Effective Green, g (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Actuated g/C Ratio	0.31	0.71			0.36	0.36		0.21	0.21			
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Grp Cap (vph)	620	2489			972	497		347	370			
v/s Ratio Prot	c0.24	0.25			c0.40							
v/s Ratio Perm						0.12		0.16	0.15			
v/c Ratio	0.78	0.36			1.11	0.33		0.76	0.72			
Uniform Delay, d1	31.4	5.6			32.0	23.2		37.1	36.7			
Progression Factor	0.18	0.21			0.67	0.46		1.00	1.00			
Incremental Delay, d2	5.9	0.3			58.2	1.2		14.4	11.3			
Delay (s)	11.5	1.4			79.7	11.9		51.5	48.0			
Level of Service	B	A			E	B		D	D			
Approach Delay (s)		5.0			59.6			49.1			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	37.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
16: Wilsonville Rd & Town Center Lp West

WV Fred Meyer TIA  
Existing PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95			1.00	0.95		0.91	0.91		1.00	0.95
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.99			1.00	0.99		1.00	0.96		1.00	0.89
Flt Protected	0.95	1.00			0.95	1.00		0.95	0.98		0.95	1.00
Satd. Flow (prot)	2540	3457			1805	2650		1579	3144		1736	1531
Flt Permitted	0.95	1.00			0.95	1.00		0.95	0.98		0.95	1.00
Satd. Flow (perm)	2540	3457			1805	2650		1579	3144		1736	1531
Volume (vph)	490	820	60	59	598	53	207	78	62	86	81	615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	516	863	63	62	629	56	218	82	65	91	85	647
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	107	343
Lane Group Flow (vph)	516	921	0	62	679	0	115	218	0	91	210	72
Confl. Peds. (#/hr)	4		4	4		4	2		3	3		2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	3%	3%	5%	0%	4%	0%	4%	3%	2%	4%	6%	3%
Turn Type	Prot				Prot		Split		Split		Perm	
Protected Phases	5	2			1	6		8	8		4	4
Permitted Phases												4
Actuated Green, G (s)	23.4	48.9			6.4	31.9		10.8	10.8		16.9	16.9
Effective Green, g (s)	23.4	49.4			6.4	32.4		10.8	10.8		17.4	17.4
Actuated g/C Ratio	0.23	0.49			0.06	0.32		0.11	0.11		0.17	0.17
Clearance Time (s)	4.0	4.5			4.0	4.5		4.0	4.0		4.5	4.5
Vehicle Extension (s)	2.5	4.3			2.5	4.3		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	594	1708			116	859		171	340		302	266
v/s Ratio Prot	c0.20	0.27			0.03	c0.26		c0.07	0.07		0.05	c0.14
v/s Ratio Perm												0.05
v/c Ratio	0.87	0.54			0.53	0.79		0.67	0.64		0.30	0.79
Uniform Delay, d1	36.8	17.5			45.4	30.7		42.9	42.7		36.0	39.6
Progression Factor	1.10	1.12			1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	10.9	0.4			3.6	7.3		9.1	3.6		0.4	14.3
Delay (s)	51.6	20.0			49.0	38.0		52.0	46.4		36.4	53.9
Level of Service	D	C			D	D		D	D		D	D
Approach Delay (s)		31.3				39.0			48.1			43.1
Approach LOS		C				D			D			D

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Fred Meyer TIA - 2008
PM Peak Hour
Existing Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #138 Boones Ferry Rd/North Fred Meyer's

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B [ 12.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1:0 0 0 0 1:0 0 0 0 1:0 0 0 0 0 0 0

Volume Module: >> Count Date: 1 Jul 2008 << PM Peak Hr (4:45 pm)
Base Vol: 7 235 0 0 199 62 48 0 11 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 7 235 0 0 199 62 48 0 11 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87
PHF Volume: 8 270 0 0 229 71 55 0 13 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 8 270 0 0 229 71 55 0 13 0 0 0

Critical Gap Module:
Critical Gp: 4.1 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 6.4 6.5 6.2 xxxxxx xxxxxx xxxxxx
FollowUpTim: 2.2 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 3.5 4.0 3.3 xxxxxx xxxxxx xxxxxx

Capacity Module:
Cnflct Vol: 300 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 551 551 264 xxxxx xxxxx xxxxxx
Potent Cap.: 1273 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 499 445 779 xxxxx xxxxx xxxxxx
Move Cap.: 1273 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 497 442 779 xxxxx xxxxx xxxxxx
Volume/Cap: 0.01 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.11 0.00 0.02 xxxxx xxxxx xxxxxx

Level Of Service Module:
2Way95thQ: 0.0 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
Control Del: 7.8 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
LOS by Move: A \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 533 xxxxxx xxxxxx xxxxxx xxxxxx
SharedQueue: xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.4 xxxxxx xxxxxx xxxxxx xxxxxx
Shrd ConDel: xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 12.7 xxxxxx xxxxxx xxxxxx xxxxxx
Shared LOS: \*
ApproachDel: xxxxxxxx xxxxxxxx 12.7 xxxxxxxx
ApproachLOS: \*

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
PM Peak Hour
Existing Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #189 Boones Ferry Rd/Bailey St

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B [ 10.9]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1:0 0 0 0 1:0 0 0 0 1:0 0 0 0 1:0 0

Volume Module: >> Count Date: 24 Jun 2008 << PM Peak (some factoring up)
Base Vol: 1 143 1 40 111 4 5 0 3 8 0 32
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 143 1 40 111 4 5 0 3 8 0 32
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87
PHF Volume: 1 164 1 46 128 5 6 0 3 9 0 37
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 1 164 1 46 128 5 6 0 3 9 0 37

Critical Gap Module:
Critical Gp: 4.1 xxxxx xxxxxx 4.1 xxxxx xxxxxx 7.1 6.5 6.2 7.1 6.5 6.2
FollowUpTim: 2.2 xxxxx xxxxxx 2.2 xxxxx xxxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:
Cnflct Vol: 132 xxxxx xxxxxx 166 xxxxx xxxxxx 407 390 130 391 391 165
Potent Cap.: 1434 xxxxx xxxxxx 1401 xxxxx xxxxxx 558 549 925 572 547 885
Move Cap.: 1434 xxxxx xxxxxx 1401 xxxxx xxxxxx 520 530 925 555 529 885
Volume/Cap: 0.00 xxxxx xxxxxx 0.03 xxxxx xxxxxx 0.01 0.00 0.00 0.02 0.00 0.04

Level Of Service Module:
2Way95thQ: 0.0 xxxxx xxxxxx 0.1 xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Control Del: 7.5 xxxxx xxxxxx 7.7 xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx
LOS by Move: A \* \* \* \* \* A \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 623 xxxxxx xxxxx 791 xxxxxx
SharedQueue: xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.0 xxxxxx xxxxxx 0.2 xxxxxx
Shrd ConDel: xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 10.9 xxxxxx xxxxxx 9.8 xxxxxx
Shared LOS: \*
ApproachDel: xxxxxxxx xxxxxxxx 10.9 xxxxxxxx
ApproachLOS: \*

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
PM Peak Hour
Existing Conditions

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #253 Boones Ferry Rd/South Fred Meyer's

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: B [ 11.9]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 0 1 0 0).

Table with 13 columns: Volume Module, Count, Date, PM Peak Hr (4:45 pm), Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table with 13 columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with 13 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with 13 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.



HCM Signalized Intersection Capacity Analysis

1: Wilsonville Rd & I-5 SB

WV Fred Meyer TIA

PM Peak (Ex. Config.) -- Ex + Proj

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑	↑	↑↑					↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95						0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00						1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00						1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (prot)	2600	1534	1920	3406						1640	1640	1482
Flt Permitted	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (perm)	2600	1534	1920	3406						1640	1640	1482
Volume (vph)	0	865	620	585	660	0	0	0	0	415	0	435
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	892	639	603	680	0	0	0	0	428	0	448
RTOR Reduction (vph)	0	0	307	0	0	0	0	0	0	0	0	246
Lane Group Flow (vph)	0	892	332	603	680	0	0	0	0	214	214	202
Confl. Peds. (#/hr)	3		4	4		3						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	0%	4%	2%	4%	6%	0%	0%	0%	0%	3%	0%	9%
Turn Type		Perm	Prot							Perm	Perm	
Protected Phases	2		1		6						4	
Permitted Phases		2			6					4		4
Actuated Green, G (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Effective Green, g (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Actuated g/C Ratio	0.39	0.39	0.28	0.71						0.21	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Grp Cap (vph)	1014	598	538	2418						344	344	311
v/s Ratio Prot	c0.34		c0.31	0.20								
v/s Ratio Perm		0.22								0.13	0.13	c0.14
v/c Ratio	0.88	0.56	1.12	0.28						0.62	0.62	0.65
Uniform Delay, d1	28.3	23.8	36.0	5.3						35.9	35.9	36.1
Progression Factor	0.97	1.34	0.28	0.04						1.00	1.00	1.00
Incremental Delay, d2	7.2	2.3	57.0	0.1						8.2	8.2	10.1
Delay (s)	34.6	34.2	67.2	0.3						44.1	44.1	46.3
Level of Service	C	C	E	A						D	D	D
Approach Delay (s)	34.5			31.7			0.0			45.2		
Approach LOS	C			C			A			D		

Intersection Summary

HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

2: Wilsonville Rd & Boones Ferry Rd

WV Fred Meyer TIA

PM Peak (Ex. Config.) -- Ex + Proj

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑	↑	↓	↑↑	↑	↓	↓	↓	↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	0.98	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	1.00	1.00	0.85	1.00	0.88	1.00	0.88	1.00	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3030	1770	3240	1383	1770	1599	3400	1721			
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3030	1770	3240	1383	1770	1599	3400	1721			
Volume (vph)	55	763	21	198	743	154	83	49	201	521	96	65
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	787	22	204	766	159	86	51	207	537	99	67
RTOR Reduction (vph)	0	2	0	0	0	0	0	89	0	0	25	0
Lane Group Flow (vph)	57	807	0	204	766	159	86	169	0	537	141	0
Confl. Peds. (#/hr)	7		4	4		7	3		3	3		3
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	5%	3%	19%	2%	4%	14%	2%	2%	3%	3%	1%	6%
Turn Type	Prot			Prot	Free	Split				Split		
Protected Phases	1	6		5	2		4	4		8	8	
Permitted Phases		6			Free							
Actuated Green, G (s)	5.6	34.5		12.5	41.4	100.0	8.7	8.7		19.3	19.3	
Effective Green, g (s)	7.6	37.5		14.5	44.4	100.0	10.7	10.7		21.3	21.3	
Actuated g/C Ratio	0.08	0.38		0.14	0.44	1.00	0.11	0.11		0.21	0.21	
Clearance Time (s)	6.0	7.0		6.0	7.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	131	1136		257	1439	1383	189	171		724	367	
v/s Ratio Prot	0.03	c0.27		c0.12	0.24		0.05	c0.11		c0.16	0.08	
v/s Ratio Perm						0.11						
v/c Ratio	0.44	0.71		0.79	0.53	0.11	0.46	0.99		0.74	0.38	
Uniform Delay, d1	44.1	26.6		41.3	20.2	0.0	41.9	44.6		36.8	33.7	
Progression Factor	1.00	1.00		1.08	0.64	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	3.8		13.8	1.3	0.1	1.7	64.3		4.1	0.7	
Delay (s)	46.5	30.4		58.6	14.3	0.1	43.7	108.9		40.9	34.4	
Level of Service	D	C		E	B	A	D	F		D	C	
Approach Delay (s)		31.5			20.3			92.6			39.4	
Approach LOS		C			C			F			D	

Intersection Summary

HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
15: Wilsonville Rd & I-5 NB

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Proj

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0				
Lane Util. Factor	1.00	0.95		0.95	1.00		1.00	1.00				
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00				
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	1.00		1.00	0.85		1.00	0.85				
Flt Protected	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (prot)	2000	3505		2700	1380		1650	1760				
Flt Permitted	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (perm)	2000	3505		2700	1380		1650	1760				
Volume (vph)	450	830	0	0	1000	420	245	0	540	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	484	892	0	0	1075	452	263	0	581	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	289	0	0	316	0	0	0
Lane Group Flow (vph)	484	892	0	0	1075	163	0	263	265	0	0	0
Confl. Peds. (#/hr)	4		4	4		4						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	5%	3%	0%	0%	4%	3%	10%	0%	4%	0%	0%	0%
Turn Type	Prot				Perm	Perm		Perm				
Protected Phases	5	2			6			8				
Permitted Phases		2				6	8		8			
Actuated Green, G (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Effective Green, g (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Actuated g/C Ratio	0.31	0.71			0.36	0.36		0.21	0.21			
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Grp Cap (vph)	620	2489			972	497		347	370			
v/s Ratio Prot	c0.24	0.25			c0.40							
v/s Ratio Perm						0.12		0.16	0.15			
v/c Ratio	0.78	0.36			1.11	0.33		0.76	0.72			
Uniform Delay, d1	31.4	5.6			32.0	23.2		37.1	36.7			
Progression Factor	0.18	0.21			0.67	0.46		1.00	1.00			
Incremental Delay, d2	5.9	0.3			58.2	1.2		14.4	11.3			
Delay (s)	11.5	1.4			79.7	11.8		51.5	48.0			
Level of Service	B	A			E	B		D	D			
Approach Delay (s)		5.0			59.6			49.1			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	37.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
16: Wilsonville Rd & Town Center Lp West

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Proj

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95		0.91	0.91		1.00	0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	0.89	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98		0.95	1.00	1.00
Satd. Flow (prot)	2540	3457		1805	2650		1579	3144		1736	1531	1467
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98		0.95	1.00	1.00
Satd. Flow (perm)	2540	3457		1805	2650		1579	3144		1736	1531	1467
Volume (vph)	490	820	60	59	598	53	207	78	62	86	81	615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	516	863	63	62	629	56	218	82	65	91	85	647
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	107	344
Lane Group Flow (vph)	516	921	0	62	679	0	115	218	0	91	209	72
Confl. Peds. (#/hr)	4		4	4		4	2		3	3		2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	3%	3%	5%	0%	4%	0%	4%	3%	2%	4%	6%	3%
Turn Type	Prot				Prot		Split		Split		Perm	
Protected Phases	5	2			1	6		8	8		4	4
Permitted Phases												4
Actuated Green, G (s)	23.4	48.9			6.4	31.9		10.8	10.8		16.9	16.9
Effective Green, g (s)	23.4	49.4			6.4	32.4		10.8	10.8		17.4	17.4
Actuated g/C Ratio	0.23	0.49			0.06	0.32		0.11	0.11		0.17	0.17
Clearance Time (s)	4.0	4.5			4.0	4.5		4.0	4.0		4.5	4.5
Vehicle Extension (s)	2.5	4.3			2.5	4.3		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	594	1708			116	859		171	340		302	266
v/s Ratio Prot	c0.20	0.27			0.03	c0.26		c0.07	0.07		0.05	c0.14
v/s Ratio Perm												0.05
v/c Ratio	0.87	0.54			0.53	0.79		0.67	0.64		0.30	0.79
Uniform Delay, d1	36.8	17.5			45.4	30.7		42.9	42.7		36.0	39.5
Progression Factor	1.10	1.12			1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	10.9	0.4			3.6	7.3		9.1	3.6		0.4	13.8
Delay (s)	51.6	20.0			49.0	38.0		52.0	46.4		36.4	53.3
Level of Service	D	C			D	D		D	D		D	D
Approach Delay (s)		31.3				39.0		48.1			42.9	
Approach LOS		C				D		D			D	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Fred Meyer TIA - 2008
PM Peak Hour
Existing + Project

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #138 Boones Ferry Rd/North Fred Meyer's

Average Delay (sec/veh): 18.3 Worst Case Level Of Service: F[314.3]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 1 0 1 0).

Table with 11 columns: Volume Module, Count, Date, PM Peak Hr, Base Vol, Growth Adj, Initial Bse, Added Vol, FM, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table with 11 columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with 11 columns: Capacity Module, Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Table with 11 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
PM Peak Hour
Existing + Project

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #189 Boones Ferry Rd/Bailey St

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B[ 12.6]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 0 1:0 0).

Table with 11 columns: Volume Module, Count, Date, PM Peak Hr, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table with 11 columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with 11 columns: Capacity Module, Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Table with 11 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
PM Peak Hour
Existing + Project

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #253 Boones Ferry Rd/South Fred Meyer's

Average Delay (sec/veh): 11.1 Worst Case Level Of Service: F[ 67.4]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (1, 0, 0, 1, 0).

Table with 12 columns: Volume Module, Count, Date, PM Peak Hr (4:45 pm), Base Vol, Growth Adj, Initial Bse, Added Vol, FM, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table with 12 columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with 12 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with 12 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

HCM Signalized Intersection Capacity Analysis  
1: Wilsonville Rd & I-5 SB

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↑	↓	↑	↓	↓	↑	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95						0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00						1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00						1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (prot)	2600	1534	1920	3406						1640	1640	1482
Flt Permitted	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (perm)	2600	1534	1920	3406						1640	1640	1482
Volume (vph)	0	1059	675	673	854	0	0	0	0	457	0	572
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1092	696	694	880	0	0	0	0	471	0	590
RTOR Reduction (vph)	0	0	299	0	0	0	0	0	0	0	0	168
Lane Group Flow (vph)	0	1092	397	694	880	0	0	0	0	236	235	422
Confl. Peds. (#/hr)	3		4	4		3						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	0%	4%	2%	4%	6%	0%	0%	0%	0%	3%	0%	9%
Turn Type		Perm	Prot							Perm	Perm	
Protected Phases	2		1	6						4	4	
Permitted Phases		2		6						4	4	
Actuated Green, G (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Effective Green, g (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Actuated g/C Ratio	0.39	0.39	0.28	0.71						0.21	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Grp Cap (vph)	1014	598	538	2418						344	344	311
v/s Ratio Prot	c0.42		c0.36	0.26								
v/s Ratio Perm		0.26								0.14	0.14	c0.28
v/c Ratio	1.08	0.66	1.29	0.36						0.69	0.68	1.36
Uniform Delay, d1	30.5	25.1	36.0	5.7						36.5	36.4	39.5
Progression Factor	0.93	1.07	0.31	0.05						1.00	1.00	1.00
Incremental Delay, d2	43.4	2.6	131.8	0.0						10.6	10.5	179.9
Delay (s)	71.6	29.5	143.0	0.3						47.1	46.9	219.4
Level of Service	E	C	F	A						D	D	F
Approach Delay (s)	55.2			63.2			0.0			142.9		
Approach LOS	E			E			A			F		
<b>Intersection Summary</b>												
HCM Average Control Delay	79.1											
HCM Volume to Capacity ratio	1.21											
Actuated Cycle Length (s)	100.0						Sum of lost time (s)	12.0				
Intersection Capacity Utilization	102.2%						ICU Level of Service	G				
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
2: Wilsonville Rd & Boones Ferry Rd

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↓	↑	↑↑	↓	↑	↓	↓	↑	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.88		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3030		1770	3240	1383	1770	1598		3400	1688	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3030		1770	3240	1383	1770	1598		3400	1688	
Volume (vph)	85	915	26	222	964	240	96	53	218	601	100	95
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	943	27	229	994	247	99	55	225	620	103	98
RTOR Reduction (vph)	0	2	0	0	0	0	0	90	0	0	34	0
Lane Group Flow (vph)	88	968	0	229	994	247	99	190	0	620	167	0
Confl. Peds. (#/hr)	7		4	4		7	3		3	3		3
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	5%	3%	19%	2%	4%	14%	2%	2%	3%	3%	1%	6%
Turn Type		Prot			Prot	Free	Split			Split		
Protected Phases	1	6			5	2		4	4		8	8
Permitted Phases		6				Free						
Actuated Green, G (s)	5.6	34.0			13.0	41.4	100.0	7.7	7.7		20.3	20.3
Effective Green, g (s)	7.6	37.0			15.0	44.4	100.0	9.7	9.7		22.3	22.3
Actuated g/C Ratio	0.08	0.37			0.15	0.44	1.00	0.10	0.10		0.22	0.22
Clearance Time (s)	6.0	7.0			6.0	7.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	131	1121			266	1439	1383	172	155		758	376
v/s Ratio Prot	0.05	c0.32			c0.13	0.31		0.06	c0.12		c0.18	0.10
v/s Ratio Perm							0.18					
v/c Ratio	0.67	0.86			0.86	0.69	0.18	0.58	1.22		0.82	0.44
Uniform Delay, d1	45.0	29.2			41.5	22.3	0.0	43.2	45.1		36.9	33.5
Progression Factor	1.00	1.00			1.01	0.75	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	12.7	8.9			17.5	1.9	0.2	4.6	144.9		6.9	0.8
Delay (s)	57.7	38.0			59.4	18.6	0.2	47.8	190.0		43.8	34.3
Level of Service	E	D			E	B	A	D	F		D	C
Approach Delay (s)		39.7				21.8		152.9				41.5
Approach LOS		D				C		F				D
<b>Intersection Summary</b>												
HCM Average Control Delay	44.5											D
HCM Volume to Capacity ratio	0.89											
Actuated Cycle Length (s)	100.0						Sum of lost time (s)	16.0				
Intersection Capacity Utilization	85.4%						ICU Level of Service	E				
Analysis Period (min)	15											
c Critical Lane Group												



HCM Signalized Intersection Capacity Analysis  
15: Wilsonville Rd & I-5 NB

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0				
Lane Util. Factor	1.00	0.95		0.95	1.00		1.00	1.00				
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00				
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	1.00		1.00	0.85		1.00	0.85				
Flt Protected	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (prot)	2000	3505		2700	1380		1650	1760				
Flt Permitted	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (perm)	2000	3505		2700	1380		1650	1760				
Volume (vph)	533	983	0	0	1212	488	315	0	588	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	573	1057	0	0	1303	525	339	0	632	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	318	0	0	316	0	0	0
Lane Group Flow (vph)	573	1057	0	0	1303	207	0	339	316	0	0	0
Confl. Peds. (#/hr)	4		4	4		4						
Confl. Bikes (#/hr)		1				3						
Heavy Vehicles (%)	5%	3%	0%	0%	4%	3%	10%	0%	4%	0%	0%	0%
Turn Type	Prot				Perm	Perm		Perm				
Protected Phases	5	2			6			8				
Permitted Phases		2				6	8		8			
Actuated Green, G (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Effective Green, g (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Actuated g/C Ratio	0.31	0.71			0.36	0.36		0.21	0.21			
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Grp Cap (vph)	620	2489			972	497		347	370			
v/s Ratio Prot	c0.29	0.30			c0.48							
v/s Ratio Perm						0.15		0.21	0.18			
v/c Ratio	0.92	0.42			1.34	0.42		0.98	0.85			
Uniform Delay, d1	33.4	6.0			32.0	24.1		39.3	38.0			
Progression Factor	0.17	0.20			0.68	0.42		1.00	1.00			
Incremental Delay, d2	8.9	0.3			156.7	1.2		42.8	21.5			
Delay (s)	14.6	1.5			178.5	11.4		82.1	59.5			
Level of Service	B	A			F	B		F	E			
Approach Delay (s)		6.1			130.5			67.4			0.0	
Approach LOS		A			F			E			A	

Intersection Summary			
HCM Average Control Delay	70.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
16: Wilsonville Rd & Town Center Lp West

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95		0.91	0.91		1.00	0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	0.88	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98		0.95	1.00	1.00
Satd. Flow (prot)	2540	3460		1805	2650		1579	3144		1736	1519	1467
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98		0.95	1.00	1.00
Satd. Flow (perm)	2540	3460		1805	2650		1579	3144		1736	1519	1467
Volume (vph)	598	910	63	59	705	63	208	78	62	96	81	787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	629	958	66	62	742	66	219	82	65	101	85	828
RTOR Reduction (vph)	0	5	0	0	6	0	0	32	0	0	137	384
Lane Group Flow (vph)	629	1019	0	62	802	0	115	219	0	101	255	137
Confl. Peds. (#/hr)	4		4	4		4	2		3	3		2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	3%	3%	5%	0%	4%	0%	4%	3%	2%	4%	6%	3%
Turn Type	Prot				Prot		Split		Split		Perm	
Protected Phases	5	2			1	6	8	8		4	4	
Permitted Phases												4
Actuated Green, G (s)	24.3	47.0			6.4	29.1	10.4	10.4		19.2	19.2	19.2
Effective Green, g (s)	24.3	47.5			6.4	29.6	10.4	10.4		19.7	19.7	19.7
Actuated g/C Ratio	0.24	0.48			0.06	0.30	0.10	0.10		0.20	0.20	0.20
Clearance Time (s)	4.0	4.5			4.0	4.5	4.0	4.0		4.5	4.5	4.5
Vehicle Extension (s)	2.5	4.3			2.5	4.3	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	617	1644			116	784	164	327		342	299	289
v/s Ratio Prot	c0.25	0.29			0.03	c0.30	c0.07	0.07		0.06	c0.17	
v/s Ratio Perm												0.09
v/c Ratio	1.02	0.62			0.53	1.02	0.70	0.67		0.30	0.85	0.47
Uniform Delay, d1	37.9	19.5			45.4	35.2	43.3	43.1		34.2	38.7	35.6
Progression Factor	1.12	1.15			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	37.2	0.7			3.6	38.0	11.8	4.6		0.4	20.0	0.9
Delay (s)	79.5	23.2			49.0	73.2	55.1	47.8		34.6	58.7	36.5
Level of Service	E	C			D	E	E	D		C	E	D
Approach Delay (s)		44.6				71.4		50.1			44.9	
Approach LOS		D				E		D			D	

Intersection Summary			
HCM Average Control Delay	51.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Fred Meyer TIA - 2008
PM Peak Hour
Existing + Stage II

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #253 Boones Ferry Rd/South Fred Meyer's

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: B[ 12.4]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), and Rights (Include). Includes Lanes row with values 0 1 0 0 0 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0.

Table with 13 columns: Volume Module, Count, Date, PM Peak Hr, and 12 traffic flow directions. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume.

Table with 13 columns: Critical Gap Module, FollowUpTim, and 12 traffic flow directions. Values include 4.1, 2.2, 6.4, 6.5, 6.2, 3.5, 4.0, 3.3.

Table with 13 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap., and 12 traffic flow directions. Values include 264, 1311, 1311, 0.01, 463, 463, 228, 561, 499, 816, 558, 496, 816, 0.14, 0.00, 0.01.

Table with 13 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS, and 12 traffic flow directions. Values include 0.0, 7.8, A, LT-LTR-RT, 577, 0.5, 7.8, A, 12.4, B.

Note: Queue reported is the number of cars per lane.

HCM Signalized Intersection Capacity Analysis

WV Fred Meyer TIA

1: Wilsonville Rd & I-5 SB

PM Peak (Ex. Config.) -- Ex + Proj + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑	↑	↑↑					↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95						0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00						1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00						1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (prot)	2600	1534	1920	3406						1640	1640	1482
Flt Permitted	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (perm)	2600	1534	1920	3406						1640	1640	1482
Volume (vph)	0	1155	710	673	939	0	0	0	0	457	0	621
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1191	732	694	968	0	0	0	0	471	0	640
RTOR Reduction (vph)	0	0	299	0	0	0	0	0	0	0	0	142
Lane Group Flow (vph)	0	1191	433	694	968	0	0	0	0	236	235	498
Confl. Peds. (#/hr)	3		4	4		3						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	0%	4%	2%	4%	6%	0%	0%	0%	0%	0%	0%	9%
Turn Type		Perm	Prot							Perm	Perm	
Protected Phases	2		1		6						4	
Permitted Phases		2			6					4		4
Actuated Green, G (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Effective Green, g (s)	39.0	39.0	28.0	71.0						21.0	21.0	21.0
Actuated g/C Ratio	0.39	0.39	0.28	0.71						0.21	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Grp Cap (vph)	1014	598	538	2418						344	344	311
v/s Ratio Prot	c0.46		c0.36	0.28								
v/s Ratio Perm		0.28								0.14	0.14	c0.34
v/c Ratio	1.17	0.72	1.29	0.40						0.69	0.68	1.60
Uniform Delay, d1	30.5	25.9	36.0	5.9						36.5	36.4	39.5
Progression Factor	0.99	1.16	0.31	0.05						1.00	1.00	1.00
Incremental Delay, d2	79.6	0.7	131.8	0.0						10.6	10.5	284.9
Delay (s)	109.9	30.7	143.0	0.3						47.1	46.9	324.4
Level of Service	F	C	F	A						D	D	F
Approach Delay (s)	79.7			59.9			0.0			206.8		
Approach LOS	E			E			A			F		

Intersection Summary

HCM Average Control Delay	102.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

WV Fred Meyer TIA

2: Wilsonville Rd & Boones Ferry Rd

PM Peak (Ex. Config.) -- Ex + Proj + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑	↑	↓	↑↑					↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.89		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3030		1770	3240	1383	1770	1622		3400	1749	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	3030		1770	3240	1383	1770	1622		3400	1749	
Volume (vph)	85	870	127	419	901	240	207	146	394	601	192	95
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	897	131	432	929	247	213	151	406	620	198	98
RTOR Reduction (vph)	0	11	0	0	0	0	0	90	0	0	18	0
Lane Group Flow (vph)	88	1017	0	432	929	247	213	467	0	620	278	0
Confl. Peds. (#/hr)	7		4	4		7	3		3	3		3
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	5%	3%	19%	2%	4%	14%	2%	2%	3%	3%	1%	6%
Turn Type		Prot			Prot	Free	Split			Split		
Protected Phases	1	6			5	2		4	4		8	8
Permitted Phases		6				Free						
Actuated Green, G (s)	5.6	34.0			13.0	41.4	100.0	7.7	7.7		20.3	20.3
Effective Green, g (s)	7.6	37.0			15.0	44.4	100.0	9.7	9.7		22.3	22.3
Actuated g/C Ratio	0.08	0.37			0.15	0.44	1.00	0.10	0.10		0.22	0.22
Clearance Time (s)	6.0	7.0			6.0	7.0		6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	131	1121			266	1439	1383	172	157		758	390
v/s Ratio Prot	0.05	c0.34			c0.24	0.29		0.12	c0.29		c0.18	0.16
v/s Ratio Perm							0.18					
v/c Ratio	0.67	0.91			1.62	0.65	0.18	1.24	2.97		0.82	0.71
Uniform Delay, d1	45.0	29.9			42.5	21.7	0.0	45.1	45.1		36.9	35.9
Progression Factor	1.00	1.00			1.00	0.76	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	12.7	12.1			290.5	1.3	0.2	147.0	904.6		6.9	6.1
Delay (s)	57.7	42.0			332.9	17.8	0.2	192.1	949.8		43.8	42.0
Level of Service	E	D			F	B	A	F	F		D	D
Approach Delay (s)			43.2				99.7		740.2			43.2
Approach LOS			D				F		F			D

Intersection Summary

HCM Average Control Delay	185.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
15: Wilsonville Rd & I-5 NB

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Proj + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↕	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0				
Lane Util. Factor	1.00	0.95		0.95	1.00		1.00	1.00				
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00				
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	1.00		1.00	0.85		1.00	0.85				
Flt Protected	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (prot)	2000	3505		2700	1380		1650	1760				
Flt Permitted	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (perm)	2000	3505		2700	1380		1650	1760				
Volume (vph)	581	1031	0	0	1261	488	351	0	588	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	625	1109	0	0	1356	525	377	0	632	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	310	0	0	316	0	0	0
Lane Group Flow (vph)	625	1109	0	0	1356	215	0	377	316	0	0	0
Confl. Peds. (#/hr)	4		4	4		4						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	5%	3%	0%	0%	4%	3%	10%	0%	4%	0%	0%	0%
Turn Type	Prot				Perm	Perm		Perm				
Protected Phases	5	2			6			8				
Permitted Phases		2				6	8		8			
Actuated Green, G (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Effective Green, g (s)	31.0	71.0			36.0	36.0		21.0	21.0			
Actuated g/C Ratio	0.31	0.71			0.36	0.36		0.21	0.21			
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Grp Cap (vph)	620	2489			972	497		347	370			
v/s Ratio Prot	c0.31	0.32			c0.50							
v/s Ratio Perm						0.16		0.23	0.18			
v/c Ratio	1.01	0.45			1.40	0.43		1.09	0.85			
Uniform Delay, d1	34.5	6.2			32.0	24.2		39.5	38.0			
Progression Factor	0.17	0.21			0.68	0.41		1.00	1.00			
Incremental Delay, d2	12.9	0.2			180.6	1.2		73.4	21.5			
Delay (s)	18.9	1.5			202.3	11.1		112.9	59.5			
Level of Service	B	A			F	B		F	E			
Approach Delay (s)		7.8			148.9			79.5			0.0	
Approach LOS		A			F			E			A	

Intersection Summary			
HCM Average Control Delay	80.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
16: Wilsonville Rd & Town Center Lp West

WV Fred Meyer TIA  
PM Peak (Ex. Config.) -- Ex + Proj + Stg2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↕	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95		0.91	0.91		1.00	0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	0.88	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98		0.95	1.00	1.00
Satd. Flow (prot)	2540	3461		1805	2650		1579	3144		1736	1517	1467
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.98		0.95	1.00	1.00
Satd. Flow (perm)	2540	3461		1805	2650		1579	3144		1736	1517	1467
Volume (vph)	622	934	63	59	729	63	208	78	62	96	81	812
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	655	983	66	62	767	66	219	82	65	101	85	855
RTOR Reduction (vph)	0	4	0	0	6	0	0	32	0	0	143	380
Lane Group Flow (vph)	655	1045	0	62	827	0	115	219	0	101	264	153
Confl. Peds. (#/hr)	4		4	4		4	2		3	3		2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	3%	3%	5%	0%	4%	0%	4%	3%	2%	4%	6%	3%
Turn Type	Prot				Prot		Split		Split		Perm	
Protected Phases	5	2			1	6		8	8		4	4
Permitted Phases												4
Actuated Green, G (s)	24.2	46.8			6.4	29.0		10.1	10.1		19.7	19.7
Effective Green, g (s)	24.2	47.3			6.4	29.5		10.1	10.1		20.2	20.2
Actuated g/C Ratio	0.24	0.47			0.06	0.29		0.10	0.10		0.20	0.20
Clearance Time (s)	4.0	4.5			4.0	4.5		4.0	4.0		4.5	4.5
Vehicle Extension (s)	2.5	4.3			2.5	4.3		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	615	1637			116	782		159	318		351	306
v/s Ratio Prot	c0.26	0.30			0.03	c0.31		c0.07	0.07		0.06	c0.17
v/s Ratio Perm												0.10
v/c Ratio	1.07	0.64			0.53	1.06		0.72	0.69		0.29	0.86
Uniform Delay, d1	37.9	19.9			45.4	35.2		43.6	43.4		33.8	38.6
Progression Factor	1.12	1.16			1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	50.9	0.8			3.6	48.3		14.1	5.6		0.3	21.2
Delay (s)	93.3	23.8			49.0	83.6		57.7	49.0		34.1	59.8
Level of Service	F	C			D	F		E	D		C	E
Approach Delay (s)		50.6				81.2			51.7			45.5
Approach LOS		D				F			D			D

Intersection Summary			
HCM Average Control Delay	56.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Fred Meyer TIA - 2008
PM Peak Hour
Ex + Proj + Stg II

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #138 Boones Ferry Rd/North Fred Meyer's

Average Delay (sec/veh): 34.2 Worst Case Level Of Service: F[556.6]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 1 0 1 0).

Table with 12 columns: Volume Module, Count, Date, PM Peak Hr, Base Vol, Growth Adj, Initial Bse, Added Vol, FM, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table with 12 columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with 12 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with 12 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
PM Peak Hour
Ex + Proj + Stg II

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #189 Boones Ferry Rd/Bailey St

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: B[ 13.8]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 0 1:0 0).

Table with 12 columns: Volume Module, Count, Date, PM Peak Hr, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table with 12 columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with 12 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with 12 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
PM Peak Hour
Ex + Proj + Stg II

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #253 Boones Ferry Rd/South Fred Meyer's

Average Delay (sec/veh): 11.9 Worst Case Level Of Service: F[ 79.4]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), and Rights (Include). Includes Lanes: 1 0 0 1 0 for North and South, 0 0 1 0 0 for East and West.

Volume Module: >> Count Date: 1 Jul 2008 << PM Peak Hr (4:45 pm)
Base Vol: 7 173 0 0 147 63 69 0 8 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 7 173 0 0 147 63 69 0 8 0 0 0
Added Vol: 1 70 1 170 73 0 0 7 1 1 7 171
FM: 0 -28 13 20 -29 0 0 0 0 15 0 13
Initial Fut: 8 215 14 190 191 63 69 7 9 16 7 184
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87
PHF Volume: 9 247 16 218 220 72 79 8 10 18 8 211
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 9 247 16 218 220 72 79 8 10 18 8 211

Critical Gap Module:
Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx 7.1 6.5 6.2 7.1 6.5 6.2
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:
Cnflct Vol: 301 xxxx xxxxx 263 xxxx xxxxx 1085 983 265 975 1011 255
Potent Cap.: 1272 xxxx xxxxx 1313 xxxx xxxxx 196 251 779 233 241 788
Move Cap.: 1262 xxxx xxxxx 1313 xxxx xxxxx 120 206 773 193 198 788
Volume/Cap: 0.01 xxxx xxxxx 0.17 xxxx xxxxx 0.66 0.04 0.01 0.10 0.04 0.27

Level Of Service Module:
2Way95thQ: 0.0 xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
Control Del: 7.9 xxxx xxxxx 8.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: A \* \* A \* \* \* \* \* \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 137 xxxxx xxxx 589 xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx 4.1 xxxxx xxxxx 1.9 xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx 79.4 xxxxx xxxxx 15.2 xxxxx
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx 79.4 15.2
ApproachLOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*

Note: Queue reported is the number of cars per lane.

# **HCM Intersection Analysis - Mitigated**

HCM Signalized Intersection Capacity Analysis  
1: Wilsonville Rd & I-5 SB

Fred Meyer TIA  
Existing + Project

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑↑↑	↑	↑	↑↑					↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	
Lane Util. Factor	0.91	1.00	0.91	0.91						0.97	0.88	
Frpb, ped/bikes	1.00	0.99	1.00	1.00						1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	
Frt	1.00	0.85	1.00	1.00						1.00	0.85	
Flt Protected	1.00	1.00	0.95	0.99						0.95	1.00	
Satd. Flow (prot)	4988	1566	1579	3234						3400	2608	
Flt Permitted	1.00	1.00	0.95	0.51						0.95	1.00	
Satd. Flow (perm)	4988	1566	1579	1686						3400	2608	
Volume (vph)	0	961	655	585	745	0	0	0	0	415	0	484
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	991	675	603	768	0	0	0	0	428	0	499
RTOR Reduction (vph)	0	0	43	0	0	0	0	0	0	0	0	386
Lane Group Flow (vph)	0	991	632	309	1062	0	0	0	0	428	0	113
Confl. Peds. (#/hr)	3		4	4		3						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	0%	4%	2%	4%	6%	0%	0%	0%	0%	3%	0%	9%
Turn Type	custom				Prot		Prot		custom			
Protected Phases	2	4	1	6						4	4	
Permitted Phases	2				6							
Actuated Green, G (s)	42.0	67.0	31.0	77.0						25.0	25.0	
Effective Green, g (s)	42.0	67.0	31.0	77.0						25.0	25.0	
Actuated g/C Ratio	0.38	0.61	0.28	0.70						0.23	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0						4.0	4.0	
Lane Grp Cap (vph)	1905	1011	445	1616						773	593	
v/s Ratio Prot	0.20	c0.14	c0.20	0.19						0.13	0.04	
v/s Ratio Perm		0.26		c0.27								
v/c Ratio	0.52	0.62	0.69	0.66						0.55	0.19	
Uniform Delay, d1	26.2	13.6	35.3	9.2						37.6	34.3	
Progression Factor	0.93	1.41	0.00	0.43						1.00	1.00	
Incremental Delay, d2	0.8	2.2	4.7	1.5						2.8	0.7	
Delay (s)	25.3	21.3	4.8	5.4						40.4	35.0	
Level of Service	C	C	A	A						D	D	
Approach Delay (s)	23.7			5.3		0.0				37.5		
Approach LOS	C			A		A				D		

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
2: Wilsonville Rd & Boones Ferry Rd

Fred Meyer TIA  
Existing + Project

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑	↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	1.00	1.00	0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	4805		3433	3471	1364	1770	1863	1555	3400	1777	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	4805		3433	3471	1364	1770	1863	1555	3400	1777	
Volume (vph)	55	718	122	395	680	154	194	142	377	521	188	65
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	57	740	126	407	701	159	200	146	389	537	194	67
RTOR Reduction (vph)	0	20	0	0	86	0	0	35	0	12	0	0
Lane Group Flow (vph)	57	846	0	407	701	73	200	146	354	537	249	0
Confl. Peds. (#/hr)	7		4	4		7	3		3	3		3
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	5%	3%	19%	2%	4%	14%	2%	2%	3%	3%	1%	6%
Turn Type	Prot		Prot		Perm		Split		pm+ov		Split	
Protected Phases	1	6		5	2		4	4	5	8	8	
Permitted Phases	6		2		4		4		4			
Actuated Green, G (s)	6.2	39.4		16.6	49.8	49.8	15.4	15.4	32.0	21.6	21.6	
Effective Green, g (s)	6.2	40.4		16.6	50.8	50.8	15.4	15.4	32.0	21.6	21.6	
Actuated g/C Ratio	0.06	0.37		0.15	0.46	0.46	0.14	0.14	0.29	0.20	0.20	
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	2.5	4.3		2.5	0.5	0.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	97	1765		518	1603	630	248	261	452	668	349	
v/s Ratio Prot	0.03	c0.18		c0.12	0.20		c0.11	0.08	0.12	c0.16	0.14	
v/s Ratio Perm						0.05			0.11			
v/c Ratio	0.59	0.48		0.79	0.44	0.12	0.81	0.56	0.78	0.80	0.71	
Uniform Delay, d1	50.7	26.7		45.0	20.0	16.8	45.9	44.1	35.8	42.2	41.3	
Progression Factor	1.00	1.00		1.25	0.78	0.47	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.3	0.9		5.9	0.7	0.3	16.7	2.1	8.3	6.8	6.3	
Delay (s)	58.0	27.7		62.2	16.2	8.2	62.6	46.2	44.2	48.9	47.6	
Level of Service	E	C		E	B	A	E	D	D	D	D	
Approach Delay (s)		29.5			30.0			49.6			48.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
15: Wilsonville Rd & I-5 NB

Fred Meyer TIA  
Existing + Project

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↕	↔	↕	↕	↔	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0				
Lane Util. Factor	0.91	0.91		0.91	1.00	0.97		0.88				
Frpb, ped/bikes	1.00	1.00		1.00	0.99	1.00		1.00				
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00				
Frt	1.00	1.00		1.00	0.85	1.00		0.85				
Flt Protected	0.95	0.99		1.00	1.00	0.95		1.00				
Satd. Flow (prot)	1564	3324		4988	1552	3183		2733				
Flt Permitted	0.95	0.51		1.00	1.00	0.95		1.00				
Satd. Flow (perm)	1564	1701		4988	1552	3183		2733				
Volume (vph)	498	878	0	0	1049	420	281	0	540	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	535	944	0	0	1128	452	302	0	581	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	105	0	0	292	0	0	0
Lane Group Flow (vph)	376	1103	0	0	1128	347	302	0	289	0	0	0
Confl. Peds. (#/hr)	4		4	4		4						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	5%	3%	0%	0%	4%	3%	10%	0%	4%	0%	0%	0%
Turn Type	Prot				custom		Prot	custom				
Protected Phases	5	2			6	8		8				
Permitted Phases		2				6						
Actuated Green, G (s)	43.0	77.0			30.0	55.0	25.0	25.0				
Effective Green, g (s)	43.0	77.0			30.0	55.0	25.0	25.0				
Actuated g/C Ratio	0.39	0.70			0.27	0.50	0.23	0.23				
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Grp Cap (vph)	611	1825			1360	832	723	621				
v/s Ratio Prot	0.24	c0.24			c0.23	0.09	0.09	c0.11				
v/s Ratio Perm		0.19				0.13						
v/c Ratio	0.62	0.60			0.83	0.42	0.42	0.47				
Uniform Delay, d1	26.9	8.6			37.6	17.4	36.3	36.7				
Progression Factor	0.16	1.01			0.64	1.16	1.00	1.00				
Incremental Delay, d2	4.1	1.3			4.4	1.1	1.8	2.5				
Delay (s)	8.4	10.0			28.6	21.3	38.1	39.2				
Level of Service	A	A			C	C	D	D				
Approach Delay (s)		9.5			26.5		38.8			0.0		
Approach LOS		A			C		D			A		

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
16: Wilsonville Rd & Town Center Lp West

Fred Meyer TIA  
Existing + Project

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↕	↔	↕	↕	↔	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	0.97		1.00		1.00	0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99		1.00	0.99	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99	1.00		0.93		1.00	0.90	0.85
Flt Protected	0.95	1.00		0.95	1.00	0.95		1.00		0.95	1.00	1.00
Satd. Flow (prot)	3400	3458		1805	3435	3367		1717		1736	1542	1467
Flt Permitted	0.95	1.00		0.95	1.00	0.95		1.00		0.95	1.00	1.00
Satd. Flow (perm)	3400	3458		1805	3435	3367		1717		1736	1542	1467
Volume (vph)	514	844	60	59	622	53	207	78	62	86	81	640
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	541	888	63	62	655	56	218	82	65	91	85	674
RTOR Reduction (vph)	0	4	0	0	5	0	0	29	0	0	70	401
Lane Group Flow (vph)	541	947	0	62	706	0	218	118	0	91	200	88
Confl. Peds. (#/hr)	4		4	4		4	2		3	3		2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	3%	3%	5%	0%	4%	0%	4%	3%	2%	4%	6%	3%
Turn Type	Prot				Prot		Split			Split		Perm
Protected Phases	5	2			1	6		8	8		4	4
Permitted Phases												4
Actuated Green, G (s)	29.8	55.5			5.9	31.6		12.4	12.4		19.2	19.2
Effective Green, g (s)	29.8	56.0			5.9	32.1		12.4	12.4		19.7	19.7
Actuated g/C Ratio	0.27	0.51			0.05	0.29		0.11	0.11		0.18	0.18
Clearance Time (s)	4.0	4.5			4.0	4.5		4.0	4.0		4.5	4.5
Vehicle Extension (s)	2.5	4.3			2.5	4.3		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	921	1760			97	1002		380	194		311	276
v/s Ratio Prot	c0.16	0.27			0.03	c0.21		0.06	c0.07		0.05	c0.13
v/s Ratio Perm												0.06
v/c Ratio	0.59	0.54			0.64	0.70		0.57	0.61		0.29	0.73
Uniform Delay, d1	34.8	18.3			51.0	34.7		46.3	46.5		39.1	42.6
Progression Factor	0.99	1.02			1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.9			11.5	4.2		1.7	4.5		0.4	8.6
Delay (s)	35.2	19.6			62.5	38.9		48.0	50.9		39.5	51.2
Level of Service	D	B			E	D		D	D		D	D
Approach Delay (s)		25.2			40.8			49.2			43.5	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



HCM Signalized Intersection Capacity Analysis  
1: Wilsonville Rd & I-5 SB

Fred Meyer TIA  
Existing + Stage II

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑	↑↑					↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	
Lane Util. Factor	0.91	1.00	0.91	0.91						0.97	0.88	
Frpb, ped/bikes	1.00	0.99	1.00	1.00						1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	
Frt	1.00	0.85	1.00	1.00						1.00	0.85	
Flt Protected	1.00	1.00	0.95	0.99						0.95	1.00	
Satd. Flow (prot)	4988	1566	1579	3234						3400	2608	
Flt Permitted	1.00	1.00	0.95	0.51						0.95	1.00	
Satd. Flow (perm)	4988	1566	1579	1674						3400	2608	
Volume (vph)	0	1059	675	673	854	0	0	0	0	457	0	572
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1092	696	694	880	0	0	0	0	471	0	590
RTOR Reduction (vph)	0	0	30	0	0	0	0	0	0	0	0	338
Lane Group Flow (vph)	0	1092	666	354	1220	0	0	0	0	471	0	252
Confl. Peds. (#/hr)	3		4	4						3		
Confl. Bikes (#/hr)			1							3		
Heavy Vehicles (%)	0%	4%	2%	4%	6%	0%	0%	0%	0%	3%	0%	9%
Turn Type	custom				Prot		Prot		custom			
Protected Phases	2	4	1	6						4	4	
Permitted Phases	2				6							
Actuated Green, G (s)	42.0	67.0	31.0	77.0						25.0	25.0	
Effective Green, g (s)	42.0	67.0	31.0	77.0						25.0	25.0	
Actuated g/C Ratio	0.38	0.61	0.28	0.70						0.23	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0						4.0	4.0	
Lane Grp Cap (vph)	1905	1011	445	1611						773	593	
v/s Ratio Prot	0.22	c0.15	c0.22	0.21						0.14	0.10	
v/s Ratio Perm		0.28		c0.32								
v/c Ratio	0.57	0.66	0.80	0.76						0.61	0.43	
Uniform Delay, d1	26.9	14.0	36.6	10.5						38.1	36.4	
Progression Factor	0.91	1.24	0.01	0.46						1.00	1.00	
Incremental Delay, d2	1.0	2.7	4.7	2.0						3.6	2.2	
Delay (s)	25.6	20.1	5.1	6.9						41.7	38.6	
Level of Service	C	C	A	A						D	D	
Approach Delay (s)	23.5			6.5			0.0			40.0		
Approach LOS	C			A			A			D		
<b>Intersection Summary</b>												
HCM Average Control Delay	21.4			HCM Level of Service			C					
HCM Volume to Capacity ratio	0.72											
Actuated Cycle Length (s)	110.0			Sum of lost time (s)			4.0					
Intersection Capacity Utilization	61.9%			ICU Level of Service			B					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
2: Wilsonville Rd & Boones Ferry Rd

Fred Meyer TIA  
Existing + Stage II

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	1.00	1.00	0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.99	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	4991		3433	3471	1364	1770	1863	1555	3400	1686	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	4991		3433	3471	1364	1770	1863	1555	3400	1686	
Volume (vph)	85	915	26	222	964	240	96	53	218	601	100	95
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	943	27	229	994	247	99	55	225	620	103	98
RTOR Reduction (vph)	0	2	0	0	0	117	0	0	20	0	32	0
Lane Group Flow (vph)	88	968	0	229	994	130	99	55	205	620	169	0
Confl. Peds. (#/hr)	7		4	4		7	3		3	3		3
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	5%	3%	19%	2%	4%	14%	2%	2%	3%	3%	1%	6%
Turn Type	Prot		Prot		Perm		Split		pm+ov		Split	
Protected Phases	1	6		5	2		4	4	5	8	8	
Permitted Phases	6		2		4		4		4			
Actuated Green, G (s)	9.7	45.6		12.2	48.1	48.1	10.8	10.8	23.0	24.4	24.4	
Effective Green, g (s)	9.7	46.6		12.2	49.1	49.1	10.8	10.8	23.0	24.4	24.4	
Actuated g/C Ratio	0.09	0.42		0.11	0.45	0.45	0.10	0.10	0.21	0.22	0.22	
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	2.5	4.3		2.5	0.5	0.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	152	2114		381	1549	609	174	183	325	754	374	
v/s Ratio Prot	0.05	0.19		0.07	c0.29		0.06	0.03	c0.07	c0.18	0.10	
v/s Ratio Perm						0.10			0.06			
v/c Ratio	0.58	0.46		0.60	0.64	0.21	0.57	0.30	0.63	0.82	0.45	
Uniform Delay, d1	48.2	22.7		46.6	23.6	18.6	47.4	46.1	39.6	40.7	37.0	
Progression Factor	1.00	1.00		1.18	0.81	0.48	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.3	0.7		1.5	1.4	0.5	3.4	0.7	3.5	7.1	0.6	
Delay (s)	52.5	23.4		56.3	20.5	9.5	50.8	46.8	43.1	47.8	37.7	
Level of Service	D	C		E	C	A	D	D	D	D	D	
Approach Delay (s)		25.8			24.3			45.7			45.3	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM Average Control Delay	31.5			HCM Level of Service			C					
HCM Volume to Capacity ratio	0.67											
Actuated Cycle Length (s)	110.0			Sum of lost time (s)			12.0					
Intersection Capacity Utilization	67.7%			ICU Level of Service			C					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
15: Wilsonville Rd & I-5 NB

Fred Meyer TIA  
Existing + Stage II

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↕	↔	↕	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0				
Lane Util. Factor	0.91	0.91		0.91	1.00	0.97		0.88				
Frpb, ped/bikes	1.00	1.00		1.00	0.99	1.00		1.00				
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00				
Frt	1.00	1.00		1.00	0.85	1.00		0.85				
Flt Protected	0.95	0.99		1.00	1.00	0.95		1.00				
Satd. Flow (prot)	1564	3327		4988	1552	3183		2733				
Flt Permitted	0.95	0.51		1.00	1.00	0.95		1.00				
Satd. Flow (perm)	1564	1707		4988	1552	3183		2733				
Volume (vph)	533	983	0	1212	488	315	0	588	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	573	1057	0	1303	525	339	0	632	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	92	0	0	246	0	0	0	0
Lane Group Flow (vph)	414	1216	0	1303	433	339	0	386	0	0	0	0
Confl. Peds. (#/hr)	4		4	4		4						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	5%	3%	0%	0%	4%	3%	10%	0%	4%	0%	0%	0%
Turn Type	Prot				custom	Prot		custom				
Protected Phases	5	2		6	8	8		8				
Permitted Phases		2			6							
Actuated Green, G (s)	43.0	77.0		30.0	55.0	25.0		25.0				
Effective Green, g (s)	43.0	77.0		30.0	55.0	25.0		25.0				
Actuated g/C Ratio	0.39	0.70		0.27	0.50	0.23		0.23				
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0				
Lane Grp Cap (vph)	611	1828		1360	832	723		621				
v/s Ratio Prot	c0.26	0.26		c0.26	0.12	0.11		c0.14				
v/s Ratio Perm		0.21			0.16							
v/c Ratio	0.68	0.67		0.96	0.52	0.47		0.62				
Uniform Delay, d1	27.8	9.3		39.4	18.6	36.8		38.2				
Progression Factor	0.16	1.15		0.62	1.05	1.00		1.00				
Incremental Delay, d2	5.2	1.6		11.2	1.4	2.2		4.6				
Delay (s)	9.8	12.3		35.6	20.8	38.9		42.9				
Level of Service	A	B		D	C	D		D				
Approach Delay (s)		11.6		31.4			41.5			0.0		
Approach LOS		B		C			D			A		

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
16: Wilsonville Rd & Town Center Lp West

Fred Meyer TIA  
Existing + Stage II

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↕	↔	↕	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	0.97		1.00		1.00	0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99		1.00	0.99	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99	1.00		0.93		1.00	0.89	0.85
Flt Protected	0.95	1.00		0.95	1.00	0.95		1.00		0.95	1.00	1.00
Satd. Flow (prot)	3400	3459		1805	3434	3367		1717		1736	1530	1468
Flt Permitted	0.95	1.00		0.95	1.00	0.95		1.00		0.95	1.00	1.00
Satd. Flow (perm)	3400	3459		1805	3434	3367		1717		1736	1530	1468
Volume (vph)	598	910	63	59	705	63	208	78	62	96	81	787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	629	958	66	62	742	66	219	82	65	101	85	828
RTOR Reduction (vph)	0	4	0	0	6	0	0	29	0	0	86	419
Lane Group Flow (vph)	629	1020	0	62	802	0	219	118	0	101	235	173
Confl. Peds. (#/hr)	4		4	4		4	2		3	3		2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	3%	3%	5%	0%	4%	0%	4%	3%	2%	4%	6%	3%
Turn Type	Prot				Prot		Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												4
Actuated Green, G (s)	29.8	52.8		5.2	28.2		12.4	12.4		22.6	22.6	22.6
Effective Green, g (s)	29.8	53.3		5.2	28.7		12.4	12.4		23.1	23.1	23.1
Actuated g/C Ratio	0.27	0.48		0.05	0.26		0.11	0.11		0.21	0.21	0.21
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.5	4.5	4.5
Vehicle Extension (s)	2.5	4.3		2.5	4.3		2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	921	1676		85	896		380	194		365	321	308
v/s Ratio Prot	c0.19	0.29		0.03	c0.23		0.07	c0.07		0.06	c0.15	
v/s Ratio Perm												0.12
v/c Ratio	0.68	0.61		0.73	0.90		0.58	0.61		0.28	0.73	0.56
Uniform Delay, d1	35.9	20.7		51.7	39.2		46.3	46.5		36.4	40.6	38.9
Progression Factor	1.05	1.08		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	1.2		25.2	13.4		1.7	4.5		0.3	7.9	1.9
Delay (s)	39.0	23.6		76.9	52.6		48.0	50.9		36.7	48.4	40.8
Level of Service	D	C		E	D		D	D		D	D	D
Approach Delay (s)		29.4			54.3			49.2			42.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Fred Meyer TIA  
Existing + Project + Stage II

1: Wilsonville Rd & I-5 SB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑	↑↑					↑↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	
Lane Util. Factor	0.91	1.00	0.91	0.91						0.97	0.88	
Frpb, ped/bikes	1.00	0.99	1.00	1.00						1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	
Frt	1.00	0.85	1.00	1.00						1.00	0.85	
Flt Protected	1.00	1.00	0.95	0.99						0.95	1.00	
Satd. Flow (prot)	4988	1566	1579	3237						3400	2608	
Flt Permitted	1.00	1.00	0.95	0.51						0.95	1.00	
Satd. Flow (perm)	4988	1566	1579	1670						3400	2608	
Volume (vph)	0	1155	710	673	939	0	0	0	0	457	0	621
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1191	732	694	968	0	0	0	0	471	0	640
RTOR Reduction (vph)	0	0	29	0	0	0	0	0	0	0	0	296
Lane Group Flow (vph)	0	1191	703	374	1288	0	0	0	0	471	0	344
Confl. Peds. (#/hr)	3		4	4		3						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	0%	4%	2%	4%	6%	0%	0%	0%	0%	3%	0%	9%
Turn Type	custom			Prot			Prot			custom		
Protected Phases	2	4	1	6						4		4
Permitted Phases	2			6								
Actuated Green, G (s)	42.0	67.0	31.0	77.0						25.0		25.0
Effective Green, g (s)	42.0	67.0	31.0	77.0						25.0		25.0
Actuated g/C Ratio	0.38	0.61	0.28	0.70						0.23		0.23
Clearance Time (s)	4.0	4.0	4.0	4.0						4.0		4.0
Lane Grp Cap (vph)	1905	1011	445	1611						773		593
v/s Ratio Prot	0.24	c0.16	c0.24	0.23						0.14		0.13
v/s Ratio Perm		0.29		c0.33								
v/c Ratio	0.63	0.70	0.84	0.80						0.61		0.58
Uniform Delay, d1	27.6	14.6	37.2	11.2						38.1		37.8
Progression Factor	0.84	1.33	0.01	0.49						1.00		1.00
Incremental Delay, d2	1.0	2.6	4.7	2.3						3.6		4.1
Delay (s)	24.3	22.1	5.1	7.9						41.7		41.9
Level of Service	C	C	A	A						D		D
Approach Delay (s)	23.5			7.2			0.0			41.8		
Approach LOS	C			A			A			D		

Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Fred Meyer TIA  
Existing + Project + Stage II

2: Wilsonville Rd & Boones Ferry Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑	↑↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.00	0.99	1.00	0.99	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98	1.00	1.00	0.85	1.00	1.00	1.00	0.85	1.00	0.95	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1719	4833	3433	3471	1364	1770	1863	1554	3400	1747		
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1719	4833	3433	3471	1364	1770	1863	1554	3400	1747		
Volume (vph)	85	870	127	419	901	240	207	146	394	601	192	95
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	897	131	432	929	247	213	151	406	620	198	98
RTOR Reduction (vph)	0	16	0	0	0	131	0	0	19	0	16	0
Lane Group Flow (vph)	88	1012	0	432	929	116	213	151	387	620	280	0
Confl. Peds. (#/hr)	7		4	4		7	3		3	3		3
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	5%	3%	19%	2%	4%	14%	2%	2%	3%	3%	1%	6%
Turn Type	Prot		Prot		Perm		Split		pm+ov		Split	
Protected Phases	1	6		5	2		4	4	5	8		8
Permitted Phases	6		2				4					
Actuated Green, G (s)	8.1	37.0		16.4	45.3	45.3	15.8	15.8	32.2	23.8		23.8
Effective Green, g (s)	8.1	38.0		16.4	46.3	46.3	15.8	15.8	32.2	23.8		23.8
Actuated g/C Ratio	0.07	0.35		0.15	0.42	0.42	0.14	0.14	0.29	0.22		0.22
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	4.0	4.0	4.0		4.0
Vehicle Extension (s)	2.5	4.3		2.5	0.5	0.5	2.5	2.5	2.5	2.5		2.5
Lane Grp Cap (vph)	127	1670		512	1461	574	254	268	455	736		378
v/s Ratio Prot	0.05	0.21		0.13	c0.27		0.12	0.08	c0.13	c0.18		0.16
v/s Ratio Perm						0.09			0.12			
v/c Ratio	0.69	0.61		0.84	0.64	0.20	0.84	0.56	0.85	0.84		0.74
Uniform Delay, d1	49.7	29.8		45.6	25.2	20.2	45.9	43.9	36.6	41.3		40.2
Progression Factor	1.00	1.00		1.14	0.83	0.49	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	14.0	1.6		7.2	1.2	0.5	20.5	2.2	14.0	8.5		7.0
Delay (s)	63.7	31.4		59.4	22.0	10.3	66.4	46.1	50.6	49.8		47.2
Level of Service	E	C		E	C	B	E	D	D	D		D
Approach Delay (s)		34.0			30.3			54.1				49.0
Approach LOS		C			C			D				D

Intersection Summary			
HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Fred Meyer TIA  
Existing + Project + Stage II

15: Wilsonville Rd & I-5 NB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↕	↔	↕	↕	↔	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.91	0.91		0.91	1.00	0.97	0.88					
Frpb, ped/bikes	1.00	1.00		1.00	0.99	1.00	1.00					
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00					
Frt	1.00	1.00		1.00	0.85	1.00	0.85					
Flt Protected	0.95	0.99		1.00	1.00	0.95	1.00					
Satd. Flow (prot)	1564	3324		4988	1552	3183	2733					
Flt Permitted	0.95	0.52		1.00	1.00	0.95	1.00					
Satd. Flow (perm)	1564	1734		4988	1552	3183	2733					
Volume (vph)	581	1031	0	0	1261	488	351	0	588	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	625	1109	0	0	1356	525	377	0	632	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	79	0	0	227	0	0	0
Lane Group Flow (vph)	441	1293	0	0	1356	447	377	0	405	0	0	0
Confl. Peds. (#/hr)	4		4	4		4						
Confl. Bikes (#/hr)			1			3						
Heavy Vehicles (%)	5%	3%	0%	0%	4%	3%	10%	0%	4%	0%	0%	0%
Turn Type	Prot				custom		Prot	custom				
Protected Phases	5	2			6	8	8	8				
Permitted Phases		2				6						
Actuated Green, G (s)	43.0	77.0			30.0	55.0	25.0	25.0				
Effective Green, g (s)	43.0	77.0			30.0	55.0	25.0	25.0				
Actuated g/C Ratio	0.39	0.70			0.27	0.50	0.23	0.23				
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Grp Cap (vph)	611	1835			1360	832	723	621				
v/s Ratio Prot	c0.28	0.28			c0.27	0.12	0.12	c0.15				
v/s Ratio Perm		0.22				0.17						
v/c Ratio	0.72	0.70			1.00	0.54	0.52	0.65				
Uniform Delay, d1	28.4	9.8			40.0	18.8	37.3	38.6				
Progression Factor	0.15	1.11			0.61	1.02	1.00	1.00				
Incremental Delay, d2	6.1	1.9			17.4	1.4	2.7	5.3				
Delay (s)	10.5	12.7			41.8	20.5	39.9	43.8				
Level of Service	B	B			D	C	D	D				
Approach Delay (s)		12.1			35.9		42.4				0.0	
Approach LOS		B			D		D				A	

Intersection Summary

HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

Fred Meyer TIA  
Existing + Project + Stage II

16: Wilsonville Rd & Town Center Lp West

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↕	↔	↕	↕	↔	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	0.97	1.00	1.00	0.95	0.95	0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99	1.00	0.93	1.00	0.93	1.00	0.89	0.85
Flt Protected	0.95	1.00		0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	3461		1805	3435	3367	1717	1736	1529	1468		
Flt Permitted	0.95	1.00		0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	3461		1805	3435	3367	1717	1736	1529	1468		
Volume (vph)	622	934	63	59	729	63	208	78	62	96	81	812
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	655	983	66	62	767	66	219	82	65	101	85	855
RTOR Reduction (vph)	0	4	0	0	5	0	0	29	0	0	88	415
Lane Group Flow (vph)	655	1045	0	62	828	0	219	118	0	101	243	194
Confl. Peds. (#/hr)	4		4	4		4	2		3	3		2
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	3%	3%	5%	0%	4%	0%	4%	3%	2%	4%	6%	3%
Turn Type	Prot				Prot		Split		Split		Perm	
Protected Phases	5	2			1	6	8	8	4	4		
Permitted Phases											4	
Actuated Green, G (s)	29.8	52.2			4.9	27.3	12.4	12.4	23.5	23.5	23.5	
Effective Green, g (s)	29.8	52.7			4.9	27.8	12.4	12.4	24.0	24.0	24.0	
Actuated g/C Ratio	0.27	0.48			0.04	0.25	0.11	0.11	0.22	0.22	0.22	
Clearance Time (s)	4.0	4.5			4.0	4.5	4.0	4.0	4.5	4.5	4.5	
Vehicle Extension (s)	2.5	4.3			2.5	4.3	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	921	1658			80	868	380	194	379	334	320	
v/s Ratio Prot	c0.19	0.30			0.03	c0.24	0.07	c0.07	0.06	c0.16		
v/s Ratio Perm											0.13	
v/c Ratio	0.71	0.63			0.78	0.95	0.58	0.61	0.27	0.73	0.61	
Uniform Delay, d1	36.2	21.4			52.0	40.5	46.3	46.5	35.7	40.0	38.7	
Progression Factor	1.05	1.08			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.6	1.2			35.2	21.2	1.7	4.5	0.3	7.2	2.7	
Delay (s)	39.8	24.4			87.2	61.6	48.0	50.9	36.0	47.1	41.5	
Level of Service	D	C			F	E	D	D	D	D	D	
Approach Delay (s)		30.3			63.4		49.2		42.7			
Approach LOS		C			E		D		D			

Intersection Summary

HCM Average Control Delay	42.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Fred Meyer TIA - 2008
PM Peak Hour
Ex + Proj + Stg II -- Mitigated

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #138 Boones Ferry Rd/North Fred Meyer's

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B[ 13.8]

Table with 4 columns: Approach, Movement, Rights, Lanes. Rows for North, South, East, West bounds.

Table with 12 columns: Volume Module, Count, Date, PM Peak Hr, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with 4 columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with 4 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with 4 columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, Approach Del, Approach LOS.

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
PM Peak Hour
Ex + Proj + Stg II -- Mitigated

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #253 Boones Ferry Rd/South Fred Meyer's

Cycle (sec): 100 Critical Vol./Cap.(X): 0.748
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 20.1
Optimal Cycle: 0 Level Of Service: C

Table with 4 columns: Approach, Movement, Rights, Lanes. Rows for North, South, East, West bounds.

Table with 12 columns: Volume Module, Count, Date, PM Peak Hr, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with 4 columns: Saturation Flow Module, Adjustment, Lanes, Final Sat.

Table with 4 columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, Approach Del, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Table with 4 columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, Approach Del, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.



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Existing + Proj + Stg2      Tue Jul 22, 2008 14:18:22      Page 3-1
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Fred Meyer TIA - 2008
PM Peak Hour
Ex + Proj + Stg II -- Mitigated
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
*****
Intersection #189 Boones Ferry Rd/Bailey St
*****
Average Delay (sec/veh):      5.2      Worst Case Level Of Service: C[ 17.0]
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Rights:      Include      Include      Include      Include
Lanes:      0 0 1 0 0      1 0 0 1 0      0 0 1 0 0      1 0 0 1 0
-----|-----|-----|-----|
Volume Module: >> Count Date: 24 Jun 2008 << PM Peak (some factoring up)
Base Vol:      1 143 1      40 111 4      5 0 3      8 0 32
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 143 1      40 111 4      5 0 3      8 0 32
Added Vol:      0 16 4      133 18 3      3 0 0      4 0 45
FM:      0 -24 21      9 -18 0      0 0 0      0 18 0 9
Initial Fut: 1 135 26      182 111 7      8 0 3      30 0 86
User Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87 0.87
PHF Volume: 1 155 30      209 128 8      9 0 3      34 0 99
Reduct Vol: 0 0 0      0 0 0      0 0 0      0 0 0
FinalVolume: 1 155 30      209 128 8      9 0 3      34 0 99
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp: 4.1 xxxx xxxxx 4.1 xxxx xxxxx 7.1 6.5 6.2 7.1 6.5 6.2
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol: 136 xxxx xxxxx 185 xxxx xxxxx 772 737 132 724 726 170
Potent Cap.: 1430 xxxx xxxxx 1378 xxxx xxxxx 319 348 923 344 353 879
Move Cap.: 1430 xxxx xxxxx 1378 xxxx xxxxx 250 295 923 302 299 879
Volume/Cap: 0.00 xxxx xxxxx 0.15 xxxx xxxxx 0.04 0.00 0.00 0.11 0.00 0.11
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ: 0.0 xxxx xxxxx 0.5 xxxx xxxxx xxxx xxxx xxxxx 0.4 xxxx xxxxx
Control Del: 7.5 xxxx xxxxx 8.1 xxxx xxxxx xxxxx xxxx xxxxx 18.4 xxxx xxxxx
LOS by Move: A * * * A * * * * * C * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 312 xxxxx xxxx xxxx 879
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 0.1 xxxxx xxxxx xxxx 0.4
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 17.0 xxxxx xxxxx xxxx 9.6
Shared LOS: * * * * * * * C * * * A
ApproachDel: xxxxxx xxxxxx 17.0 11.9
ApproachLOS: * * C B
*****
Note: Queue reported is the number of cars per lane.
*****

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HCM Signalized Intersection Capacity Analysis  
 253: Freds South Access & Boones Ferry Rd Existing + Project + Stage II -- Mitigated Fred Meyer TIA

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		4.0		4.0		4.0	
Lane Util. Factor	1.00				1.00		1.00		1.00		1.00	
Frt	0.99				1.00		0.85		1.00		0.97	
Flt Protected	0.96				0.97		1.00		0.95		1.00	
Satd. Flow (prot)	1790				1824		1599		1787		1830	
Flt Permitted	0.73				0.84		1.00		0.54		1.00	
Satd. Flow (perm)	1362				1587		1599		1012		1864	
Volume (vph)	134	12	8	20	12	184	15	207	14	335	283	63
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	146	13	9	22	13	200	16	225	15	364	308	68
RTOR Reduction (vph)	0	2	0	0	0	58	0	3	0	0	5	0
Lane Group Flow (vph)	0	166	0	0	35	142	16	237	0	364	371	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm		pm+ov		pm+pt		pm+pt			
Protected Phases	4		8		8		1		5		2	
Permitted Phases	4		8		8		2		6			
Actuated Green, G (s)	19.6		19.6		78.1		22.4		19.9		82.4	
Effective Green, g (s)	19.6		19.6		78.1		22.4		19.9		82.4	
Actuated g/C Ratio	0.18		0.18		0.71		0.20		0.18		0.75	
Clearance Time (s)	4.0		4.0		4.0		4.0		4.0		4.0	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	243		283		1193		224		337		1055	
v/s Ratio Prot	c0.12		0.02		0.03		0.01		c0.13		c0.18	
v/s Ratio Perm	c0.12		0.02		0.03		0.01		0.08			
v/c Ratio	0.68		0.12		0.12		0.07		0.70		0.35	
Uniform Delay, d1	42.3		38.0		5.1		35.4		42.3		5.6	
Progression Factor	1.00		1.00		1.00		1.00		1.00		1.55	
Incremental Delay, d2	7.7		0.2		0.0		0.1		6.5		0.6	
Delay (s)	50.1		38.2		5.1		35.6		48.8		9.4	
Level of Service	D		D		A		D		D		A	
Approach Delay (s)	50.1		10.0				47.9				10.4	
Approach LOS	D		B				D				B	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

## **HCM Intersection Analysis - Saturday**

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HCM Signalized Intersection Capacity Analysis  
1: Wilsonville Rd & I-5 SB

WV Fred Meyer TIA  
Existing -- Saturday

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑					↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95						0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00						1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00						1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (prot)	2600	1494	1920	3539						1640	1640	1538
Flt Permitted	1.00	1.00	0.95	1.00						0.95	0.95	1.00
Satd. Flow (perm)	2600	1494	1920	3539						1640	1640	1538
Volume (vph)	0	654	246	386	526	0	0	0	0	444	1	295
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	711	267	420	572	0	0	0	0	483	1	321
RTOR Reduction (vph)	0	0	154	0	0	0	0	0	0	0	0	260
Lane Group Flow (vph)	0	711	113	420	572	0	0	0	0	242	242	61
Confl. Peds. (#/hr)			7	7								
Heavy Vehicles (%)	0%	2%	4%	1%	2%	0%	0%	0%	0%	1%	0%	5%
Turn Type		Perm	Prot							Perm	Perm	
Protected Phases		2	1	6							4	
Permitted Phases			2							4		4
Actuated Green, G (s)		42.4	42.4	26.6	73.0					19.0	19.0	19.0
Effective Green, g (s)		42.4	42.4	26.6	73.0					19.0	19.0	19.0
Actuated g/C Ratio		0.42	0.42	0.27	0.73					0.19	0.19	0.19
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		4.9	4.9	2.3	4.9					2.3	2.3	2.3
Lane Grp Cap (vph)		1102	633	511	2583					312	312	292
v/s Ratio Prot		c0.27		c0.22	0.16							
v/s Ratio Perm			0.08							c0.15	0.15	0.04
v/c Ratio		0.65	0.18	0.82	0.22					0.78	0.78	0.21
Uniform Delay, d1		22.8	17.9	34.5	4.3					38.5	38.5	34.2
Progression Factor		0.79	0.67	0.41	0.43					1.00	1.00	1.00
Incremental Delay, d2		2.6	0.6	8.4	0.2					10.8	10.8	0.2
Delay (s)		20.6	12.6	22.6	2.0					49.3	49.3	34.4
Level of Service		C	B	C	A					D	D	C
Approach Delay (s)		18.4			10.7			0.0			43.3	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
2: Wilsonville Rd & Boones Ferry Rd

WV Fred Meyer TIA  
Existing -- Saturday

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑	↑	↓	↑↑	↑	↓	↓	↓	↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.87		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3030		1770	3240	1484	1752	1580		3400	1629	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3030		1770	3240	1484	1752	1580		3400	1629	
Volume (vph)	55	574	21	150	536	135	29	22	158	168	47	40
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	598	22	156	558	141	30	23	165	175	49	42
RTOR Reduction (vph)	0	2	0	0	0	0	0	86	0	0	35	0
Lane Group Flow (vph)	57	618	0	156	558	141	30	102	0	175	56	0
Confl. Peds. (#/hr)	12		2	2	12	1		7	7		1	
Heavy Vehicles (%)	2%	3%	0%	2%	4%	6%	3%	9%	1%	4%	6%	10%
Turn Type		Prot		Prot	Free	Split				Split		
Protected Phases		1	6	5	2		4	4		8	8	
Permitted Phases			6		Free							
Actuated Green, G (s)		6.1	41.0	11.7	46.6	100.0	12.1	12.1		10.2	10.2	
Effective Green, g (s)		8.1	44.0	13.7	49.6	100.0	14.1	14.1		12.2	12.2	
Actuated g/C Ratio		0.08	0.44	0.14	0.50	1.00	0.14	0.14		0.12	0.12	
Clearance Time (s)		6.0	7.0	6.0	7.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		143	1333	242	1607	1484	247	223		415	199	
v/s Ratio Prot		0.03	c0.20	c0.09	0.17		0.02	c0.06		c0.05	0.03	
v/s Ratio Perm					0.10							
v/c Ratio		0.40	0.46	0.64	0.35	0.10	0.12	0.46		0.42	0.28	
Uniform Delay, d1		43.6	19.7	40.8	15.3	0.0	37.5	39.4		40.6	39.9	
Progression Factor		1.00	1.00	1.06	0.53	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.8	1.2	5.5	0.6	0.1	0.2	1.5		0.7	0.8	
Delay (s)		45.5	20.9	48.8	8.7	0.1	37.8	40.9		41.3	40.7	
Level of Service		D	C	D	A	A	D	D		D	D	
Approach Delay (s)		22.9			14.6			40.5			41.1	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
15: Wilsonville Rd & I-5 NB

WV Fred Meyer TIA  
Existing -- Saturday

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗	↗	↘	↗	↘	↘	↗	↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0				
Lane Util. Factor	1.00	0.95		0.95	1.00		1.00	1.00				
Frbp, ped/bikes	1.00	1.00		1.00	0.94		1.00	1.00				
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00				
Frt	1.00	1.00		1.00	0.85		1.00	0.85				
Flt Protected	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (prot)	2000	3574		2700	1380		1650	1760				
Flt Permitted	0.95	1.00		1.00	1.00		0.95	1.00				
Satd. Flow (perm)	2000	3574		2700	1380		1650	1760				
Volume (vph)	278	820	0	0	747	461	165	2	422	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	299	882	0	0	803	496	177	2	454	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	242	0	0	340	0	0	0
Lane Group Flow (vph)	299	882	0	0	803	254	0	179	114	0	0	0
Confl. Peds. (#/hr)	12		15	15		12	4					4
Heavy Vehicles (%)	4%	1%	0%	0%	2%	2%	4%	0%	3%	0%	0%	0%
Turn Type	Prot		Perm				Perm		Perm			
Protected Phases	5	2	6				8		8			
Permitted Phases	2		6				8		8			
Actuated Green, G (s)	21.9	77.1	51.2				51.2		14.9			
Effective Green, g (s)	21.9	77.1	51.2				51.2		14.9			
Actuated g/C Ratio	0.22	0.77	0.51				0.51		0.15			
Clearance Time (s)	4.0	4.0	4.0				4.0		4.0			
Vehicle Extension (s)	2.3	4.9	4.9				4.9		2.3			
Lane Grp Cap (vph)	438	2756	1382				707		246			
v/s Ratio Prot	c0.15	0.25	c0.30									
v/s Ratio Perm							0.18		0.11			
v/c Ratio	0.68	0.32	0.58				0.36		0.73			
Uniform Delay, d1	35.9	3.5	16.9				14.6		40.6			
Progression Factor	0.27	0.27	0.61				0.42		1.00			
Incremental Delay, d2	2.9	0.2	1.2				1.0		9.3			
Delay (s)	12.7	1.2	11.5				7.1		49.9			
Level of Service	B	A	B				A		D			
Approach Delay (s)	4.1		9.9				42.4		0.0			
Approach LOS	A		A				D		A			
<b>Intersection Summary</b>												
HCM Average Control Delay	14.3		HCM Level of Service				B					
HCM Volume to Capacity ratio	0.63											
Actuated Cycle Length (s)	100.0		Sum of lost time (s)				12.0					
Intersection Capacity Utilization	64.4%		ICU Level of Service				C					
Analysis Period (min)	15											
c Critical Lane Group												



WV Fred Meyer TIA
Saturday Peak Hour
Existing Conditions

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #138 Boones Ferry Rd/North Fred Meyer's

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B [ 10.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0

Volume Module:

Base Vol: 1 111 0 0 108 37 42 0 3 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 111 0 0 108 37 42 0 3 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 1 119 0 0 116 40 45 0 3 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 1 119 0 0 116 40 45 0 3 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 6.4 6.5 6.2 xxxxxx xxxxxx xxxxxx
FollowUpTim: 2.2 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 3.5 4.0 3.3 xxxxxx xxxxxx xxxxxx

Capacity Module:

Cnflct Vol: 156 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 258 258 136 xxxxx xxxxxx xxxxxx
Potent Cap.: 1436 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 736 650 918 xxxxx xxxxxx xxxxxx
Move Cap.: 1436 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 735 650 918 xxxxx xxxxxx xxxxxx
Volume/Cap: 0.00 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.06 0.00 0.00 xxxxx xxxxxx xxxxxx

Level Of Service Module:

2Way95thQ: 0.0 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
Control Del: 7.5 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
LOS by Move: A \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 745 xxxxxx xxxxxx xxxxxx xxxxxx
SharedQueue: 0.0 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.2 xxxxxx xxxxxx xxxxxx xxxxxx
Shrd ConDel: 7.5 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 10.2 xxxxxx xxxxxx xxxxxx xxxxxx
Shared LOS: A \*
ApproachDel: xxxxxxxx xxxxxxxx 10.2 xxxxxxxx
ApproachLOS: \*

Note: Queue reported is the number of cars per lane.

WV Fred Meyer TIA
Saturday Peak Hour
Existing Conditions

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #253 Boones Ferry Rd/South Fred Meyer's

Average Delay (sec/veh): 2.6 Worst Case Level Of Service: A [ 9.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0

Volume Module:

Base Vol: 6 60 0 0 74 37 53 0 4 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 6 60 0 0 74 37 53 0 4 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 7 66 0 0 81 41 58 0 4 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 7 66 0 0 81 41 58 0 4 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 6.4 6.5 6.2 xxxxxx xxxxxx xxxxxx
FollowUpTim: 2.2 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 3.5 4.0 3.3 xxxxxx xxxxxx xxxxxx

Capacity Module:

Cnflct Vol: 122 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 181 181 102 xxxxx xxxxxx xxxxxx
Potent Cap.: 1478 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 813 717 959 xxxxx xxxxxx xxxxxx
Move Cap.: 1478 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 811 714 959 xxxxx xxxxxx xxxxxx
Volume/Cap: 0.00 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.07 0.00 0.00 xxxxx xxxxxx xxxxxx

Level Of Service Module:

2Way95thQ: 0.0 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
Control Del: 7.4 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
LOS by Move: A \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 819 xxxxxx xxxxxx xxxxxx xxxxxx
SharedQueue: 0.0 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.2 xxxxxx xxxxxx xxxxxx xxxxxx
Shrd ConDel: 7.4 xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 9.8 xxxxxx xxxxxx xxxxxx xxxxxx
Shared LOS: A \*
ApproachDel: xxxxxxxx xxxxxxxx 9.8 xxxxxxxx
ApproachLOS: \*

Note: Queue reported is the number of cars per lane.

HCM Signalized Intersection Capacity Analysis

Fred Meyer TIA

1: Wilsonville Rd & I-5 SB

Existing + Project -- Saturday (6-Lane Enhanced)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↓	↑	↑↑					↓	↓	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0						4.0	4.0	
Lane Util. Factor	0.91	1.00	0.91	0.91						0.97	0.88	
Frpb, ped/bikes	1.00	0.99	1.00	1.00						1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00						1.00	1.00	
Frt	1.00	0.85	1.00	1.00						1.00	0.85	
Flt Protected	1.00	1.00	0.95	0.99						0.95	1.00	
Satd. Flow (prot)	5085	1538	1626	3367						3467	2707	
Flt Permitted	1.00	1.00	0.95	0.57						0.95	1.00	
Satd. Flow (perm)	5085	1538	1626	1943						3467	2707	
Volume (vph)	0	785	294	386	640	0	0	0	0	444	0	362
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	853	320	420	696	0	0	0	0	483	0	393
RTOR Reduction (vph)	0	0	96	0	0	0	0	0	0	0	0	271
Lane Group Flow (vph)	0	853	224	277	839	0	0	0	0	483	0	122
Confl. Peds. (#/hr)			7	7								
Heavy Vehicles (%)	0%	2%	4%	1%	2%	0%	0%	0%	0%	1%	0%	5%
Turn Type		custom	Prot							Prot	custom	
Protected Phases		2	4	1	6					4		4
Permitted Phases			2		6							
Actuated Green, G (s)		26.0	57.0	31.0	61.0					31.0		31.0
Effective Green, g (s)		26.0	57.0	31.0	61.0					31.0		31.0
Actuated g/C Ratio		0.26	0.57	0.31	0.61					0.31		0.31
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Grp Cap (vph)		1322	938	504	1627					1075		839
v/s Ratio Prot		c0.17	0.07	c0.17	0.16					c0.14		0.05
v/s Ratio Perm			0.07		0.15							
v/c Ratio		0.65	0.24	0.55	0.52					0.45		0.15
Uniform Delay, d1		32.9	10.7	28.7	11.1					27.7		24.9
Progression Factor		0.97	1.19	0.10	0.26					1.00		1.00
Incremental Delay, d2		2.2	0.5	3.7	1.1					1.4		0.4
Delay (s)		34.1	13.2	6.4	3.9					29.0		25.3
Level of Service		C	B	A	A					C		C
Approach Delay (s)		28.4			4.5			0.0			27.3	
Approach LOS		C			A			A			C	
<b>Intersection Summary</b>												
HCM Average Control Delay		19.7										B
HCM Volume to Capacity ratio		0.54										
Actuated Cycle Length (s)		100.0						12.0				
Intersection Capacity Utilization		44.4%										A
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Fred Meyer TIA

2: Wilsonville Rd & Boones Ferry Rd

Existing + Project -- Saturday (6-Lane Enhanced)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↓	↑↑↑	↓	↓	↑↑	↓				↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	1.00	1.00	0.97	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4874		3433	3471	1452	1752	1743	1581	3367	1725	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4874		3433	3471	1452	1752	1743	1581	3367	1725	
Volume (vph)	55	510	158	421	446	135	186	151	401	168	176	40
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	531	165	439	465	141	194	157	418	175	183	42
RTOR Reduction (vph)	0	49	0	0	0	75	0	0	143	0	8	0
Lane Group Flow (vph)	57	647	0	439	465	66	194	157	275	175	217	0
Confl. Peds. (#/hr)	12		2	2		12	1		7	7		1
Heavy Vehicles (%)	2%	3%	0%	2%	4%	6%	3%	9%	1%	4%	6%	10%
Turn Type		Prot		Prot	Perm	Split		pm+ov	Split			
Protected Phases		1	6		5	2	4	4	5	8	8	
Permitted Phases			6			2			4			
Actuated Green, G (s)		6.4	35.2		16.9	45.7	14.5	14.5	31.4	16.4	16.4	
Effective Green, g (s)		6.4	36.2		16.9	46.7	14.5	14.5	31.4	16.4	16.4	
Actuated g/C Ratio		0.06	0.36		0.17	0.47	0.14	0.14	0.31	0.16	0.16	
Clearance Time (s)		4.0	5.0		4.0	5.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		2.5	4.3		2.5	0.5	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)		113	1764		580	1621	678	254	253	496	552	283
v/s Ratio Prot		0.03	c0.13		c0.13	0.13		c0.11	0.09	0.09	0.05	c0.13
v/s Ratio Perm						0.05				0.08		
v/c Ratio		0.50	0.37		0.76	0.29	0.10	0.76	0.62	0.55	0.32	0.77
Uniform Delay, d1		45.3	23.5		39.6	16.4	14.9	41.1	40.2	28.5	36.9	40.0
Progression Factor		1.00	1.00		1.21	0.86	0.80	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.6	0.6		4.8	0.4	0.3	12.2	4.0	1.1	0.2	11.2
Delay (s)		47.8	24.1		52.8	14.5	12.1	53.3	44.2	29.6	37.1	51.2
Level of Service		D	C		D	B	B	D	D	C	D	D
Approach Delay (s)		25.9			30.3			38.6			45.0	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM Average Control Delay		33.3										C
HCM Volume to Capacity ratio		0.59										
Actuated Cycle Length (s)		100.0								16.0		
Intersection Capacity Utilization		68.2%										C
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

Fred Meyer TIA

15: Wilsonville Rd & I-5 NB

Existing + Project -- Saturday (6-Lane Enhanced)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕	↗	↘	↕	↗	↘	↕	↗	↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.91	0.91			0.91	1.00	0.97		0.88			
Frpb, ped/bikes	1.00	1.00			1.00	0.99	1.00		1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1579	3406			5085	1561	3367		2760			
Flt Permitted	0.95	0.85			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	1579	2888			5085	1561	3367		2760			
Volume (vph)	344	885	0	0	813	461	213	0	422	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	370	952	0	0	874	496	229	0	454	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	109	0	0	243	0	0	0
Lane Group Flow (vph)	305	1017	0	0	874	387	229	0	211	0	0	0
Confl. Peds. (#/hr)	12		15	15		12	4					4
Heavy Vehicles (%)	4%	1%	0%	0%	2%	2%	4%	0%	3%	0%	0%	0%
Turn Type	Prot		custom				Prot		custom			
Protected Phases	5	2			6	8	8		8			
Permitted Phases		2				6						
Actuated Green, G (s)	31.0	66.0			31.0	57.0	26.0		26.0			
Effective Green, g (s)	31.0	66.0			31.0	57.0	26.0		26.0			
Actuated g/C Ratio	0.31	0.66			0.31	0.57	0.26		0.26			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Grp Cap (vph)	489	2067			1576	952	875		718			
v/s Ratio Prot	c0.19	0.15			c0.17	c0.11	0.07		0.08			
v/s Ratio Perm		0.17				0.14						
v/c Ratio	0.62	0.49			0.55	0.41	0.26		0.29			
Uniform Delay, d1	29.5	8.6			28.7	12.0	29.4		29.6			
Progression Factor	0.07	0.37			1.00	1.00	1.00		1.00			
Incremental Delay, d2	4.5	0.7			1.4	1.3	0.7		1.0			
Delay (s)	6.5	3.9			30.2	13.3	30.1		30.7			
Level of Service	A	A			C	B	C		C			
Approach Delay (s)		4.5			24.1		30.5				0.0	
Approach LOS		A			C		C				A	
<b>Intersection Summary</b>												
HCM Average Control Delay		17.7			HCM Level of Service				B			
HCM Volume to Capacity ratio		0.52										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)				8.0			
Intersection Capacity Utilization		44.4%			ICU Level of Service				A			
Analysis Period (min)		15										

c Critical Lane Group

Fred Meyer TIA - 2008
Saturday Peak Hour
Existing + Project -- Mitigated

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #138 Boones Ferry Rd/North Fred Meyer's

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: B[ 13.5]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 0 1 1 0).

Volume Module: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module: Critical Gp, FollowUpTim.

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Fred Meyer TIA - 2008
Saturday Peak Hour
Existing + Project -- Mitigated

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #253 Boones Ferry Rd/South Fred Meyer's

Cycle (sec): 100 Critical Vol./Cap.(X): 0.880
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 22.7
Optimal Cycle: 0 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign), Rights (Include), Min. Green, Lanes (1 0 0 1 0).

Volume Module: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module: Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

HCM Signalized Intersection Capacity Analysis  
 253: Freds South Access & Boones Ferry Rd Existing + Project -- Saturday (mitigated) Fred Meyer TIA

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		4.0		4.0		4.0	
Lane Util. Factor	1.00				1.00		1.00		1.00		1.00	
Frbp, ped/bikes	1.00				1.00		1.00		0.99		1.00	
Flpb, ped/bikes	1.00				1.00		1.00		1.00		0.99	
Frt	1.00				1.00		0.85		1.00		0.98	
Flt Protected	0.96				0.97		1.00		0.95		1.00	
Satd. Flow (prot)	1787				1843		1615		1805		1794	
Flt Permitted	0.73				0.83		1.00		0.58		1.00	
Satd. Flow (perm)	1360				1582		1615		1108		1794	
Volume (vph)	95	16	4	26	16	239	7	93	18	435	225	37
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	104	18	4	29	18	263	8	102	20	478	247	41
RTOR Reduction (vph)	0	3	0	0	0	163	0	12	0	0	8	0
Lane Group Flow (vph)	0	123	0	0	47	100	8	110	0	478	280	0
Confl. Peds. (#/hr)	9											
Confl. Bikes (#/hr)	1											
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	3%	0%	0%	4%	0%
Turn Type	Perm		Perm		pm+ov		pm+pt		pm+pt			
Protected Phases	4		8		8		1		5		2	
Permitted Phases	4		8		8		2		6			
Actuated Green, G (s)	8.2		8.2		19.1		20.1		18.9		33.8	
Effective Green, g (s)	8.2		8.2		19.1		20.1		18.9		33.8	
Actuated g/C Ratio	0.16		0.16		0.38		0.40		0.38		0.68	
Clearance Time (s)	4.0		4.0		4.0		4.0		4.0		4.0	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	223		259		746		462		678		873	
v/s Ratio Prot	c0.09		0.03		0.03		0.01		c0.12		0.16	
v/s Ratio Perm	0.55		0.18		0.13		0.02		0.16		0.55	
v/c Ratio	19.2		18.0		10.1		9.0		10.3		3.8	
Uniform Delay, d1	1.00		1.00		1.00		1.00		1.00		2.03	
Progression Factor	3.0		0.3		0.1		0.0		0.5		0.5	
Incremental Delay, d2	22.2		18.3		10.1		9.0		10.8		8.3	
Delay (s)	C		B		B		A		B		A	
Level of Service	22.2		11.4				10.7				7.7	
Approach Delay (s)	C		B				B				A	
Approach LOS												

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



# Queuing Analysis

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Fred Meyer TIA

Existing + Project + Stage II -- Mitigated  
8/14/2008

Intersection: 1: Wilsonville Rd & I-5 SB

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	LT	T	L	L	R	R	
Maximum Queue (ft)	308	343	329	374	511	521	471	310	287	352	306	
Average Queue (ft)	190	221	167	159	247	356	201	163	162	142	107	
95th Queue (ft)	259	289	232	287	459	578	431	254	250	247	206	
Link Distance (ft)		474	474	474	406	406	406		1182			
Upstream Blk Time (%)					0	3	1					
Queuing Penalty (veh)					2	17	4					
Storage Bay Dist (ft)	350							400		400	400	
Storage Blk Time (%)		0										
Queuing Penalty (veh)		0										

Intersection: 2: Wilsonville Rd & Boones Ferry Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	TR	L	L	T	T	R	L	T	R
Maximum Queue (ft)	173	328	576	539	295	440	512	491	220	291	410	402
Average Queue (ft)	92	224	217	238	176	156	252	271	89	180	119	141
95th Queue (ft)	169	302	402	454	269	278	420	450	260	288	240	275
Link Distance (ft)		1279	1279				474	474			329	329
Upstream Blk Time (%)							1	1			1	2
Queuing Penalty (veh)							6	11			3	6
Storage Bay Dist (ft)	450			500	400	400			180	325		
Storage Blk Time (%)				1			1	14	0		1	
Queuing Penalty (veh)				3			5	35	0		1	

Intersection: 2: Wilsonville Rd & Boones Ferry Rd

Movement	SB	SB	SB
Directions Served	L	L	TR
Maximum Queue (ft)	380	329	474
Average Queue (ft)	228	187	205
95th Queue (ft)	327	306	349
Link Distance (ft)		1018	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	600	600	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Fred Meyer TIA

Existing + Project + Stage II -- Mitigated  
8/14/2008

Intersection: 15: Wilsonville Rd & I-5 NB

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	LT	T	T	T	T	R	L	L	R	R
Maximum Queue (ft)	422	474	498	569	578	609	330	232	267	235	194
Average Queue (ft)	242	346	245	340	390	348	138	115	133	154	80
95th Queue (ft)	511	556	497	499	559	588	324	196	220	236	150
Link Distance (ft)	406	406	406		587	587			1123		
Upstream Blk Time (%)	0	4	0	0	0	1					
Queuing Penalty (veh)	1	20	1	0	0	12					
Storage Bay Dist (ft)				677			300	360		360	360
Storage Blk Time (%)				0	0	8	0				
Queuing Penalty (veh)				0	0	37	0				

Intersection: 16: Wilsonville Rd & Town Center Lp West

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	TR	L	T	TR	L	L	TR	L	TR
Maximum Queue (ft)	337	370	354	328	129	459	503	144	154	227	110	678
Average Queue (ft)	228	243	212	222	60	297	305	84	94	113	80	443
95th Queue (ft)	314	338	307	321	102	439	443	123	156	204	142	661
Link Distance (ft)			587	587		864	864			869		1233
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	450	450			100			115	115		80	
Storage Blk Time (%)					5	44		3	4	11	14	70
Queuing Penalty (veh)					17	26		4	6	23	69	67

Intersection: 16: Wilsonville Rd & Town Center Lp West

Movement	SB
Directions Served	R
Maximum Queue (ft)	575
Average Queue (ft)	367
95th Queue (ft)	574
Link Distance (ft)	1233
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Fred Meyer TIA

Existing + Project + Stage II -- Mitigated  
8/14/2008

Intersection: 138: Freds North Access & Boones Ferry Rd

Movement	EB	WB	NB
Directions Served	R	R	T
Maximum Queue (ft)	34	129	46
Average Queue (ft)	11	68	2
95th Queue (ft)	36	112	16
Link Distance (ft)	262	339	202
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 189: Bailey & Boones Ferry Rd

Movement	EB	WB	NB	SB
Directions Served	LR	LR	LTR	L
Maximum Queue (ft)	46	160	29	104
Average Queue (ft)	11	59	1	26
95th Queue (ft)	37	112	10	69
Link Distance (ft)	215	370	435	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			250	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 253: Freds South Access & Boones Ferry Rd

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	L	TR	L	TR
Maximum Queue (ft)	240	81	111	28	389	265	194
Average Queue (ft)	116	21	45	9	192	89	47
95th Queue (ft)	193	61	98	28	325	209	116
Link Distance (ft)	238	387	387		374	202	202
Upstream Blk Time (%)	1				0	1	0
Queuing Penalty (veh)	0				0	4	0
Storage Bay Dist (ft)				100			
Storage Blk Time (%)					30		
Queuing Penalty (veh)					5		

Network Summary

Network wide Queuing Penalty: 387
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# Warrant Analysis

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**Peak Hour Traffic Signal Warrant Analysis**

Project: Wilsonville Fred Meyer TIA

**PM Peak Hour -- Existing + Stage II + Project (Mitigated Boones Ferry Road Cross-section)**

Int #	Major (N-S, E-W)	Minor (N,S, E,W)	Intersection	Urban (1) or Rural (2)*	Major Street Lanes (1 or 2)	Minor Street Lanes (1 or 2)	Major Volume	Minor TH and LT Volume	Minor RT Volume	RT Reduction	Minor Volume	Warrant Volume	Warrant Met?
326	N-S	E	South acces to Boones Ferry Rd	1	2	1	917	146	8	0.00	154	323	No
326	N-S	W	South acces to Boones Ferry Rd	1	2	1	917	32	184	0.00	216	323	No
327	N-S	E	Boones Ferry Rd & Bailey St	1	2	1	472	8	3	0.00	11	9999	No
327	N-S	W	Boones Ferry Rd & Bailey St	1	2	1	472	30	94	0.00	124	9999	No

**Saturday Peak Hour -- Existing + Project (Mitigated Boones Ferry Road Cross-section)**

Int #	Major (N-S, E-W)	Minor (N,S, E,W)	Intersection	Urban (1) or Rural (2)*	Major Street Lanes (1 or 2)	Minor Street Lanes (1 or 2)	Major Volume	Minor TH and LT Volume	Minor RT Volume	RT Reduction	Minor Volume	Warrant Volume	Warrant Met?
336	N-S	E	South acces to Boones Ferry Rd	1	2	1	820	62	4	0.00	66	361	No
336	N-S	W	South acces to Boones Ferry Rd	1	2	1	820	42	239	0.00	281	361	No

\*Use Rural analysis for speeds on Major Street above 40 mph or in communities with less than 10,000 population

**PM Peak Hour -- Existing + Stage II + Project + Retail Development South of Fred's (Mitigated Boones Ferry Road Cross-section)**

Int #	Major (N-S, E-W)	Minor (N,S, E,W)	Intersection	Urban (1) or Rural (2)*	Major Street Lanes (1 or 2)	Minor Street Lanes (1 or 2)	Major Volume	Minor TH and LT Volume	Minor RT Volume	RT Reduction	Minor Volume	Warrant Volume	Warrant Met?
326	N-S	E	South acces to Boones Ferry Rd	1	2	1	1174	146	8	0.00	154	227	No
326	N-S	W	South acces to Boones Ferry Rd	1	2	1	1174	32	224	0.00	256	227	Yes

**Saturday Peak Hour -- Existing + Project + Retail Development South of Fred's (Mitigated Boones Ferry Road Cross-section)**

Int #	Major (N-S, E-W)	Minor (N,S, E,W)	Intersection	Urban (1) or Rural (2)*	Major Street Lanes (1 or 2)	Minor Street Lanes (1 or 2)	Major Volume	Minor TH and LT Volume	Minor RT Volume	RT Reduction	Minor Volume	Warrant Volume	Warrant Met?
336	N-S	E	South acces to Boones Ferry Rd	1	2	1	1149	62	4	0.00	66	237	No
336	N-S	W	South acces to Boones Ferry Rd	1	2	1	1149	42	239	0.00	281	237	Yes

\*Use Rural analysis for speeds on Major Street above 40 mph or in communities with less than 10,000 population



# **Trip Generation and Distribution**

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**Previous Study (2004 TIA)**

Building/Pad	Name	LU	Size	Trip Rate	In	Trip Gen		Internal Capture	
						Out	Total	Rate	Trips
	Fred Meyer		166,887	4.95			826	5%	
1 through 3	Shopping Center		9,000	14.2			128	30%	
4	Restaurant		6,000	10.86			65	40%	
<b>Total</b>			<b>181,887</b>				<b>1,019</b>		
							<b>Net PM Driveway Trips</b>	<b>917</b>	

**New Study (2008 TIA)**

Building	Name	LU	Size	Trip Rate	In	Out	Total	Internal Capture	
A	Fred Meyer		145,581	based on counts					
Space J	Tenant Space		7,500						
Space K	Tenant Space		2,600						
<b>Total</b>			<b>155,681</b>	<b>4.95</b>			<b>771</b>	<b>5%</b>	<b>39</b>

Building	Name	LU	Size	Trip Rate	In	Out	Total	Rate	Trips
B	Retail		6,421	all summed as shopping center	48%		51		
C	Retail		11,172				88		
D	Retail		10,771				85		
E	Retail		11,570				91		
F	Retail		2,181				17		
G	Retail		8,764				69		
<b>Total</b>			<b>50,879</b>	<b>7.88</b>	<b>192</b>	<b>209</b>	<b>401</b>	<b>20%</b>	<b>80</b>
F	Restaurant	932	3,316	10.92	22	14	36	30%	11
G	Low-rise Condo	231	60	0.78	27	20	47	38%	18

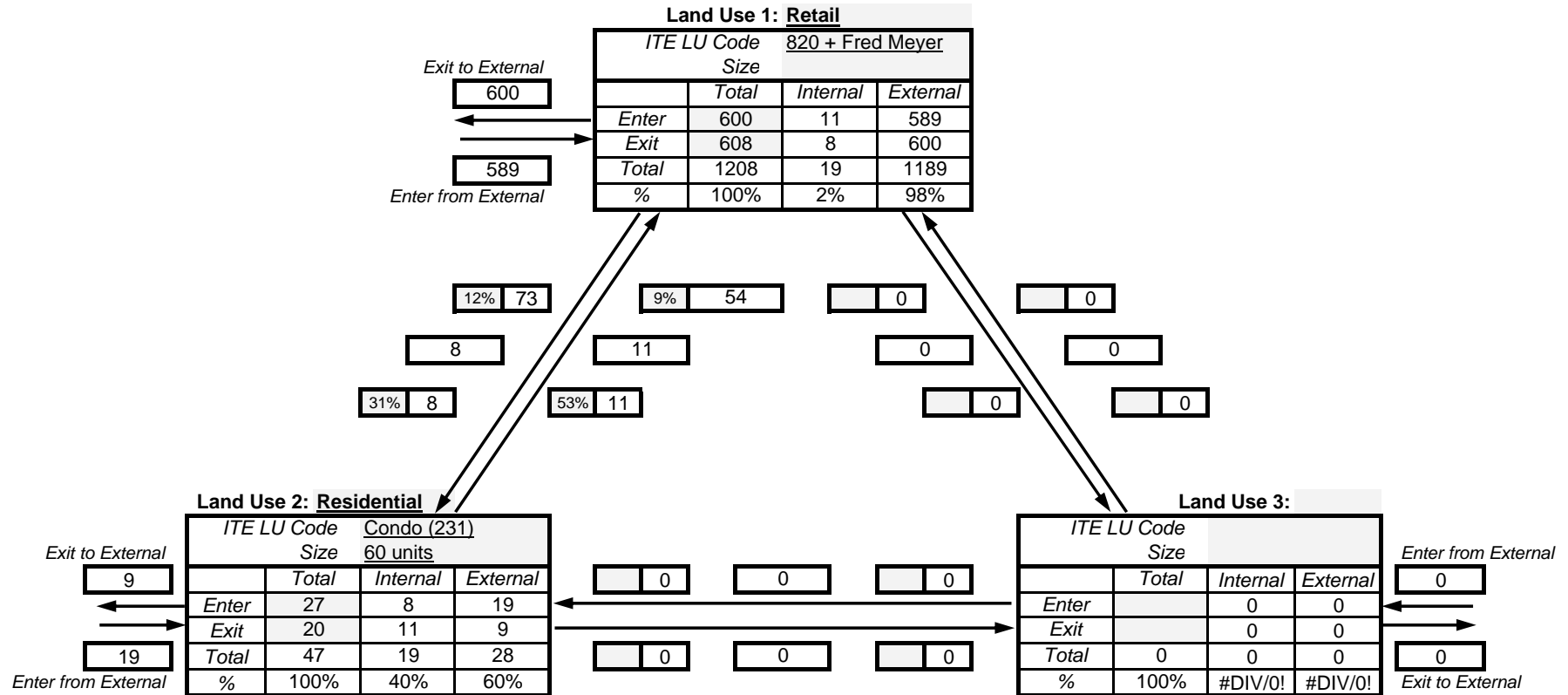
<b>Total</b>			<b>209,876 SF retail and 60 residential units</b>				<b>1,255</b>		
			<b>15%</b>			<b>Net PM Driveway Trips</b>	<b>1,107</b>	148	Total Internal Trips
						Increase in Total Trips	<b>21%</b>	11.8%	Total Internal Rate
						<b>Net PM Driveway Trips for Retail Uses only</b>	<b>1,078</b>	130	Retail/Restaurant Internal Trips
						Increase in Retail Trips (excluding new residential trips)	<b>18%</b>	10.8%	Retail Internal Rate

Analyst BBC  
Date July 6, 2008

### Multi-Use Development Trip Generation And Internal Capture Summary

Name of Dvlpt Fred Meyer Development  
Time Period PM Peak Hr

\*This worksheet only calculates trips between residential and retail uses.\*



	Retail	Residential	0	Total	
Enter	589	19	0	608	
Exit	600	9	0	609	
Total	1189	28	0	1217	Internal Capture
Single-Use Trip Gen. Est.	1208	47	0	1255	3.0%

1. WILSONVILLE RD @  
BOONES FERRY RD



2. WILSONVILLE RD @  
I-5 SB ON/OFF RAMP



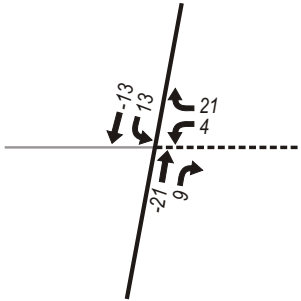
3. WILSONVILLE RD @  
I-5 NB ON/OFF RAMP



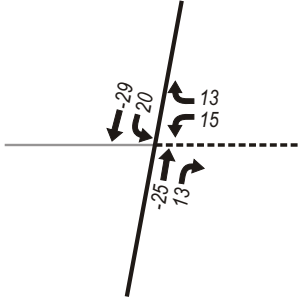
4. WILSONVILLE RD @  
TOWN CENTER LOOP W.



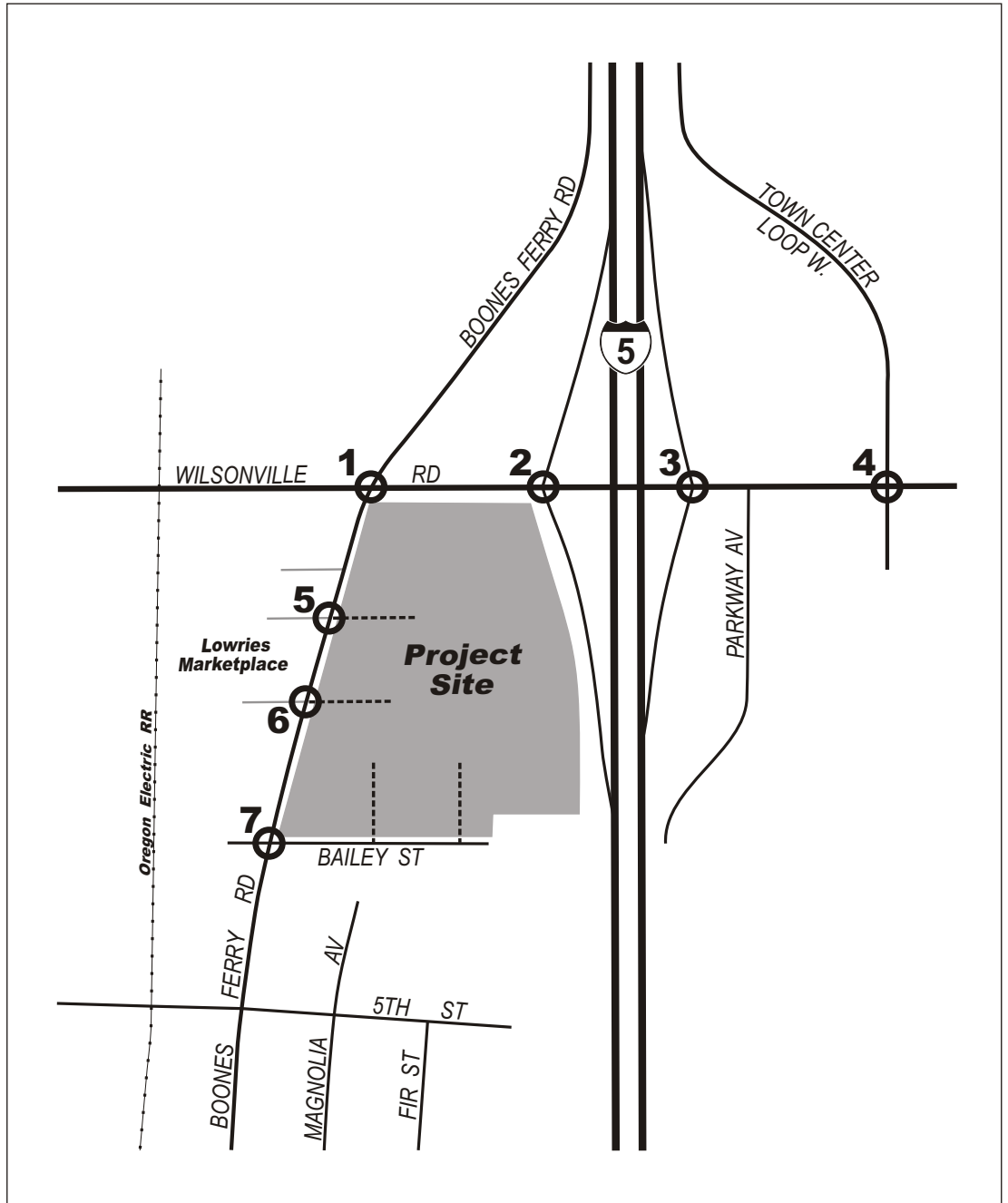
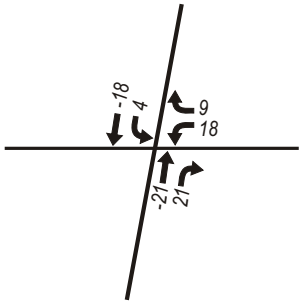
5. BOONES FERRY RD @  
LOWRIES/N. PROJECT DRIVEWAY



6. BOONES FERRY RD @  
LOWRIES/S. PROJECT DRIVEWAY



7. BOONES FERRY RD @  
BAILEY ST



**LEGEND**

- 10 - Study Intersection & Number
- Proposed Fred Meyer Driveway
- Existing Lowries Driveway
- ← 00 - Pass-by Project PM Peak Hour Traffic Volumes

**DKS Associates**  
TRANSPORTATION SOLUTIONS

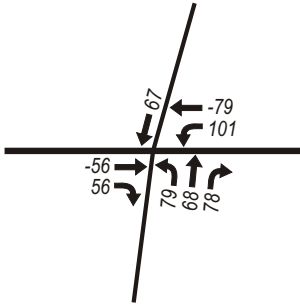


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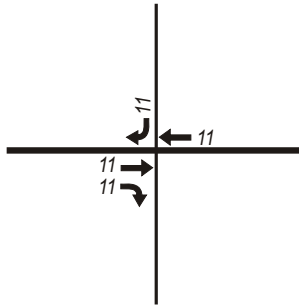
**PASS-BY PROJECT  
PM PEAK HOUR TRIPS**

160 Trips (80 in, 80 out)

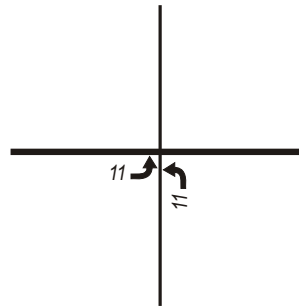
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2. WILSONVILLE RD @ I-5 SB ON/OFF RAMP



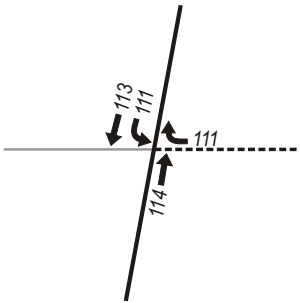
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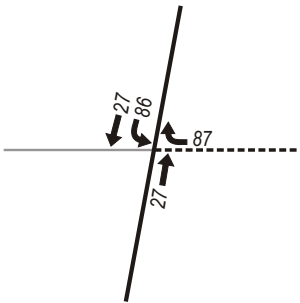
4. WILSONVILLE RD @ TOWN CENTER LOOP W.



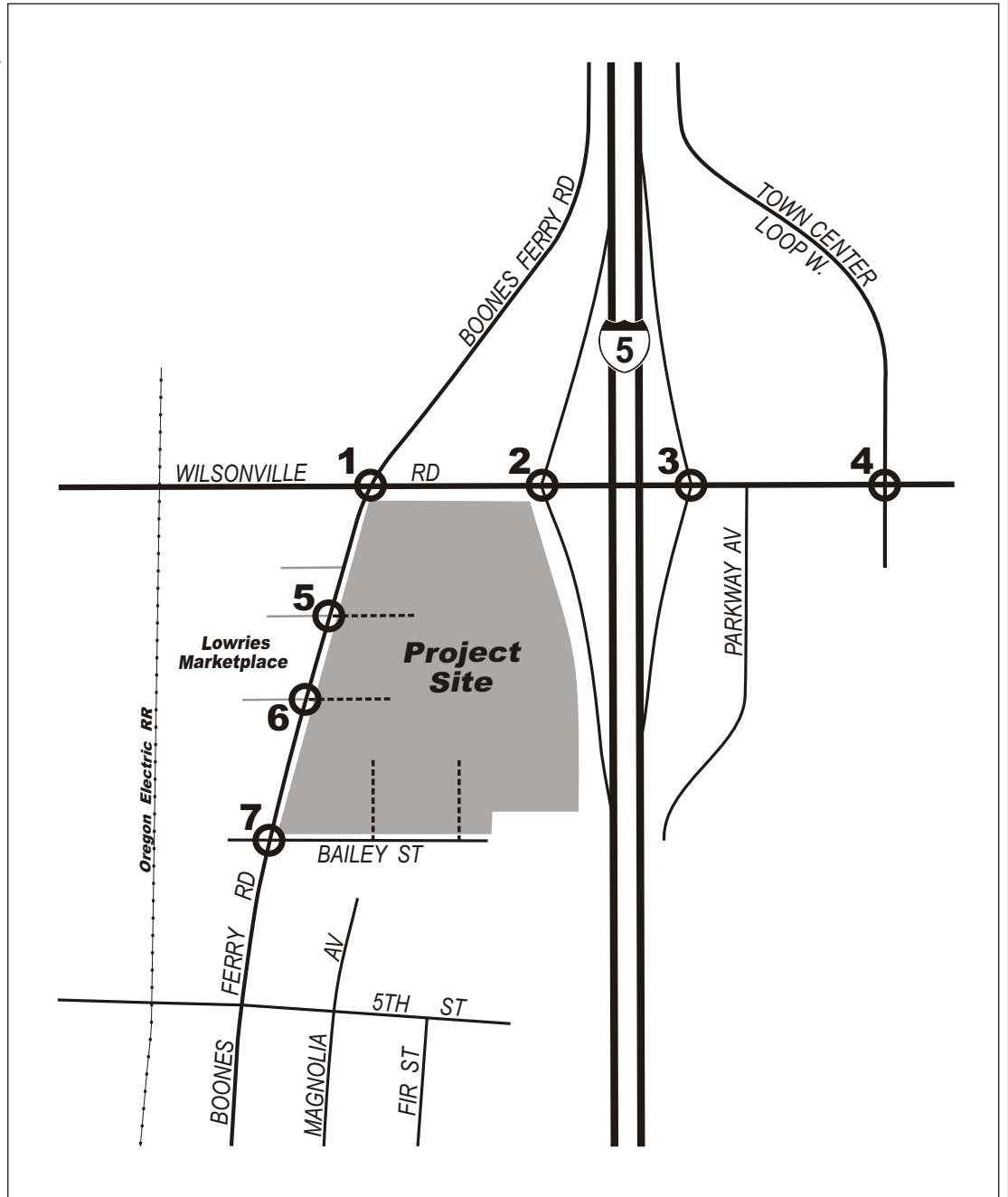
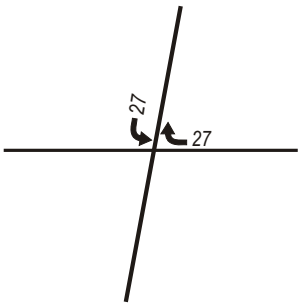
5. BOONES FERRY RD @ LOWRIES/N. PROJECT DRIVEWAY



6. BOONES FERRY RD @ LOWRIES/S. PROJECT DRIVEWAY



7. BOONES FERRY RD @ BAILEY ST



**LEGEND**

- 1○ - Study Intersection & Number
- - Proposed Fred Meyer Driveway
- - Existing Lowries Driveway
- ← 00 - Diverted Project PM Peak Hour Traffic Volumes

**DKS Associates**  
TRANSPORTATION SOLUTIONS



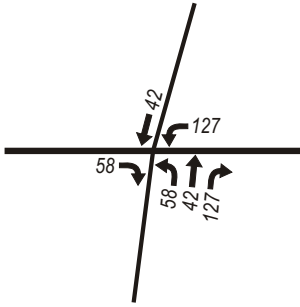
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**DIVERTED PROJECT PM PEAK HOUR TRIPS**

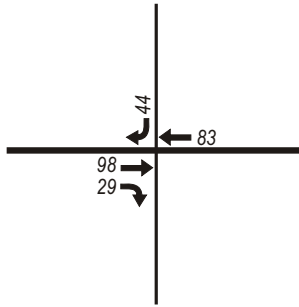
449 Trips (224 in, 225 out)



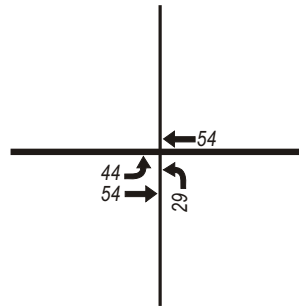
1. WILSONVILLE RD @ BOONES FERRY RD



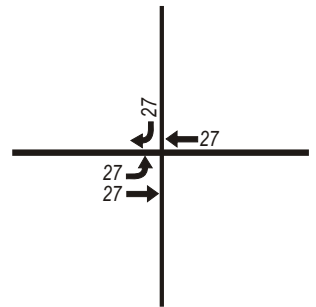
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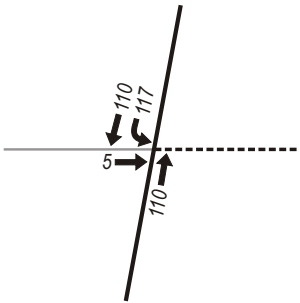
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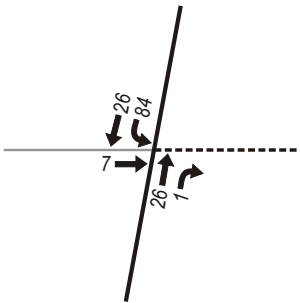
4. WILSONVILLE RD @ TOWN CENTER LOOP W.



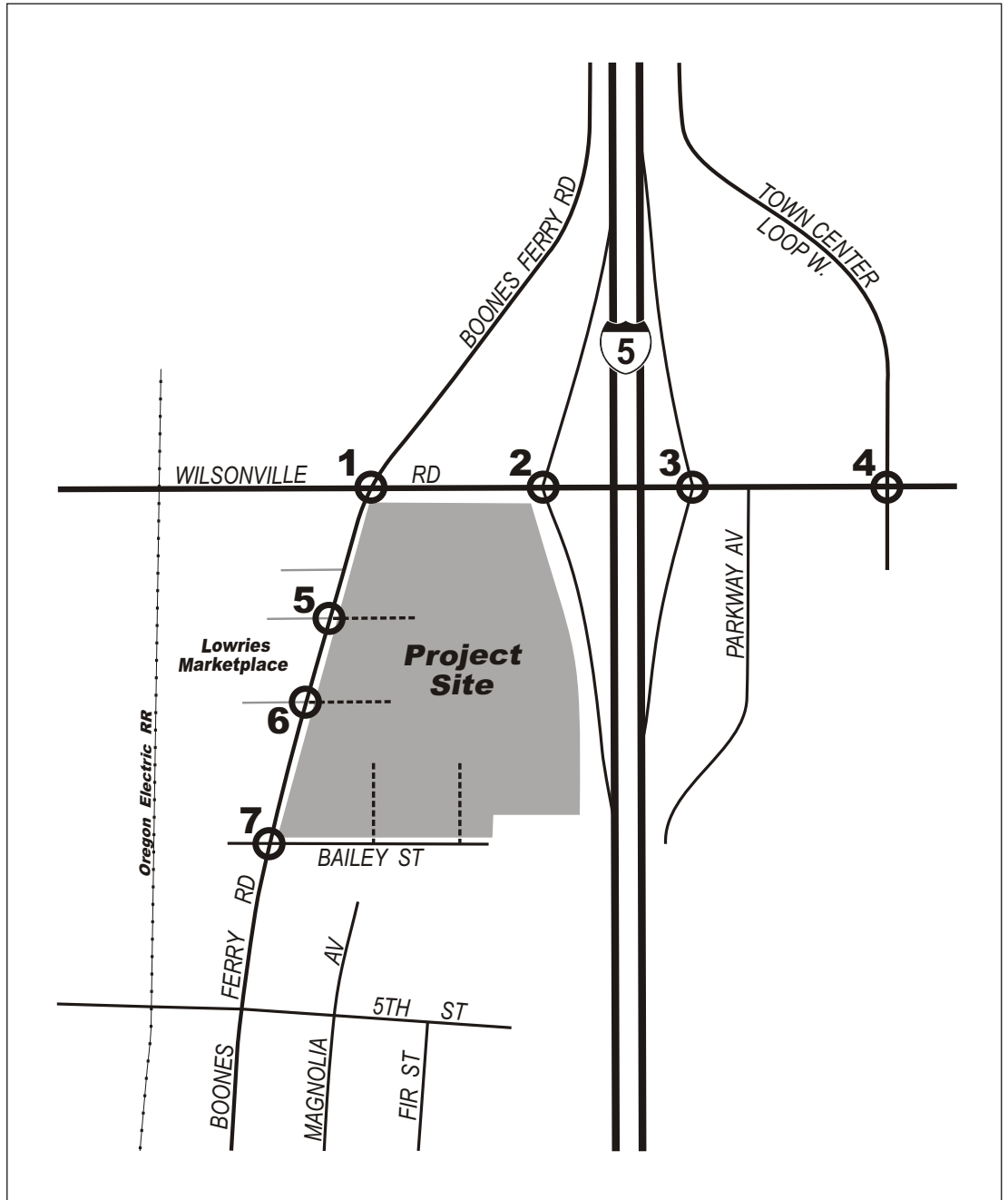
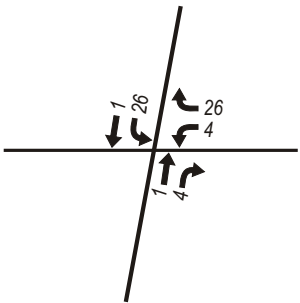
5. BOONES FERRY RD @ LOWRIES/N. PROJECT DRIVEWAY



6. BOONES FERRY RD @ LOWRIES/S. PROJECT DRIVEWAY



7. BOONES FERRY RD @ BAILEY ST



**LEGEND**

- 1** - Study Intersection & Number
- - Proposed Fred Meyer Driveway
- - Existing Lowries Driveway
- ← 00 - Primary Project PM Peak Hour Traffic Volumes

**DKS Associates**  
TRANSPORTATION SOLUTIONS



**PRIMARY PROJECT  
PM PEAK HOUR TRIPS**

488 Trips (244 in, 244 out)





City of Wilsonville,  
Oregon

Adopted  
BUDGET

FY 2015-16





# Transportation

# SMART transit

South Metro Area Regional Transit (SMART) provides convenient, safe and reliable transportation services in a fiscally responsible manner to meet the needs of Wilsonville residents, employees and visitors of all ages, ethnicities and income levels. Fleet provides efficient and effective services to all City departments in the maintenance and repair of vehicles and equipment.

The Department's primary functions include overall administration for transit operations, grant management, commuter and community programs, and fleet services for all City-owned vehicles and equipment. Transit Operations includes demand-response, fixed-route bus service, dispatch center services and a comprehensive training program for transit operators. The SMART Options Program carries out commuter and community based initiatives to increase the use of transit, walking, bicycling and ridesharing to support local and regional transportation system management policies.

## Program Objectives

### **Multi-Modal Transportation Network**

- Continue update of the Transit Master Plan (a subset of the Transportation Systems Plan)
- Implement the recommendations of the Transit Integration Plan
- Support local, regional and statewide policies for transportation system management

### **Welcoming, Engaged and Satisfied Residents**

- Exceed customers' expectations and ensure continuous improvement
- Provide high quality customer service for commuters, residents and the business community
- Implement technology upgrades to buses and facilities

### **Economic Development**

- Plan to provide services to industrial, employment and future development lands (including Coffee Creek, Frog Pond, Advance and Basalt Creek areas)
- Work as part of the City's economic development team to retain and expand existing businesses and recruit new businesses to Wilsonville

### **Community Amenities and Recreation**

- Provide user-friendly outreach and education on transit and active transportation modes of travel

### **Safe Healthy & Aesthetically Pleasing Community**

- Increase the public's knowledge of safety for pedestrians and cyclists

### **Fiscal Discipline**

- Continue to actively pursue, secure and administer grant funding to help cover the costs of capital projects and operations

#### Full Time Equivalent Positions

Position	Budget 2012-13	Budget 2013-14	Budget 2014-15	Adopted 2015-16
Transit Director	1.00	1.00	1.00	1.00
Operation Manager	1.00	1.00	1.00	1.00
Dispatchers	2.00	2.00	2.00	2.00
Field Supervisors	2.00	2.00	3.00	3.00
Trainer	1.00	1.00	0.00	0.00
Drivers	26.44	26.44	26.77	26.70
Program Coordinator	1.00	1.00	1.00	1.00
Transportation Options Program Manager	1.00	1.00	1.00	1.00
Transit Grants Administrator	0.00	0.00	0.00	1.00
Bike & Ped Coordinator	1.00	0.00	0.00	0.00
Intern	0.00	0.30	0.30	0.30
	<b>36.44</b>	<b>35.74</b>	<b>36.07</b>	<b>37.00</b>

## SMART transit

## Transportation

<b>Operating Summary</b>	Actual 2012-13	Actual 2013-14	Budget 2014-15	Proposed 2015-16	Approved 2015-16	Adopted 2015-16
Personnel Services						
Salaries and wages	\$ 1,726,035	\$ 1,825,871	\$ 1,922,260	\$ 1,950,110	\$ 1,950,110	\$ 1,950,110
Employee benefits	889,742	932,561	1,062,880	1,131,280	1,131,280	1,131,280
Total	2,615,777	2,758,432	2,985,140	3,081,390	3,081,390	3,081,390
Materials and Services						
Supplies	32,336	66,638	50,465	80,101	80,101	80,101
Prof and tech services	264,835	442,494	216,565	190,222	190,222	190,222
Utility services	42,279	52,617	67,674	89,193	89,193	89,193
Repairs & maintenance	27,669	30,159	35,588	35,944	35,944	35,944
Fleet services	938,115	996,885	1,050,520	1,029,982	1,029,982	1,029,982
Rents & leases	9,500	1,781	2,164	2,185	2,185	2,185
Insurance	29,403	32,063	33,930	42,810	42,810	42,810
Commuter rail service	300,000	-	312,000	315,120	315,120	315,120
Comm svcs programs	11,524	1,001	76,515	1,530	1,530	1,530
Employee development	9,077	15,009	21,080	21,230	21,230	21,230
Fees, dues, advertising	24,410	21,059	35,047	35,396	35,396	35,396
Meeting expenses	763	2,471	3,121	3,152	3,152	3,152
Total	1,689,911	1,662,177	1,904,669	1,846,865	1,846,865	1,846,865
Capital Outlay						
Machinery & equipment	3,250	-	100,000	195,000	195,000	195,000
Software	-	-	-	100,000	100,000	100,000
Vehicles	432,935	785,703	1,423,506	85,000	85,000	85,000
Total	436,185	785,703	1,523,506	380,000	380,000	380,000
Total Department	\$ 4,741,873	\$ 5,206,312	\$ 6,413,315	\$ 5,308,255	\$ 5,308,255	\$ 5,308,255

<b>Resources Summary</b>	Actual 2012-13	Actual 2013-14	Budget 2014-15	Proposed 2015-16	Approved 2015-16	Adopted 2015-16
Payroll taxes	\$ 3,990,885	\$ 4,342,353	\$ 4,524,000	\$ 4,576,000	\$ 4,576,000	\$ 4,576,000
Charges for services	223,931	251,511	218,000	210,001	210,001	210,001
Intergovernmental grants	2,974,577	1,041,610	1,958,542	959,915	959,915	959,915
Other revenues	21,311	41,437	13,000	31,000	31,000	31,000
Total	\$ 7,210,704	\$ 5,676,911	\$ 6,713,542	\$ 5,776,916	\$ 5,776,916	\$ 5,776,916

**Explanation of Variances**

At the time the budget was developed, labor negotiations were underway. Therefore, no changes in the Salaries and Wages scales are included. Once negotiations are complete, a supplemental budget will be prepared to implement necessary changes.

The Personnel Services category is increasing overall by 3%. An additional position is proposed for FY 2015-16, a Grant Administrator. Currently, grant administration is handled by an outside consultant. However, the work is on-going in nature and works closely with Transit and Finance Department staff, and is more suited to be performed by a full-time, regular City employee. The Federal Transit Administration criticized SMART for using a part-time consultant for grant administration work. This addition answers that criticism. The position will be instrumental in researching new grant opportunities and administering grants awarded. Additionally, the position will assist with procurement and planning functions. The cost of adding the Grant Administrator is fully offset within Transit's budget; partially absorbed within the Personnel Services category, and partially offset by decreasing the budget for Professional and Technical Services.

Other changes within Personnel Services include increasing the Employee Benefits line to account for increases to retirement system contributions, and changes in employee choices of and increases to health insurance plans.

*(continued on the next page)*

# Transportation

# SMART transit

## Explanation of Variances, (continued)

The Materials & Services category of expenditures is increasing approximately 1% to account for inflationary increases. Other changes are described below.

Supplies are increasing over the FY 2014-15 budget by just under \$30,000, or 59%. This increase represents grant funding for the new federal grant for the Travel Training Program to teach older adults and people with disabilities to travel independently and safely on public transportation. Professional and Technical Services are decreasing about \$26,000, or 12%. This represents a budget reduction for consulting services, replaced by the proposed addition of a Grants Administrator position, and is offset by an increase to recognize a grant to partially fund the Transit Master Plan work. Utilities are increasing about \$22,000, or 32%, representing rate increases, as well as the re-organization of expenses out of Public Works – Roads and into the Transit department. These expenses were always paid for by the Transit fund, but will now be expensed through Transit department instead of the Public Works - Roads. Fleet Services are decreasing 2%, or about \$21,000, representing fuel savings due to the transition to more fuel efficient vehicles and declining gas prices. Insurance is increasing about \$9,000, or 26%, truing the budget up to anticipated actuals, based on the composition of the fleet. Community Services are decreasing by about \$75,000, or 98%, representing the removal of budget for the one-time, federal-grant-funded Integration Project.

Capital Outlay items include the replacement of a copier, improvements and expansion of the natural gas fueling system, the purchase of a new bus, and technological upgrades for such things as upgrading SMART's on-vehicle equipment to monitor performance and enhance traveler information. Approximately \$290,000 of the Capital Outlay expense category is anticipated to be covered by grants.

When considering the budget of SMART, one factor to remain mindful of are the variances in the SMART budget attributed to grant funding from both state and federal sources. SMART has been fortunate to do well in competing for grant funds, but the availability of grant funding is uncertain from year to year. The SMART budget is based on best estimates and historic trends, but mid-year corrections may be necessary as state and federal budgets are adopted.

Another unexpected situation that could lead to variances has to do with the recent nationwide drop in fuel prices. While lower fuel prices mean lower costs for SMART, they also mean reduced ridership, as many people switch from riding the bus to driving their own cars.

### **Anticipated Grants for 2015-16**

SMART has already received approval for a number of grants that will bring revenue into the FY 2015-16 budget. However, these grants require matching funds that must come from SMART and often require consultant assistance, particularly for grant administration.

**Elderly & Disabled (E&D) Transportation Program Grant:** Grant funding in the amount of \$147,000 in State Transportation Formula (STF) funds is anticipated to offset the cost of the out of town Dial-A-Ride service.

**Dial-A-Ride Operations Clackamas County Agreement:** An agreement with Clackamas County is anticipated to provide \$56,000 in funding for the Dial-A-Ride demand response service.

**Transportation Demand Management (TDM) Grant:** Grant funding in the amount of \$75,545 plus \$8,216 in local match will support the SMART Options Program which is designed to work with Wilsonville employers and residents to reduce drive alone commute trips and improve air quality.

**Travel Training Grant:** Grant funding in the amount of \$20,000 plus \$2,289 in local match will support a program to teach older adults and people with disabilities to travel independently and safely on public transportation.

**Transit Integration Project Grant:** Grant funding in the amount of \$50,000 plus \$10,000 in local match will be used to complete this project integrating fixed route commuter and door-to-door elderly and disabled (E&D) services with the Wilsonville to Portland corridor.

**Section #5307 Grant:** Grant funding in the amount of \$316,500 plus \$79,125 in local match is anticipated to be used for preventative maintenance operations, technology upgrades, and a transit master plan.

**Capital Grant:** Grant funding in the amount of \$76,270 plus local match of \$8,730 will be used to purchase a bus.



## SMART transit

## Transportation

**Capital Grant:** Grant funding the amount of \$80,000 plus local match of \$20,000 will be used to upgrade SMART's on-vehicle technology to enhance abilities to monitor operational performance, enhance traveler information and improve data for planning and scheduling purposes.

**Capital Grant:** Grant funding in the amount of \$70,000 plus local match of \$40,000 will be used to expand and improve the existing natural gas fueling system.

## Anticipated Grant Funding for 2015-16

Intergovernmental Agreement /Grant	Funding Source			Funding Use	
	Grant Funding	Transit Tax	Reserve	Operations	Capital
State Grant - Elderly & Disabled Service	\$ 147,000	\$ -	\$ -	\$ 147,000	\$ -
Dial-a-Ride Operations - Clackamas County	56,000	-	-	56,000	-
Transportation Demand Management (TDM)	74,545	8,532	-	83,077	-
Travel Training Program	20,000	2,289	-	22,289	-
Integration Grant	50,000	10,000	-	60,000	-
Transportation Master Plan	69,600	-	17,400	87,000	-
Section #5307 - Maintenance, Master Plan, Technology	316,500	-	79,125	320,625	75,000
Capital Grant - Bus	76,270	-	8,730	-	85,000
Capital Grant - Software	80,000	-	20,000	-	100,000
Capital Grant - Compressed Natural Gas Equipment	70,000	-	40,000	-	110,000
	\$ 959,915	\$ 20,821	\$ 165,255	\$ 775,991	\$ 370,000

## Performance Measurements

Strategy	Measure	Actual	Actual	Actual	Estimate	Forecast
		2011-12	2012-13	2013-14	2014-15	2015-16
Provide efficient transit services to meet the needs of the community	Cost per passenger trip	\$8.92	\$10.91	\$10.44	\$11.30	\$11.21
	Cost per service hour	\$74.39	\$85.37	\$83.33	\$89.54	\$94.07
	Cost per mile	\$4.92	\$5.92	\$5.75	\$6.12	\$6.49
	Passenger trips per service hour	8.3	7.8	8.5	7.9	8.4
	Passenger trips per mile	0.55	0.54	0.55	0.54	0.58
Increase ridership within the community	Number of passenger trips	370,526	351,374	374,408	362,891	383,095
	Service hours	44,407	44,908	45,896	45,788	45,712
	Annual miles driven	671,903	647,786	679,941	670,289	662,161
	On-time performance	99%	99%	92%	90%	89%

## Performance Measurements Outcome

For FY 2013-14 ridership and other statistics were very close to projections. Our estimates for the remainder of FY2014-15 show that ridership will be lower than anticipated. With the drop in fuel prices, more people are driving and we have seen a corresponding drop in transit ridership. This will have a negative impact on revenues. We are also seeing a drop in on-time performance, due to a general increase in traffic, particularly on I-5 and the I-5/Wilsonville Road/Boones Ferry Road interchange. Traffic congestion on I-5 is especially bad between Wilsonville and Portland during evening commute times. Some cost savings will be realized as we recently combined two evening routes into a more efficient single route, thereby reducing operating hours and costs slightly.

## Transportation

## fleet

The Fleet Services program provides internal customers with safe, reliable and efficient vehicles and equipment needed to perform their duties. Fleet also protects the City's investment in vehicles and equipment through quality maintenance. Fleet charges participating departments through an internal work order system and depreciation in order to recover costs associated with operating, maintaining, and replacing vehicles.

Fleet Services manages the vehicle and equipment maintenance and replacement funds, coordinates and executes all fleet acquisitions and sales, repairs and maintains vehicles and equipment, manages outside vendor support and manages 2-way radio acquisition and maintenance for all City departments.

Fleet personnel are responsible for the repair and ongoing maintenance of 248 items including the SMART fleet of buses and vans, trucks and specialty equipment used by Public Works and Parks & Recreation, such as tractors and mowers, the general motor pool used by City staff, as well as emergency generators and trailers.

### Program Objectives

#### *Well Maintained Infrastructure*

- Provide safe and clean vehicles and equipment

#### *Fiscal Discipline*

- Monitor and adjust vehicle allocations to ensure efficient utilization of assets
- Extend vehicle service life through quality maintenance
- Maximize return on investments through effective vehicle purchase and disposal procedures

#### *Environmental Stewardship*

- Continue exploration and implementation of fuel saving strategies, including the implementation of alternative fuel vehicles

Position	Full Time Equivalent Positions			
	Budget 2012-13	Budget 2013-14	Budget 2014-15	Adopted 2015-16
Fleet Services Manager	1.00	1.00	1.00	1.00
Mechanic II	2.00	2.00	2.00	2.00
Mechanic I	2.00	2.00	2.00	2.00
Fleet Hostler	1.50	1.50	1.60	1.60
	6.50	6.50	6.60	6.60

## fleet

## Transportation

<b>Operating Summary</b>	Actual 2012-13	Actual 2013-14	Budget 2014-15	Proposed 2015-16	Approved 2015-16	Adopted 2015-16
Personnel Services						
Salaries and wages	\$ 286,162	\$ 328,016	\$ 340,180	\$ 340,970	\$ 340,970	\$ 340,970
Employee benefits	167,567	196,992	217,380	217,960	217,960	217,960
<b>Total</b>	<b>453,729</b>	<b>525,008</b>	<b>557,560</b>	<b>558,930</b>	<b>558,930</b>	<b>558,930</b>
Materials and Services						
Supplies	162,670	180,276	185,380	191,741	191,741	191,741
Fuel	330,227	377,759	392,120	362,241	362,241	362,241
Utility services	83,295	85,146	85,100	72,066	72,066	72,066
Repairs & maintenance	21,914	28,964	36,338	36,701	36,701	36,701
Insurance	1,296	2,501	2,950	2,880	2,880	2,880
Employee development	2,005	8,701	15,701	15,858	15,858	15,858
<b>Total</b>	<b>601,407</b>	<b>683,347</b>	<b>717,589</b>	<b>681,487</b>	<b>681,487</b>	<b>681,487</b>
Capital Outlay						
Vehicles	75,725	124,834	114,000	75,000	75,000	75,000
<b>Total Department</b>	<b>\$ 1,130,861</b>	<b>\$ 1,333,189</b>	<b>\$ 1,389,149</b>	<b>\$ 1,315,417</b>	<b>\$ 1,315,417</b>	<b>\$ 1,315,417</b>
<b>Resources Summary</b>	Actual 2012-13	Actual 2013-14	Budget 2014-15	Proposed 2015-16	Approved 2015-16	Adopted 2015-16
Fleet charges	\$ 1,167,935	\$ 1,203,110	\$ 1,287,780	\$ 1,298,027	\$ 1,298,027	\$ 1,298,027
Assigned contingencies	75,725	124,837	114,000	75,000	75,000	75,000
<b>Total</b>	<b>\$ 1,243,660</b>	<b>\$ 1,327,947</b>	<b>\$ 1,401,780</b>	<b>\$ 1,373,027</b>	<b>\$ 1,373,027</b>	<b>\$ 1,373,027</b>

Fleet charges are calculated to cover Fleet's operating budget and to fund future vehicle and equipment purchases.

#### Explanation of Variances

At the time the budget was developed, labor negotiations were underway. Therefore, no changes in the Salaries and Wages scales are included. Once negotiations are complete, a supplemental budget will be prepared to implement necessary changes.

The Personnel Services category remains flat when comparing FY 2014-15 to the FY 2015-16 Proposed Budget. Increases to retirement system contributions and health insurance plans are offset by changes in employee choices of plans.

The Materials & Services category of expenditures is increasing approximately 1% to account for inflationary increases. Other changes are described below.

Supplies are increasing about \$6,400, or 3%, representing increased costs for tires and other vehicle supplies. The fuel budget is decreasing approximately \$30,000, an 8% decrease. This represents the transition to more fuel efficient vehicles, such as the Hybrid and Compressed Natural Gas (CNG) buses, as well as gas prices that are expected to remain below the retail peak of \$4.00 per gallon seen in 2012. Utility Services are decreasing by 15%, or about \$13,000, due to reduced garbage costs upon moving to the new building, and also due to eliminating extra two way radios that brought down air-time costs.

Capital Outlay reflects the replacement of three City vehicles. These replacements are fully funded through the Fleet replacement fund. Factors used to determine vehicle replacements include pending repair needs, age, and suitability to assigned task.

## Transportation

fleet

## Performance Measurements

<i>Strategy</i>	<i>Measure</i>	<b>Actual 2011-12</b>	<b>Actual 2012-13</b>	<b>Actual 2013-14</b>	<b>Estimate 2014-15</b>	<b>Forecast 2015-16</b>
Track labor productivity in terms of time spent directly on maintenance activities, goal is a minimum of 70% of non-supervisory time	Percent of FTE applied to "wrench turning" labor activities	73%	71%	72%	70%	70%
Preventative maintenance	Percent completed on time	86%	87%	87%	90%	90%
Track number of road calls	Number of road calls per year	52	53	54	45	45

## Performance Measurements Outcome

Performance indicators include number of breakdowns (road calls), labor productivity and preventative maintenance on-time percentage. Fleet staff continue to meet or exceed the goals set for these measurements. Meeting these goals is of high importance, as data must be reported to both the Federal Transit Administration (maintenance on-time percentage) and National Transit Database (number of road calls).



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## MEMORANDUM

**DATE:** April 13, 2016

**TO:** Eric Mende, Capital Projects Engineer  
Chris Neamtzu, Planning Director

**FROM:** Scott Mansur, P.E., PTOE  
Jordin Ketelsen, EIT

**SUBJECT:** **Wilsonville TSP Additional Bike/Ped Project Amendment**

P15125-003

This memorandum discusses an additional project to be included in the Wilsonville Transportation System Plan (TSP) Amendment. This project would be categorized as a bicycle/pedestrian project and would entail providing set-aside funds to allow the City of Wilsonville to purchase strategically located properties that can facilitate future bicycle and pedestrian connections as these properties become available. The remainder of this memorandum outlines support for the inclusion of this project in the Wilsonville TSP Amendment as well as the necessary changes to the existing TSP document if the project was incorporated.

As outlined in Chapter 2 of the existing TSP document, policy areas including system design, connectivity, and active transportation support the addition of the aforementioned project. This project would help provide a safe, well-connected, and efficient system for all travel modes by adding pedestrian and bicycle connections throughout the city's transportation system. It would also improve access between neighborhoods, serve new development, and manage system performance as well as provide facilities that allow more people to walk and bike, not only as low-impact transportation choices, but also to benefit the health and economy of the community. This project is also consistent with Wilsonville City Council Goals 4) Clear Vision and Community Design, 9) Multi-Modal Transportation Network, and 10) Safe Healthy and Aesthetically Pleasing Community.

If this project is approved to be included in the city's TSP amendment, the following changes would be necessary. Revisions to existing TSP language are presented with deletions shown in ~~strike through~~ and additions or new code shown as underlined.

### ***Higher Priority Projects Table*** (Page v)

Add the following projects to this table:

- BW-15 Property Acquisitions for Bike/Ped Connectivity

### ***Table 5-6: Higher Priority Projects (Citywide) (Page 5-14)***

Add the following project and associated costs and descriptions:

- BW-15 Property Acquisitions for Bike/Ped Connectivity (\$1,000,000)

Provide set-aside funds to allow purchase of strategically located properties that can facilitate bicycle and pedestrian connections as these properties become available.



# Executive Summary



## INTRODUCTION

The Wilsonville Transportation System Plan (TSP) is the City's long-term transportation plan and is an element of its Comprehensive Plan. It includes policies, projects, and programs that could be implemented through the City's Capital Improvement Plan, development requirements, or grant funding. The TSP's transportation planning story is outlined in the box at right, and the key findings of each TSP chapter are highlighted below.

## THE CONTEXT (SEE CHAPTER 1)

The 2013 TSP process built upon two decades of community planning to create a complete community transportation plan that integrates all travel modes. This update is needed to account for changing economic and social circumstances and to ensure consistency with state and regional planning policies. It also ensures the City will be prepared to support land use growth within the urban growth boundary through the 2035 planning horizon.

Most of the policies and projects come from prior adopted plans, including the Comprehensive Plan, 2003 TSP, 2006 Bicycle and Pedestrian Master Plan, and 2008 Transit Master Plan. While the TSP replaces the 2003 TSP in its entirety, it updates and builds upon the 2006 Bicycle and Pedestrian Master Plan and 2008 Transit Master Plan. Where these documents may be in conflict, the new TSP takes precedence.

The City's future financial outlook was also evaluated to identify the City's forecasted resources and financial limitations. The City draws upon multiple funding sources to manage, operate, and improve its transportation system. For capital improvement projects, the City relies heavily on developer contributions and fees (including system development charges) and urban

## A TRANSPORTATION PLANNING STORY

The TSP chapters tell a story of how the City's planning efforts are helping the community achieve its desired transportation system:

- **Chapter 1: The Context** provides the background of the City's transportation planning efforts.
- **Chapter 2: The Vision** shares the City's visions of its desired transportation system.
- **Chapter 3: The Standards** outlines the standards the City is implementing to ensure ongoing progress towards its vision.
- **Chapter 4: The Needs** identifies the existing and anticipated needs of the transportation system through the 2035 planning horizon.
- **Chapter 5: The Projects** explains the transportation improvement projects that will allow the City to meet its infrastructure needs.
- **Chapter 6: The Programs** describes the ongoing transportation programs that help the City manage its transportation system.
- **Chapter 7: The Performance** lists the performance measures to be considered in subsequent TSP updates to determine if its planning efforts are leading to the desired outcomes.

renewal funds, which are primarily associated with new growth areas. With ongoing planning and investment in its transportation system, the City can continue to serve its residents, businesses, and the region.

**THE VISION (SEE CHAPTER 2)**

As Wilsonville grows, it is essential for the community to work collaboratively toward its shared vision, which is summarized in the call-out box at right.

Transportation goals and policies form the bases for how the local transportation system will be developed and maintained through the TSP’s 2035 horizon year. Wilsonville’s seven transportation goals are identified in the table below. The City’s vision and goals support a multimodal approach to transportation, which means that the system accommodates users of all travel modes.

**WILSONVILLE’S TRANSPORTATION VISION**

*Wilsonville’s coordinated multimodal transportation system is strategically designed and collaboratively built. Our system provides mode and route choices, delivering safe and convenient local accessibility to assure that Wilsonville retains its high levels of quality of life and economic health. Neighborhoods, employment centers, schools, shopping, and parks are connected by a network of streets and pathways that give residents options to easily get around town.*

*Our local accessibility is further enhanced through arterial connectivity with our neighboring communities, thereby providing excellent intercity and interstate mobility serving our residential and business needs. The system is designed, built and maintained to be cost effective and to maximize the*

**Wilsonville’s Transportation Goals**

Goals	Description
1 <b>Safe</b>	Follow current safety practices for design, operations, and maintenance of transportation facilities.
2 <b>Connected and Accessible</b>	Provide all users with access to integrated facilities and services that connect Wilsonville’s neighborhoods, parks, schools, employment centers, and retail areas to each other and to the surrounding region.
3 <b>Functional and Reliable</b>	Provide, manage, and maintain sufficient transportation infrastructure and services throughout Wilsonville to ensure functional and reliable multimodal and freight operations as development occurs.
4 <b>Cost Effective</b>	Utilize diverse and stable funding sources to implement transportation solutions that provide the greatest benefit to Wilsonville residents and businesses, while mitigating impacts to the city’s social, economic, and environmental resources.
5 <b>Compatible</b>	Develop and manage a transportation system that is consistent with the City’s Comprehensive Plan and coordinates with other local, regional, and state jurisdictions.
6 <b>Robust</b>	Encourage and support the availability of a variety of transportation choices for moving people and goods.
7 <b>Promotes Livability</b>	Design and construct transportation facilities in a manner that enhances the livability of Wilsonville and health of its residents.

## THE STANDARDS (SEE CHAPTER 3)

Wilsonville's transportation standards ensure the City develops and operates consistent with its goals and vision. Wilsonville's six types of transportation standards are listed in the call-out box at right.

How well a street serves its users ultimately depends upon which elements are included, their dimensions, and how they relate to each other (all of which are informed by the City's standards). For example, streets designed consistent with adjacent land uses can contribute to the identity and character of a neighborhood and increase property values. They can also affect traffic speeds, reduce environmental impacts, and allow for safe multimodal use.

## THE NEEDS (SEE CHAPTER 4)

Wilsonville's transportation standards and policies serve as a benchmark for determining what needs exist throughout the city. The city's needs are categorized as gaps (missing connections or barriers in the transportation network) or deficiencies (shortcomings of the existing system). The TSP identifies the gaps and deficiencies that currently exist or are anticipated to arise through the 2035 horizon year as additional local and regional development occurs.

## THE PROJECTS (SEE CHAPTER 5)

Many of the city's existing and future transportation needs can be addressed through capital improvement projects. The projects needed through 2035 were principally based on prior City plans.

Constructing all identified transportation projects would cost approximately \$218.2 million, which exceeds the \$123.4 million forecasted to be available through 2035. Therefore, the transportation projects were separated into two lists:

- The "Higher Priority" project list includes the recommended projects reasonably expected to be funded through 2035. These are the highest priority projects and will inform the City's yearly

## WILSONVILLE'S TRANSPORTATION STANDARDS

Wilsonville's six types of transportation standards support its management of an effective multimodal transportation system:

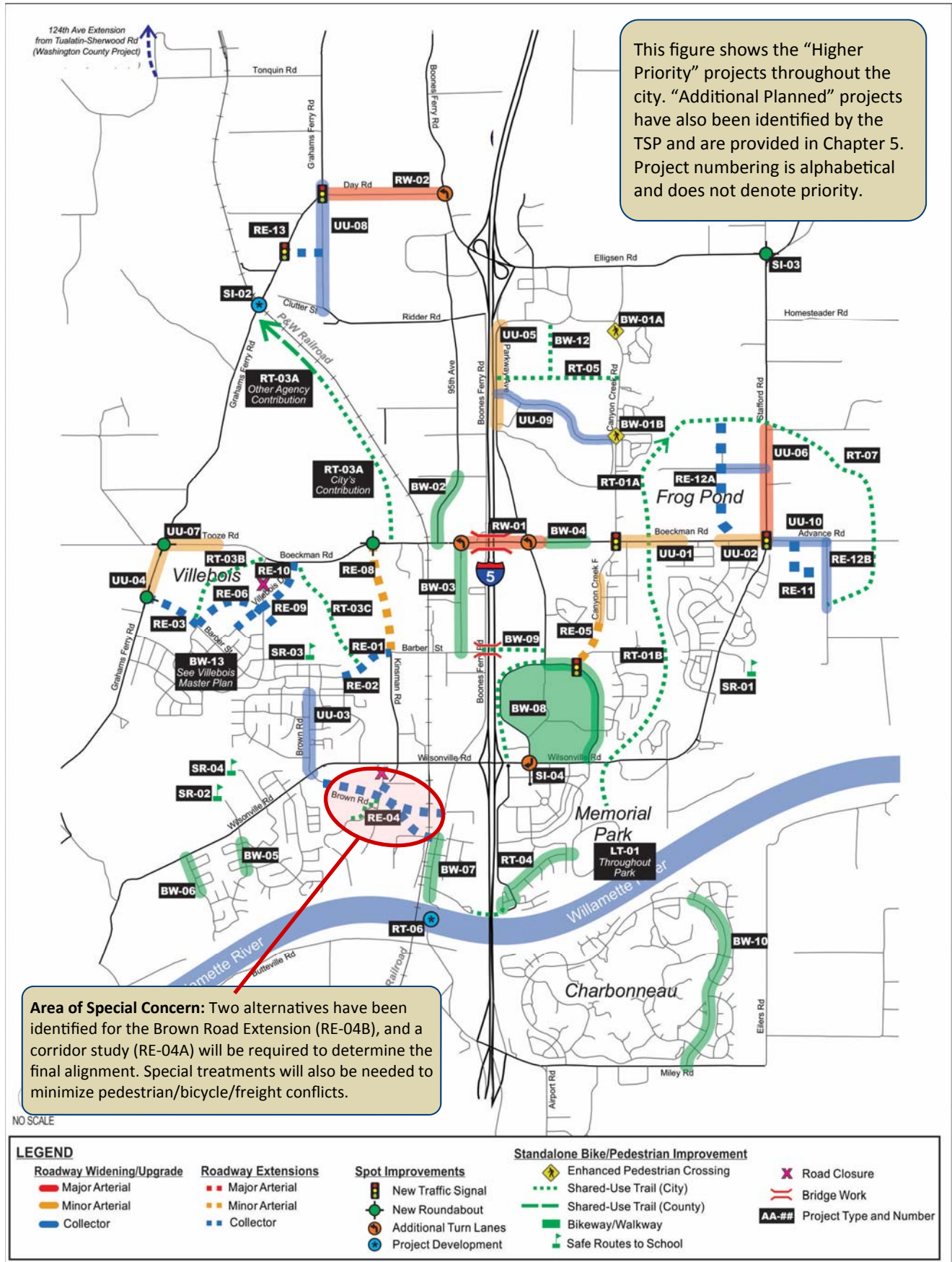
- **Functional Classifications** provide a hierarchy for determining how streets should function and which street design elements to include.
- **Connectivity and Facility Spacing Standards** ensure that direct routes and travel options are available for all transportation users.
- **Freight Routes** connect the city's industrial and commercial sites with I-5 and other regional facilities and improve coordination between freight and other travel modes.
- **Bicycle Routes** connect neighborhoods, schools, parks, community centers, business districts, and natural resource areas to support bicycle travel by residents of varying physical capabilities, ages, and skill levels.
- **Cross-Section Standards** provide guidance for selecting and sizing various design elements to serve intended users' needs.
- **Access Management** balances the transportation system's need to provide safe, efficient, and timely travel with the need to allow access to individual properties.

budget and 5-year Capital Improvement Plan (CIP). These projects are identified in the following figure (page v) and table (page vi).

- The "Additional Planned" project list includes those projects that would contribute to the City's desired transportation system through 2035 but that are not considered "Higher Priority" projects due to estimated funding limitations. These projects are identified in Chapter 5 and should be pursued as funding opportunities are available.



HIGHER PRIORITY PROJECTS



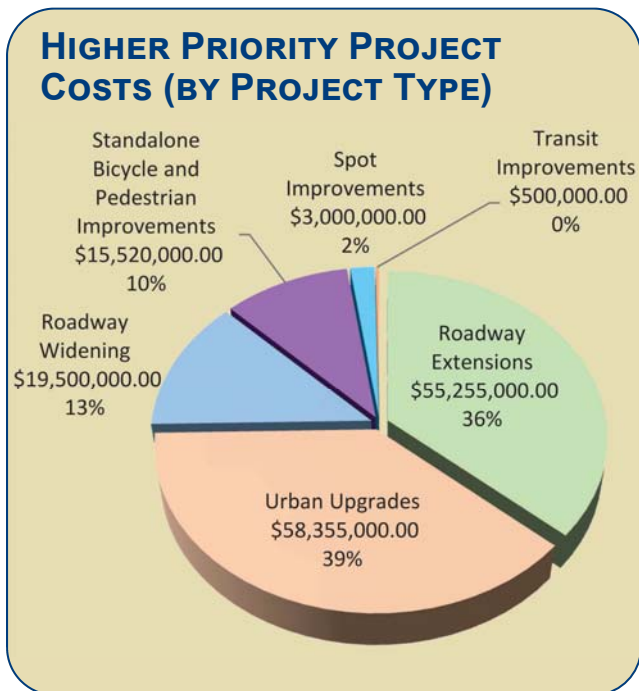
## HIGHER PRIORITY PROJECTS (LISTED ALPHABETICALLY BY IMPROVEMENT)

No.	Higher Priority Project
<b>Roadway Extensions (Multimodal Connectivity)</b>	
RE-01	Barber Street Extension
RE-02	Barber Street Extension (Part 2)
RE-03	Barber Street through Villebois
RE-04A	Corridor Study for Brown Road Extension
RE-04B	Brown Road Extension (with Bailey Street or 5th Street Connection)
RE-05	Canyon Creek Road Extension
RE-06	Costa Circle Loop Extension
RE-08	Kinsman Road Extension (South)
RE-09	Villebois Drive Extension
RE-10	Villebois Drive Extension (Part 2)
RE-11	Meridian Creek Middle School Improvements
RE-12A	Frog Pond West Neighborhood Collector Roads
RE-12B	Frog Pond South Neighborhood Collector Road
RE-13	Java Road Connection and Signal
<b>Roadway Widening (Capacity)</b>	
RW-01	Boeckman Road Bridge and Corridor Improvements
RW-02	Day Road Widening
<b>Urban Upgrades (Multimodal Connectivity and Safety)</b>	
UU-01	Boeckman Road Dip Improvements
UU-02	Boeckman Road Urban Upgrade
UU-03	Brown Road Upgrades
UU-04	Grahams Ferry Urban Upgrade
UU-05	Parkway Avenue Urban Upgrade
UU-06	Stafford Road Urban Upgrade
UU-07	Tooze Road Urban Upgrade
UU-08	Garden Acres Road Urban Upgrade
UU-09	Printer Parkway Urban Upgrade
UU-10	Advance Road Urban Upgrade
<b>Spot Improvements (Transportation System Management/Operations)</b>	
SI-02	Grahams Ferry Railroad Undercrossing Project Development
SI-03	Stafford Road/65th Avenue Intersection Improvements
SI-04	Wilsonville Rd/Town Center Loop West Intersection Improvements
<b>Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements)</b>	
BW-01 A/B	Canyon Creek Road Enhanced Pedestrian Crossings

No.	Higher Priority Project
<b>Bikeways and Walkways (Standalone Pedestrian and Bicycle Improvements) . . . Continued</b>	
BW-02	95th Avenue Sidewalk Infill
BW-03	Boberg Road Sidewalk Infill
BW-04	Boeckman Road Bike Lanes and Sidewalk Infill
BW-05	Willamette Way East Sidewalk Infill
BW-06	Willamette Way West Sidewalk Infill
BW-07	Boones Ferry Road Sharrows
BW-08	Town Center Loop Pedestrian, Bicycle, and Transit Improvements
BW-09	Town Center Loop Bike/Pedestrian Bridge
BW-10	French Prairie Drive Pathway
BW-12	Parkway Center Trail Connector
BW-13	Villebois Loop Trail
BW-14	Wayfinding Signage
BW-15	Property Acquisition for Bike/Ped Connectivity
<b>Safe Routes to School (Standalone Pedestrian and Bicycle Improvements)</b>	
SR-01	Boeckman Creek Primary Safe Routes to School Improvements
SR-02	Boones Ferry Primary Safe Routes to School Improvements
SR-03	Lowrie Primary Safe Routes to School Improvements
SR-04	Wood Middle School Safe Routes to School Improvements
<b>Local Trails (Standalone Pedestrian and Bicycle Improvements)</b>	
LT-01	Memorial Park Trail Improvements
<b>Regional Trails (Standalone Pedestrian and Bicycle Improvements/Safety)</b>	
RT-01A	Boeckman Creek Trail (North)
RT-01B	Boeckman Creek Trail (South)
RT-03A	Tonquin Trail (North)
RT-03B/C	Tonquin Trail (Villebois)
RT-04	Waterfront Trail Improvements
RT-05	Wiedeman Road Trail
RT-06	Willamette River Bike/Pedestrian/Emergency Bridge Project Dev.
RT-07	Revised Frog Pond Trail
<b>Transit Improvements</b>	
TI-01	Pedestrian Access to Transit
TI-02	Transit Street Improvements



Wilsonville’s “Higher Priority” project list includes several project types. The pie chart below provides the cost breakdown by project type. The highest costs would be incurred for the three roadway improvement types, which include facility improvements for all travel modes.



**Estimated Funding Available through 2035 for Capital Improvements**

Funding Source	Estimated Capital Funding through 2035
Street System Development Charges (SDCs)	\$42 million
Developer Contributions	\$30 million
West Side Plan – Urban Renewal District (URD)	\$27 million
Year 2000 Plan – Urban Renewal District (URD)	\$5 million
Park System Development Charges (SDCs)	\$0.7 million
Local/Regional Partnerships	\$2.9 million
Grants	\$3.2 million
State and Federal Funding	\$12.6 million
<b>Total Funds</b>	<b>\$123.4 million</b>

To fund its capital improvements projects, the City relies heavily on developer contributions and fees (including system development charges) and urban renewal funds, which are primarily associated with new growth areas. The table to the lower left lists the estimated funding available for capital improvements through the 2035 planning horizon year.

**THE PROGRAMS (SEE CHAPTER 6)**

Wilsonville’s transportation programs (listed below) also play an important role in the City’s ongoing efforts to provide a coordinated, cost-effective, multimodal transportation system. Well-run programs help extend the service life of the City’s infrastructure improvements and increase the value of transportation investments. The City’s Community Development and SMART Transit departments are responsible for managing the majority of its transportation programs.

**TRANSPORTATION PROGRAMS**

Wilsonville has various transportation programs that support ongoing operations and services:

- Capital Improvement Program (CIP)
- Safety (Proposed)
- Safe Routes to School
- ADA Comprehensive Access (Proposed)
- SMART Transit
- SMART Options and Transportation Demand Management (TDM)
- Intelligent Transportation System (ITS)
- Bike Smart and Walk Smart

**THE PERFORMANCE (SEE CHAPTER 7)**

Wilsonville’s Transportation System Plan (TSP) provides policies, standards, projects, and programs that, when put into action, will improve the city’s transportation system. By tracking appropriate performance measures in future TSP updates, the City can evaluate their progress.

# The Standards

## Chapter 3



Wilsonville's transportation standards ensure the city develops consistent with its vision of supporting a multimodal transportation system that is strategically designed for optimum community function and benefit. A street's design determines how it will look and function. How a street looks and functions is ultimately dependent upon which street elements are included, their dimensions, and how they relate to each other.

The standards are intended to ensure appropriate design and create a consistent approach throughout the city as development and redevelopment occurs. Since the design of a street is so closely tied to how it performs and how people experience the city, it is important for Wilsonville to carefully consider how it wants its streets to look and function and then to design them accordingly.

### OTHER CITY DOCUMENTS WITH TRANSPORTATION STANDARDS

The transportation standards in this chapter cover a variety of areas that help inform other City documents:

- Standard Detail Drawings
- Public Works Standards
- Planning and Land Development Ordinance

*Standards support the vision of a multimodal transportation system that is . . .*

- *Strategically designed and*
- *Collaboratively built,*

*Resulting in . . .*

- *Mode and route choices,*
- *Safe and convenient local accessibility, and*
- *Quality of life and economic health.*



## HOW STANDARDS BENEFIT THE TRANSPORTATION SYSTEM

The transportation standards included in this chapter support the City's management of an effective multimodal transportation system:

- **Functional Classifications** provide a hierarchy for managing public roadways practically and cost effectively. They provide a framework for identifying which street elements to include in a street's design.
- **Connectivity and Facility Spacing Standards** ensure that direct routes and travel options are available for all transportation users.
- **Freight Routes** connect the city's industrial and commercial sites with I-5 and other regional facilities and improve the coordination between freight and other travel modes.
- **Bicycle Routes** connect neighborhoods, schools, parks, community centers, business districts, and natural resource areas to support bicycle travel by residents of varying physical capabilities, ages, and skill levels.
- **Cross-Section Standards** provide guidance for selecting and sizing various design elements to serve intended users' needs.
- **Access Management** balances the transportation system's need to provide safe, efficient, and timely travel with the need to allow access to individual properties.

*Looking north at Boones Ferry Road north of Day Road. Washington County recently received jurisdiction of this roadway from ODOT and will be constructing improvements that include roadway widening, bike lanes, and sidewalks.*

## ROADWAY JURISDICTION

A roadway's jurisdiction affects who will have the ultimate authority over improvements and what standards apply. In the Wilsonville vicinity, there are four agencies with jurisdiction:

- **City of Wilsonville** has the majority of roadways within City limits.
- **Washington County** roadways are on the outskirts to the north of the city.
- **Clackamas County** roadways are on the outskirts to the east, west, and south of the city.
- **ODOT** has jurisdiction of Interstate-5, the corresponding interchange ramps, the portions of Elligsen Road and Boones Ferry Road between the Parkway Avenue and Day Road, and Wilsonville Road between Town Center Loop West and Boones Ferry Road.

As the City expands, it is expected that the county roadways in the immediate vicinity of the city will transfer jurisdictions to the City of Wilsonville. These roadways include Stafford Road, Advance Road, Elligsen Road, Frog Pond Lane, Clutter Street, and Grahams Ferry Road.







## FUNCTIONAL CLASSIFICATION

The City's street functional classification system is an important tool for managing public roadways. It is based on a hierarchical system of roads (see diagram at right) where streets with a higher classification, such as arterial streets, emphasize a higher level of mobility for through-movement. They look and function very differently than a street with a lower classification, such as local streets, which emphasize the land access function.

Wilsonville has four functional classes:

- **Major Arterials** primarily connect the I-5 interchanges with major activity centers (i.e., Town Center and Argyle Square) but also include the key connections requiring additional travel lanes (i.e., Boeckman Road bridge over I-5 and Stafford Road). They generally have four or more travel lanes, bicycle lanes, and limited access (preferably connecting with minor arterials).
- **Minor Arterials** serve as the direct connections through town and usually do not penetrate identifiable neighborhoods. They generally have two or three travel lanes, bicycle lanes, and consolidated access to larger developed areas and neighborhoods.
- **Collectors** provide traffic circulation within residential, commercial, and industrial areas and serve to funnel traffic from neighborhoods to the arterial street network. They have two or three travel lanes, bicycle lanes, optional on-street parking, and minor access restrictions.
- **Local Streets** are located within residential, commercial, and industrial areas and discourage through movement. They allow on-street parking and ensure that every parcel is accessible for all modes.

The roadway classifications throughout the city are shown in Figure 3-2. These classifications provide a vision of how these roadways should be designed and constructed as improvements are made.



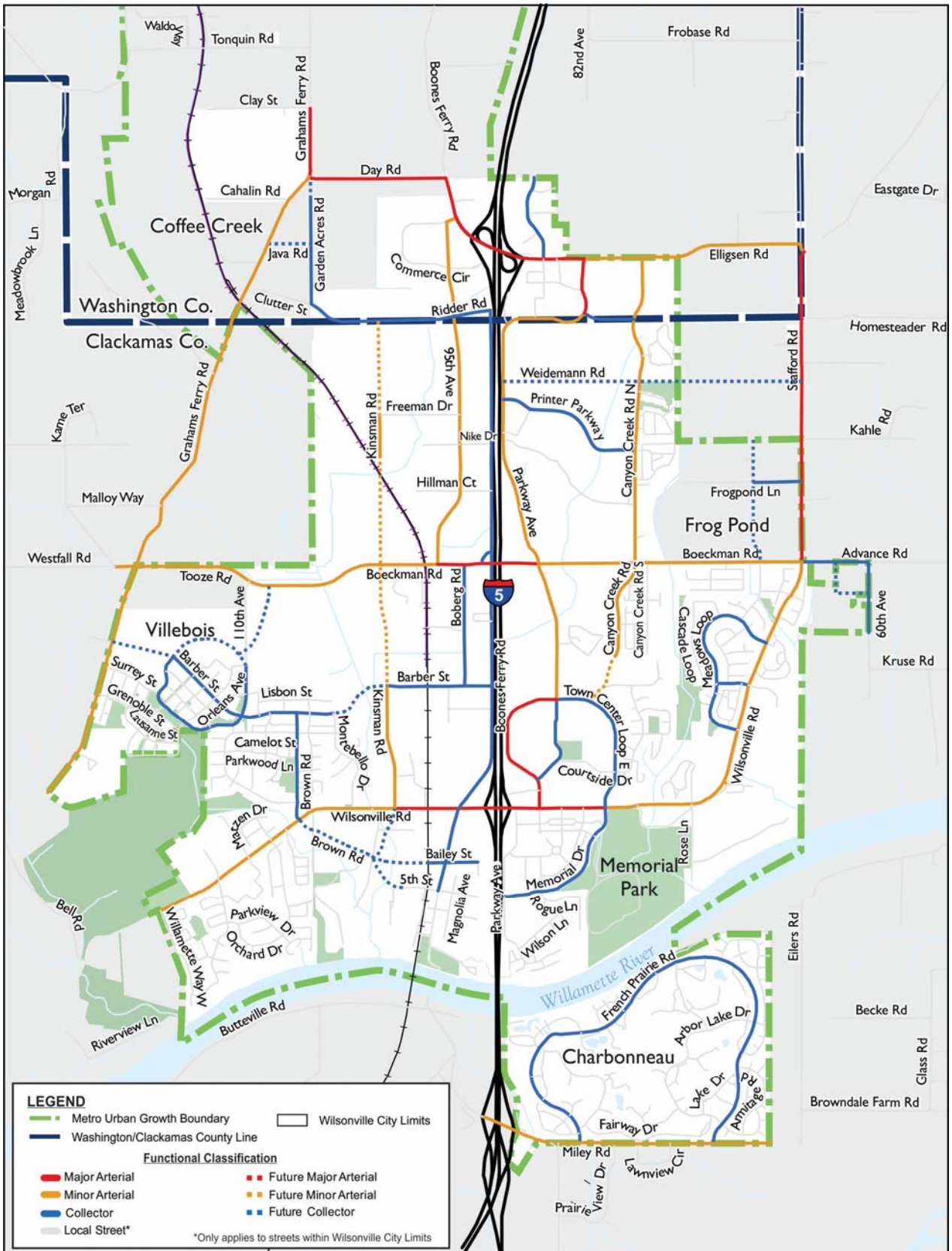
### FUNCTIONAL CLASSIFICATION AS A FRAMEWORK FOR STANDARDS

Functional classification provides a helpful framework for managing the City's transportation system and supporting the following standards:

- **Connectivity and Spacing Standards** indicate how far apart roadways of different functional classifications should be spaced to ensure a balanced approach to mobility and land access throughout the city.
- **Freight Routes and Transit Streets** primarily use higher classification roads to serve freight and/or transit vehicles due to the wider cross-sections and greater focus on mobility.
- **Cross-Section Standards** vary by functional classification to meet user needs. However, functional class is not the only factor in determining street design.
- **Access Management Standards** are more stringent for higher class roadways, which are intended to emphasize mobility.



FIGURE 3-2. FUNCTIONAL CLASS DESIGNATIONS



### CONNECTIVITY AND SPACING

One of Wilsonville’s goals is to improve connectivity by constructing parallel facilities spaced at regular intervals throughout the city. These facilities provide multiple alternatives and more direct routes between both local and regional destinations, including neighborhoods, parks, schools, employment centers, and retail areas.

Table 3-1 lists the desired spacing of each facility type throughout Wilsonville to ensure a high level of connectivity. Figure 3-3 illustrates the desired spacing for the arterial and collector street network. Deviations to these guidelines may be needed in locations where there are significant barriers, such as topography, rail lines, freeways, existing development, and the presence of natural areas.

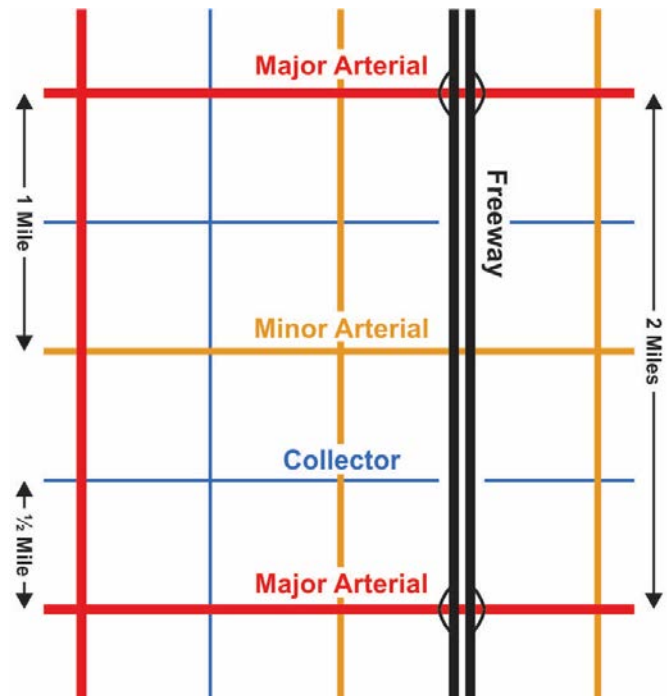
Bicyclists and pedestrians benefit the most from closely spaced facilities because they are the most affected by distance. By providing walking and biking facilities spaced less than 300 feet apart, Wilsonville will support walking and biking use within and between its neighborhoods. In addition, these connections can improve access to transit.

**Table 3-1. Facility Spacing Guidelines**

Facility Type	Desired Spacing <sup>a</sup>
Major Arterial	1 - 2 mi
Minor Arterial	1 mi
Collector	1/4 - 1/2 mi
Local Street	300 - 500 ft
Bicycle and Pedestrian Facilities	300 ft

<sup>a</sup> Desired Spacing refers to distance between facilities with same or higher functional classification.

**FIGURE 3-3. DESIRED FACILITY**



### BENEFITS OF CONNECTIVITY

Connectivity provides all transportation system users with multiple benefits:

- Increased mobility by distributing traffic over multiple connected streets rather than forcing all traffic onto the City’s arterial street system
- More equitable access for all businesses and neighborhoods throughout the city
- Improved walking, biking, and transit use due to more direct connections and less out of direction travel between neighborhoods, schools, transit stops, retail centers, employment centers, and recreational areas
- Reduction in short auto trips between adjacent neighborhoods and land uses





*Villebois Village Master Plan was designed to provide a high level of connectivity for all travel modes using short blocks arranged in a grid pattern, numerous pathways, and a diversity of land use.*

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*“Connectivity is important because you want to be able to have options for how you move through your community. I don’t personally always want to drive my car places, especially when I have my children with me. I want us to get out and be active and to be able to bike to the store. We have stores that are really close to us, but it’s not always safe and convenient for us to ride our bike there. Which is why having bike lanes and sidewalks that are designed to accommodate these other options are critical to enhance our livability.”*

*Marta McGuire  
Planning Commission*

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## FREIGHT ROUTES

Wilsonville’s freight routes connect the city’s industrial and commercial sites with I-5 and other regional facilities. Figure 3-4 identifies the City’s freight routes, which include truck routes, railroads, and waterways. Improvement projects should be coordinated to facilitate freight needs while balancing the needs of other users.

Some of the key truck routes that provide important truck connections to Washington County include Boones Ferry Road, Kinsman Road, and Tonquin Road. In addition, the Portland and Western Railroad runs through Wilsonville and serves freight traffic, and the Willamette River has the potential for handling barge traffic. These routes are identified in *Metro’s Regional Freight Plan* (June 2010).

As a major employment center and industry hub along I-5, Wilsonville will benefit from ensuring that its freight routes are designed to accommodate the needs of its industrial and commercial sites. At the same time, Wilsonville’s residential neighborhoods should be protected from freight traffic. The call-out box at right lists multiple freight coordination improvements resulting from having freight routes.

## IMPROVED FREIGHT COORDINATION

By having designated freight routes, various City efforts regarding freight and non-freight users will be improved:

- **Roadway and Intersection Improvements** can be designed for freight vehicles with adjustments for turn radii, sight distance, lane widths, turn pocket lengths, and pavement design.
- **Bicycle and Pedestrian Improvements**—such as buffered bike lanes, enhanced pedestrian crossings, and other safety improvements—can be identified to reduce freight impacts to other users (particularly along bikeways and walkways).
- **Roadway Durability** can be increased by using concrete instead of asphalt.
- **Railroad Connections** can be coordinated to support businesses that ship goods by rail, particularly in areas where railroad sidings can be provided along the Portland and Western Railroad track.
- **Willamette River Port** can be considered to support businesses that ship goods using barges on the Willamette River.
- **Coordination with Businesses and Adjacent Jurisdictions** can ensure that local and regional freight traffic uses the City’s freight routes to travel

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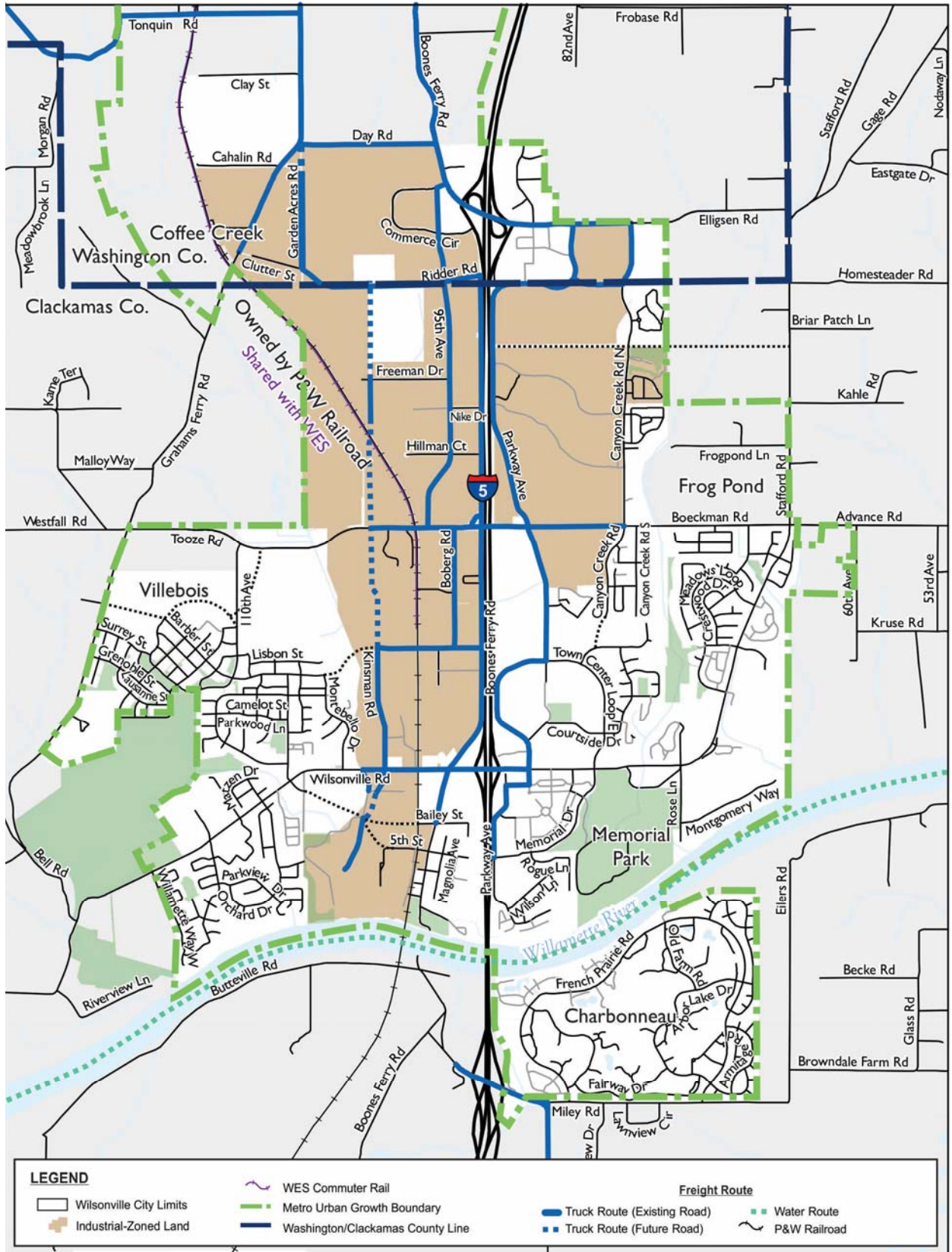
*“We have a significant number of large manufacturing companies because we have an efficient freight mobility process where our trucks can get in and out of town with the least amount of interference from local traffic. For the part of the transporter, that’s very important in as much as it costs money for these trucks, even when they are not moving. Secondly, the local resident doesn’t want to have to be disrupted by freight transportation.”*

*Ray Phelps  
Planning Commission*

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FIGURE 3-4. FREIGHT ROUTES





## BICYCLE ROUTES

Bicycle routes are provided throughout Wilsonville and connect to neighborhoods, schools, parks, community centers, business districts, and natural resource areas. The City's bicycle network serves multiple users of varying physical capabilities, ages, and skill levels.

Figure 3-5 identifies the City's bicycle routes, which include three facility types:

- **Shared-Use Paths** are 10-foot to 12-foot wide pathways that have minimal conflicts with automobile traffic and may have their own right-of-way (cross-section standards shown in Figure 3-11). Shared-use paths serve multiple non-motorized users: bicyclists, pedestrians, wheelchair users, skaters, and others. Many of the shared-use paths throughout Wilsonville are part of the regional trail network, which traverses large sections of the city and connects to neighboring jurisdictions and regionally significant destinations. These regional trails are designed to meet state and federal guidelines, which make them eligible for state and federal transportation funding.
- **Bike Lanes** are provided on Arterial and Collector streets throughout Wilsonville. They are usually 6-foot wide and adjacent to motor vehicle travel lanes (cross-section standards shown in Figures 3-6, 3-7, and 3-8). Buffered bike lanes and one-way or two-way cycle tracks may be used instead of bike lanes and include buffers between the bike and motor vehicle travel lanes (cross-section standards shown in Figure 3-12).
- **Local Street Bikeways** are streets designated as important bicycle connections where bicyclists share the travel lane with motor vehicle traffic. Even though all Local Streets allow bicyclists to share the travel lane (cross-section standards shown in Figures 3-9 and 3-10), Local Street Bikeways are intended to serve a greater number

of bicyclists. They typically are provided on low-volume, low-speed residential streets that serve as important connections to nearby bike lanes, shared-use paths, and key destinations.

Modifications—such as sharrows, traffic calming devices, or wayfinding signage—may be made to these streets to emphasize their use as bicycling facilities and increase the comfort and confidence of bicyclists.

### KEY BICYCLE FACILITIES

The following existing and future bicycle facilities (which are included in Figure 3-5) provide important connections throughout the city:

#### Regional Trails

- Ice Age Tonquin Trail (through West Wilsonville with connections to Tualatin and Sherwood)
- Waterfront Trail (along the Willamette River)
- Boeckman Creek Trail (along Boeckman Creek in East Wilsonville)
- Stafford Spur Trail (connecting to regional destinations in Northeast Wilsonville)

#### Shared-Use Paths

- Primarily near schools, parks, transit hubs, retail centers, and other pedestrian areas

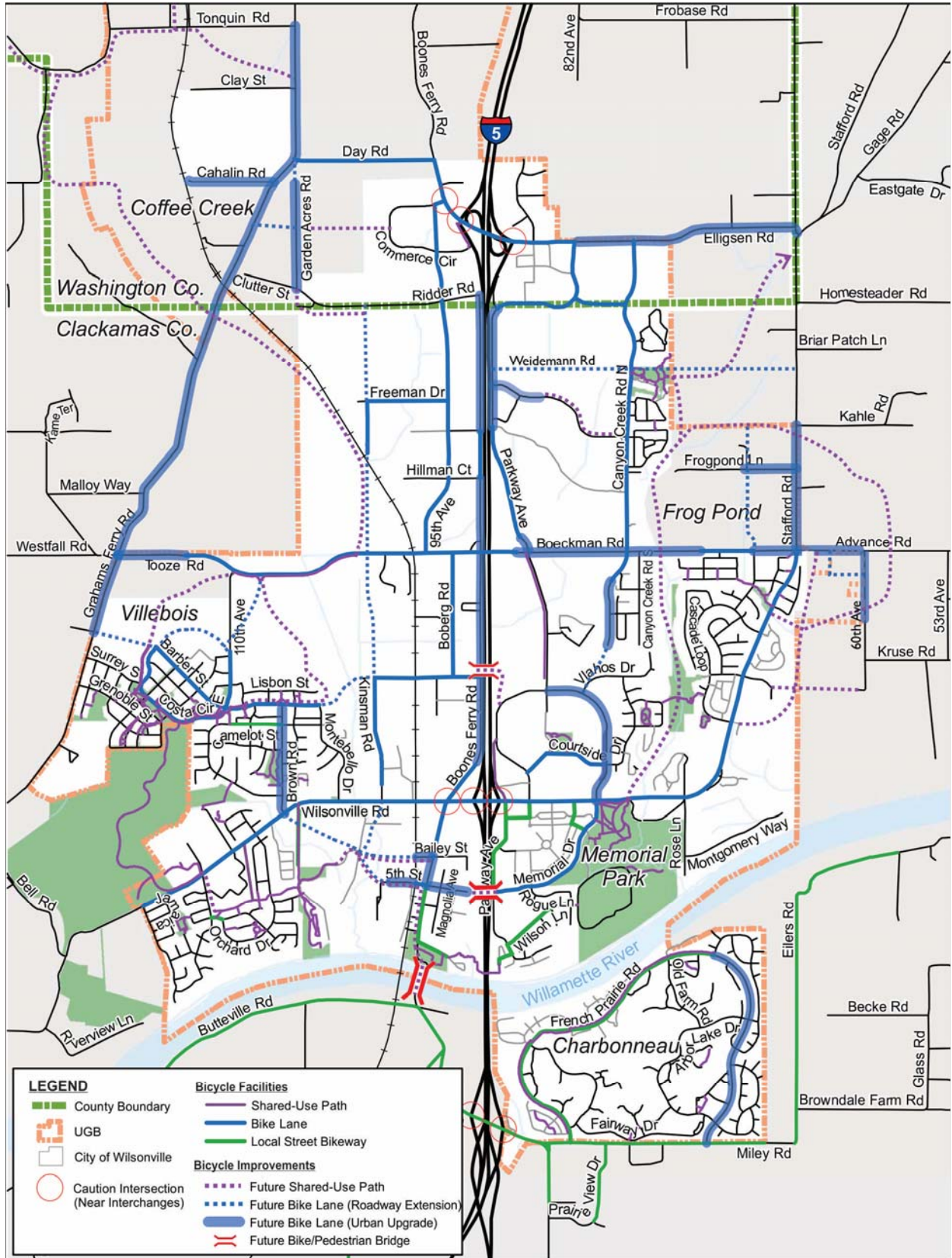
#### Bike Lanes

- On Arterial and Collector streets

#### Local Street Bikeways

- Boones Ferry Road south of 5th Street to connect to future Willamette River bridge
- Parkway Avenue connecting to Wilsonville Road to the nearby neighborhood
- Wilson Lane, Metolius Lane, and Kalyca Drive connecting Memorial Park to the Waterfront Trail near where it passes underneath the I-5 Boone Bridge

FIGURE 3-5. BICYCLE ROUTES





## STREET CROSS-SECTION DESIGN

Since different streets serve different purposes, a functional classification system—which is a hierarchy of street designations—provides a framework for identifying the size and type of various street elements to consider including in a street's design. Not all elements are included on all streets and so they must be carefully selected based on multimodal needs.

While a street's functional classification does not dictate which street elements to include, it does facilitate the selection of multimodal facilities and widths that will help ensure the roadway can meet its intended multimodal function. Adjacent land uses and available right-of-way width also influence which elements are included in a specific segment.

Roadway cross-section design elements include travel lanes, curbs, planter strips, sidewalks on both sides of the road, and bicycle facilities consistent with designated bikeways, walkways, and shared-use trails. Low impact development (LID) standards may also be used throughout the City at the City's discretion.

### FACILITY TYPES

Cross-section standards are provided for the following facilities:

- Major Arterials
- Minor Arterials
- Collectors
- Local Streets
- Low Impact Development (LID) Local Streets (similar modifications may be made to other streets regardless of classification)
- Shared-Use Paths and Trails
- Bicycle Facility Design Options



*Example of a Major Arterial - Boeckman Road looking west towards Boberg Road and 95th Avenue*

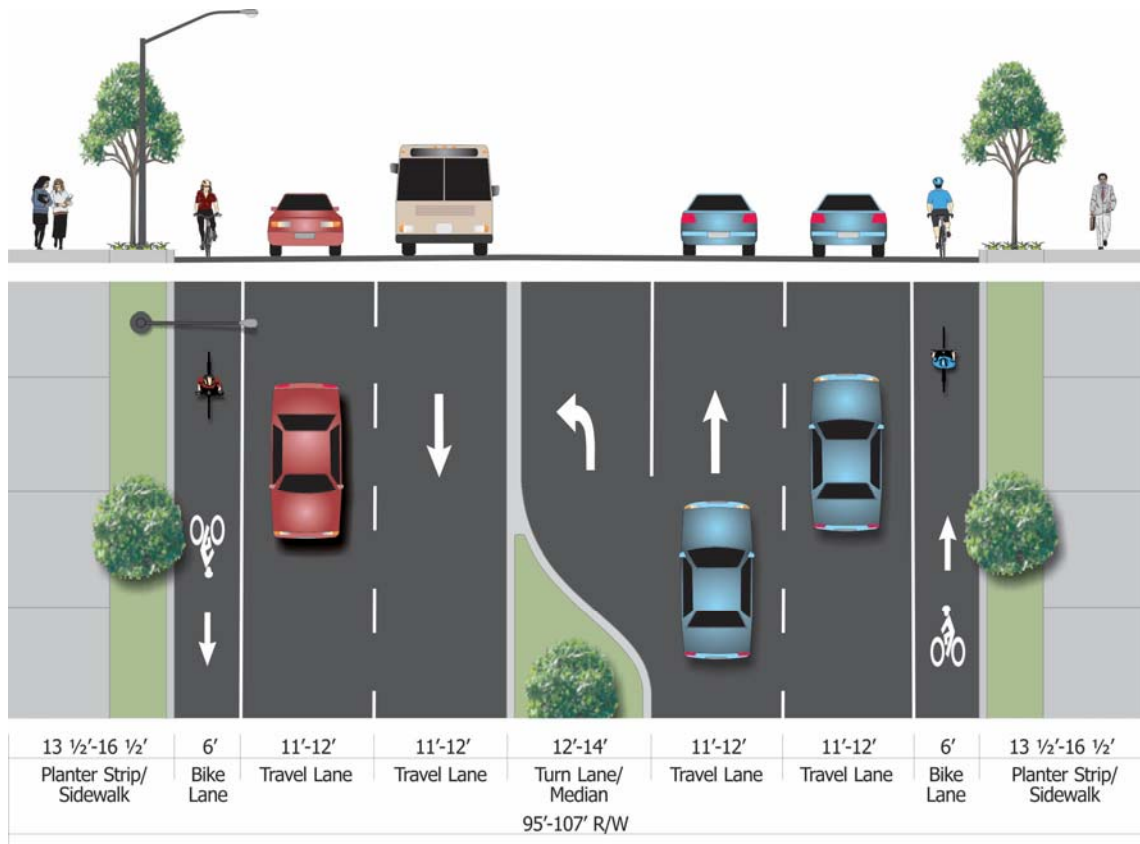


*Example of a Collector - Barber Street looking east near SMART Central at Wilsonville Station transit center*



*Example of a Local Street - Rogue Lane looking east near Memorial Park*

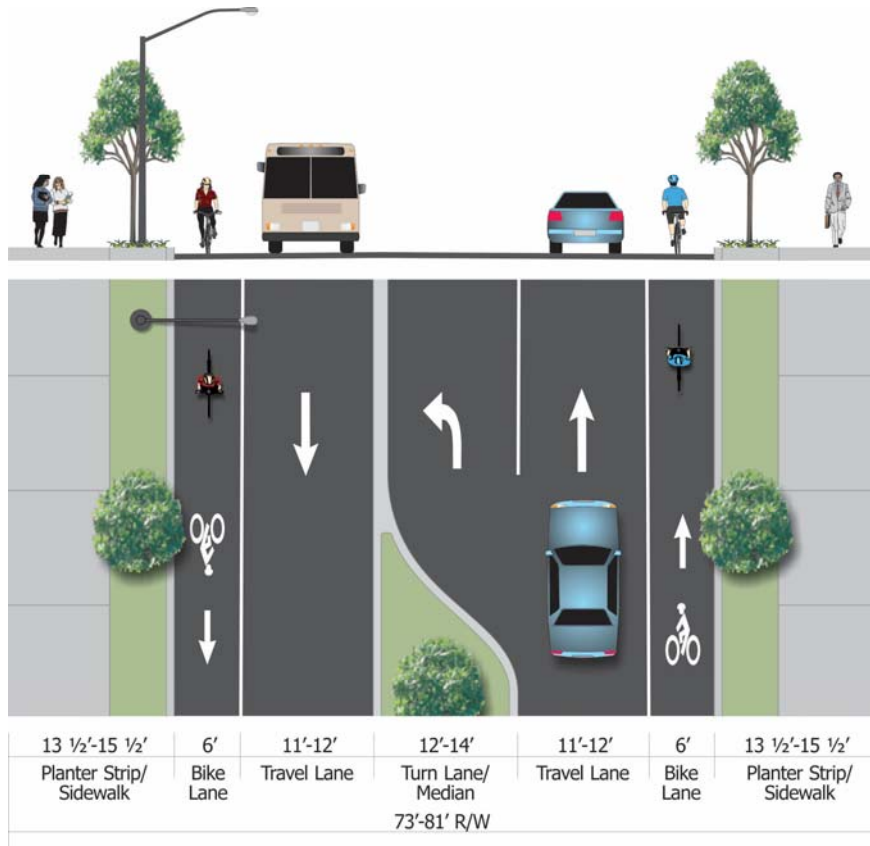
FIGURE 3-6. MAJOR ARTERIAL CROSS-SECTION



## Notes:

1. Travel lane and turn lane/median widths as determined by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 13½ to 16½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb width of ½-foot is included in the sidewalk/planter strip width.
4. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
5. Striping and signage as required in the PW Standards.
6. On-street parking is not allowed.
7. Transit stop locations to be determined by Transit Director.
8. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
9. New streets shall incorporate low impact development design as practicable.
10. Allow for separation for bikes on major arterials (especially freight routes).

**FIGURE 3-7. MINOR ARTERIAL CROSS-SECTION**

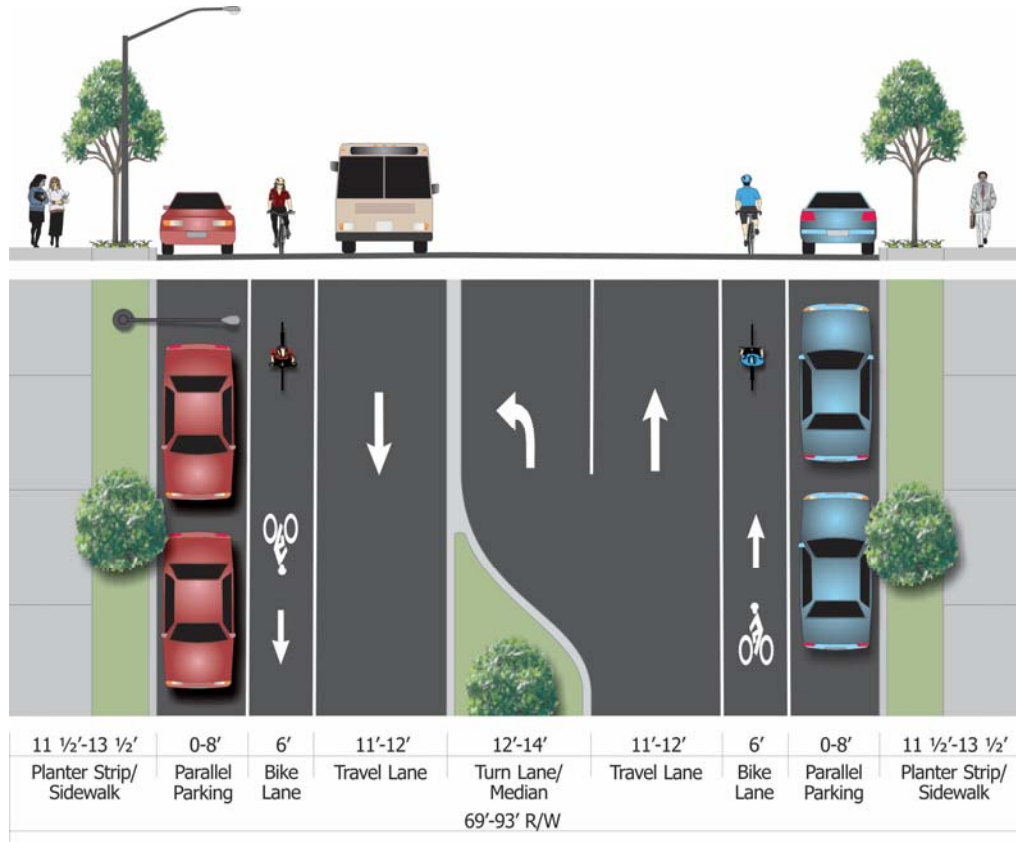


Notes:

1. Travel lane and turn lane/median widths as determined by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 13½ to 15½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb width of ½ foot is included in the sidewalk/planter strip width.
4. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
5. Striping and signage as required in the PW Standards.
6. On-street parking is not allowed.
7. Transit stop locations to be determined by Transit Director.
8. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
9. New streets shall incorporate low impact development design as practicable.
10. Allow for separation for bikes on minor arterials (especially freight routes).

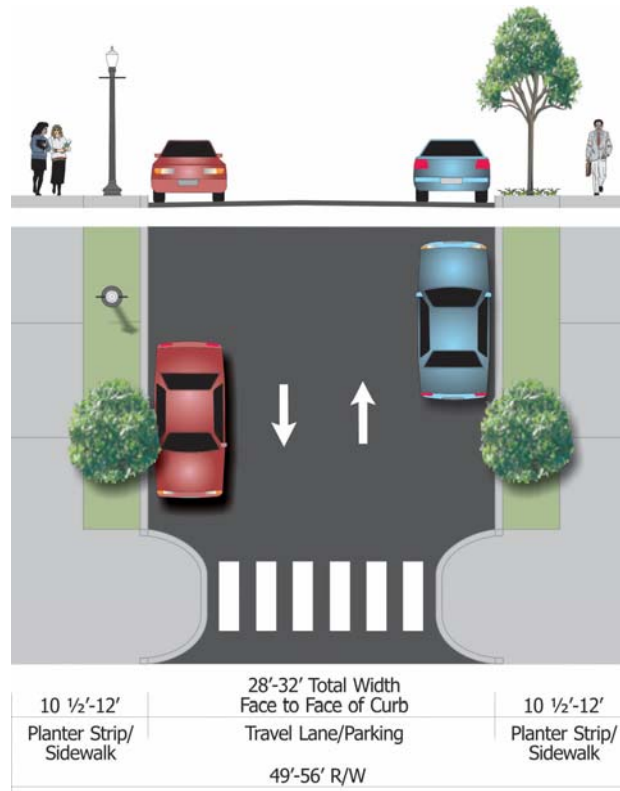


FIGURE 3-8. COLLECTOR CROSS-SECTION



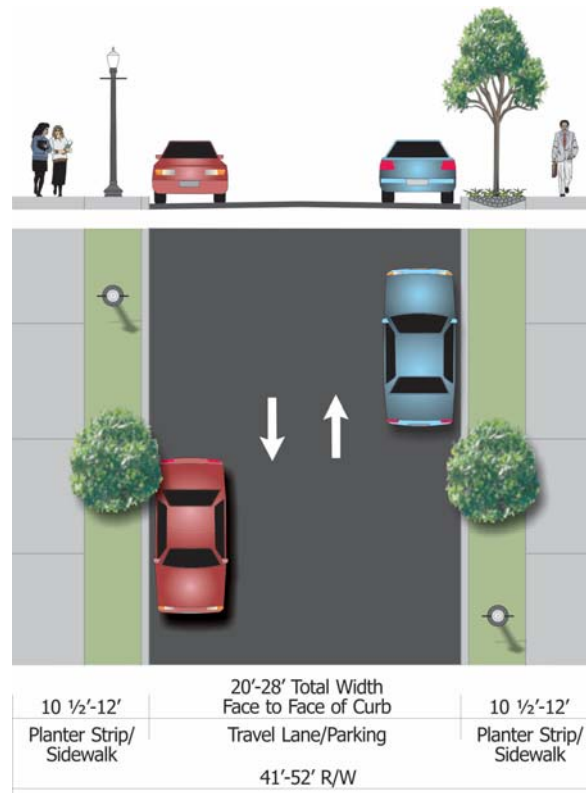
## Notes:

1. Collector right-of-way varies between 59 to 89 feet as determined by Community Development Director based on surrounding planned development of residential, commercial or industrial and need for on-street parking and/or turn lane/median.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director. Width of sidewalk/planting strip may be combined in commercial/retail areas for a total width of 11½ to 13½ feet; street trees shall be located in minimum 4-foot tree wells.
3. Curb and sidewalk bulb-outs at crosswalks or street intersections as determined by Community Development Director.
4. Curb width of ½ foot is included in the sidewalk/planter strip width.
5. Street lights shall be located within the planter strip, center landscape median, or sidewalk as determined by Community Development Director.
6. Travel lane and turn lane/median widths as determined by Community Development Director. Turn lane/median may be eliminated.
7. Striping and signage as required in the PW Standards.
8. On-street parking on one or both sides is allowed.
9. Transit stop locations to be determined by Transit Director.
10. When not needed as a left-turn lane, median may be provided to serve safety, stormwater, or aesthetic objectives.
11. New streets shall incorporate low impact development design as practicable.

**FIGURE 3-9. LOCAL STREET CROSS-SECTION****Notes:**

1. Minimum right-of-way width of 47 feet (parking on one side) and 51 feet (parking on both sides). Providing parking on both sides is preferred unless constraints exist.
2. Minimum sidewalk width is 5 feet; minimum planter strip width is 5 feet.
3. Curb width of ½ foot is included in the planter strip width.
4. Curb and sidewalk bulb-outs at crosswalks or street intersections as determined by Community Development Director.
5. Street lights shall be located within the planter strip as required in the PW Standards.
6. No lane striping on street. Signage as required.
7. New streets shall incorporate low impact development design as practicable.

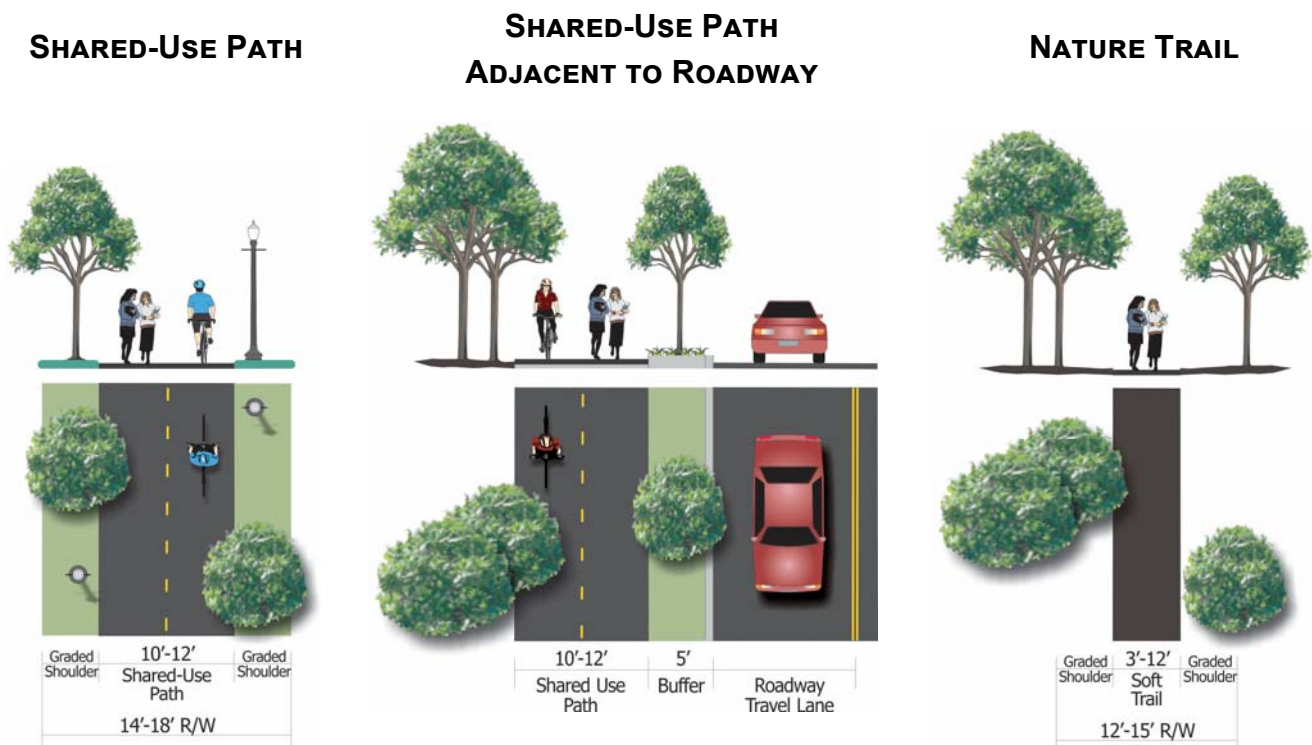
**FIGURE 3-10. LOW IMPACT DEVELOPMENT (LID) LOCAL STREET CROSS-**



**Notes:**

1. LID streets located as approved by Community Development Director.
2. Minimum sidewalk width is 5 feet; actual sidewalk width as determined by Community Development Director.
3. Minimum landscape width of 6½ feet where a water quality swale is proposed.
4. Curb width of ½ foot is included in the planter strip width.
5. Stormwater control as required in the PW Standards.
6. Use of pervious surfaces as determined by Community Development Director.
7. Narrower streets as approved by Community Development Director and as permitted in the PW Standards.
8. 28-foot curb-to-curb street is intended to allow on-street parking on both sides.
9. 24-foot curb-to-curb street is intended to allow on-street parking on one side.
10. 20-foot curb-to-curb street would not allow on-street parking on either side.

**FIGURE 3-11. SHARED-USE PATH AND TRAIL CROSS-SECTIONS**



**Notes:**

1. Trail types and widths as approved by Community Development Director.
2. Typical cross section of shared-use path is 12 feet wide with 2-foot-wide compacted crushed stone shoulders.
3. Vertical separation between shared-use path and roadway may be used instead of 5' buffer as approved by Community Development Director.
4. Cross-section standards identified in the Ice Age Tonquin Trail Master Plan are required along the Ice Age Tonquin Trail.
5. Additional design standards are available in the Bicycle and Pedestrian Master Plan.

**FIGURE 3-12. BICYCLE FACILITY DESIGN OPTIONS**

**BUFFERED BIKE LANES AND CYCLE TRACKS**

Buffered bike lanes (buffer between travel lane and bike lane) and cycle tracks (parking and/or other buffer between travel lane and one- or two-way bike facility) are two alternate bicycle facility options that are gaining popularity throughout the United States and have been implemented in other parts of the Portland Metro area. Therefore, the design options shown below have been provided to allow the City flexibility to consider these bicycle treatments on their Arterial and Collector streets in place of typical bike lanes.

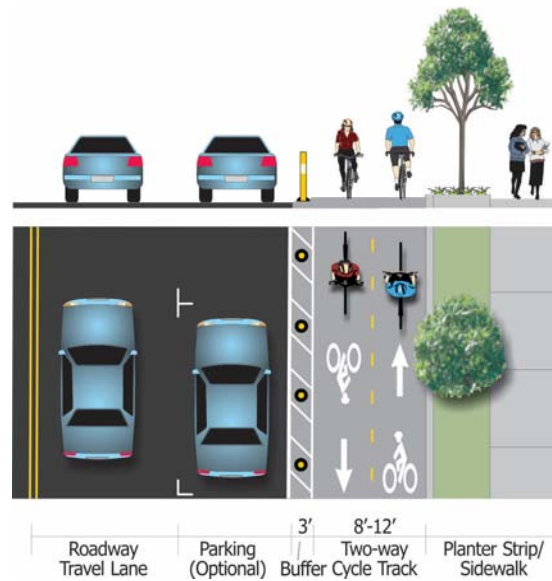


*One-Way Cycle Track on Cully Boulevard in Northeast Portland. Cycle tracks are typically protected from motor vehicle traffic by parked cars, raised curbs, or other physical buffers.*

**BUFFERED BIKE LANE OR ONE-WAY CYCLE TRACK**



**TWO-WAY CYCLE TRACK**



Notes:

1. Design option locations, widths, separation buffer features, and adjacent parking as approved by Community Development Director.
2. Additional design guidance can be obtained from the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide



### ACCESS MANAGEMENT

Access management refers to the broad set of techniques that are used to balance safe, efficient, and timely travel with the ability to allow access to individual properties. Access is an important component of the city’s transportation infrastructure and significantly affects system operations and safety.

Wilsonville should continue to manage roadway access to improve traffic flow and safety. By limiting access to higher classification roadways (especially Major and Minor Arterials), conflicts between vehicles entering and exiting driveways and vehicles on the roadway are reduced. Pedestrians and bicyclists also benefit from reduced conflicts with vehicles entering and exiting the roadway.

Table 3-2 lists the City’s access spacing standards. Because there are existing non-conforming accesses, these standards will primarily guide access layout of future development consistent with the strategies listed in the call-out box at right. ODOT also has access spacing standards that apply to the I-5 interchange areas and to the section of Boones Ferry Road that is under ODOT jurisdiction (i.e., between Parkway Avenue and Day Road). The I-5/Wilsonville Road Interchange Area Management Plan (IAMP) should also be consulted when considering access needs near the Wilsonville Road interchange.



Looking east to the I-5/Wilsonville Road interchange. Interchange areas have the most restrictive access spacing standards to ensure safety and mobility.

### ACCESS MANAGEMENT STRATEGIES

The City can use various access management strategies to help improve mobility and safety:

- **Interchange Areas:** Eliminate or consolidate accesses within one-quarter mile of the I-5 interchanges as opportunities arise.
- **Adjacent to High Volume Intersections:** Pursue appropriate treatments at accesses adjacent to high volume intersections, particularly when queues block access.
- **Existing Driveways:** Evaluate accesses that do not conform to the City’s access spacing standard and consider modifications as practicable, while maintaining reasonable access to each property.
- **Ongoing Development Review:** Manage new driveway locations and spacing on a case-by-case basis. Where driveways do not meet spacing standards, consider mitigation treatments, such as consolidating accesses or restricting turn movements to right-in/right-out.

Table 3-2. Access Spacing Standards

Functional Classification	Access Spacing Standards <sup>a</sup>	
	Desired <sup>b</sup>	Minimum
Near Interchanges	ODOT Requires 1,320 ft	
Major Arterial	1,320 ft	1,000 ft
Minor Arterial	1,000 ft	600 ft
Collector	300 ft	100 ft
Local Street	Access Permitted to Each Lot	

<sup>a</sup> Spacing is measured from centerline to centerline on Major Arterials and Minor Arterials and between adjacent curb returns on Collectors and Local Streets

<sup>b</sup> Desired Access Spacing shall be adhered to unless otherwise approved by the City Engineer. Reasons for deviating from Desired Access Spacing include aligning with existing driveways, topography, property limitations, and other safety related issues as identified in a transportation study.

FIGURE 3-13. ACCESS MANAGEMENT INTEREST AREAS







*A colorful row of street trees along Wilsonville Road near Boones Ferry Primary School during a fall day. Street trees can provide both aesthetic and safety benefits. They improve the walking environment by creating a pleasing buffer between the motor vehicle and pedestrian facilities. They also provide visual cues to drivers that can result in reduced traffic speeds.*

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*“The City needs to have a Transportation System Plan to make sure we are prepared for how we get around the city in the future. This includes automobiles, freight, bikes, and pedestrians.”*

*Nancy Kraushaar  
Community Development Director*

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# The Needs

## Chapter 4



As a growing community, Wilsonville faces the challenge of addressing new and ongoing transportation system needs. These needs are categorized as either gaps (missing connections or barriers in the transportation network) or deficiencies (shortcomings of the existing system). The City's transportation policies (see Chapter 2) and standards (see Chapter 3) serve as a framework for determining what gaps and deficiencies currently exist or are anticipated to arise through the 2035 horizon year as additional development occurs throughout the city and the region. The City's transportation improvement projects (see Chapter 5) and programs (see Chapter 6) address these needs and ensure Wilsonville's continued growth and prosperity.

### GAPS AND DEFICIENCIES

- **System Gaps** are missing connections or barriers in the urban transportation system that functionally prohibit travel for a given mode. While a gap generally means a connection does not exist, it could also be the result of a physical barrier (such as I-5, the Willamette River, other natural feature, or existing development) or a social barrier (including lack of information, language, education, and/or limited resources).
- **System Deficiencies** are performance, design, or operational constraints that limit travel by a given mode. Examples may include unsafe designs, bicycle and pedestrian connections that contain obstacles, inadequate intersection or roadway capacity, insufficient bus frequency, and congestion.

*Wilsonville's transportation needs include . . .*

- *Gaps (missing connections or barriers)*
- *Deficiencies (shortcomings)*

*These needs will be addressed by . . .*

- *Improvement projects (Chapter 5)*
- *Programs (Chapter 6)*



Header Photo Source: OBEC

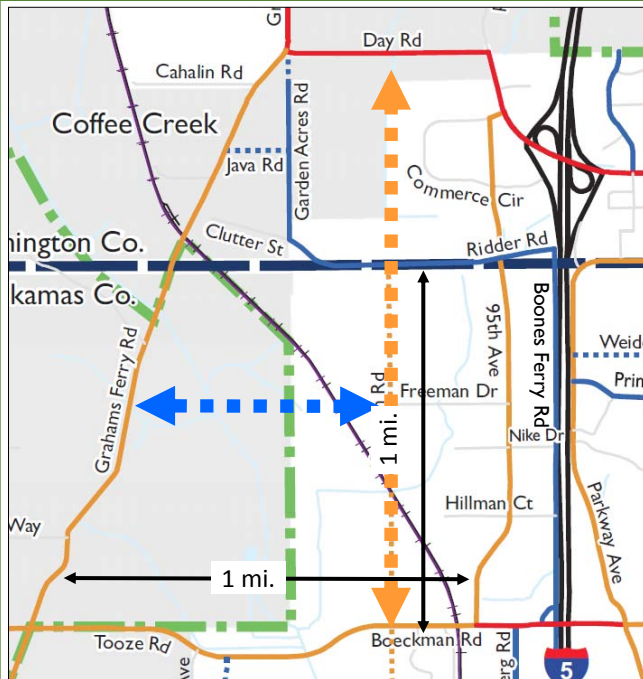


### MULTIMODAL CONNECTIVITY GAPS

Providing a well connected transportation system is one of the City’s goals. In order to ensure this goal is achieved, the City has developed facility spacing standards to provide direct routes and travel options

for system users. Based on the street connectivity guidelines set forth in Chapter 3, there are system gaps in each of the city’s four quadrants. However, there are also constraints and barriers that may make some connections infeasible.

#### Northwest Quadrant Connectivity

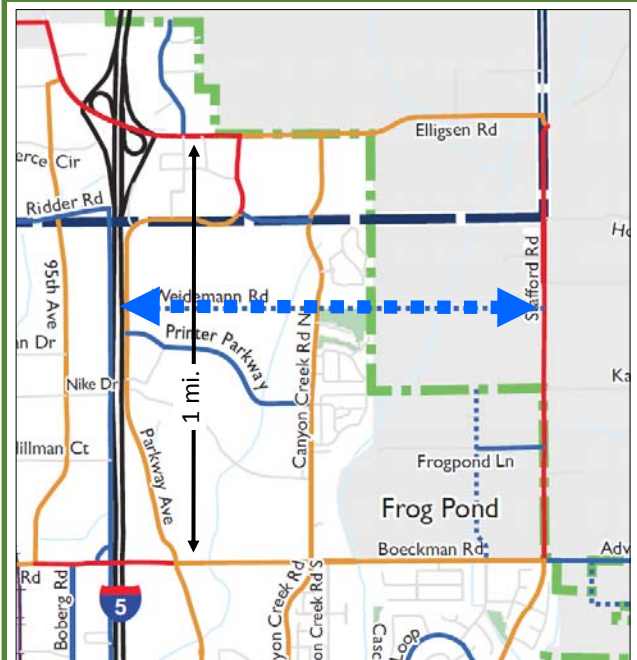


Two connectivity gaps exist in this quadrant:

- A north-south gap exists between Day Road and Boeckman Road that increases congestion at the 95th Avenue/Elligsen Road intersection and the nearby I-5 interchange.
- An east-west gap exists between 95th Avenue and Grahams Ferry Road.

**North/south Minor Arterial and east/west Collector** would be needed as future development occurs to fill these gaps, provide additional travel options, and allow access to future development. However, these roads will be difficult to construct due to the P&W railroad track and Metro green space in this quadrant that are barriers. The new north/south roadway should be considered after 95th Avenue between Boeckman Road and Ridder Road no longer sufficiently serves this function.

#### Northeast Quadrant Connectivity



There is a gap in the east west connectivity between Elligsen Road and Boeckman Road.

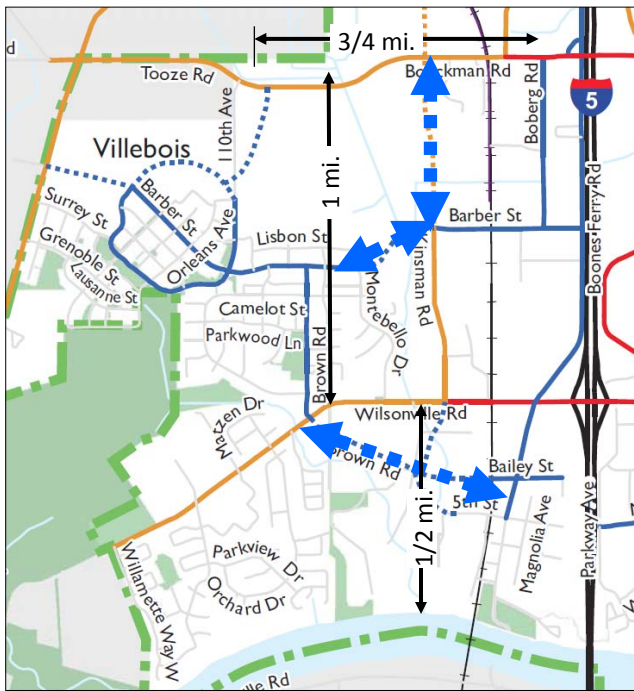
**An east/west Collector** from Parkway Avenue to Stafford Road would be needed to fill this gap. The City currently owns partial right-of-way along the west end of Wiedemann Road, which is a single-lane gravel road that runs east/west for a short distance east of Parkway Avenue.

The following legend applies to each of the four quadrant images.

LEGEND	
Functional Classification	New Connection Needed
Major Arterial	Minor Arterial
Minor Arterial	Collector
Collector	
Local Street*	



### Southwest Quadrant Connectivity



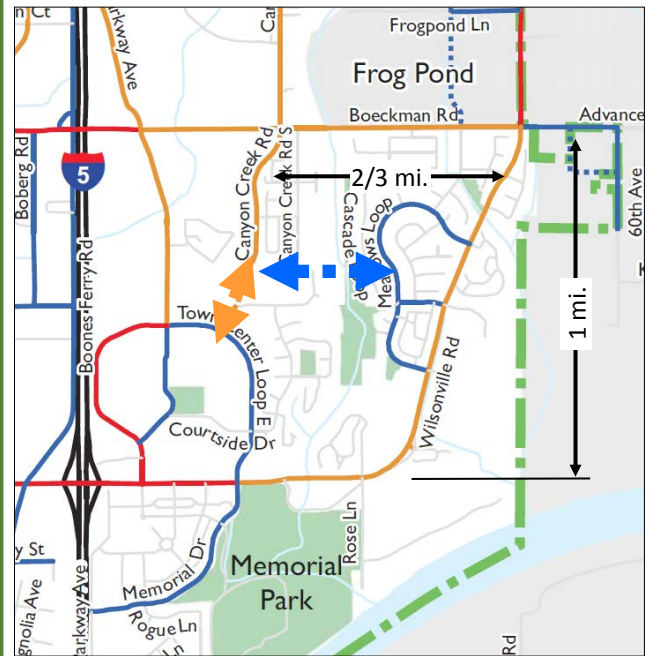
There are several gaps in east-west and north-south connectivity as follows:

- North/south and east-west gap exists between Wilsonville Road and Boeckman Road and between the Villebois development and the WES station.
- An east-west gap exists between the Willamette River and Wilsonville Road.

**North/south Minor Arterial and east/west Collector (north of Wilsonville Road)** streets are needed to fill these gaps. The Barber Street and Kinsman Road extensions are currently in the design phase that would satisfy these needs.

**An east/west Collector (south of Wilsonville Road)** would be needed as development occurs to provide the necessary connectivity. This roadway would also provide a secondary access option to and from Old Town (that is needed today), and the likely connection options are either 5th Street or Bailey Street.

### Southeast Quadrant Connectivity



There are two existing gaps in this quadrant as follows:

- A north-south gap exists between Boeckman Road and Town Center Loop that leads to additional traffic on Parkway Avenue and Wilsonville Road.
- An east-west gap exists between Canyon Creek Road and Meadows Loop.

**North/south Minor Arterial** extension of Canyon Creek Road is needed as soon as funding is available and would provide the connection to Town Center Loop. A major portion of this connection has already been constructed by adjacent development.

**An east/west Collector** from Canyon Creek Road to Meadows Loop would provide the connectivity needed. However, there are topographical, environmental, and development constraints that make this connection difficult. An existing trail and bridge provide pedestrian and bicycle connectivity.

## CROSS-SECTION DEFICIENCIES

To ensure Wilsonville’s roadways adequately serve all modes, the City has cross-section standards that guide roadway design based on the street’s functional classification with the acknowledgement that design elements shall be matched with the adjacent land use to provide safe transportation choices for users. The functional classifications and cross-section standards include number of motor vehicle travel lanes, sidewalks on both sides of the street, planter strips, and curbs (see Chapter 3: The Standards). In addition, the higher classification roadways also include bicycle facilities.

Building roads that provide facilities for all travel modes and meet applicable cross-section standards is critical to assure a safe and well connected transportation system. If bike lanes and sidewalks are

missing, the users of these facilities are likely using other portions of the roadway (motor vehicle travel lanes or shoulders) that may be unsafe.

Figure 4-1 shows which City roadways do not meet their applicable cross-section standards. In some instances, all that is needed are sidewalks for improved pedestrian connectivity. In other instances, roadways may need to be widened to include center turn lanes or bike lanes. Many of these roads are adjacent to rural areas and will be brought up to meet standards as adjacent parcels develop. Others will require standalone improvement projects. Depending on the situation, these roadway sections will require urban upgrades, sidewalk infill, or bike lane infill improvements.

*Freeman Drive between 95th Avenue and businesses lacks sidewalks on the south side.*



*Parkway Avenue near the Xerox campus is a Minor Arterial but does not include bike lanes. There is a sidewalk on the east side, but it ends at the boundary with the vacant parcel to the north.*



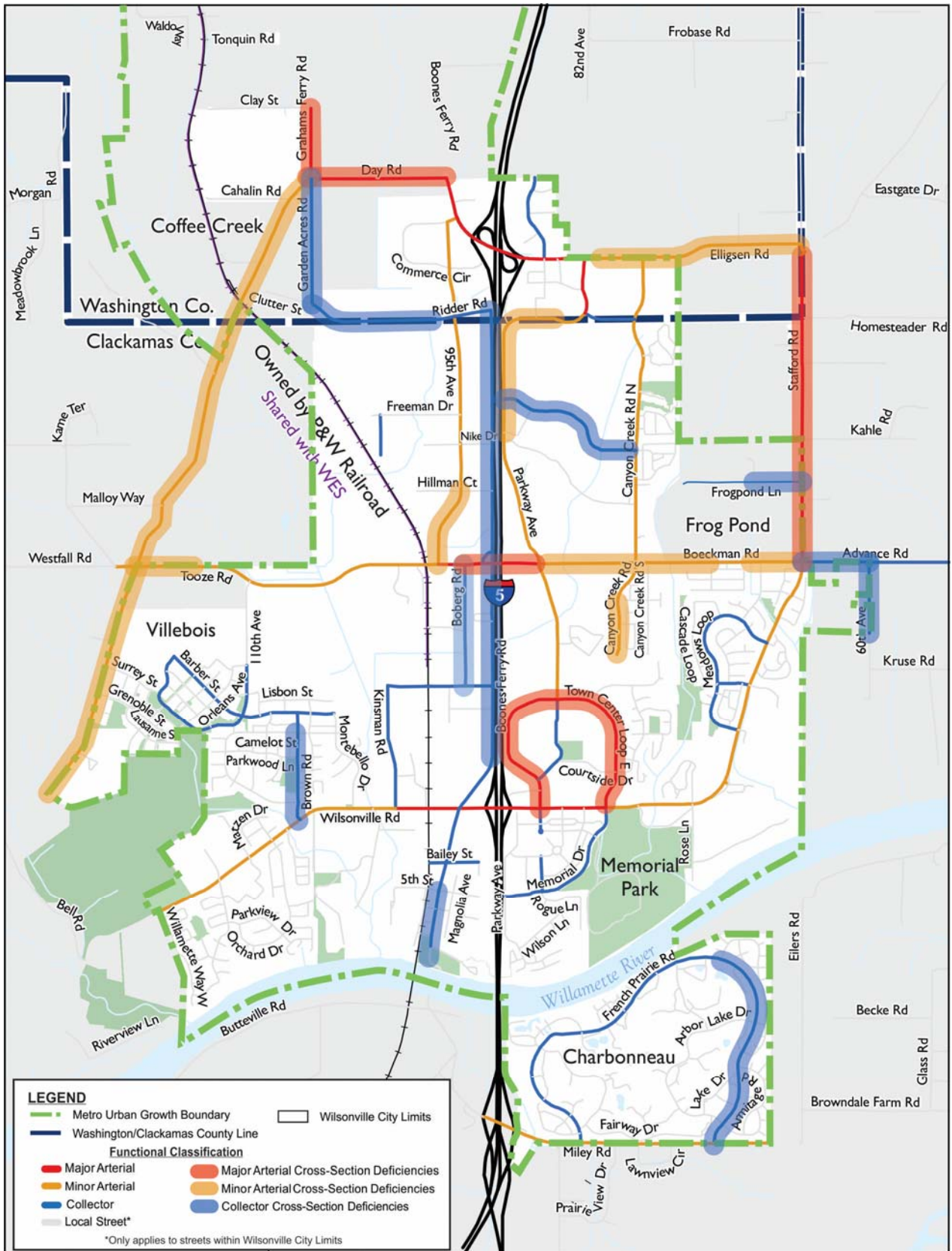

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*“I-5 poses some challenges because it serves as a barrier in between the east and west sides of town. This puts a lot of pressure on the few existing connections that make it harder for people to walk between one place and another.”*

*Katie Mangle  
Long Range Planning Manager*

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FIGURE 4-1. ROADWAY CROSS-SECTION DEFICIENCIES





## CAPACITY DEFICIENCIES

Capacity deficiencies for motor vehicles were identified throughout Wilsonville by evaluating traffic operations for a 2035 future scenario. The traffic forecasts were performed using a travel demand model based on Metro regional land use with the transportation network refined specifically for Wilsonville.

Due to the high level of detail, the Wilsonville travel demand model was able to more accurately represent local routing choices while also forecasting traffic pattern changes resulting from varying levels of congestion and delay expected for 2035. The model also assumed the completion of seven key roadway extensions (listed in the call-out box at right), as well as land use growth based on regional population and employment forecasts for the 2035 horizon year.

Figure 4-2 shows the 20 study intersections and five roadway segments that would not meet adopted mobility standards under the 2035 baseline scenario. These roadway capacity improvements would primarily be needed when the vacant land in their vicinity is developed.

The majority of the intersection and roadway deficiencies were identified in prior planning efforts and already included associated improvement projects. Therefore, many of the City's planned projects only required minor revisions, refinements, and prioritization adjustments. Along with minor changes to existing projects, a few new projects are also needed to meet the city's long term capacity needs.

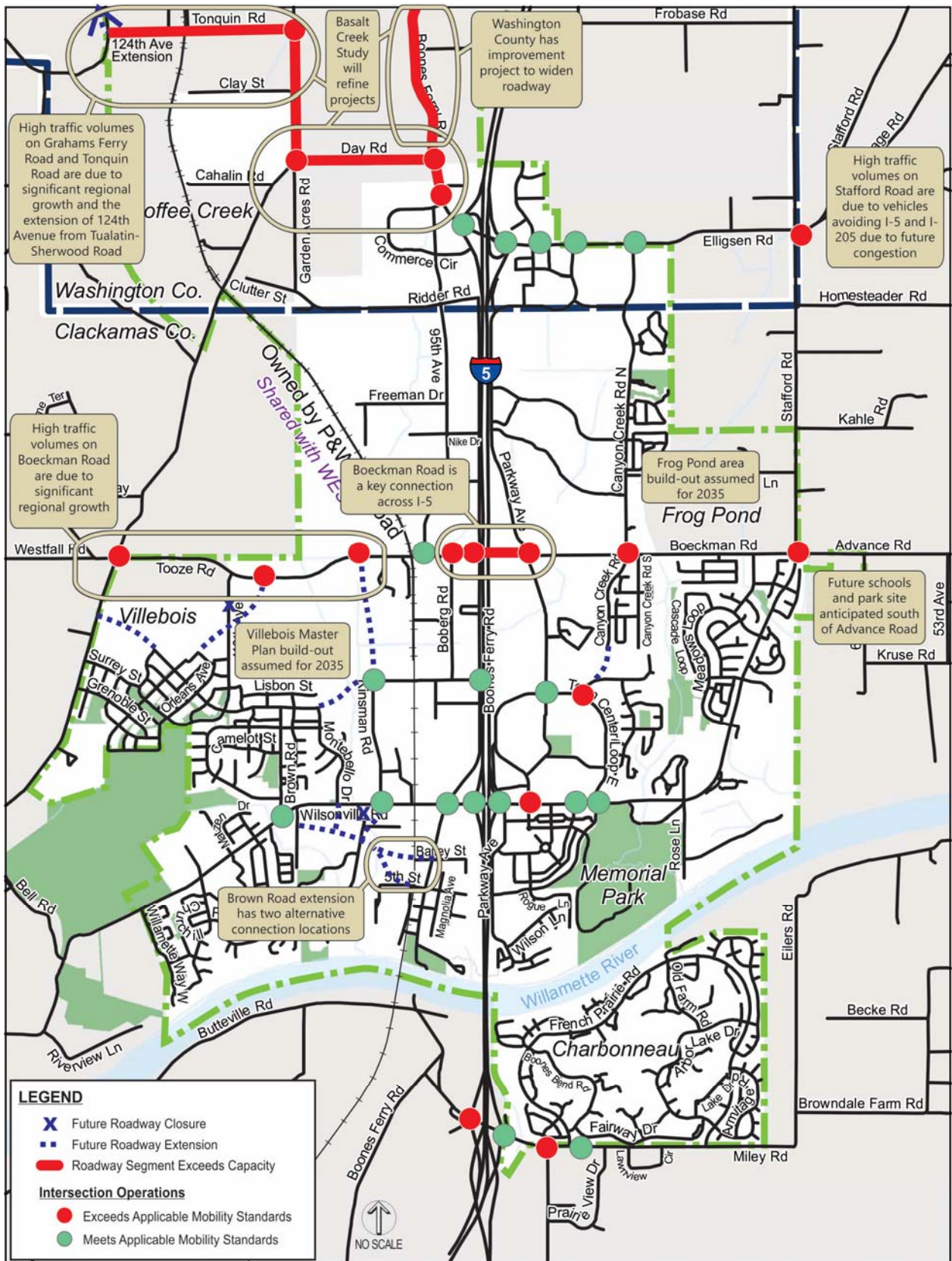
## 2035 BASELINE ROADWAY EXTENSION ASSUMPTIONS

Various roadway extensions throughout the city satisfy critical connectivity needs and would be constructed as development occurs. To account for the resulting traffic patterns, the 2035 baseline capacity analysis assumed the completion of these projects:

- **Barber Street Extension** from Kinsman Road to Montebello Drive, connecting the WES Station to Villebois (Regional Transportation Plan Project 10153, design plans are currently in process)
- **Barber Street Extension** to Grahams Ferry Road (Key roadway in Villebois Master Plan Area)
- **Villebois Drive Extension** to Boeckman Road (Key roadway in Villebois Master Plan Area to replace existing 110th connection)
- **Kinsman Road Extension** from Barber Street to Boeckman Road (Regional Transportation Plan Project 10130; design plans are currently in process)
- **Kinsman Road Extension** from Ridder Road to Day Road (Regional Transportation Plan Project 10853; key roadway in Coffee Creek Master Plan Area)
- **Brown Road Extension** (Currently has partial preliminary design plans for two alternatives)
- **Canyon Creek Road Extension** to Town Center Loop East (Small segment remains to finish connection; eligible as one of final projects using East Side Urban Renewal funding)

These roadway improvements are included in Figure 4-2, which also shows with the 2035 capacity

FIGURE 4-2. FUTURE 2035 CAPACITY DEFICIENCIES





## FREIGHT-RELATED DEFICIENCIES

In the past, Wilsonville relied on county and Metro designated freight routes. As a major employment center and industry hub along Interstate-5 (I-5), the city and its freight community will benefit from adopting a local freight plan and freight routes. Wilsonville's residential areas will also benefit from designating freight routes that avoid neighborhoods. The community would also benefit from increased marine freight traffic on the Willamette River.

The plan is a result of outreach to identify the city roadways used by freight carriers, as well as the freight-related deficiencies and problem locations on these roadways. This outreach included distribution of surveys to the city's major freight carriers, and a meeting with the Allied Waste commercial and

residential drivers, who service the entire city and have a particularly extensive understanding of the city's freight needs.

Figure 4-3 identifies the key gaps and deficiencies that were identified based on the feedback received. It also identifies the streets where freight vehicles are present, though not all of these should become designated freight routes.

The following feedback, which is more general in nature, was also provided by the freight carriers:

- Flashing yellow left-turn arrows at traffic signals are the preferable design treatment for protective/permissive phasing.
- Where possible, it is important to separate trucks from pedestrians and bicycles (especially on roadways and at tight intersection corners).
- There are inconsistent speeds on similar functioning roadways (for example, Boones Ferry Road versus Parkway Avenue).
- Trucks block traffic when they must wait off-site to access busy on-site loading docks.
- Improved loading areas and site access at retail establishments would aid delivery.
- There are limited direct routes for freight that exist between north and south Wilsonville.

### FREIGHT CARRIER OUTREACH

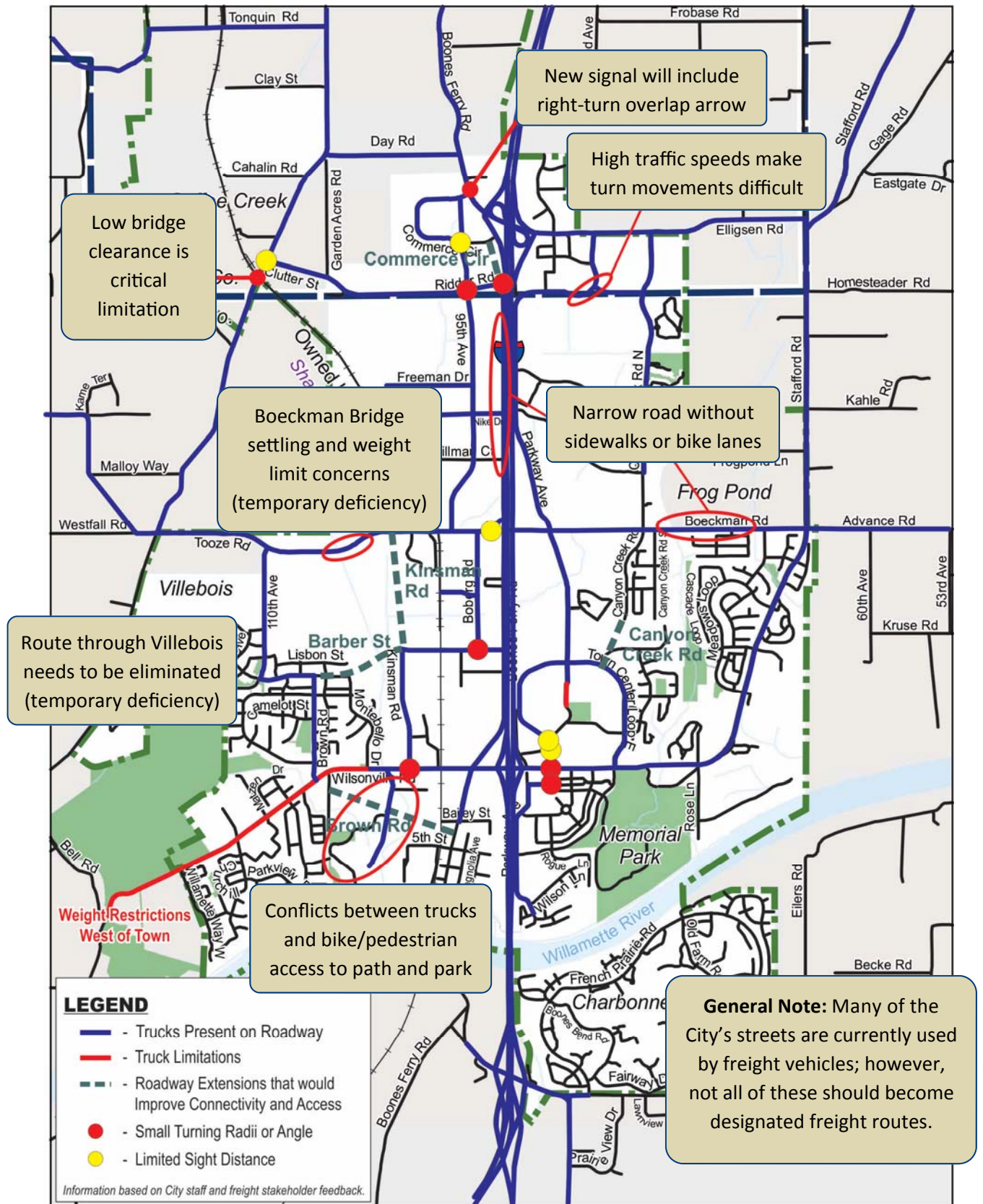
Multiple freight carriers provided feedback on freight routes and deficiencies:

- Allied Waste Services of Wilsonville
- Coca-Cola Bottling of Oregon
- Eaton Corporation
- FLIR Systems, Inc.
- Mentor Graphics Corp
- OrePac Building Products
- Owens & Minor Distribution Inc
- Parker Johnstone's Wilsonville Honda
- Rite Aid Distribution Center
- Rockwell Collins Head-Up Guidance Systems
- SYSCO Food Services of Portland
- Tyco Electronics Medical Products/Precision Interconnect Corp.
- US Crane & Hoist, Inc.
- Vision Plastics, Inc.
- Wilsonville Concrete
- Wilsonville Toyota
- Xerox Corporation



*Roadway congestion and queuing on Elligsen Road leads to increased delay to freight movement.*

FIGURE 4-3. FREIGHT-RELATED DEFICIENCIES



## BICYCLE AND PEDESTRIAN NEEDS

Bicycle and pedestrian facilities support complete community connectivity and opportunities for work, play, shopping, and exercise. They also help reduce traffic congestion, vehicle-miles traveled, and greenhouse gas emissions, while increasing the vibrancy and connectedness of communities and improving the health of city residents.

Figure 4-4 shows the major bicycle and pedestrian gaps and deficiencies in Wilsonville. These needs are due to the various barriers in the system relating to natural areas, topography, and existing development.

There is also a need for improved street cleaning and related maintenance to remove debris from the I-5 interchange areas on Wilsonville Road and Elligsen Road, which are under ODOT jurisdiction. These facilities serve as primary connections over the city's



*The lack of continuous bike lanes on Brown Road north of Wilsonville Road requires cyclists to use the travel lane.*

## SAFE ROUTES TO SCHOOL

Additional bicycle and pedestrian gaps and deficiencies were identified as part of the Safe Routes to School assessment that the City performed in collaboration with the West Linn-Wilsonville School District and each of the city's primary and middle school. These needs are identified in Chapter 6: The Programs.

two most significant barriers (i.e., Interstate-5 and the Willamette River).

Another pedestrian and bicycle need that affects Wilsonville is regional access to the nearby communities. The Ice Age Tonquin Trail and Boones Ferry Road improvements north of Day Road are two examples of facilities that will provide regional connectivity. In addition, Clackamas County has identified the need to provide bicycle facilities on Stafford Road and 65th Avenue to the north and east of Wilsonville. A connection to the south over the Willamette River is also a critical need to link to Charbonneau and the Willamette River Heritage Area (including Champoeg State Park and the Willamette Valley Scenic Bikeway).

To further enhance regional connectivity, the City should continue to coordinate with Clackamas County and Washington County to ensure that bicycle and pedestrian improvements on county roadways are identified in their county TSP updates and that these facilities connect to the city's bicycle and pedestrian systems.

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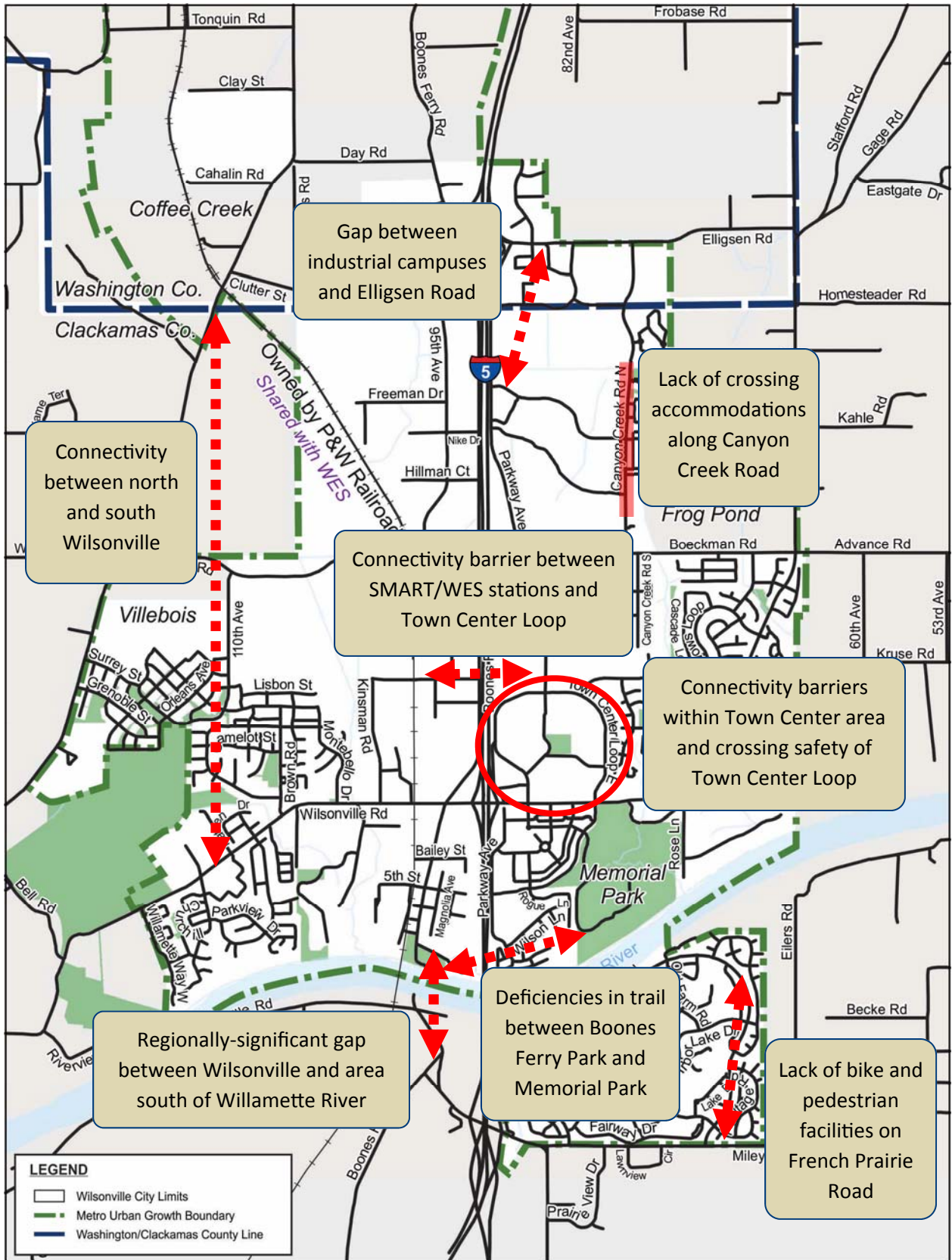
*“Right now there are many gaps where sidewalks end or cross into areas where there are no receiving facilities for them. So, the transportation system plan is looking at those gaps and will be trying to fill them.”*

*Al Levit  
Planning Commission*

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FIGURE 4-4. MAJOR BICYCLE AND PEDESTRIAN NEEDS



## TRANSIT NEEDS

Wilsonville is unique among the cities within the Portland Metro area because it has its own transit system. While the rest of Metro is served by TriMet, Wilsonville has been operating South Metro Area Regional Transit (SMART) since it withdrew from TriMet's service district in 1988.

A locally run transit system provides many benefits for Wilsonville's residents and employees. Because it is not dependent upon another agency, SMART is able to determine its own bus routes, frequencies, and fares. It currently provides fare-free service within Wilsonville and supports other programs unique to Wilsonville, such as the SMART Options program. SMART is financially supported by payroll taxes from its strong employment base.

SMART also experiences various challenges, including six key transit needs:

- **Regional Transit Connections** are important for SMART due to Wilsonville's central location between two metropolitan areas (Portland Metro and Salem-Keizer) and its large employment base. While it has existing connections to TriMet (Portland Metro) and Cherriots (Salem-Keizer), these connections should be improved as opportunities arise. For example, expanded service hours and express service to downtown Portland would benefit a larger population of employees and residents of Wilsonville.
- **Service Coverage and Bus Frequency** require ongoing adjustments as demand and resources change. SMART should provide transit service within 1/4-mile of land uses throughout the city. Currently, there are only a few areas that do not fall within the 1/4-mile coverage radius, including Wilson Lane on the east, Willamette Way and Orchard Drive on the west, and the majority of Charbonneau. SMART will need to be responsive

to the desires of the public and all affected neighbors before providing or removing service from a given neighborhood. SMART will also need to expand its service as new development occurs in the areas of Coffee Creek, Villebois, and Frog Pond. To expand coverage and service, SMART may require additional buses.

- **Pedestrian and Bicycle Access to Transit** can help improve transit service by providing safe and convenient connections at either end of transit trips. Pedestrian and bicycle networks that provide access to transit stops and good connectivity to all destinations throughout the city are important. They encourage increased use of transit, walking, and bicycling, which are

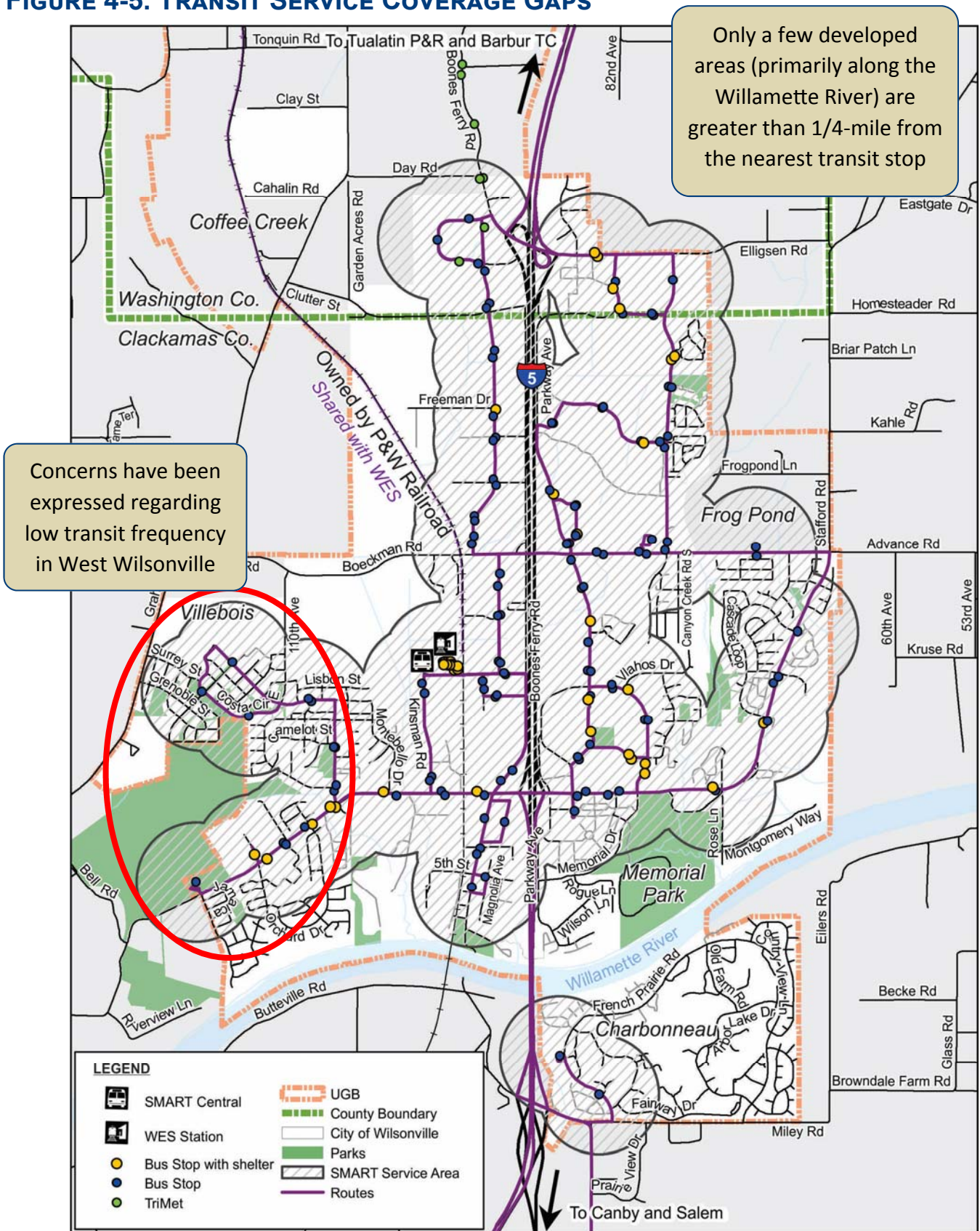
## RECENT TRANSIT IMPROVEMENTS

Since the prior 2008 Transit Master Plan was adopted, three major transit system improvements have been implemented that provide a backbone to the city's transit service:

- **SMART Central at Wilsonville Station** was constructed to act as SMART's main transportation hub and includes a 400 space park and ride lot, twelve bus bays, a new facility with an operator break room and public restrooms, shelters, and a clock tower with security cameras.
- **TriMet's Westside Express Service (WES) Commuter Rail** service began operating out of its new station located adjacent to the SMART Central at Wilsonville Station transit center.
- **SMART Bus Routes** changed to coordinate with WES train departures and arrivals.
- **SMART Operations Center** was built to house fleet and operations facilities, including administration offices, maintenance bays, and a bus parking area.



**FIGURE 4-5. TRANSIT SERVICE COVERAGE GAPS**



complementary travel modes and often used as part of the same trip. Some of the most important locations for access improvements include the Town Center Loop area and the Barber Street connection between Villebois Village and the SMART Central transit center. Other needs throughout the city should be addressed on an ongoing basis.

- **New Buses** are needed for SMART to maintain a quality transit fleet. Many of its buses are aging and require a greater amount of maintenance to keep them in operation. SMART can lower the amount of its budget that it spends on maintenance costs by replacing these buses. Additional buses will also be needed as growth occurs throughout the city. When possible, new buses should use alternative fuels, such as compressed natural gas. This will help SMART to reduce fuel costs and help meet regional and statewide goals for reducing greenhouse gas emissions.
- **Development Review** should address transit needs to ensure that transit users are accommodated as new development occurs in the city. SMART should be involved in the development review process to ensure that existing transit stops are improved and new stops, amenities or routes are provided as needed. In addition, when a new employment or commercial development occurs near a major transit stop, it should locate its building close to the transit stop.
- **Rider Education and Outreach** are ongoing needs that support and encourage transit ridership. One particular area where improvement is needed is adapting to new technology. This includes passenger access to ‘real time’ transit data and improved on-board amenities. Rider safety education is also an ongoing need.

## ENVIRONMENTAL JUSTICE

As stated by the Environmental Protection Agency, “Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (U.S. EPA, Environmental Justice, Compliance and Enforcement, Website, 2007).

Within the context of the TSP, Environmental Justice is an effort to identify underserved and vulnerable populations so the City can improve transportation services while reduce future inequalities. Two areas of particular need are Charbonneau (due to the higher proportion of elderly residents) and a small area on the southern edge of Villebois (due to lower income housing).

## SAFETY NEEDS

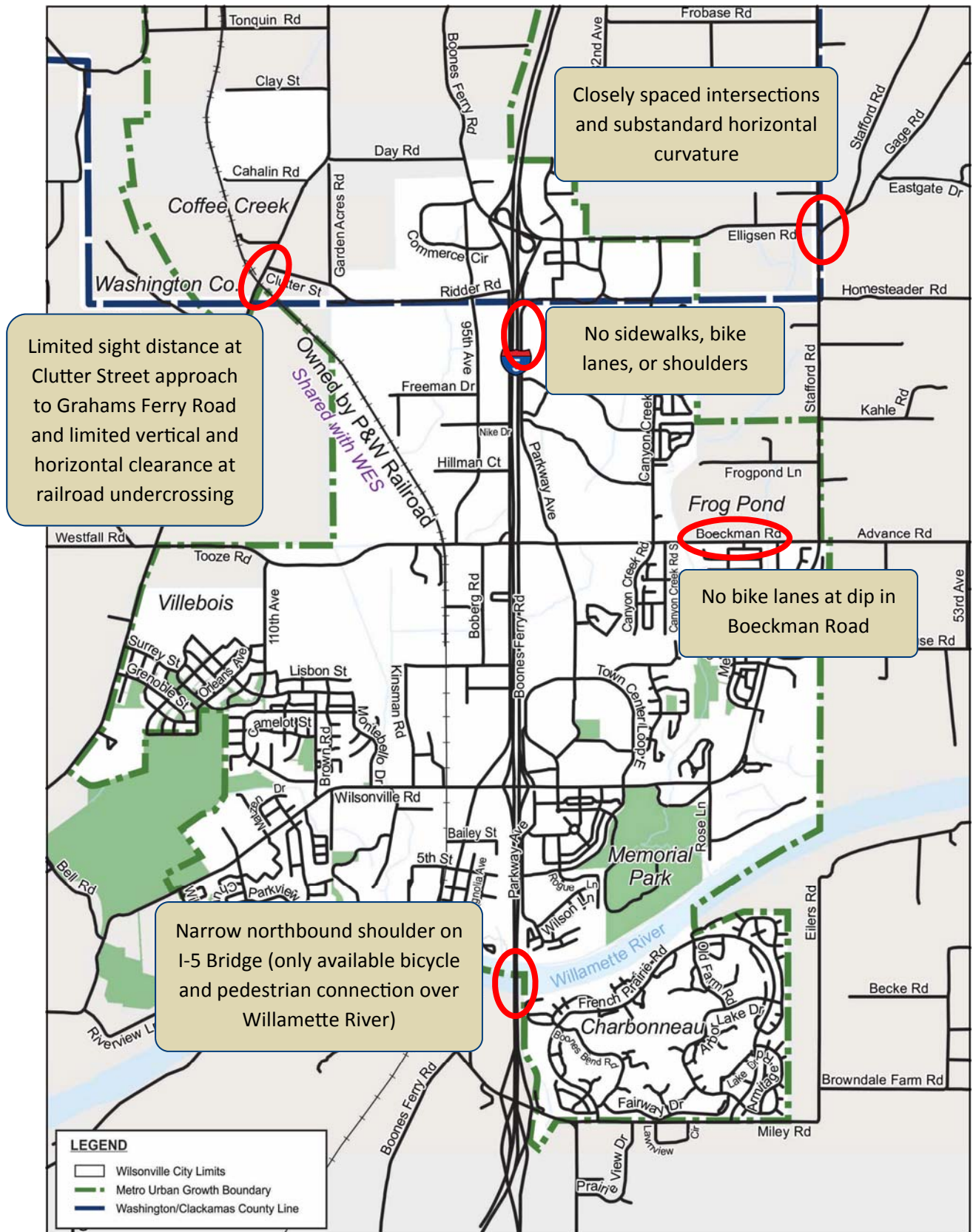
While there are no high-collision locations within Wilsonville, various safety-related deficiencies exist. Figure 4-6 shows five primary locations where there are existing safety concerns. Topography, roadway curvature, and nearby barriers (including I-5 and the railroad track) are key contributors.



*The railroad bridge over Grahams Ferry Road has limited horizontal and vertical clearance. This creates a safety hazard, particularly for bicyclists, pedestrians, and freight traffic.*



FIGURE 4-6. SAFETY DEFICIENCIES



## RAIL NEEDS

The primary rail-related deficiency in Wilsonville is the limited vertical and horizontal clearance that the railroad bridge over Grahams Ferry Road causes for trucks. This is also a safety deficiency.

ODOT Rail has a policy of not granting new at-grade crossings. Crossings may be relocated (i.e., a new one is provided but only if an old one is removed). Therefore, railroad tracks can pose a significant barrier to the transportation system due to the high cost of grade separated crossings. The primary location in Wilsonville where the railroad contributes to a roadway system gap is the potential Kinsman Road extension in the northwest quadrant (see the prior Multimodal Connectivity Gaps discussion in this chapter).

Another future item that may affect Wilsonville is that ODOT Rail is studying the feasibility of improving intercity rail service between Eugene and Portland (with the potential for developing a high-speed rail line). Portland and Western's Oregon Electric rail



*Portland and Western's Oregon Electric rail line runs north/south through Wilsonville and serves as an important freight and commuter rail corridor. However, it also creates a barrier to travel for other modes due to limited crossing locations.*

line, which runs through Wilsonville, is one of the existing rail alignments being studied. Depending on the outcome of this study, there may be additional passenger rail trains traveling through Wilsonville that would increase gate down time and rail related congestion for all modes of travel.

## AIR NEEDS

The City of Wilsonville has no direct jurisdictional control or responsibility for managing the Aurora Airport. However, the City, concerned citizens, and local businesses have participated in the Oregon Department of Aviation's (ODA) development of an updated Master Plan for the airport. The City acknowledges the adoption of the Master Plan by ODA and will continue to monitor planned improvements at the airport and coordinate with ODA and Marion County, who have jurisdictional responsibilities.

The City also has two, potentially conflicting interests that must be balanced related to the airport. These include noise sensitivity for city residents and the reliance local businesses have on the airport for corporate travel.

## WATER NEEDS

The City of Wilsonville has no direct jurisdictional control or responsibility for managing activities on the Willamette River. However, it supports efforts by Corps of Engineers to maintain the following two activities, which are essential for the river to function over time as a viable transportation facility:

- Periodic dredging to maintain channel depth to support applicable river traffic
- Maintenance of the Locks at Oregon City

## PIPELINE SYSTEM

A high-pressure natural gas mainline pipe exists in the vicinity of the Interstate-5 corridor. The location of this pipeline may impact a project's feasibility or limit available improvement options in its vicinity.

## TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS NEEDS

Transportation System Management and Operations (TSMO) improvements include integrated operations solutions that incorporate advanced technologies. Due to the regional significance of TSMO improvements, Clackamas County and Metro have prepared their own plans. Some key needs include:

- **Arterial Corridor Management** for Boones Ferry Road, Elligsen Road, 65<sup>th</sup> Avenue, Wilsonville Road, and Stafford Road to improve reliability and traveler information along the corridors. Arterial Corridor Management includes installing fiber optic cable to allow communication with the ODOT/County Transportation Management and Operations Center as well as other intelligent transportation devices such as variable message signs, CCTV cameras, traveler information and adaptive traffic signal systems.
- **Transportation Demand Management (TDM)** by supporting the SMART Options Program, which works with Wilsonville area employers and residents to promote transit and other transportation options that reduce traffic congestion, such as carpool, vanpool, bike, walk, and telecommute.
- **Regional Fiber Network Connections** between Wilsonville's traffic signals and Clackamas County's fiber network (Clackamas County currently maintains and operates the City's traffic signals on its behalf).

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*"We have a new beautiful interchange with much more capacity, but we don't want to use up the capacity just to get from one side of town to the other."*

*Ben Altman, Chair  
Planning Commission*

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- **Adaptive Signal Timing** and associated video monitoring cameras and vehicle detection equipment (to collect traffic counts and speeds) on Wilsonville Road from Brown Road to Town Center Loop East.
- **Closed Circuit Television Cameras** at the key locations along Wilsonville Road and I-5.
- **Video Monitoring Cameras and Vehicle Detection Equipment** (to collect traffic counts and speeds) on Elligsen Road from Day Road to Canyon Creek Road.
- **Railroad Crossing Alert System** at Portland and Western at-grade railroad crossings.

### RECENT TSMO PROJECTS

Through a collaborative effort by Wilsonville, Clackamas County, and ODOT, the following TSMO projects have already been implemented:

- **Wilsonville Road Traffic Signal Communications** were improved as part of the Wilsonville Road Interchange Improvements to help manage traffic operations.
- **I-5 Interchange Area CCTV Cameras** were installed by ODOT and linked to the ODOT Trip Check website to provide real time information to drivers traveling within and through Wilsonville.
- **Discover Wilsonville** was a one-year program to make sure every Wilsonville resident has all the information they need to use whatever travel options interest them.
- **Sunday Streets** was a special event focusing on connecting neighborhoods, parks, and people. Bicyclists, walkers, runners, seniors, adults, and children enjoyed traffic-free streets filled with physical activities, fun and



## ALTERNATIVE FUEL NEEDS

Within Wilsonville and throughout the Portland Metro area, there is an increasing need to provide infrastructure to support vehicles that use alternative fuels (i.e., electrical and compressed natural gas vehicles). These vehicles help to reduce greenhouse gas emissions and are becoming more popular and affordable. SMART already has a compressed natural gas fueling station that it will use for its bus fleet.

The City could consider identifying various electrical vehicle stations at strategic locations that serve both residential and business users. Level II charging stations (input voltage of 240 volts, which requires two to four hours for charging) already exist at City Hall (2 stations) and the Fred Meyer parking lot (2 stations). Additional locations that may be considered for Level II charging stations are the SMART Central transit center and Town Center Loop.

The City of Wilsonville could also take advantage of its location at the southern tip of the Portland Metropolitan area to install (or coordinate with a willing business to install) a Level III (480 volt) fast charging station, which require only 20 to 40 minutes to complete the charge. An ideal location would be near one of the I-5 interchanges.

Another option to be ready for the transition to electric transportation would be to include provisions in residential, commercial, and industrial building codes for supporting the required infrastructure. It would be less expensive to require new buildings and parking lots to have the required electrical wiring and outlets to support future electric vehicle charging stations than it would be to retrofit older buildings and parking lots. By taking this preliminary step in preparing its infrastructure, a smoother transition could be made to alternative fuels for vehicles.



*Electric vehicle charging stations, such as those located at Fred Meyer (shown above) and Wilsonville City Hall (shown below), allow patrons, employees, and visitors to charge their vehicles while working, shopping, and visiting Wilsonville.*



# The Projects

## Chapter 5



Wilsonville is responsible for managing an efficient and effective transportation system that supports the quality of life of its residents and the economic vitality of its businesses. This is no easy task, but the City can succeed by implementing programs and projects that provide three primary benefits:

- Reduce rush hour traffic
- Improve operations and safety
- Make strategic investments in new and expanded facilities to serve all modes.

Wilsonville should be engaged in these three activities simultaneously through a balanced effort of programs and projects to receive the greatest value from its infrastructure expenditures. This balanced approach can also guard against over-building roadway capacity.

The list of transportation projects that will repair or complete the transportation system through 2035 is based largely on past plans, but includes updated solutions. Constructing all of the identified transportation solutions would cost approximately \$218.2 million, which exceeds \$123.4 million, which is forecasted to be available through 2035 from both City and other funding sources. Therefore, Wilsonville must choose how to invest its limited resources to provide the greatest benefit to Wilsonville residents and businesses. The highest priority solutions to meet the most important transportation system needs are included in the “Higher Priority” project list, while all other projects are included in the “Planned” project list.

*Wilsonville will . . .*

- *Improve system efficiency,*
- *Reduce congestion, and*
- *Save money*

*By implementing programs and projects that . . .*

1. *Reduce rush hour traffic,*
2. *Improve operations and safety, and*
3. *Make strategic investments in new and expanded facilities to serve all modes*



## SYSTEM IMPROVEMENT PRIORITIES

Most of the transportation system improvement projects needed to address gaps and deficiencies in the system were identified in prior City plans, including its 2003 Transportation Systems Plan, 2006 Bicycle and Pedestrian Master Plan, 2008 Transit Master Plan, and multiple development master plans (see Chapter 1: The Context). The City's prior transportation projects were reconsidered, integrated, and revised to address updated information and prepare for the 2035 planning horizon.

Because transportation funding is limited, Wilsonville recognizes the importance of being fiscally responsible in managing and improving its transportation system. The diagram at right illustrates cost-effective steps and associated solution areas to resolving transportation needs by following a multimodal, network-wide approach. These five steps were considered from top to bottom when evaluating Wilsonville's transportation projects:

- **Manage** the performance of congested locations with strategies that reduce traffic conflicts, increase safety, and encourage more efficient usage of the transportation system. Intersection operational improvements are considered to fall under this category.
- **Reduce** the driving demand at congested locations by ensuring safe and available walking, biking, and transit options.
- **Revisit** land use decisions and congestion thresholds to support shorter driving trips or modified travel decisions.
- **Extend** streets to increase connectivity and create parallel routes that reduce the driving demand on congested facilities.
- **Expand** existing streets or intersections to increase the driving capacity of congested facilities.

## COST-EFFECTIVE STEPS TO RESOLVING TRANSPORTATION NEEDS

FIGURE 5-1. IMPROVEMENT PRIORI-



*“We want to create a transportation system that has multiple choices . . . That way we are not heavily reliant on the car, which will still stay a key element to the system. But we want to make sure we are providing options for bicycles, pedestrians, and transit.”*

*Ben Altman, Chair  
Planning Commission*

## PRIORITIZED SOLUTION AREAS

As illustrated in Figure 5-1, the City can best manage its transportation system by having plans, programs, and/or projects that address each of the following solution areas:

1. **Transportation System Management and Operations (TSMO)** strategies that improve the safety and efficiency of the current system, including Transportation Demand Management (TDM)
2. **Bicycle, Pedestrian, and Transit** system improvements that target key system gaps and safely accommodate all transportation users
3. **Land Use and Development Strategies** that (1) provide equal accessibility and connectivity to those users who choose to travel by transit, bicycle, and pedestrian modes and (2) utilize the City's functional classification hierarchy to reduce out-of-direction travel and manage congestion on arterials
4. **Connectivity** improvements that include motor vehicle, pedestrian, bicycle, and transit facilities to provide more direct routes for all transportation users between neighborhoods, schools, parks, and retail/industrial areas
5. **Motor Vehicle Capacity** improvements upon a demonstration that the other strategies are not appropriate or cannot adequately address identified transportation needs

General preference should be given to those listed first, but only to the degree to which they are more cost-effective at supporting the City's vision and goals (i.e., a transportation system that is safe, connected and accessible, functional and reliable, cost effective, compatible, robust, and promotes livability). Many of the City's projects include elements that address multiple solutions.

## PROJECT EVALUATION PROCESS

Wilsonville's transportation improvement projects were also evaluated and prioritized to help select which projects to include in the Higher Priority project list. Many projects had been evaluated and prioritized in recently adopted mode-specific transportation plans. As a result, the TSP evaluation process varied for the different modes:

- **Motor Vehicle Projects:** The projects were ranked according to a point-based technical scoring methodology using evaluation criteria consistent with the City's transportation goals. This allowed for a consistent method to understand how well the projects would meet the City's transportation goals and policies. In addition, community input was considered when prioritizing the projects.
- **Bicycle, Pedestrian, and Transit Projects:** The project priorities in the 2006 Bicycle and Pedestrian Master Plan and 2008 Transit Master Plan were reviewed, and a few changes were made based on City staff and public input. The majority of the higher priority bicycle and pedestrian projects were included in the Higher Priority project list, even if it would require them to be constructed separately from associated motor vehicle projects.

Prioritizing the projects in this way allowed for them to be separated into two lists: the "Higher Priority" project list includes the highest priority solutions to meet the City's most important transportation system needs, while the "Additional Planned" project list includes all of the other projects.



## HIGHER PRIORITY PROJECTS

The “Higher Priority” project list includes the recommended projects reasonably expected to be funded through 2035. These are the highest priority solutions to meet the City’s most important needs. These projects will inform the City’s yearly budget and 5-year Capital Improvement Plan (CIP). As shown in Table 5-1, the Higher Priority projects would cost a total of \$118.0 million, which is consistent with forecast available funding through 2035.

Figures 5-2 through 5-6 show locations of the projects, and corresponding project details are included in Tables 5-1 through 5-5 (project numbering is alphabetical). Some of the City’s Higher Priority projects are not associated with a specific location but instead will be applied citywide as needed. These projects are listed in Table 5-6. Additional project details are included in the appendix (where they are sorted by project type).

**Table 5-1. Higher Priority Project Costs<sup>a</sup>**

Project Type	2011 Cost Estimate
Roadway Extensions	\$55,255,000
Roadway Widening	\$19,500,000
Urban Upgrades	\$58,355,000
Spot Improvements	\$3,000,000
Standalone Bicycle and Pedestrian Improvements	\$16,520,000
Transit Improvements	\$500,000
<b>Total Higher Priority Project Costs</b>	<b>\$153,130,000</b>

<sup>a</sup> See Tables 5-2, 5-3, 5-4, 5-5, and 5-6 for individual project costs.

### PROJECT TYPES

**RE – Roadway Extensions (Multimodal Connectivity):**

New transportation facilities in Wilsonville will connect neighborhoods to one another and to other important destinations. Many of the bicycle and pedestrian improvements related to roadway extensions will fill important system gaps so that neighborhoods have improved non-motorized connectivity, while roadway extension projects are the key motor vehicle improvements that provide increased connectivity in Wilsonville. The roadway extensions help the City to meet the one-mile arterial and half-mile collector spacing standards, consistent with City and regional policy.

**RW – Roadway Widening (Capacity):** The roadway widening projects increase roadway capacity.

**UU – Urban Upgrades (Multimodal Connectivity and Safety):** The urban upgrade projects complete existing roadways, and often improve connectivity by adding bike lanes, sidewalks, and turn lanes that accommodate access to adjacent neighborhoods.

These projects improve the roadways to meet the City’s cross-section standards.

**SI – Spot Improvements (Transportation System Management and Operations):** Spot improvements consist of isolated intersection improvements and safety improvements throughout the city.

**BW, SR, LT, and RT – Standalone Bicycle and Pedestrian Improvements (Multimodal Connectivity and Safety):** While many bicycle and pedestrian facilities will be constructed as elements of roadway extension and widening projects, there are a number of projects that the City should construct separately or as part of future development. These include the highest priority bikeways/walkways (**BW**), Safe Routes to School projects (**SR**), local trails (**LT**), and regional trails (**RT**).

**TI – Transit Improvements:** Transit projects are needed throughout the city to provide bus stop amenities and improve bicycle and pedestrian access to



FIGURE 5-2. HIGHER PRIORITY PROJECTS

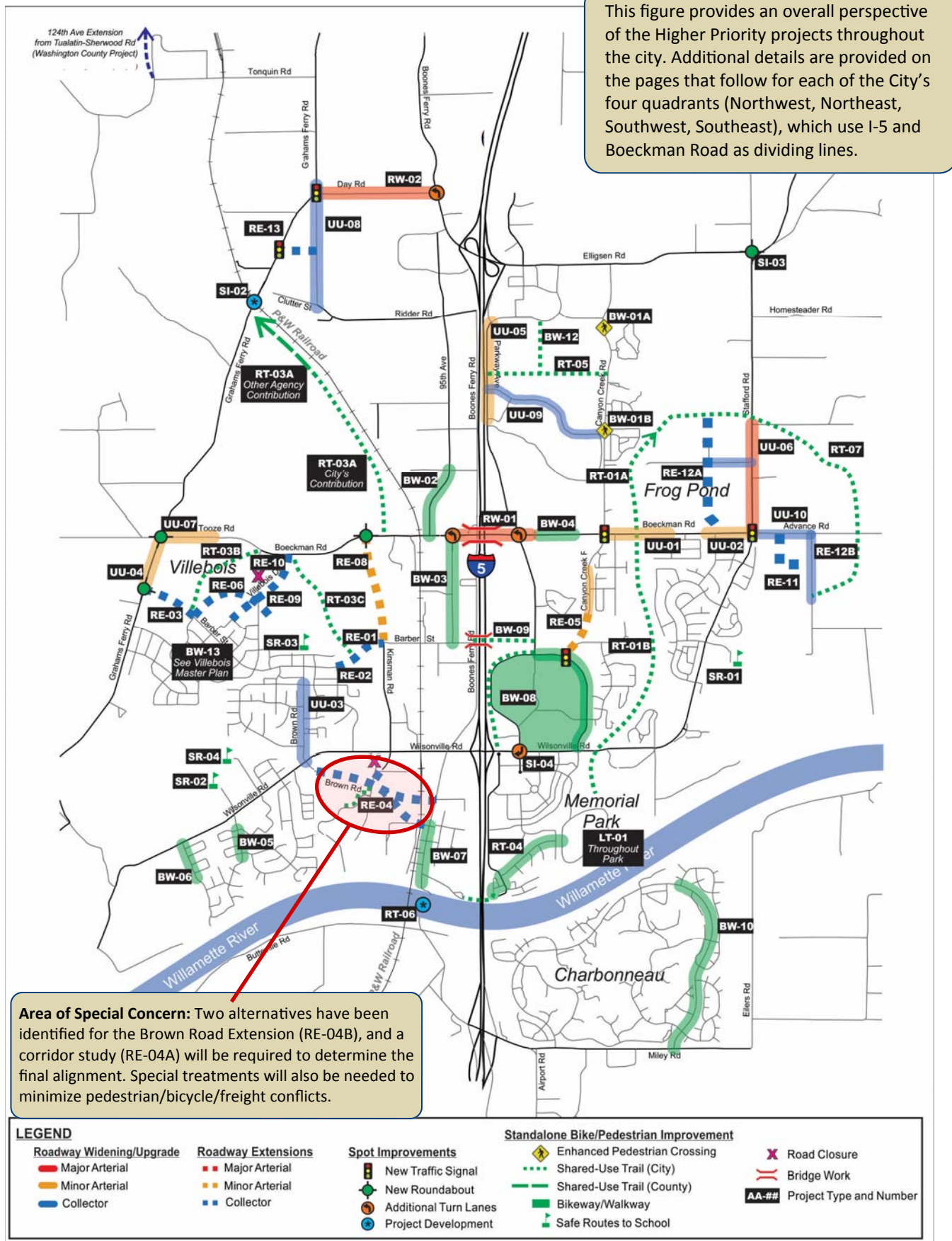


Table 5-2. Higher Priority Projects (Northwest Quadrant)

Project	Description	Cost
<b>Roadway Extensions</b>		
RE-13 Java Road Connection and Signal	Construct Java Road from Boones Ferry Road to Grahams Ferry Road and Garden Acres Road with a signal at the Java Road/Grahams Ferry Road intersection and disconnect Clutter Street from Grahams Ferry Road.	\$1,500,000
<b>Urban Upgrades</b>		
UU-08 Garden Acres Road Urban Upgrade	Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade the Garden Acres Road/Day Road intersection to either a signal or a roundabout. Realign Ridder Road to Garden Acres Road. Close the existing Clutter Road connection to Grahams Ferry Road after completion of Project RE-13. Close the existing Coffee Creek Correctional Facility driveway to Grahams Ferry Road and relocate the driveway to Cahalin Road.	\$14,260,000
<b>Roadway Widening</b>		
RW-02 Day Road Widening	Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/Boones Ferry Road intersection.	\$5,900,000
<b>Spot Improvements</b>		
SI-02 Grahams Ferry Railroad Undercrossing Project Development	Perform preliminary analysis to determine needs, feasibility, etc.	\$500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-02 95th Avenue Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of 95th Avenue from Boeckman Road to Hillman Court, and construct transit stop improvements.	\$85,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>		
RT-03A Ice Age Tonquin Trail (North)	Construct sections of the Ice Age Tonquin Trail north of Boeckman Road; City to construct portion within City limits (approximately \$750,000) and coordinate portion farther north with Washington County and neighboring cities.	\$2,040,000 (Partial Regional funding)

**FIGURE 5-3. HIGHER PRIORITY PROJECTS (NORTHWEST QUADRANT)**

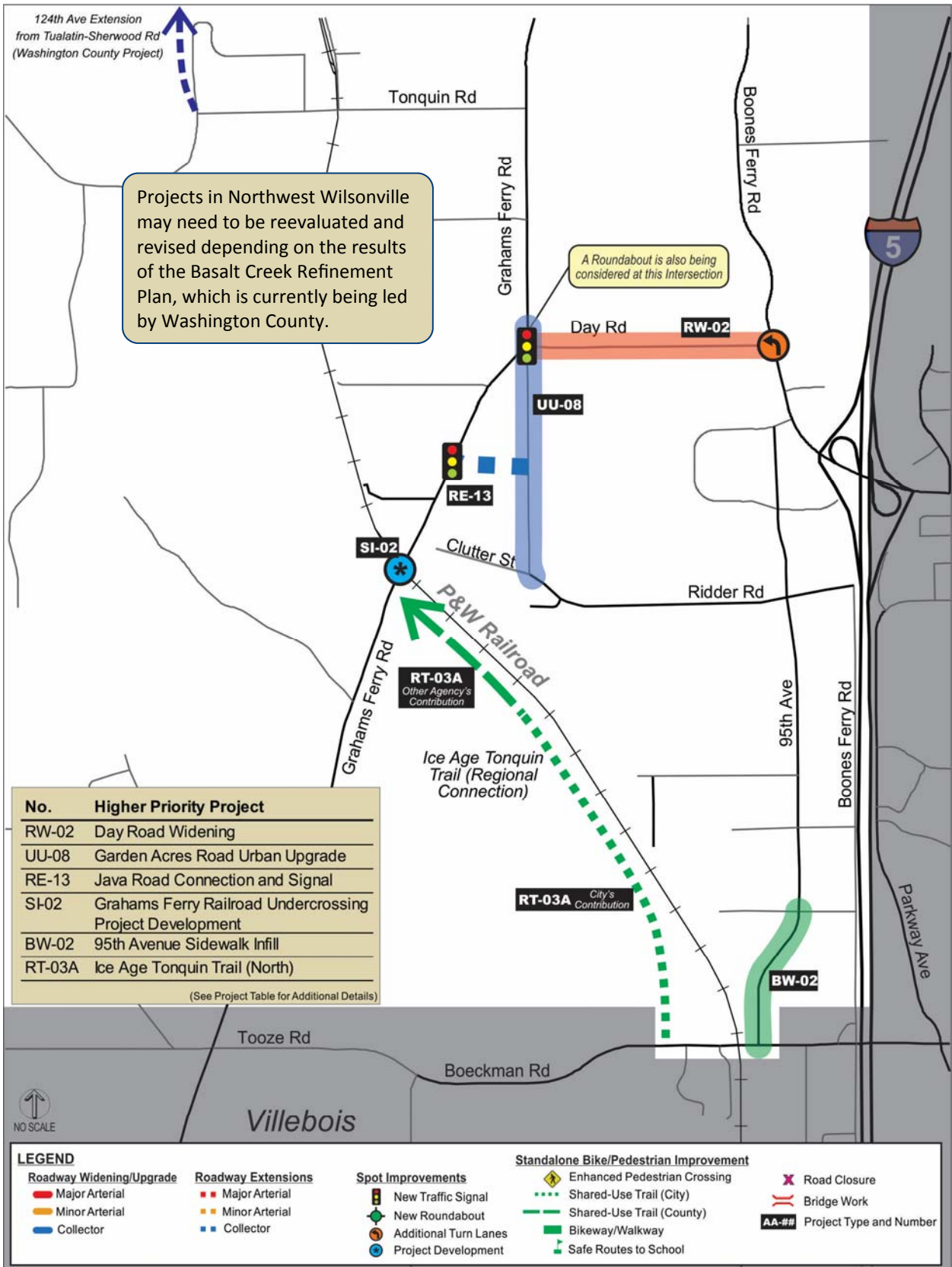


Table 5-3. Higher Priority Projects (Northeast Quadrant)

Project	Description	Cost
<b>Roadway Extensions</b>		
RE-11 Meridian Creek Middle School Site Improvements	Construct the collector roadways and site improvements associated with the proposed Meridian Creek Middle School site	\$1,600,000
RE-12A Frog Pond West Neighborhood Collector Roads	Construct the collector roadways within the west neighborhood as identified in the Frog Pond Area Plan	\$9,510,000
RE-12B Frog Pond South Neighborhood Collector Roads	Construct the collector roadways within the south neighborhood as identified in the Frog Pond Area Plan	\$2,650,000
<b>Roadway Widening</b>		
RW-01 Boeckman Road Bridge and Corridor Improvements	Widen Boeckman Road from Boberg Road to 500 feet east of Parkway Avenue to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes reconstruction of the bridge over I-5 and improvements at Boeckman Road/Boberg Road and Boeckman Road/Parkway Avenue intersections and adjacent transit stops	\$13,600,000
<b>Urban Upgrades</b>		
UU-01 Boeckman Road Dip Improvements	Upgrade at vertical curve east of Canyon Creek Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); options should also be considered to make connections to the regional trail system and to remove the culvert and install a bridge	\$12,220,000
UU-02 Boeckman Road Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); project includes a traffic signal or roundabout at the Boeckman Road-Advance Road/Stafford Road-Wilsonville Road Intersection	\$2,100,000
UU-05 Parkway Avenue Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements)	\$5,000,000
UU-06 Stafford Road Urban Upgrade	Upgrade to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements)	\$4,200,000
UU-09 Printer Parkway Urban Upgrade	Upgrade Printer Parkway to a three-lane collector with bicycle lanes and multiuse path	\$3,600,000
UU-10 Advance Road Urban Upgrade	Upgrade Advance Road to collector standards starting at Stafford Road to the proposed 63 <sup>rd</sup> Avenue (entrance to proposed Meridian Creek Middle School)	\$3,175,000
<b>Spot Improvements</b>		
SI-03 Stafford Road/65th Avenue Intersection Improvements	Improve turn radii, sight distance and grade differential by combining intersections as either a roundabout or traffic signal	\$2,000,000 (Partial County funding)
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-01 Canyon Creek Road Enhanced A/B Pedestrian Crossings	Install two new pedestrian crossings of Canyon Creek Road that include rectangular rapid flashing beacons (RRFBs), center pedestrian median island, signage, etc. (final locations to be determined)	\$130,000
BW-04 Boeckman Road Bike Lanes and Sidewalk Infill	Construct bike lanes (both sides of street) and sidewalks (south side of street) from Parkway Avenue to Canyon Creek Road	\$515,000
BW-12 Parkway Center Trail Connector	Construct shared-use path as development occurs; with connection to proposed regional trail (Wiedeman Road Trail) on the south	\$120,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>		
RT-01A Boeckman Creek Trail (North)	Construct north-south trail through east Wilsonville following Boeckman Creek, with connections to neighborhoods, parks, and intersecting roads (may need a boardwalk for various sections and would require a comprehensive public process)	\$850,000
RT-05 Wiedeman Road Trail	Construct east-west trail in north Wilsonville near the Xerox campus with City responsible for portion through developed land and future developer responsible for portion on future development site	\$340,000
RT-07 Revised Frog Pond Regional Trail	Construct the regional trail identified in the Frog Pond Area Plan	\$700,000



FIGURE 5-4. HIGHER PRIORITY PROJECTS (NORTHEAST QUADRANT)

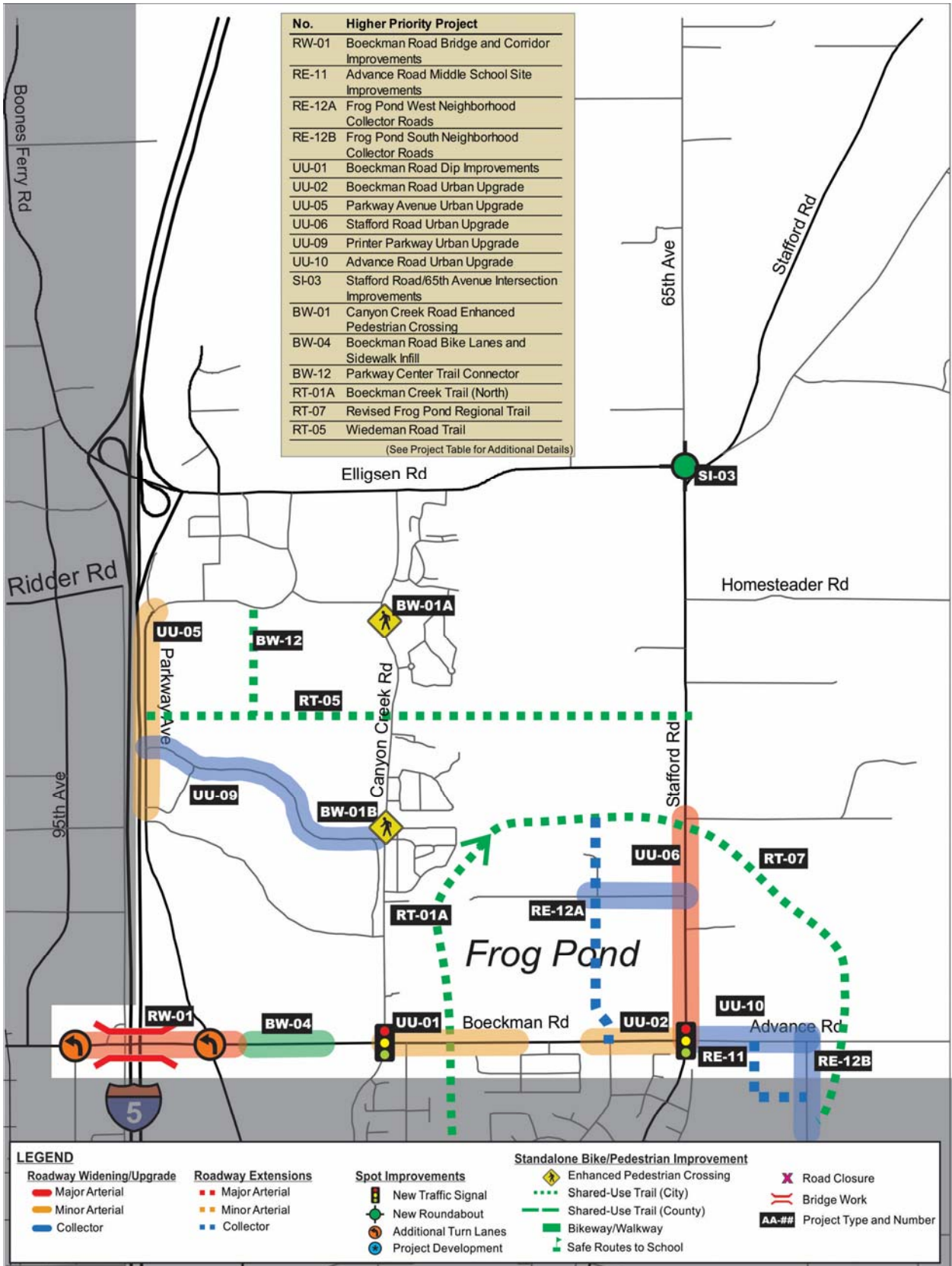




Table 5-4. Higher Priority Projects (Southwest Quadrant)

Project		Description	Cost
<b>Roadway Extensions</b>			
RE-01	Barber Street Extension	Construct 2-lane roadway with bridge, bike lanes, sidewalks, and transit stop improvements from Kinsman Road to Coffee Lake Drive to facilitate access and circulation to WES Station and Villebois	\$8,315,000
RE-02	Barber Street Extension (Part 2)	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Coffee Lake Drive to Montebello Drive to facilitate access and circulation to WES Station and Villebois	\$400,000
RE-03	Barber Street through Villebois	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Monte Carlo Avenue to Grahams Ferry Road	\$520,000
RE-04A	Corridor Study for Brown Road Extension	Perform a corridor study to determine the recommended Brown Road extension alignment (i.e., connection at either Bailey Street or 5th Street)	\$20,000
RE-04B	Brown Road Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Wilsonville Road to Boones Ferry Road (connect at either Bailey Street or 5th Street); includes roadway connection to Kinsman Road (with bike lanes and sidewalks), portion of Ice Age Tonquin Trail connecting to trial terminus on Arrowhead Creek Lane, and Brown Road/Kinsman Road intersection	\$15,200,000
RE-06	Costa Circle Loop Extension	Construct remaining 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Villebois Drive to Mont Blanc Street	\$3,000,000
RE-08	Kinsman Road Extension (South)	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Barber Street to Boeckman Road; project also includes a roundabout at Kinsman Road/Boeckman Road intersection	\$8,400,000
RE-09	Villebois Drive Extension	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Costa Circle to Coffee Lake Drive	\$390,000
RE-10	Villebois Drive Extension (Part 2)	Construct 2-lane roadway with bike lanes, sidewalks, and transit stop improvements from Coffee Lake Drive to Boeckman Road	\$250,000
<b>Urban Upgrades</b>			
UU-03	Brown Road Upgrades	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stops)	\$3,500,000
UU-04	Grahams Ferry Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Barber Street intersection	\$2,400,000
UU-07	Tooze Road Urban Upgrade	Upgrade to meet cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit stop improvements); includes roundabout at Grahams Ferry Road/Tooze Road intersection	\$7,900,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>			
BW-03	Boberg Road Sidewalk Infill	Fill in gaps in the sidewalk network on the east side of the roadway from Boeckman Road to Barber Street, and construct transit stop improvements	\$375,000
BW-05	Willamette Way East Sidewalk Infill	Fill in gaps in the sidewalk network on the west side of the roadway from Chantilly to south of Churchill (part of Ice Age Tonquin Trail)	\$50,000
BW-06	Willamette Way West Sidewalk Infill	Construct a new sidewalk on west side of the roadway from Wilsonville Road to Paulina Drive	\$50,000
BW-07	Boones Ferry Road Sharrows	Stripe sharrows (shared travel lanes) from 5th Street to Boones Ferry Park; this will connect Ice Age Tonquin Trail (once the portion along the Brown Road Extension is completed) to Waterfront Trail	\$5,000
BW-13	Villebois Loop Trail	Construct shared-use path as part of Villebois development; include connections to Villebois Greenway, the Ice Age Tonquin Trail, and the Village Center	\$180,000
<b>Standalone Pedestrian and Bicycle Improvements (Safe Routes to School)</b>			
SR-02	Boones Ferry Primary Safe Routes to School Improvements	Construct shared-use path between Boones Ferry Primary and Wood Middle School, a bicycle parking shelter near the school, and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road	\$200,000
SR-03	Lowrie Primary Safe Routes to School Improvements	Construct shared-use path from existing connection of Lowrie Primary School to Barber Street as part of Villebois development; include connections to new school, Ice Age Tonquin Trail, and Barber Street To future connections	\$150,000
SR-04	Wood Middle School Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a shared-use path connecting the bicycle shelter to the sidewalks along Wilsonville Road; also widen and stripe the Park at Merryfield Trail, which connects Wood Middle School to Camelot Street to the north	\$150,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>			
RT-03	Ice Age Tonquin Trail B/C (Villebois)	Construct the remaining sections of the Ice Age Tonquin Trail within Villebois Village in conjunction with development and adjacent roadway improvements	\$560,000
RT-06	Willamette River Bike/Pedestrian and Emergency Bridge Project Development	Perform feasibility study and project development for bike/pedestrian/emergency bridge over the Willamette River to provide a non-motorized alternative to the I-5 freeway deck	\$1,380,000 (Partial Regional funding)

FIGURE 5-5. HIGHER PRIORITY PROJECTS (SOUTHWEST QUADRANT)

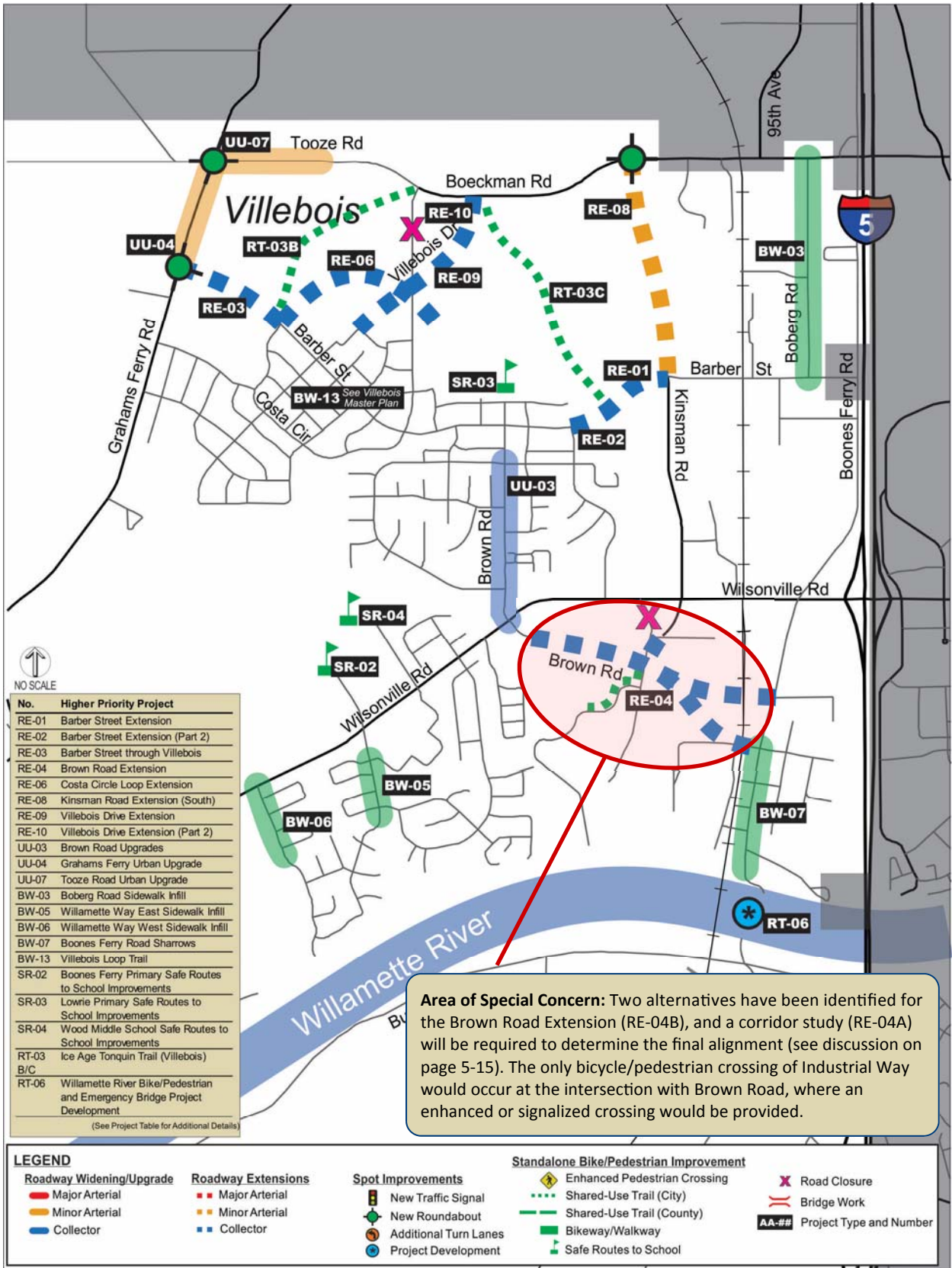


Table 5-5. Higher Priority Projects (Southeast Quadrant)

Project	Description	Cost
<b>Roadway Extensions</b>		
RE-05 Canyon Creek Road Extension	Construct remaining 3-lane roadway with bike lanes, sidewalks, and transit stop improvements from existing terminus to Town Center Loop East; project also includes realigning a portion of Vlahos Drive (so it intersects Canyon Creek Road) and installing a traffic signal at the Town Center Loop East/Canyon Creek Road intersection	\$3,500,000
<b>Spot Improvements</b>		
SI-04 Wilsonville Road/Town Center Loop West Intersection Improvements	Widen the north leg of the intersection and install a second southbound right-turn lane (dual lanes)	\$500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-08 Town Center Loop Pedestrian, Bicycle, and Transit Improvements	Create more direct connections between destinations within Town Center area, improve accessibility to civic uses and transit stops, retrofit sidewalks with curb ramps, highlight crosswalks with colored pavement, and construct other similar treatments that support pedestrian, bicycle, and transit access and circulation; also construct shared-use path along Town Center Loop West from Wilsonville Road to Parkway Avenue and restripe Town Center Loop East from Wilsonville Road to Parkway Avenue to a three-lane cross-section with bike facilities	\$500,000
BW-09 Town Center Loop Bike/Pedestrian Bridge	Construct bike/pedestrian bridge over I-5 approximately aligned with Barber Street to improve connectivity of Town Center area with businesses and neighborhoods on west side of I-5; include aesthetic design treatments	\$4,000,000
BW-10 French Prairie Drive Pathway	Construct 10-foot wide shared-use path along French Prairie Drive from Country View Lane to Miley Road or reconfigure existing roadway to remove a travel lane in each direction and add bicycle and pedestrian facilities	\$1,140,000
<b>Standalone Pedestrian and Bicycle Improvements (Safe Routes to School)</b>		
SR-01 Boeckman Creek Primary Safe Routes to School Improvements	Construct a bicycle parking shelter near the school and a new 10 to 12-foot bike path on the south side of the existing sidewalk that meanders south of the tree line and connects to the existing marked crosswalk near the school parking lot	\$65,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>		
LT-01 Memorial Park Trail Improvements	Construct trails throughout Memorial Park, including the Memorial Park Center Loop Trail, the River Trail, Kolbe Homestead Trail, and Klein Homestead Trail	\$595,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>		
RT-01B Boeckman Creek Trail (South)	Construct north-south trail through east Wilsonville following Boeckman Creek, with connections to neighborhoods, parks, and intersecting roads (may need a boardwalk for various sections and would require a comprehensive public process)	\$1,150,000 (Partial Regional funding)
RT-04 Waterfront Trail Improvements	Improve the condition of the shared-use path as it passes underneath the I-5 Boone Bridge by removing the Jersey barriers, installing bollards, widening the trail, adding appropriate pedestrian features such as benches and lighting, and altering the grade of the path underneath the underpass to make it more easily accessible	\$125,000

FIGURE 5-6. HIGHER PRIORITY PROJECTS (SOUTHEAST QUADRANT)

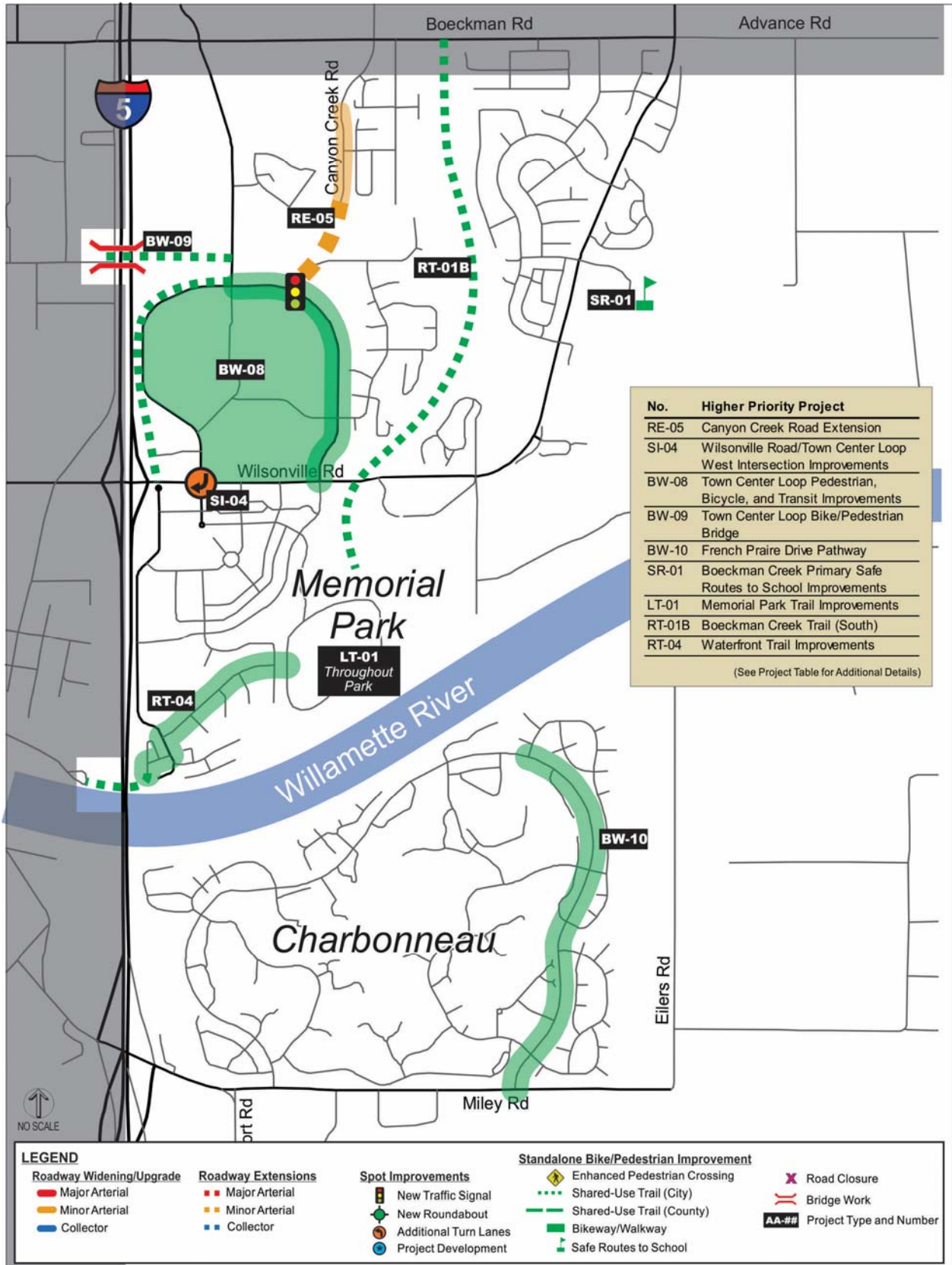




Table 5-6. Higher Priority Projects (Citywide)

Project	Description	Cost
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>		
BW-14 Wayfinding Signage	Provide bicycle, pedestrian, and transit wayfinding signage directing users to/from the Ice Age Tonquin Trail, the SMART and WES transit center, and other points of interest throughout the city	\$65,000
BW-15 Property Acquisitions for Bike/Ped Connectivity	Provide set-aside funds to allow purchase of strategically located properties that can facilitate bicycle and pedestrian connections as these properties become available.	\$1,000,000
<b>Transit Improvements</b>		
TI-01 Pedestrian Access to Transit	Construct sidewalk and curb ramp improvements at SMART stops throughout the city to meet ADA requirements, create safe street crossings, and connect new development with transit (includes retrofits at substandard stops)	\$200,000
TI-02 Transit Street Improvements	Widen roadways or construct sidewalk extensions on a case-by-case basis to improve transit on-time performance and passenger/pedestrian safety; may involve on-site bus turnarounds with project owner approval	\$300,000

Table 5-7 provides a side-by-side comparison of the estimated funding sources available and how much they would contribute to the Higher Priority projects. Additional cost information is provided in the

appendix. The planning level project costs are intended to cover a moderate level of unanticipated costs that may arise at the time the projects are constructed.

Table 5-7. Higher Priority Project Funding Sources and Contributions

Project Type	Capital Improvement Funding Estimates through 2035	
	Approximate Funding Available	Contributions to Higher Priority Projects
Street System Development Charges (SDCs) and Developer Contributions	\$72 million	\$68.6 million
West Side Plan – Urban Renewal District	\$27 million	\$26.6 million
Year 2000 Plan – Urban Renewal District	\$5 million	\$3.5 million
Park System Development Charges (SDCs)	\$0.7 million <sup>a</sup>	\$0.7 million
Local/Regional Partnerships	\$2.9 million <sup>a</sup>	\$2.9 million
Grants	\$3.2 million <sup>a</sup>	\$3.2 million
State and Federal Funding	\$12.6 million <sup>a</sup>	\$12.6 million
<b>Total</b>	<b>\$123.4 million<sup>a</sup></b>	<b>\$118.1 million</b>

<sup>a</sup> The approximate funding levels estimated for various sources were considered to be equal to the contributions due to the prior experience of how the City has been able to fund transportation projects. If the City is unable to obtain local/regional partnerships, grants, and/or state and federal funding, then the associated projects that assume these funding sources may have to be put on hold until other funding becomes available.



## BROWN ROAD EXTENSION ALTERNATIVES

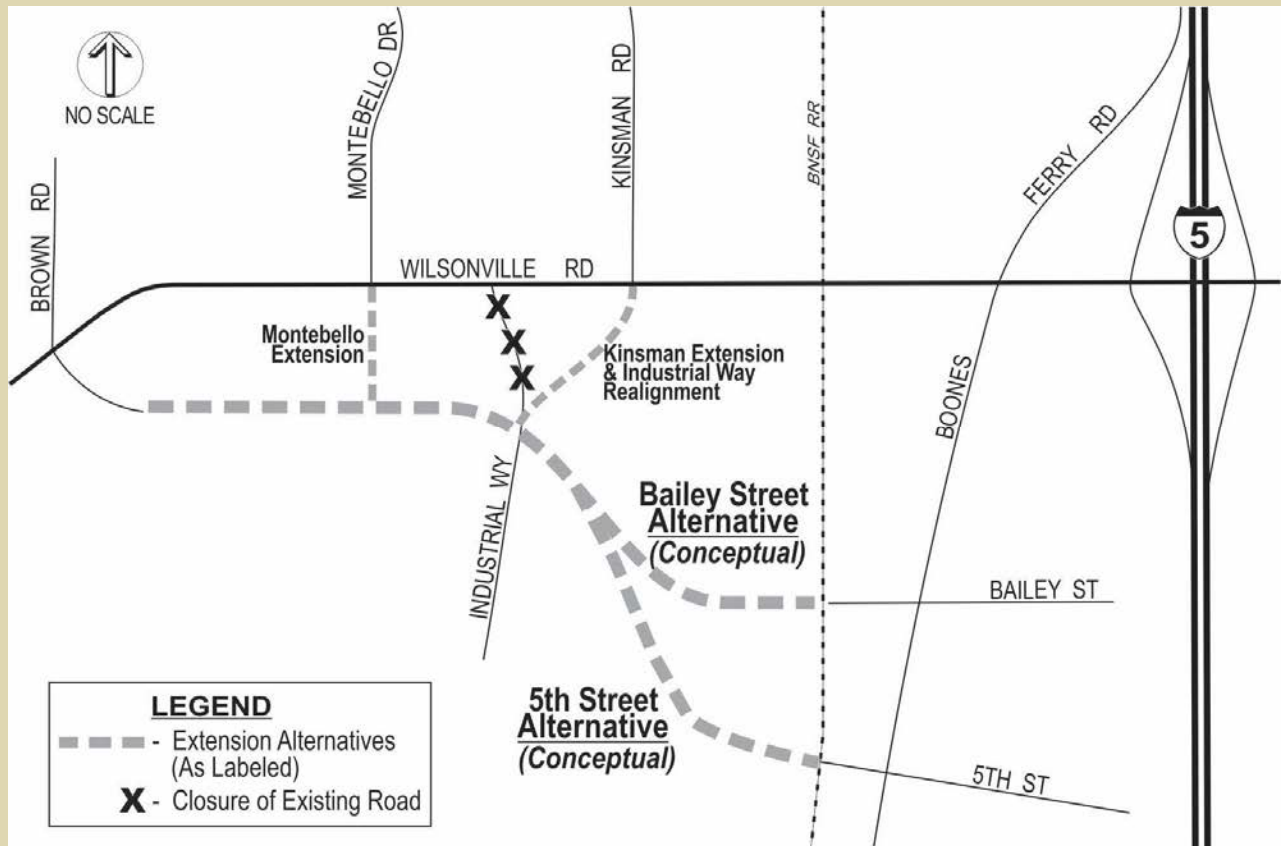
From a transportation planning standpoint, both Brown Road extension alternatives would provide comparable benefits to the transportation network. Selection of an alignment should be made during or prior to the master planning process for the large area south of Wilsonville Road and west of the railroad tracks.

The following factors should be considered as part of selecting a future alignment:

- Access
- Bicycle and pedestrian network connections
- Environmental impacts
- Freight benefits/impacts
- Future development plans and land use changes in the two areas most impacted by

the roadway extension: (1) west of the railroad tracks south of Wilsonville Road and (2) in Old Town, specifically along Boones Ferry Road

- Motor vehicle capacity
- Neighborhood/commercial connectivity
- Private property impacts
- Project costs
- Public input
- Railroad crossings
- Small business impacts
- Timing
- Traffic diversion
- Water and sewer utility issues



### ADDITIONAL PLANNED PROJECTS

The “Additional Planned” project list includes those projects that would contribute to the City’s desired transportation system through 2035 but that were not included as “Higher Priority” projects due to estimated funding limitations. This list represents a coordinated transportation network and adequate facilities to serve the community through 2035.

The State stipulates that projects listed in the TSP form the legal basis for exacting developer-provided improvements. Together, the “Higher Priority” and “Additional Planned” project lists document all the City’s desired projects so that it is clear what improvements are needed to ensure that the City’s transportation network fully supports its continued growth.

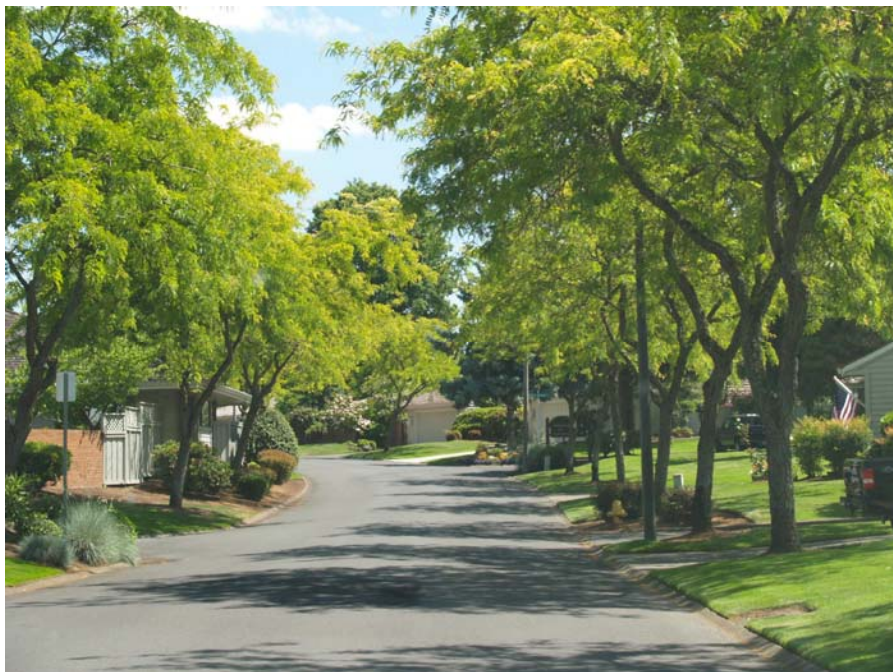
Even though the City should primarily focus on the projects included in the Higher Priority Solutions Package, it should look for opportunities to pursue these remaining projects as funding opportunities become available, including grant funding.

As shown in Table 5-8, the “Additional Planned” projects would cost a total of \$100.1 million. Figures 5-7 through 5-11 show locations of the projects, and corresponding project details are included in Tables 5-8 through 5-12. Some of the City’s Additional Planned projects are not associated with a specific location but instead will be applied citywide as needed. These projects are listed in Table 5-13.

**Table 5-8. Additional Planned Project Costs<sup>a</sup>**

Project Type	2011 Cost Estimate
Roadway Extensions	\$27,200,00
Roadway Widening	\$7,000,000
Urban Upgrades	\$19,800,000
Spot Improvements	\$6,500,000
Standalone Bicycle and Pedestrian Improvements	\$25,610,000
Transit Improvements	\$14,450,000
<b>Total Additional Planned Project Costs</b>	<b>\$100,560,000</b>

<sup>a</sup> See Tables 5-9, 5-10, 5-11, 5-12, and 5-13 for individual project costs.



*Trees provide an aesthetically pleasing environment and shade along a street in Charbonneau, a private planned community in Wilsonville surrounding a 27-hole golf course. Because Charbonneau is on the southern bank of the Willamette River, it is separated from the remainder of the city and would benefit from a dedicated bicycle and pedestrian bridge.*

FIGURE 5-7. ADDITIONAL PLANNED PROJECTS

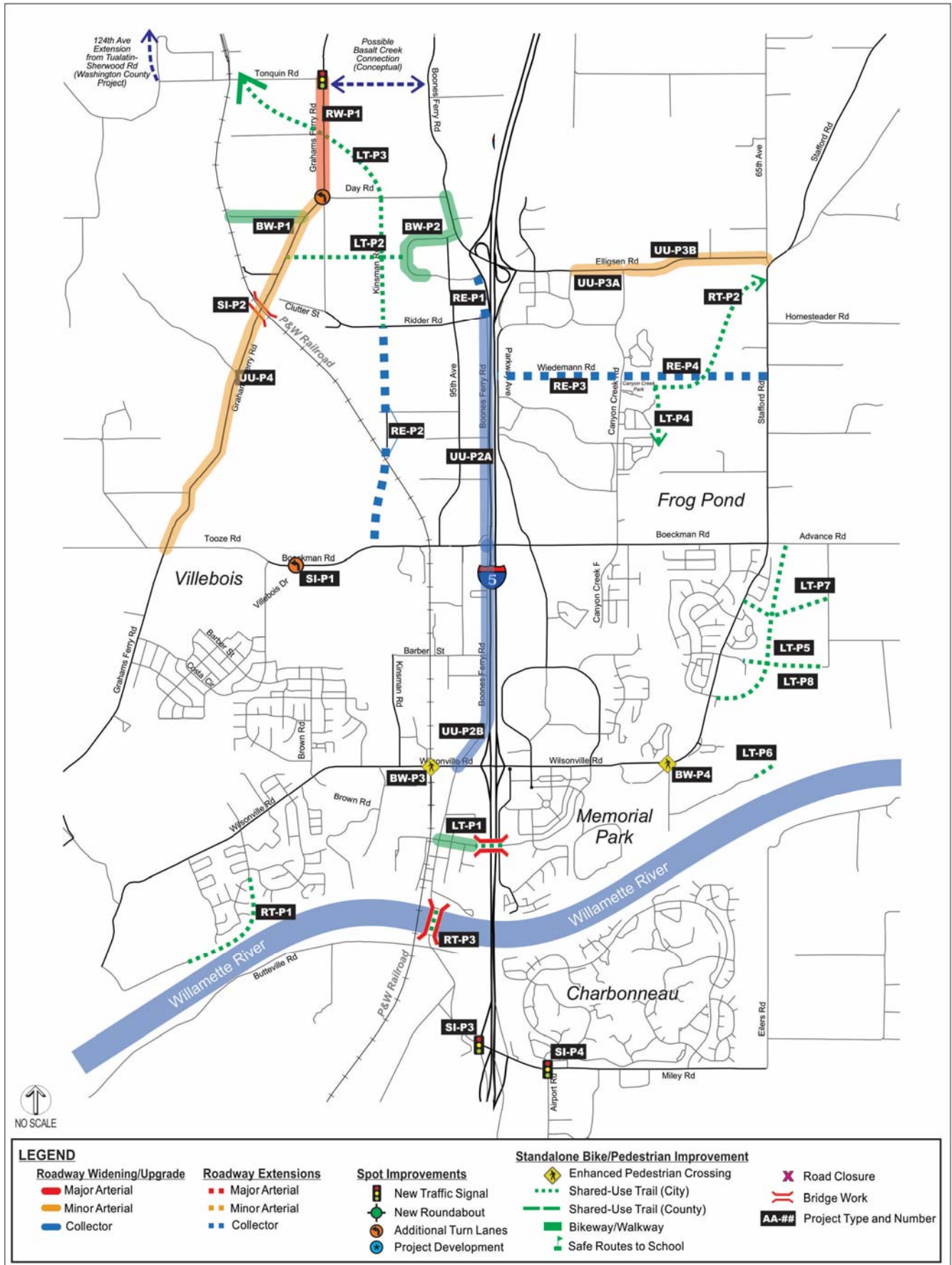
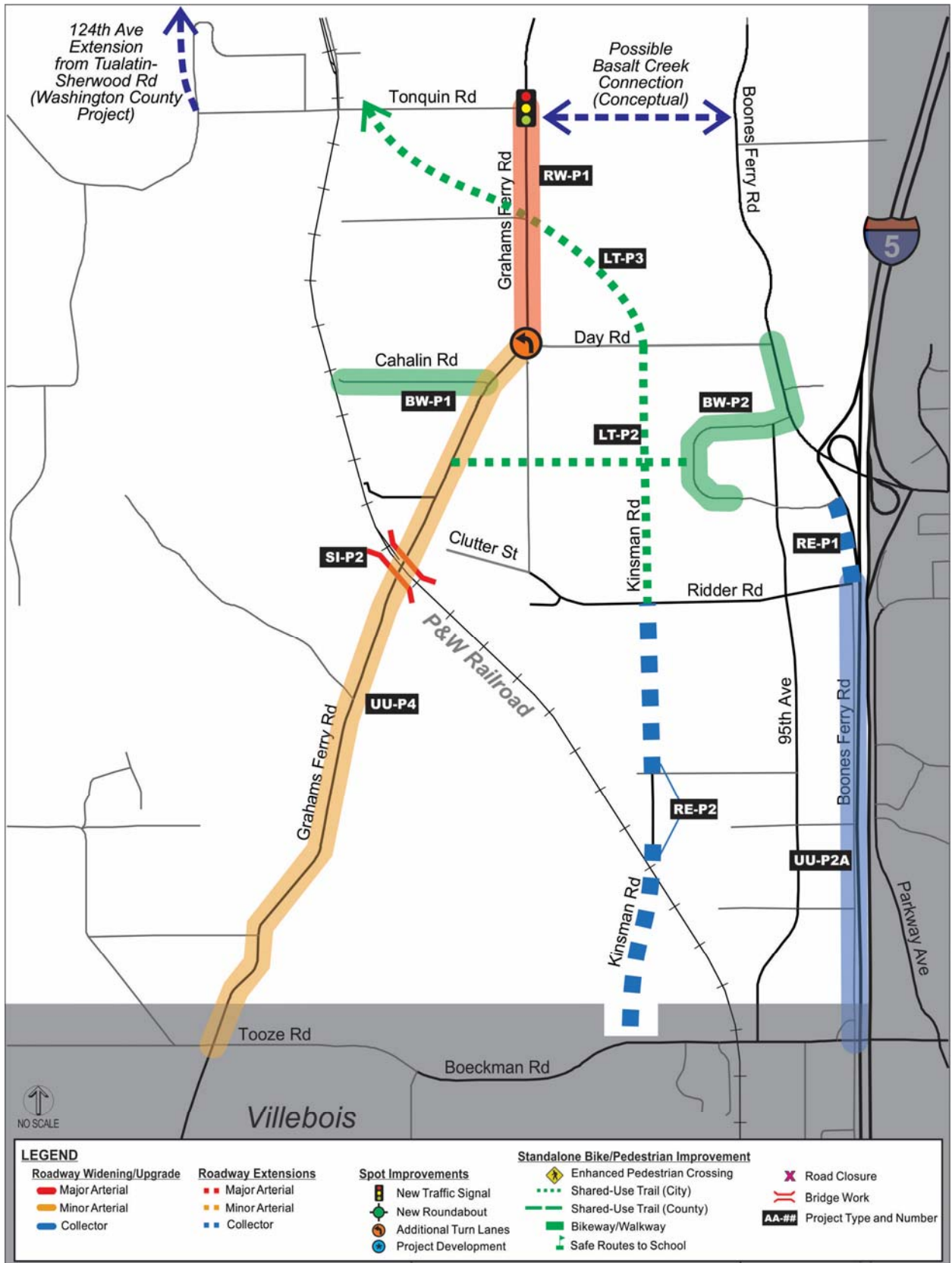


Table 5-9. Additional Planned Projects (Northwest Quadrant)

Project	Description	Why Not Higher Priority?	Cost
<b>Roadway Extensions</b>			
RE-P1 Boones Ferry Road Extension	Construct 2-lane roadway from Ridder Road to Commerce Circle with bike lanes, sidewalks, and transit improvements to facilitate access and circulation in the area surrounding Ridder Road and 95th Avenue	Identified as potentially helpful freight connection, but not a critical need at this time	\$2,100,000
RE-P2 Kinsman Road Extension (Central)	Construct 2/3-lane roadway from Boeckman Road to Ridder Road with bike lanes and sidewalks	High cost due to grade-separated RR crossing and construction across Metro lands; alternative route (95th Avenue) is available	\$12,000,000
<b>Roadway Widening</b>			
RW-P1 Grahams Ferry Road Widening	Widen Grahams Ferry Road from Tonquin Road to Day Road to four lanes with bike lanes, sidewalks, and transit improvements; acquire the full five-lane right-of-way width to accommodate future left-turn lanes; also provide additional left-turn lanes at Tonquin Road and Day Road intersections	Located within Washington County and is only needed under certain scenarios of the pending Basalt Creek Refinement Plan	\$7,000,000
<b>Urban Upgrades</b>			
UU-P2A Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	High cost with limited connectivity benefit alternative parallel routes exist	\$5,900,000
UU-P4 Grahams Ferry Road Urban Upgrade	Upgrade Grahams Ferry Road from Day Road to Tooze Road to meet applicable cross-section standards (i.e., 3 lanes with bike lanes, sidewalks, and transit improvements)	Grahams Ferry Road is primarily a rural road and Ice Age Tonquin Trail is a preferred option for providing north-south connection through this part of Wilsonville	\$2,000,000
<b>Spot Improvements</b>			
SI-P2 Grahams Ferry Road Undercrossing Improvements at Railroad Bridge	Reconstruct existing railroad under-crossing to City of Wilsonville Minor Arterial standards; Higher Priority project list includes project development portion of this project (costs are separate)	Located within Washington County jurisdiction, and it is an important safety-related project with particular benefits for freight travel; however, it comes with high cost and freight traffic has alternate travel routes	\$4,500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>			
BW-P1 Cahalin Road Bike Lanes and Sidewalks	Construct bike lanes and sidewalks from Kinsman Road extension to Ice Age Tonquin Trail	High cost due to railroad crossing barrier	\$700,000
BW-P2 Commerce Circle Loop and Boones Ferry Road Sidewalk Infill	Fill in gaps in the sidewalk network on Commerce Circle Loop and Boones Ferry Road	Industrial area with no connectivity to other facilities	\$150,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>			
LT-P2 Area 42 Trail	Shared Use Path from Kinsman Road to Day Road	To be constructed as Coffee Lake Creek Master Plan Area Redevelops	\$220,000
LT-P3 BPA Power Line Trail	Shared Use Path from Day Road to Ice Age Tonquin Trail providing trail users to City's northern industrial area	Ice Age Tonquin Trail provides key connection to north (more critical when Coffee Lake Creek develops)	\$500,000



FIGURE 5-8. ADDITIONAL PLANNED PROJECTS (NORTHWEST QUADRANT)





**Table 5-10. Additional Planned Projects (Northeast Quadrant)**

Project		Description	Why Not Higher Priority?	Cost
<b>Roadway Extensions</b>				
RE-P3	Wiedeman Road Extension (West)	Construct 2/3-lane roadway from Parkway Avenue to Canyon Creek Road with bike lanes and sidewalks	Limited impact on system capacity; money better spent upgrading Boeckman Road and Elligsen Road	\$4,300,000
RE-P4	Wiedeman Road Extension (East)	Construct 2/3-lane roadway from Canyon Creek Road to Stafford Road with bike lanes and sidewalks; would require construction over Boeckman Creek	Only needed with future development on land east of Canyon Creek Road; costly (especially over wetlands) and has limited impact on system capacity; and money better spent upgrading Boeckman Road and Elligsen Road	\$8,800,000
<b>Urban Upgrades</b>				
UU-P3 A/B	Elligsen Road Urban Upgrade	Upgrade Elligsen Road from Parkway Center to Stafford Road to meet applicable cross-section standards including bike lanes, sidewalks, and transit improvements	Much of the land is in Clackamas County; significant slopes from Parkway Center Drive to Canyon Creek Road would likely require retaining walls (higher costs) and large oak trees would be impacted	\$6,000,000 (Partial Federal funding)
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>				
LT-P4	Canyon Creek Trail	Shared Use Path from Canyon Creek Park to Boeckman Creek Trail providing connectivity to neighborhoods to the south	Low priority as it needed after the Boeckman Creek Trail is constructed	\$200,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>				
RT-P2	Stafford Spur Trail	Shared-Use Path from Canyon Creek Park to Stafford Road	High cost project that provides limited connectivity to land uses in Clackamas County	\$1,640,000

FIGURE 5-9. ADDITIONAL PLANNED PROJECTS (NORTHEAST QUADRANT)

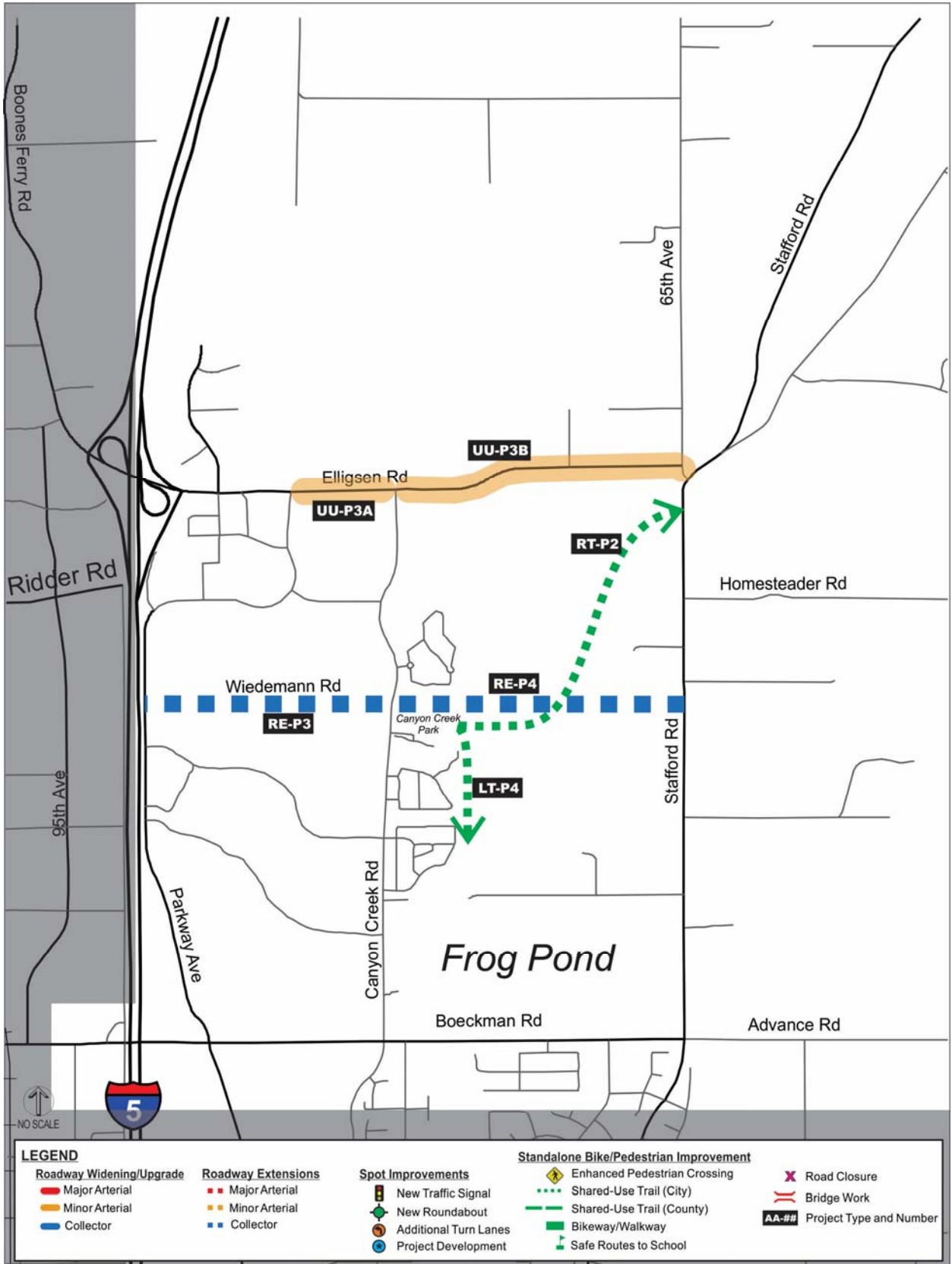


Table 5-11. Additional Planned Projects (Southwest Quadrant)

Project	Description	Why Not Higher Priority?	Cost
<b>Urban Upgrades</b>			
UU-P2B Boones Ferry Road Urban Upgrade	Upgrade Boones Ferry Road from Wilsonville Road to Ridder Road with bike lanes on both sides and sidewalks on west side only	High cost with limited additional connectivity benefits due to alternative parallel routes (i.e., Kinsman Road extension); project would become more beneficial once bike and pedestrian bridge is built over I-5 connecting Barber Street to Town Center Loop West	\$5,900,000
<b>Spot Improvements</b>			
SI-P1 Boeckman Road/Villebois Drive Roundabout Widening	Expand roundabout by adding a westbound slip lane to accommodate two westbound travel lanes on Boeckman Road	Potential improvement need expected to be triggered by future regional traffic traveling east-west through Wilsonville	\$500,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>			
BW-P3 Wilsonville Road Enhanced Pedestrian Crossing at Railroad Track	Install new pedestrian crossing adjacent to the railroad tracks that includes rectangular rapid flashing beacons (RRFBs), center pedestrian median island, signage, etc.	Not critical until land south of Wilsonville Road Develops	\$70,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>			
LT-P1 5th Street Bike/Pedestrian Bridge and Connections	Construct bike/pedestrian bridge over I-5 approximately aligned with 5 <sup>th</sup> Street; also construct bike lanes and sidewalks on 5 <sup>th</sup> Street connecting the new bridge to Boones Ferry Road	High cost and recent improvements to Wilsonville Road Interchange have improved East/West pedestrian connectivity	\$6,400,000
<b>Standalone Pedestrian and Bicycle Improvements (Regional Trails)</b>			
RT-P1 Rivergreen Trail	Natural Trail from Ice Age Tonquin Trail/SW Willamette Way to Waterfront Trail	Low priority as it is needed after other critical trail and pathway connections are completed (i.e. Ice Age Tonquin Trail)	\$260,000
RT-P3 Willamette River Bike/Pedestrian and Emergency Bridge	Construct bridge over Willamette River for bike, pedestrian, and emergency access to provide an alternative to the I-5 freeway deck; Higher Priority project list includes project development portion of this project (costs are separate)	High cost; next step is to determine feasibility within planning horizon	\$14,000,000

FIGURE 5-10. ADDITIONAL PLANNED PROJECTS (SOUTHWEST QUADRANT)

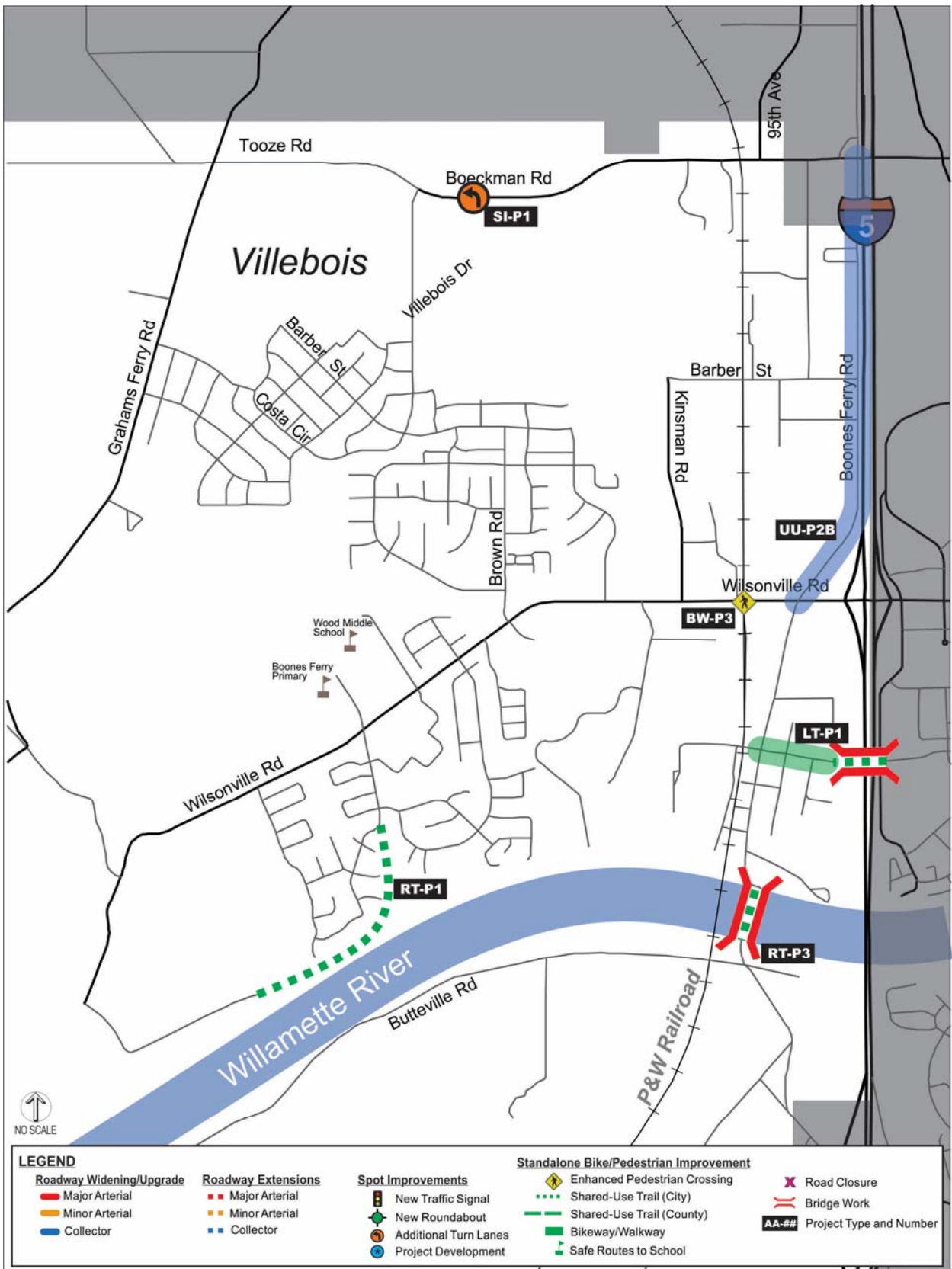


Table 5-12. Additional Planned Projects (Southeast Quadrant)

Project	Description	Why Not Higher Priority?	Cost	
<b>Spot Improvements</b>				
SI-P3	Miley Road/I-5 Southbound Ramp Improvements	Install traffic signal and southbound left-turn lane	Outside City's jurisdiction (ODOT facility) and no future Wilsonville growth expected; improvement needs would be triggered primarily by regional traffic	\$750,000
SI-P4	Miley Road/Airport Road Intersection Improvements	Install traffic signal and northbound left-turn lane	Outside City's jurisdiction (Clackamas County facility) and no future Wilsonville growth expected; improvement needs would be triggered primarily by regional traffic	\$750,000
<b>Standalone Pedestrian and Bicycle Improvements (Bikeways and Walkways)</b>				
BW-P4	Wilsonville Road Enhanced Pedestrian Crossing at Rose Lane	Install new pedestrian crossing adjacent to Rose Lane and nearby transit stops; potential crossing treatments include, but are not limited to, rectangular rapid flashing beacons (RRFBs), signage, etc.	Crossing need at this location is considered low at this time, and there is an existing pedestrian crossing and flasher to the west at Kolbe Lane that provides more direct access to Memorial Park and the Boeckman Creek Trail	\$50,000
<b>Standalone Pedestrian and Bicycle Improvements (Local Trails)</b>				
LT-P5	New School Site Trail	Shared Use Path from Boeckman Creek Elementary School to planned school and park site, with possible connections to adjacent neighborhoods	Medium priority due to existing connections; will become important when school and park are constructed	\$700,000
LT-P6	Park Access Trail	Low Volume Roadway accessed from Montgomery Way; would require extensive public process	Lower priority until after other critical trail and pathway connections are completed	\$20,000
LT-P7	School Connection Trail	Construct the School Connection Trail identified in the Frog Pond Area Plan	Medium priority due to existing connections; will become important when school and park are constructed	\$460,000
LT-P8	60 <sup>th</sup> Avenue Trail	Construct the 60 <sup>th</sup> Avenue Trail identified in the Frog Pond Area Plan	Medium priority due to existing connections; will become important when school and park are constructed	\$240,000



FIGURE 5-11. ADDITIONAL PLANNED PROJECTS (SOUTHEAST QUADRANT)

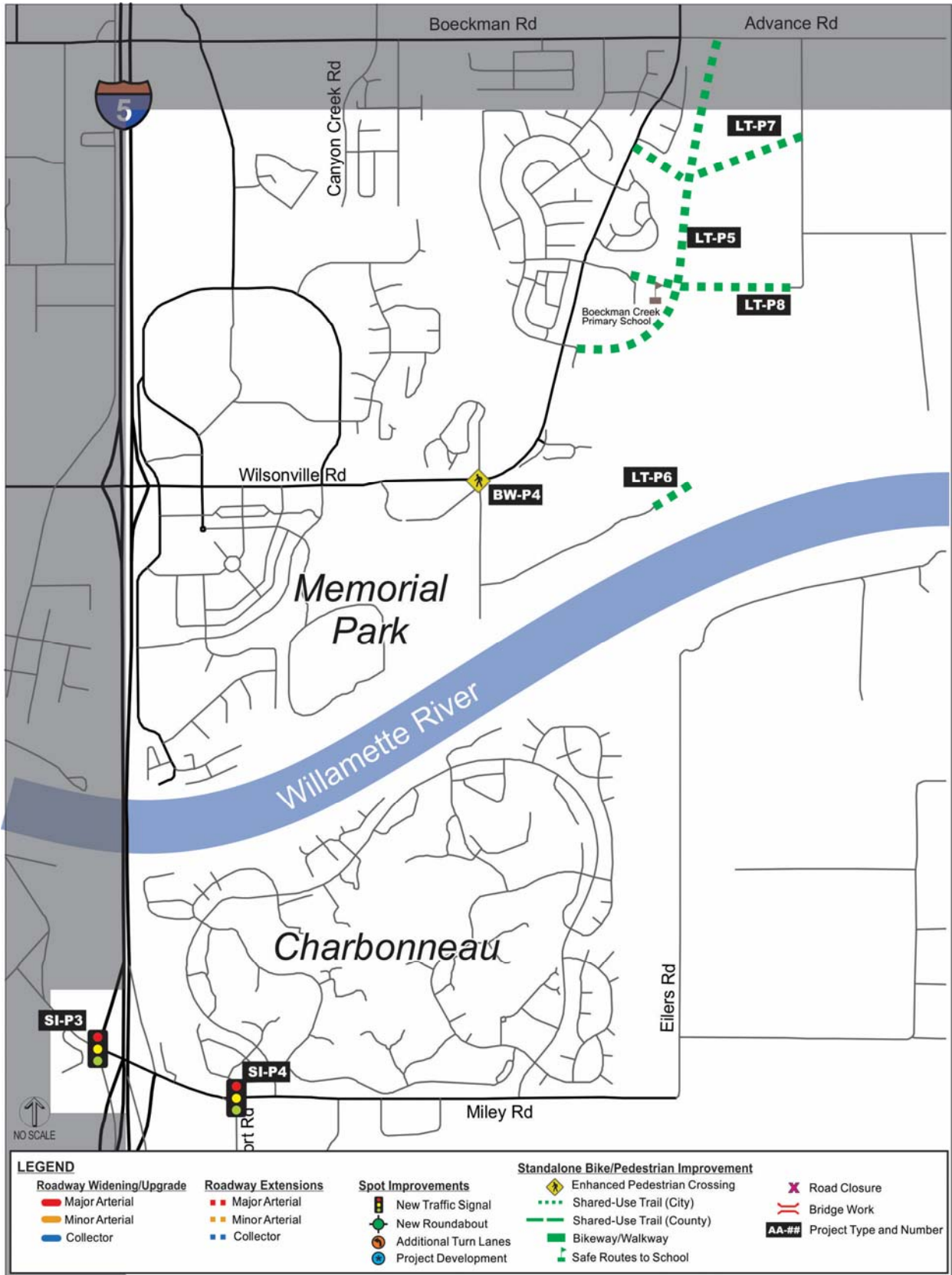


Table 5-13. Additional Planned Projects (Citywide)

Project		Description	Why Not Higher Priority?	Cost
<b>Spot Improvements</b>				
TI-P1	Bus Stop Amenities	Install bus shelters, benches, and bus seat poles on a case-by-case basis as needs are identified and funds are available	Funding has not been identified	\$450,000
TI-P2	SMART Buses	Replace old buses; also outfit each bus with a tracking system and provide real-time display boards at the SMART Central station and other key routes	Funding has not been identified	\$14,000,000

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*“It is very important we prepare now so that we don’t have congestion in the future—or can at least manage the congestion. We can also prepare for connectivity so we can get places conveniently.”*

*Nancy Kraushaar  
Community Development Director*

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CIVIL LAND USE PLANNING SURVEY  
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9020 SW Washington Square Rd Suite 170  
Portland, Oregon 97223

May 4, 2016

Wilsonville City Council  
29799 SW Town Center Loop E.  
Wilsonville, OR 97070

**RE: Republic Services – Ordinance 789 - Supplemental Testimony Supporting TSP Amendment File LP16-0001 – Replacement of Collector Extension north of Ridder Road from Kinsman Road (RE-07) to Garden Acres Road (UU-08).**

Honorable Mayor Knapp and Councilors:

At the Hearing for First Reading of Ordinance 789, Mayor Knapp raised concerns about completely eliminating the Kinsman Road alignment north of Ridder Road. On behalf of Republic Services, I present this supplemental testimony specifically addressing the Mayor's concern.

Our prior testimony before the Planning Commission and to the Council outlined the basic issues which led to the proposed TSP amendment, eliminating the Kinsman Road alignment.

Certainly, everyone would agree that arterial and collector street alignments function best when the alignments are general straight links between cross streets. However, there are circumstances when such straight alignments are just not viable options. That is the case with Kinsman Road.

We have previously emphasized that the alignment north of Ridder runs afoul with the BPA substation and power line right-of-way, plus the significant impacts (added public & private costs) related to the untenable situation for Republic Services functional operations.

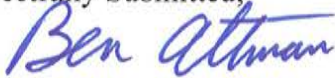
But for Kinsman, it is important to recognize that it is not just the section north of Ridder Road that is impractical to construct. The section north of Boeckman Road to Ridder also has significant challenges. This section has grade differentials, a railroad crossing and again the BPA substation and power line easement which all conspire to limit the likelihood of this segment ever being constructed.

Consequently, the most logical second best solution to support north/south movements on the west side, is Kinsman from Wilsonville Road, to Boeckman Road, then to 95<sup>th</sup> Avenue, up to Ridder, and then up Garden Acres Road to Day Road. While this is not the desired direct route, it is deliverable.

The Kittelson analysis confirms that this collector configuration is capable of maintaining acceptable traffic volumes, comparable to the Kinsman alignment. But, again, and probably more importantly, this configuration is deliverable and at a substantially lower cost than the current Kinsman alignment. And, this configuration maintains the desired link to the planned 124<sup>th</sup> Avenue extension, via Garden Acres and Grahams Ferry Roads. It also eliminates one intersection crossing of Day Road, thereby maintaining enhanced capacity for the short segment between Grahams Ferry and Boones Ferry Roads.

We (Republic Services) believe this specific amendment is appropriate and necessary to avoid unacceptable and unnecessary site and operational impacts to Republic Services facilities. It is also necessary to avoid excessive and unnecessary public costs of constructing the Kinsman alignment. Given the specific circumstances involved here, Kinsman Road could be the most expensive road ever built in the City, which is clearly not a desired result.

Respectfully Submitted;



Ben Altman  
Senior Planner/Project Manager

cc: Republic Services



CITY OF WILSONVILLE

# Monthly Report



COMMUNITY DEVELOPMENT DEPARTMENT

April 2016



## FROM THE DIRECTOR'S OFFICE

Greetings! I would say it was an amazing April in the Community Development department! As you will read in the next six (6) pages, our staff is moving forward on a multitude of projects.

Grande Pointe is the latest neighborhood to take shape in Villebois. It is located where the old Learning Enrichment Center once was. Graham's Ferry Road has been paved and striped. The old forest has been kept as a beautiful backdrop and amenity for the homes. And rumor has it that a pub is coming to the Village Center in Villebois—this should be a fun spot to gather next to the Plaza.

The design phases was completed for two (2) major capital projects in April. The Charbonneau High Priority Utility Repair bids have since come in favorably, and Kinsman Road (Barber to Boeckman) will advertise for bids the third week in May.

Major progress was made on several planning projects:

- \* The Frog Pond multi-modal network and possible lotting patterns are being thoughtfully detailed,
- \* There was a very good turnout at the Basalt Creek public open house with mostly property owners and a few neighbors, and
- \* The consultant team was selected for the Boones Ferry Road to Brown Road (BFR2BR) Connector Corridor Plan.

I attended a big meeting held by the Oregon Transportation Forum where a funding package for the 2017 legislative session was the discussion focus. About eight (8) legislators as well as staff from the Governor's, Peter Courtney's, and the Tina Kotak's offices spoke about their approaches to public support. They encouraged us to all start now at the local level to talk about the importance of maintaining and building our transportation systems.

Clackamas County staff initiated an effort to coordinate and prioritize transportation projects of regional or countywide significance. We have been discussing five (5): the Boeckman Dip Bridge, the I-5 Ped/Bike Overcrossing, the French Prairie Bridge (all considered part of the Wilsonville network) and the Stafford-Elligsen-65th Street intersection (in Clackamas and Washington Counties) and I-5/Boones Bridge widening (on the ODOT system). This is a good opportunity to raise awareness of all five needs.

Finally, the proposed Coffee Creek Urban Renewal Plan progressed with a positive open house and unanimous vote of support from the Urban Renewal Task Force when the plan was presented to them on April 25. Thank you to the Council President Starr for his leadership of the group.

May you have few sneezes as our plants and trees continue to burst with new life in May!

- Nancy Kraushaar PE



## Engineering Division, Capital Projects

**Boones Ferry Road to Brown Road Connector Corridor Plan (4196):** City staff has chosen a design team led by Otak, Inc. to determine a preferred east-west roadway alignment connecting Boones Ferry Road and Brown Road. A Professional Services Agreement and Scope of Work are presently being negotiated and we anticipate bringing this to Council for approval in May.

**Charbonneau High Priority Utility Repair (1500/2500/7500):** This project involves the replacement and repair of the most deficient sewer and storm pipes within Charbonneau in three (3) phases over the next three (3) years. Also, the project includes replacement of a recently failed 12" water line between Boones Bend Road and Mariner's Village. Bids were opened on April 26th. The Low Bid was Canby Excavating at \$898K, which is 20% under the Engineers Estimate. Construction will occur this summer.

**Charbonneau Walking Path Repair (4715):** This project includes repair of the pathway along French Prairie Drive in Charbonneau. Existing trip hazards, drainage issues and sidewalk ramp areas will be repaired to meet ADA standards. Final plans and specifications have been completed. Construction bid documents are being prepared for a June bid advertisement. Construction of this project is scheduled to begin in July 2016.

**Coffee Creek Development Readiness (CIP 3002):** Consultants and Staff have completed a draft of the Coffee Creek Urban Renewal Plan and accompanying report. An open house was held on April 25th.

**French Prairie Bridge (9137):** This project will determine the final location, alignment, and design type and includes preparation of preliminary construction and environmental documents for a new pedestrian, bike, and emergency vehicle bridge over the Willamette River in the vicinity of Boones Ferry Road. Contract negotiations with the selected consultant team are complete and documents have been submitted to ODOT to finalize the contract. Final execution of the consulting engineer's contract with ODOT is anticipated to be complete in June 2016 with project work beginning shortly thereafter. It is anticipated that the project will be completed within two (2) years of the start date.

**Kinsman Road Extension (4004):** This project involves construction of a new section of Kinsman Road between Barber Street and Boeckman Road and includes the upsizing and relocation of the 30" sanitary sewer pipe (Coffee Creek Interceptor Upsizing (CIP 2079) and installation of a 66" water line for the Willamette Water Supply Program (CIP 1127). All documentation is complete. Bid opening is scheduled for May 26<sup>th</sup> with construction anticipated to begin in July 2016.

**Parkway Center Storm Sewer (7048):** A new storm sewer is being designed in-house to correct a historic flooding issue adjacent to the Town Center Apartments. Design is progressing toward 80%, with bidding/construction to occur this summer.

**Street Light Infill (4696):** This project will provide new streetlights in five (5) locations to fill gaps in lighting coverage. Design is progressing toward 60%.

**Transportation Systems Plan (TSP) Amendment (CIP 4189):** A public hearing was held at the Planning Commission meeting on April 19th, with the Commission recommending approval. Council hearings will follow on May 2nd and May 16th.

**Water Treatment Plant Master Plan (1122):** Staff received a briefing from WWSP and consultants on April 27th. A briefing to Council is being scheduled for Work Session on June 6th. Completion of the Master Plan is expected by late summer 2016.

**Willamette River Outfalls (7053):** The Rivergreen HOA Board is very pleased with the performance of the temporary repair work completed last November at the Willamette Way West outfall and how well it held up to this winter's storm events. In fact, it has held up so well that they have requested we monitor the repairs and hold off on final design and construction. This will save the City much needed stormwater funds by allowing us to delay this work for a few years. The AKS Engineering design team is moving forward with the plan design for the Belnap Court outfall and Morey Court outfall.

**Willamette River Water Supply (1127):** An ODOT-required Cooperative Utility Agreement has been signed by all parties allowing the WWSP pipeline to be combined with the road project and identifying the cost share responsibilities.

**Wilsonville Road ADA & Signal Improvements (4014/4118):** As part of this project, the pedestrian signals and sidewalk ramps along Wilsonville Road at Montebello and Kinsman will be improved to meet current ADA standards in advance of the upcoming Wilsonville Road Asphalt overlay work. KPFF Consulting Engineers is preparing a concept level design and cost estimation for improving truck turning movements at the Wilsonville Road and Kinsman Road intersection for Council consideration. Final design and construction of this project is anticipated to begin late summer 2016.

**WWTP Outfall Replacement (2095):** Siting alternatives for the new outfall have been reviewed and evaluated. The consultant is working on design and permitting documents

## Engineering Division, Private Development



Villebois Grande Pointe

## Engineering Division, Private Development cont'd

**Meridian Creek Middle School:** Early site work grading and construction will begin this month. While most of the work will occur on-site, the contractor will also be working on Advance Road installing water and sanitary pipe.

**Starbucks** has plans to occupy the old Arby's building on Town Center Loop West at Citizens Drive. The Engineering staff is reviewing plans that will rework some of the storm piping here.

**Trocadero Park RP-5:** Plans are under review for this next regional park in Villebois, located just south of the City's former Urban Renewal 10-acre piece of land.

**Villebois Brookside Terrace:** A preconstruction meeting has been held for the 50-unit subdivision located between Montague Park and the new Villebois East Swim Center. Both projects are still under construction. Construction is expected to start soon.

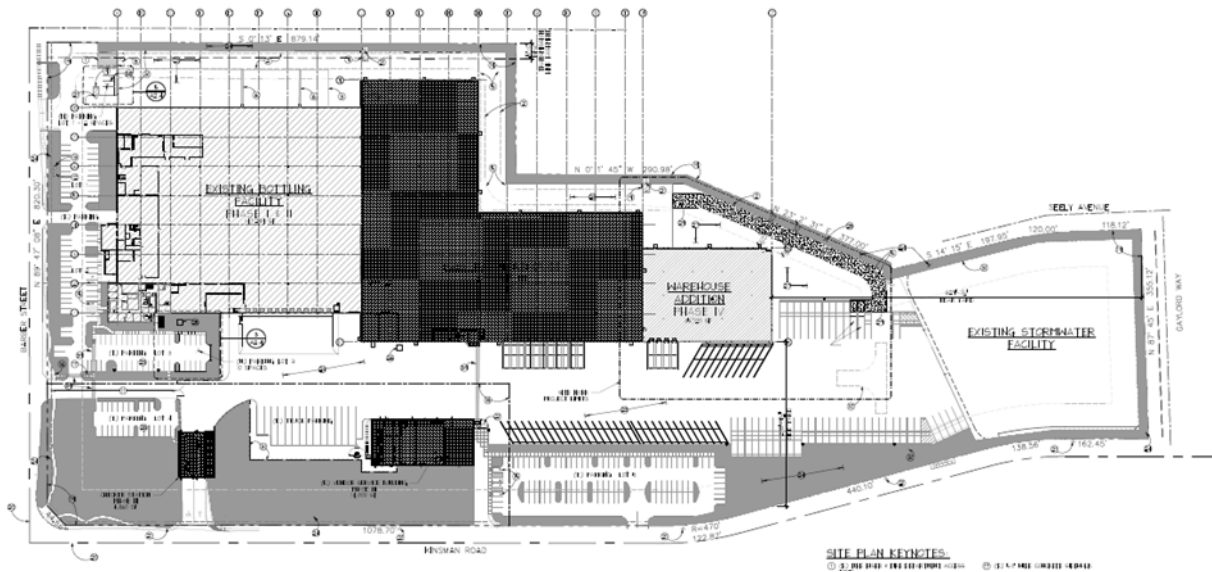


Villebois Tonquin Meadows 3

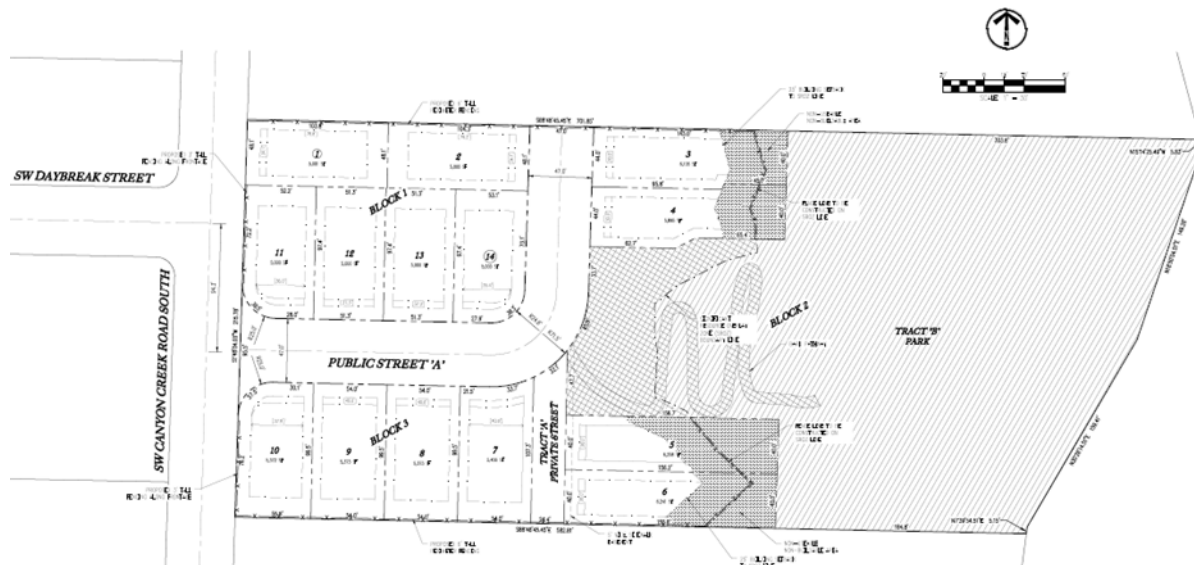
# Planning Division, Current

## DRB Hearings

At their April 11th meeting DRB Panel 'A' approved a request for a 35,120 square foot warehouse addition to the Coca Cola facility at Barber Street and Kinsman Road. The addition is planned south of the existing building and will increase the floor area by about 11.5 %.



On April 25<sup>th</sup> DRB Panel 'B' held a continued public hearing on a proposed 14-lot single-family subdivision on the east side of SW Canyon Creek Road South at and just south of SW Daybreak Street. After hearing testimony from the applicant and a number of residents the DRB recommended approval of the Comprehensive Plan Map Amendment and Zone Map Amendment to City Council and approved the other related land use applications.





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## Planning Division, Current, cont'd

### Projects Being Prepared for DRB Hearings

- Republic Services Annexation and SORT Bioenergy Biodigester
- Republic Services Temporary Use Permit Renewal for Modular Offices

### Administrative Decisions Issued

- Addition to AGC Building at 95<sup>th</sup> Avenue and Commerce Circle North
  - Revised Carport Placement for New Townhomes on Maxine Lane
  - Lot Line Adjustment on Morey's Court
  - 3 Class I Sign Permits
  - 13 Type A Tree Permits
  - Type B Tree Permit on Xerox Campus
- 

## Planning Division, Long Range

### Annual Housing Report



Planning Division staff completed the City's 2015 Annual Housing Report (attached for your information) with special acknowledgement to Miranda Bateschell, Jenn Scolla, Dan Stark, Becky White, Tami Bergeron and Susan Rothenberger for their assistance.

The report summarizes the City's home construction and entitlement statistics for 2015, and compares this information to past statistics and forecasts, including Wilsonville's population, issued building permits, household inventory and growth, number of single- and multi-family residential units constructed, and residential home selling prices.

The Annual Housing Report is an integral reporting mechanism showing that Wilsonville responsibly plans and builds to ensure that our communities grow and retain quality of life and level of City services.

### Town Center Redevelopment

City Staff is happy to announce the Request For Proposals (RFP) for the Town Center Redevelopment Plan is now on the City's website with a deadline of May 16, 2016 to submit proposals. This is an open process and Staff hopes to have a contract awarded by June.

The Town Center Redevelopment Project seeks to create a long-range plan and near-term actions for how the City's Town Center can better serve the interests and needs of residents, workers and visitors. The plan will develop strategies for how the Town Center can evolve into a more walkable, attractive and commercially vibrant, mixed-use district that supports a range of businesses. Additional information is available on the project web page <http://www.ci.wilsonville.or.us/826/Town-Center>.

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## Planning Division, Long Range, cont'd

### Frog Pond Master Plan

The public has been invited to join the project team at the May 11th Open House for the **Frog Pond Master Plan**. The event is an opportunity to view drawings, talk with the project team, and provide early feedback on work in progress. Draft materials will include working ideas for zoning, residential design guidelines, street designs, and parks and open space.



The Planning Commission will hold a work session following the Open House and the public is welcome to attend, as well.

### Basalt Creek



On Thursday, April 28, 2016, the cities of Tualatin and Wilsonville jointly held a Basalt Creek Concept Plan Open House for the public to learn about the preferred land use plan, parks and open spaces, and pedestrian, bike and transit networks. Project team members from the Cities of Tualatin and Wilsonville and project consultants attended to share information and answer questions. An informational presentation was conducted by the consultants which included informal polling questions posed to the public in attendance. At this time, the results and public input have not yet been consolidated.



Additional information is available on the project website at [www.basaltcreek.com](http://www.basaltcreek.com)

## Building Division

### Single Family Dwelling Permits YTD: 44

#### Major Projects Under Review:

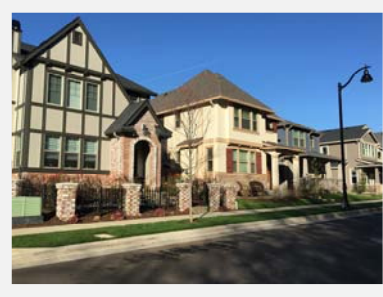
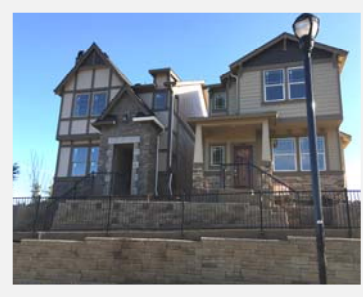
- Boulder Creek Apartments, Ashland Dr.
- Wilsonville Women's Health, 29702 SW Town Center Loop W
- India Cuisine, 29030 SW Town Center Loop E

#### Temporary or Certificates of Occupancy Issued:

- Sit Means Sit Dog Kennel, 9425 SW Commerce Cir.
- Excavator Rental Services,  
28725 SW Boones Ferry Rd.
- TLC Nail Salon, 29950 SW Town Center Loop W.



Final Homes of Legend at Villebois



WILSONVILLE



# WILSONVILLE

## 2015

# ANNUAL HOUSING REPORT

ORIGINAL PUBLICATION: MARCH 2016

The City of Wilsonville Building Permit Database was the primary source for the data and information presented in this report.

Staff of the City of Wilsonville prepared this report, with special acknowledgement to:

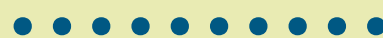
CHRIS NEAMTZU, PLANNING DIRECTOR  
MIRANDA BATESCHELL, LONG-RANGE PLANNING MANAGER  
JENN SCOLA, ASSISTANT PLANNER  
DAN STARK, GIS MANAGER  
BECKY WHITE, PERMIT TECHNICIAN  
TAMI BERGERON, ADMINISTRATIVE ASSISTANT  
SUSAN ROTHENBERGER, GIS & MAPPING TECHNICIAN



29799 Town Center Loop East  
Wilsonville, OR 97070  
503-682-1011 Phone  
503-682-1015 Fax Administration  
503-682-7075 Fax Community Development  
[www.ci.wilsonville.or.us](http://www.ci.wilsonville.or.us)

*Although an effort is made to assure the accuracy and completeness of the information provided in this annual report, the City of Wilsonville makes no expressed or implied warranty as to the accuracy, adequacy, completeness, legality, reliability or usefulness of the report's information. The City of Wilsonville provides this information and all report services on an "as is" basis. While there may be changes to the City of Wilsonville's information on topics covered in this annual report, these changes may or may not be made available until after this report publication.*

# A SNAPSHOT OF 2015



**324** HOUSEHOLDS  
PERMITTED

**312** SINGLE-FAMILY  
**96%**

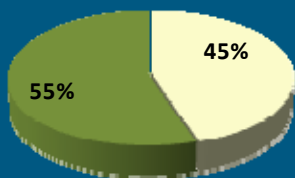
**12** MULTI-FAMILY  
**4%**

**\$80,299,804**

TOTAL VALUE OF CONSTRUCTION COSTS



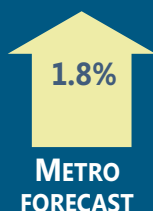
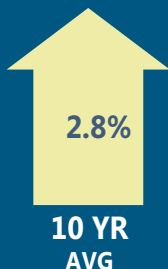
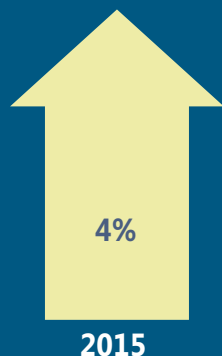
## CITYWIDE HOUSEHOLD INVENTORY



- Single Family
- Multi-Family



## HOUSEHOLD GROWTH



**6.3%** POPULATION GROWTH (2013-2015)

*"I believe that our community benefits when we are better able to accommodate a range of housing options desired by residents at different times of their lives: as singles, couples, families and retirees.*

*Wilsonville experienced a second consecutive year of a record level of single-family home construction. As the economy has continued to recover from the Great Recession and unemployment declines, the housing market has swung back to traditional single-family homes."*

– MAYOR TIM KNAPP

# HOUSING ACTIVITY IN THE

The City of Wilsonville experienced a record-high level of single-family home construction in calendar year 2015. In 2015, the City of Wilsonville issued permits for a total of 312 households in single-family homes with a valuation of \$78.6 million and 12 households in multi-family homes with a valuation of \$1.7 million. For the third consecutive year, both the number of single-family home permits issued and the value of new residential construction are record Wilsonville levels. 2015 exceeded the prior record-setting years of 2013 and 2014 when 180 and 246 single-family building permits were issued, respectively.

The range of housing types developed over the past year offer exciting opportunities for everyone in the community: entry-level townhomes, traditional single-family homes, and riverfront living with boat amenities at the Renaissance Boat Club. The majority of residential projects permitted were single-family homes, which was expected given a 2014 housing study that identified a need for more detached single-family housing in the city. The impact citywide has been a shift of single-family homes representing 45% of the housing supply, up from 43% just two years ago.

In 2015, the total number of 324 new residential units built in Wilsonville is 34 percent greater than the 10-year average of 244 units per year. This household growth represents a rate increase of 3.3% in 2015, following a growth rate of 4% in 2014. This growth maintains a 10-year average annual household growth rate of 2.8% and remains well above the 1.8% household growth assumed by the regional forecast.



## \$384,500

AVERAGE SELLING PRICE

SOURCES: ZILLOW.COM, REALTOR.COM



in 2015

WITH A MORTGAGE PAYMENT OF **39%**  
OF THE AVERAGE FAMILY'S INCOME



# CITY OF WILSONVILLE

Major residential construction remains due to the continued emergence from the Great Recession as well as significant rates of migration to Oregon and Wilsonville due to the growing economy and high-quality of life here. The majority of new home-building is occurring in Villebois, where home-builders Legend Homes, Polygon Northwest, and Lennar are active, as well as Brenchley Estates, the Grove, and Renaissance Boat Club.

This growth also resulted in home prices showing strong gains in value; the average sale price rose 8% over 2015. The increase in housing values raised the average sale price of a home to \$385,000 putting it 6% above the affordability target<sup>1</sup> for the average Wilsonville family (based on the median household income reported by the 2013 U.S. Census: \$56,430). With a continued increase in home values, the city's commitment to providing a range of housing options to meet the various preferences and income levels of Wilsonville employees and residents remains critical.

Residential growth is expected to remain strong. In addition to the record-setting number of residential permits issued, the city approved plans for a total of 235 future single-family homes anticipated to be built between 2016 and 2018. These projects include row homes located in Villebois and residential infill in Old Town. Details on approved plans and issued permits are included in the following pages.

<sup>1</sup> Housing affordability is commonly defined as 33% or less of household income being spent on rent or mortgage expenses. Mortgage calculation assumes 20% down payment and 30-year term at a fixed rate of 3.8%. A mortgage payment of \$1565 meets the affordability index and represents a home sale price of \$317,000.

## 235 HOMES



WERE APPROVED BY THE DEVELOPMENT REVIEW BOARD IN 2015  
CONSTRUCTION ANTICIPATED 2016-2018

**235** SINGLE-FAMILY    **0** MULTI-FAMILY

**100%**                      **0%**

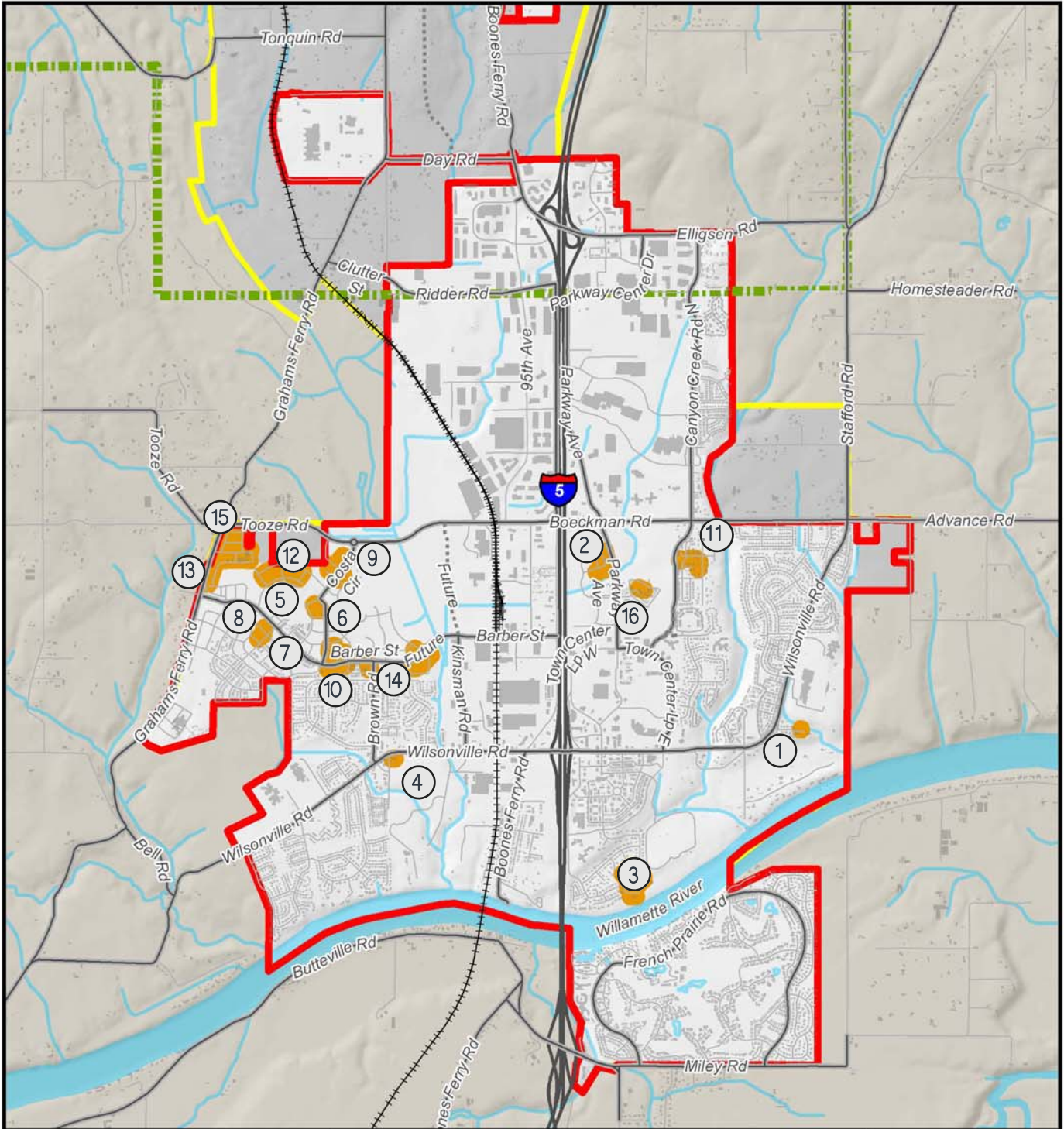
# RESIDENTIAL PERMITS ISSUED



*“This is the second year in a row that the City has seen a record number of single family home starts. I feel fortunate to be part of our dedicated Community Development staff that continues to provide quality livability standards for our community in addition to the needed infrastructure and inspection services all while maintaining current staffing levels.”*

*Martin Brown  
Wilsonville Building Official*





**The City of Wilsonville, Oregon**  
Clackamas and Washington Counties

**2015 Approved Building Permits**

- City Limits
- County Boundary
- UGB

- |                               |                      |
|-------------------------------|----------------------|
| ① CEDAR POINTE                | ⑫ TONQUIN WOODS 6    |
| ② GROVE SINGLE FAMILY NORTH   | ⑬ TONQUIN WOODS 7    |
| ③ RENAISSANCE BOAT CLUB       | ⑭ RETHERFORD MEADOWS |
| ④ WILSONVILLE GREENS          | ⑮ CALAIS             |
| ⑤ TONQUIN WOODS 4             | ⑯ ASH MEADOWS        |
| ⑥ TONQUIN MEADOWS 2           |                      |
| ⑦ OFFICERS ROW                |                      |
| ⑧ CARVALHO DUPLEXES           |                      |
| ⑨ TONQUIN MEADOWS             |                      |
| ⑩ LEGEND AT VILLEBOIS         |                      |
| ⑪ RENAISSANCE AT CANYON CREEK |                      |



3/2/2016



M:\projects\2016\020116\_Housing\ApprovedPlans2015.mxd



1

# CEDAR POINTE



aerial photo dated Summer 2015

APPROVED: SPRING 2015



PHOTO TAKEN FEBRUARY 2016

## SITE CHARACTERISTICS

NUMBER OF HOMES: 1 OF 15

LOT SIZE: 14,000 SF (AVG 14,000 SF)

NET ACRES FOR HOUSING: 0.32

NET DENSITY: 3.11 UNITS PER ACRE

CONSTRUCTION BY: INDEPENDENT BUILDER

CONSTRUCTION VALUE: \$416,307

HOUSING TYPE: SINGLE FAMILY

LOCATION: CEDAR POINTE

ZONING: PDR-2



# 2

# GROVE SINGLE FAMILY NORTH



aerial photo dated Summer 2015

APPROVED: SPRING—FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 21 OF 27

LOT SIZE: 4500– 6555 SF (AVG 5,116 SF)

NET ACRES FOR HOUSING: 2.47

NET DENSITY: 8.50 UNITS PER ACRE

CONSTRUCTION BY: LENNAR NW, INC.

CONSTRUCTION VALUE: \$5,438,833

HOUSING TYPE: SINGLE FAMILY

LOCATION: BRENCHLY ESTATES

ZONING: PDR-5



PHOTO TAKEN FEBRUARY 2016



# RENAISSANCE BOAT CLUB



aerial photo dated Summer 2015

APPROVED: SPRING—FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 13 OF 33

LOT SIZE: 5,000—7,841 SF (AVG 6,252 SF)

NET ACRES FOR HOUSING: 1.87

NET DENSITY: 6.95 UNITS PER ACRE

CONSTRUCTION BY: RENAISSANCE CUSTOM HOMES

CONSTRUCTION VALUE: \$5,051,976

HOUSING TYPE: SINGLE FAMILY

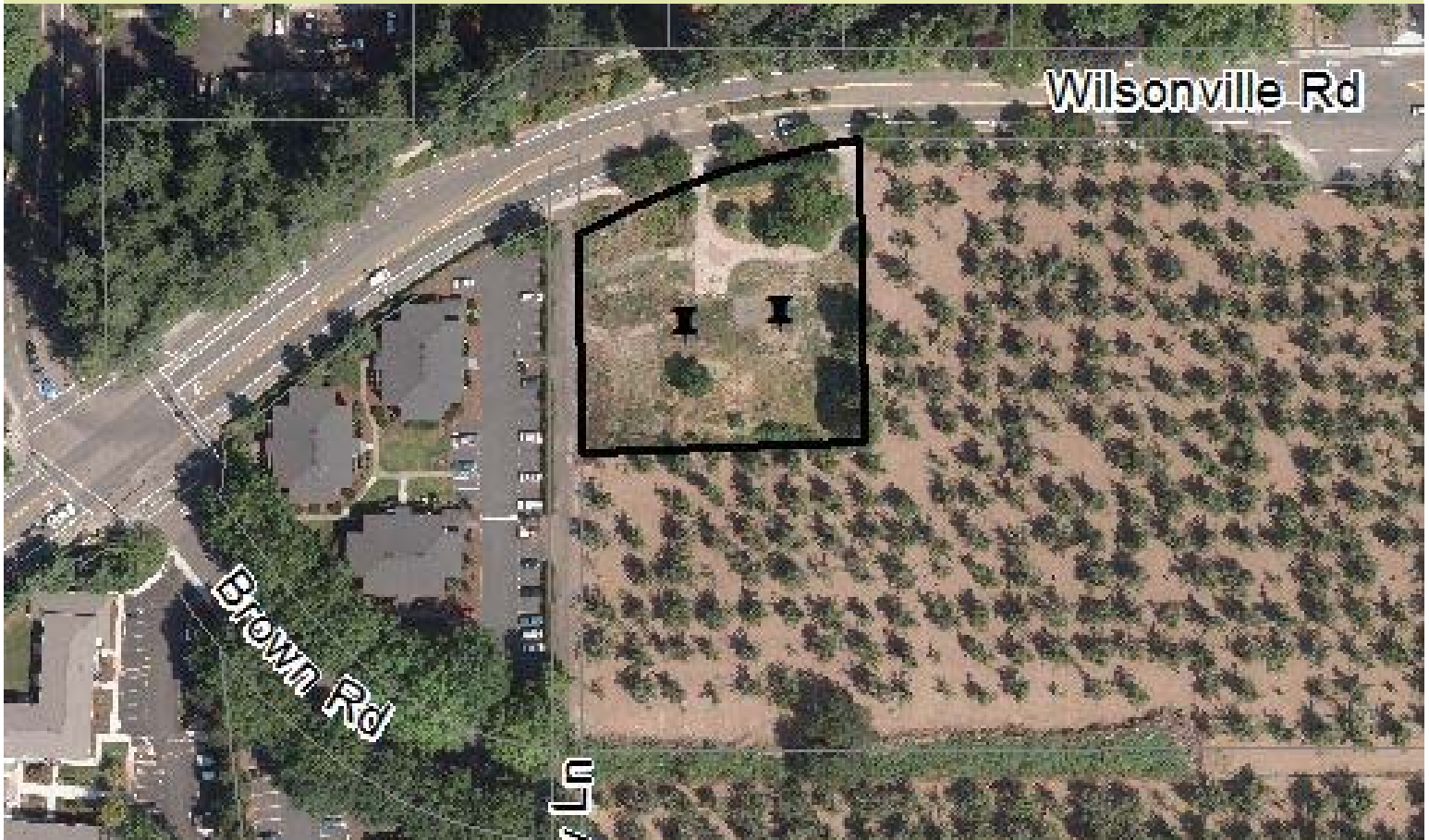
LOCATION: WEST OF MEMORIAL PARK, ON THE RIVER

ZONING: PDR-4



PHOTOS TAKEN FEBRUARY 2016

# WILSONVILLE GREENS



aerial photo dated Summer 2015

APPROVED: FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 12 OF 12

LOT SIZE: 17,206 (AVG 17,206 )

NET ACRES FOR HOUSING: 0.79

NET DENSITY: 15.19 UNITS PER ACRE

CONSTRUCTION BY: WEST COAST HOME SOLUTIONS

CONSTRUCTION VALUE: \$1,671,176

HOUSING TYPE: MULTI-FAMILY

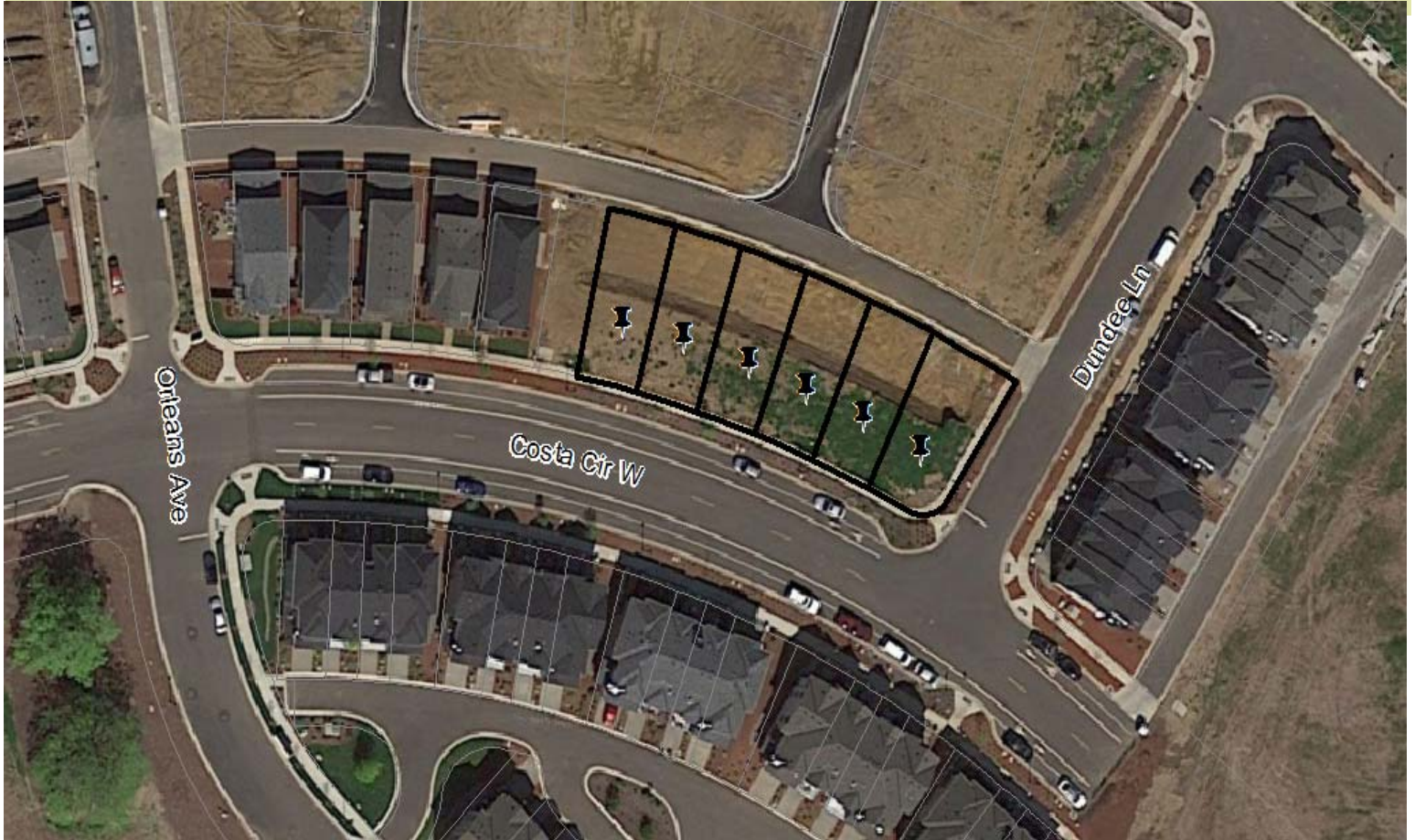
LOCATION: SOUTH SIDE OF WILSONVILLE ROAD, BETWEEN BROWN ROAD AND MONTEBELLO

ZONING: PDR-5



PHOTOS TAKEN FEBRUARY 2016





aerial photo dated Summer 2015

APPROVED: SUMMER—FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 6 OF 37

LOT SIZE: 2,349—2,974 SF (AVG 2,427 SF)

NET ACRES FOR HOUSING: 0.34

NET DENSITY: 17.65 PER ACRE

CONSTRUCTION BY: POLYGON

CONSTRUCTION VALUE: \$1,059,815

HOUSING TYPE: SINGLE FAMILY

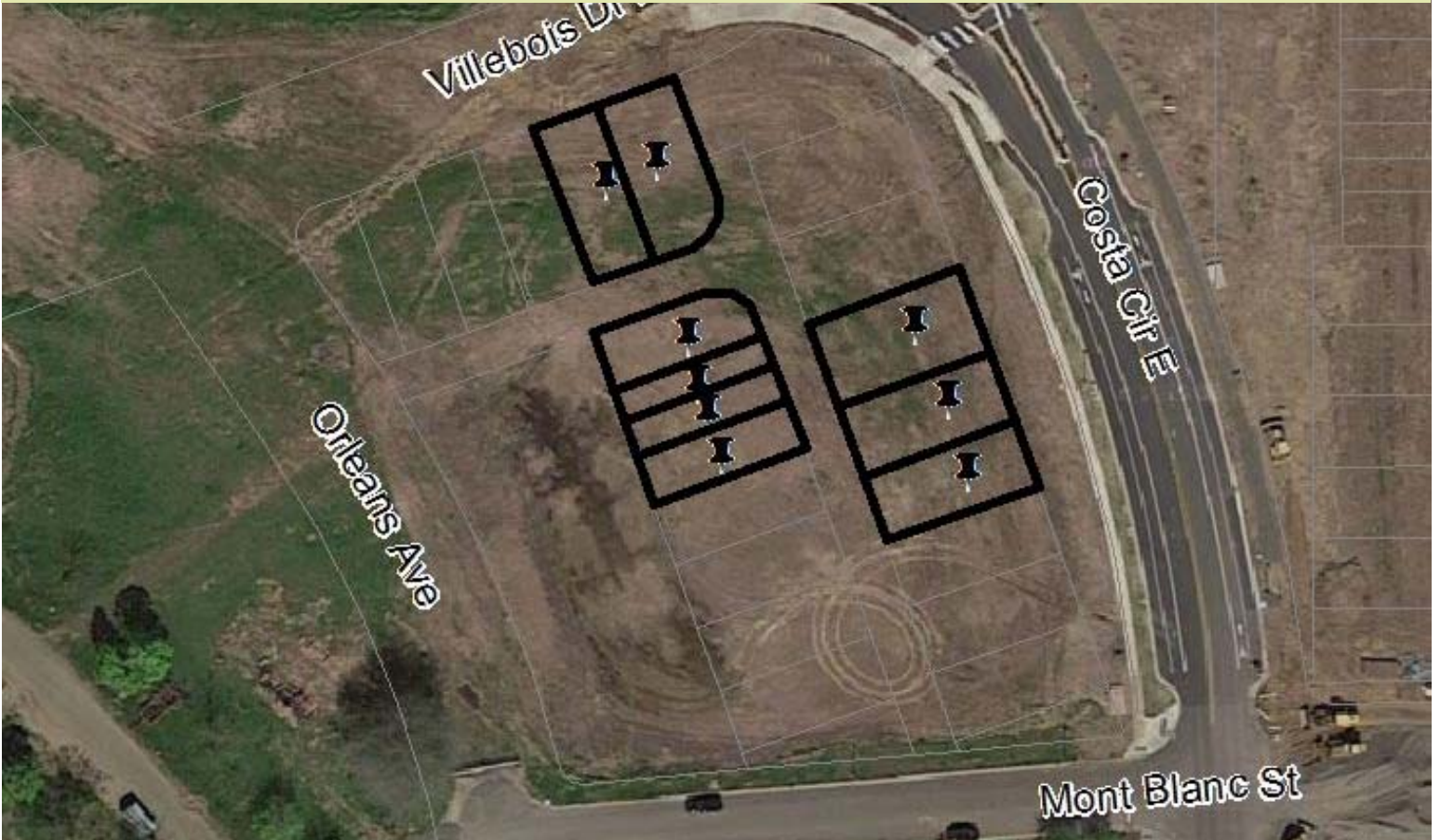
LOCATION: VILLEBOIS NORTH

ZONING: VILLAGE



PHOTOS TAKEN FEBRUARY 2016





aerial photo dated Summer 2015

APPROVED: FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 9 OF 21

LOT SIZE: 1,119—2,920 SF (AVG 2,039 SF)

NET ACRES FOR HOUSING: 0.42

NET DENSITY: 21.43 UNITS PER ACRE

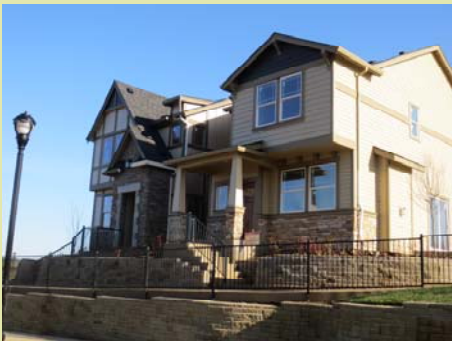
CONSTRUCTION BY: POLYGON

CONSTRUCTION VALUE: \$1,702,741

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS EAST

ZONING: VILLAGE



PHOTOS TAKEN FEBRUARY 2016



# OFFICERS ROW



aerial photo dated Summer 2015

APPROVED: FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 7 OF 18

LOT SIZE: 1,974—2,432 SF (AVG 2,104 SF)

NET ACRES FOR HOUSING: 0.34

NET DENSITY: 20.59 UNITS PER ACRE

CONSTRUCTION BY: PNW LAND DEVELOPMENT

CONSTRUCTION VALUE: \$1,806,907

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS CENTRAL

ZONING: VILLAGE



PHOTOS TAKEN FEBRUARY 2016



# CARVALHO DUPLEXES



aerial photo dated Summer 2015

APPROVED: FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 2 OF 3

LOT SIZE: 3,342 SF (AVG 3,342 SF)

NET ACRES FOR HOUSING: 0.15

NET DENSITY: 13.33 UNITS PER ACRE

CONSTRUCTION BY: PNW LAND DEVELOPMENT

CONSTRUCTION VALUE: \$167,967

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS CENTRAL

ZONING: VILLAGE



PHOTOS TAKEN FEBRUARY 2016



# TONQUIN MEADOWS



aerial photo dated Summer 2015

APPROVED: SPRING—SUMMER 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 43 OF 205 (PHASE 1)

LOT SIZE: 951—3,429 SF (AVG 1,928 SF)

NET ACRES FOR HOUSING: 1.91

NET DENSITY: 22.51 UNITS PER ACRE

CONSTRUCTION BY: POLYGON

CONSTRUCTION VALUE: \$7,615,518

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS EAST

ZONING: VILLAGE



PHOTO TAKEN FEBRUARY 2016



# LEGEND AT VILLEBOIS



aerial photo dated Summer 2015

APPROVED: SPRING—WINTER 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 38 OF 88

LOT SIZE: 2,720— 4,504 SF (AVG 3,375 SF)

NET ACRES FOR HOUSING: 2.94

NET DENSITY: 12.92 UNITS PER ACRE

CONSTRUCTION BY: LEGEND HOMES

CONSTRUCTION VALUE: \$10,054,621

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS EAST

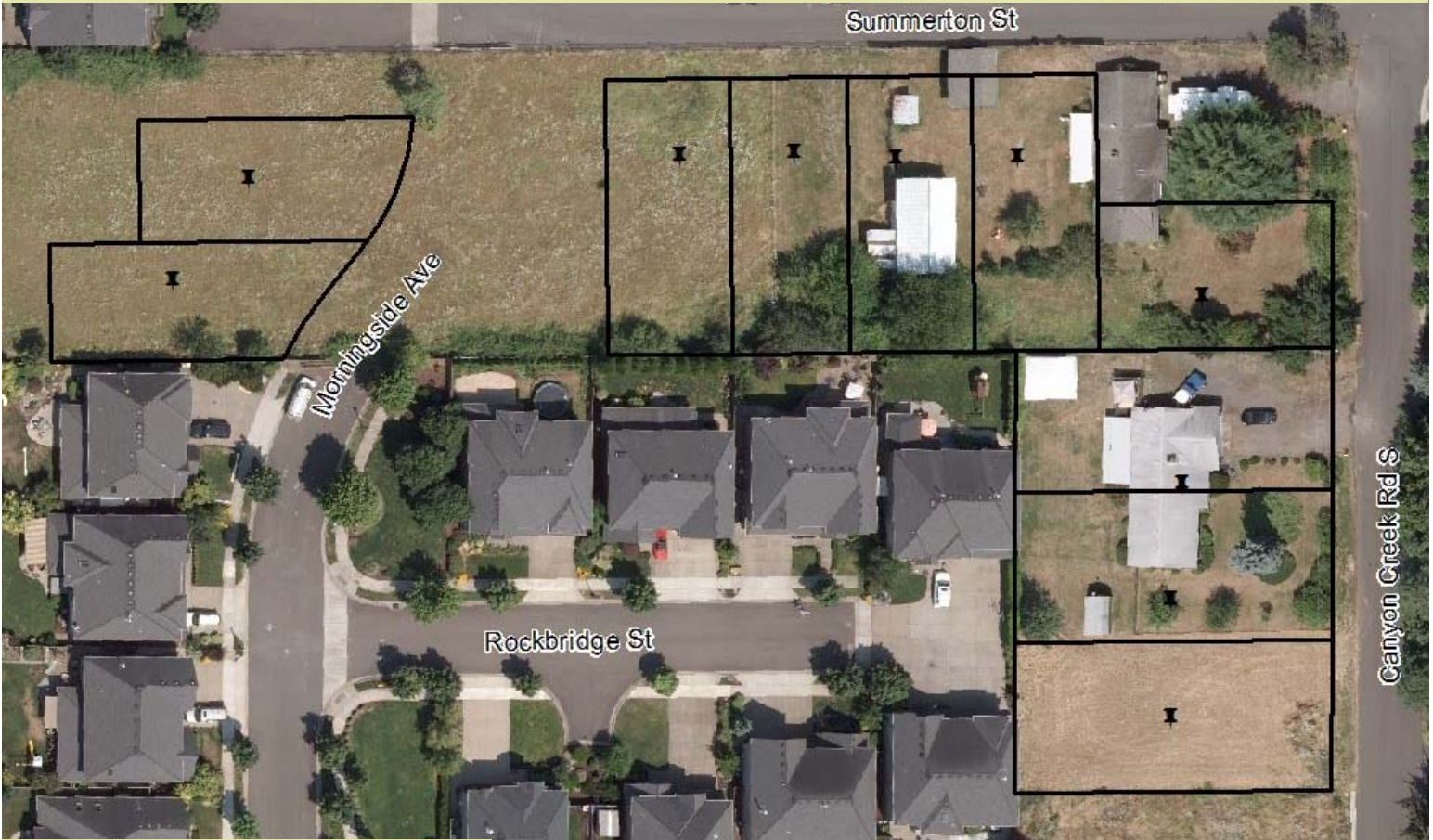
ZONING: VILLAGE



PHOTOS TAKEN FEBRUARY 2016



# RENAISSANCE AT CANYON CREEK



aerial photo dated Summer 2015

APPROVED: SPRING—FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 10 OF 10

LOT SIZE: 5,706—8,712 SF (AVG 6,582 SF)

NET ACRES FOR HOUSING: 1.51

NET DENSITY: 6.62 UNITS PER ACRE

CONSTRUCTION BY: RENAISSANCE HOMES

CONSTRUCTION VALUE: \$3,511,367

HOUSING TYPE: SINGLE FAMILY

LOCATION: SOUTH OF SUMMERTON ST, WEST OF CANYON CREEK ROAD SOUTH

ZONING: PDR-3



PHOTO TAKEN FEBRUARY 2016





aerial photo dated Summer 2015

APPROVED: SPRING—FALL 2015

### SITE CHARACTERISTICS

NUMBER OF HOMES: 32 OF 32 BUILDING PERMITS

LOT SIZE: 2,336—3,024 SF (AVG 2,603 SF)

NET ACRES FOR HOUSING: 1.91

NET DENSITY: 16.75 UNITS PER ACRE

CONSTRUCTION BY: POLYGON

CONSTRUCTION VALUE: \$6,799,533

HOUSING TYPE: SINGLE FAMILY

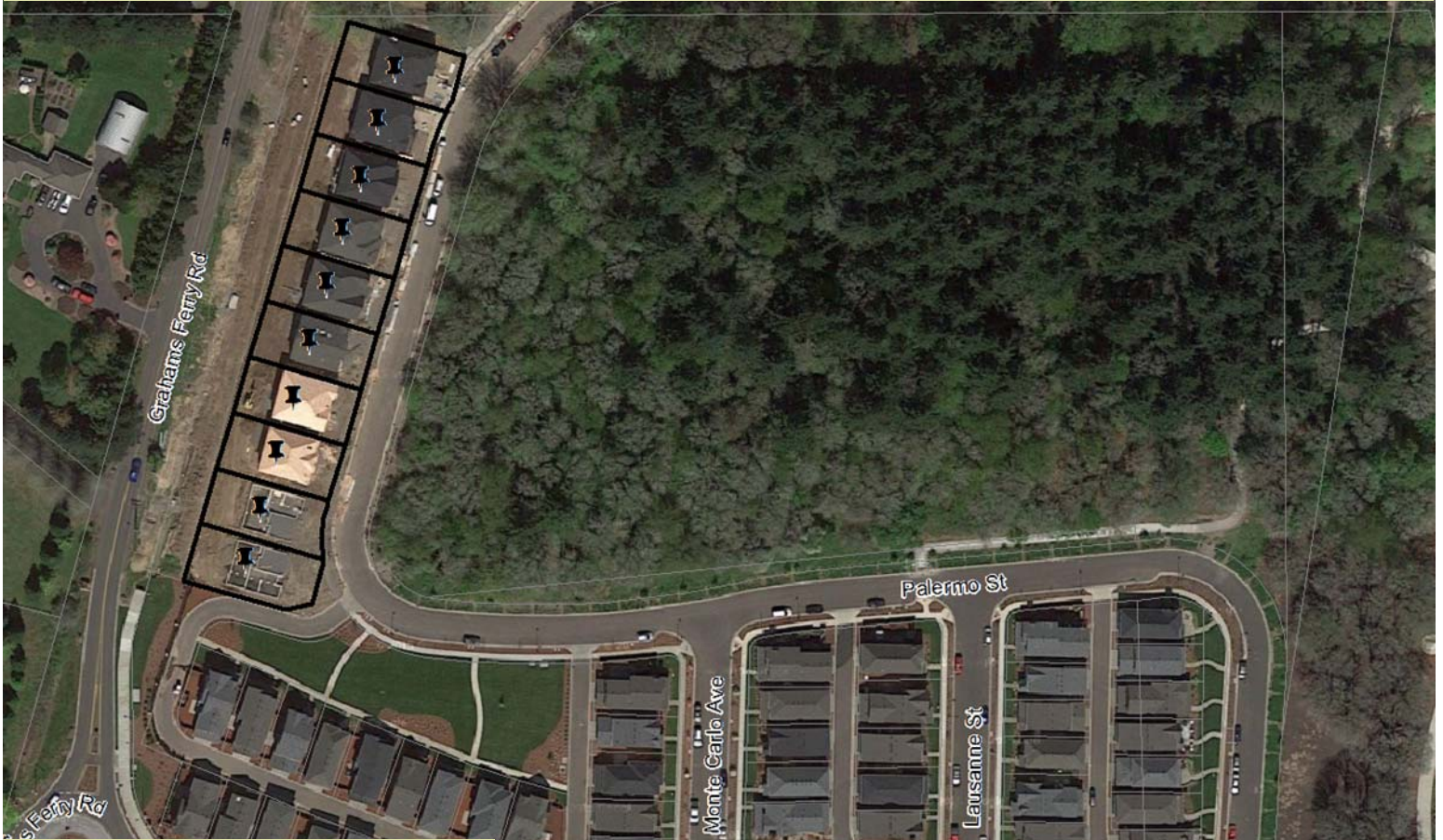
LOCATION: VILLEBOIS EAST

ZONING: VILLAGE



PHOTOS TAKEN FEBRUARY 2016





aerial photo dated Summer 2015

APPROVED: SPRING 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 10 OF 10 BUILDING PERMITS

LOT SIZE: 5,000—5,774 SF (AVG 5,138 SF)

NET ACRES FOR HOUSING: 1.18

NET DENSITY: 8.47 UNITS PER ACRE

CONSTRUCTION BY: POLYGON

CONSTRUCTION VALUE: \$3,193,862

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS EAST

ZONING: VILLAGE

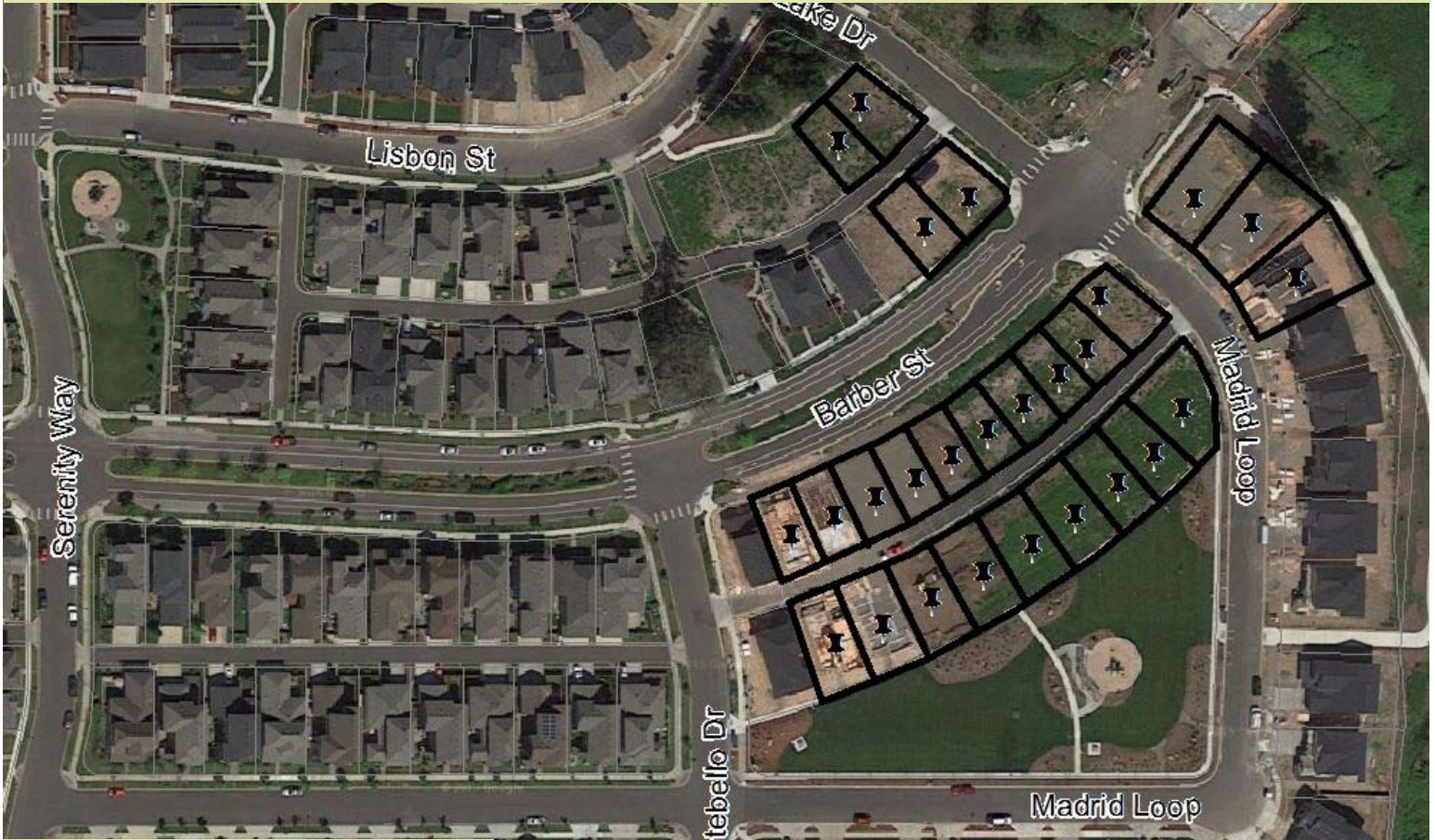


PHOTOS TAKEN FEBRUARY 2016



14

# RETFERFORD MEADOWS



aerial photo dated Summer 2015

APPROVED: SPRING-SUMMER 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 26 OF 88 BUILDING PERMITS

LOT SIZE: 2,590— 5,985 SF (AVG 3,471 SF)

NET ACRES FOR HOUSING: 2.07

NET DENSITY: 12.56 UNITS PER ACRE

CONSTRUCTION BY: LENNAR NW INC.

CONSTRUCTION VALUE: \$6,423,739

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS EAST

ZONING: VILLAGE



PHOTO TAKEN FEBRUARY 2016





aerial photo dated Summer 2015

APPROVED: SPRING—SUMMER 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 84 OF 84 BUILDING PERMITS

LOT SIZE: 2,400—7,366 SF (AVG 4,037 SF)

NET ACRES FOR HOUSING: 7.79

NET DENSITY: 10.78 UNITS PER ACRE

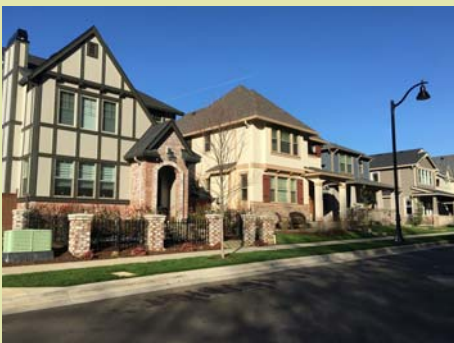
CONSTRUCTION BY: POLYGON

CONSTRUCTION VALUE: \$23,757,790

HOUSING TYPE: SINGLE FAMILY

LOCATION: VILLEBOIS NORTH

ZONING: VILLAGE



PHOTOS TAKEN FEBRUARY 2016



# ASH MEADOWS



aerial photo dated Summer 2015

APPROVED: FALL 2015

## SITE CHARACTERISTICS

NUMBER OF HOMES: 10 OF 81

LOT SIZE: 1,204— 1,249 SF (AVG 1,220 SF)

NET ACRES FOR HOUSING: 0.28

NET DENSITY: 35.7 UNITS PER ACRE

CONSTRUCTION BY: BC CUSTOM CONSTRUCTION

CONSTRUCTION VALUE: \$1,490,623

HOUSING TYPE: SINGLE FAMILY

LOCATION: EAST OF PARKWAY, SOUTH OF MAXINE LN

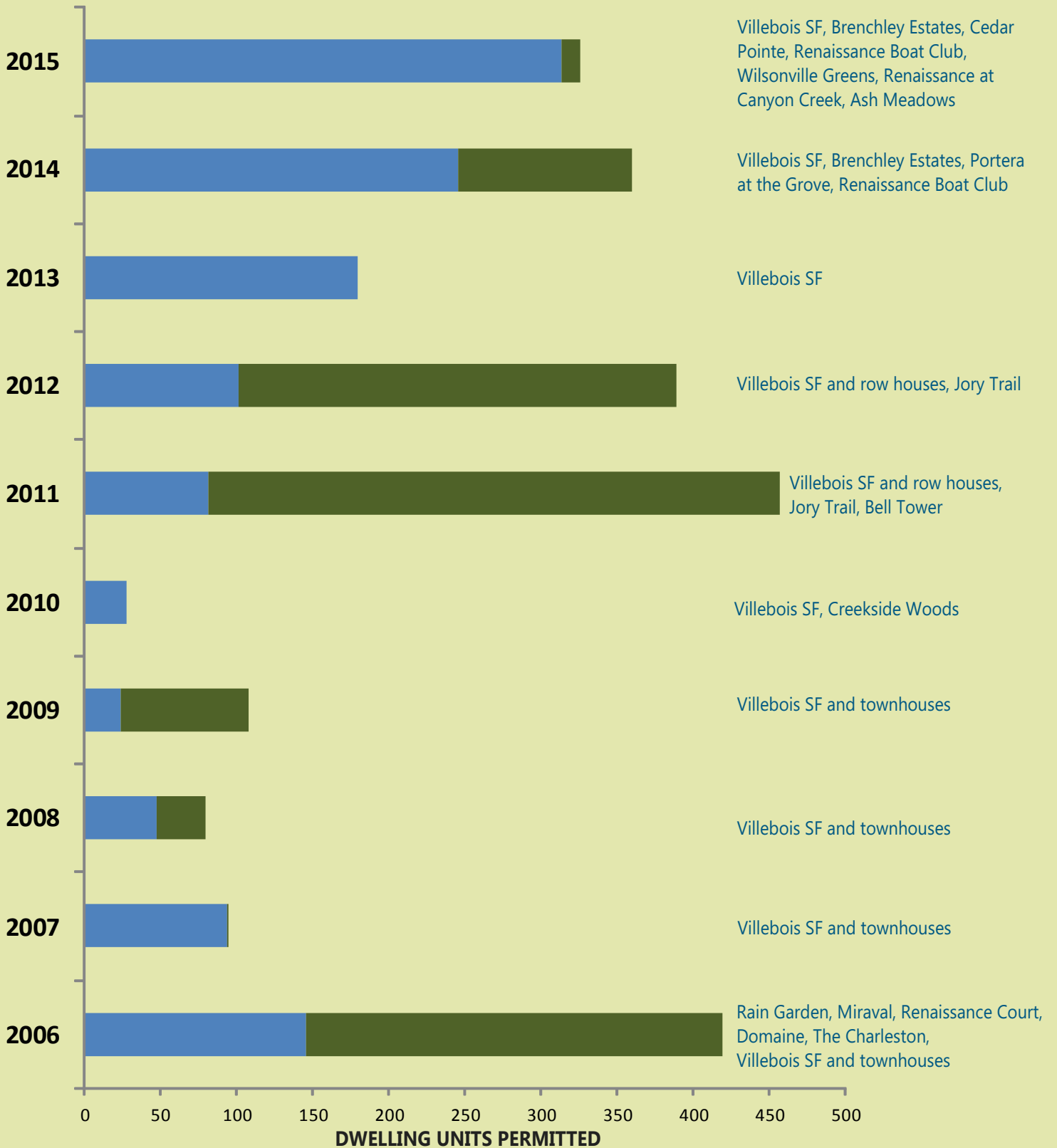
ZONING: PDR-5



PHOTOS TAKEN FEBRUARY 2016

# 10-YEAR DEVELOPMENT

SF Units Permitted MF Units Permitted





# TRENDS AND TIMELINE

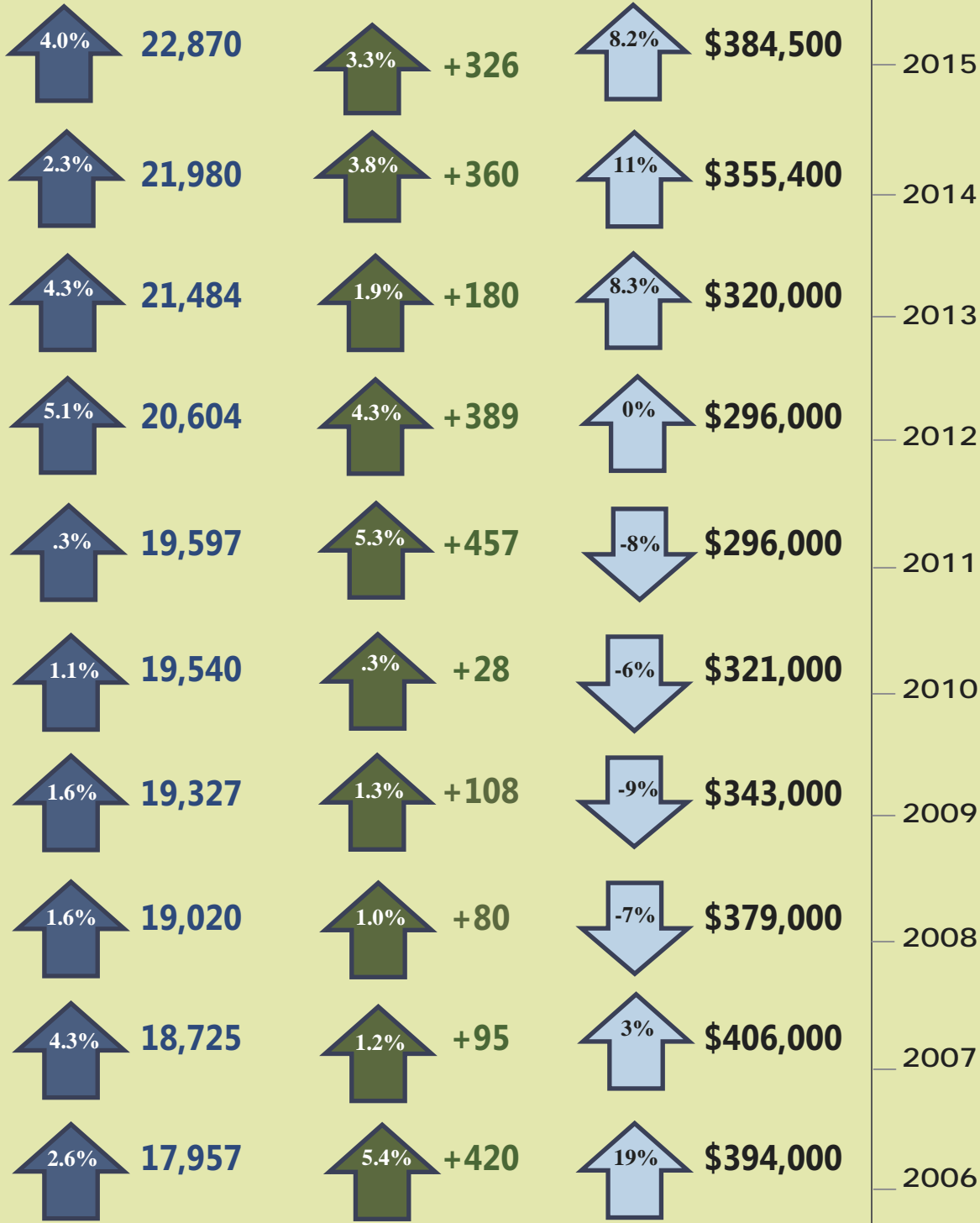
## POPULATION / GROWTH RATE

Sources: US Census and PSU

## HOUSEHOLD GROWTH RATE

## AVERAGE SELLING PRICE OF HOME

Source: Zillow.com



# RESIDENTIAL PERMITS ISSUED

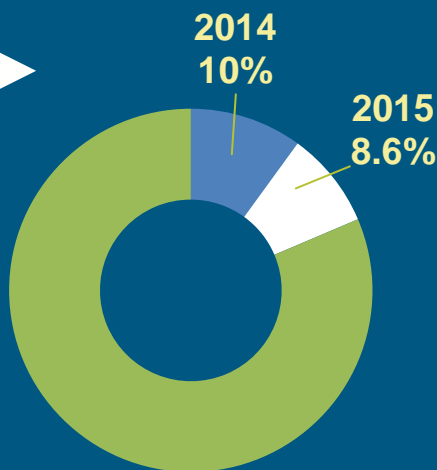


Permitted housing projects this past year provided an array of housing types to meet the various housing needs of the people who live in and are moving to the city. The projects reflect a range of lot sizes, from 1,100–14,000 square feet, with homes ranging in size, design and cost and providing both rental and ownership opportunities. The majority of residential projects permitted this year were single-family homes, which was expected given a recent housing study that identified a need for more detached single-family housing in the city and long range plans for single family residential development.

The 324 residential building permits issued in 2015 represent 10% of the 20-year Metro Household Growth Forecast, for the second consecutive year. Metro’s official estimate forecasts Wilsonville will add 3,749 households between 2014 and 2034, which represents an average annual growth rate of 1.8%. However actual building activity last year enforces a significantly higher growth rate (3.3%) in line with the city’s historical annual growth rate (2.8%). At the current rate of development, household growth would surpass the regional forecast by 2024, and the city would be looking beyond its current residential buildable land inventory.

## METRO HOUSEHOLD GROWTH FORECAST

2014 - 2034

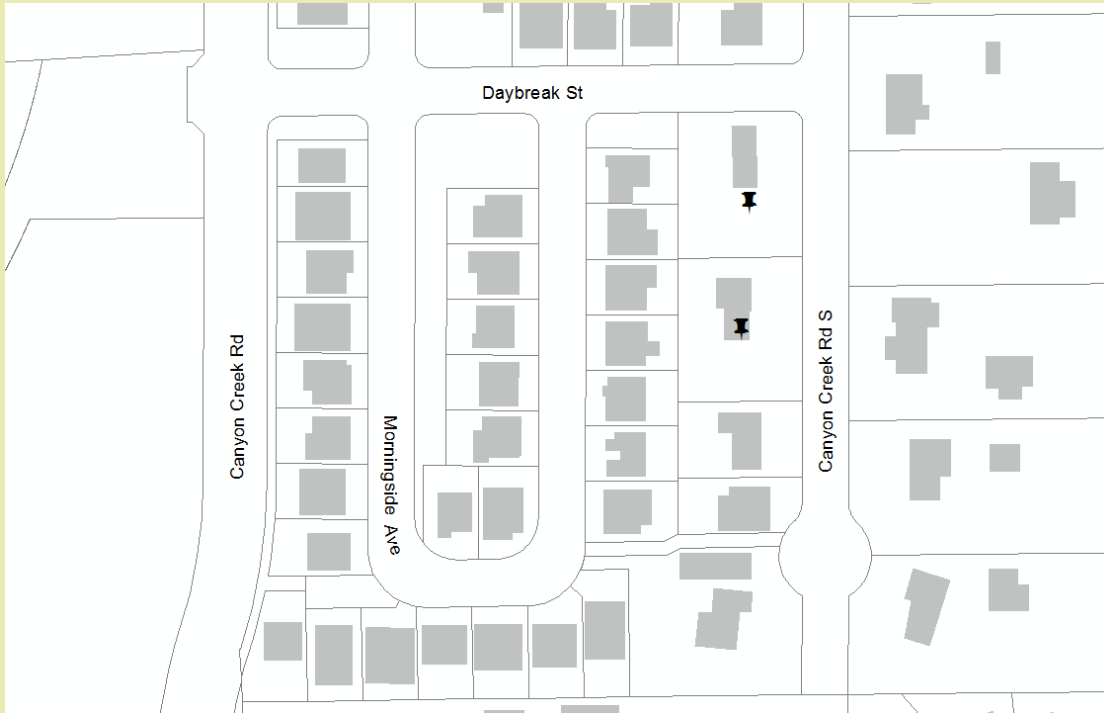


**8.6%**

OF FORECASTED HOUSEHOLDS  
WERE PERMITTED FOR  
CONSTRUCTION LAST YEAR

# PARTITIONS

A **land partition** is a division of an area or tract of land into two or three parcels when such area or tract of land exists as a unit or contiguous units of land under single ownership. The city approved a handful of partition applications increasing potential development on those sites.



## 6 PARCELS

## 0.97 ACRES



ZONED SINGLE-FAMILY RESIDENTIAL

AR15-0058  
 RENAISSANCE  
 CREATED 3 PARCELS TOTAL  
 0.49 ACRES  
 CANYON CREEK ROAD S.

AR15-0059  
 RENAISSANCE  
 CREATED 3 PARCELS TOTAL  
 0.48 ACRES  
 CANYON CREEK ROAD S.

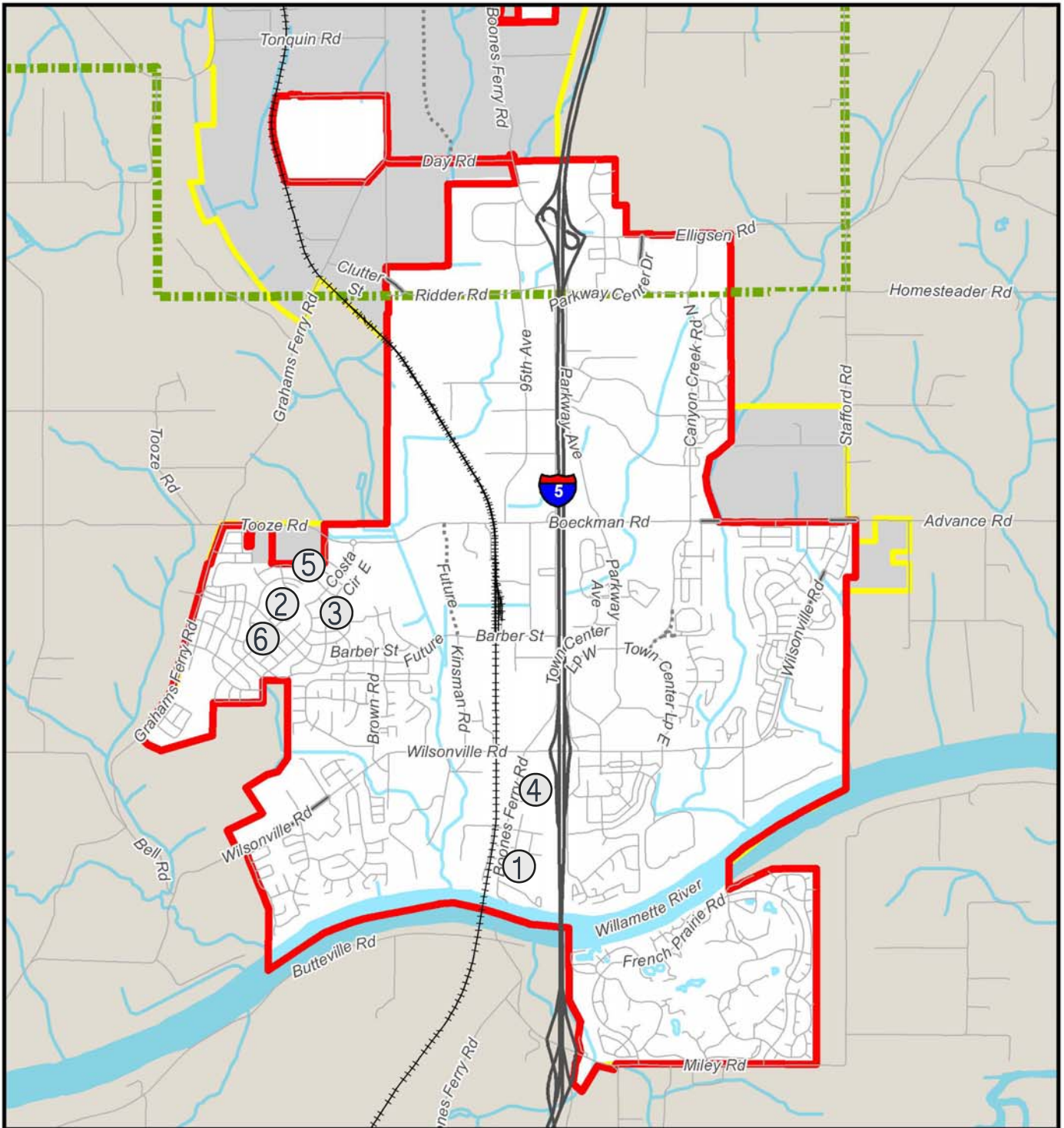
# HOUSING PLANS APPROVED



*“For the past three years, year over year, Wilsonville has set records for the number of single-family home construction permits issued. This activity offers citizens, both existing and new, everything from entry level townhomes in Villebois, to riverfront living with boat amenities at the Renaissance Boat Club. The diversity of housing choices in the community is truly indicative of an evolving, complete community.”*

*— CHRIS NEAMTZU, WILSONVILLE PLANNING DIRECTOR*





**The City of Wilsonville, Oregon**  
Clackamas and Washington Counties

**2015 Approved Housing Plans**

- City Limits
- County Boundary
- UGB

- ① OLD TOWN INFILL – TAXLOT 800
- ② PHASE 6 CENTRAL VILLEBOIS ROW HOMES
- ③ MONT BLANC ROW HOMES
- ④ OLD TOWN INFILL – TAXLOTS 3801 AND 3802
- ⑤ BROOKESIDE TERRACE ROW HOMES
- ⑥ ROYAL CRESCENT AT VILLEBOIS AND CAMDEN SQUARE

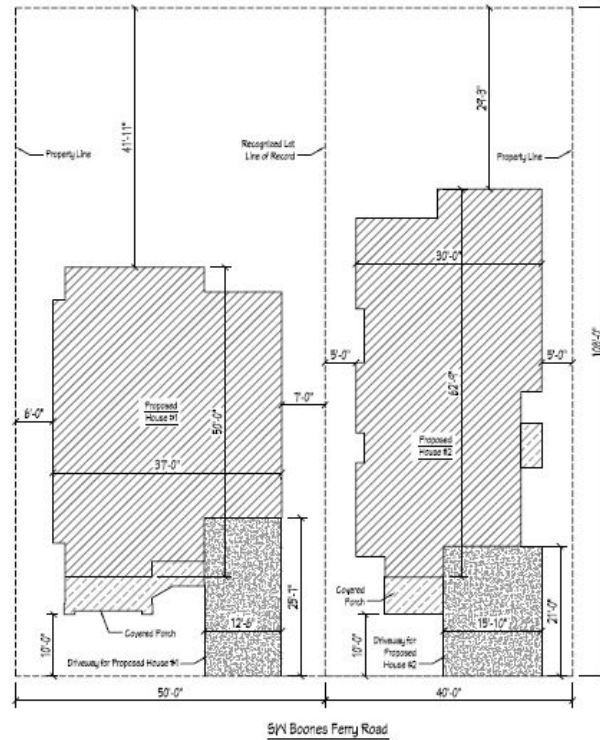


2/5/2016



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51N Boones Ferry Road

ACRES:  
0.22 GROSS

NUMBER OF HOMES:  
2

AVERAGE LOT SIZE:  
4,860 SF

NET DENSITY:  
10.5 UNITS PER ACRE

APPLICANT:  
RUPP FAMILY BUILDERS



APPROVED: JUNE 22, 2015

## LAND DEDICATIONS

HOUSING: 0.19 ACRES (85%)

OPEN SPACE: 0 ACRES\*

LANDSCAPING: 0.03 ACRES (15%)

ALLEYS: 0 ACRES

PUBLIC STREETS: 0 ACRES

HOUSING TYPES:

2 SINGLE FAMILY HOMES

1 ACCESSORY DWELLING UNIT PER LOT

LOCATION: OLD TOWN

\*OPEN SPACE NOT REQUIRED FOR DEVELOPMENTS WITHIN THE RA-H ZONE



ACRES:  
1.52 GROSS

NUMBER OF HOMES:  
31

AVERAGE LOT SIZE:  
1,096 SF

NET DENSITY:  
41 UNITS PER ACRE

APPLICANT:  
POLYGON NORTHWEST

APPROVED: JULY 13, 2015

## LAND DEDICATIONS

HOUSING: 0.78 ACRES (51%)

OPEN SPACE: 0.15 ACRES (10%)

ALLEYS: 0.28 ACRES (19%)

PUBLIC STREETS: 0.31 ACRES (20%)

HOUSING TYPES:

31 SINGLE FAMILY ROWHOMES

LOCATION: VILLEBOIS CENTRAL





APPROVED: JULY 13, 2015

ACRES:  
3.44 GROSS

NUMBER OF LOTS:  
68

AVERAGE LOT SIZE:  
1,210 SF

NET DENSITY:  
36 UNITS PER ACRE

APPLICANT:  
POLYGON NORTHWEST

## LAND DEDICATIONS

HOUSING: 1.89 ACRES (55%)

OPEN SPACE: 0.32 ACRES (9%)

ALLEYS: 0.43 ACRES (13%)

PUBLIC STREETS: 0.10 ACRES (3%)

PRIVATE STREETS: 0.59 ACRES (17%)

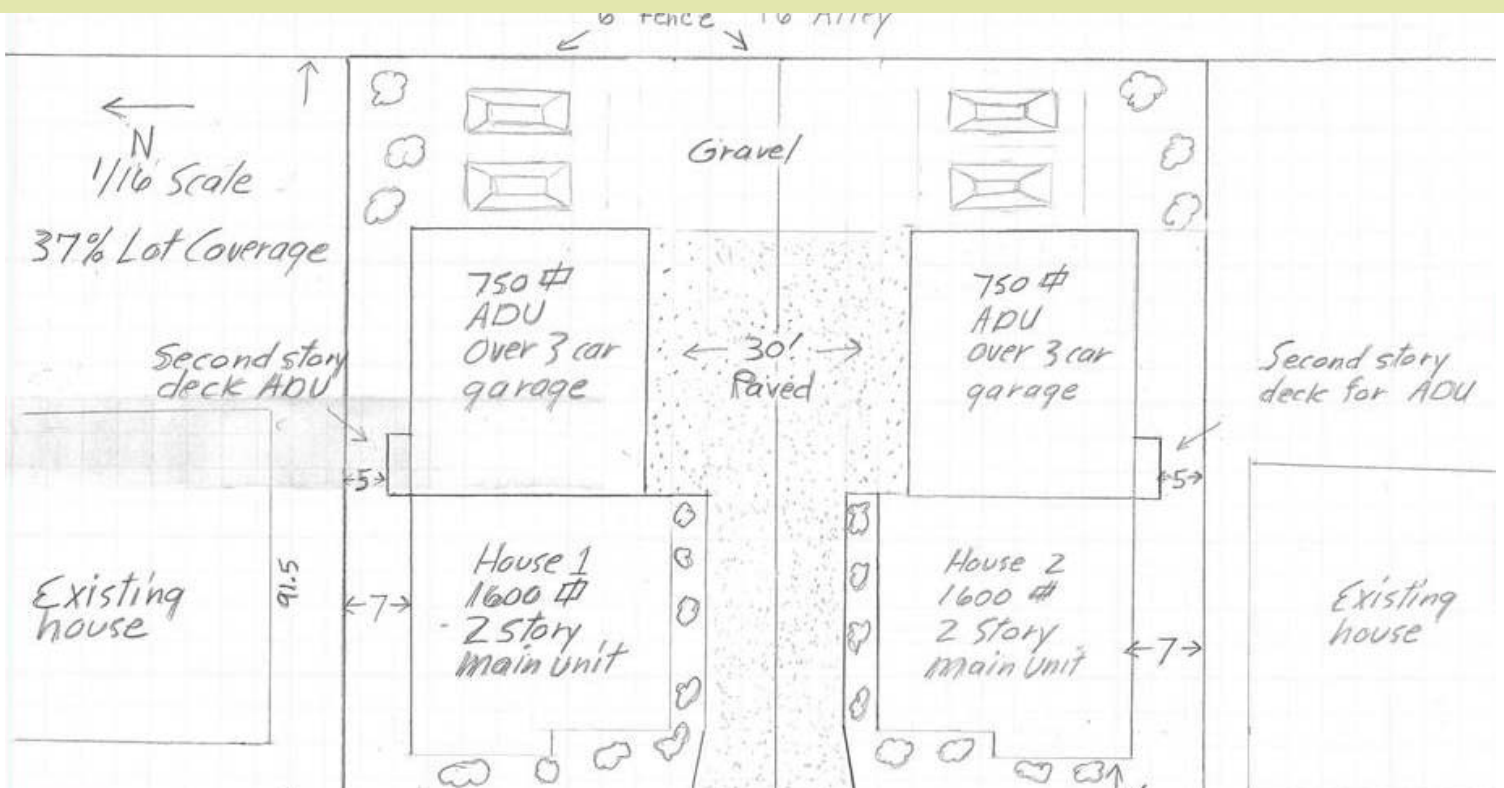
FUTURE DEVELOPMENT LOTS: 0.11 ACRES (3%)

HOUSING TYPES:  
68 ATTACHED SINGLE FAMILY

LOCATION: VILLEBOIS CENTRAL







ACRES:  
0.23 GROSS

NUMBER OF HOMES:  
2

AVERAGE LOT SIZE:  
5,033 SF

NET DENSITY:  
10 UNITS PER ACRE

APPLICANT:  
PROPERTY OWNER



APPROVED: DECEMBER 14, 2015

## LAND DEDICATIONS

HOUSING: 0.20 ACRES (85%)

OPEN SPACE: 0 ACRES\*

LANDSCAPING: 0.03 ACRES (15%)

ALLEYS: 0 ACRES

PUBLIC STREETS: 0 ACRES

HOUSING TYPES:

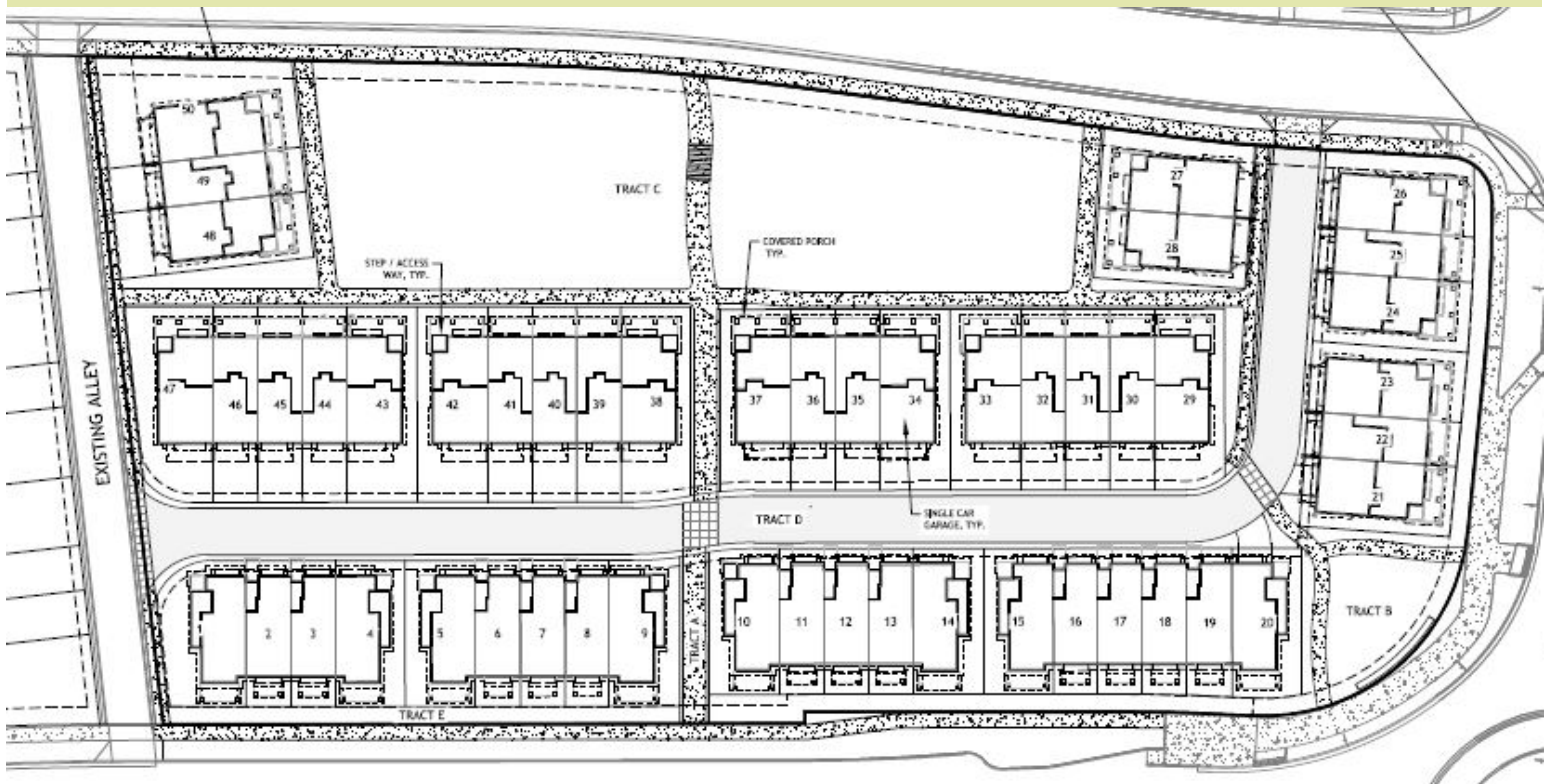
2 SINGLE FAMILY HOMES

1 ACCESSORY DWELLING UNIT PER LOT

LOCATION: OLD TOWN

\*OPEN SPACE NOT REQUIRED FOR DEVELOPMENTS WITHIN THE RA-H ZONE

# BROOKESIDE TERRACE ROW HOMES



**ACRES:**  
2.25 GROSS

**NUMBER OF LOTS:**  
50

**AVERAGE LOT SIZE:**  
1,141 SF

**NET DENSITY:**  
38 UNITS PER ACRE

**APPLICANT:**  
POLYGON NORTHWEST

APPROVED: DECEMBER 14, 2015

## LAND DEDICATIONS

HOUSING: 1.31 ACRES (58%)

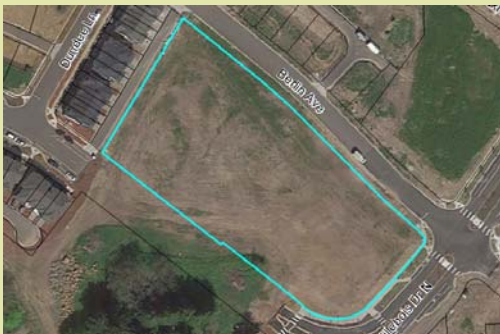
OPEN SPACE: 0.69 ACRES (31%)

ALLEYS: 0.24 ACRES (11%)

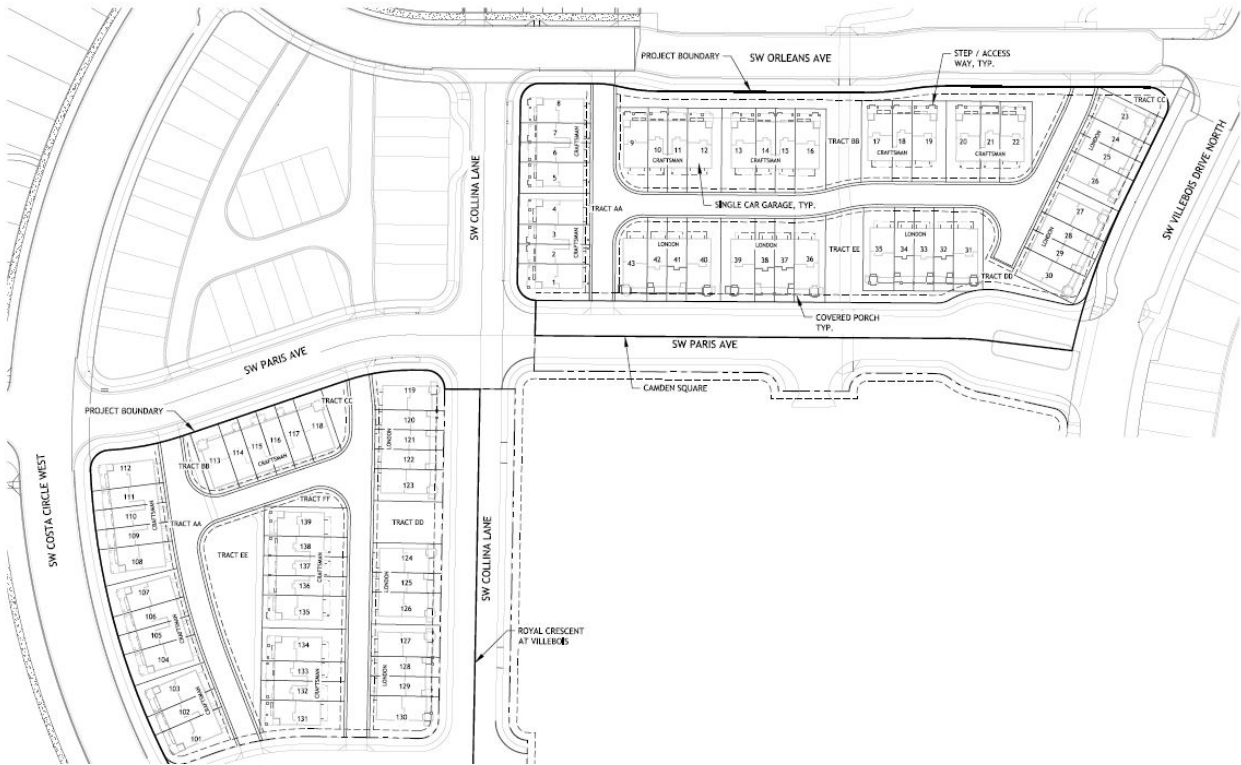
PUBLIC STREETS: 0.00 ACRES

HOUSING TYPES:  
50 ATTACHED SINGLE FAMILY

LOCATION: VILLEBOIS CENTRAL







ACRES:  
3.94 GROSS

NUMBER OF HOMES:  
82

AVERAGE LOT SIZE:  
1,200 SF

NET DENSITY:  
36 UNITS PER ACRE

APPLICANT:  
POLYGON NORTHWEST

APPROVED: DECEMBER 14, 2015

## LAND DEDICATIONS

HOUSING: 2.26 ACRES (58%)

OPEN SPACE: 0.46 ACRES (12%)

ALLEYS: 0.61 ACRES (15%)

PUBLIC STREETS: 0.61 ACRES (15%)

HOUSING TYPES:  
82 ATTACHED SINGLE FAMILY

LOCATION: VILLEBOIS CENTRAL



# LOOKING FORWARD

The City of Wilsonville has experienced notable growth over the past four years; with 4% population growth and a 3.3% increase in households, it is nearly double regional expectations. As expected, with Villebois over half built and significant infrastructure projects completed, the fast pace of housing development continues.

As the city looks forward to 2016, development is expected to remain strong. In the past year, the city approved development plans for an additional 235 homes. In just the past two years, the city has approved residential development on 79 acres or 16% of the city's 20-year residential land inventory (477 acres). Construction of these projects is expected over the next few years. All of this activity reinforces the importance of the Frog Pond Area Plan and additional housing opportunities in other parts of the city such as the Town Center.

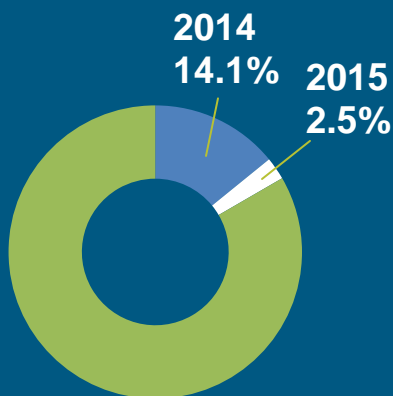
People are attracted to live in Wilsonville and employers continue to locate here, consistently rating the city as a great place to live, work, and do business. Looking forward, it will remain integral to the health and sustainability of the city to provide adequate and diverse housing options for new employees and residents, growing and changing families, and seniors who want to age-in-place.

*Wilsonville works with private and public interests to plan for our future—rather than just let it happen. Planning helps us get to where we want to be as a complete community offering a quality environment to live, work and play.*

— MAYOR TIM KNAPP

## RESIDENTIAL BUILDABLE LAND IN THE CITY

2014–2034



# 16.6% (79.2 OF 477 ACRES)

OF 20-YEAR LAND INVENTORY WAS DEDICATED BY PLANS APPROVED OVER LAST TWO YEARS CONSTRUCTION ANTICIPATED 2015-2018



**Wilsonville Public Library  
Monthly Report to Council  
May 2016**

**Headlines:**

**Patrick Duke**  
Library Director

**LIBRARY  
BOARD**

**Carolyn Berry**  
Chair

**Megan**  
Chuinard

**Reggie Gaines**

**Rich Dougall**

**Alan Steiger**

- **Summer Reading is just around the corner**  
Summer Reading Program sign-ups start on June 6<sup>th</sup>. It will be another program filled summer with the Thursday Fun Shows starting on June 23<sup>rd</sup>, Family Stories and Science starting June 21<sup>st</sup>, and our popular Science classes in August. Kids and families who finish can get tickets to a Blazers game, to the Portland Thorns, or the Oregon State Fair, among other prizes. The Summer Reading Program is significantly funded by the Wilsonville Friends of the Library and the Wilsonville Public Library Foundation.
- **Poetry Month was a great success**  
This year, the Library celebrated Poetry Month with several interactive activities for library visitors and a 'poetry music' concert at the end of April. About two dozen folks created book spine or blackout poems in the library and many were hung on our 'poetree', which was a small Christmas tree with poems hung on it. Attendance at the concert on April 30<sup>th</sup> was 41, and surveys from those in attendance were glowing.
- **Just when you thought Alan Steiger couldn't get more awesome**  
So we all know Alan as Library Board member, Foundation Board member, and Budget Committee Chair. We may also know that Alan (and Carole Hanna) gave up their Saturdays this spring to help about 130 folks with their taxes. But now Alan is going farther by hosting and teaching a series of financial literacy classes in the library. On April 28<sup>th</sup>, Alan presented *Creating and Sticking to a Budget*, on May 9<sup>th</sup> he will present *Spring Cleaning Your Debt*, and on June 7<sup>th</sup> will present *Talking to Aging Parents about Money*. Alan certainly leads the way in showing how committed volunteers can make a positive difference in our community. Thank You Alan.
- **Wilsonville Public Library Foundation planning May donor lunch**  
The Library Foundation is planning a lunch on May 24<sup>th</sup> in order to talk to donors about library initiatives, and to solicit support. State Librarian MaryKay Dahlgreen will speak about the impact of libraries on communities, and library staff will talk to donors about library initiatives that are being developed. This lunch is the first of a series of events and outreach activities that are designed to more deeply engage donors.
- **Library Board meeting. May 25th 6:30pm** at the Library

**April Statistics**

- E-book and downloadable audiobook circulation: 1,994.
- Library print circulation : 35,045
- Total items added: 1,203; items withdrawn: 1,707
- Room reservations: 312
- 

**Adult Services**

- April Adult Program attendance: 349

**Upcoming Programming:**

- Great Books Discussion Group. This month *What is War?* by von Clausewitz. May 19<sup>th</sup>. 6pm.
- History Pub May 31st. The Portland Mavericks: winning with baseball's double dirty dozen. Presented by former manager Frank Peters. Doors open at 5pm
- Game Night: Board Games, Cards and Chess. Wednesday May 25. 6-8 pm
- Talking to your Aging Parents about Money, Tuesday June 7<sup>th</sup> 6pm
- First Friday Film, June 3<sup>rd</sup> 6pm
- Genealogy Club, June 20<sup>th</sup> 1pm
- Great Books Discussion Group, June 20<sup>th</sup> 1pm

**Youth Services**

- April Children's Program attendance: 2,789
- Youth Services takes a break after May 20<sup>th</sup>, to gear up for the start of Summer Reading signups on June 6th

**This Quarter's weekly schedule:**

**Toddler Time**  
Tuesdays 10 am

**Babytime**  
Tuesdays 11 am

**Family Storytime**  
Tuesday 6:30 pm  
Wednesday 10:30 am,  
and 1:00 pm  
Thursday 10:30 am

**Library Playgroup**  
Mondays 10 – 11:30 am

**Read to the Dogs**  
Call for appointment  
503-570-1599

**Upcoming Programming:**

- Mama Bear Moms Group. May 13<sup>th</sup>, 20<sup>th</sup>, 27th. 4pm
- Teen Event: Dis-Night. May 20<sup>th</sup> 6:30 to 8:30 pm

See more events and services at [www.wilsonvillelibrary.org](http://www.wilsonvillelibrary.org)



# Parks and Recreation April 2016 Report



## Program News



Summer registration opened on April 18th with a 10% discount offered between the 18th and 30th. 15k in revenue was taken in this year compared to 9k during the same time period last year.



The Community Center held a scavenger hunt for Bring Your Child to Work Day. The kids earned "Healthy Eating, Active Living" backpacks and Frisbees.



Body Sculpt, an evening fitness class for adults, reached its capacity of 23 participants (plus a waitlist) within twelve days of opening for registration



Thanks to a generous donation from Xerox, the Community Center was able to purchase 6 new computers and 24 inch HD monitors for the computer lab.



The newly expanded Community Garden sold out for the season with 134 in-ground plots and 21 raised beds reserved for the season.

Nutritionist Karen McGeehan offered a lunchtime lecture on Wednesday, April 27th. The topic of the lecture was "Toxins in our Foods, how to make good choices." 13 people attended, and enjoyed a soup and salad lunch provided by a sponsorship from HealthNet.



## Parks Maintenance Update



Finalized course design with PacWest Disc Golf representatives



Completed Murase Plaza terracing project



Prepped ballfields for use



Completed Community Garden remodel

\*\* All full time parks staff attended HazMat Training \*\*

## Upcoming Events and Programs

- \* WERK Day  
Saturday, May 14. 8 am - 1 pm  
Meet at Community Center
- \* Queen of the High Road 10k and Half-Marathon  
Saturday, May 21. 9 am  
River Shelter and City sidewalks
- \* Wilsonville Festival of Arts  
Saturday, June 4 and 5  
Town Center Park



# Public Works

April 2016

## HAZARDOUS MATERIALS (HazMat) TRAINING

### *Roads Division*

The Public Works and the Parks departments completed four hours of HazMat training on April 12. This training prepares the City crews for emergency situations and how to handle them. As well as, an annual update on any new rules and regulations that may have changed with this Oregon Department of Transportation program and keeps the City in compliance with OSHA.



## CONTROL VALVE MAINTENANCE AND METER REPLACEMENTS

### *Utilities ~ Water Distribution*

Contractors performed ten control valve rebuilds at five locations this month, including the Tooze Road Revenue Vault pictured below. The rebuild consists of cleaning all pilot controls and internal components, replacing soft materials and any other parts as needed. Routine maintenance such as this ensures the City's distribution control valves operate smoothly and reliably as designed.





**CONTROL VALVE MAINTENANCE AND METER REPLACEMENTS (cont'd)**

*Utilities ~ Water Distribution*

The Water Distribution crew continued replacing water meters in Charbonneau this month along with their regular maintenance tasks. Some replacements are easier than others. Damage from tree roots is a common problem which affects water meters and meter boxes as pictured below.



Maintenance Specialist Shawn Powlison (below left) cuts tree roots to make room for two replacement meter boxes on Fairway Drive. Water Distribution Operator Steve Gering (below right) works at the same location to remove roots and earth by hand before installing the new boxes and replacement meters.

