

**ORDINANCE NO. 594**

**AN ORDINANCE AMENDING THE WILSONVILLE COMPREHENSIVE PLAN BY ADOPTING THE AMENDED VILLEBOIS VILLAGE MASTER PLAN AS AN ANCILLARY DOCUMENT**

WHEREAS, Ordinance No. 554 amended the Wilsonville Comprehensive Plan text to direct implementation of the Villebois Village Concept Plan, which was adopted by Ordinance No. 553 as a refinement of Dammasch Area Transportation-Efficient Land Use Plan (DATELUP) to guide the buildout of the Dammasch Area of Wilsonville; and

WHEREAS, Comprehensive Plan Implementing Measures 4.1.6.a and 4.1.6.b direct development and adoption of a Villebois Village Master Plan, whereby the buildout of the Dammasch area defined in the Comprehensive Plan can be accomplished consistent with the adopted Villebois Village Concept Plan; and

WHEREAS, the Villebois Master Plan was adopted by City Council via Ordinance No. 556 in August of 2003, and was amended through Ordinance No. 566 in June 2004; and

WHEREAS, changes to the Villebois Village Master Plan are proposed by the Master Planner Costa Pacific Communities and involve an update to reflect amendments to the land uses, street pattern and parks in the Village Center, location of a specific 10-acre elementary school site, minor text edits, and updates to reflect recent land use approvals for SAP-South and SAP-East; and

WHEREAS, the amendments contain an increase in total units from 2,390 to 2,473 homes resulting in an increase of 83 dwelling units; and

WHEREAS, the proposed changes have been analyzed by Staff and are found to be generally in compliance with City Code, Comprehensive Plan and other applicable standards; and

WHEREAS, at the Planning Commission's July 13, 2005 meeting a duly noticed public hearing was conducted and a recommendation of approval with conditions and corrections forwarded to the City Council; and

WHEREAS, the City Council conducted a duly noticed public hearing on the proposed Master Plan on August 15 and September 19, 2005; and

WHEREAS, the Council has considered the record before the Planning Commission, the Planning Division staff report and testimony and evidence of interested parties;

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

Section 1. Findings. The City Council hereby adopts as findings of fact the above recitals and the statements of fact and Conclusionary Findings in the staff report in the matter dated August 8, 2005, attached as Exhibit A, and the Revised December 5, 2005 Planning Staff Report attached as Exhibit B, incorporated by reference as if fully set forth herein.

Section 2. Order.

- (a) The City Council hereby adopts as an ancillary document to the Wilsonville Comprehensive Plan, the amended Villebois Village Master Plan as recommended by the Planning Commission on August 15, 2005, attached hereto and incorporated herein as Exhibit C, with additional amendments as contained in the August 8, 2005 and Revised December 5, 2005 staff reports shown on Exhibit A and Exhibit B, and
- (b) The City Council hereby directs the initiation of appropriate master plan updates, as indicated in said Master Plan conclusions and in the Conclusionary Findings pertaining to this matter.

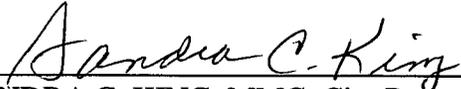
SUBMITTED to the Wilsonville City Council for first reading at a regular meeting thereof on the 15<sup>th</sup> day of August, 2005 and scheduled for a second reading on the 5<sup>th</sup> day of December 2005 at the hour of 7:00 p.m. at the Wilsonville Community Center, 7965 SW Wilsonville Road, Wilsonville, Oregon.

  
SANDRA C. KING, MMC, City Recorder

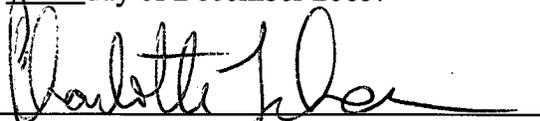
ENACTED by the City Council on the 5th day of December 2005, by the following votes:

YEAS: -4-

NAYS: -0-

  
SANDRA C. KING, MMC, City Recorder

DATED and signed by the Mayor this 5<sup>th</sup> day of December 2005.

  
CHARLOTTE LEHAN, Mayor

**SUMMARY OF VOTES:**

Mayor Lehan	Yes
Councilor Kirk	Yes
Councilor Holt	Excused
Councilor Ripple	Yes
Councilor Knapp	Yes

LP2005-02-00006

**Attachments:**

- Exhibit A - Wilsonville Planning Division Staff Report dated August 8, 2005
- Exhibit B - Planning Division Staff Report dated Revised December 5, 2005
- Exhibit C: The amended Villebois Village Master Plan as recommended by the Planning Commission on August 15, 2005.

**WILSONVILLE PLANNING DIVISION  
STAFF REPORT**

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**HEARING DATE:** August 15, 2005

**DATE OF REPORT:** August 8, 2005

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**APPLICATION NO:** LP-2005-02-006

**APPLICANT:** Costa Pacific Communities

**REQUEST:** Amendments to the Villebois Village Master Plan, making the Master Plan consistent with subsequent land use approvals for Specific Area Plan (SAP) South and East, modifications to the land uses and layout of the Village Center in SAP Central, identification of a specific 10-acre elementary school site in the north part of the Village, and deletion of references to the Living Enrichment Center and Wilsonville Tract, and other minor edits. *The City Council is the final authority on this matter.*

**LOCATION:** Approximately 480 acres on the west side of Wilsonville commonly referred to as Villebois.

**LAND USE DESIGNATION:** Wilsonville Comprehensive Plan Map Designation: "Residential-Village".

**ZONING DESIGNATIONS:** Wilsonville Zone Map Classifications: "Public Facilities," "Village Zone" and "Residential Agriculture-Holding"; Clackamas County Zone Map Classification: "Exclusive Farm Use"

**STAFF REVIEWER:** Chris Neamtzu AICP, Manager of Long-Range Planning

**APPLICABLE REVIEW CRITERIA:** *Wilsonville Comprehensive Plan*, pages 7-9: Standards for Approval of Plan Amendments, Goal 1.1 Citizen Involvement, Implementation Measure 1.1.1.e, Implementation Measure 1.1.1.f, and Implementation Measure 4.1.6.b; *Metro Urban Growth Management Functional Plan*; Applicable Statewide Planning Goals 1, 2, 10, 11; *Oregon Revised Statute 426.508*; *Wilsonville Planning and Land Development Ordinance (Wilsonville's Development Code)* Section 4.003: Consistency with Plan and Laws; Section 4.008 Application Procedures- In General, Section 4.009 Who May Initiate Applications, Section 4.032 Authority of the Planning Commission, Section 4.033 Authority of the City Council, Section 4.125 Village Zone, and Section 4.198 Comprehensive Plan Changes-Adoption by the City Council.

## SUMMARY:

After two continuances, on July 13, 2005 the Planning Commission conducted a lengthy public hearing on the proposed Villebois Master Plan amendments, and forwarded a recommendation of approval to the City Council. The final recommendation for approval included a number of modifications as proposed by Staff, as well as a number which were agreed to between the Staff and the applicant and documented in the applicant's Rolling Log (PC Exhibit #18). The Commission deferred a number of the PF Conditions to the SAP application where more detailed information would be available. Please refer to the Planning Commission motion to approve the Master Plan for additional details.

The revised Master Plan that was submitted by the applicant for the City Council hearing (dated Revised August 1, 2005) does not contain all of the changes that were recommended by the Planning Commission. Michelle Tyson's memorandum dated August 8, 2005 outlines the status of the changes and documents which changes are included in the resubmitted Master Plans and which are still outstanding. The outstanding items include:

- 1) Re-establishment of park space in SAP Central
- 2) Revised language for PF #1 and PF#5 (PC Exhibit 15)
- 3) The trial width standards (PF #2-4)
- 4) Bus Routes and SMART coordination

The Planning Commission supported the final Staff recommendations in their motion to adopt the Villebois Master Plan revisions. The following is an update on the status of these items:

*1) The two Implementation Measures on page 18 of the Master Plan should be replaced with the revised language proposed by the applicant contained on page 2 of Exhibit 17;*

**Staff Response: This item has been addressed.**

*2) The applicant shall provide a letter of support from the West Linn-Wilsonville School District supporting the revised language prior to the City Council hearing on this matter;*

**Staff Response: This item has been addressed. Please see letter from Roger Woehl.**

*3) Require the applicant to retain the majority of the trees that were located in the pocket park that was deleted in the revised Master Plan;*

**Staff Response: In the Master Plan revision, the applicant deleted a pocket park that protected 3 "important" pin oak trees in the southern part of SAP Central. The Planning Commission agreed with the Staff recommendation to preserve these trees. The applicant has been working on a redesign for this area that would retain**

the previous pocket park, expand on its size and change the configuration to provide bicycle and pedestrian connectivity, delete the street connection as well as save some of the trees. Please see memorandum from Dan Hoyt of Costa Pacific Communities dated August 8, 2005 titled "SAP Central Pocket Park and Related Tree Preservation" for details regarding the approach to this redesign and a site plan.

The applicant's proposal could be massaged slightly to ensure adequate protection of the "important" pin oak trees. Two of the trees are located centrally in the park, one of the trees is in the proposed bike/pedestrian connection toward Ravenna Street, and one of the trees is not protected at all. Staff has concerns that while the redesign is an improvement, it does not provide adequate space for the roots and crowns of these "important" trees when considering park activities, adjacent multi-family development and bicycle and the pedestrian pathway connection through a 20' access way. Staff recommends that all four of these trees "important" trees be preserved.

*4) Require the applicant to identify the location of another pocket park of comparable size in SAP-Central that will replace the deleted pocket park;*

**Staff Response:** The Planning Commission agreed with Staff that there should be no net loss of parks in the revised Master Plan for SAP C and required that the applicant include a park of comparable size in the revised master plan. The applicant has been working on a redesign of this area to provide a bike/pedestrian connection which will: 1) increase in the size of the park; 2) retain two-three "important" pin oak trees; 3) provide a mid block linear green bike/pedestrian connection; and 4) delete the street connection. Please refer to the memorandum from Dan Hoyt dated August 8, 2005.

*5) Request that the DRB review the tree protection plan in detail to preserve as many of the large, healthy "important" trees as possible in the development of the Village Center;*

**Staff Response:** The Planning Commission supports this recommendation.

*6) Make the changes identified in Exhibit #17-Parks section and #18-Rolling log of edits;*

**Staff Response:** Please refer to the memorandum provided by Michelle Tyson of Alpha Community Development dated August 8, 2005 for an outline of the status of each item contained in the Rolling Log. The increase in acreage to the linear green as outlined in PC Exhibit 17 has been included in the revised Master Plan.

*7) Incorporate the Engineering Division's PF Conditions (Exhibits #12 and #15) as conditions of approval;*

**Staff Response:** The PF conditions were modified at the Planning Commission public hearing with input from the City Engineer. The Engineering Division provided two sets of conditions. They can be found in PC Exhibits 12 and 15.

There are three outstanding issues related to the PF Conditions in PC Exhibit 15: They are:

- 1) New language for PF #1 of Exhibit 15

**Response:** Proposed PF1 reads *“Pedestrian and bicycle connectivity shall be provided between all public and private street termination points and adjacent trails/pathways.”*

The applicant was concerned that this would result in an inflexible approach to providing connections possibly resulting in many that were un-necessary and redundant. The PC agreed to have Staff propose alternative language to the City Council that would result in a thoughtful approach to providing connectivity. The proposed language is:

*PF1. Pedestrian and bicycle connectivity shall be provided between public and private street termination points and adjacent trails/pathways at the discretion of the City Engineer.*

- 2) Trail width standards

**Response:** PF#2-4 of PC Exhibit 15 were the topic of lengthy debate. The trail width sections contained in the Villebois Master Plan are taken from the City’s 1994 Parks and Recreation Master Plan. These standards are outdated. DKS Associates review of the Master Plan (PC Exhibit 9) resulted in a series of modifications to the trail widths that are contained in the Engineering PF conditions. The applicant disagrees with the Staff and DKS recommendations.

The PC agreed with PF#2 and PF#3. Regarding PF#4, the PC recommends that the major pathways can be constructed one of two ways, as approved - 10’ paved, with a 3’ soft surface, or as an alternative 12’ paved. Staff has concerns about the long-term maintenance and appearance of the 3’ soft surface trail adjacent to the 10’ path and the cost of such maintenance. Staff recommends PF #4 remain as proposed.

- 3) PF 5-Bicycle Boulevard

**Response:** The Planning Commission supports the applicant’s proposal for a “bicycle boulevard” along Villebois Drive toward the Village Center. Staff would like to work with the developer on this concept, and proposes replacement language

for Condition #5. The proposed replacement language provided by the City Engineer is:

**PF5.** Along Villebois Drive between "O" Street and Barber Street is where the proposed "bicycle boulevard" street section will be located:

- 1) The on-street bicycle striping is omitted with proper signage at the beginning and ending of the removed section as required.
- 2) The smooth asphalt street surface is replaced with a modified street texture providing the following:
  - a. 20-year minimum design life
  - b. Adequate bicycle "ride" without resulting in an unsafe operating condition.

*8) Modify the bicycle linkages to provide complete on-street striped bike lanes from the Loop Road into the Village Center along Villebois Drive connecting to Barber Street;*

**Staff Response:** The applicant's proposal is to bring the on-street bicycle lanes into two blocks into the Village Center past the Loop Road and then transition to essentially a shared road condition where bikes and cars come together.

The PC recommends the bicycle boulevard be approved as proposed by the applicant, with a consideration for alternative paving; different color paving/surface treatment; and gateway and safety signage.

This concept has been successful in places around the world and according to the applicant is in the spirit for creating a unique European inspired community. In discussions with Alta Planning and Design (the city's bicycle and pedestrian master plan consultant), this concept can work if the car speeds are low, and there are safe designs (such as bulb outs and intersection treatments) with clear textural changes, signage, gateways, public art or other clear indications that the cycling experience is changing so that the cyclist is keenly aware of arriving in a different place.

Staff recommends that if approved, the final design of this bicycle boulevard be coordinated with Alta Planning and Design and DKS Associates to ensure sound design and a high level of public safety. In PC Exhibit 17, the applicant agrees to coordination with the City's bicycle and pedestrian consultant.

*9) Provide a letter from the TVFR Department regarding approval of the turning radii and street cross sections in the revised Master Plan prior to the City Council hearing on this matter.*

**Staff Response:** The applicant has provided approval from TVFR (Please see PC Exhibit 21).

*10) SMART Coordination.*

**Staff Response:** The PC requested that an additional bus stop be located at the future elementary school. The applicant's narrative states that they are coordinating with SMART and will have additional information to present to the Council at the public hearing.

**RECOMMENDATION:**

Staff respectfully recommends that the City Council conduct a public hearing on this matter, incorporate the changes recommended by the Planning Commission and Staff and approve the attached Ordinance.

**BACKGROUND:**

The applicant, Costa Pacific Communities, proposes a series of amendments to the text and graphics of the adopted Villebois Master Plan (dated June 21, 2004). The changes are primarily related to a refined design of the street grid, parks and land uses in the Central SAP that have been necessitated by further study and evolution of the design, a modification to the orientation of land uses and public spaces, as well as the identification of a specific location of the 10-acre elementary school site consistent with adopted implementation measures in the north part of the project area, and associated street and land use modifications.

The applicant has submitted the Specific Area Plan (SAP) for the central part of the project. The site plans are included in the record as background information for contextual purposes and are not the subject of review of this case file. The case file record contains a number of memos and correspondence between the applicant's consultant and Staff in response to questions raised during the review of this legislative master plan amendment. Much of this material is intended to help the Commission and the Council understand the full scope of the changes and to provide additional information on specific topics.

Opposed to producing a large number of revised Master Plans for the PC hearing in July, the applicant proposed to keep a rolling log of changes to the Master Plan (Exhibit 18) that have been agreed to between the applicant and Staff as well as ones that come out of the Planning Commission review and make the changes following the Commission hearings. The applicant has submitted revised Master Plans for the hearings with the City Council (Master Plans dated Revised August 1, 2005).

Other proposed changes to the Master Plan include:

- an increase in total units from 2,390 to 2,473, an increase of 83 dwelling units
- modifications to the total unit counts for various housing categories and prices

- the incorporation of approvals recently granted by the DRB for SAP's and PDP's to make the Master Plan maps and diagrams current (with the exception of the most recent approvals for SAP-E)
- the deletion of the reference to the "Living Enrichment Center" and "Wilsonville Tract" replacing them with "Future Study Area" and "Grahams Oak Natural Area" respectively
- trail renaming to avoid confusion
- street grid modifications on Figure 7 and cross section modifications on Figure 9 and 9A deleting the residential village center with median, residential one-way with parking and adding the private Woonerf (street cross section N1, and N2 on Figure 9B) and residential-Village Center with bike lanes (street cross section H on Figure 9A).

The Wilsonville City Council adopted the Villebois Village Concept Plan (Ordinance No. 553) on June 2, 2003. The City of Wilsonville Comprehensive Plan text has been amended to include the Residential-Village land use designation (City Ordinance No. 554, May 19, 2003) and the Comprehensive Plan Map has been revised to designate the Villebois Village Master Plan area as Residential-Village (City Ordinance No. 555, May 19, 2003). The City of Wilsonville Comprehensive Plan has been amended by adoption of the Villebois Village Master Plan as an ancillary document (City Ordinance No. 556, August 18, 2003). Adoption of a revised Villebois Village Master Plan was granted by the City Council on June 21, 2004 (City Ordinance No. 566) which replaced the originally approved Master Plan that was adopted by the City Council on August 18, 2003. This proposal, submitted on February 23, 2005 and revised on April 26, 2005 would replace the Villebois Master Plan adopted on June 21, 2004.

The general goals of the Villebois development include these objectives:

- A plan for a minimum residential development of 2,300 units,
- Assurance that housing would be provided for special needs and a variety of income levels,
- Transportation alternatives to the automobile using transit, bikeways and effective land-use planning to reduce total vehicle trips,
- Creation and construction of a pedestrian-friendly community,
- A village center that incorporates transit oriented development,
- Protection of natural resources and provision of green spaces and other public spaces including a public elementary school, and
- A method of directing and controlling architectural standards for the development.

The proposed legislative amendment of the Villebois Village Master Plan is demonstrated to be in compliance with the City of Wilsonville Comprehensive Plan and with other applicable City Master Plans, and other applicable standards, as provided for in the conclusionary findings of this Staff Report as well as the findings found in Attachment X (dated "Received May 2, 2005") provided by the applicant and entered into the record as Exhibit #2.

## **Description of the Changes to the Villebois Village Master Plan:**

The changes to the Villebois Master Plan are primarily related to the siting of the elementary school, and revisions to the Village Center to enable submittal of SAP Central as well as housekeeping and updating to make the Plan current with recent land use approvals.

The revised Villebois Village Master Plan identifies the infrastructure expansion that is necessary for the development proposed by the Villebois Village Concept Plan to occur. The discussion and conclusions of the different chapters form the basis for the City's calculations of Systems Development Charges (SDCs) within the Villebois Study Area, and indicate the range and type of infrastructure improvements that must be available to serve the development.

Each Master Plan chapter proposes how, and to what scale, infrastructure must be provided, followed by an analysis of how proposed infrastructure conforms to adopted City master plans. Full compliance with City master plans and other policy directives provide the basis for SDC charges through time and indicate how concurrency requirements are fulfilled.

### **Chapter Summaries:**

**It is helpful to use the adopted Villebois Master Plan (dated June 21, 2004) for comparison with the proposed changes. Below is a general summary of the proposed changes by chapter.**

#### **Chapter 1 – Purpose & Scope of the Villebois Village Master Plan:**

- No changes are proposed.

#### **Chapter 2 – Land Use:**

Please refer to PC Exhibits #3 and #5 Memorandums from Stacy Connery and Michelle Tyson of Alpha for additional information regarding the proposed changes to the land use plan. The changes are summarized as follows:

- Minor text changes are proposed throughout the Master Plan replacing “Living Enrichment Center” with “Future Study Area” and “Wilsonville Tract” with “Grahams Oak Natural Area”.
- Figure 1: The land uses have been changed in the Central and Northern SAP's, and the boundary of the Central SAP has been enlarged by 8 acres to the northeast to include Hilltop Park and some village apartments to the northeast.
- Figure 1: The unit count for various land uses has been modified from the original master plan. For a detailed explanation of the changes, please refer to the

applicant's memorandum dated 5/2/05-Exhibit #5. Average village density has been modified, and the total number of units has increased from 2,390 to 2,473 for an increase of 83 dwelling units.

- Figure 1: The housing categories of specialty condos, mixed use condos, urban apartments, condos, small lot-attached, medium lot-attached, and estate lots have gone down in total numbers, and village apartments, rowhouses, small lot detached and large lot attached have gone up in total numbers, and the number of neighborhood apartments and standard lot single-family units remains the same.
- Figure 1: Identification of a 10-acre elementary school site in the north, and altered surrounding land uses and street grid.
- Figure 1: Updates to South and East SAP's to reflect DRB and City Council approved plans.
- Figure 2: Adding trail names, the Coffee Lake/Wood Trail running along the west edge of Coffee Lake and the Tonquin Trail following the greenway through Villebois.
- Figure 2: Change in street classification from collector to "Residential-Village Center with bike lanes" for Villebois Drive beginning two blocks from the Loop Road into the Village Center (Exhibit 17).
- Figure 2a: Modified street grid, and land use plan.
- Figure 2a: A reduction in the total number of specialty condos, limiting this housing product primarily to the adaptive reuse of Buildings C and D.
- Figure 2a: A redesign of the Village Center Linear Green that now connects West Neighborhood Park and the Greenway with the Village Center Plaza and a new configuration for the Village Center Plaza surrounding it by streets.
- Modified language related to the detailed siting of the elementary school in the north part of the project area.
- Figure 3: Updated street grid.
- Figure 4: Addition of a note that states the phasing dates are from the date of original approval in 2003.
- Implementation Measure (IM) #3 on page 17 related to Clackamas Community College being located in the Village Center has been deleted.
- Implementation Measure #1 related to the Elementary School is satisfied as a result of this submittal, and as a result is being deleted.

- Two new Implementation Measures are proposed (pg 18 of the Master Plan) related to the future elementary school. Please refer to page 2 of Exhibit 17 for revised language. Revised language is proposed to address the concerns raised in the letter submitted from Roger Woehl, Superintendent of the West Linn-Wilsonville School District objecting to the originally proposed language (Exhibit 6). The applicant has provided a letter from the WLWVSD supporting the revised language.

Overall, the proposed changes to Chapter 2 are minor in nature at the Master Planning level and result in a current master plan, which is desirable. The changes in density and housing types are a result of market conditions and evolution of design of the Central SAP.

### **Chapter 3 – Parks & Open Space/Off-Street Trails & Pathways:**

There are a series of changes to the parks and opens space section of the Master Plan. Please refer to PC Exhibit #4 and Figure 5 in Exhibit #17 for additional details regarding the changes to parks and open spaces at Villebois. The proposed changes are primarily related to:

- Making the Master Plan current with the SAP South approvals granted by the DRB and City Council. The most current approvals for PDP-1 of SAP-E have been incorporated.
- Changes in the park layout, size and configuration for SAP Central; and
- The addition of a specific 10-acre elementary school site in the northeastern part of the Village.

Other changes to Chapter 3 include:

- A change in the name of Tonquin Trailhead Park to Coffee Lake Trailhead Park.
- An increase in the size of the Village Center Plaza from .50 acres to .52 acres for an 871 SF increase.
- A redesign of the Village Center Linear Green which connects West Park with the Village Center. This redesign has improved the layout and functionality of this park space, changing the configuration from a “pill” shaped park median in the middle of the street to a long linear green connecting two important public spaces, West Park in the Greenway and the Central Plaza.
- The pocket park immediately south of Fir Park has been reduced in size from .67 acres to .60 acres for a 3,049 SF reduction. This change is described in Exhibit

#4, and according to the applicant was approved to be reduced as part of the SAP-East review.

- Deletion of a pocket park in the southern part of SAP Central (approximately 8,400 SF as identified in the June 21, 2004 "adopted Master Plan", which according to the applicant's narrative, was replaced by a park in SAP South. The applicant has agreed to reinstall this park consistent with the PC recommendation at the approved location and increase its size. Please refer to the August 8, 2005 memorandum from Dan Hoyt of Costa Pacific Communities regarding the Master Planners approach to this issue.
- Tonquin Trailhead Park has been renamed Coffee Lake Trailhead Park. The Tonquin Trail will follow the Greenway, and the Coffee Lake Wood Trail will follow the west edge of Coffee Lake.
- An increase in acreage of miscellaneous pocket parks, primarily as a result of the addition of private open space in SAP South, PDPs II-III and SAP E PDP1.
- Implementation Measure #3 related to the confirmation of the school site has been deleted, and new language has been added regarding the location of the play fields. The applicant proposes to delete the last sentence of this IM to address concerns raised by the School District (Please refer to Exhibit 17).
- Exhibit #17 addresses some of the issues related to the provision of private recreational space in the Village Center. The multi-family developers in order to be competitive often have their own private recreational amenities for residents such as pools, gyms, and meeting rooms. Provision of quality private recreational facilities are key in today's competitive multi-family housing market. The Council will need to balance the provision of public space in the Central part of the project with the private facilities that will serve the residents of this part of Villebois. At this time there are no proposals for indoor public recreation centers at Villebois.

**Issues:**

- 1) Tree retention is difficult to evaluate at the Master Planning level. The appropriate time to review the tree protection plan is at the DRB where detailed arborist and survey information is provided. The Commission recommended to the Council that the DRB pay special attention to the tree protection plan in their review of SAP-Central and require design solutions to save large, healthy and important trees in this part of the project.

Staff is in the process of updating the City wide Parks and Recreation Master Plan, and has been working with the applicant on a parks matrix that identifies the distribution of active park spaces and addresses financing and ownership issues in the Master Plan. The

end result of all of these efforts could be that there are policy recommendations that result in modifications to the parks and recreation section of the Villebois Master Plan.

City Staff has been meeting regularly on a variety of issues related to parks and the definition of usable parkland, rainwater management and bicycle and pedestrian connectivity. It is important to note that there is on-going work which could likely result in the City initiating amendments to the Villebois Master Plan to address the issue of usable park land and that approval of these applicant initiated Master Plan amendments will not preclude re-visitation of these issues at a later date by the City of Wilsonville. Inclusion of City initiated modifications are not on a timeline that would accommodate the applicant's schedule, so this review is being conducted without that information.

#### **Recommendations:**

- 1) Approve the applicant's proposal for a replacement park and linear greenway in SAP-Central as identified in Dan Hoyt's August 8, 2005 memorandum, while ensuring protection of the four "important" pin oak trees; and**
- 2) Request that the DRB review the tree protection plan in detail to preserve as many of the large, healthy "important" trees as possible in the development of the Village Center;**

#### **Chapter 4 – Utilities:**

Only minor modifications have been made to Chapter 4. The proposed revisions still meet the test for infrastructure availability to approve the revised Master Plan. The following narrative was provided in the original staff report for the Villebois Village Master Plan.

*Chapter 4 is broken into three sections: sanitary sewer, water, and storm drainage. Each section provides a description of the service proposal, a technical analysis of the proposal's compliance with the relevant City Master Plan, and an analysis of compliance with the implementation measures of the relevant Master Plan.*

*The sanitary sewer system for the Villebois area was included in the City Wastewater System Master Plan so modifications will be negligible. Wastewater capacity is available at a master planning level to support Villebois. Current projections indicate that the wastewater treatment plant would need expansion in 2011 without Villebois. Including Villebois and assuming full buildout in the shortest amount of time (eight years), the need for plant expansion would be advanced two years to 2009.*

*The City's Water System Master Plan included the Villebois area but assumed a longer buildout period. Water capacity is available at the master planning level to support full buildout. Current projections indicate that the water treatment plant would need expansion in 2008. With the incorporation of the proposed project at a buildout rate of 8-12 years, staff anticipates needing additional capacity approximately nine months*

*earlier. If existing low-use patterns persist (experienced under water restrictions), additional capacity would not be needed until 2012 (2011 with Villebois in place).*

*The Storm Water Master Plan did not include the Villebois area directly. However, Capital Improvement Project CLC-10 impacts development at that site. CLC-10 includes improvements to the headwaters of Arrowhead Creek and outfall re-construction and partial flow re-direction for the drainage from the former Dammasch State Hospital. The Villebois Village Master Plan proposes to support the approach to CLC-10. In addition, a Rainwater Management Program for onsite runoff is proposed to be constructed. Inclusion of the Villebois project can be addressed through an update to the City's Storm Water Master Plan. The development of Villebois does not require an amendment to the Storm Water Master Plan in order to be implemented.*

The City's Engineering Staff has reviewed the proposal and has determined that the modifications can be accommodated at the Master Planning level. Sharon Zimmerman, Assistant City Engineer has provided comments in Exhibit 12:

**Sanitary Sewer:**

There are only minor changes proposed to the sanitary sewer section of Chapter 4 and Figure 6. They are related primarily to line location, flows and flow routing. Additional information is required to be provided by the applicant as part of the SAP Central application to determine the adequacy of the sewer capacity.

**Water:**

Only minor name changes are proposed in the water section of the revised Master Plan.

**Storm Drainage:**

Figure 6A has been modified to show updated stormwater facilities in SAP East adjacent to Coffee Lake Creek and in SAP North. The revised Figure 6A includes the addition of stormwater facilities along Tooze Road that according to the applicant's narrative have always been a part of the plan, but were left off of all prior submittals.

Language has been changed to Implementation Measure #3 referencing the agreement between Metro, the City and Costa Pacific for the improvements to Mill Creek. This Memorandum of Understanding has been executed (Metro contract #926255) and can be found in Appendix C of the revised Master Plan.

With the conditions of approval provided by the Engineering Division, the utilities chapter meets the test for infrastructure and can be approved.

**Recommendation:**

- 1) **Incorporate the Engineering Division's PF Conditions (Exhibit #12 as modified by the Planning Commission) as conditions of approval.**

**Chapter 5 – Circulation:**

DKS Associates has analyzed the revised street grid and updated the traffic report that was prepared as part of the original Master Plan approval. They have provided a number of comments that are based on their professional judgment and the City's adopted TSP. Their report is attached as Exhibit #9. Comments, recommendations and Engineering staff comments can be found in Exhibit #15. Issues are summarized as follows:

- Overall trip generation is reduced so all prior conclusions on level of service remain valid.
- The width of the private Woonerf has been addressed with the Fire Marshall to meet the fire, life and safety needs of the TVFR Department for emergency services provision. A condition of approval has been added by the Engineering Division (PF 7) that requires the applicant to provide a 20' clear traveling path.
- The Fire Marshall also raised concerns about the turning radii (Exhibit #8). Staff understands that this issue has been addressed. The applicant agreed to coordinate with the Fire District and provide Staff with a letter of approval from the Fire Marshall regarding the revisions to the street cross sections and turning radii. A letter from the Fire Marshall was provided at the PC hearing (PC Exhibit 21).
- On-street striped bicycle connections and street classifications from the Loop Road to the Village Center along Villebois Drive have been modified. The applicant is proposing a new street section-"Residential-Village Center with bike lanes" (Please see Figure 7 and 9a of Exhibit #19 for the latest information). The applicant's proposal (Exhibit #17) is to stripe a residential street with on street bike lanes for two blocks past the Loop Road toward the Village Center and then transition to a "bicycle boulevard" where cars and cyclists share the road.
- The Access Management hatching on the legend of Figure 7 should be extended along Tooze Road in addition to Grahams Ferry Road (Please see PF 11).
- Figure 9A contains note #14 that states "*Sidewalk becomes 13.5', planting strip is removed and right of way becomes 61' when adjacent to commercial*". Staff points out that there will still need to be street trees in grates along the sidewalk for the street section H, Residential-Village Center adjacent to commercial.
- The applicant has provided a bus stop exhibit in PC Exhibit 19. SMART has reviewed this plan and has added a bus route from Boeckman Road to the

roundabout at the loop road and Villebois Drive and has also added two bus stop locations one along Coffee Lake Drive and one along Villebois Drive. The PC requested that SMART consider the inclusion of a bus stop at the future elementary school site. The applicant continues to coordinate with SMART. Michelle Tyson's August 8, 2005 memorandum states that there will be information provided at the Council hearing regarding this matter.

- The DKS Associates traffic report and the Engineering Division PF Conditions require that the trail widths be modified to be consistent with the TSP, the Development Code, and the Oregon Bike and Pedestrian Plan. Given the design tenet of connectivity, and due to the dense nature of the project, high anticipated volumes of walkers and cyclists, and the functional multi-modal design, wider trail widths than those shown in the Master Plan are warranted and should be included in the revisions. Please refer to PF 1-4 and the PC recommendations.

Other changes to Chapter 5 include the deletion of street cross section "F", the "Residential-Village Center with Median" and Section "N", the "Residential-One Way Parking, One Side". The applicant has added street cross sections "N1" and "N2" "Woonerf" and a revised street cross section "H", adding two 6' bike lanes to the "Residential-Village Center".

Chapter 5 outlines a proposed street plan, an on-street bike lane system, major and minor arterials, major and minor collectors with cross-sections of these types of facilities, and an on-site trail system. The proposed systems are evaluated against the City's 2003 Transportation Systems Plan (TSP), which included the Villebois area in its projections for future transportation needs (based on DATELUP). Some minor modifications of the internal collector road network are anticipated. The initiation of the Villebois development does not require an amendment to the TSP in order to be implemented.

**Staff's review of the revised proposal concluded:**

- 1) **The proposed street layout will function with at least a level of service D or better; and**
- 2) **The proposed Woonerf street section has been demonstrated be adequate to the satisfaction of the TVFR Department regarding meeting all applicable fire, life and safety requirements.**

**CONCLUSIONARY FINDINGS:**

The applicant has provided findings of fact supporting the proposed master plan amendment. Those findings are generally supported by Staff (with the exception of Finding #144, which should have been deleted from the findings document) and can be found in Attachment X (Exhibit #2).

**Oregon Revised Statute: 426.508 [Entitled] Sale of F. H. Dammasch State Hospital; fair market value; redevelopment of property; property reserved for community housing.**

**Sub-section (3) Redevelopment of the real property formerly occupied by the F. H. Dammasch State Hospital shall be consistent with the Dammasch Area Transportation Efficient Land Use Plan developed by Clackamas County, the City of Wilsonville, the Oregon Department of Administrative Services, the Department of Land Conservation and Development, the Department of Transportation, the State Housing Council, the Department of Human Services and the Division of State Lands.**

**Response:** The Villebois Village Master Plan is intended to serve as an implementation guide for the Villebois Village Concept Plan. The Villebois Village Concept Plan is a refinement of the Dammasch Area Transportation-Efficient Land Use Plan (DATELUP). DATELUP was developed to integrate the Dammasch property with the surrounding area. Following its adoption in 1996, the City enacted a Comprehensive Plan provision making DATELUP, as it may be amended, the conceptual plan for Area of Special Concern B. The City has found that the Villebois Village Concept Plan is consistent with the DATELUP Adopted Conceptual Plan, and, therefore, it is also consistent with ORS 426.508(3). The proposed amendment to the Villebois Village Master Plan will not alter the project's compliance with ORS 426.508(3). Community housing remains a component of the project, unaltered by the proposed amendment, and will be provided consistent with State requirements and guidelines. The Villebois Village Master Plan and this proposed legislative amendment are consistent with the Villebois Village Concept Plan, and are, thereby, consistent with DATELUP and ORS 426.508(3).

**Statewide Planning Goals:**

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

**Response:** The public notification process has been followed for this legislative application. Public notice was mailed to Federal, State and local agencies, special districts, all owners of property within 250' of the site boundaries, as well as to a lengthy list of individuals interested in Villebois. Public notices were posted at three locations around the City, and printed in the newspaper. This notification encourages participation by a wide variety of individuals in the public hearing process and review of submitted materials and ensures that citizens are given an opportunity to be involved in all phases of the planning process. This goal is satisfied.

***Goal 2-Land Use Planning:* 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 adequate factual base for such decisions and actions.**

**Response:** The Villebois Master Plan was originally adopted consistent with the planning policies found in the Wilsonville Comprehensive Plan. The City's Comprehensive Plan is duly acknowledged, and is in compliance with Goal 2. The Villebois Master Plan is consistent with this Goal because it creates a specific plan for a portion of the City, and provides guidance and regulations regarding how that area will be built. The proposed legislative amendment does not alter these circumstances. This Goal is satisfied.

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

**Response:** The revised Villebois Master Plan proposes an increase in the total number of units from 2,390 to 2,473, which increases the opportunity for housing for the citizens of the state. This Goal is supported by the revised Villebois Master Plan.

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

**Response:** The Villebois Master Plan plans for a timely, orderly and efficient arrangement of public facilities and services, consistent with the City's adopted infrastructure master plans, and the adopted Finance Plan for the project. This Goal is satisfied.

**Metro Urban Growth Management Functional Plan:**

The applicant has provided findings to various Titles of the Functional Plan in Attachment X, Conclusionary Findings. Staff supports the applicant's findings and hereby incorporates them by reference.

***Title 1: Requirements for Housing and Employment Accommodation:***

**The purpose of this title is to ensure that there is an adequate supply of land for housing and employment within the UGB over a 20-year planning horizon.**

**Response:** Villebois will help to ensure that the City meets its obligations to provide housing in a sub-area of the region where there is currently a jobs/housing imbalance. By providing 2,473 dwelling units over 7-12 years, with an average density of over 10 dwelling units per acre, Title 1 requirements are satisfied by the proposed Master Plan amendment.

***Title 7: Affordable Housing:***

**The intent of Title 7 is to provide affordable housing opportunities through out the region through: a diverse range of housing types, provide sufficient and affordable housing opportunities to households of all income levels, and provide an appropriate balance of jobs and housing of all types within sub-regions.**

**Response:** The amended Villebois Master Plan will continue to provide a wide range of housing choices in 13 housing categories. Single-family detached lots have been reduced in size from 2,500 SF to 2,000 SF, and the percentage of apartment and rental units has gone up from 17% to 21%. Price point changes are shown in Table A of the applicant's findings document (Finding 100). The City does not currently have an affordable housing policy, but is in the process of completing a housing analysis as part of periodic review. The elements in the Master Plan support the intent of Title 7, and the proposed changes continue to provide the opportunity for the provision of affordable housing at Villebois. The City will work to complete the housing study and together with the developers of Villebois will come up with a plan to provide this important component of the project. Until the City completes the housing needs analysis, and develops affordable housing strategies, provision of mental health housing and a wide range of housing types with a broad range of rental prices and ownership opportunities is the basis of the strategy.

**Wilsonville Comprehensive Plan:**

*Standards for Approval of Plan Amendments:*

4. *Standards for approval of Plan Amendments.*

*In order to grant a Plan amendment, the City Council shall, after considering the recommendation of the Development Review Board (quasi-judicial) or Planning Commission (legislative), find that:*

- a. *The proposed amendment is in conformance with those portions of the Plan that are not being considered for amendment.*
- b. *The granting of the amendment is in the public interest.*
- c. *The public interest is best served by granting the amendment at this time.*
- d. *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.*

- e. *Proposed changes or amendments to the Comprehensive Plan do not result in conflicts with applicable Metro requirements.*

**Response:** The Villebois Master Plan is an ancillary document to the Comprehensive Plan. Within this Staff Report, and in the applicant's Attachment X, are findings that demonstrate that the amended Master Plan is in conformance with the applicable sections of the City's Comprehensive Plan. Amending the Master Plan is in the public interest in that it provides additional detail about the location of the elementary school, and the Central SAP. More definition in these areas generally results in a better Master Plan. The amended master plan has addressed issues related to the above factors, and the proposal will not result in conflicts with applicable Metro standards. These criterion are met.

**GOAL 1.1 To encourage and provide means for interested parties to be involved in land use planning processes, on individual cases and City-wide programs and policies.**

*Implementation Measure 1.1.1.e Encourage the participation of individuals who meet any of the following criteria:*

1. *They reside within the City of Wilsonville.*
2. *They are employers or employees within the City of Wilsonville.*
3. *They own real property within the City of Wilsonville.*
4. *They reside or own property within the City's planning area or Urban Growth Boundary adjacent to Wilsonville.*

**Response:** Public notice was mailed to Federal, State and local agencies, special districts, all owners of property within 250' of the site boundaries, as well as to a lengthy list of individuals interested in Villebois. Public notices were posted at three locations around the City, and printed in the newspaper. This notification encourages participation by a wide variety of individuals. This measure is satisfied.

*Implementation Measure 1.1.1.e Encourage the participation of individuals who meet any of the following criteria:*

1. *They reside within the City of Wilsonville.*
2. *They are employers or employees within the City of Wilsonville.*
3. *They own real property within the City of Wilsonville.*
4. *They reside or own property within the City's planning area or Urban Growth Boundary adjacent to Wilsonville.*

*Implementation Measure 1.1.1.f Establish and maintain procedures that will allow any interested parties to supply information.*

**Response:** The City's legislative public hearing process before the Planning Commission and City Council provides a procedure for interested parties to supply information. This measure is satisfied.

### **Compact Urban Development-**

*Implementation Measure 4.1.6.b The Villebois Village Master Plan shall contain the following elements:*

- 1. An integrated plan addressing land use, transportation, utilities, open space and natural resources.*
- 2. Direction for cohesive community design based on sustainable economic, social and environmental principles; pedestrian and transit friendly principles; mitigation of traffic impacts; and enhanced connectivity within proposed development as well as to the remaining Wilsonville environs.*
- 3. Identification of opportunities for employment and services within a village core area to reduce vehicle trip lengths.*
- 4. Incorporation of designs or an indication of where those designs shall be developed that will implement Villebois Village Concept Plan principles of innovative rainwater management, aesthetic vistas, nature corridors and pathways, active and passive parks, wildlife corridors, protection of trees, wetlands, and other sensitive natural resources.*
- 5. Identification of how the properties will accommodate a mix of housing types and densities so that an ultimate buildout of over 2300 housing units is accommodated.*
- 6. Direction for provision of community housing consistent with Oregon Revised Statute 426.508.*
- 7. Identification of architectural patterns and types, creating neighborhoods that encourage bicycle and pedestrian travel, human interaction, and appreciation for natural features and systems.*

**Response:** The proposed master plan amendments will not alter the ability to implement the Villebois guiding elements consistent with the intent of the adopted Concept Plan. This measure is satisfied.

### **Planning and Land Development Ordinance:**

#### **Section 4.003. Consistency with Plan and Laws.**

*Actions initiated under this Code shall be consistent with the Comprehensive Plan and with applicable State and Federal laws and regulations as these plans, laws and regulations may now or hereafter provide.*

**Response:** The proposed Master Plan amendments will have no substantive bearing on the Comprehensive Plan, or applicable state, regional or federal laws. This criterion is met.

**Section 4.008. Application Procedures - In General.**

- (.01) *The general application procedures listed in Sections 4.008 through 4.024 apply to all land use and development applications governed by Chapter 4 of the Wilsonville Code. These include applications for all of the following types of land use or development approvals:*

**Response:** All appropriate application procedures listed in Section 4.008 through 4.024 have been followed and carried out for developing and hearing this legislative proposal. Staff finds that the application complies with this section of the Wilsonville Code. This criterion is met.

**Section 4.009. Who May Initiate Applications.**

- (.01) *Except for a Specific Area Plan (SAP), applications involving specific sites maybe 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. Changes to the Comprehensive Plan or zoning may also be initiated by the City Council, Planning Commission, or Development Review Board, acting by motion. Applications involving a Specific Area Plan shall be initiated as provided in Section 4.125(.18)(C) and (D). [Amended by Ord. 557 adopted 9/5/03]*

**Response:** The Master Planner has initiated the proposed amendments to the Master Plan. The Master Planner owns property at Villebois and is the appropriate party to initiate a Master Plan amendment. This criterion is met.

**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:*

- A. *Legislative zone changes and changes to the text of Chapter 4 of this Code;*

**Response:** The Planning Commission opened the public hearing on the proposed Villebois Master Plan amendments at their meeting of May 11, 2005, accepted testimony from the applicant and continued the item to the June 8, 2005 meeting. On June 8, 2005 the public hearing was again continued at Staff's request to the July 13, 2005 meeting

where the Commission conducted a lengthy public hearing and forwarded a recommendation of approval to the Council with modifications consistent with the authority granted to this body by the Comprehensive Plan and Development Code. This criterion is met.

**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.*

**Response:** Following the Planning Commission review of this application, the City Council will hold public hearings and will render a final decision. The City Council will conduct the first public hearing on August 15, 2005, with the second tentatively scheduled for September 19, 2005 and is the final authority on this matter. This criterion is met.

**Section 4.125. V – Village Zone**

*(.01) Purpose.*

*The Village (V) zone is applied to lands within the Residential Village Comprehensive Plan Map designation. The Village zone is the principal implementing tool for the Residential Village Comprehensive Plan designation. It is applied in accordance with the Villebois Village Master Plan and the Residential Village Comprehensive Plan Map designation as described in the Comprehensive Plan.*

- A. The Village zone provides for a range of intensive land uses and assures the most efficient use of land.*
- B. The Village zone is intended to assure the development of bicycle and pedestrian-sensitive, yet auto-accommodating, communities containing a range of residential housing types and densities, mixed-use buildings, commercial uses in the Village Center and Neighborhood Centers, and employment opportunities.*
- C. The Village zone, together with the Architectural Pattern Book and Community Elements Book, is intended to provide quantitative and objective review guidelines.*

**Response:** The proposed Villebois Master Plan amendment supports the intent of the purpose statement of the Village Zone code. This section is satisfied.

**Section 4.198: Comprehensive Plan Changes:**

*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;*
- 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;*
- C. That the proposed amendment supports applicable Statewide Planning Goals, or a Goal exception has been found to be appropriate; and*
- D. That the proposed change will not result in conflicts with any portion of the Comprehensive Plan that is not being amended.*

*(.02) 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 scheduled for public hearing before the City Council.*

*(.03) Notice of the Council's consideration of the matter shall be provided as set forth in Section 4.012.*

*(.04) Upon conclusion of its public hearing on the matter, the Council shall adopt its decision by ordinance, authorizing the Planning Director to amend the official zoning map, Comprehensive Plan Map or the text of Chapter 4 as set forth in Section 4.102.*

*(.05) 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.*

**Response:** This legislative land use application is being reviewed by the Planning Commission. After conducting a public hearing and considering all of the testimony and information contained in the public record, the Commission will forward a recommendation to the City Council. Following the Council consideration and deliberation, this criterion will be satisfied.

## **CONCLUSIONS AND RECOMMENDATIONS:**

Based on the findings of fact, conclusionary findings, applicant's submittal documents and exhibits and based on a public hearing duly noticed and conducted, Staff respectfully recommends that the City Council adopt the revised Villebois Village Master Plan with the Planning Commission and Staff recommendations contained herein.

## **EXHIBITS in Planning Commission Record**

**Planning Commission Record  
LP-2005-02-00006  
Villebois Village Master Plan Amendments  
Record Index**

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**Staff Report for the July 13, 2005 Planning Commission Public Hearing including the following exhibits:**

- Exhibit 25: Photo of spruce trees in south pocket park dated 7-13-05
- Exhibit 24: Photo of pin oak grove dated 7-13-05
- Exhibit 23: Responses to Exhibits 12 and 15 (Public Facilities Conditions)
- Exhibit 22: Applicant's response to City's Final Staff Recommendations for Master Plan Amendments
- Exhibit 21: Letter from TVFR Deputy Fire Marshall, Eric McMullen dated July 22, 2005
- Exhibit 20: Fax from Christine Heycke, Transportation Planner with SMART
- Exhibit 19: Replacement maps for the Villebois Village Master Plan dated June 29, 2005, including.
  - Bus Stop Exhibit
  - Figure 2: Neighborhood Concept Diagram
  - Figure 5: Parks and Open Space Plan
  - Figure 7: Street Plan
  - Figure 9a & 9b: Street and Trail Sections
- Exhibit 18: Master Plan Amendment Rolling Log of Edits.
- Exhibit 17: A memorandum dated June 29, 2005, to Chris Neamtzu, from Michele Tyson of Alpha Community Development, regarding 398-022.
- Exhibit 16: A memorandum dated June 21, 2005, to Arlene Loble, from Mike Ragsdale of Costa Pacific Communities, regarding 398-022.
- Exhibit 15: An Engineering Department Memo, dated July 6, 2005, to Chris Neamtzu, from Sharon Zimmerman, regarding Engineering Division Public Facilities (PF) Conditions of Approval for the proposed Legislative Amendment Villebois Village Master Plan (LP-2005-02-006) – Transportation.
- Exhibit 12: A memorandum dated May 25, 2005; from Sharon Zimmerman, Assistant City Engineer; regarding Engineering Division Public Facilities (PF) Conditions of Approval for the proposed Legislative Amendment Villebois Village Master Plan – (LP 2005-02-006).
- Exhibit 11: Plan sets for SAP Central submittal to DRB (informational only)
- Exhibit 10: Memorandum from Michelle Tyson dated May 24, 2005, regarding 398-022.
- Exhibit 9: A memorandum dated June 15, 2005, from Ransford McCourt and Scott Mansur of DKS Associates, regarding Villebois Urban Village Master Plan Amendment Transportation Summary.
- Exhibit 8: Letter from Jim Everitt, Deputy Fire Marshall of the Tualatin Valley Fire & Rescue; dated May 23, 2005; regarding Villebois Legislative Amendment and Plan 4-S.

- Exhibit 7: Letter from Roger Woehl of the West Linn-Wilsonville School District, dated February 8, 2005, regarding Elementary School within Villebois (generally agreeing to the location of the 10-acre elementary school site).
- Exhibit 6: Letter from Roger Woehl of the West Linn-Wilsonville School District, dated May 20, 2005, regarding the Villebois Village Master Plan Amendments (objecting to specific language in the revised Master Plan).
- Exhibit 5: Memorandum from Michelle Tyson, dated 5/2/05, regarding 398-022 (changes to the land use plan).
- Exhibit 4: Memorandum from Michelle Tyson dated 4/29/05, regarding 398-022 (park acreages)
- Exhibit 3: Memorandum from Stacy Connery and Michelle Tyson of Alpha Community Development, dated 3/9/05, regarding Master Plan Amendment (LP2005-02-006).

**June 8, 2005 Planning Commission motion continuing the LP-2005-02-00006 public hearing to July 13, 2005.**

**Included in the June 8, 2005 Planning Commission Meeting Packet:**

- A memorandum dated June 1, 2005, from Chris Neamtzu, regarding Continuation of Case Files LP-2005-02-006: Villebois Master Plan Amendments and LP-2005-02-007: Text Changes to WC Section 4.125 – Village Zone.

**May 11, 2005 Planning Commission motion continuing the LP-2005-02-00006 Public Hearing to June 8, 2005.**

**Distributed at the May 11, 2005 Planning Commission meeting:**

- Exhibit 14: A letter dated May 10, 2005; from Tim Ramis of Ramis Crew Corrigan, LLP; regarding Additional Exhibit for Inclusion in LP-2005-02-006 and LP-005-02-007.
- Exhibit 13: May 11, 2005 Planning Commission Meeting, Executive Summary submitted by Dan Hoyt of Costa Pacific Communities.
- Exhibit 2: Conclusionary Findings, File No. LP 2005-02-006, (Findings Supporting Document), received by City on May 2, 2005, from Costa Pacific Communities (Alpha Community Development).
- Exhibit 1: Proposed Legislative Amendment Villebois Village Master Plan (City File No. LP 2005-02-006), submitted February 23, 2005, Revised April 26, 2005 and received by the City on May 11, 2005, from Costa Pacific Communities (Alpha Community Development).

**Included in the May 11, 2005 Planning Commission Packet:**

- A memorandum dated May 4, 2005, from Chris Neamtzu, regarding Continuation of Case Files LP-2005-02-006: Villebois Master Plan Amendments and LP-2005-02-007: Text Changes to WC Section 4.125 – Village Zone.

**DLCD Notice of Proposed Amendment**

- DLCD Notice of Proposed Amendment

- An Alpha Community Development memorandum dated 3//9/05, to Sandi Young, from Stacy Connery and Michele Tyson, regarding Master Plan Amendment (LP2005-02-006)
- A list, "Changes to Master Plan (February 23, 2005)"

**PLANNING DIVISION  
STAFF REPORT**

**EXHIBIT B**

**Date: Revised December 5, 2005**

**To: City Council**

**From: Sandi Young, AICP, Planning Director**

**Subject: Villebois Master Plan Amendment (Ordinance No. 594)**

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Ordinance No. 594 is scheduled for second reading by the Council on December 5, 2005. This ordinance adopts an amended Villebois Village Master Plan as an ancillary document to the City's Comprehensive Plan.

Following first reading, the Council recommended that the following concerns and expectations be included in the second reading and adoption of the Master Plan. Staff's response to each concern is given each concern.

- 1. This ordinance is consistent with the current code provision which provides no role for Council in the SAP approval process. Staff has proposed amendments to the code that would formalize the city council role in the SAP and PDP approval process. Should these amendments not proceed in time to impact the Central SAP, the applicant/master planner is to be put on notice of the council's intent to call up the Central SAP under the current code provisions and to continue to exercise discretion in the approval of the zone changes with PDPs.**

Staff response: The proposed code amendment providing a role for Council in the SAP approvals was circulated to the Planning Commission and the Development Review Boards where it received, at best, a lukewarm reception. After further consideration, the application was withdrawn. Council has the authority to call up any action of the DRB, including SAPs. The PDP actions are routinely transmitted to Council together with zone change applications. Therefore, the potential call ups do not need to be included in the ordinance for second reading.

- 2. Council is particularly concerned that the affordable housing issues be dealt with before approval of any future SAPs. It would behoove the applicant to develop its own proposal for affordable housing in the Central SAP.**

Staff response: The Master Planner has met with Trammel Crow Residential and has determined that, of the 274 units in their first phase of SAP Central, 90 units will rent at market rate prices affordable by families making \$25,000 - \$35,000 per year (30% - 60% MFI). One hundred fifty nine (159) units will have rental

rates affordable to families earning \$35,000 - \$50,000 (+/- 60% - 73% MFI) annually and 25 units will rent at rates affordable to those making \$50,000 to \$75,000 annually. In addition, The Master Planner has met with Betty Dominquez, Oregon Housing and Community Services, and is working on a plan for a mixed building on the Plaza, with retail on the ground floor and 3-4 floors of affordable residential rentals above. A combination of incentives and subsidies will be necessary for this happen. And finally, CPC's rowhouses in Phase I are priced at just above eligibility for the first time homebuyer program. Work is proceeding to see if ways can be found to create eligibility for those units.

Admittedly this is not a plan. Both the City and the Master Planner know the parameters of housing need. The task is to continue to create realistic solutions which can be assembled into a plan. The Council may wish to amend Implementation Measure 3 on page 16 to read:

“Develop affordable housing objectives for Villebois. Develop strategies to accomplish a variety of mixes and densities and indicate how build out under each Specific Area Plan implements those strategies and contributes to the overall goals and policies of the Villebois Village Master Plan. The affordable housing objectives and plan is to be submitted before, or together with, the application with SAP Central.”

3. **Council continues to have concerns about the lack of indoor and outdoor recreational space throughout the Villebois Urban Village. Nothing in this Master Plan amendment or in the current Master Plan addresses these concerns in sufficient detail. Council will be looking carefully at the Central SAP for the provision of both public and private recreational facilities.**

Staff Response:

Approval of this Master Plan in no way removes the requirement for review and adoption of the revised Parks and Recreation Plan now nearing completion by Costa Pacific and their partners. The following implementation measure is proposed to be added as # 3 on page 33. The remaining implementation measures are then renumbered. *(New language in italics)*

3. *The Master Planner shall submit the necessary application materials for a legislative plan amendment to Chapter 3-Parks and Open Space of the Villebois Village Master Plan related to the detailed indoor and outdoor parks and recreation programming, and amenity package no later than January 1, 2006. Application materials shall include updated Villebois Village Master Plan findings, text, maps and figures as appropriate, and supporting technical data and analyses to address this issue as appropriate. Such amendments shall apply to pending and future Specific Area Plan (SAP) and Preliminary Development Plan (PDP) approvals.*

In addition, staff has proposed an amendment to WC 125 (.05)(E, 1, 2, 3) to allow up to 50% of the required outdoor recreational space to be counted for indoor common recreational facilities. The goal is to encourage a high level of both indoor and outdoor facilities in the high density Urban Village. That amendment is scheduled for hearing by the Planning commission on Dec. 14.

- 4. The Master Planner shall work with City Staff to prepare a more detailed parks and recreation master plan to replace Figure 5 in Chapter 3, Parks and Open Space. Responsibilities for maintenance also need to be clarified. In the absence of such a plan, the Council will not commit any public funds for park development within Villebois.**

Staff response: The Master Planner has submitted a detailed draft parks and master plan and text to replace Figure 5 and text within Chapter 3. Staff is currently reviewing the draft with a goal for hearings at the Planning commission in February. In the meantime, staff and the various partners have finalized the Operations and Maintenance Agreement template setting forth maintenance duties for the various categories of parks and open space. The amendment in # 3 above adds an Implementation Measure with requirements for submittal.

- 5. Tree retention is difficult to evaluate at the Master Plan level. The Council will want to review tree protection plans both at the SAP and PDP level.**

Staff response:

Protection of existing trees has been of concern to staff, Boards and the Council. Implementation Measure # 4 on page 34 sets forth a procedure for tree preservation. Staff recommends adding the following language to IM # 4:  
*(new language in italics)*

- 4. The design of the project shall result in Tree Preservation Plans for each Specific Area Plan that retain the maximum practicable number of existing trees six inches or more DBH in the "important" and "good" tree rating categories. Native tree species and large caliper (>18" DBH) trees shall be given special consideration for retention on the project site. Such requirements shall apply to pending and future SAP and PDP approvals. The Specific Area Plan shall outline the methodology employed in the determination of tree quality. Construction specifications for the protection and preservation of trees within construction zones shall be a component of the Community Elements book (with each Specific Area Plan submitted). Trees removed for development shall be mitigated per the City of Wilsonville's Tree Preservation and Protection Ordinance (Chapter 4.600).*

6. **The Wayfinding and Fencing Plans for Villebois need to be submitted to DRB for approval prior to processing the Central SAP. Approval of these design elements is critical for SAP South and East which already have PDPs under construction.**

Staff Response:

The Council has approved code text amendments necessary for approval of fencing, signage and wayfinding plans. The Fencing, Signage and Wayfinding Plans for SAP South and SAP East have been approved.

Other amendments:

Many of the proposed changes represent prior approved amendments that are now being incorporated into an updated Plan. A summary of significant changes, their relationship to further pending changes, and where appropriate, staff proposed implementation measures, follows:

1. Figure 1 – Land Use Plan
  - a. Increases the number of total units from 2390 to 2466.
  - b. Redistributes the mix of housing types consistent with approved SAPS and with the proposed Central SAP to decrease the number of estate units and increase the number of multi-family, rowhouse and small detached units.
  - c. Increases park/open space by about 3 acres.
2. Figure 2A – Village Center Boundary and Land use Plan
  - a. Expands the SAP boundary to include residential lands northeast of Hilltop Park.
  - b. Changes the location of housing types.
3. All references to the Living Enrichment Center have been changed to Future Study Area – (formerly LEC)
4. On page 17, the references to the location of Clackamas County Community College within Villebois have been deleted.
5. On page 17, under Elementary School:
  - a. New Implementation Measure 1 identifies the location of the school site.
  - b. New applicant proposed Implementation Measure 2 places the approval process for the site and architectural design of the school into the North SAP, or later depending the school district's schedule for development.

Chapter 4 – Utilities.

a. Page 35, 1<sup>st</sup> paragraph: Midway in the paragraph under the LEC/Future Study Area discussion, a partial sentence is added reading, “*The site currently generates 158 gpm through it’s pump station, and*” an analysis of potential new uses within the site determined that the maximum flow should not exceed the 158 gpm already included in the City’s Wastewater Master Plan for this site.]

b. Pg. 48 - 60. Stormwater/Rainwater Management.

This section will be revised by changes which occur as part of the development of the new Parks and Recreation Plan as well as the completion of the floodplain and regional detention studies in the Coffee Lake area. Staff recommends adding Implementation Measure # 1 to read as follows. Remaining implementation measures to be renumbered. The legislative amendment will then require changes to the pending application for approval of the Rainwater Management Plan and Program for SAP South.

1. *The Master Planner shall submit the necessary application materials for a legislative plan amendment to Chapter 4 – Utilities of the Villebois Village Master Plan related to stormwater management and rainwater on the site no later than January 1, 2006. Application materials shall include updated Villebois Village Master Plan findings, text, maps and figures as appropriate, and supporting technical data and analyses to address this issue as appropriate. Such amendments shall apply to pending and future SAP and PDP approvals.*
2. *Application for a revised SAP South rainwater management plan and program consistent with the legislative amendments in 1 above, shall be submitted by March 1, 2006. The final plat for PDP # 4 shall not be approved until said plan and program are approved by the City.*

EXHIBIT C  
ORD. 594  
Adopted 12/5/05



# Villebois

Proposed Legislative Amendment  
Villebois Village Master Plan  
(City File No. LP 2005-02-006)



The City of Wilsonville  
Submitted: February 23, 2005  
Revised: September 19, 2005

**APPLICATION No. LP2005-02-006**  
**VILLEBOIS VILLAGE MASTER PLAN**

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# CHAPTER 1 – PURPOSE & SCOPE OF VILLEBOIS VILLAGE MASTER PLAN

## 1.1 PURPOSE

The *Villebois Village Master Plan* was developed in close coordination with City staff, following adoption of the *Villebois Village Concept Plan*. The *Villebois Village Master Plan* affects an estimated 480-acre area identified on *Figure 1 – Land Use Plan* as the “Village Area Boundary.”

The *Villebois Village Master Plan* is intended to implement the *Villebois Village Concept Plan* and serve as a basis for Village zone development standards. These standards in turn direct development through the build-out period of the *Concept Plan*. The *Villebois Village Master Plan* provides a detailed analysis of the framework systems identified in the *Concept Plan*, including the land use program, parks and open space system, utilities framework and circulation system. Consistency of these elements with the relevant system Master Plans is shown in the *Villebois Village Master Plan*. Compliance with the *Concept Plan* and with all other City, State and Regional applicable review criteria is presented in a separate supporting document.

The *Villebois Village Master Plan* incorporates the guiding design principles that were adopted in the *Villebois Village Concept Plan*. The guiding design principles are listed below.

**Connectivity:** Refers to a series of physical connections created within the village that also fosters other “connections,” such as the link between land use and transportation, as well as a sense of place and a sense of community. The list of these connectivity options and where they are addressed are as follows:

- Land Use Patterns (see Chapter 2);
- Parks/Open Space and Pathways (see Chapter 3); and
- Transportation (see Chapter 5).

**Diversity:** Refers to Villebois’ commitment to providing a community that offers many options and choices for those who live, work and play there. The list of these diversity options and where they are addressed are as follows:

- Housing Options (see Chapter 2);
- Village Center (see Chapter 2);
- Parks/Open Space (see Chapter 3); and
- Transportation (see Chapter 5).

**Sustainability:** Refers to the thread of stewardship and viability – social, environmental and economic – that is woven throughout every aspect of Villebois. The list of sustainability examples and where they are addressed are as follows:

- Village Center and Neighborhood Centers (see Chapter 2);
- Parks/Open Space (see Chapter 3); and
- Rainwater Systems (see Chapter 4).

## 1.2 SCOPE

Prior to or concurrent with approval of this *Villebois Village Master Plan*, the City of Wilsonville Comprehensive Plan text will be amended to include a discussion of the Residential-Village (R-V) land use designation (City File 02PC07A) and the Comprehensive Plan Map will be revised to designate the *Villebois Village Master Plan* area Residential-Village (City File 02PC07C). The uses and systems envisioned by the *Villebois Village Master Plan* within the Residential-Village designation will be implemented through the ordinances of the Village zone and the review procedures established with the Village zone (City File 02PC08 – WC 4.125).

The Land Use Chapter, which follows, identifies the proposed land uses to be developed at Villebois Village to create a complete community with a vibrant mixed-use Village Center as envisioned in the *Villebois Village Concept Plan* (City File 02PC06). It provides goals, policies and implementation measures for the general land use plan, residential neighborhood housing, the Village Center, and the elementary school.

The Parks and Open Space / Off-Street Pathways Chapter demonstrates that Villebois Village meets the vision of the City's Parks & Recreation Master Plan of a "comprehensive parks and recreation system that grows along with the community" by providing diversity in the types of recreational opportunities within the Village and responding to the unique opportunity to provide a regional link between the adjacent major open space and wildlife areas. This project does not require amendment of the City's Parks & Recreation Master Plan in order to be implemented. However, the next scheduled update of the City's Parks & Recreation Master Plan will need to account for the addition of the *Villebois Village Master Plan* area.

The Utilities Chapter is broken into three sections: sanitary sewer, water, and storm drainage. Each section provides a description of the proposal, a technical analysis of the proposal's compliance with the relevant City Master Plan, and an analysis of the proposal's compliance with the City's implementation measures of the relevant Master Plan. The *Villebois Village Master Plan* is consistent with the City's Wastewater Collection System Master Plan and the City's Water System Master Plan. The *Villebois Village Master Plan* is consistent with the City's Stormwater Master Plan, and exceeds the standards of City's Stormwater Master Plan with the addition of the proposed Rainwater Management Program. However, the City's Stormwater Master Plan will need to account for the inclusion of the Villebois area when next updated.

The Circulation Chapter compares the proposed street system for Villebois with the provisions of the City's Transportation Systems Plan (TSP). The analysis contained in the Circulation Chapter identifies the consistencies and differences between the *Villebois Village Master Plan* and the City's TSP. This Chapter recommends implementation measures that will assure that identified differences are addressed through the appropriate review process for the alternatives proposed with the Villebois street system.

The *Villebois Village Master Plan* will receive an extensive public review that includes public hearings before the City of Wilsonville Planning Commission and City Council. This *Villebois Village Master Plan* will be a supporting document to the City of Wilsonville Comprehensive Plan.

## CHAPTER 2 – LAND USE

### 2.1 INTRODUCTION / PROPOSAL

*Figure 1 – Land Use Plan* identifies the proposed land uses to be developed at Villebois to create a complete community with a vibrant Village Center. At build-out, Villebois will be an urban village of at least 2,300 residential units surrounding a mixed-use Village Center comprised of residential, office, retail and/or related employment uses. The development of the land use design relied heavily upon the three guiding principles of connectivity, diversity and sustainability described in the *Villebois Village Concept Plan* and discussed in the previous chapter. The *Concept Plan* also identified the following key design elements, which represent the principle building blocks upon which the Villebois Village is to be developed:

- Neighborhoods
- Village Center
- Commercial Development and Employment
- Elementary School
- Parks and Open Spaces
- Rainwater Systems
- Environmental Programs
- Connectivity

The Villebois Village Master Plan also recognizes the Future Study Area, formerly known as the Living Enrichment Center (LEC), which represents approximately 8% of the total acreage of the Residential – Village area.

This chapter focuses on the first four design elements and the Future Study Area. Parks and Open Spaces are discussed in Chapter 3, Rainwater Systems in Chapter 4, Connectivity in Chapter 5, and the pertinent Environmental Programs as applicable in Chapters 3, 4, and 5.

#### *The Neighborhoods of Villebois Village*

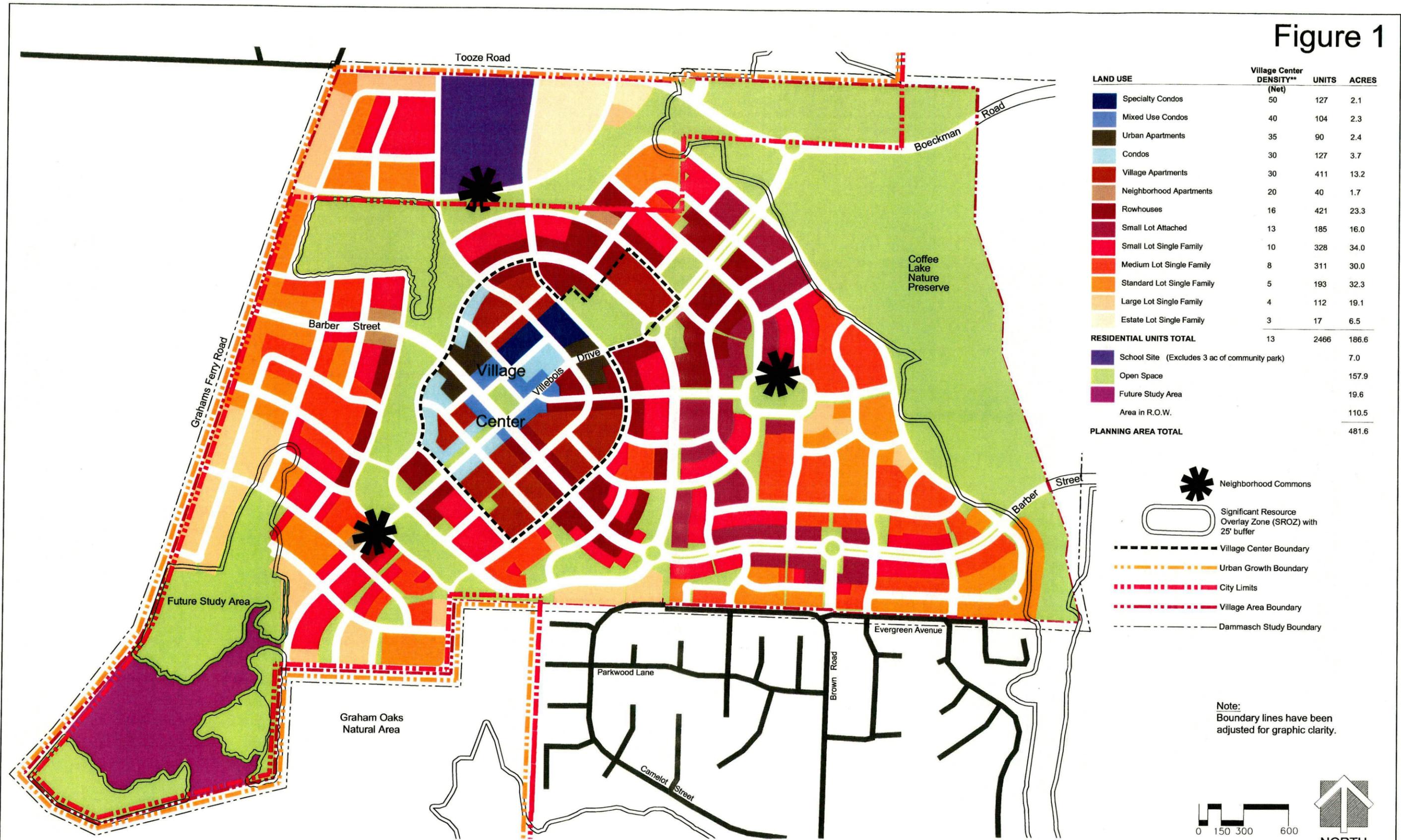
The neighborhood is the organizing land use principle for Villebois. Design elements characterizing the neighborhoods include:

- One-quarter mile radius in size,
- Neighborhood edges defined by the roadway system,
- A mix of housing types,
- A commons at each neighborhood,
- The Village Center at the confluence of the neighborhoods, and
- Open space linkages between neighborhoods and to adjacent open space.

The *Villebois Village Master Plan* provides three distinct neighborhoods, each within a quarter-mile radius of the Village Center, as shown in *Figure 2 – Neighborhood Concept Diagram*. The extensions of Boeckman Road and Barber Street form the internal edges of these neighborhoods. A Neighborhood Commons is a public open space that defines the center of each neighborhood, and may include a Neighborhood Center with convenient retail, transit stop and postal services. It is about a five-minute walk from each Neighborhood Commons to the Village Center - forming a human-scale, pedestrian-oriented environment.

Convenient retail uses at the Neighborhood Center are intended to serve the basic needs of neighborhood residents and are small in scale (no more than 3,500 square feet in area), compared to the larger retail development within the Village Center.

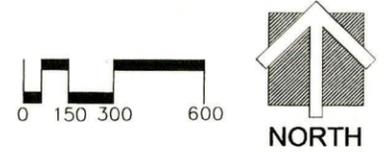
# Figure 1



LAND USE	Village Center DENSITY** (Net)	UNITS	ACRES
Specialty Condos	50	127	2.1
Mixed Use Condos	40	104	2.3
Urban Apartments	35	90	2.4
Condos	30	127	3.7
Village Apartments	30	411	13.2
Neighborhood Apartments	20	40	1.7
Rowhouses	16	421	23.3
Small Lot Attached	13	185	16.0
Small Lot Single Family	10	328	34.0
Medium Lot Single Family	8	311	30.0
Standard Lot Single Family	5	193	32.3
Large Lot Single Family	4	112	19.1
Estate Lot Single Family	3	17	6.5
<b>RESIDENTIAL UNITS TOTAL</b>	<b>13</b>	<b>2466</b>	<b>186.6</b>
School Site (Excludes 3 ac of community park)			7.0
Open Space			157.9
Future Study Area			19.6
Area in R.O.W.			110.5
<b>PLANNING AREA TOTAL</b>			<b>481.6</b>

- Neighborhood Commons
- Significant Resource Overlay Zone (SROZ) with 25' buffer
- Village Center Boundary
- Urban Growth Boundary
- City Limits
- Village Area Boundary
- Dammasch Study Boundary

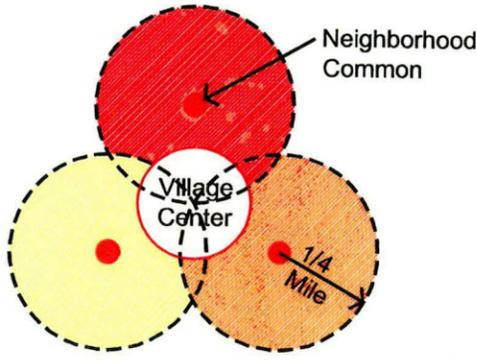
Note:  
Boundary lines have been adjusted for graphic clarity.



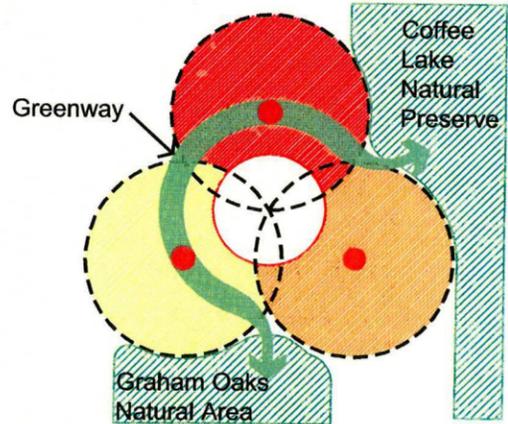
**NOTES:**  
The Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Encroachments within the SROZ are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations.

\*\* An average village density (net) is noted for informational purposes only. The net area used to calculate densities excludes right-of-way and park/open space areas.

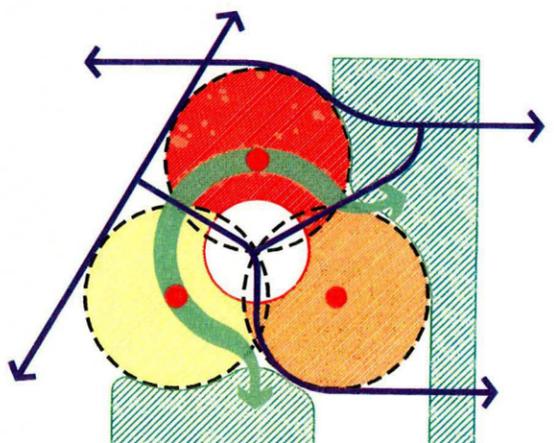
Figure 2



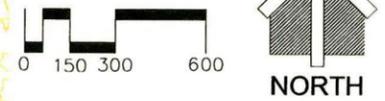
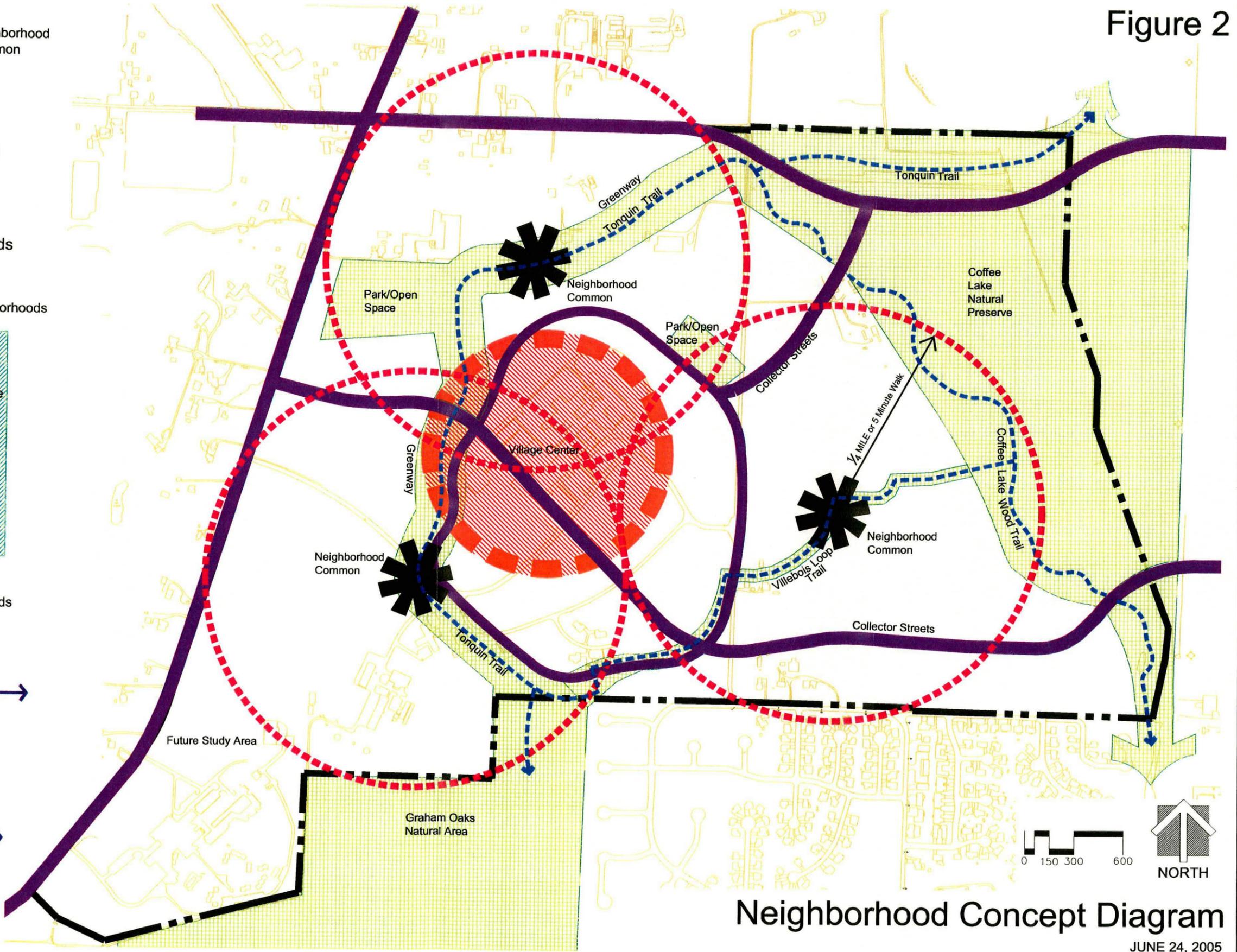
**Conceptual Diagram - Neighborhoods**  
 - 1/4 mile radius neighborhood = 5 minute walking distance  
 - Commons at neighborhood center  
 - Village Center at the confluence of neighborhoods



**Conceptual Diagram - Greenway**  
 - Connection to adjacent open spaces  
 - Open space linkage between neighborhoods



**Conceptual Diagram - Roadways**  
 - Roadway system defines neighborhood edges



Neighborhood Concept Diagram

JUNE 24, 2005

Each neighborhood will include a mix of housing types, including detached and attached single-family lots with a variety of lot sizes ranging from about 9,500 square feet to approximately 2,500 square feet, ancillary dwellings, cluster housing and row houses. Market segments will include market rate for-sale and rental homes, affordable housing, and community housing per ORS.426.508.

The State statute defines "community housing" to mean residences for "chronically mentally ill persons." The F.H. Dammasch State Hospital property requires, as part of its sale, no more than ten acres total be reserved to this special community housing type.

The larger single-family lots will be located adjacent to existing single-family homes along Brown Road and Evergreen Road to the south, the Future Study Area to the southwest, Grahams Ferry Road to the west and Tooze Road to the north. They also will face onto the proposed Coffee Lake Drive that follows the border of the Coffee Lake and Metro open space, helping to make a soft transition between the built and the natural environment. The medium-density housing will be used to help define important walking streets and open space edges at the transition between the neighborhoods and the Village Center.

### ***The Village Center***

The Village Center, with its heart at the intersection of Villebois Drive and the Barber Street extension, occupies about 42 acres at the center of Villebois (*see Figure 2A – Village Center Boundary & Land Use Plan*). Design elements, which characterize the Village Center include:

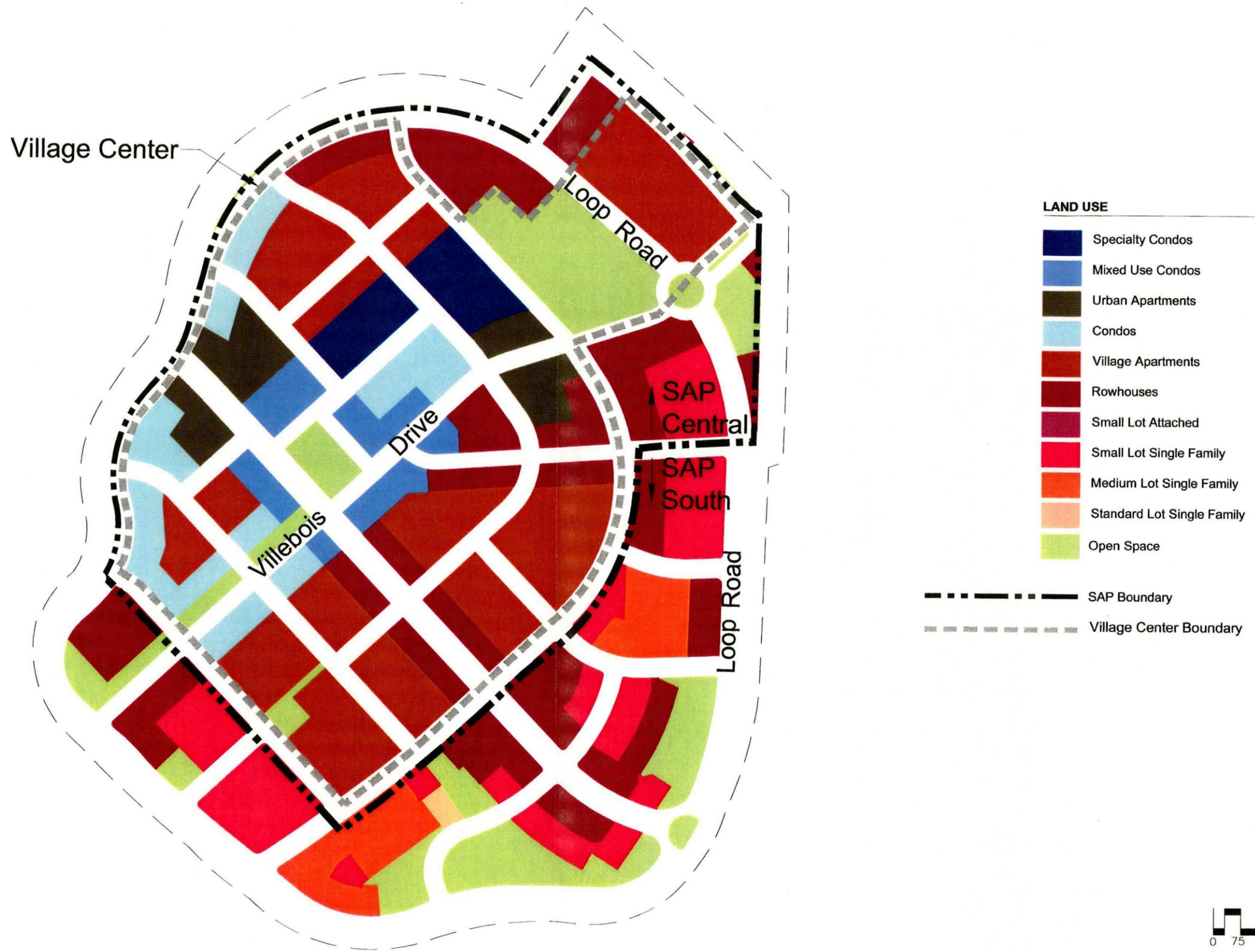
- Higher-density residential housing,
- Mixed-use development,
- A location inside a loop road connecting with three neighborhoods,
- Opportunities for office/commercial/light industrial/civic uses,
- Easy access to multi-modal transportation opportunities,
- Inclusion of parks and greenway features, and
- Adaptation of former Dammasch State Hospital buildings, as feasible.

Higher density development in the Village Center includes, but is not limited to, multi-family residential and mixed-use development such as ground level retail or office and "flex-space" uses with office or multi-family residential units above.

The Village Center is intended to create the opportunity for the core area of Villebois to have a higher concentration of employment uses than may be allowed with the underlying Village zone. This area is designated for mixed-use (residential, retail, civic, and office development) and related employment uses. The transportation framework - including the Barber Street extension, Villebois Drive, the Loop Road and transit stops - provides access for cars, pedestrians and bicyclists in this high-density area. The Village Center is intended to provide locations for uses consistent with, but not limited to, the following examples.

- *Consumer Goods:* bookstore, clothing, florist, jeweler, pet shop, bicycle shop.
- *Food and Sundries:* bakery, specialty grocery, hardware, laundromat, dry cleaner, gifts.
- *General Office:* professional offices, non-profit, health services, governmental services, real estate, insurance, travel.
- *Service Commercial:* bank, day care center, photo processing, telecommunications, upholstery shop.
- *Lifestyle and Recreation:* hair salon, specialty retail, theater, video/DVD store, art gallery, health club, restaurants, dance studio.
- *Hospitality:* hotel, bed and breakfast, conference center.
- *Light Manufacturing/Research and Development.*
- *Civic/Institutional:* meeting hall, library, museum, churches, farmer's market, community center.
- *Residential:* condominiums, apartments, and townhouses.

Figure 2A



Village Center Boundary and Land Use Plan

AUGUST 15, 2005

Net residential density in the Village Center ranges from just over 16 dwelling units per acre (for row houses) to 50 or more dwelling units per acre (for specialty condos) and includes flex-space in mixed-use buildings, freestanding condominiums and apartments, and apartments above retail or office space. Individual buildings will range in height from one to four or more stories. The Village Center is defined by the greenway to the west and is organized around open space areas, Villebois Drive, and the former Dammasch State Hospital buildings.

### ***The Elementary School***

In accordance with the recommendation and request of the West Linn/Wilsonville School District, a 10-acre elementary school (inclusive of a 3-acre Community Park) is planned to be provided within Villebois. *Figure 1 – Land Use Plan* shows the elementary school location within SAP North. The School District has indicated that they will continue to work with the Master Planner, the City and affected property owners throughout the subsequent planning and development stages of the project. .

### ***Future Study Area – (Formerly LEC)***

Per the City's approval of City Files 02PC07A and 02PC07C, the Future Study Area, formerly known as the Living Enrichment Center (LEC), has been included in the area to be designated Residential – Village on the Comprehensive Plan Land Use Map. The Future Study Area is located on a parcel that is approximately 42.8 acres in area. Approximately 23.2 acres are located within the City's Significant Resource Overlay Zone (SROZ) overlay leaving approximately 19.6 acres outside of the SROZ boundaries.

Representatives of LEC have provided testimony on the proposed future uses of the LEC campus. In their March 31, 2003 letter, a representative of LEC proposed the following uses (which include expansion of some or all current uses):

- New sanctuary;
- New teen center;
- Chapel; and
- Expansion of the retreat center, including additional overnight lodging facilities and senior housing and care facilities.

The *Villebois Village Master Plan* recognizes the Future Study Area as part of the Residential – Village Comprehensive Plan land use designation and illustrates this area within the boundaries of the Master Plan. Full analysis of the Future Study Area's compliance with the City's Comprehensive Plan and its various sub-elements is not included in this document (City File 02PC07B).

A Specific Area Plan (SAP) will be submitted for this property in the future and as a part of this SAP approval, compliance must be demonstrated with the *Villebois Village Master Plan*, the City's Comprehensive Plan and its sub-elements, the City's Planning and Land Development Ordinance, and all other applicable regulatory requirements. The developer of the Future Study Area shall be responsible for obtaining any master plan or ordinance amendment(s) that may be necessitated by their proposal.

### ***The Next Step***

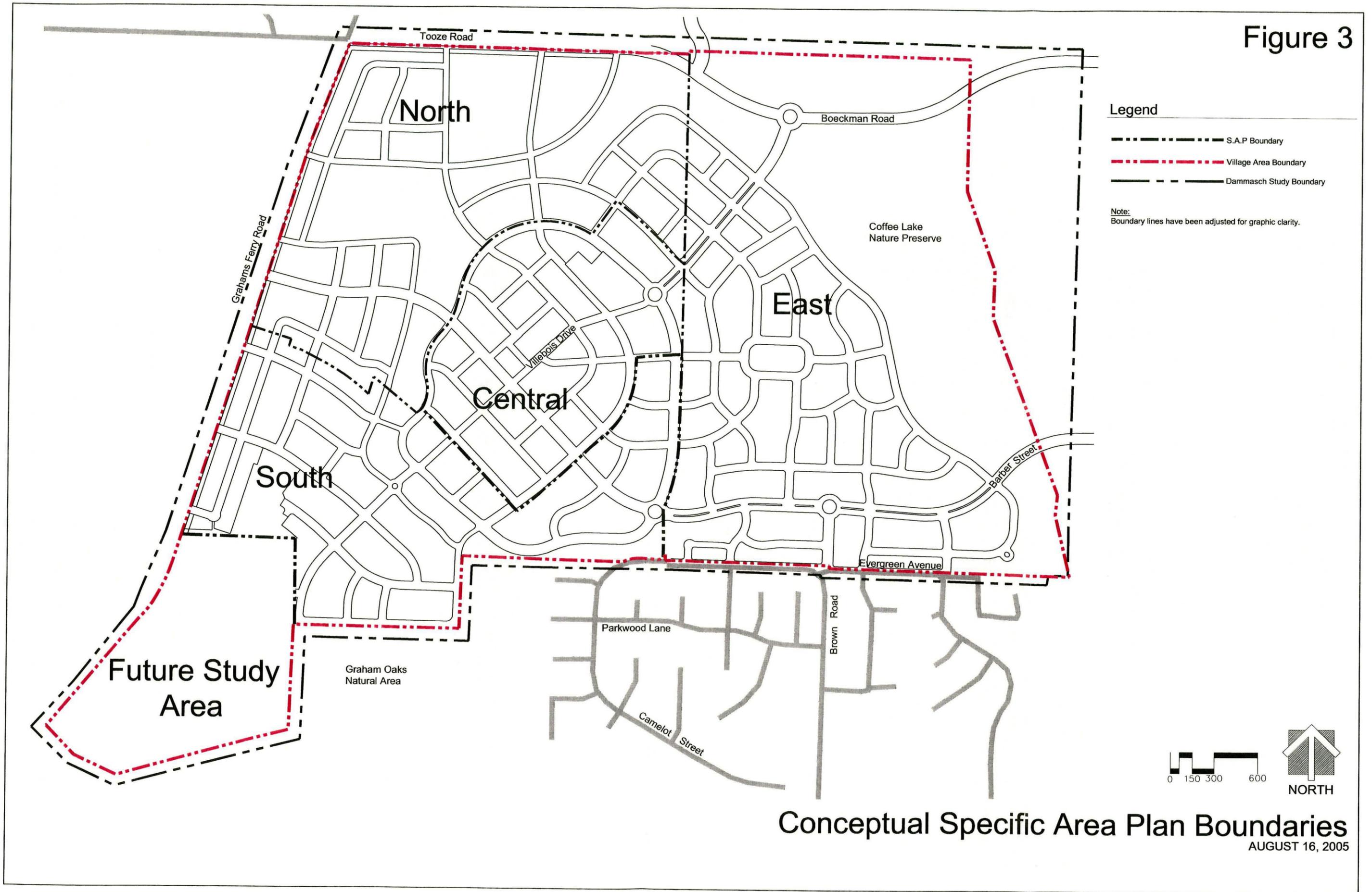
Prior to or concurrent with approval of this *Villebois Village Master Plan*, the City of Wilsonville Comprehensive Plan text will be amended to include the Residential-Village (R-V) land use designation (City File 02PC07A) and the Comprehensive Plan Map will be revised to designate the *Villebois Village Master Plan* area Residential-Village (City File 02PC07C). The uses and systems envisioned by the *Villebois Village Master Plan* within the Residential-Village

designation will be implemented through the ordinances of the Village zone and the review procedures established with the Village zone (City File 02PC08).

Refinements to the *Villebois Village Master Plan* are anticipated as more detailed plans and analyses are crafted during the development process. Plan refinements will be formalized through a process established under the Village zone, entitled Specific Area Plans (SAPs). Specific Area Plan approval will occur subsequent to *Villebois Village Master Plan* approval and prior to submittal of development applications. Specific Area Plans will provide a more detailed analysis of the development of specific portions of the *Villebois Village Master Plan* area. Specific Area Plan areas are conceptually identified within the *Villebois Village Master Plan* as shown on *Figure 3 – Conceptual Specific Area Plan Boundaries*. SAP boundaries will be refined with the adoption of SAPs. Specific Area Plans will include a Pattern Book and Community Elements Book, as well as other items as specified in the implementing Village zone. The pattern book will depict the architectural character of the Specific Area Plan. The Community Elements Book will establish the type and location of community elements within the Specific Area Plan, including, but not limited to: lighting, street trees, site furnishings and tree protection standards.

Villebois will be developed over a period of 7 to 12 years. Phasing will be determined by several factors, including response to market analysis and market conditions, availability and capacity of utilities and infrastructure, and timing of road improvement approval and funding (see *Figure 4 – Sequence of Development*).

Figure 3



Legend

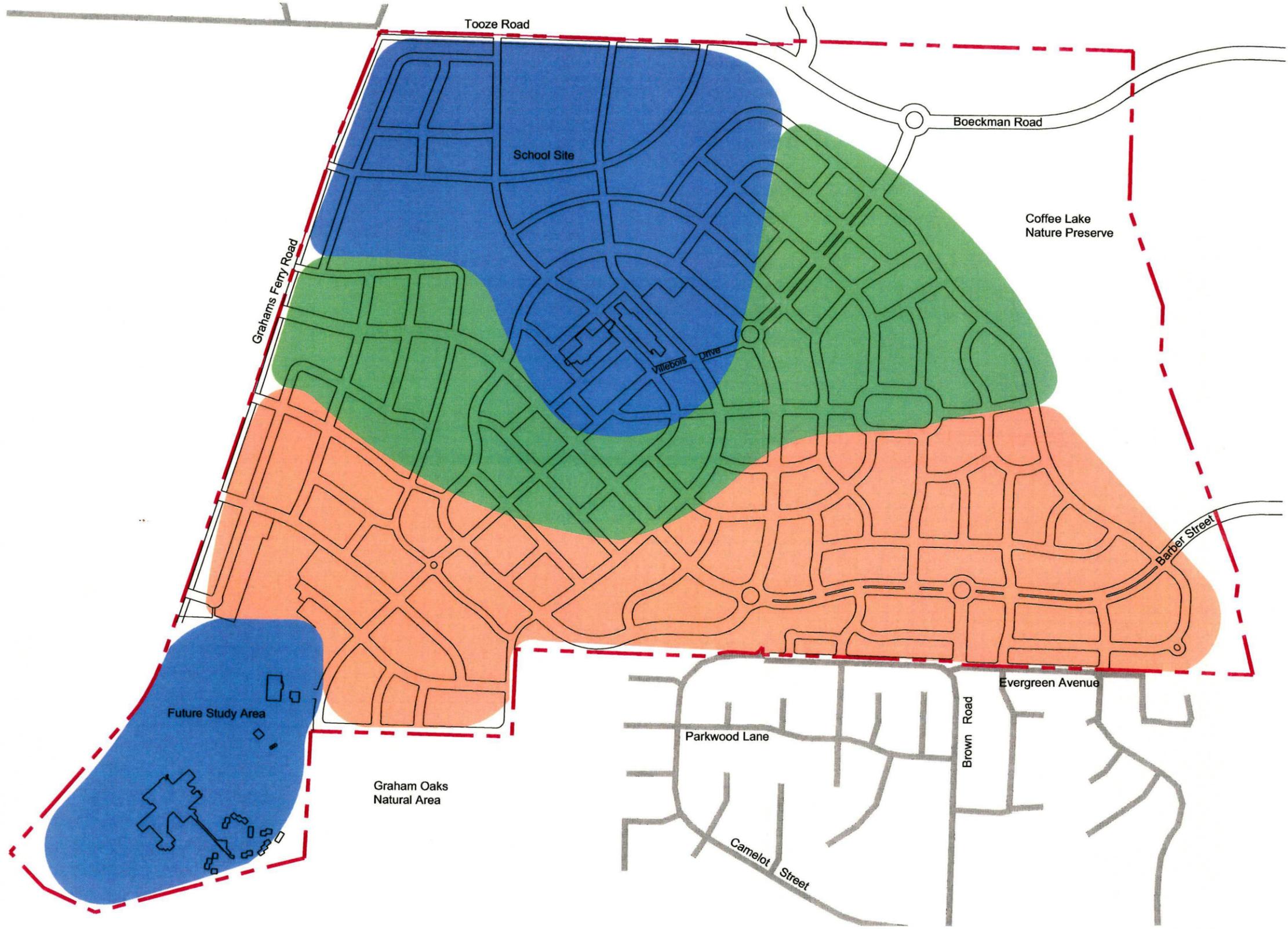
- S.A.P Boundary
- ..... Village Area Boundary
- . - . Dammasch Study Boundary

Note:  
Boundary lines have been adjusted for graphic clarity.

Conceptual Specific Area Plan Boundaries

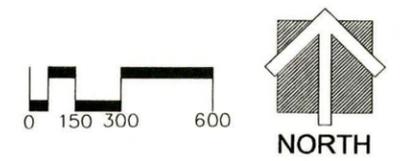
AUGUST 16, 2005

Figure 4



- Legend**
- Early Phases - 0 to 3 years
  - Middle Phases - 2 to 6 years
  - Later Phases - 5 to 9+ years
  - Village Area Boundary

\* Phasing dates are based on original Master Plan approval dated August 18, 2003



### Conceptual Sequence of Development

AUGUST 16, 2005

## 2.2 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION

### GENERAL – LAND USE PLAN

#### Goal

Villebois Village shall be a complete community that integrates land use, transportation, and natural resource elements to foster a unique sense of place and cohesiveness.

#### Policies

1. The Villebois Village shall be a complete community with a wide range of living choices, transportation choices, and working and shopping choices. Housing shall be provided in a mix of types and densities resulting in a minimum of 2,300 dwelling units within the *Villebois Village Master Plan* area.
2. Future development applications within the Villebois Village area shall provide land uses and other major components of the Plan such as roadways and parks and open space in general compliance with their configuration as illustrated on *Figure 1 – Land Use Plan* or as refined by Specific Area Plans. The proposed uses for the Future Study Area Specific Area Plan shall be those identified in the *Villebois Village Concept Plan*, and the Specific Area Plan shall not be considered a neighborhood plan as defined in Section 2.1 of the *Villebois Village Master Plan*.
3. The Villebois Village shall provide civic, recreational, educational and open space opportunities.
4. The Villebois Village shall have full public services including: transportation; rainwater management; water; sanitary sewer; fire and police services; recreation, parks and open spaces; education; and transit.
5. Development of Villebois shall be guided by a Finance Plan and the City's Capital Improvement Plan, ensuring that the availability of services and development occur in accordance with the City's concurrency requirements (see Implementation Measure 4, below).

#### Implementation Measures

1. Allow for unique planning and regulatory tools that are needed to realize the *Villebois Village Master Plan*. These tools shall include, but are not limited to: Specific Area Plans; Pattern Books; and Community Elements Books.
2. Adopt the newly created Village zone district, which may be applied to the *Villebois Village Master Plan* area designated Residential-Village on the Comprehensive Plan Map. The new Village zone shall be based on the *Villebois Village Master Plan* Goals, Policies and Implementation Measures contained within this document.
3. Refinements to the *Villebois Village Master Plan* are anticipated as more detailed plans are developed for the Specific Area Plans. Specific Area Plans may propose refinements to the *Villebois Village Master Plan* without requiring an amendment to the *Villebois Village Master Plan* provided the refinement is not significant. Non-significant refinements shall be defined in the Village ("V") Zone text and may include, but are not limited to: minor alterations to street alignments or minor changes in area or uses. Disagreement about whether a refinement is significant shall be resolved by a process provided in the Village ("V") Zone text.
4. The Master Planner shall coordinate with the City on the development of a Finance Plan for necessary urban services and public infrastructure. Each developer within Villebois

Village will sign their own Development Agreement that will address the necessary urban services and public infrastructure as appropriate.

5. The Specific Area Plan (SAP) the Future Study Area shall demonstrate compliance with the *Villebois Village Master Plan*, the City's Comprehensive Plan and its sub-elements, the City's Planning and Land Development Ordinance, and all other applicable regulatory requirements. The developer of the Future Study Area shall be responsible for obtaining any master plan or ordinance amendment(s) that may be necessitated by their proposal.

## **RESIDENTIAL NEIGHBORHOOD HOUSING**

### **Goal**

The Villebois Village shall provide neighborhoods consisting of a mix of homes for sale, apartments for rent, row homes, and single-family homes on a variety of lot sizes, as well as providing housing for individuals with special needs. The Villebois Village shall provide housing choices for people of a wide range of economic levels and stages of life through diversity in product type.

### **Policies**

1. Each of the Villebois Village's neighborhoods shall include a wide variety of housing options and shall provide home ownership options ranging from affordable housing to estate lots.
2. Affordable housing within Villebois shall include rental and home ownership opportunities.
3. The mix of housing shall be such that the Village development provides an overall average density of at least 10 dwelling units per net residential acre.
4. The Villebois Village shall accommodate a total of at least 2,300 dwelling units within the boundary of the *Villebois Village Master Plan*.
5. The Villebois Village shall provide a mix of housing types within each neighborhood and on each street to the greatest extent practicable.
6. The Villebois Village shall include community housing types consistent with Oregon Revised Statute 426.508(4), which requires that no more than 10 acres be retained from the sale of the former Dammasch State Hospital property for development of community housing for chronically mentally ill persons. The City of Wilsonville, the Oregon Department of Administrative Services, and the Mental Health and Developmental Disability Services Division shall jointly coordinate the identification of the acreage to be retained.
7. The development standards and Specific Area Plans required by the Village zone shall be consistent with the Governor's Quality Development Objectives and the Governor's Livability Initiative.
8. Each neighborhood shall be designed to increase transportation options. Neighborhoods shall be bike and pedestrian friendly.
9. Higher density residential uses shall be of a scale and design in keeping with the desired vision for Villebois as expressed in the *Villebois Village Concept Plan* and in the Policies and Implementation Measures of the *Villebois Village Master Plan*.
10. Natural features shall be incorporated into the design of each neighborhood to maximize their aesthetic character while minimizing impacts to said natural features.

### **Implementation Measures**

1. Ensure, through the development standards and Pattern Book(s) required by the Village zone, that the design and scale of dwellings are compatible with the compact, pedestrian-oriented character of the concepts contained in the *Villebois Village Concept Plan* and the contents of this *Villebois Village Master Plan*.
2. Create a set of design guidelines for the development of Pattern Books with the Village zone requirements. Pattern Books shall address, at a minimum, architectural styles and elements, scale and proportions, and land use patterns with lot diagrams.
3. Develop Affordable Housing objectives for Villebois, which shall contain, at a minimum, a desired mix and density of housing to ensure that sufficient and affordable housing is available to households of all income levels that live or have a member working within the City of Wilsonville. Develop strategies to accomplish those desired mixes and densities, and indicate how build-out under each Specific Area Plan implements those strategies and contributes to the overall Goals and Policies of the *Villebois Village Master Plan*.

### **VILLAGE CENTER**

#### **Goal**

The Villebois Village shall include a mixed-use Village Center that will be the core of the community.

#### **Policies**

1. The Village Center shall be a highly pedestrian-oriented place that is the focus of a mix of residential, shopping, service, and civic and mixed-use buildings.
2. The Village Center shall encourage multi-modal transportation system opportunities with good access by vehicular, pedestrian, bicycle and transit traffic.
3. The Village Center shall include a civic plaza to serve as a community gathering space, along with a main street environment establishing a social atmosphere that encourages residents and visitors to linger and interact.
4. Connectivity to the Village Center from adjacent neighborhoods shall ensure that services are centralized and convenient to pedestrian-oriented shopping.
5. The core area of the Village Center shall provide for mixed-use residential, retail, and employment areas that may include office uses and live-work housing opportunities.
6. The Villebois Village shall allow redevelopment of the former Dammasch State Hospital building provided that it does not create conflicts with the overall development plan.

#### **Implementation Measures**

1. Establish a review process for the Village Center with the implementing Village zone ordinances. This review process shall guide development in the Village Center and recognize that uses may evolve over time as this area matures.
2. Specify a mixture of uses (residential, commercial, retail, civic, and office development) with the implementing Village zone that will support the long-term vitality of the Village Center and enhance the creation of a true urban village at its core. Employment may include uses related to high-tech businesses. The Village Center is intended to provide locations for uses consistent with, but not limited to, the following examples.

- *Consumer Goods*: bookstore, clothing, florist, jeweler, pet shop, bicycle shop.
- *Food & Sundries*: bakery, specialty grocery, hardware, laundromat, dry cleaner, gifts.
- *General Office*: professional offices, non-profit, health services, governmental services, real estate, insurance, travel.
- *Service Commercial*: bank, day care center, photo processing, telecommunications, upholstery shop.
- *Lifestyle & Recreation*: hair salon, specialty retail, theater, video/DVD store, art gallery, health club, restaurants, dance studio.
- *Hospitality*: hotel, bed and breakfast, conference center.
- *Light Manufacturing/Research and Development*.
- *Civic/Institutional*: meeting hall, library, museum, churches, farmer's market, community center.
- *Residential*: condominiums, apartments, and townhouses.

## **ELEMENTARY SCHOOL**

### **Goal**

The *Villebois Village Master Plan* shall provide for an elementary school within the Villebois Village portion of the *Villebois Village Concept Plan*.

### **Policies**

1. The Plan for Villebois Village shall provide an elementary school site in a location that provides safe and convenient access and complements the surrounding neighborhood.
2. Coordination shall continue to occur among the West Linn/Wilsonville School District, the Master Planner, the City and the affected property owners throughout the subsequent planning and development stages relating to the elementary school.

### **Implementation Measure**

1. The school site shall be developed in the location noted on *Figure 1 – Land Use Plan*.
2. Architectural and community elements associated with the school shall be addressed in the forthcoming SAP North application. If these details are not available at the time of SAP North application, a SAP amendment may be filed to address these elements when the school is ready to develop.

## CHAPTER 3 – PARKS & OPEN SPACE / OFF-STREET TRAILS & PATHWAYS

### 3.1 INTRODUCTION / PROPOSAL

The *Villebois Village Concept Plan* focuses on three guiding design principles of connectivity, diversity and sustainability, to shape the Village's parks and open space program and off-street trails and corridors. Parks and open space areas are shown on *Figure 5–Parks & Open Space Plan* and include the following areas, some of which are classified according to the City of Wilsonville's Parks & Recreation Master Plan of 1994 (denoted by PRMP), and some of which have been organized under new categories specific to Villebois (denoted by VVMP):

#### ***P-1 Neighborhood Parks (PRMP Category)***

- 1 to 5 acres in size
- Within ¼ mile of city residential areas
- Located on residential or collector streets
- Target of 2.5 acres per 1,000 residents
- Passive recreation primarily, some play equipment

*(Permanent names will be assigned as plans for Villebois progress)*

#### ***Eastside Neighborhood Park (1.6 acres)***

This park space is located in the Village's east neighborhood and will provide recreation space for the surrounding residents. The Villebois Loop Trail will pass along the south side of this park providing connections to the Coffee Lake Nature Preserve to the east and to the Villebois Greenway and the Graham Oaks Natural Area to the southwest. Additionally, minor pathways provide connections to Brown Road to the south, the Village Center to the west, and to major pathways within the Villebois Greenway / Coffee Lake Nature Preserve to the north. This park will be characterized by a neighborhood plaza and a generally level lawn area for informal play. This park will include picnic tables and play equipment, and a gazebo may also be provided.

#### ***Pathway Neighborhood Park – Cedar (1.0 acres)***

This space, located at a prominent gateway to the Villebois Village Center, preserves 7 uniquely arranged incense cedars and emphasizes the space that they create. The park routes the Brown Road portion of the Villebois Loop Trail on its eastern side and will include open lawn areas for informal active play. Sidewalks and pathways weave through the space creating potential opportunities for segregated garden spaces. Several homes will front on the space providing a sense of security to the park.

#### ***Pathway Neighborhood Park – Oak (1.53 acres)***

This park, which will include active and passive uses, preserves several large Oak trees and Poplar trees and the Villebois Loop Pathway runs along its southern edge. Open lawn areas will be available for informal play. The park will include play equipment, paved walks, benches and lighting. Several houses will front on the park, benefiting from the amenity but also, providing a sense of security for the park.

# Figure 5

## Legend

- Neighborhood Commons/Mixed Use
- Pocket Park
- Linear Green
- Urban Plaza
- Villebois Proposed Major Pathways (T-3)
- Villebois Proposed Minor Pathways (T-2)
- Villebois Proposed Nature Trails (T-1)
- City Proposed Pathways
- PHS Wetland Delineation
- Approximate 100 Year Flood Line
- Significant Resource Overlay Zone (SROZ) with 25' buffer
- Elementary School Site includes 3 acre Community Park

## Tree Rating

- Important
- Good
- Moderate
- Poor
- Tree Canopy Unspecified

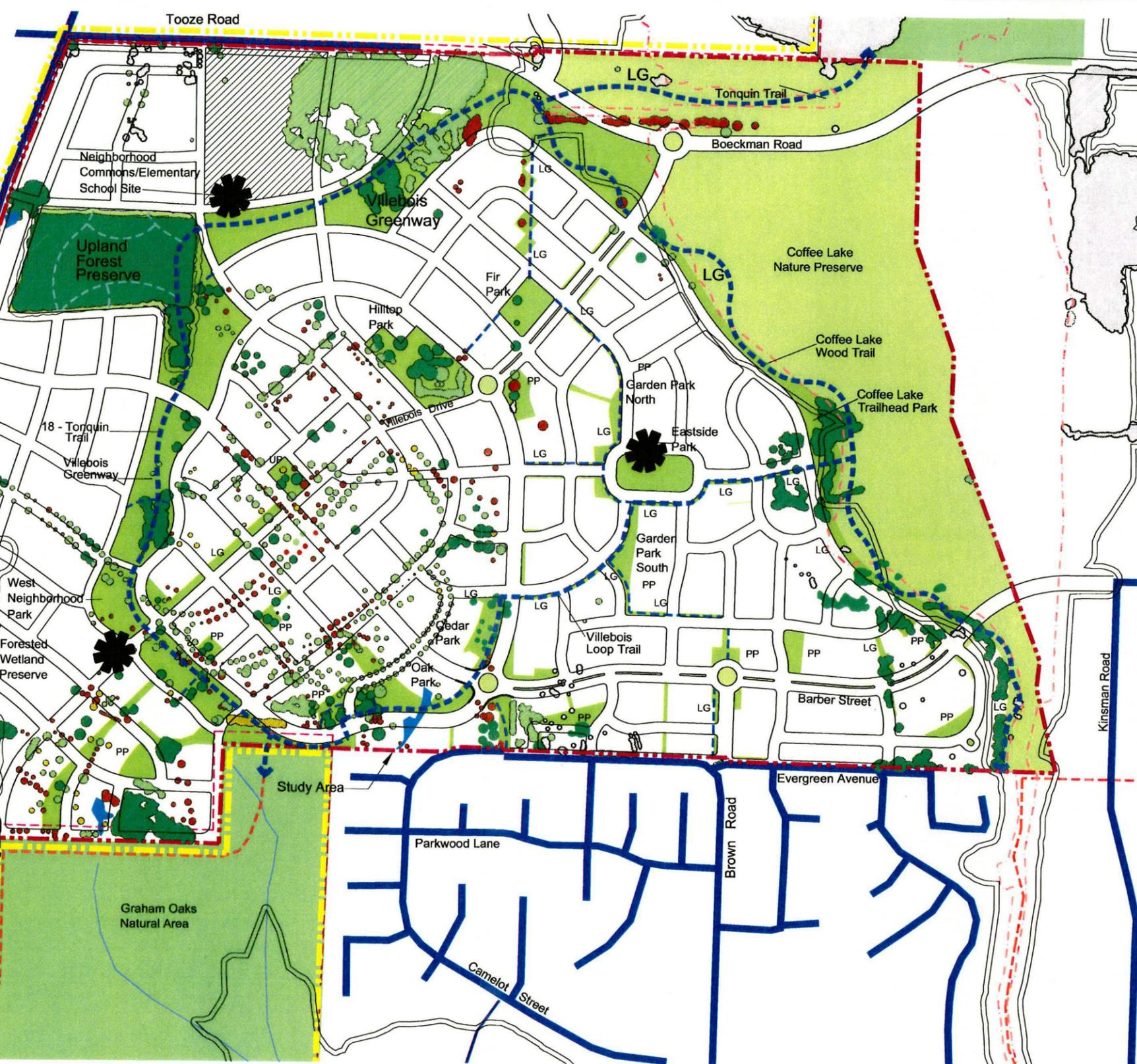
NOTE: Tree ratings are conceptual and are to be re-evaluated with appropriate SAP application.  
 Classification Method:  
 Trees were rated based on the following considerations:

1. Health
2. Species (natives with habitat and ecosystem value)
3. Compatibility with development
4. Form / Visual Interest / Mature Size

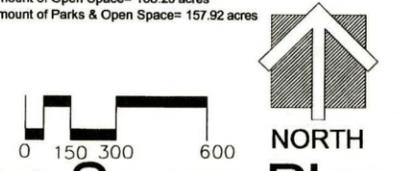
- Trees in the important category rated high in all four areas.
- Trees in the good category had good health and were a desirable species, but had irregular form or less compatibility with development.
- Trees in the moderate category had good to moderate health and form, but were a less desirable species or may be less compatible with development.
- Trees in the poor category had poor health and/or substantial damage.

## NOTES:

The Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations. Flood Insurance Rate Map 410025-0004-C dated February 19, 1987 shows the northerly limit of the detailed study area having an elevation of 143 (Ft. NGVD). This elevation has been used to approximate the flood plain limits within the project limits. Development in and around wetlands will be done per all applicable federal, state and local wetland regulations.



- (P-1) Neighborhood Parks - 26.82 acres**
  - Eastside Neighborhood Park - 1.6 acres**
    - Provides park space for neighborhood recreation
    - Includes Neighborhood Commons features
  - Pathway Neighborhood Parks - 2.53 acres**
    - All parks incorporate the Villebois loop trail which links them together.
    - Cedar Park contributes 1.0 acre of park space, preserves existing incense cedars, enhances a prominent gateway to the Village Center, and provides informal active play areas
    - Oak Park contributes 1.53 acres of park space, preserves existing trees, and provides active and passive uses
  - Fir Park - 1.0 acre**
    - Preserve existing specimen trees, picnic tables
    - Small gathering spaces active and passive recreation
  - Coffee Lake Trailhead Park - 1.0 acre**
    - Overlook of Coffee Creek Lake
    - Connection to trail system and linkage to Villebois trails
    - Trailhead signage
    - Passive recreation gathering space
- (UP)Village Center Plaza - 0.52 acres**
  - Primary gathering space of Villebois Community
  - Focus of mixed-use area
  - Hosts annual or weekly events and farmer's market
  - Village Center Linear Green links the Village Center Plaza, the Villebois Greenway, and the West Neighborhood Park through a wide, tree-lined sidewalk.
- Village Center Linear Green - 0.69 acres**
- Hilltop Park - 2.90 acres**
  - Preserve existing specimen trees, picnic tables
  - Performance and small gathering spaces
  - Viewing areas, active and passive recreation
- West Park - 1.8 acres**
  - Serves as a linkage in the greenway, shared common area
  - Small plaza space, reflecting lake/rainwater detention
  - Informal play and practice area
- (PP)Pocket Parks - 4.98 acres**
  - Passive recreation, preservation of existing trees
  - Opportunities for structured play
  - Garden Parks contributes 0.9 acre of park space and provides passive and active recreation facilities adjoining an integrated with the linear pathway system.
- (LG)Linear Greens with Pathways- 9.80 acres**
  - Linear Green at Coffee Lake Nature Preserve includes the Tonquin Trail (T-3 Major Pathway), wildlife viewing opportunities, trail connections, and picnic and informal play areas.
  - Trailside Parks buffer T-2 Minor Pathways from residences and connects pathways and parks.
- (P-2) Community Parks 3.0 Acres**
  - North Park/Elementary School**
    - 3 acres of park area associated with school location, including active/recreational fields. (See legend)
- (P-3) Regional Parks - 19.9 acres**
  - Villebois Greenway - 19.9 acres**
    - Multi-functional park
    - Connects major regional open spaces and trails
    - Preserves existing trees and views
- Open Space - 108.2 acres**
  - Forested Wetland Preserve - 4.4 acres**
    - Nature trail and viewing opportunities near perimeter
    - Wetland restoration and mitigation
  - Future Study Area - 23.2 acres**
  - Upland Forest Preserve - 10.6 acres**
    - SROZ preservation of existing trees and wildlife habitat patch
    - Nature trail and viewing opportunities near perimeter
  - Coffee Lake Nature Preserve - 70.0 acres**
    - Includes Coffee Lake Wetland Complex
    - Links with regional openspace/wildlife habitat
    - Active/passive opportunities outside of wetland/SROZ
- Total amount of Parks= 49.72 acres**
- Total amount of Open Space= 108.20 acres**
- Total amount of Parks & Open Space= 157.92 acres**



# Parks and Open Space Plan

AUGUST 15, 2005

**Fir Park (1.0 acres)**

This park is situated along two minor pathways, providing connections to the Eastside Neighborhood Park to the southeast, Hilltop Park to the southwest, and the Villebois Greenway / Coffee Lake Nature Preserve to the north. This park will include areas for passive recreation and play equipment. This park will also include the preservation of several existing trees.

**Coffee Lake Trailhead Park (1.0 acres)**

This park will provide an overlook area for the Coffee Lake Nature Preserve and trailhead signage for the Coffee Lake Wood Trail. Connection to the Villebois Loop Trail will also occur within this park. This park will include gathering spaces for passive recreation, including benches and picnic tables, providing areas for hikers to pause and enjoy the view. This park will include a small parking area and restrooms.

**Village Center Plaza (0.52 acres)**

The plaza will be the heart of the Villebois community. Recreation in such common areas might include festivals, outdoor movies, music and dining, children playing and people watching, all things that bring a mix of age groups together in public, and thus contribute to a greater sense of community. The plaza will incorporate existing trees and provide seating, lighting and distinct site furnishings. This central plaza will also help support unique pedestrian-scaled forms of retail and restaurants, with tables and display carts spread into the square.

**Village Center Linear Green (0.69 acres)**

One particular linear green is a unique space that will link the Village Center Plaza with the Villebois Greenway and the West Neighborhood Park. It will bring greenway users into the Village Center, leading the eye down a wide sidewalk framed by trees. Beyond the wide walk, homes will front onto an expanse of lawn, continuing some of the urban recreational activity and "eyes on the street" that occur in the Village Center. The wide walk will thus become an extension or 'spur' of the Major Pathway in the Villebois Greenway leading pedestrians into the Center.

**Hilltop Park (2.9 acres)**

This public open space appears to be one of the original home sites on the property. It will preserve the English walnut trees originally planted on the site as well as a substantial Big Leaf Maple that has been a prominent feature on the hilltop for many decades. Most of the existing cedars and firs, which appear to have been planted as a windbreak will be protected and incorporated into the park design. The park features a natural amphitheater space, which will be explored for use as a gathering and neighborhood performance space. Open lawn areas near the Big Leaf Maple will accommodate both active and passive use while providing views to Mt. Hood. It will be developed as an urban park with paved walks, benches, picnic tables, and lighting.

**West Park (1.8 acres)**

This park is a linkage in the Greenway and hosts a section of the Tonquin Trail on its eastern edge. The southwest corner of the park will feature a small plaza space adjacent to a large reflecting lake. The plaza is demarcated by an existing pin oak preserved within an adjacent traffic circle. The plaza will support seating and gathering spaces. The reflecting lake will be both a beautiful amenity for the park as well as a control and detention facility for rainwater. The western side of the park will have a large open lawn area with views both north up the Greenway and southeast down the Greenway. This area will support informal active play areas as well as providing an opportunity for larger gatherings.

Miscellaneous Pocket Parks (4.98 acres)

Small open spaces, or pocket parks, will be interspersed throughout the Villebois community. These spaces will incorporate important existing trees and provide passive recreational opportunities for residents. Some pocket parks will include rainwater treatment facilities, trails, lighting, site furnishings, and possibly play structures. These open spaces will provide areas for community use that are safe and easily maintained, while also helping to serve as a buffer between adjoining uses. The pocket parks will be privately maintained as "community backyards," where higher density development precludes large yards for residents.

**Garden Park South** and **Garden Park North** are pocket parks located along pathways leading to and from the East Neighborhood Park. The Garden Parks combined equal **0.9 acres**. These parks will provide small spaces for passive recreation and informal play along an active trail system, emphasizing the connections between the parks and trail systems of Villebois. These small parks serve the adjacent neighborhood, providing the Linear Green with nodes and focal points.

Linear Greens with Pathways (9.80 acres)

**Linear Green at Coffee Lake Nature Preserve** - The Coffee Lake Wood Trail will weave through a linear park outside the boundary of the Coffee Lake SROZ. This long park will serve as a conduit for Villebois residents to access wildlife viewing opportunities along the edge of the nature preserve without actually entering the SROZ and allow access to major trail connections. It will also serve as a significant open space in its own right, with benches, picnic areas and grassy areas for informal play. This park leads into and out of the Coffee Lake Trailhead Park.

**Trailside Parks** - The Villebois Loop Trail will weave through the east neighborhood and connect to the Coffee Lake Wood Trail on the outer east edge of the Villebois residential neighborhoods. A swath of parks will serve as buffers between the Villebois Loop Trail or Minor Pathways and surrounding houses. These greens highlight the locations of important pathways like the Villebois Loop Trail and other trails that connect through the middle of blocks and off the site to surrounding neighborhoods and open spaces. These connections are important links in the overall parks system, contributing to the vision of Villebois as a fully interconnected and interwoven community with many mobility options.

**P-2 Community Parks (PRMP Category)**

- 5 to 50 acres in size
- 1-mile service area
- Located on collector streets or larger
- Target of 8 acres per 1,000 residents
- Active recreation

North Park / Elementary School Community Park (3.0 acres)

Three (3) acres of park area will be provided in association with the elementary school within Specific Area Plan North. This park will include active recreational playfields that can accommodate team sports, as well as play equipment, paved walks, benches, picnic tables, public restrooms, lighting and appropriately landscaped areas.

### ***P-3 Regional Parks (PRMP Category)***

- 100 acres + in size
- Serves all Wilsonville residents and also non-residents
- On-site parking
- Target of 10 acres per 1,000 residents
- Sports fields, picnic areas, shelters, restrooms, some natural features

### ***Villebois Greenway (19.9 acres)***

The Villebois Greenway will be used as a multi-functional park within the community and will serve as an important community link between the Tonquin Geologic area, a regionally significant open space to the north, and Graham Oaks Natural Area regional open space. The Greenway will include amenities such as the Tonquin Trail, picnic areas, gathering spaces, and neighborhood park space, as well as wildlife habitat in patches and rainwater collection and cleaning. This space will also preserve many of the site's highest quality existing trees.

### ***OS-Open Spaces (Villebois Village Master Plan Category)***

The Villebois site possesses abundant natural features, organized in nature preserves, covering over 108.2 acres of the site, including wetlands, forests and grasslands. These natural features are not considered park area, but will feature "usable" trails, bike paths and bridges, as permitted in Section 4.139.04 of the Wilsonville Code. The abundance of parks and open space within Villebois exceeds City Development Code (4.113.02) requirements that 25% of the site area be dedicated as outdoor recreation or open space (the Villebois percentage is approximately 32%, without including private open space on homeowners' property). These natural areas are integrated into the neighborhood and are celebrated, rather than being treated as leftover, undesirable spaces.

The City of Wilsonville PRMP deferred classification and standardization of open space to a "separate process" accompanied by an Oregon Statewide Goal 5 inventory, and so does not include open space designation. The Villebois site's natural systems have been carefully inventoried and are placed under the protection of the City's Significant Resource Overlay Zone regulations and incorporated into the plan to minimize impacts from development.

### ***Forested Wetland Preserve (4.4 acres)***

This natural preserve contains intact and functioning wetlands within the forested portion of the area and farmed wetlands to the north (any work or impacts within the forested wetland preserve shall comply with the SROZ regulations). The Villebois plan will restore the farmed wetlands. The wetlands in this area may be expanded to mitigate for other small wetlands throughout the site, which will be lost as drainage patterns are changed. Walking trails and viewing opportunities will occur on the upland perimeter of the wetland area.

### ***Future Study Area SROZ (23.2 acres)***

This area will be further defined by the developer of the Future Study Area during future planning for that property.

### ***Upland Forest Preserve (10.6 acres)***

The Villebois plan advocates removal of invasive species within this area (any work or impacts within the upland forest area shall comply with SROZ regulations). The forest is contiguous with the Villebois Greenway and the Villebois Loop Trail's Tonquin segment. Smaller soft-surface nature trails will meander through the forest and link neighborhoods on either side. This maturing second-growth forest ecosystem will act as a habitat patch, valuable to small mammals, invertebrates and birds. Along the nature trails, benches and possibly educational signage for

wildlife viewing and quiet contemplation will complement the undeveloped nature of this open space.

**Coffee Lake Nature Preserve (70.0 acres)**

Implementation Directive 11 of the *Villebois Village Concept Plan* (City File 02PC06) calls for development of "a wetland naturalization and enhancement plan" for the Coffee Lake wetland complex. The *Villebois Village Master Plan* includes Policy 7 and Implementation Measure 5 to encourage development of a naturalization and enhancement plan for the Coffee Lake wetland complex. The Coffee Lake Nature Preserve will eventually be linked to Metro's Tonquin Geologic Area and the Tualatin River National Wildlife Refuge to the north, one of 10 urban refuges in the National Wildlife Refuge System. Refuge habitats consist of emergent, shrub, and forested, wetlands, riparian forests, oak and pine grassland, meadows, and mixed deciduous/coniferous forests common to Western Oregon prior to settlement. When final acquisition is completed, the refuge will total over 3,000 acres and preserve a floodplain wetland ecosystem.

Parts of the Coffee Lake area outside of the Wetland/SROZ will provide for recreational opportunities such as hiking, bicycling and wildlife viewing. These areas are categorized separately within the Linear Green at Coffee Lake Nature Preserve or the Coffee Lake Trailhead Park.

***RC-1 Minor Limited-use Recreation Center and RC-3 Minor Multi-Use Recreation Center (PRMP Categories)***

- Less than 5,000sf
- Serves a particular group or activity
- Multi-use recreational facility
- 1,400sf per 1,000 residents

***RC-2 Major Limited-use Recreation Center (PRMP Category)***

- Greater than 5,000sf
- Serves a particular group or activity
- Multi-use recreational facility
- Located along or near a collector street or arterial
- 1,400sf per 1,000 residents

***RC-4 Major Multi-Use Recreation Center (PRMP Category)***

- Greater than 5,000sf
- Many concurrent activities and events
- Located along or near an arterial
- Plenty of parking
- Multi-use recreational facility
- 2,800sf per 1,000 residents

The proposed elementary school will provide some recreational facilities in association with the school, including a gymnasium and athletic fields. If portions of the existing Dammasch State Hospital buildings can be reused, there may be potential for a RC-2 or RC-4 Recreation Center within a rehabilitated structure, if economically feasible. This cannot be committed to or confirmed until further studies of the buildings are conducted, and until an economic feasibility analysis is prepared.

### ***T-1 Nature Trails (PRMP Category)***

- 4 to 8 feet wide
- 10 feet minimum right-of-way
- Pedestrians only
- Soft surface
- Serve park and open space sites
- No requirement per 1,000 residents

Nature Trails will be located within two of the large natural open spaces at Villebois. These trails will be four feet wide with a soft surface.

*Upland Forested Preserve:* The *Villebois Village Master Plan* includes 2,300 lineal feet of nature trails through the forested area connecting neighborhoods to the north and south as well as linking to the multi-use trail in the greenway.

*Forested Wetland Preserve:* The *Villebois Village Master Plan* includes 700 lineal feet of nature trails around the edge of the forested wetland, connecting the Future Study Area with the West Neighborhood Park and Greenway via a short sidewalk.

### ***T-2 Minor Pathways (PRMP Category)***

- 6 to 10 feet wide
- 15 feet minimum right- of-way
- Paved surface, with 4' optional soft surface jogging shoulder
- Lighting, signage and benches
- 1,500 lineal feet per 1,000 residents

Minor pathways serve as pedestrian and bike connections between neighborhoods, through parks and large natural open spaces at Villebois. These are important contributors to the walkability and connectivity of Villebois. Minor pathways between neighborhoods are often accompanied by linear trailside parks, which are described above.

### ***T-3 Major Pathways (PRMP Category)***

- 10 to 17 feet wide
- 15 to 25 feet minimum right-of-way
- Paved surface, with 4' optional soft surface jogging shoulder
- Lighting, signage and benches
- 3,000 lineal feet per 1,000 residents

### ***Coffee Lake-Wood Trail/Villebois Loop Trail/Brown Road Trail/Tonquin Trail***

There are several major pathways planned for Villebois, the Tonquin Trail and the connection suggested by the Brown Road Trail in the PRMP. Metro's Tonquin Trail (now the Coffee Lake Wood Trail) was envisioned in the DATELUP study to run north to south along the western edge of the Coffee Lake Nature Preserve. The Villebois Loop Trail provides connections between the Tonquin Trail and the Coffee Lake-Wood Trail.

In addition to providing an important linkage between the regionally significant Tonquin Geologic Region to the north and the Graham Oaks Natural Area to the south, the combined trails create a loop (T-3 Major Pathway) that links the major parks and open spaces on the site. The Villebois Loop Trail, comprised of the Tonquin Trail, the Coffee Lake-Wood Trail and the Brown Road Trail, passes through the heart of each of the neighborhoods linking one to the next. The trail also provides an important function for school children. The off-street loop trail providing access points to both Boones Ferry Primary and Wood Middle Schools through the future trail in the Graham Oaks Natural Area, as well as to the proposed elementary school in Villebois, is a safe and easy connection to the school sites for both parents who would like to

accompany their young children and older children who might want to walk or ride their bike to school.

### **3.2 PARKS & RECREATION MASTER PLAN COMPLIANCE ANALYSIS**

#### **PURPOSE OF THE COMPLIANCE ANALYSIS**

This Compliance Analysis has been prepared to compare the *Villebois Village Master Plan* with the City's 1994 Parks & Recreation Master Plan.

#### **RELEVANT DOCUMENTS**

The referenced City Master Plan is titled "City of Wilsonville Parks & Recreation Master Plan Final Report, December 1994." Relevant sections of Chapter 4 of the Wilsonville Code were consulted as needed, and are cited. The Villebois parks and open space and off-street trails plan is *Figure 5 – Parks and Open Space Plan*, which is a part of the submittal documents for the *Villebois Village Master Plan*.

#### **METHODOLOGY**

The following table reviews the above-referenced document to compare the targets established in the 1994 Parks & Recreation Master Plan with the unique mix of parks provided in the *Villebois Village Master Plan*.

#### **COMPLIANCE ANALYSIS**

The following table compares the park acreage standards and pathway standards of the Wilsonville PRMP and the park acreage proposed by the *Villebois Village Master Plan*.

**Table 1: Parks & Recreation Master Plan Comparison**

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
<p><b>Neighborhood Parks</b></p>	<p>1-5 acres in size</p> <p>within 1/4 mile of residential areas</p> <p>located on local or collector streets</p> <p>target of 2.5 acres per 1,000 residents</p> <p>passive recreation, picnic areas and unstructured play.</p> <p>[example: River Fox and Courtside Parks]</p>	<p>Neighborhood Parks-</p> <p>Eastside Neighborhood Park (1.6 Acres), Cedar Park (1.0 Acres), Oak Park (1.53 Acres), Fir Park (1.0 Acres), Coffee Lake Trailhead Park (1.0 Acres), Village Center Plaza (0.52 Acres), Village Center Linear Green (0.69 Acres) Hilltop Park (2.9 Acres), West Park (1.8 Acres), Pocket Parks (4.98 Acres), and Linear Greens except Village Center Linear Green (9.80 Acres).</p> <p>Active/Passive Recreation</p> <p>May provide picnic areas, areas for unstructured play, play structures or sports courts</p>	<p>In 1994, the Neighborhood Parks category was identified as the one with the greatest deficiency.</p> <p>The Villebois plan proposes 26.82Acres vs. 12 Acres within DATELUP.</p> <p>The Villebois plan exceeds the target acreage from the 1994 Master Plan and the acreage proposed in DATELUP.</p> <p>The unique categories proposed in the Villebois Village Master Plan of linear parks, pocket parks and linear greens all provide facilities and experiences that are comparable to the Neighborhood Parks category.</p> <p>The number, type and location of fields will be determined as the design progresses</p>
<p><b>Community Parks</b></p>	<p>5 to 50 acres in size</p> <p>1 mile service area</p> <p>located on collector or higher classification streets</p> <p>target of 8 acres per 1,000 residents</p> <p>active recreation</p>	<p>North Park / Elementary School Community Park (3.0 Acres).</p> <p>These areas can be used for organized play, community events, and may contain multi-use sports fields, playgrounds, shelters, picnic areas, restrooms, parking and some passive functions.</p>	<p>A total of 3.0 Acres of Community Parks. Community Parks serve more than the immediate neighborhood.</p> <p>Updates to the Parks and Recreation Master Plan will need to address the need in this parks category for the increased population.</p> <p>The Parks and Recreation Master Plan includes school site recreational facilities in the inventory for Community Parks.</p>

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
	[example: Boones Ferry and Town Center Parks]		
<b>Regional Parks</b>	<p>100+ acres in size</p> <p>serves Wilsonville residents and non-residents</p> <p>target of 10 acres per 1,000 residents</p> <p>sports fields, picnic areas, shelters, on-site parking, restrooms and significant natural features</p> <p>[example: Memorial Park]</p>	<p>Villebois Greenway (19.9 Acres)</p>	<p>The Villebois Greenway may act as a regional destination for the area. It could contain many features that are found in a Regional Park, such as trails, picnic areas and natural features.</p> <p>Updates to the Parks and Recreation Master Plan will need to address the need in this parks category for the increased population.</p> <p>The Greenway provides greater access to residents than Neighborhood Parks. Connects regional open spaces (Coffee Lake and Wilsonville Tract) and protects important trees.</p> <p>The majority of the Greenway could be included in this category as providing capacity and meeting the requirements, provided that restrooms and parking are provided.</p>
<b>Recreation Centers</b>  Minor Limited-Use/Minor Multi-Use	<p>less than 5,000 square feet</p> <p>serves a particular group or activity</p> <p>serves several recreational uses at different times</p>	<p>Elementary School</p>	<p>In DATELUP, two Recreation Centers were envisioned, one at the future school and one at the Village Center. Villebois proposes one at the future school, and another one depending on economic feasibility.</p> <p>If potential recreational uses in the Village Center materialize, they could be counted toward meeting the capacity against the overall requirement.</p> <p>Minor Limited Use and Minor Multi Use facilities may be provided with multi-family housing.</p> <p>Based on a future population of 4,674-5,570 people, there would be a need for a minor limited use/minor multi-use recreation facility of 6,440-7,840 SF.</p>

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
	<p>target of 1,400 square feet per 1,000 residents</p> <p>[example: limited-use - Wood Middle School</p>		<p>Updates to the Parks and Recreation Master Plan will need to address the need in this facility category for the increased population.</p>
Major Limited-Use	<p>greater than 5,000 square feet</p> <p>serves the local population</p> <p>on-site parking and accommodations such as restrooms</p> <p>located along collector or arterial streets</p> <p>target of 1,400 square feet per 1,000 residents</p> <p>[example: future Wilsonville Swim Center</p>	<p>The Villebois Village Plan states (pg. 20) that there may be potential for a Major Limited-Use or Major Multi-Use recreation center within the existing Dammasch multi-purpose building, if rehabilitated and economically feasible</p>	<p>Based on a future population of 4,674-5,570 people, there would be a need for a major limited use recreation facility of 6,440-7,840 SF.</p> <p>Updates to the Parks and Recreation Master Plan will need to address the need in this facility category for the increased population.</p> <p>If potential recreational uses in the Village Center materialize, they could be counted toward meeting the capacity against the overall requirement.</p>
Major Multi-Use	<p>greater than 5,000 square feet</p> <p>many concurrent activities and events</p> <p>located along or near an arterial street</p> <p>plenty of on-site parking</p> <p>access is important because of the high volume of use</p> <p>target of 2,800 square feet per 1,000 residents</p>	<p>Not identified</p>	<p>The 1994 P&amp;R Master Plan identifies the "West Wilsonville Community Center" in a community park possibly next to a future school site identified by the District.</p> <p>Based on a future population of 4,674-5,570 people, there would be a need for a major multi use recreation facility of 12,880-15,680 SF.</p> <p>Updates to the Parks and Recreation Master Plan will need to address the need in this facility category for the increased population.</p> <p>If potential recreational uses in the Village Center materialize, they could be counted toward meeting the capacity against the overall requirement.</p>

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
	[example: Wilsonville High School and Community Center]		
<b>Nature Trails</b>	<p>4-8 feet wide within a 10 foot right-of-way</p> <p>soft surface</p> <p>serves park and open space sites</p> <p>no requirement per 1,000 residents</p> <p>pedestrians only</p> <p>[example: Memorial and Tranquil Parks]</p>	3,000 LF	25,150 total lineal feet for Nature, Minor and Major pathways. Minimum requirement is 20,700 LF. The proposed trails in the Villebois Village Plan satisfy the P&R Master Plan.
<b>Minor Pathways</b>	<p>6-10 feet wide within a 15 foot right-of-way</p> <p>paved surface with 4 foot optional soft surface shoulder</p> <p>lighting, signage and benches</p> <p>target of 1,500 linear feet per 1,000 residents</p> <p>[example: Merryfield Park Path]</p>	6,250 LF	25,150 total lineal feet for Nature, Minor and Major pathways. Minimum requirement is 20,700 LF. The proposed trails in the Villebois Village Plan satisfy the P&R Master Plan.
<b>Major Pathways</b>	<p>10-17 feet wide within 15-25 foot right-a-way</p> <p>paved surface with 4 foot optional soft surface shoulder</p> <p>lighting, signage and benches</p>	15,900 LF	25,150 total lineal feet for Nature, Minor and Major pathways. Minimum requirement is 20,700 LF. The proposed trails in the Villebois Village Plan satisfy the P&R Master Plan.

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
	target of 3,000 linear feet per 1,000 residents  [example: Town Center Bike and Pedestrian Path]		
<b>Pocket Parks*</b>	N/A	4.98 acres of pocket parks	Although pocket parks are not as large as neighborhood parks, they do offer some of the same elements such as opportunities for passive recreation.
<b>Linear Green*</b>	N/A	9.80 acres of linear greens-viewing overlooks, education, interpretive, bike and pedestrian connections	Linear greens will provide connectivity, and will augment the passive recreation areas within the non-linear parks.

\*Pocket Parks and linear greens have been added to the neighborhood parks classification for compliance analysis purposes.

## COMPLIANCE ANALYSIS CONCLUSION

The *Villebois Village Master Plan* proposes several unique categories of parks facilities that are not contained in the City's Parks & Recreation Master Plan. The above table provides an "apples to apples" comparison of the proposed facilities for sake of determining the project's adequacy. While some of the proposed acreages do not meet the hard acreages per parks category contained in the City's Master Plan, the uses, experiences and facilities contained within the proposed parks facilities are the real benchmark by which to measure the proposal's adequacy. The *Villebois Village Master Plan* satisfies the recommended standards contained in the City's 1994 Parks & Recreation Master Plan for the categories of neighborhood parks, minor limited use/minor multi use recreation centers, nature trails, minor and major pathways, and partially satisfies the recommended standards for community parks, regional parks, major limited use and major multi use recreation centers. The categories where the recommended standards are not being completely satisfied on site can be addressed through an update to the City's Parks & Recreation Master Plan.

### 3.3 PARKS & RECREATION MASTER PLAN POLICY ANALYSIS

The following are Implementation Measures that address selected issues raised in the 1994 Parks & Recreation Master Plan:

***Issue 1 – Combined Facilities.*** Recognizing "...the opportunity to combine facilities owned by the city with those of the school district...offer(ing) linkages for easy pedestrian access and connection."

Response: The *Villebois Village Master Plan* proposes an elementary school that includes 3 acres of playfields and trail connections to the school for students from Villebois and adjacent neighborhoods. The *Villebois Village Master Plan* has made a considerable effort to anticipate connections to the schools southeast of the Graham Oaks Natural Area. The Villebois Greenway provides a direct pathway connection to the Graham Oaks Natural Area pathway system, which is currently planned to accommodate school children moving between Villebois and the schools. The Villebois Specific Area Plan – South may provide a drop off/pick up location on the interface between Villebois and the Graham Oaks Natural Area for the use of parents and school children.

***Issue 6 – Development of Facilities Outside the City.*** Anticipate future demand for "valuable natural areas and trail opportunities outside the city limits and urban growth area."

Response: Ownership and specific interagency arrangements for maintenance of parks and identified open spaces in Villebois will be evaluated during Specific Area Plans and defined in subsequent Development Agreements that will be executed during the development stages of the project.

***Issue 7 – Concerns over Operation and Maintenance***

Response: Much of the open space at Villebois will consist of sensitive habitat and will continue to lie within Significant Resource Overlay Zones (SROZ). Initial efforts to remove invasive species will need to be concentrated and intensive. Follow up maintenance will be less demanding for these open spaces. Homeowners' Association dues will fund the maintenance of the neighborhood parks, pocket parks and linear greens. The Homeowners Association may participate in the maintenance of the Greenway system as well.

***Issue 9 – Emphasis on Residential Area Demand***

Response: The *Villebois Village Master Plan* proposes to provide a unique blend of parks and open space situated within the neighborhood to satisfy all scales of recreational need within a ¼-mile to a mile of each home.

***Issue 10 – Open Space as part of the System***

Response: The open spaces of the *Villebois Village Master Plan* were planned in consideration of the overall regional open space system of the City of Wilsonville and the Metro Tonquin/Graham Oaks Natural Area properties. Connectivity of hydrologic systems and wildlife habitat was a key concern, as was the provision of open space for the distinct neighborhoods within the overall Villebois community.

***Issue 16 – Trail Alignment Concerns and Conflicts***

Response: A complete and separated pathway system was identified in the Parks & Recreation Master Plan as critically important. The *Villebois Village Master Plan* proposes a network of trails and pathways, which meet the City of Wilsonville's trail standards (see Table 1). Issues of privacy, security and natural resource protection were carefully considered in the location of proposed trails in and around the community. Private property conflicts with trails should be minimized.

***Issue 17 – To Protect Wildlife Corridors***

Response: Where applicable, fencing and other barriers to wildlife passage are not proposed in the Coffee Lake area. On non-Villebois properties, it will be important in future naturalization plans to include measures that ensure safe through-passage of wildlife in the Coffee Lake/Seeley Ditch drainages by limiting fences and removing them where possible. The Villebois Greenway, while accommodating a variety of activities such as active and passive recreation, rainwater systems, etc., will still provide the opportunity for wildlife movement and linkage from the habitat patches to and from Mill Creek to the Coffee Lake Creek wetlands and the Graham Oaks Natural Area.

***Issue 18 – Rehabilitate creeks and streams***

Response: Prior to the development of Dammasch State Hospital, hospital property naturally drained to Arrowhead Creek and Coffee Lake Creek. Currently much of the hospital site drains to Mill Creek through catch basins and pipes flowing southwest to Canyon Creek (a tributary of Mill Creek) on the western edge of the Graham Oaks Natural Area. The creek bed is severely eroded and is threatening to undermine a number of old growth trees. It is a priority to disconnect this drainage system with the first phase of Villebois. The City Stormwater Master Plan has identified Capital Improvement Project CLC-10 to address this existing problem (see Section 4.3 – Storm Drainage for description and implementation measures).

### 3.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION

#### Goal

The Villebois Village shall provide an interconnected network of parks, trails, open space and other public spaces that tie into a broader regional system while protecting natural resources.

#### Policies

1. The Specific Area Plans shall identify all public parks, trails and open spaces, with acreages and programmed uses.
2. Future development applications within the Villebois Village area shall match the proposed parks, trails and open spaces in close compliance with the system that is conceptually proposed in *Figure 5–Parks and Open Space Plan*.
3. The *Villebois Village Master Plan* shall comply with the City of Wilsonville SROZ regulations. Encroachments within the SROZ and flood plain are shown for illustrative purposes only in the *Villebois Village Master Plan*, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations.
4. Parks and open spaces shall be designed to incorporate native vegetation, landforms and hydrology to the fullest extent possible.
5. Each park and open space tract shall be linked with a trail or pathway to adjacent neighborhoods and nearby parks and open spaces.
6. A Tree Preservation Plan shall be included in the design of each Specific Area Plan.
7. Naturalization and enhancement of the Coffee Lake Creek wetland complex is desirable to be achieved overtime.
8. Coordination shall continue to occur among the West Linn/Wilsonville School District, the Master Planner, the City, and affected property owners throughout the subsequent planning and development stages relating to the elementary school to ensure the establishment of 3 acres of community park that include sports fields, within the 10-acre elementary school site.

#### Implementation Measures

1. Include the *Villebois Village Master Plan* area in all future updates of the 1994 Parks Master Plan. The next update to the City's Parks & Recreation Master Plan shall address the identified need for the following facilities:
  - Community Park;
  - Regional Park;
  - Minor Limited Use/Minor Multi Use Recreation Category;
  - Major Limited Use Recreation Center Category; and
  - Major Multi Use Recreation Center Category.
2. Provide for review of cultural and historic resources on portions of Villebois Village that are to be annexed into the City of Wilsonville with the Specific Area Plan.
3. A three (3) acre Community Park will be provided within the school site as noted on *Figure 1 – Land Use Plan*.

4. Identify existing important trees on the Villebois site that can be retained and create a Tree Preservation Plan for each Specific Area Plan. The Specific Area Plan shall outline the methodology employed in the determination of tree quality. Construction specifications for the protection and preservation of trees within construction zones shall be a component of the Community Elements Book (with each Specific Area Plan submittal). Trees removed for development shall be mitigated per the City of Wilsonville's Tree Preservation and Protection Ordinance (Chapter 4.600).
5. Through time, the developers shall have a responsibility to participate in planning, implementing and securing funding sources for a wetland naturalization and enhancement plan for the Coffee Lake Creek wetland complex. These wetlands are adjacent to Coffee Lake Creek and within the boundary of the Villebois Village. The wetland naturalization and enhancement plan shall be initiated and completed with the phased development of the Village.
6. The *Villebois Village Master Plan* shall comply with the Significant Resource Overlay Zone (SROZ) regulations. Proposed encroachments into the SROZ for exempt or non-exempt development shall be reviewed for compliance with the requirements of Section 4.139 of the Wilsonville Code.
7. Design for all neighborhood parks greater than one acre in size shall include picnic areas and an area for unstructured play and passive recreation, and shall consider provision of playground equipment and/or a sports court. These design features shall be included in the appropriate Specific Area Plan. Other design features to be considered may include: restrooms and on-street parking as part of the Greenway in close proximity to west park restrooms and on-site parking in conjunction with north park / elementary school community park, and restrooms and on-street parking associated with Tonquin Trailhead Park.

## CHAPTER 4 – UTILITIES

### 4.1 SANITARY SEWER

#### 4.1.1 INTRODUCTION / PROPOSAL

On Figure 4-1 of the “City of Wilsonville Wastewater Collection System Master Plan” (hereafter referred to as the City Wastewater System Master Plan), the Villebois Village project is comprised of the Dammasch State Hospital site, the area designated as “UPA-2” and a small portion of the area designated as “SD-6”. The ultimate build-out of the Future Study Area will add some additional flows to the system. The site currently generates 158 gpm through its pump station, and an analysis of potential new uses within the site, determined that the maximum flow should not exceed the 158 gpm already included in the City Wastewater Master Plan for this site. City Wastewater Master Plan Table 4.3, Note 4, collectively refers to UPA-2 as including the Dammasch site, as well as the Future Study Area facility. Hereafter, UPA-2 is used to designate only this proposal.

*Figure 6 – Conceptual Composite Utilities Plan* conceptually depicts the proposed sanitary system for Villebois and shows its points of connection into the City’s United Disposal Interceptor system. The larger portion of the project site will discharge sanitary wastewater to the United Disposal Interceptor (UDI) at or near its intersection with Barber Street through a proposed trunk sewer line identified in the City Wastewater System Master Plan as CIP-UD2. A smaller portion will discharge to the existing line in Evergreen Drive, and thence to the UDI. The remaining very small portion of the site is physically too low in elevation to reach either of the two other locations and must be discharged through existing facilities in the Park at Merryfield, and thence to the Wood School Interceptor.

While not specifically identified in the City Wastewater Collection System Master Plan, the City of Wilsonville has indicated that certain properties located along the west side of Grahams Ferry Road, south of Tooze Road and adjacent to UPA-2, are to be included in sanitary service planning for this project.

The City has indicated that flow from this area, subsequent to a future expansion of the Urban Growth Boundary, should be discharged through existing facilities in the Park at Merryfield. This project proposes that future service to the this area, as well as the Future Study Area, be through the Villebois site in exchange for the small portion of Villebois, which must be discharged through Park at Merryfield.

As a part of the development of Villebois, sanitary facilities will be extended along Tooze Road to serve the UPA-3 area north of Tooze Road.

#### 4.1.2 WASTEWATER COLLECTION SYSTEM MASTER PLAN COMPLIANCE ANALYSIS

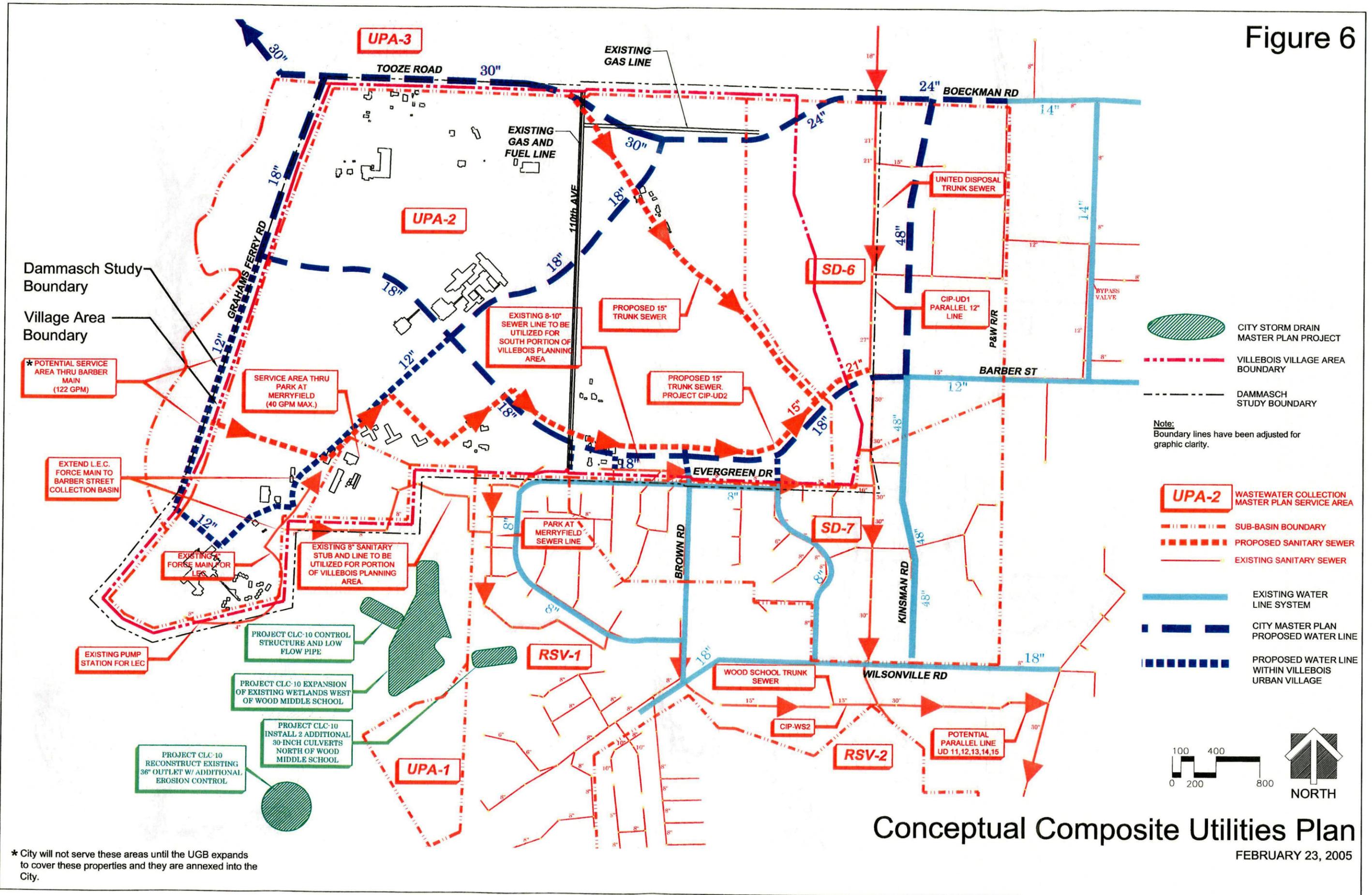
##### PURPOSE OF THE COMPLIANCE ANALYSIS

The City of Wilsonville updated its Wastewater Collection System Master Plan in January 2001. A Master Plan for the Villebois Village Project has been prepared which shows:

- The existing conveyance system in the immediate area.
- The proposed conveyance system.

This compliance analysis has been prepared to determine the state of compliance between the City Wastewater Collection System Master Plan and the Villebois Sanitary Sewer plan as proposed.

Figure 6



Conceptual Composite Utilities Plan

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\* City will not serve these areas until the UGB expands to cover these properties and they are annexed into the City.

## RELEVANT DOCUMENTS

The referenced City Wastewater Collection System Master Plan is titled "City of Wilsonville Wastewater Collection System Master Plan – Ordinance No. 531, January 2001." The Villebois Sanitary Sewer Master Plan is a portion of *Figure 6 – Conceptual Composite Utilities Plan*, which is a part of the submittal documents for the *Villebois Village Master Plan*.

## METHODOLOGY

Relevant documents have been reviewed to determine compliance in terms of:

- (1) Wastewater flows
- (2) Points of Discharge
- (3) Flow Routing
- (4) Impacts
- (5) If the Villebois Sanitary Sewer Plan meets or exceeds the requirements of the City Wastewater System Master Plan.
- (6) What revisions to the City Wastewater Collection System Master Plan will be necessary to accommodate the Villebois Sanitary Sewer Plan.

## COMPLIANCE ANALYSIS – METHODOLOGY ITEMS 1-4

### Wastewater flows

When fully built-out, estimations shown in City Wastewater Collection System Master Plan Table 4-6 anticipate that UPA-2 will generate an average wastewater flow of 0.59 million gallons per day (mgd) and that UPA-3 will generate an average flow of 0.20 mgd. When combined, with peaking factor and Infiltration/Inflow (I/I) amounts added, the total flow from these areas is estimated to be 2.10 mgd, or about 1,641 gallons per minute (gpm).

Supplemental City Wastewater Collection System Master Plan information, provided by the City, indicates that 122 gpm is to be anticipated from future development of the area west of Grahams Ferry Road, that 99 gpm is currently discharged into Evergreen Road and 81 gpm from Park at Merryfield. In addition, the City has requested capacity in the Barber main be provided for the 158 gpm from the Future Study Area (formerly LEC). Therefore, the total flow anticipated in the Study Area is 2002 gpm.

### Points of Discharge

The following points of discharge have been identified for the above flows:

1. A new line in the extension of Barber Road (CIP-UD2).
2. The existing system in Evergreen Drive.
3. The existing system in the Park at Merryfield.

### Flow Routing

Supplemental City Wastewater Collection System Master Plan information, provided by the City, indicates anticipated flow routing as follows:

Barber Street:	1,294 gpm (from UPA-2 & 3)
Evergreen Road:	347 gpm (from UPA-2)
Park at Merryfield:	<u>361 gpm</u> (158 from Future Study Area + 122 from west 2,002 gpm of Grahams Ferry + 81 from Park at Merryfield)

Proposed routing:

Barber Street:	1,829 gpm (minimum from UPA-2 & 3 + 158 from Future Study Area + 122 from Grahams Ferry area)
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Evergreen Road: 114gpm (maximum = 99 existing flows + 15 from UPA-2)  
Park at Merryfield: 129 gpm (81 from Park at Merryfield + 48 from UPA-2)  
2,072gpm

### Impacts

#### UDI system:

All discharge points, described above, ultimately connect into the UDI, in which the City Wastewater Collection System Master Plan has identified deficiencies under build-out conditions at UD\_5,9,11,12,14,15,18 and 28. Because build-out will occur over an unknown length of time, most of the required remedial improvements can be deferred, and completed on an as needed basis. Some of these improvements are already funded or under construction. The Finance Plan will reflect planned project phasing and address the timing and sequence of specific improvements.

#### Barber Street:

This system will connect directly to the UDI, and is addressed by the UDI discussion above.

#### Evergreen Road:

The existing system has a limiting capacity of 537 gpm, in one reach, which is downstream of the planned connection point at about Brown Road. The system has an existing flow of 99 gpm at this location; thus, the addition of the 15 gpm identified above will not exceed existing capacity.

#### Park at Merryfield:

The supplemental City Wastewater Collection System Master Plan information, previously described, identifies 3 downstream reaches where existing capacity would be exceeded by the 45 gpm additional discharge anticipated at total build-out of the tributary properties. Directing flows from the Future Study Area and the area west of Grahams Ferry Road to the Barber Street sewer extensions of the UDI will eliminate the anticipated surcharging of the system.

### COMPLIANCE ANALYSIS CONCLUSION

The Villebois Village Sanitary Sewer Plan meets or exceeds the requirements of the City of Wilsonville Wastewater Collection System Master Plan.

#### **4.1.3 WASTEWATER COLLECTION SYSTEM MASTER PLAN POLICY ANALYSIS**

The City's stated goal is: *"To provide a functioning wastewater conveyance system at a reasonable cost."*

*Policy 1: "The City of Wilsonville shall prevent sanitary sewer overflows (SSO) in accordance with Oregon Administrative Rules (OAR) 340-041-120 which prohibits SSOs during the winter season (November 1 through May 21) except during a storm event greater than the five-year, 24-hour duration storm."*

*Implementation Measure 1.1: "The City will undertake an assessment of its current wastewater collection system as an update to the Master Plan. This assessment will include the use of engineering tools, maintenance logs, and flow monitoring. The assessment will result in identifying capacity restrictions within the conveyance system. Improvements to alleviate the identified capacity restrictions will be recommended in order or priority. These improvements will become part of the Capital Improvements Program (CIP) in order to allocate funds for these projects or addressed through the City's Maintenance Program."*

Response: No system capacity deficiency has been identified which would result in this occurrence. Participation in the City wide build-out capacity needs will be addressed in the Finance Plan

*Implementation Measure 1.2: "Sewers within natural or environmentally sensitive areas shall be inspected on a regular basis to determine pipe condition with a goal of minimizing inflow/infiltration and identifying structural defects that may lead to SSOs."*

Response: All sanitary sewers in the project will be public lines and included in the City's inspection program.

*City Policy 2: "The City of Wilsonville shall maximize the use of the existing wastewater collection system to minimize the need for improvements and extend the life of the existing system."*

*Implementation Measure 2.1: "The City will allow limited surcharge to increase pipe capacities. These levels of surcharge will provide a sufficient factor of safety to prevent sewer backups in basements and surface overflows for the conditions stated in OAR 340-041-120."*

Response: All proposed systems will operate within acceptable performance standards as defined in the City Wastewater Collection System Master Plan.

*Implementation Measure 2.2: "The City will divert wastewater flow to interceptors with excess capacity from interceptors with capacity limitations through the use of diversion manholes. This will reduce or eliminate the need to improve capacity in the capacity-limited interceptors."*

Response: No such opportunities have been identified.

*Implementation Measure 2.3: "The City will use appropriate engineering tools to analyze the wastewater collection system, such as spreadsheet models, fully dynamic models, flow monitoring devices, maintenance logs, etc."*

Response: This proposal uses the modeling techniques described in the City Wastewater Collection System Master Plan.

*Policy 3: "The City of Wilsonville shall provide adequate wastewater collection system capacity for future growth at build-out development conditions."*

*Implementation Measure 3.1: "The City will use appropriate land use projections to determine future growth. These projections will be based on best available information provided by the Planning Department. In order to maximize the planning efforts for the wastewater conveyance system, the future growth scenario will be that which is expected at ultimate build-out."*

Response: This proposal assumes ultimate build-out conditions for the study area.

*Implementation Measure 3.2: "The City will include Urban Planning Areas (UPA). Rather than use a completely separate and independent conveyance system, wastewater flows from the UPAs will flow through interceptors which currently convey flows from within the existing service area."*

Response: This proposal will serve UPA-2 and UPA-3 from existing interceptors within the existing service area.

*Policy 4: "The City of Wilsonville shall use appropriate unit flow factors to account for actual and anticipated conditions in order assure an adequately sized wastewater conveyance system."*

*Implementation Measure 4.1: "The City will assess current system conditions according to current water usage in order to provide an accurate picture of current average dry weather flows. The current conditions unit flow factors will be determined by water usage according to*

*broad categories, i.e. residential, commercial, and industrial. These unit flow factors will be verified based on flow monitoring results."*

Response: This criteria has been met and documented in the City Wastewater Collection System Master Plan, June 2001.

*Implementation Measure 4.2: "As part of the analysis under future build-out development, the City will increase the build-out unit flow factors. This will allow proper planning for future water-intensive industrial and commercial enterprises that may locate to Wilsonville when water usage restrictions are no longer in place."*

Response: No such uses are anticipated within the Villebois Village.

*Implementation Measure 4.3: "The City will continue flow monitoring during wet and dry weather conditions to verify unit sanitary flow rates and infiltration/inflow (I/I) rates."*

Response: This requirement continues to be met by the City Public Works Department.

*Policy 5: "The City of Wilsonville shall fund the capital improvements with monies collected in accordance with existing laws, rules, and regulations."*

*Implementation Measure 5.1: "The City will fund projects related to current capacity limitations with system development charges (SDC) within the existing service area. New development is prohibited by State Law from funding projects to alleviate current system problems."*

Response: This project will participate in the SDC program, and overall funding will be addressed in the Finance Plan.

*Implementation Measure 5.2: "The City will fund projects related to growth with SDCs, both within the current service area and in urban planning areas as development occurs in areas needing improvements."*

Response: This project will participate in the SDC program, and overall funding will be addressed in the Finance Plan.

*Policy 6: "The City of Wilsonville shall coordinate conveyance system improvements with other CIP projects, such as roads, water, storm sewer, to save construction costs and minimize public impacts during construction."*

Response: All projects will be coordinated with City staff to insure coordination with other CIP projects to save construction cost and minimize public impacts during construction.

*Policy 7: "The City of Wilsonville shall allow for wastewater collection system basin boundary revisions and out-of-basin flow transfers."*

*"General. Wastewater flows developed in the master planning process is based on the land use contained within the sub-basin boundaries. Flow from each sub-basin is then conveyed by a specific interceptor sewer. There are five major interceptors in the City's collection system. Similarly, there are five major basins with 24 sub-basins contributing wastewater flow to the interceptors. However, wastewater flow can be transferred between major basins by flow diversions or pump stations. These out-of-basin transfers impact the planning assumptions used to evaluate the capacity of the interceptors by essentially revising the sub-basin or basin boundaries. At a minimum, the following items need to be addressed when evaluating the viability of an out-of-basin transfer:*

*Implementation Measure 7.1: Flow Generation*

- Land Use in the affected areas.*
- Unit flow factors for the various land use categories and I/I contributions.*

- *Peak Flow and peaking factor.*

Response: No out-of basin transfers have been proposed.

*Implementation Measure 7.2: Hydraulic Evaluation*

- *Identify the effect of peak flow on the existing collection system using the current condition spreadsheet model.*
- *Identify the percent capacity and HGL status of the affected pipes.*
- *Identify the effect of peak flow on the existing collection system with revised build-out flows using the build-out condition spreadsheet model.*
- *Identify the percent capacity and HGL status of the affected pipes.*

Response: No out-of basin transfers have been proposed.

*Implementation Measure 7.3: Evaluate Recommended System Improvements*

- *Determine if the recommended system improvements noted in the Master Plan are developed to convey the increased (transferred) flows.*
- *Determine if the flow removed from the original basin removes the need for any of the system improvements recommended in the 2001 Master Plan.*

Response: No out-of basin transfers have been proposed.

*Implementation Measure 7.4: Identify Needed System Improvements*

- *Based on the Hydraulic Evaluation and the impact on the Recommended System Improvements noted in this Master Plan, develop system improvement recommendations to convey the transferred flows. System improvement recommendations will also identify Master Plan improvements that can be removed as a result of the basin transfer.*

Response: No out-of basin transfers have been proposed.

*Implementation Measure 7.5: Prepare Addendum to the Master Plan*

- *Summarize the flow generation, hydraulic analysis and system improvement recommendations to convey the out-of-basin flow transfer.*
- *Digitally revise the sub-basin and basin boundaries.*
- *Update the Build-out Condition and Recommended System Improvement spreadsheet models.*

Response: No out-of basin transfers have been proposed.

*Implementation Measure 7.6: Planning Commission Approval*

- *The Addendum must be approved by the Planning Commission as an Amendment to the Master Plan and as a component of the Comprehensive Plan.*

Response: No out-of basin transfers have been proposed.

*Implementation Measure 7.7: City Council Approval*

- *Upon Planning Commission approval, City staff will take the addendum before the City Council for its approval.*

Response: No out-of basin transfers have been proposed.

#### **4.1.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION**

##### **Goal**

The Villebois Village shall include adequate sanitary sewer service.

##### **Policy**

1. The sanitary sewer system for Villebois Village shall meet the necessary requirements for the City of Wilsonville Wastewater Master Plan.

##### **Implementation Measures**

1. Implement the following list of policies and projects of the City of Wilsonville Wastewater Master Plan:
  - Policies: 1-7; and
  - Projects: CIP-UD2.
2. Incorporate the construction of CIP-UD2 into the Finance Plan.
3. Insure the 537 gpm capacity of the Evergreen Road sewer line is not exceeded with Specific Area Plan – South application.
4. Insure the 340 gpm capacity of the Park at Merryfield sewer line is not exceeded with Specific Area Plan – South application

## 4.2 WATER

### 4.2.1 INTRODUCTION / PROPOSAL

The Villebois Village project is comprised of the Dammasch State Hospital site and that portion of Urban Planning Area 41 south of Tooze Road as shown on Figure 2-2 in the City of Wilsonville Water System Master Plan (hereafter referred to as the City Water System Master Plan).

*Figure 6 – Conceptual Composite Utilities Plan* conceptually depicts the proposed water system for Villebois and shows its points of connection to the City's existing system. It consists of a network of 12-inch to 48-inch transmission mains, which will deliver water for domestic and fire protection purposes for the Villebois Village and adjacent areas.

### 4.2.2 WATER SYSTEM MASTER PLAN COMPLIANCE ANALYSIS

#### PURPOSE OF THE COMPLIANCE ANALYSIS

The City of Wilsonville updated its Water System Master Plan (City Water System Master Plan) on January 24, 2002. A Villebois Village Water Plan has been prepared which shows:

- The existing transmission water line system in the immediate area
- The proposed water transmission lines.

This Compliance analysis has been prepared to determine the state of compliance between the City Water System Master Plan and the Villebois Village Water Plan as proposed.

#### RELEVANT DOCUMENTS

The referenced City Water System Master Plan is titled "Water System Master Plan – Ordinance No. 531, adopted January 24, 2002" including Sections 1 through 10, and the Executive Summary. The Villebois Water Plan is a portion of *Figure 6 – Conceptual Composite Utilities Plan*, which is a part of the submittal documents for the Villebois Village Water Master Plan.

#### METHODOLOGY

Relevant documents have been reviewed to determine compliance in terms of:

- (1) Alignment
- (2) Capacity (main size)
- (3) Points of connection
- (4) Water quality
- (5) Fire flow adequacy
- (6) Materials of construction
- (7) Right-of-Way acquisition needs
- (8) Construction Methods, including traffic control, construction safety (including trench safety (OSHA)), noise control (time of construction), dust abatement, and general aesthetic considerations (tree removal and replacement, etc.)
- (9) Future maintenance requirements for the City
- (10) Water storage capacities, pumping capacities, system design (pressure zone arrangement).
- (11) Water production capacity
- (12) If the Villebois Village Water Plan meets or exceeds the requirements of the City Water System Master Plan.
- (13) What revisions to the City Water System Master Plan will be necessary to accommodate the Villebois Village Water Plan.

## COMPLIANCE ANALYSIS - METHODOLOGY ITEMS 1 & 2 CAPITAL IMPROVEMENT PROJECTS

The City Water System Master Plan is a very broad brushed master plan dealing with city wide, and semi-regional water issues and supply options. This master plan does not deal with distribution water mains, except in very general terms. The master plan deals with transmission water mains in terms of Capital Improvement Programs (CIP) at five-year intervals from 2005 to 2020. These CIP projects are tabled and delineated on Table ES-4 and Figure ES-3 in the Executive Summary in the City's Water System Master Plan. These are duplicates of Table 9-1 and Figure 9-1 in section 9 of the City's Water System Master Plan, "Summary of the Capital Improvement Program." These plans and tables deal only with transmission line alignment and capacity in terms of pipe diameter. This comparison will deal only with those issues, on a CIP by CIP basis.

### 2005 CIP

Capital improvement projects in the City Water System Master Plan includes:

- 18-inch main in Evergreen from Kinsman Road to Brown Road
- 48-inch main from WTP in Kinsman Road from Barber Street to Boeckman Road / 95<sup>th</sup> Avenue.

The main within Kinsman Road has already been constructed as a 48-inch main from Wilsonville Road to Barber Street.

The Villebois proposed water plan includes:

- 18-inch main in Barber St. from Kinsman Road to Brown Road
- 48-inch main from WTP in Kinsman Road from Barber Street to Boeckman Road

The transmission mains shown above for Villebois will meet the requirements of the City Water System Master Plan for the 2005 Capital Improvement Program based on alignment and pipe size. Water demand has been addressed by City staff as being adequate.

### 2010 CIP

Capital improvement projects in the City Water System Master Plan includes:

- 24-inch main in Boeckman Road from Kinsman Road to 110<sup>th</sup> Avenue
- 18-inch main in 110<sup>th</sup> Avenue from Boeckman Road to Evergreen Avenue
- 18-inch main from 110<sup>th</sup> Avenue to Grahams Ferry
- 18-inch main in Grahams Ferry

The Villebois proposed water plan:

- 24-inch main in Boeckman Road from Kinsman Avenue to Villebois Drive
- 18-inch main in Villebois Drive from Boeckman to Barber
- 18-inch main in Barber from Brown Road to Grahams Ferry
- 18-inch main in Grahams Ferry from Barber to Tooze
- 12-inch main in extension of Villebois Drive from Barber to Future Study Area
- 12-inch main in Grahams Ferry from Future Study Area to Barber St.
- 12-inch main connections from Barber to Evergreen

The transmission mains shown above for Villebois will meet the requirements of the City Water System Master Plan for the 2010 Capital Improvement Program based on alignment and pipe size. Water demand has been addressed by City staff as being adequate.

## 2015 CIP

Capital improvement projects in the City Water System Master Plan includes:

- 30-inch main in Tooze Road from 110<sup>th</sup> Avenue to Grahams Ferry Road

The Villebois proposed water plan:

- 30-inch main in Tooze Road from Villebois Drive to Grahams Ferry Road

The transmission mains shown above for Villebois will meet the requirements of the City Water System Master Plan for the 2015 Capital Improvement Program based on alignment and pipe size. Water demand has been addressed by City staff as being adequate.

## 2020 CIP

There are no mains in the 2020 Capital Improvement Program that are within project boundaries. Therefore, nothing is required of this project to bring it into compliance with the City Water System Master Plan for the 2020 Capital Improvement Program.

## SUMMARY - CAPITAL IMPROVEMENT PROJECTS

The proposed Water Plan for Villebois Village will meet or exceed all requirements of the City Water System Master Plan, in terms of water transmission main size and location, for all four Capital Improvement Project years listed in the City Water System Master Plan. This completes our analysis of points 1 and 2 under "Methodology" above.

## COMPLIANCE ANALYSIS - METHODOLOGY ITEMS 3 THROUGH 10

Concerning "Methodology" Item 3, adequate water supply points of connection are available to accommodate our project based on system modeling done with the City Water System Master Plan. Connection points proposed by our project meet the requirements of the City Water System Master Plan based on location and pipe size.

Concerning "Methodology" Items 6, 8, and 9, "materials of construction, construction methods, and future maintenance requirements for the City," these items are not addressed directly by the City Water System Master Plan. However, these items will be addressed and accommodated by the construction plans and specifications, which will be prepared to the satisfaction of the City and in accordance with the City's Public Work Standards. Therefore, by virtue of the City's plan check and permitting procedures being in compliance with the City Water System Master Plan, the project will meet or exceed all requirements of the City Water System Master Plan.

Concerning "Methodology" Items 4, 5, 7, and 10, "Water quality, Fire flow adequacy, right-of-way acquisition, and Water storage capacities, pumping capacities, system design (pressure zone arrangement)," the City of Wilsonville Water System Master Plan anticipated land uses for the project area which match the demand resulting from the proposed project. Therefore; water quality, fire flow adequacy, right-of-way acquisition, water storage capacities, pumping capacities, system design (pressure zone arrangement), have not been affected. Consequently, the project will meet or exceed all requirements of the City Water System Master Plan.

Concerning "Methodology" Item 11, there will be no change in overall City production capacity requirements. There may be a requirement to expand the Water Treatment Plant earlier than previously anticipated and the City will analyze that during evaluation of the infrastructure required with each phase of Villebois development.

## COMPLIANCE ANALYSIS CONCLUSION

The *Villebois Village Master Plan* meets or exceeds the requirements of the City of Wilsonville Water System Master Plan.

### 4.2.3 WATER SYSTEM MASTER PLAN POLICY ANALYSIS

Implementation measures are specified in the City of Wilsonville Water System Master Plan on pages ES-11 through ES-14 in the Executive Summary. Pages 10-2 through 10-4 in Section 10 - "Conclusions and Recommendations" are exact duplicates of ES-11 through ES-14, with one very minor inconsequential exception. This report will address implementation measures on a policy-by-policy basis.

*Policy 1: "The City of Wilsonville shall continue a comprehensive water conservation program to make effective use of the water infrastructure, source water supply and treatment processes."*

Response: The City Water System Master Plan, which incorporates existing City codes, establishes criteria for water conservation, water infrastructure and source supply that were used as the basis for those provisions in this project.

*Policy 2: "The City of Wilsonville shall make effective use of the existing water system facilities to reduce the need for improvements and extend the life of the existing system."*

Response: The City Water System Master Plan, specifically Figure ES-3 and Figure 9-1, titled "Capital Improvement Program Pipelines" specify a pipe layout of proposed transmission water mains, and existing transmission and distribution water mains, which comprise an integrated plan of existing and proposed water pipeline systems. The *Villebois Village Master Plan* for this project complies with the requirements of the City Water System Master Plan. Therefore, this project meets the requirements of Policy 2.

*Policy 3: "The City of Wilsonville shall provide adequate treated water supply and distribution system capacity for future growth to build-out development conditions."*

Response: The City of Wilsonville Water System Master Plan includes proposed transmission water mains transmitting treated water, connected to existing water mains outside this project, through this project, and extending out the far side of our project to serve the farthest reaches of the service area, with provisions to serve areas outside the present service area that may possibly be annexed into the service area in the future. The City's Water System Master Plan has been used as the basis of the project Water Plan, and, therefore, this project meets the requirements of Policy 3.

*Policy 4: "The City of Wilsonville shall maintain an accurate user demand profile to account for actual and anticipated demand conditions in order to assure an adequately sized water system."*

Response: The City Water System Master Plan has generated appropriate demand patterns based on historical data, which have been used as the basis for the projected demands of this project.

*Policy 5: "The City of Wilsonville shall fund the capital improvements with monies collected in accordance with existing laws, rules, and regulations."*

Response: This project will participate in the SDC program, and overall funding will be addressed in the Finance Plan.

*Policy 6, "The City of Wilsonville shall coordinate distribution system improvements with other CIP projects, such as roads, wastewater, storm sewer, to save construction costs and minimize public impacts during construction."*

Response: All projects will be coordinated with City staff to insure coordination with other CIP projects to save construction cost and minimize public impacts during construction.

*Policy 7, "The City shall have a master plan that can be adjusted for changes in water requirements."*

Response: The Water System Master Plan proposed for Villebois Village has not proposed changes in planning areas, service areas or main sizes.

#### **4.2.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION**

##### **Goal**

The Villebois Village shall include adequate water service.

##### **Policy**

The water system for Villebois Village shall meet the necessary requirements of the City of Wilsonville Water System Master Plan.

##### **Implementation Measures**

1. Implement the following list of Water System Master Plan policies and projects with development of Villebois Village:
  - Policies: 1-7
  - Projects:
    - 1) 18-inch main in Barber Street from Kinsman Road to Brown Road
    - 2) 48-inch main in Kinsman Road from Barber Street to Boeckman Road
    - 3) 24-inch main in Boeckman Road from Kinsman Road to Villebois Drive
    - 4) 18-inch main in Villebois Drive from Boeckman Road to Barber Street
    - 5) 18-inch main in Barber Street from Brown Road to Grahams Ferry Road
    - 6) 18-inch main in Grahams Ferry from Barber Street to Tooze Road.
    - 7) 12-inch main in Grahams Ferry from Future Study Area to Barber Street
    - 8) 30-inch main in Tooze Road from Villebois Drive to Grahams Ferry Road
    - 9) 12-inch main in extension of Villebois Drive from Barber Street to Future Study Area
    - 10) 12-inch main connections from Barber to Evergreen
2. Incorporate the construction of the above referenced projects into the Finance Plan.

## 4.3 STORM DRAINAGE

### 4.3.1 INTRODUCTION / PROPOSAL

The *Villebois Village Master Plan* is designed to minimize impacts from this development on the three watersheds into which the site historically drained. The following two components, incorporated into the design of Villebois, are derived from and are in conformance with the City of Wilsonville Stormwater Master Plan:

- 1) onsite water quality and onsite stormwater detention facilities to maintain predevelopment runoff levels up to the 25 year storm, and
- 2) construction of Project CLC-10 within the Graham Oaks Natural Area.

The onsite water quality and onsite detention facilities will perform at or above all performance standards of the City of Wilsonville Stormwater Master Plan, and will not require offsite facilities to meet this standard requirement. Project CLC-10 was included in the City of Wilsonville Stormwater Master Plan, and is included in the design of Villebois, solely to reduce flows currently being discharged by the existing 36-inch outfall pipe down to periodic overflows only occurring in large storm events. This is a partial correction of the basin area diversion caused by the Dammasch State Hospital construction many years ago.

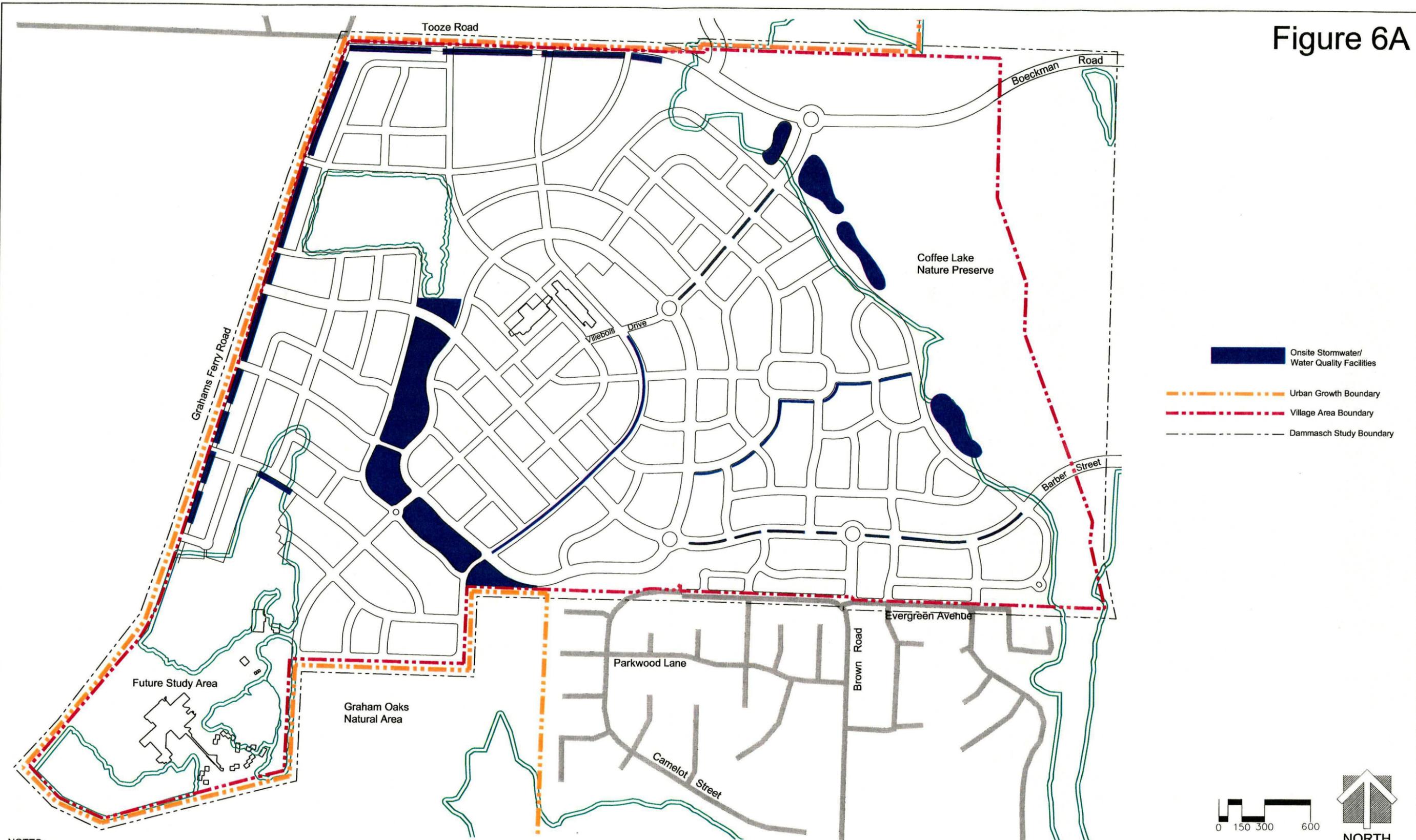
A third component incorporated into the design seeks to further reduce impacts from this development for smaller storms not addressed in the City of Wilsonville Stormwater Master Plan. Rainfall data indicates that 90% of all storms in this area have a 24-hour rainfall total of less than 0.26 inches. These storms are easily conveyed by standard storm drainage facilities designed for much larger storm events, but the incremental increase in runoff is detrimental to natural drainage courses. Evidence suggests that the increased runoff during these frequent small rains has a detrimental effect on streambed health and aquatic habitat. A Rainwater Management Program has been incorporated into the project to minimize this impact, and the facilities and programs will be constructed onsite.

Villebois Village is that area identified on Figure 2-1 in the City of Wilsonville Stormwater Master Plan as the Dammasch Basin and the area directly east including Seely Ditch (hereafter referred to as Coffee Lake Creek). *Figure 6 – Conceptual Composite Utilities Plan* shows the improvements to the headwaters of Arrowhead Creek and the outfall re-construction and partial flow re-direction for the drainage from the former Dammasch State Hospital. This work is identified as Capital Improvement Project CLC-10 and is the only improvement directly related to Villebois Village addressed in the City Stormwater Master Plan. *Figure 6A – On-site Stormwater Facilities* shows the location of the onsite water quality and stormwater facilities. *Figure 6B – On-site Rainwater Management* shows the area included in the Villebois Village Rainwater Management Program.

### 4.3.2 STORMWATER MASTER PLAN COMPLIANCE ANALYSIS

The City of Wilsonville Stormwater Master Plan analyzes the City's existing watersheds and storm system to identify Capital Improvement Projects (CIP's) and prescribe stormwater management policies. The *Villebois Village Master Plan* will show compliance with site related CIP's and recommended policies.

Figure 6A

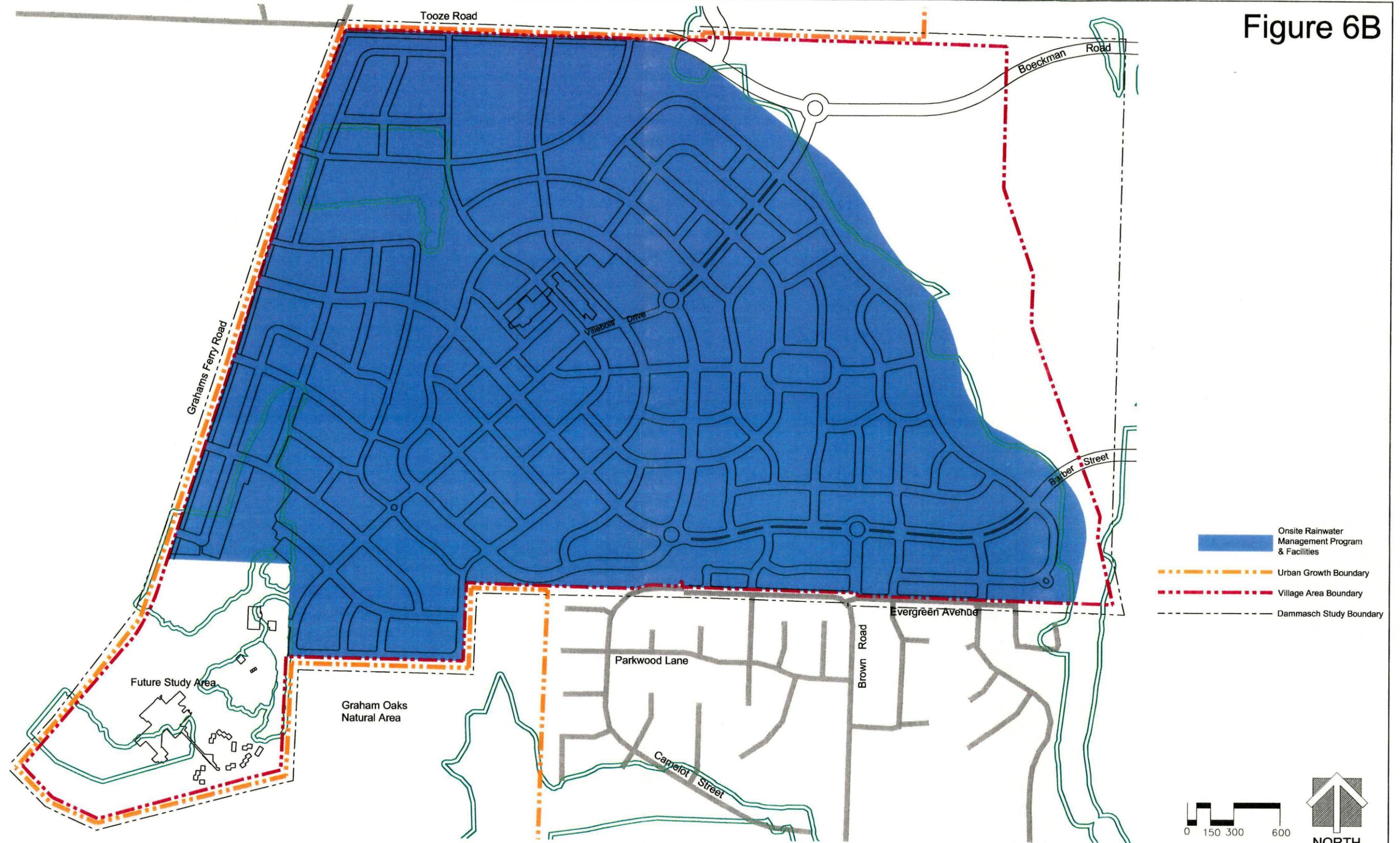


**NOTES:**  
 The Villabois Village Master Plan shall comply with the City Of Wilsonville SROZ regulations. encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemptions as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations.

**Onsite Stormwater Facilities**

AUGUST 16, 2005

Figure 6B



**NOTES:**  
The Villbois Village Master Plan shall comply with the City Of Wilsonville SROZ regulations. encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemptions as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations.

# Onsite Rainwater Management

AUGUST 16, 2005

## RELEVANT DOCUMENTS

The *Villebois Village Master Plan* references the “City of Wilsonville Stormwater Master Plan, June 2001”, including the Executive Summary and Sections 2-10. Section 1 addresses authorization and scope for the preparation of the City Stormwater Master Plan and is not related to the *Villebois Village Master Plan*. *Figure 6 – Conceptual Composite Utilities Plan*, is a part of the submittal documents for the *Villebois Village Master Plan* and depicts the location of CLC-10 in relation to the Villebois site. *Figure 6A – On-site Stormwater Facilities* shows the location of the onsite water quality and stormwater facilities. *Figure 6B – On-site Rainwater Management* shows the area included in the Villebois Village Rainwater Management Program.

## METHODOLOGY

Relevant documents have been reviewed to determine compliance with relation to:

- (1) Study Area;
- (2) Study Methods;
- (3) Existing Stormwater System;
- (4) Basin Analysis;
- (5) Improvement Options;
- (6) Recommended System Improvements;
- (7) Capital Improvement Program;
- (8) If the Villebois Village Master Plan meets or exceeds the requirements of the City Stormwater Master Plan; and
- (9) What revisions to the City Stormwater Master Plan are necessary to bring it into compliance with the Villebois Village Master Plan.

## COMPLIANCE ANALYSIS – METHODOLOGY ITEM 1 THROUGH 5

Concerning “Methodology” Item 1, the study area for the City Stormwater Master Plan was determined using existing topography and boundaries. The Villebois site encompasses an area within the City limits and a designated Urban Growth Area for the City and was therefore included in the study area for the City’s Stormwater Master Plan. This study identified drainage basins, wetlands and riparian corridors, geological hazards, soils and land uses. The existing natural conditions of the Villebois site remain the same today as at the time of the study. Land use designations for the site have evolved to the uses proposed with the *Villebois Village Master Plan*, but maintain the essential mix discussed in the City’s Stormwater Master Plan. Therefore, the *Villebois Village Master Plan* is in compliance with this Methodology.

Concerning “Methodology” Item 2, the methods for hydrologic analysis, runoff modeling, conveyance system modeling and water quality analysis used by the City in developing the City Stormwater Master Plan remain standard in the industry. Thus, where the *Villebois Village Master Plan* draws conclusions based on these methods those conclusions are valid and inherently in compliance with the City’s Stormwater Master Plan.

Concerning “Methodology” Item 3, the stormwater system around the Villebois site has not seen an appreciable change from the condition in which it was analyzed at the time the City Stormwater Master Plan was prepared. The drainage conveyance facilities, water quality facilities and problem areas affecting the Villebois site as presented in the City Master Plan will be complied with in the *Villebois Village Master Plan*.

Concerning “Methodology” Item 4, the proposed Villebois land uses are comparable to those used in the hydraulic analysis of the Coffee Lake Creek and Arrowhead Creek basins in the City’s Stormwater Master Plan. Therefore, the impacts of Villebois Village on the hydraulics analysis in these basins are consistent with those used in the calculations. The City of Wilsonville has commissioned a detailed study of Coffee Lake Creek as part of the Boeckman Road extension project. The results of this study will be used in the design of stormwater facilities required as

part of that road extension and with the detention and water quality design for areas draining into Coffee Lake Creek. A study of Arrowhead Creek capacity will be utilized in the evaluation of detention and water quality facilities for the Arrowhead and Mill Creek basins. The Arrowhead Creek capacity study will also be used in the evaluation of potential changes to CLC-10, which are further discussed in the Compliance Analysis for Methodology Items 5-7.

#### SUMMARY – METHODOLOGY ITEMS 1 THROUGH 4

The Villebois Village Stormwater Master Plan will meet or exceed the standards associated with this portion of the City Stormwater Master Plan.

#### COMPLIANCE ANALYSIS – METHODOLOGY ITEMS 5 THROUGH 7

The City Stormwater Master Plan evaluated numerous improvement options to alleviate problems identified with the analysis of Sections 1-4. These improvement options were broken down into two categories, Conveyance Improvement Options and Water Quality Improvement Options. There are no Water Quality Improvement Options with relevance to the Villebois site included in the City Master Plan. The Dammasch Basin/Arrowhead Creek Improvement Option is further addressed in Chapter 7, "Recommended System Improvements" as CLC-10.

Capital Improvement Project CLC-10 as discussed in the City Stormwater Master Plan consists of four elements:

- 1) Installation of a diversion structure on the 36" Dammasch outfall;
- 2) Expansion of the wetlands on the Metro Wilsonville Tract;
- 3) Installation of two-30" culverts at the bike path crossing; and
- 4) Repairs to Mill Creek Outfall.

Many decades ago, construction of the Dammasch State Hospital created a drainage basin transfer from Arrowhead Creek and Coffee Lake Creek to Mill Creek. CLC-10 partially corrects this transfer with the installation of a diversion structure on the existing 36" storm drain. This structure would return a portion of the runoff to its historic Arrowhead Creek drainage basin. This diversion would have the benefit of recharging the wetlands and reducing erosion in the Mill Creek basin.

At a minimum, the *Villebois Village Master Plan* will comply with CLC-10 as presented in the City Stormwater Master Plan. However, there are options that have the potential to improve upon the intent of CLC-10. The *Villebois Village Master Plan* proposes the following options to modify CLC-10 in Arrowhead Creek for further evaluation and consideration.

Option A would correct the basin transfer in full by re-directing the entire historic flow to Arrowhead Creek and Coffee Lake Creek drainage basins.

Option B, a blend of CLC-10 and Option A, seeks to restore as much of the historic flows as possible. Potential elements of this option include detention on the Graham Oaks Natural Area, additional detention within Villebois, and continued discharge at reduced rates to Mill Creek.

Prior to the consideration of Option A or B, supplemental analysis would be performed to further study impacts of restoring historic flows above those anticipated by CLC-10. This analysis would include areas identified in the initial study, including the pedestrian path crossing at Wood Middle School, the Wilsonville Road crossing and the Jobsey Lane crossing of Arrowhead Creek. Improvement projects and other implications resulting from this study will be coordinated with the City of Wilsonville and affected property owners. Neither option would move required onsite water quality and stormwater detention facilities onto offsite property. Table 2 lists components of the options and Table 3 lists advantages and disadvantages of the options.

**Table 2: Components of Basin Transfer**

	<b>CLC-10 (minimum standard)</b>	<b>CLC-10 modified by Option A</b>	<b>CLC-10 modified by Option B</b>
Location	Graham Oaks Natural Area	Graham Oaks Natural Area	Graham Oaks Natural Area, possibly portion in Villebois
Receiving Drainage Basin	Arrowhead Creek and Mill Creek	Arrowhead Creek and Coffee Lake Creek	Arrowhead Creek, Coffee Lake Creek and Mill Creek
Stormwater Improvements	Diversion structure for low flows to Arrowhead Creek; install two 30" culverts	Diversion structure not necessary due to re-direction of full historic flows; install appropriate sized culverts downstream	Analyze need for diversion structure; detention basins on Graham Oaks Natural Area and/or Villebois; install appropriate sized culverts downstream
Expanded Wetlands	Expand wetlands with CLC-10 restoration project	Expand wetlands per CLC-10 restoration project	Expand wetlands per CLC-10 restoration project
Mill Creek Outfall	Restore surrounding area but do not remove outfall	Remove outfall and restore surrounding area	Analyze ability to remove outfall and restore surrounding area

**Table 3: Analysis of Basin Transfer**

	<b>Advantages</b>	<b>Disadvantages</b>
<b>CLC-10 (minimum standard)</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Project identified and analyzed in City's Stormwater Master Plan</li> <li><input type="checkbox"/> Removes low flows from Mill Creek outfall, and includes repairs of outfall and minimizing erosion in Mill Creek</li> <li><input type="checkbox"/> Project appears to be consistent with the wetland restoration goals for the proposed Graham Oaks Natural Area</li> <li><input type="checkbox"/> Minimizes impacts to downstream properties on Arrowhead Creek</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Out-of-basin transfer is not fully corrected with this project</li> <li><input type="checkbox"/> Maintains peak flows to Mill Creek, which will require modifications of outfall to minimize future added degradation</li> <li><input type="checkbox"/> No existing stormwater easement outside existing 30-foot easement</li> </ul>
<b>CLC-10 modified by Option A</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Out-of-basin transfer corrected with this project</li> <li><input type="checkbox"/> Removes flows (low and peak) and outfall structure from Mill Creek, which will allow for full restoration of creek and outfall area</li> <li><input type="checkbox"/> Expansion of wetlands may be consistent with the wetland restoration goals for the Graham Oaks Natural Area</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Project not identified or analyzed in City's Stormwater Master Plan</li> <li><input type="checkbox"/> Potentially significant impacts to downstream properties on Arrowhead Creek will require downstream improvements to mitigate</li> <li><input type="checkbox"/> Potential impacts (i.e. increased water level) to existing wetlands from returning full historic flows</li> <li><input type="checkbox"/> No existing stormwater easement outside existing 30-foot easement</li> </ul>
<b>CLC-10 modified by Option B</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Removes low flows and some peak flows from Mill Creek outfall, and includes repairs of outfall and minimizing erosion in Mill Creek</li> <li><input type="checkbox"/> Reduces flows to Mill Creek outfall</li> <li><input type="checkbox"/> Expansion of wetlands may be consistent with the wetland restoration goals for the Graham Oaks Natural Area</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Project not identified or analyzed in City's Stormwater Master Plan</li> <li><input type="checkbox"/> Out-of-basin transfer is not fully corrected with this project</li> <li><input type="checkbox"/> Potential impacts to downstream properties on Arrowhead Creek will require downstream improvements to mitigate</li> <li><input type="checkbox"/> Potential impacts (i.e. increased water level) to existing wetlands from locating detention basin (discharge) on Graham Oaks Natural Area</li> <li><input type="checkbox"/> No existing stormwater easement outside existing 30-foot easement</li> </ul>

The *Villebois Village Master Plan* proposes to further analyze these options and determine their potential. The final determination will be coordinated with the City of Wilsonville/Villebois and Metro, will be made in accordance with the terms specified in the memorandum of understanding between the City/Villebois and Metro (Metro contract #926225).

Concerning "Methodology" Item 7, the City Stormwater Master Plan rates the items recommended in Section 6 and estimates costs for these improvements. Project CLC-10 is

established as a low priority and “Dammasch Stormwater Improvements” are not included in the City’s funding program. The *Villebois Village Master Plan* will comply with the City Stormwater Master Plan by implementing CLC-10 or one of the options outlined above.

## SUMMARY – METHODOLOGY ITEMS 5 THROUGH 7

At a minimum, the *Villebois Village Master Plan* will implement CIP project CLC-10 as identified in the City Stormwater Master Plan, thereby complying with the City Stormwater Master Plan. A more complete restoration of historic drainage basins might be achieved through one of the proposed options. These options will be further evaluated in cooperation with the City and property owners and if selected, will be incorporated into the City Stormwater Master Plan during the City’s next scheduled update.

## COMPLIANCE ANALYSIS CONCLUSION

The *Villebois Village Master Plan* meets or exceeds the requirements of the City of Wilsonville Stormwater Master Plan.

### 4.3.3 STORMWATER MASTER PLAN POLICY ANALYSIS

Implementation measures for the City’s Stormwater Master Plan are specified in Section 9 of the City’s Master Plan. This report addresses these policies on a policy-by-policy basis.

#### 9.1 Current Regional Standards

*9.1.1 Metro Title 3: On June 18, 1998, the Metro Regional Council adopted the Stream and Floodplain Protection Plan (Ordinance 98-730). This plan is also known as Title 3 of Metro’s Urban Growth Management Functional Plan (UGMFP). Title 3 addresses and sets standards for regional water quality in the Metro area. These standards include protection of floodplains, buffering of rivers, streams and wetlands with vegetation, erosion control and hazardous material storage. The City of Wilsonville has prepared a Natural Resources Plan which provides specific requirements for wetlands and riparian areas, meeting requirements of Statewide Planning Goal 5, Title 3 of the UGMFP, and the Endangered Species Act. Many of these are currently contained in Wilsonville’s Public Works Standards.*

Response: The *Villebois Village Master Plan* will follow all setback and buffer requirements, erosion control, vegetation of streams and wetlands and hazardous material storage standards as defined by the City’s Significant Resource Overlay Zone (SROZ) and Public Works Standards in compliance with Title 3 and the Goal 5 program.

*9.1.2 Federal Clean Water Act: The National Pollutant Discharge Elimination System (NPDES) was established in 1972 by the Clean Water Act. This program controls “point source” pollution and requires a permit from the Oregon Department of Environmental Quality (DEQ). The Clean Water Act was re-authorized in 1987 to address “nonpoint source” pollution, which subsequently required municipalities to obtain an NPDES permit. The City of Wilsonville currently has an active permit with several other jurisdictions issued in December 1995 and is awaiting approval on their renewal application submitted in 2000.*

Response: The *Villebois Village Master Plan* will follow City guidelines and standards developed for compliance with the Clean Water Act and the NPDES permit and, therefore, is in compliance with this policy.

## **9.2 General Stormwater Management Policies**

*Policy 9.2.1: "The City of Wilsonville shall manage stormwater on or as close as is practical to the development site in order to mitigate water quantity and water quality discharge impacts near the source."*

Response: Proposed stormwater facilities for water quality and detention to achieve pre-developed levels will be within the Villebois project boundaries, except for Project CLC-10. The City of Wilsonville anticipated this project, therefore, the *Villebois Village Master Plan* complies with this policy.

*Policy 9.2.2: "The City of Wilsonville shall assure that stormwater management has, to the maximum extent practicable, no negative impact on nearby streams, wetlands, groundwater or other water bodies."*

Response: Stormwater management for this project will follow the City guidelines and standards set by the City of Wilsonville. In addition, Villebois will be undertaking a new development standard referred to as "Rainwater Management." The Rainwater Management Program will prescribe guidelines and goals for reducing the increase in runoff from the 90<sup>th</sup> percentile rain event, 0.26" in a 24-hr period. By addressing the 90<sup>th</sup> percentile storm event, Villebois Village will succeed in minimizing the development "footprint" on the hydrological cycle. The Villebois Rainwater Management Program will be defined and implemented as part of the Specific Area Plan. With these goals, the *Villebois Village Master Plan* meets and exceeds the requirements of this policy.

*Policy 9.2.3: "The City of Wilsonville shall preserve existing open surface water facilities and encourage the expansion of surface facilities where practical."*

Response: Surface water facilities, defined as stormwater conveyance facilities, on-site will be maintained and protected to the maximum extent practical. The only identified open surface water facility on Villebois Village is Coffee Lake Creek, which will remain a wetland.

*Policy 9.2.4: "The City of Wilsonville shall require that the maintenance of water quality control facilities be the responsibility of the private or public owner."*

Response: Water quality control facilities will be maintained by private owners, a homeowners association, or as arranged with the Finance Plan. The *Villebois Village Master Plan* is in compliance with this measure.

*Policy 9.2.5: "The City of Wilsonville shall assure that all stormwater facilities receive adequate maintenance."*

Response: The City of Wilsonville Stormwater Master Plan identifies several maintenance standards and performance measures for ensuring adequate maintenance of stormwater facilities. Since the stormwater facilities in Villebois Village will either be publicly maintained or held to public standards if a private system, the *Villebois Village Master Plan* is in compliance with this policy.

### **Fish Passage Culverts:**

*Policy 9.2.6: "The City of Wilsonville shall require the use of culvert designs that meet Oregon Department of Fish and Wildlife Guidelines and Criteria for Stream-Road Crossings."*

Response: All culvert designs shall be reviewed by the City Engineer to determine their overall effectiveness in meeting the fish passage requirements specified by the State or Federal agencies.

***Development Review:***

*Policy 9.2.7: "Based on the need to demonstrate protection of habitat and water quality and quantity for endangered species listed as threatened under section 4(d) of the ESA, design and construction of stormwater facilities shall be reviewed by the Planning Division through a Class II administrative review process, as may be amended. However, such administrative process shall be expedited when time is of the essence in planning and constructing necessary facilities. Review of a facility may also be accomplished as part of an application for development review by the Development Review Board (DRB) or City Council."*

Response: Review of proposed stormwater quality facilities in Villebois Village will follow the planning guidelines developed in this policy, thereby complying with this policy.

***Erosion Control Policies:***

*Erosion control is important in terms of both water quantity and quality. The City's Erosion Control Ordinance (Ordinance No. 482) was adopted in April 1997. Its requirements are based on the February 1994 Erosion Prevention and Sediment Control Plans – Technical Guidance Handbook, prepared by the City of Portland and the Unified Sewerage Agency.*

*Policy 9.2.8: "The City of Wilsonville shall take steps to minimize erosion resulting from land use and development activities."*

Response: Construction on Villebois Village will conform to the City of Wilsonville Public Works Standards for erosion control and applicable DEQ 1200C permit, meeting the requirements of this policy.

***9.3 Stormwater Quality Policies:***

*Policy 9.3.1: "The City of Wilsonville shall, as much as is practical, assure that the quality of stormwater leaving the site after development will be equal to or better than the quality of stormwater leaving the site before development."*

***Design Standards:***

*Wilsonville's current standards for stormwater facility construction are contained in the City's Public Works Standards. These standards provide construction details and design criteria for water quality facilities.*

Response: Stormwater facilities in the Villebois Village are being given extra attention in the design process to create a facility that emulates a natural system both in function and appearance. The design of these facilities will meet or exceed the design criteria contained in the City's Public Works Standards and these facilities will comply with monitoring and enforcement policies developed by the City. Therefore, the *Villebois Village Master Plan* meets the requirements of this policy.

***On-Site Water Quality Facilities:***

*Studies have shown that development increases the concentration in runoff of suspended sediment, oil and grease, and nutrients. Because existing development includes few or no water quality facilities, proposed regional facilities are targeted downstream of existing development where suitable to protect existing wetland and riparian areas.*

*Policy 9.3.2: "The City of Wilsonville shall use a combination of regional and on-site facilities to achieve the recommended pollution reduction outlined in this Stormwater Master Plan."*

Response: The Villebois storm system will utilize a variety of onsite water quality facilities for treatment. Large greenway corridors are being master planned into the site for the purpose of providing treatment, detention and open space. In addition to these, smaller facilities will be dispersed throughout the site to provide more localized treatment. Facilities utilized by Villebois Village will range from elaborate "stream and pond" systems to more traditional swales and ponds to planter boxes and other new technologies. In addition, master planning for water quality treatment has been based on historic flow regimes for the site and will support restoration of historic flows to pre-development basins. This variety of treatment measures meets and exceeds the requirements of this policy.

#### ***Source Controls for Development***

*Policy 9.3.3: "The City of Wilsonville shall continue to require on-site facilities to serve new or expanding developments, subject to prescribed standards."*

Response: Villebois Village will be providing on-site facilities to achieve water quality treatment. These facilities shall meet construction and maintenance standards developed by the City of Wilsonville, and shall comply with additional measures as required for discharge directly into wetlands or other sensitive areas. The *Villebois Village Master Plan* complies with this policy.

#### ***Shading of Water Bodies***

*Policy 9.3.4: "The City of Wilsonville shall require shading of surface facilities in order to reduce water temperatures in existing and new surface water facilities."*

Response: Surface water quality facilities within Villebois Village will provide shading to meet City standards and, therefore, the *Villebois Village Master Plan* meets the requirements of this policy.

#### ***9.4 Landscaping Policies:***

*Policy 9.4.1: "The City of Wilsonville shall require landscaping in conjunction with stormwater facilities."*

Response: The City Stormwater Master Plan identifies several implementation measures regarding landscaping. Stormwater systems for Villebois Village are master planned to be a prominent, attractive and unique asset to the site. Each system will be carefully designed to address these issues. Landscaping will provide the density and height necessary to shade shallow water quality facilities and provide treatment. Materials utilized in landscaping of these facilities will be native when possible and shall be maintained in compliance with this policy. Storm facilities will be designed to provide accessible slopes of 3:1 or greater, and where not possible, fencing will be considered only as necessary for safety. Access to the facilities will also be addressed on an individual basis while retaining the ability to create a unique facility. Adequate irrigation to assure survival will be provided. The *Villebois Village Master Plan* therefore meets the requirements of this policy.

#### ***9.5 Stormwater Quantity Policies***

##### ***Design Standards:***

*The City of Wilsonville's Public Works Standards provide standards for hydrology and hydraulic design, as well as construction details and design criteria for pipes and channels. The City's*

*standards also address the conveyance design storm event and guidelines for determining upstream and downstream impacts.*

*Policy 9.5.1: "The City of Wilsonville shall continue to utilize Public Works Standards that provide a comprehensive set of requirements for surface water management facilities."*

Response: Utilization of the "Santa Barbara Urban Hydrograph method" has become an accepted industry standard practice for hydrologic analysis. This method will be used on the Villebois site with the approval of the City Engineer. Stormwater quantity facilities in Villebois Village will utilize, as a minimum, the City of Wilsonville *Public Works Standards* for design and construction specifications. The preliminary drainage report as prepared for the *Villebois Village Master Plan* will be in compliance with the design standards of the City's Stormwater Master Plan and Public Works Standards. Therefore, the *Villebois Village Master Plan* is in compliance with this policy.

#### ***On-Site Stormwater Detention:***

*The proposed regional stormwater facilities were limited by geographical and financial constraints and will not by themselves be able to maintain future-condition flows at existing levels. As stream bank erosion is affected by both the frequency and magnitude of increased flows, runoff from both small and large storms must be controlled, managed on or as close as is practical to the development site in order to mitigate water quantity and water quality discharge impacts near the source. Consequently, on-site detention facilities for new development City-wide are recommended but financial participation in regional facilities will be considered as well as other creative alternatives to on-site detention facilities.*

*Policy 9.5.2: "The City of Wilsonville shall continue to require on-site detention facilities to serve new or expanding developments, subject to prescribed standards."*

Response: The City Stormwater Master Plan identifies detention requirements for the 2- through 25-year, 24-hour storms. For events more severe than the 25-year storm, overflows safely directing drainage to the downstream channel shall be provided. Detention of stormwater for Villebois Village will be provided in on-site facilities. These facilities will follow the design requirements identified in this policy. In addition to stormwater detention, the Rainwater Management Program will strive to reduce the increased runoff from the 90<sup>th</sup> percentile of rainfall. Villebois Village will develop design guidelines for achieving this goal as part of the Specific Area Plan, thereby meeting and exceeding the requirements of this measure.

#### ***9.6 Property Acquisition Policies***

*Policy 9.6.1: "The City of Wilsonville shall continue to acquire property in fee or easement for stormwater facilities."*

Response: Public stormwater facilities constructed within Villebois Village will be granted to the City of Wilsonville either in fee or easement. The developer shall obtain the necessary easements for the construction of any off-site facilities proposed. The *Villebois Village Master Plan* is therefore in compliance with this policy.

#### **REVIEW OF IMPLEMENTATION PLAN CONCLUSION**

The *Villebois Village Master Plan* addresses and complies with the policies and implementation measures of the City Stormwater Master Plan.

#### **4.3.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION**

##### **Goal**

The Villebois Village shall include adequate storm water systems to prevent unacceptable levels of flooding, protect receiving streams and water bodies from pollution and increased runoff rates due to development, and create a connection between people and the environment.

##### **Policy**

1. The onsite storm water system for Villebois shall meet the necessary requirements of the City of Wilsonville Stormwater Master Plan and Public Works Standards.
2. Villebois Village shall strive to minimize the development "footprint" on the hydrological cycle through the combination of stormwater management and rainwater management.
3. Villebois Village shall integrate rainwater management systems into parks and open space areas.

##### **Implementation Measures**

1. Implement the following list of City Stormwater Master Plan policies and facilities:
  - Policies: 9.1-9.6
  - Projects: CLC-10

At a minimum CIP Project CLC-10 shall be complied with. Alternatives to CLC-10 shall be explored to additional restoration of historic flows. These alternatives, Options A and B, seek to restore historic flows to Arrowhead Creek thereby correcting the out of basin transfer that occurred with the construction of the Dammasch State Hospital. Analysis of these alternatives will be coordinated with the City, METRO, and affected property owners.

2. Develop a Rainwater Management Program with the first Specific Area Plan that will provide opportunities for integrating water quality, detention, and infiltration into the site's natural features and the proposed urban form, thus developing a green, natural, aesthetically pleasing rainwater management system. This program will provide the specific goal of reducing the increase in runoff from the 90<sup>th</sup> percentile of all rain events, mimicking pre-development hydrology and keeping Villebois Village true to its development goal of minimal negative impacts to the existing system. In addition to this standard, the program will provide guidelines and standards for the design of all stormwater systems challenging them to be creative and unique while meeting necessary requirements.
3. Construct CLC-10 as defined or implement Option A or B as proposed. Construction of CLC-10, or selection of an option to modify CLC-10, is to occur in accordance with the terms specified in the memorandum of understanding between the City/Villebois and Metro (Metro contract #926225).
4. Incorporate the construction of CLC-10 or as modified by Option A or B into the Finance Plan.
5. Insure that on-going costs to maintain rainwater systems in public rights-of-way are included in Finance Plan.
6. The City shall prepare a study of Coffee Lake Creek drainage basin in conjunction with the Barber Street and Boeckman Road extension projects.

7. The City shall prepare design for fish passage culverts in the Barber Street and Boeckman Road extension projects.
8. Pending resolution of the detailed study of Coffee Lake Creek drainage basin to be undertaken as part of the Boeckman Road extension project, adequate stormwater quantity (detention) facilities will be provided within the Villebois Village development for the proposed re-direction of historic flows to the Coffee Lake Creek basin. This requirement shall be addressed with the submittal of Specific Area Plan for the affected drainage basin area.
9. Pursuant to the City's Stormwater Master Plan Policies 9.2.4 and 9.2.5, maintenance of stormwater conveyance facilities, including detention/retention facilities, will be planned as part of the Specific Area Plans for the Villebois Village.
10. Complete the study of Options A and B with regard to CIP Project CLC-10 in accordance with the terms specified in the memorandum of understanding between the City/Villebois and Metro (Metro contract #926225). The study shall consider at least the following actions, which are required to obtain approval of the City Engineer:
  - Coordinate design of culvert at Arrowhead Creek/ Wilsonville Road crossing with the Wilsonville Road Capital Improvement Project and the City of Wilsonville.
  - Prepare additional study of culvert at Jobsey Lane crossing of Arrowhead Creek and identify construction recommendations to mitigate capacity and erosion problems.
  - Design plan for removal or abandonment of Dammasch 36-inch outfall at Mill Creek.
  - Coordinate with and obtain approval of Metro and the City of Wilsonville for integration of a potential detention facility into the design of the Graham Oaks Natural Area. Obtain appropriate easements as required for said facility.
  - Prepare additional study of Arrowhead Creek to and including backup from Willamette River at location Arrowhead Creek flows into Seely Ditch.
  - Prepare additional detailed study of impact of added flows on functioning of wetlands and prevention of overflow onto Wood Middle School and forested wetlands.
  - Obtain overall approval of drainage report.
11. The City shall include the *Villebois Village Master Plan*, including the finalized concept of CLC-10, in future updates of the City of Wilsonville Stormwater Master Plan.

## CHAPTER 5 – CIRCULATION

### 5.1 INTRODUCTION / PROPOSAL

The circulation system proposed in the Villebois Village is designed to reflect the principles of smart growth encouraging alternatives to the automobile while accommodating all travel modes, including passenger cars, trucks, buses, bicycles and pedestrians. Accordingly, there is a system of public and private streets and trails that will connect users of the various modes to the major activities inside and outside the community. All public streets are connected without dead-ends or cul-de-sacs, except in those rare cases where required by topography or natural features. The circulation plan will also meet all ADA requirements. *Figure 7 - Street Plan* shows the planned transportation system. *Figure 8 – Proposed Arterial & Collector System* shows the planned Arterial and Collector street system, and *Figures 9A & 9B – Street & Trail Sections* show the planned cross-sections for the streets and trails.

### 5.2 TRANSPORTATION SYSTEMS PLAN COMPLIANCE ANALYSIS

#### PURPOSE OF THE COMPLIANCE ANALYSIS

The City of Wilsonville recently adopted its Transportation Systems Plan (TSP). A Master Plan for Villebois has been prepared for evaluation under the TSP, which shows:

- The proposed street plan;
- The proposed Arterial/Collector system; and
- The proposed street sections.

#### RELEVANT DOCUMENTS

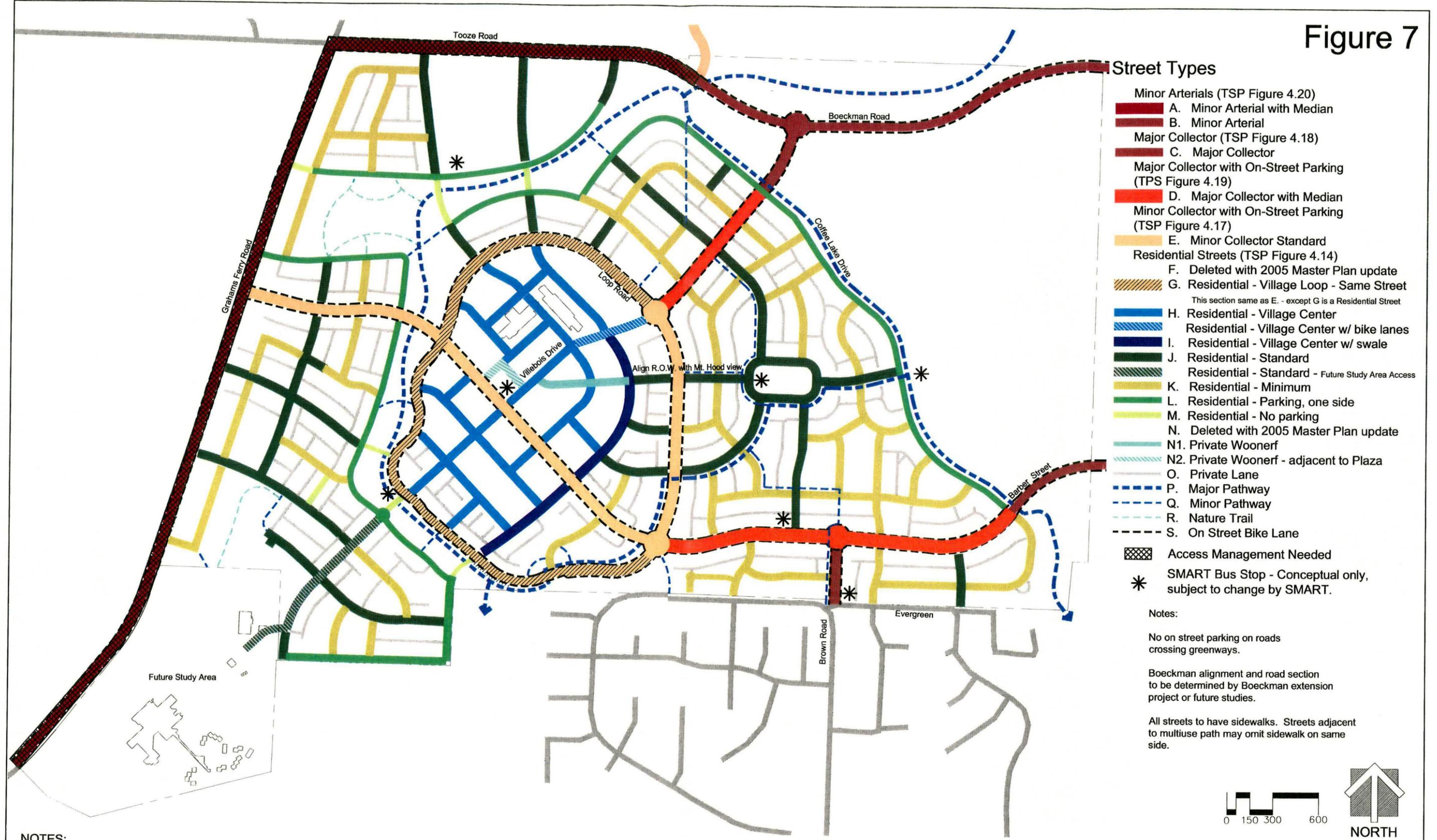
The referenced City transportation plan is titled “City of Wilsonville Transportation Systems Plan, June 2, 2003.” The *Villebois Village Master Plan* consists of *Figure 7 – Street Plan*, *Figure 8 – Proposed Arterial & Collector System*, and *Figures 9A & 9B – Street & Trail Sections*.

#### METHODOLOGY

*Figure 7 - Street Plan* of the *Villebois Village Master Plan* shows a system of Residential, Collector and Arterial streets that interconnect between modes and activities within and outside Villebois Village. The *Villebois Village Master Plan* is generally consistent with the Wilsonville TSP in that it:

- Retains the north-south Collector through the site in a modified alignment of Brown Road-110<sup>th</sup> Avenue;
- Retains the east-west Arterial connection on the northern boundary of the site by providing a through connection from Kinsman Road to Grahams Ferry Road;
- Maintains a hierarchy of streets within and adjacent to Villebois, while providing the TSP required spacing of Arterial, Collector, and Residential streets;
- Provides acceptable levels of service at all street intersections;
- Adheres to the City’s access spacing policy on all streets, with minor exceptions as discussed below; and
- Provides safe movements for all travel modes, by complying with City policies and standards including AASHTO standards.

Figure 7



**NOTES:**  
 The Villebois Village Master Plan shall comply with the city of Wilsonville SROZ regulations. Encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations.

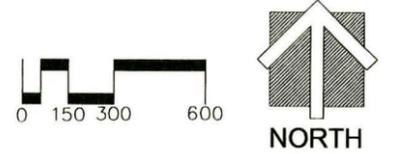


Figure 8

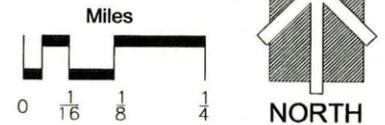


**LEGEND**

Existing	Proposed	
		Major Arterial
		Minor Arterial
		Major Collector
		Minor Collector
		Existing streets replaced by Villebois' Circulation Plan
		Planned streets replaced by Villebois' Circulation Plan
		Local street

Note:  
See Villebois Street Sections for specific Collector / Arterial configurations

(Source: 2003 TSP and Villebois Village Plan)

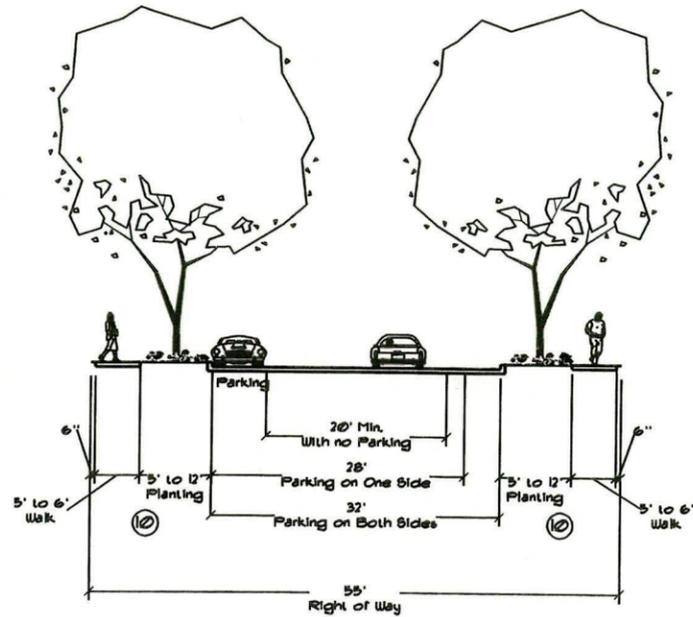


# Proposed Arterial/Collectors Street System

FEBRUARY 23, 2005



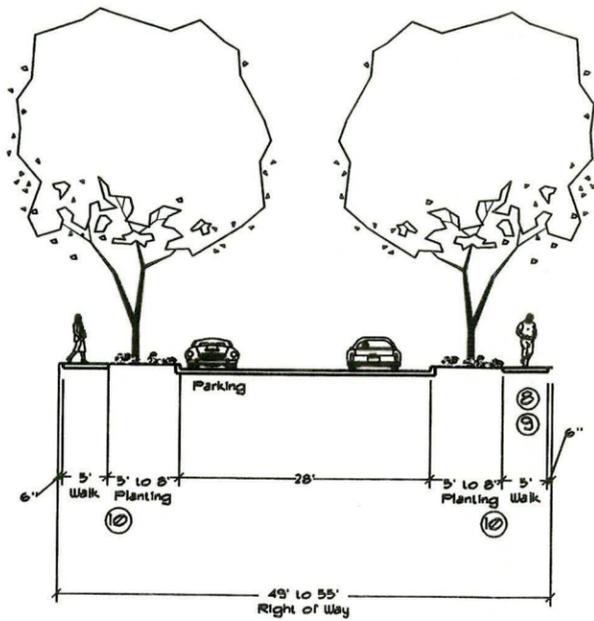
Figure 9B



K. Residential - Minimum

(TSP Figure 4.14)

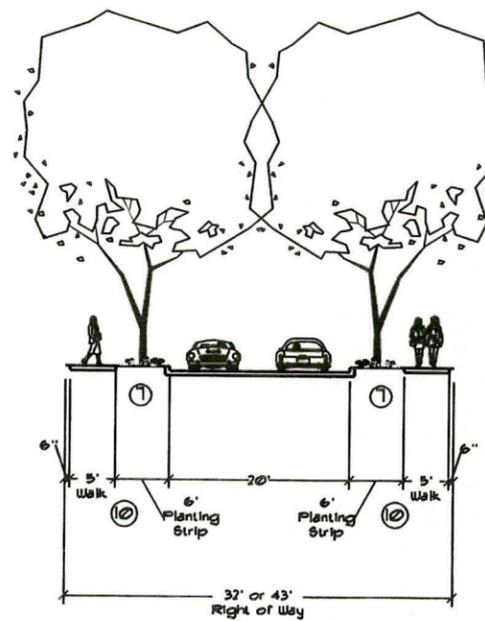
Scale: 1" = 20'



L. Residential - Parking One Side

(TSP Figure 4.14)

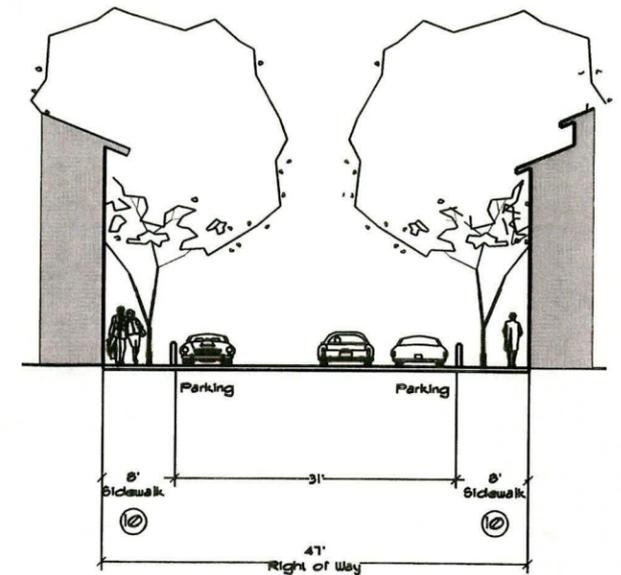
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M. Residential - No Parking

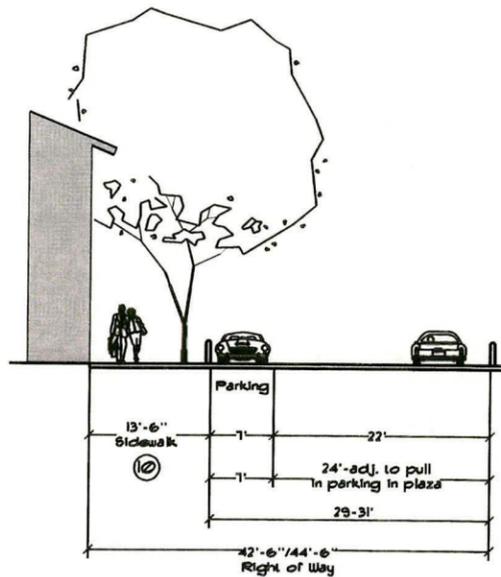
(TSP Figure 4.14)

Scale: 1" = 20'



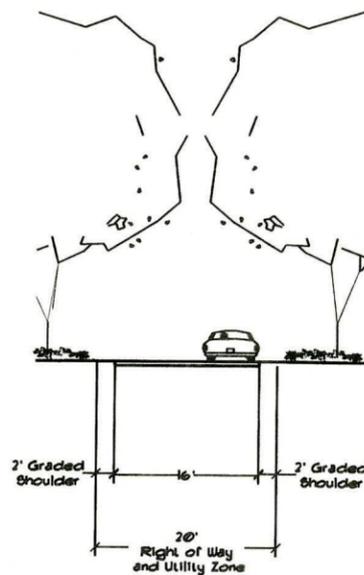
N1. Private Woonerf

Scale: 1" = 20'



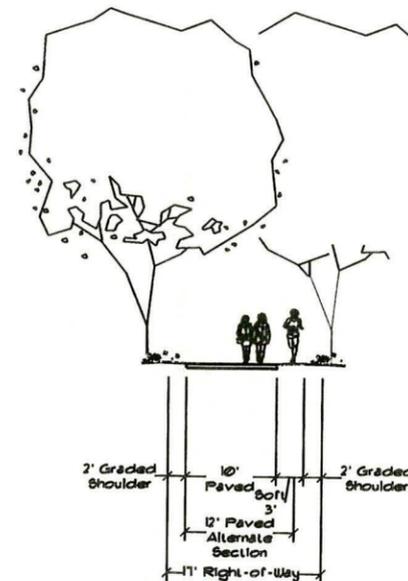
N2. Private Woonerf - adjacent to Plaza

Scale: 1" = 20'



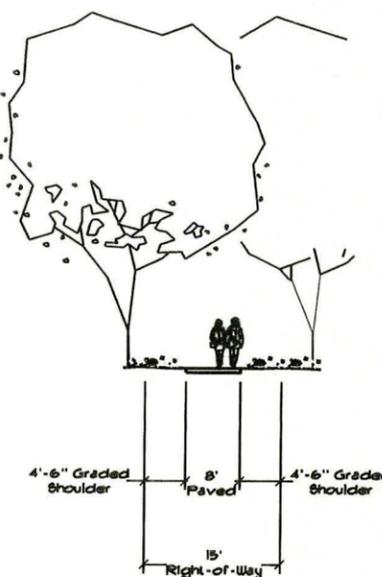
O. Private Lane

Scale: 1" = 20'



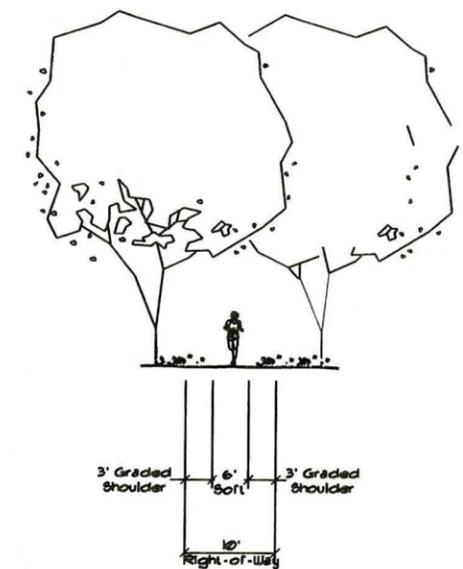
P. Major Pathway

Scale: 1" = 20'



Q. Minor Pathway

Scale: 1" = 20'



R. Nature Trail

Scale: 1" = 20'

NOTES:

1. No parking where turn lanes are required at intersections or at Graham's Ferry Road.
2. Rainwater swales are not required for streets with grades in excess of 8%.
3. Section to be determined by Boeckman extension project or future studies.
4. In the village center the sidewalk may be widened to include the planting area when adjacent to retail/commercial uses.
5. Blocks over 330' will have a mid-block pedestrian crossing. This same area will provide 20 feet clear for vehicle passing on Queuing streets.
6. See 06A submission for swale locations.
7. No planting strip at Greenway crossings. Provide minimum 5' clear sidewalk from back of curb.
8. Walkway and planting strip optional when adjacent to multi-use trail.

9. The Right of Way shall be reduced to 12" behind face of curb where adjacent to open spaces.
10. Dry Utilities in sidewalk and planter area where necessary. Individual unit service to be in private lane where available.
11. 34' width for LEC access road may be revised with the SAP Plans to a 32' access road.
12. Continuous turn lane at Graham's Ferry Road.
13. 46' width when adjacent to Linear Green.
14. Sidewalk becomes 13.5', planting strip is removed and Right of Way becomes 61' when adjacent to Commercial.
15. Section F deleted with 2005 Master Plan update.
16. Section N deleted and replaced with Sections N1 & N2.

Street and Trail Sections - B

AUGUST 16, 2005

The following areas identified below are discussed in greater detail within this Section 5.2:

- Street designations;
- Roundabouts;
- Parking on Collectors;
- Access control on Minor Arterials;
- Continuity of streets and trails; and
- Curb Extensions.

## COMPLIANCE ANALYSIS

### *Street Designations*

The roadway classifications included in the *Villebois Village Master Plan* are generally consistent, with some variations from those in the Wilsonville TSP. As in the Wilsonville TSP, the *Villebois Village Master Plan* has streets classified as Arterials, Collectors and Residential streets. The *Villebois Village Master Plan* includes alternative cross-sections for the Collector and Residential street classifications, as defined in Table 5 in Section 5.3, below.

#### *Implementation*

The street designations and standards prepared for the Villebois Village generally meet the standards specified in the Wilsonville TSP. Alternative street sections allow use of a Residential street section with no parking, and widths to be exceeded for medians, planter strips and sidewalks on street sections as identified in Table 5 of Section 5.3, below.

### *Roundabouts*

Roundabouts will be used at locations identified on *Figure 7 – Street Plan* and will be designed to effectively manage traffic at acceptable levels of service without the need for traffic control signals, as defined in the Wilsonville TSP. Accordingly, roundabout-controlled intersections would operate at LOS “D” or better during peak hours.

#### *Implementation*

Roundabouts will be used in the locations shown on *Figure 7 – Street Plan* of the *Villebois Village Master Plan*.

### *Parking on Collectors*

On-street parking will be provided on all internal streets, with a few exceptions where adjacent land uses do not create the need for parking. Villebois Village will be developed with front doors facing the street. On-street parking is an important community characteristic for both visitors and residents when driveways are located at the back of the house since it encourages activity on the street and provides convenient access to homes. The presence of parking along Collector streets will encourage moderate travel speeds. These street sections have been designed to enable safe parking and unparking maneuvers so as not to adversely affect the safety of pedestrians and bicyclists or affect the function of a Collector street.

The TSP references a book whose basic principles should be a guide for Wilsonville. The referenced book, entitled *Creating Livable Streets: Street Design Guidelines for 2040* (Metro, June 2002), states that:

*On-street parking is permitted and provided on many of the best streets. Proportionately, parking is provided on more good streets than not. At today's car ownership levels on-street parking cannot by itself meet all of the demand created by adjacent land use. Nevertheless, on-street parking:*

1. *supports local economic activity of merchants, by providing access to local uses, as well as visitor needs in residential areas*
2. *increases pedestrian safety by providing a buffer for pedestrians from automobile traffic*
3. *increases pedestrian activity, in general, on the street. Since people rarely find parking in front of their destination, they walk, providing more exposure to ground floor retail and increasing opportunities for social interactions*
4. *increases local economic activity by increasing the visibility of storefronts and signs to motorists parking on street*
5. *supports local land use by reducing development costs for small business by reducing needs for on-site parking*
6. *provides space for on-street loading, increasing the economic activity of the street and supporting commercial uses*

The Villebois Village plan strives to meet these goals through its provision of on-street parking for Residential and Collector streets.

#### ***Implementation***

Collector streets that allow on-street parking shall be designed in consideration of the safety of pedestrians and bicyclists and shall be reviewed by the City Engineer.

#### ***Access Control on Minor Arterials***

##### ***Implementation***

Requests for major alternatives to allow less than 600 foot access spacing on Grahams Ferry Road will follow the process outlined in Wilsonville TSP Implementation Measure 4.1.1.b(3). (*Note: This issue has been resolved. The approved SAP South street system reflects the appropriate access spacing on Grahams Ferry Road.*)

#### ***Continuity of Streets and Trails***

With the exception of situations where physical constraints prohibit, streets and trails are connected. The *Villebois Village Master Plan* provides vehicular connection to all existing streets that currently stub to the property (including Montebello Drive, Serenity Way, Brown Road and Yosemite Street) to assure neighborhood circulation and connectivity consistent with City and Metro requirements. As described in the Wilsonville TSP, all streets should connect except in situations where physical constraints do not permit.

##### ***Implementation***

The *Villebois Village Master Plan* conforms to the connectivity and circulation standards prescribed in the Wilsonville TSP.

#### ***Curb Extensions***

The Villebois Village circulation plan includes curb extensions in locations of high pedestrian activity. Curb extensions serve to minimize speeds and the length of exposure for pedestrians crossing streets, and also provide protection for on-street parked cars. It is recognized that curb extensions may restrict the ability for larger vehicles to turn at street corners. The following basic principles shall be used for the placement and design of curb extensions:

- A minimum of 20-foot face-of-curb to face-of-curb street width shall be provided at all Residential street intersections, even where curb extensions are located. In the Village Center (inside the Village Loop), the minimum curb-to-curb street width for public streets should be 22 feet, in order to accommodate delivery and garbage truck movements.

- Fire trucks, buses, and single-unit trucks (i.e., garbage trucks) shall be able to negotiate from Collector/Arterial streets without crossing the Collector/Arterial street centerline. Fire trucks shall be able to negotiate through Residential streets, although it is acceptable for them to cross the street centerline on Residential streets.
- Passenger car turning movements shall be able to stay within the street centerline on all streets.
- Bike lanes shall not be forced into vehicle travel lanes.

**Implementation**

By following these basic design standards, streets within the Villebois Village will be able to meet or exceed safety and capacity standards as prescribed in the Wilsonville TSP and AASHTO standards. Placement of curb extensions shall be reviewed through the City's minor alteration process with Specific Area Plans.

**5.3 TRANSPORTATION SYSTEMS PLAN POLICY ANALYSIS**

The Villebois circulation plan is generally consistent with the policies and implementation measures of the Wilsonville TSP and AASHTO standards. The following section describes many of the policies and implementation measures that the Villebois plan either supports or proposes to alter.

**TSP Goal 4.1: To provide an interconnected motor vehicle system that will safely and efficiently provide for vehicle circulation and enhanced mobility.**

Response: The *Villebois Village Master Plan* provides enhanced mobility and connectivity for all travel modes. For motor vehicle circulation, all public streets are connected without dead-ends or cul-de-sac's except in those rare cases where required by topography or natural features. The *Villebois Village Master Plan* includes a hierarchical system of Arterial, Collector and Residential streets within and through the site that meets the intent and long-term needs of the Wilsonville TSP. The streets and intersections in Villebois will provide acceptable levels of service as defined in the Wilsonville TSP (LOS "D" or better).

**TSP Section 4.4.6: Access Management and Table 4.0: Access Management Guidelines.**

Response: The minimum access spacing for each functional classification and whether the *Villebois Village Master Plan* is in compliance is shown in the table below:

**Table 4: Functional Classification Comparison**

Functional Classification (Wilsonville TSP-April 2003 Public Draft)	Functional Classification (Figure 7 - Street Plan of the VVMP)	Minimum Access Spacing (Wilsonville TSP-April 2003 Public Draft)	VVMP Compliance (Yes or No)
Major Arterial	None	1,000 ft.	N/A
Minor Arterial	Minor Arterial	600 ft.	Yes*
Major Collector	Major Collector	100 ft.	Yes
Minor Collector	Minor Collector	50 ft.	Yes
Residential Street	Residential	Access to each lot permitted	Yes

\* See Section 5.4 (Villebois Village Master Plan Implementation) Implementation Measure 4.

**TSP Section 4.7 Implementation Measures**

**Implementation Measure 4.1.1.b** Use the Roadway Design Standards (Section 4.4.1 and Figures 4.12 through 4.22) as the standard for designing all street improvements in the city.

The TSP provides (subsection 4.1.1.b.3):

*For publicly constructed streets, these standards may be waived for major alternatives by the City Council and for minor alternatives by the City Engineer. A major alternative is one that involves a significant change from the standards impacting capacity and speed, that changes pedestrian safety and convenience, or that alters large areas of required landscaping. Examples include but are not limited to changing the number of lanes, moving a sidewalk from the property-line to the curb-line, using alternatives to standard curb, gutter, and median systems for managing stormwater, or eliminating the landscaped strip. A minor alternative is one that involves a small change from the standards that does not affect capacity or speed and does not diminish safety or aesthetics for the project as a whole. Examples include but are not limited to narrowing of lanes to moving a sidewalk to go around landscape features, or a small narrowing of lanes to fit tight right-of-way.*

**TSP Figures 4.12 through 4.22: Street Classification, Widths and Names.**

Response: The *Villebois Village Master Plan* street classifications and widths are shown in Table 5 below, together with the appropriate TSP section. Proposed alternatives to the standards are described in detail following Table 5.

Table 5 provides a comparison of each relevant TSP figure with the correlating street sections proposed in the *Villebois Village Master Plan*. The TSP figures are noted by italics in the unshaded areas of Table 5. The *Villebois Village Master Plan* (VVMP) street sections are shown by standard text within the shaded areas of Table 5. The *Villebois Village Master Plan* street sections are depicted on *Figures 9A and 9B – Street & Trail Sections*. The locations where these street sections are planned to be used are illustrated on *Figure 7 – Street Plan*.

**Table 5: Street Cross-Section Standards Comparison**

Street Classification	Right-of-way	Face-of-Curb to Face-of-Curb Section	Sidewalk Width (ft)	Planter Strip Width (ft)	Parking Width (ft)	Bike lane Width (ft)	Travel Lane Width (ft)	Center Median/Turn Lane Width (ft)
Minor Arterial (TSP Figure 4.20)	71-77	50	5	8 ½	-	6	12	14
Minor Arterial w/ Median (VVMP Section A)	78	50	5	8 ½	-	6	12	14 continuous turn lane on Grahams Ferry Road)
Minor Arterial (VVMP Section B)	77	50	5	8 ½	-	6	12	14
Major Collector (TSP Figure 4.18)	71-77	50	5	8 ½	-	6	12	14
Major Collector (VVMP Section C)	77	50	5	8 ½	-	6	12	14
Major Collector w/ On-Street Parking (TSP Figure 4.19)	85-87	64	5	6 ½	8	5	12	14
Major Collector w/ Median (VVMP Section D)	92	65	5	8	7	6	12	15
Minor Collector w/ On-Street Parking (TSP Figure 4.17)	69-73	50	5	6 ½	8	5	12	None
Minor Collector Standard (VVMP Section E)	76 <sup>1</sup>	50 <sup>3</sup>	5 <sup>3,7</sup>	7 ½ <sup>3</sup>	7	6	12	None
Residential Street (TSP Figure 4.14)	47-51	28-32	5	4 ½	Not striped	Shared w/ cars	Not striped	None
Residential Village Loop (VVMP Section G)	76 <sup>1</sup>	50 <sup>2</sup>	5 <sup>3</sup>	7 ½ <sup>3</sup>	7	6	12	None
Residential Village Center (VVMP Section H)	55-67	34	5 ½-13 ½	4 ½ <sup>3,7</sup>	Not striped	Shared w/ cars <sup>8</sup>	Not striped	None
Residential Village Center w/ Swale (VVMP Section I)	62	34	5	6 ½-10 ½	Not striped	Shared w/ cars	Not striped	None
Residential Standard (VVMP Section J)	59	20-34	5-8	5-14	Not striped	Shared w/ cars	Not striped <sup>6</sup>	None
Residential Minimum (VVMP Section K)	55	20-32	5-6	5-12	Not striped	Shared w/ cars	Not striped <sup>6</sup>	None
Residential Parking One Side (VVMP Section L)	49-55 <sup>1</sup>	28 <sup>2</sup>	5 <sup>3</sup>	5-8 <sup>3</sup>	Not striped	Shared w/ cars	Not striped	None
Residential No Parking (VVMP Section M)	32-43 <sup>1</sup>	20 <sup>2</sup>	5 <sup>3</sup>	6 <sup>3</sup>	Not striped	Shared w/ cars	Not striped <sup>6</sup>	None

- Notes:
1. The right-of-way shall be reduced to 12" behind face of curb where adjacent to open spaces.
  2. When adjacent to open space, parking on that side is optional.
  3. When adjacent to open space, planting strip and sidewalk are optional.
  4. The Villebois Village Master Plan depicts a proposed alternative to have a 13' wide median in lieu of planter strips. The Master Planner is evaluating this alternative. If this alternative is not utilized, another approved street section for Villebois will be used.
  5. When the 20' wide curb-to-curb section is used, no parking will be allowed.
  6. Villebois has a number of local street designations (refer to Figure 7 - Street Plan and Figures 9A & 9B - Street & Trail Sections). In all cases, each of these designations has a cross-section with a minimum of 32-ft. curb-to-curb section where parking is allowed on both sides; each section is a minimum of 28 feet where parking is allowed on one side, and those sections allowing no parking on either side are a minimum of 20 feet. A 20-ft. section is the minimum allowed for fire access purposes. All sections have a minimum 5-ft. sidewalk, minimum 5-ft. planter (except where adjacent to open space or park). Only the local streets - Village Loop and Village Center - with Median designations have striped bike lanes; in all other cases bike lanes are shared with motor vehicles and not explicitly striped for either travel lanes or bike lanes.
  7. In the Village Center, the sidewalk may be widened to include the plating area when adjacent to retail/commercial uses.
  8. 6' bike lanes on Villebois Drive from Costa Circle to Ravenna Loop.

### ***Implementation***

Pursuant to TSP Implementation Measure 4.1.1.b(3), the following major alterations are included in the *Villebois Village Master Plan*. A brief description of the major alteration is also provided below.

- On-street parking on Major Collector (VVMP Street Section D) and Minor Collector (VVMP Street Section E).

On-street parking will be provided on Barber Street (Major Collector & Minor Collector), the portion of the Loop Road (Minor Collector) between Barber Street and Villebois Drive, and the portion of Villebois Drive (Major Collector) between the Loop Road and Boeckman Road. Villebois Village will be developed with front doors facing the street. On-street parking is an important community characteristic for both visitors and residents when driveways are located at the back of the house, since it encourages activity on the street and provides convenient access to homes. These street sections have been designed to enable safe parking and unparking maneuvers so as not to adversely affect the function of a Collector street.

- Increase planter to 8' and median to 15' on Major Collector (VVMP Street Section D), which increase right-of-way to 92' and curb-to-curb to 65'.

Planter strip and median widths are increased on the portion of Barber Street between 110<sup>th</sup> Avenue and Coffee Lake Creek Drive and on Villebois Drive between the Loop Road and Coffee Lake Creek Drive. The wider planter strips and medians will allow larger canopied trees to be planted throughout the Village. Larger canopied trees will contribute to reductions in "heat island effect." Wider planter areas also will allow for greater variety in street trees by increasing size options. Thus, wider planter strips will contribute to the sustainability and diversity of the community.

- Increase planter to 7 ½' and stripe parking and bike lane on Residential Street (VVMP Street Section G), which increases curb-to-curb and right-of-way widths.

The wider planter strip will allow larger canopied trees to be planted (see above discussion). Parking and bike lanes will be striped due to the high level of activity expected along this street.

- Increase sidewalk widths on Residential Streets (VVMP Street Sections H, I, J and K) and increase planter strip widths on Residential Streets (VVMP Street Sections I, J, K and L).

Sidewalk widths on these streets will be increased due to the higher levels of pedestrian activity anticipated on these streets. The wider planter strips will allow larger canopied trees to be planted (see above discussion).

- Reduce curb-to-curb widths to 20' and not allow parking on Residential Streets (VVMP Street Sections J, K and M).

This street section will be used where abutting land uses do not require on-street parking. The reduced street widths will minimize impervious areas, increase park areas and protect trees.

### ***TSP Figure 4.8 through 4.12: Major Street System Improvements.***

Response: *Figure 8 – Proposed Arterial/Collector Street System* shows the proposed street system in Villebois. This street system provides the east-west and north-south Arterials and

Collectors as is prescribed in the TSP Figure 4.8, with the following additions. The alignment of Barber Street (Major Collector) between Brown Road and 110<sup>th</sup> Avenue is slightly altered with the *Villebois Village Master Plan* and the link between 110<sup>th</sup> Avenue and Grahams Ferry Road (Minor Collector) is shown. The alignment of Villebois Drive (Major Collector) between 110<sup>th</sup> Avenue and Boeckman/Tooze Road is slightly altered with the *Villebois Village Master Plan*.

Proposed lanes on all Villebois Streets and intersections will provide acceptable traffic operations and safety as required in the Wilsonville TSP. Therefore, the planned capacity and connectivity of the Wilsonville TSP is retained in the proposed *Villebois Village Master Plan*.

The Wilsonville TSP mentions many of the street treatments that are included in the Villebois Village, and are the fundamental premise upon which the Villebois Village circulation plan is based. Particular discussion about these street types is quoted directly below from the City's TSP:

“Green Street”, “Livable Street”, “Skinny Street” or similar concepts are viable alternatives to the roadway standards that follow. Green streets specifically address stormwater runoff issues. Though narrow in scope, the concept has an overall effect on transportation planning and road design by focusing attention on the protection, enhancement, and restoration of the environment. Livable streets are those that promote community livability by considering all modes of transportation, the surrounding land uses, and economic growth when designing transportation facilities. Skinny streets are those that seek to reduce the overall width of the street section in order to decrease the amount of impervious surface and enhance the livability of the urban environment.”

#### ***Implementation***

Future amendments to the TSP will include the new alignments for Barber Street, west of Brown Road and Villebois Drive, between 110<sup>th</sup> Avenue and Boeckman/Tooze Road as shown on *Figure 8 – Proposed Arterial/Collector System of the Villebois Village Master Plan*.

#### ***TSP Figure 5.3a      2002 Bicycle Map & Proposed Bicycle/Pedestrian Projects***

Response: *Figure 5 – Parks & Open Space Plan* shows the proposed pathway system in Villebois. *Figures 9A and 9B* illustrate the proposed cross-sections for pathways and streets with bike lanes. This bicycle and pedestrian system provides alignments that are slightly altered from those shown in the TSP and add alignments to those shown in the TSP. The proposed system provides connectivity for pedestrians and bicyclists among the neighborhoods of Villebois and the surrounding area.

#### ***Implementation***

Future amendments to the TSP will include the new Bicycle/Pedestrian pathways as shown of *Figure 5 – Parks & Open Space Plan* and *Figures 9A and 9B – Street and Trail Sections of the Villebois Village Master Plan*.

## 5.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION

### Goal

The Villebois Village shall provide for a circulation system that is designed to reflect the principles of smart growth.

### Policy

1. The Villebois Village shall encourage alternatives to the automobile, while accommodating all travel modes, including passenger cars, trucks, buses, bicycles and pedestrians.

### Implementing Measures

1. Include the *Villebois Village Master Plan* Arterial and Collector street system (*Figure 8*) and bicycle/pedestrian system (*Figure 5*) in future updates of the 2003 TSP.
2. The *Villebois Village Master Plan* includes the following alternative street sections. Any proposed alternative street sections not included in the list below shall follow the review procedure established in the 2003 TSP.
  - On-street parking on Major Collector (VVMP street section D) and Minor Collector (VVMP street section E).
  - Increase planter to 8' and median to 15' on Major Collector (VVMP street section D), which increase right-of-way to 65' and curb-to-curb to 92'.
  - Increase planter to 7 ½' and stripe parking and bike lane on Residential Street (VVMP street section G), which increases curb-to-curb and right-of-way widths.
  - Increase sidewalk widths on Residential Streets (VVMP street sections H, I, J and K) and increase planter strip widths on Residential Streets (VVMP street sections I, J, K and L).
  - Reduce curb-to-curb widths to 20' and not allow parking on Residential Streets (VVMP street sections J, K and M).
3. Roundabout options at intersections not already identified on *Figure 7 – Street Plan* of the *Villebois Village Master Plan* shall be reviewed through the major alternative process.
4. Requests for major alternatives for access spacing less than 600 feet on Grahams Ferry Road will follow the process outlined in Wilsonville TSP Implementation Measure 4.1.1.b(3). If this major alternative request is approved, access standards shall be resolved. For publicly constructed streets, these standards may be waived for major alternatives by the City Council and for minor alternatives by the City Engineer. A major alternative is one that involves a significant change from the standards impacting capacity and speed, that changes pedestrian safety and convenience, or that alters large areas of required landscaping. Examples include, but are not limited to, changing the number of lanes, moving a sidewalk from the property line to the curb line, using alternatives to standard curb, gutter, and median systems for managing stormwater, or eliminating the landscaped strip. A minor alternative is one that involves a small change from the standards that does not affect capacity or speed and does not diminish safety or aesthetics for the project as a whole. Examples include, but are not limited to, moving a sidewalk to go around landscape features, or a small narrowing of lanes to fit tight right-of-way.

*(Note: This issue has been resolved. The approved SAP South street system reflects the appropriate access spacing on Grahams Ferry Road).*

5. Curb extensions may be utilized within the Villebois Village area under the following basic principles for their placement and design:
- A minimum of 20-foot face-of-curb to face-of-curb street width shall be provided at all Residential street intersections, even where curb extensions are located. In the Village Center (inside the Village Loop), the minimum curb-to-curb public street width should be 22 feet, in order to accommodate delivery and garbage truck movements.
  - Fire trucks, buses, and single-unit trucks (i.e., garbage trucks) shall be able to negotiate from Collector/Arterial streets without crossing the Collector/Arterial street centerline. Fire trucks shall be able to negotiate through Residential streets, although it is acceptable for them to cross the street centerline on Residential streets.
  - Passenger car turning movements shall be able to stay within the street centerline on all streets.
  - Bike lanes shall not be forced into vehicle travel lanes.

Placement of curb extensions shall be reviewed through the City's minor alteration process with Specific Area Plans.

6. Street and pathway alignments shall be demonstrated to be in compliance with Significant Resource Overlay Zone (SROZ) regulations with Specific Area Plans.
7. Pedestrian and bicycle connectivity shall be provided between public and private street termination points and adjacent trails/pathways at the discretion of the City Engineer.
8. Along Villebois Drive between Ravenna Loop and Barber Street is where the "bicycle boulevard" street section will be located:
- 1) The on-street bicycle striping is omitted with proper signage at the beginning and ending of the removed section as required.
  - 2) The smooth asphalt street surface is replaced with a modified street texture providing the following:
    - a. 20-year minimum design life;
    - b. Adequate bicycle "ride" without resulting in an unsafe operating condition.

## GLOSSARY

## Glossary

**Circulation Framework:**

The system for pedestrian and vehicular movement including streets, alleys, lanes, walks and multi-use trails.

**Community Elements Book:**

A planning document prepared by the Master Planner in conjunction with a Specific Area Plan (SAP) that is used to establish the type and location of community elements within the SAP. Community elements include the following: lighting, street trees, site furnishings and tree protection standards.

**Community Housing:**

Property and related equipment that are used or could be used to house chronically mentally ill persons as defined and required by ORS 426.508.

**Connectivity:**

Physical connections between neighbors, within the village itself, and into other parts of the region and the world, that foster social interaction and facilitate ease of travel through a variety of transportation methods.

**DATELUP:**

The Dammasch Area Transportation-Efficient Land Use Plan dated January 31, 1997 is a conceptual master plan for the 520-acre site that is now the subject of the *Villebois Village Concept Plan*.

**Design:**

The conceptualization of the built environment in response to specific sets of human needs and desires.

**Design Principles:**

The fundamental concepts that support the objectives of the *Villebois Village Master Plan* and determine the intrinsic qualities of the built environment within the Village Zone. Design Principles are enacted through conformance with the Design Standards of the Village Zone.

**Design Standards:**

Criterion established for use in the initial design or construction of buildings to guide the selection and arrangement of common building elements to achieve a minimum level of quality and consistency in the finished product. Design Standards are applied through the Village Zone.

**Development Standards:**

Criterion established for initial planning of any change to improved or unimproved real estate that determines the relative size and arrangement of common building elements in order to achieve a certain level of quality and consistency in the built environment. Development Standards are applied through the Village Zone.

**Diversity:**

A vibrant choice of housing styles, types and levels of affordability, a healthy mixture of employment opportunities and offices, and a variety of available goods and services.

**Environmental Sustainability:**

Using, developing, and protecting natural resources at a rate and in a manner that enables people to meet their current needs while providing that future generations can meet their own needs.

**Estate:**

This land use accommodates large detached houses with private yards. Garages will be front-loaded or by alley, as per location.

**Flex-Space:**

Ground floor units of a multi-family or mixed-use building that can be converted to office/retail or residential uses.

**Governor's Quality Development Objectives:**

Signed into executive order December 1997 and amended August 2000, *Use of State Resources to Encourage the Development of Quality Communities*, articulates seven "quality development objectives" (QDOs) that serve to guide and coordinate state agency actions and investments in community development for increased livability and for efficient use of public resources.

**Large:**

This land use accommodates large detached houses with large private yards. Located at the periphery of Villebois, these homes will often have front-loaded garages.

**Master Planner:**

Villebois LLC; selected by the City of Wilsonville and the State of Oregon in accordance with ORS 426.508 to master plan the area prescribed in DATELUP.

**Medium Detached:**

This land use accommodates modestly sized detached houses with small private yards and alley parking access.

**Mixed-use Development:**

Development characterized by buildings that combine more than one use; for example, commercial and residential.

**Multi-Modal Transportation:**

A circulation system that accommodates a wide range of user groups including bicycles, vehicles, pedestrians and buses.

**Neighborhood Apartments:**

This land use designation is intended to provide for-rent multi-family units in a neighborhood setting. Buildings will be mostly two or three stories and of a character compatible with detached homes. In designated locations, this land use provides for neighborhood commercial uses at ground level.

**Neighborhood Center:**

An area of commercial uses at or near the center of a neighborhood, not exceeding 3,500 SF to provide nearby residents with convenient access to goods and services. Neighborhood Centers may only be located within a Neighborhood Commons.

**Neighborhood Commons:**

A site at or near the center of a neighborhood for use by the local residents which includes a Neighborhood Center, a transit shelter and a tract of open public land. Meant to provide a social gathering place and a safe waiting place for transit riders.

**Open Space:**

Land that is not covered by buildings, paving, or other hard surfaces, unless such hard surfaces are part of an approved landscape plan.

**ORS 426.508:**

Oregon Revised Statute authorized the sale of F. H. Dammasch State Hospital including its fair market value, the redevelopment of the property and the reservation of property for community housing. Passed in 1999 by the Oregon legislature, the statute requires redevelopment of the property to be consistent with the DATELUP adopted concept plan.

**Pattern Book:**

An illustrative document that depicts the architectural character of a proposed development, submitted as proof of compliance with the Design Principles and Design Standards. A Pattern Book is prepared by the Master Planner in conjunction with a Specific Area Plan (SAP).

**Plaza:**

As located and described in the *Villebois Village Master Plan*, the plaza is a public space at the intersection of important streets set aside for civic purposes and commercial activity.

**Rainwater Management Systems:**

Infrastructure and procedures for the collection, filtration, and conveyance of rainwater within the *Villebois Village Master Plan* area.

**Residential-Village (R-V) Comprehensive Plan Designation:**

The area within which the *Villebois Village Master Plan* applies.

**Row House:**

A form of Single Family Dwelling where fee-simple, for-sale multi-story units are arranged in an unbroken row with no side yards and with or without an accessory dwelling unit or building.

**Significant Resource Overlay Zone (SROZ):**

An overlay zone within the City of Wilsonville that is intended to implement the goals and policies of the City's Comprehensive Plan relating to natural resources, open space, environment, flood hazard and the Willamette River Greenway (see Section 4.139 of the City's Planning and Land Development Ordinance).

**Specific Area Plan (SAP):**

A series of detailed plans covering distinct portions of the *Villebois Village Master Plan* (VVMP) area. These plans provide a higher level of analysis and detail than the *Villebois Village Master Plan* within a specified area of the *Villebois Village Master Plan*.

**Small Detached:**

This land use accommodates small, detached houses with alley parking access. In some instances, houses may be arranged around a central yard or parking court.

**Standard Detached:**

This land use accommodates detached houses with private yards and alley parking access.

**Sustainability:**

Developing and protecting resources at a rate and in a manner that enables people to meet their current needs and also provides that future generations can meet their own needs. Sustainability requires simultaneously meeting environmental, economic and community needs.

**Village Center:**

An area located on the *Villebois Village Concept Plan* and *Villebois Village Master Plan*, characterized by the relative increased density of both residential and commercial uses. The Village Center occurs at the intersection of three neighborhoods and is the focal point of civic and commercial activity in Villebois.

**Village (V) Zone:**

The zoning district that is applied to areas designated Residential Village on the Wilsonville Comprehensive Plan map. The Village zone implements the Residential-Village designation and the *Villebois Village Master Plan*.

**Villebois Village Concept Plan (VVCP):**

A plan that depicts the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies for Villebois. This plan, while not completely engineered, includes detail sufficient to illustrate the inherent features of the site and the probable development pattern for a community that will develop in successive stages or subdivisions. This plan replaced DATELUP as the conceptual plan for the plan area.

**Villebois Village Master Plan (VVMP):**

The document depicting the general organizational structure and concepts of the Residential-Village Comprehensive Plan designation, including but not limited to the form and location of public open spaces, types and alignment of the various thoroughfares, and land use types and locations. The Master Plan will serve as a basis for Village zone development standards.

## LIST OF REFERENCE DOCUMENTS

City of Wilsonville Final Draft Wastewater Collection System Master Plan, June 2001.

City of Wilsonville Final Draft Wastewater Collection System Appendix, June 2001.

City of Wilsonville Parks & Recreation Master Plan, Final Report, December 1994.

City of Wilsonville Stormwater Master Plan, June 2001.

City of Wilsonville Transportation Systems Plan (TSP), April 17, 2003 Public Draft.

City of Wilsonville Water System Master Plan – Ordinance No. 531, Adopted January 24, 2001.

Creating Livable Streets: Street Design Guidelines for 2040, Metro, June 2002.

Memorandum to Eldon Johansen, City of Wilsonville from Ransford S. McCourt, P.E., DKS Associates, April 6, 2004.

Memorandum of Understanding between Villebois/City of Wilsonville and Metro, Metro Contract # 926225.

# APPENDIX A

# APPENDIX A

## Capital Improvement List and Cost Estimate

PRELIMINARY

### ***Parks***

Active Open Space (Park Improvements)	\$7,360,563
Passive Open Space (Park Improvements)	\$783,580

### ***Sanitary Sewer***

24" Parallel Sanitary Sewer (UD11-UD16) (Project A)	\$976,750
10" Sanitary Sewer in Tooze Road (Project AB)	\$701,000
21" & 24" Kinsman Rd. San. Sewer (UD28-UD37) (Project AC)	\$766,200
Coffee Lake Road 12" San. Sewer (Project AD)	\$474,000
12" Barber Street San. Sewer (Project AE)	\$195,000

### ***Water***

Boeckman / Tooze 24" Water Main (Project C)	\$914,480
Barber east of Brown 18" Water Main (Project D)	\$757,900
Village Center Dr. east of 110th 18" Water Main (Project E1)	\$352,900
Tooze Road 30" Water Main (Project E2)	\$821,100
Grahams Ferry Road 18" & 12" Water Main (Project Z)	\$535,000
Kinsman Road 48" Water Main	\$2,349,000
Barber - 110th to Brown - 18" Water Main	\$498,000
LEC 12" - Barber to boundary (oversize only)	\$36,900

### ***Storm Sewer***

#### W Components:

Coffee Lake (Detention/Water Quality/Infiltration/Conveyance)	\$3,380,000
Arrowhead Creek impr.(CLC-10)	\$790,000
Greenway Corridor (detention, infiltration, water quality and conveyance)	\$1,280,000
Roadside Swales	\$1,203,000
Wilsonville Road Culvert	\$100,000
Arrowhead Creek Culvert south of Wilsonville Road	\$100,000

# APPENDIX A

## Capital Improvement List and Cost Estimate

PRELIMINARY

### Streets

Boeckman Rd. from 95th Ave. to Tooze Rd. (Project K)	\$13,128,507
Tooze Rd. from Boeckman Rd. to GFR (Project P)	\$3,540,200
Barber St. from Kinsman Rd. to Brown Rd. (Project N2)	\$3,538,430
Grahams Ferry Rd. West Side (Project Q)	\$1,355,600
Grahams Ferry Rd. East Side (Project R)	\$2,242,800

Wilsonville Road from RR to BFR (Project #3)	\$1,176,200
Wilsonville Road Phase 2B & 3 (Project #4)	\$6,168,000
Kinsman Rd. from Barber St. to Boeckman Rd. (Project #5)	\$4,281,750
Brown Rd. from Wilsonville Rd. to Barber St. (Project #7)	\$2,611,000
Grahams Ferry Road West 1/2 street improvements - LEC	\$1,060,000
Grahams Ferry Road East 1/2 street improvements - LEC	\$900,000
Grahams Ferry Road from LEC to Bell Road	\$1,290,000
Bell Road from Grahams Ferry Road to Wilsonville Road	\$920,000

DKS1 - Add Rt. Turn Lanes SB & EB - Parkway/Boeckman Intx.	\$796,100
DKS2 - Add SB & WB Lt. Turn Lanes - Clutter/Graham Ferry Rd.	\$1,104,200
DKS3 - Traffic Signal at Intx. Boberg / Boeckman Rd.	\$337,200

Barber - Grahams Ferry to Brown (Project O)	\$1,768,000
110th Avenue - Barber to Village Center Road (Project V)	\$857,000
Village Center Road - 110th to Boeckman (Project J)	\$806,000

### Interchange

Wilsonville Rd./I-5 Interchange Phase 1 (Project 2A)	\$874,400
Wilsonville Rd/I-5 Interchange Ph. 3 (working Est. \$2,358,500) (Project 2B)	\$17,563,200
Wilsonville Rd. / I-5 Interchange Phase 2 (Project 8)	\$1,862,400

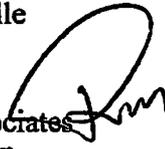
**Total \$92,556,360**

Note: This list is preliminary and will be refined with the Finance Plan.

## APPENDIX B

**MEMORANDUM**

**TO:** Chris Neamtzu, City of Wilsonville  
Sharon Zimmerman, City of Wilsonville  
Mike Stone, City of Wilsonville

**FROM:** Ransford S. McCourt, P.E., DKS Associates   
Scott Mansur, P.E., DKS Associates 

**DATE:** June 15, 2005

**SUBJECT: Villebois Urban Village Master Plan Amendment Transportation Summary**  
P02246-000-004

The purpose of the memorandum is to evaluate transportation related aspects of the revised Villebois Village Master Plan dated April 26, 2005. While we have provided comment on several documents from Villebois, this is our first formal review of the master plan. The proposed master plan revision has increased the number of housing units to 2,473, which is above the 2,400 unit count that has been previously evaluated. Additionally, the internal Villebois roadway network has changed. The evaluation will include the following:

- Trip Generation Update
- Wilsonville Road Interchange Area Trip Comparison
- Master Plan Transportation Review

**Trip Generation Update**

The Villebois Village Master Plan was previously estimated to generate approximately 2,240 PM peak hour trips to each of the individual land uses<sup>1</sup> and 1977 net new PM peak hour trips that would travel outside of the Villebois Village development<sup>2</sup>. Since this previous estimation, the Villebois Village master plan has been updated and the *ITE Trip Generation Manual* has been revised from the 6<sup>th</sup> Edition to the 7<sup>th</sup> Edition that includes additional land use trip generation data. Additionally the mix of dwelling unit types has changed. Based on these changes, the proposed master plan would generate 2,177 PM peak hour trips to each of the individual land uses and 1,907 PM peak hour trips that would travel outside of the Villebois Village development. **The proposed master plan would generate approximately 70 fewer net new PM peak hour trips than previously analyzed. Therefore, transportation findings as previously identified would be consistent with the current plan.** The PM peak hour trip generation is summarized in Table 1.

<sup>1</sup> *Villebois Site Plan Review Comments*, DKS Associates, April 6, 2004.

<sup>2</sup> *Phasing of Off-Site Improvements Associated with the Villebois Development*, DKS Associates, July 19, 2004.

**Table 1: Villebois Trip Generation Summary- PM Peak Hour**

Transportation Study	Study Date	Unit Count	Total Land Use Trips	External Trips*
Villebois Internal Circulation Memo Approved Master Plan	January 13, 2003	2,383	2,272	2,011
Villebois Master Plan Legislative Amendment	April 6, 2004	2,400	2,240	1,977
Villebois Master Plan Second Legislative Amendment	Current Study	2,474	2,177	1,907

\*Accounts for trips within Villebois separate from trips to and from points external to Villebois.

**Wilsonville Road Interchange Area Trip Comparison**

The Wilsonville Road interchange area is defined as any of the four existing signalized intersections on Wilsonville Road between Boones Ferry Road and Town Center Loop West. The interchange comparison assumes full buildout of the Villebois Village Master Plan as well as a series of expected roadway projects (Boeckman, Kinsman, and Barber extensions) that would change circulation patterns thus reducing the number of interchange area trips. **The proposed master plan would generate 17 fewer PM peak hour trips through the Wilsonville Road interchange area.** Table 2 compares the number of PM peak hour trips through the Wilsonville Road interchange area between the current master plan and two past master plan evaluations.

**Table 2: Wilsonville Road Interchange Area Trip Comparison (PM Peak Hour)**

Transportation Study	Study Date	Unit Count	Wilsonville Road Interchange Area Trips
Villebois Internal Circulation Memo Approved Master Plan	January 13, 2003	2,383	463
Villebois Master Plan Legislative Amendment	April 6, 2004	2,400	455
Villebois Master Plan Second Legislative Amendment	Current Study	2,474	438

**Villebois Master Plan Internal Street Evaluation**

The following section provides a detailed review and associated comments in regards to the Villebois Master Plan document related to internal circulation for pedestrians, bicycles and motor vehicles.

*Chapter 3, Section 3.1, Figure 5- Parks & Open Space Plan, page 20:*

The major, minor, and nature trails/pathways shown on Figure 5 show minimal linkages to and from the public and private street system. Linkages should be provided between the point where

all public and private streets terminate to the adjacent trail to enhance pedestrian and bicycle circulation to the proposed trails.

***Recommendation: Language should be added to the master plan stating that linkages should be made between the point where all public and private streets terminate to adjacent trail/pathway to enhance pedestrian and bicycle access/circulation.***

*Chapter 3, Section 3.1, T-1 Nature Trails (PRMP Category), page 25:*

The nature trails should be 6 feet in width except for short distances (less than 100 feet) when the natural environment or physical constraints precludes this width. In these cases the width could be a minimum of 4 feet.

***Recommendations: Change the first bullet to read 6 feet wide. Replace first paragraph (after bullets) with the following: Nature trails will be located within two of the large natural open spaces at Villebois. These trails will be six feet wide with a soft surface. In cases where the natural environment precludes this width, a minimum of 4 feet could be used for short distances (less than 100 feet).***

*Chapter 3, Section 3.1, T-2 Minor Pathways (PRMP Category), page 25:*

The minor pathways should be 10 feet in width except for short distances (less than 100 feet) when the natural environment or physical constraints precludes this width. In these cases the width could be a minimum of 6 feet.

***Recommendations: Change the first bullet to read 10 feet wide. Add the following sentences to the end of the first paragraph (after bullets): Minor pathways should be 10 feet wide. In cases where the natural environment precludes this width, a minimum of 6 feet could be used for short distances (less than 100 feet).***

*Chapter 3, Section 3.1, T-3 Major Pathways (PRMP Category), page 25:*

The major pathways should be 12 feet in width except for short distances (less than 100 feet) when the natural environment or physical constraints precludes this width. In these cases the width could be a minimum of 10 feet.

***Recommendations: Change the first bullet to read 12 feet wide. Add the following paragraph (after bullets): Major pathways should be 12 feet wide. In cases where the natural environment precludes this width, a minimum of 6 feet could be used for short distances (less than 100 feet).***

*Chapter 5, Section 5.2, Figure 7- Street Plan, page 64:*

The street plan was compared to the previous street plan in the approved master plan. The major changes noted with the new street plan were the addition of private woonerf's within Village Center, removing bike lanes on the Villebois Drive roadway segment between Loop Road and Barber Street, and enhancing the street connectivity within Village Center. Additional details are needed on this map that include future SMART bus stop locations and access management hatching on Boeckman Road and Tooze Road.

The woonerf street segment adjacent to the plaza that is shown connecting to Barber Street should be removed. The transition from collector street to local street should occur before encountering the woonerf. The lack of a street definition for cross streets presents an ADA crossing issue. Where public streets intersect the woonerf street section as shown on the plan, the intersection should have no vertical deflection (non-woonerf) for public street crossings. If crossings are to be elevated, they will need to be approved by Public Works and Emergency Service departments.

The Villebois Drive roadway segment between Loop Road and Barber Street should have bike lanes as previously shown in the approved master plan (street section G). This segment provides direct bicycle connectivity from Boeckman Road and the plaza/mixed use activity center of Villebois. Bicycle lanes are especially important on this segment for recreational or inexperienced bicyclists heading to the Village Center (these users are not typically comfortable merging with traffic).

***Recommendation: The woonerf segment adjacent to Barber Street should be converted to a Residential-Village Center street (street type H). All public street intersections with the private woonerf's should be lowered so there is no vertical deflection for the public street crossings or shall have an ADA plan plus approval of the Public Works and Emergency Services. The Villebois Drive roadway segment between Loop Road and Barber Street should have bike lanes as previously shown in the approved master plan (street section G). The project sponsor should contact SMART (682-7790) to determine future transit needs within Villebois. Future bus stops should be identified on Figure 7 so that setbacks, right of way, and sidewalk area are preserved. Tooze Road and Boeckman Road should have access management hatch as shown on Grahams Ferry Road.***

*Chapter 5, Section 5.2, Figure 9B- Street and Trail Sections, page 67:*

The current master plan shows cross sections for the proposed pathways, trails, and woonerf. The pathway and trails should show the cross section range as previously mentioned. The woonerf cross section N1 should have a minimum of 32 feet from face of bollard to face of bollard.

***Recommendation: The major pathway (P) should show a paved surface of 12 feet with a note below that allows 10 feet in cases of documented environmental/physical constraints. The minor pathway (Q) should show a paved surface of 10 feet (6 foot option). The nature trail should show a soft range of 6 feet (4 foot option). A note should be added to the minimum side of the range for the trails and pathways stating that the minimum width is for short distances (less than 100 feet) only when the natural environment precludes the maximum width. The woonerf (N1) should be modified for 32 feet of width from face of bollard to face of bollard.***

*Chapter 5, Section 5.2, Roundabouts, page 68:*

On-street parking allowed should not be allowed on all roundabout approaches within 100 feet to 200 feet of the roundabout.

***Recommendation: A statement should be added to this section that states there will be no on-street parking allowed on all roundabouts approaches within 100 feet to 200 feet of the roundabout.***

*Chapter 5, Section 5.2, Access Control on Minor Arterials, page 69:*

Grahams Ferry is the only minor arterial that is mentioned in the section. Boeckman Road and Tooze Road should also be included in the section since the master plan development fronts these roadways.

***Recommendation: Add "Tooze Road or Boeckman Road" immediately after Grahams Ferry Road in the first sentence of this section.***

*Chapter 5, Section 5.2, Continuity of Streets and Trails, page 69:*

Pedestrian and bicycle linkages should be provided to and from the public (including alleys) and private street system to adjacent trails and pathways. Linkages should be provided between the point where all public and private streets terminate to the adjacent trail to enhance pedestrian and bicycle circulation to the proposed trails. Pedestrian and bicycle linkages should be provided from private alleys that dead end to either the public right of way or trails and pathways as applicable. These linkages are necessary to provide good pedestrian and bicycle connectivity.

***Recommendation: Add a second paragraph to this section as follows: Pedestrian and bicycle linkages between the point where all public and private streets terminate to adjacent trail/pathways shall be provided to enhance pedestrian and bicycle circulation. This includes connections from alleys for pedestrians and bicycles to and from either the public right of way or adjacent public trails and pathways.***

*Chapter 5, Section 5.2, Curb extensions, page 69:*

A minimum of 20 feet (curb to curb) of approach width at local street intersections can be difficult for large service trucks and fire apparatus to negotiate turns. Additional text should be added that states that the applicant will provide AUTOTurn diagrams for all intersections with 20-foot approach widths. It is not desired that curb return radii be enlarged to accommodate 20-foot streets. Additionally 20-foot street segments should be limited to less than 100 feet.

***Recommendation: Add the following sentence to the end of the first bullet: Where the minimum 20 foot approach width is provided, the applicant shall provide AUTOTurn diagrams for trucks and fire district's apparatus to assure turns can be made. Revise the third bullet to state: All passenger car turning movements (including pickups, vans, SUV's) shall be able to stay within the street centerline on all streets.***

*Chapter 5, Section 5.3, TSP Goal 4.1, page 70:*

Safe sight distance to and from public streets will need to be verified, documented, and stamped by a registered professional Civil Engineer licensed in the State of Oregon.

***Recommendation: Add last sentence to the following section: Prior to occupancy, sight distance at all access points to public streets will need to be verified, documented, and stamped by a registered professional Civil Engineer licensed in the State of Oregon.***

*Chapter 5, Section 5.2, page 70:*

*The following details should be added to this section in regards to future bus stop locations.*

***Recommendation: Add the following to the end of section 5.2:***

***Bus Stop Locations***

***Transit service is not provided in Villebois today. Future transit service will follow the TSP framework for routing. Future potential bus stops should be identified on Figure 7.***

***Implementation: The Villebois Village Master Plan shall identify provisions for future bus stops locations.***

*Chapter 5, Section 5.3, TSP Figures 4.12 through 4.22: Street Classification, Widths and Names, page 75:*

On-street parking should not be allowed on Barber Street, Villebois Drive, and Loop Road where it is within the influence area of a roundabout approach (within 100 feet to 200 feet of the roundabout). Medians will be placed where it is not in conflict with left turn lane needs. A minimum of 20 feet (curb to curb) of approach width at local street intersections can be difficult for large service trucks and fire apparatus to negotiate turns. Additional text should be added that states that the applicant will provide AUTOturn diagrams for all intersections with 20-foot approach widths. It is not desired that curb return radii be enlarged to accommodate 20-foot streets. Additionally 20-foot street segments should be limited to less than 100 feet.

***Recommendation: Add the following sentence to the first bullet: On-street parking should not be allowed on Barber Street, Villebois Drive, and Loop Road where it is within the influence area of a roundabout approach (within 100 feet to 200 feet of the roundabout). Add the following sentence to the second bullet: The medians will be placed where it is not in conflict with left turn lane needs. Add the following to the fifth bullet: Where the minimum 20 foot approach width is provided, the applicant shall provide AUTOturn diagrams for trucks and fire district's apparatus to assure turns can be made. Revise the third bullet to state: All passenger car turning movements (including pickups, vans, SUV's) shall be able to stay within the street centerline on all streets.***

*Chapter 5, Section 5.4, Implementing Measures #4, page 75:*

Grahams Ferry is the only minor arterial that is mentioned in the section. Boeckman Road and Tooze Road should also be included in the section since the master plan development fronts both these roadways.

***Recommendation: Add "Tooze Road or Boeckman Road" immediately after Grahams Ferry Road in the first sentence of this section.***

*Chapter 5, Section 5.4, Implementing Measures #5, page 75:*

A minimum of 20 feet (curb to curb) of approach width at intersections is difficult for large service trucks and fire apparatus to negotiate turns. Additional text should be added that states

that the applicant will provide AUTOTurn diagrams for all intersections with 20-foot approach widths.

***Recommendation: Add the following sentence to the end of the first bullet: Where the minimum 20 foot approach width is provided, the applicant shall provide AUTOTurn diagrams for trucks and fire district's apparatus to assure turns can be made. Revise the third bullet to state: All passenger car turning movements (including pickups, vans, SUV's) shall be able to stay within the street centerline on all streets.***

## **RESIDENTIAL STREET WIDTHS**

The proposed Villebois Village Master Plan recommends implementation of 20 feet of pavement (curb to curb) on residential streets (outside of Village Center) that do not need parking. The Master Plan references these 20-foot street standards in following locations:

Chapter 5, Section 5.2, Figure 7- Street Plan, Figure 9A- Street and Trail Sections – A, and Figure 9B- Street and Trail Sections – B, pages 64, 66-67:

**These figures reference street sections J, K, and M that show 20-foot minimum cross section with no parking.**

Chapter 5, Section 5.2, Curb extensions, first bullet on page 69 where it states:

**“A minimum of 20-foot face-of-curb to face-of-curb street width shall be provided at all Residential street intersections, even where curb extensions are located.”**

Chapter 5, Section 5.3, TSP Figures 4.12 through 4.22: Street Classification, Widths and Names, fifth bullet on page 73 where it states:

**“Reduce curb-to-curb widths to 20 feet and not allow parking on Residential Streets (VVMP street sections J, K, and M).”**

Chapter 5, Section 5.4, Implementing Measures #2, sixth bullet on page 75 where it states:

**“Reduce curb-to-curb widths to 20 feet and not allow parking on Residential Streets (VVMP street sections J, K, and M).”**

Chapter 5, Section 5.4, Implementing Measures #5, first bullet on page 76 where it states:

**“A minimum of 20-foot face-of-curb to face-of-curb street width shall be provided at all Residential street intersections, even where curb extensions are located.”**

These three street sections (sections J, K, and M) make up the majority of the residential streets outside of the Village Center as shown on Figure 7. A more consistent application of typical cross sections (compared to many new neighborhood designs) that we would recommend implementation for J, K, and M would be 32 feet of pavement (curb-to-curb) for parking on both sides, 28 feet for parking on one side, and 24 feet of pavement with no parking. The predominant application of J, K, and M should be 28 feet or 32 feet. We recommend that the 20-foot minimum pavement width should only be used on local street segments that are less than 100 feet in length and serve tangent movements (not required turn movements like a tee intersection). This typical cross section (24 feet) would be 4 feet shorter than the City of Wilsonville standard residential street with no parking<sup>3</sup>. The project sponsor should be required to get a City Engineer's approval to use the 20 foot minimum cross section on residential streets, using similar criteria as those noted in the Master Plan such as providing AUTOturn diagrams for trucks and fire district's apparatus to assure turns can be made.

Feel free to give Scott Mansur or me a call if you have any questions or comments.

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<sup>3</sup> City of Wilsonville Transportation System Plan, April 2002, Figure 4.14.

## MEMORANDUM

**TO:** Eldon Johansen, City of Wilsonville  
**FROM:** Ransford S. McCourt, P.E.  
**DATE:** April 6, 2004  
**SUBJECT:** Villebois Site Plan Review Comments P/A No. 02246-000

The purpose of this memorandum is to evaluate the revised Villebois site plan received from the Villebois design team on March 10, 2004. Recent modifications have been made to the site plan that was approved during the Master Plan process early in 2003. The modifications are primarily changes to street layout and relocation of land uses. The revised site plan dated March 4, 2004, is part of a proposed legislative amendment to the Villebois Master Plan.<sup>1</sup> This evaluation will include the following:

- Comparison of land use and trip generation between plans
- Elementary school access
- 600 foot access spacing on Grahams Ferry Road south of Tooze
- Proximity of public streets in relation to roundabouts
- Community college access (not part of the proposed legislative amendment, but a cursory review is included for the City's planning purposes)
- Left turn lane needs on Loop Road between Villebois Drive and Barber Street

### ***Land Use and Trip Generation***

This section includes a comparison of PM peak trip generation between the approved Master Plan and the proposed legislative amendment to the Master Plan. Trip generation rates for the Master Plan phase of this project were based on the 6<sup>th</sup> Edition of *ITE Trip Generation*. These rates will be used for the comparison of plans even though a new 7<sup>th</sup> Edition of *ITE Trip Generation* is now available. Tables 1 through 3 compare the PM peak trip generation based on the approved land uses for the Master Plan and the revised land uses for the amendment. The proposed elementary school location was changed however the proposed phase of construction (Phase 8) and size of the school remain the same. Residential land uses changed in type and quantity for each phase resulting in a net reduction in total trips as shown in Tables 1 through 3.

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<sup>1</sup> Email from Stacy Connery, Alpha Engineering, on March 9, 2004.



1400 S.W. 5<sup>th</sup> Avenue  
Suite 500  
Portland, OR 97201-5502

(503) 243-3500  
(503) 243-1934 fax  
[www.dksassociates.com](http://www.dksassociates.com)

**Table 1: Approved Master Plan – PM Peak Trips by Phase**

Phase (Proposed Year)	Single-Family			Condo/ Townhouse			Apartments			Commercial/School			All
	DU	Rate	Trips	DU	Rate	Trips	DU	Rate	Trips	KSF	Rate	Trips	Trips
1 (2004)	149	1.01	150	47	0.54	25	8	0.62	5	-	-	-	180
2 (2005)	173	1.01	175	-	-	-	-	-	-	-	-	-	175
3 (2006)	127	1.01	128	38	0.54	21	202	0.62	125	-	-	-	274
4 (2007)	156	1.01	158	111	0.54	60	154	0.62	95	5.0	8.98	45	358
5 (2008)	121	1.01	122	320	0.54	173	31	0.62	19	17.5	8.98	157	471
6 (2009)	107	1.01	108	130	0.54	70	30	0.62	19	10.0	8.98	90	287
7 (2010)	81	1.01	82	81	0.54	44	10	0.62	6	2.5	8.98	22	154
8 (2011)	115	1.01	116	112	0.54	60	80	0.62	50	-	-	-	*373
*School	-	-	-	-	-	-	-	-	-	47.0	3.12	147	-
<b>Total</b>	<b>1029</b>	<b>-</b>	<b>1039</b>	<b>839</b>	<b>-</b>	<b>453</b>	<b>515</b>	<b>-</b>	<b>319</b>	<b>35.0</b>	<b>-</b>	<b>461</b>	<b>2272</b>

DU = Dwelling Unit

KSF = 1,000 Square Feet

\* School is physically located in Phase 4 (2007) however it will not likely be built until Phase 8 (2011).

**Table 2: Proposed Legislative Amendment to the Master Plan – PM Peak Trips by Phase**

Phase (Proposed Year)	Single-Family			Condo/ Townhouse			Apartments			Commercial/School			All
	DU	Rate	Trips	DU	Rate	Trips	DU	Rate	Trips	KSF	Rate	Trips	Trips
1 (2004)	70	1.01	71	88	0.54	48	-	-	-	-	-	-	119
2 (2005)	190	1.01	192	50	0.54	27	18	0.62	11	-	-	-	230
3 (2006)	214	1.01	216	198	0.54	107	-	-	-	-	-	-	323
4 (2007)	143	1.01	144	140	0.54	76	262	0.62	162	-	-	-	449
5 (2008)	90	1.01	91	366	0.54	198	31	0.62	19	7.5	8.98	67	465
6 (2009)	74	1.01	75	214	0.54	116	30	0.62	19	17.5	8.98	157	300
7 (2010)	89	1.01	90	15	0.54	8	-	-	-	10	8.98	90	98
8 (2011)	58	1.01	59	-	-	-	80	0.62	50	-	-	-	*256
*School	-	-	-	-	-	-	-	-	-	47.0	3.12	147	-
<b>Total</b>	<b>928</b>	<b>-</b>	<b>938</b>	<b>1071</b>	<b>-</b>	<b>580</b>	<b>421</b>	<b>-</b>	<b>261</b>	<b>-</b>	<b>-</b>	<b>461</b>	<b>2240</b>

DU = Dwelling Unit

KSF = 1,000 Square Feet

\* School is physically located in Phase 8 (2007).

**Table 3: Comparison of PM Peak Vehicle Trips by Phase**

Phase (Proposed Year)	Approved Master Plan Trips	Proposed Amendment Trips	Change in Trips from Approved Master Plan	Cumulative Change in Trips
1 (2004)	180	119	-61	-61
2 (2005)	175	230	55	-6
3 (2006)	274	323	49	43
4 (2007)	358	449	91	134
5 (2008)	471	465	-6	128
6 (2009)	287	300	13	141
7 (2010)	154	98	-56	85
8 (2011)	373	256	-117	-32
<b>Total</b>	<b>2272</b>	<b>2240</b>	<b>-32</b>	<b>-</b>

Because the total number of trips has changed very little, the mitigations recommended for the entire life of the development as shown in the approved Master Plan should not change. Reviewing the cumulative change in trips shows that the timing of those mitigation measures required for Villebois may change as the cumulative number of trips by Phase 4 is higher for the proposed amendment than for the approved Master Plan. Mitigations for Phases 1 through 3 should remain the same, mitigations for Phases 4 and 5 may be slightly accelerated, and by Phase 6, mitigations previously required up through Phase 7 would need to be completed. Mitigations previously required in Phase 8 would probably still remain connected to Phase 8. Further study would be required to determine more precisely the impacts of the accelerated accumulation of trips.

***Elementary School Access***

The previously approved location of the elementary school was on the east side of the development near Coffee Lake Drive. The proposed location is in the northwest area replacing two blocks of residential in Phase 8. There is a north-south roadway on either side of the proposed elementary school site that crosses the green space with a narrow street section. These roadways will need to be widened to accommodate additional school traffic.

Curb return radii should be designed to accommodate busses at any intersections where bus traffic might be expected. This may result in larger curb returns at many of the local street intersections, especially those in the immediate vicinity of the elementary school site. Possible school bus routes should also be considered.

The proposed location for the school would generate more left turns from Boeckman Road into Villebois during the AM peak period and more left turns from the Villebois access points onto Boeckman Road during the PM peak period. See the later section on left turn lane needs for more information.

***Access Spacing***

In a memorandum dated January 13, 2003, we recommended the following:

“Clackamas County classifies Grahams Ferry Road as a Collector<sup>2</sup> although its 85<sup>th</sup> percentile speeds are in the range of 50 to 55 miles per hour. Roadway volumes at Tooze Road and Barber Street are high enough to warrant left turn lanes on Grahams Ferry Road even if speeds were lower. Although left turn lanes would not be warranted by volumes at other intersections along Grahams Ferry Road, safety is a major concern on this corridor and the deceleration distances and turn lanes nearly extend into each other from Tooze Road to Barber Street, therefore a center turn lane is recommended along the length of Grahams Ferry Road adjacent to Villebois. Provision of left turn lanes requires adequate space for vehicles to decelerate and enter a left turn pocket safely. In the deceleration zone vehicles should not encounter vehicles from access points or cross street traffic that create conflicts. These left turn lane and deceleration needs would be the controlling aspect of access spacing on Grahams Ferry Road. To determine safe spacing, ODOT standards were utilized for determining deceleration and left turn lane lengths and needs. Left turn lanes of approximately 150 feet and deceleration lengths for 290 to 370 feet would be required for safe design (total distance of 590 to 670 feet)<sup>3</sup>. The proposed roadways are shown accessing Grahams Ferry Road as close as 250 feet apart. These should be relocated to no less than 600 foot spacing and should consider the position of existing access locations on the west side of Grahams Ferry Road to avoid offset intersections.”

On the proposed plan, some of the seven access points shown on Grahams Ferry Road do meet the 600-foot spacing recommendation however some still do not.

- The northernmost access to Grahams Ferry Road is too close to the intersection with Tooze Road. This access should be moved south. Moving this access south will place it too close to the next access point, but if any deviation is sought by the design team, it would be better to have the two more minor access points closer together than having the first access point too close to a higher volume intersection like Grahams Ferry Road/Tooze Road.
- The spacing of the four southernmost access points (the fourth is Barber Street) appears to meet the 600-foot spacing requirement. The fifth access point does not and should be eliminated. A north-south connection from this roadway to Barber Street would eliminate the need for an access to Grahams Ferry Road.
- The site plan that was provided by the Villebois design team does not show where the existing driveways are located on the west side of Grahams Ferry Road. As much as possible, the proposed access points for Villebois should line up with

<sup>2</sup> *Clackamas County Comprehensive Plan, Map V-2b.*

<sup>3</sup> *Oregon Department of Transportation Standard Drawing No. TM539, May 2001.*

existing driveways to avoid offset intersections, especially at Moffitt Court and Moffitt Drive.

***Roundabouts***

Roadway and alley access points should not be located within the approaching 200 feet of the proposed roundabouts as possible to avoid conflicts between drivers turning from side streets and drivers who should be paying attention to the upcoming roundabout. The site plan shows two roadway intersections and two alley access points within a very short distance from the roundabout at Brown Road/Barber Street. At Barber Street/Loop Road, there are four alley access points in close proximity to the roundabout. There is at least one alley access point near the roundabout at Loop Road/Villebois Drive however access for three of the adjacent blocks is not shown. These blocks should not place access near the roundabout.

The roundabout design should accommodate bus and emergency service vehicles using a WB-60 truck for design purposes (as stated in the approval conditions). The outer diameter of the circle should be consistent for the roundabouts to provide drivers with a uniform expectation for operation due to the close proximity of these facilities. The one roundabout that should be at a larger diameter is the Boeckman Road roundabout due to its arterial nature (prior recommendations indicated minimum 170 feet). The radius of the central island should be set to minimize over tracking of design vehicles onto the apron area (keep apron area at maximum 5-foot width) assuming a 20 foot traveled way. Additional comments regarding roundabout design are in prior transportation studies of Villebois.

***Community College***

There is preliminary consideration of the Wilsonville branch of Clackamas Community College (CCC) campus being relocated to a larger campus at the village center. This is not part of the proposed legislative amendment to the Master Plan at this time; however, a cursory review of the potential impacts is included here to assist the City in planning decisions that could be impacted by this addition of CCC. Table 4 shows trip generation based on proposed CCC phasing and the PM peak trip generation rate from a 2001 study done for the existing CCC facility in Wilsonville.

**Table 4: PM Peak Trips Generated by Clackamas Community College**

Phase (Proposed Year)	Community College			Proposed Amendment Trips + CCC	Change in Trips from Approved Master Plan	Cumulative Change in Trips
	KSF	Rate	Trips			
1 (2004)	-	-	-	119	-61	-61
2 (2005)	-	-	-	230	55	-6
3 (2006)	60	1.77	106	429	155	149
4 (2007)	90	1.77	159	608	250	399
5 (2008)	-	-	-	465	-6	393
6 (2009)	100	1.77	177	477	190	583
7 (2010)	-	-	-	98	-56	527
8 (2011)	-	-	-	256	-117	410
<b>Total</b>	<b>250</b>	<b>-</b>	<b>442</b>	<b>2682</b>	<b>410</b>	<b>-</b>

KSF = 1,000 Square Feet

The proposed 250,000 square foot CCC facility would potentially generate approximately 442 vehicle trips during the PM peak hour for a net addition of 410 trips for the proposed amendment site plan with CCC. Additional mitigations would likely be needed due to the addition of these trips. By the Phase 4, mitigations would likely need to happen a phase earlier than originally determined with the Master Plan. Further study would be required to determine more precisely the impacts of the additional trips.

Because it is still unknown whether or not CCC will relocate to an expanded Villebois campus, the major point to consider at this time is whether or not the addition would impact the initial phases of Villebois that are approved for construction. The most major impacts of the additional trips would likely be felt at the intersections near the village center: Barber Street/Loop Road, Barber Street/Villebois Drive, the first intersection west of the roundabout at Villebois Drive/Loop Road, and the second intersection north of the roundabout at Villebois Drive/Loop Road. That fourth intersection would also be affected by the elementary school to the north. Depending on the exact location of CCC, another possible impact could be a greater number of left turns from Loop Road (east) between Barber Street and Villebois Drive. This could trigger the need for left turn lanes in this segment, which would result in a wider roadway section. The possible impacts listed here would not affect Phases 1 and 2, but may come into play as early as Phase 3.

***Left Turn Lane Needs***

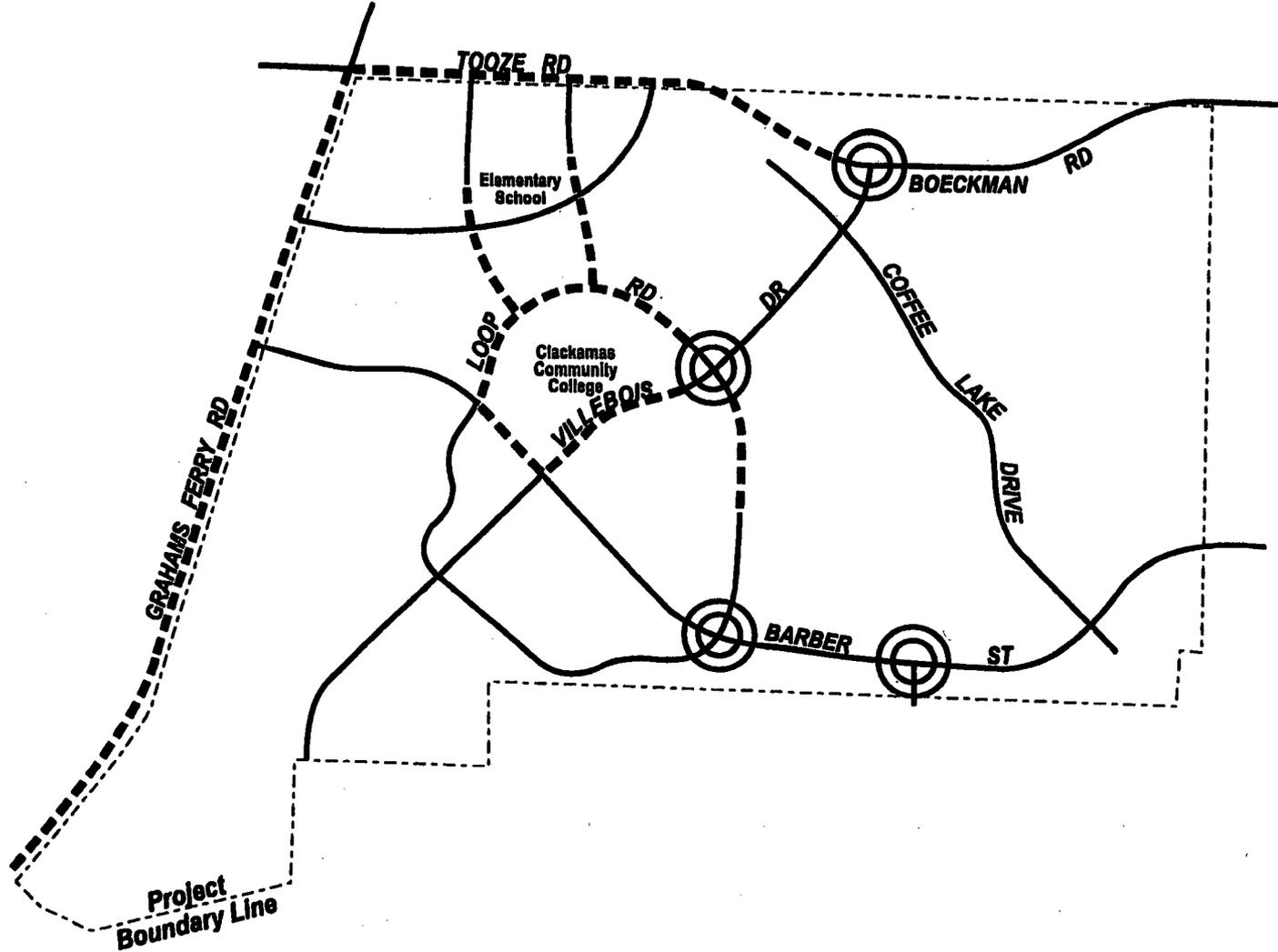
Left turn lane needs for Boeckman Road between Grahams Ferry Road and Villebois Drive and Loop Road (north and east segments) were evaluated with the new elementary school location and the addition of CCC. Locating the elementary school in the northwest corner of the site generates more turn movements to and from Boeckman Road at the intersections immediately east of Grahams Ferry Road. Warrants would be met for westbound left turn lanes at these two intersections for full build-out of Villebois with the

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TRANSPORTATION SOLUTIONS

addition of CCC. On Loop Road and Villebois Drive, the volume of traffic would be very near the threshold for left turn lane warrants depending upon the site location of CCC. Additionally, depending upon the bus circulation route for the elementary school and on-site circulation design, turn lanes may be needed approaching and departing the school. More analysis would be needed in this area if CCC does decide to relocate to an expanded Villebois campus. The attached Figure 1 indicates the segments where left turn lanes may be necessary given the current concept location of CCC and the elementary school.

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**DKS Associates**



**LEGEND**

--- - Roadways that Require Left Turn Lanes and/or Further Analysis



- No Driveways within 200' of Roundabout Edge

**Figure 1**  
**Villebois Urban Village**  
**LEFT TURN LANE NEEDS**

# DKS Associates

1400 SW 5<sup>th</sup> Avenue, Suite 500  
Portland, OR 97201  
Phone: (503) 243-3500  
Fax: (503) 243-1934

## MEMORANDUM

**TO:** Eldon Johansen, City of Wilsonville

**FROM:** Ransford S. McCourt, P.E.  
Colette Snuffin, P.E.

**DATE:** November 15, 2002

**SUBJECT:** Villebois Urban Village Trip Generation  
DRAFT

P02246

The purpose of this memorandum is to establish trip generation rates for Villebois Urban Village. Trip generation rates for the proposed development are based on ITE Trip Generation<sup>1</sup> and trip surveys of similar uses in Wilsonville<sup>2</sup>.

### Proposed Land Uses

Although the design team has not settled on densities or exact quantities of each land use, the following list of uses will likely be included in the final design.

- Single-Family Detached Housing – ITE Land Use Code 210
- Apartments – ITE Land Use Code 220
- Residential Condominium/Townhouse – ITE Land Use Code 230
- Elementary School – ITE Land Use Code 520
- Shopping Center – ITE Land Use Code 820

Research was conducted to compare vehicle trip generation of comparable land use types in Wilsonville with standard data from the Institute of Transportation Engineers (ITE). Table 1 compares both Wilsonville surveys and ITE data. Because of the close correlation with local data, ITE Trip Generation data will be utilized for Villebois.

<sup>1</sup> *Trip Generation Informational Report*, 6th Edition, Institute of Transportation Engineers, 1997.

<sup>2</sup> Conducted by DKS Associates for several residential land uses, September 2002.

**Table 1**  
**Comparison of Wilsonville Trip Surveys and ITE Trip Generation Rates (Trips/Unit)**

Land Use	ITE Code	Unit	Wilsonville Trip Survey PM Rate (In/Out)	ITE Trip Generation PM Rate (In/Out)
Single Family	210	DU	1.03 (65%/35%)	1.01 (64%/36%)
Apartment	220	DU	0.52 (61%/39%)	0.62 (67%/33%)
Retirement Community	250	DU	0.29 (64%/36%)	0.27 (56%/44%)
Elementary School	520	student	0.27 (57%/43%)	0.26 (46%/54%)

DU=Dwelling Unit

Table 2 contains trip generation rates as reported by ITE for the land uses specifically discussed by the Villebois design team.

**Table 2**  
**ITE Trip Generation Rates (Trips/Unit)**

Land Use	ITE Code	Unit	Daily Rate	AM Rate (In/Out)	PM Rate (In/Out)
Single Family	210	DU	9.57	0.75 (25%/75%)	1.01 (64%/36%)
Apartment	220	DU	6.63	0.51 (16%/84%)	0.62 (67%/33%)
Condominium/Townhouse	230	DU	5.86	0.44 (17%/83%)	0.54 (67%/33%)
Elementary School	520	student	1.02	0.29 (59%/41%)	0.26 (46%/54%)
Single-Tenant Office Building	715	KSF	11.50	1.78 (89%/11%)	1.73 (16%/84%)
Shopping Center*	820	KSF	104.80	2.60 (61%/39%)	9.50 (48%/52%)

DU=Dwelling Unit

KSF=Thousand Square Feet

\* Rates for shopping centers vary with size. Rates shown are based on 30 KSF shopping center.

### Other Considerations

Additional land uses mentioned as possibilities by the Villebois design team included converting the existing Dammasch building to office space, adding carriage units or units on small lots similar to Orenco Station and maybe even including some type of senior housing.

Because the Villebois design team is considering the inclusion of office space, it is worthwhile to note general differences in trip generation by different land uses. A ten-acre site occupied by an elementary school with 400 students would generate about 10.4 PM peak vehicle trips per acre. Villebois is planned to have about 11 dwelling units per acre. At this density, a site developed with single-family housing would generate about 11.1 PM peak vehicle trips per acre. Table 5 summarizes the PM peak trip generation potential of these and two other development scenarios based on typical densities and ITE rates.

**Table 5**  
**Trip Generation Potential of Typical Development Options**

Land Use	Trip Generation PM Rate (Trips/Acre)
Single Family Housing	11.1
Elementary School	10.4
General Office Building	16.2
Shopping Center	91.0

There are two specific survey sites that produce results that are of interest for planning Villebois. First, Charbonneau provides a residential mix of senior housing options that on the aggregate generates 0.29 vehicle trips per dwelling unit in the PM peak hour, substantially lower than would be the case with ITE trip data. This is likely due to the senior nature of the community and provides one example of how higher dwelling unit counts can be obtained with lower vehicle trip impacts. This is probably due in part to the fact that there are some restaurants and other facilities at the golf course, but more importantly, many residents of the area are retired and people returning from work generate many of the PM peak period trips. A second site, Canyon Creek Meadows, provides single-family homes on small lots averaging 4,150 square feet. These units appear to generate vehicle trips at lower levels than standard single family dwelling units (based on standard Wilsonville and ITE trip rates). While not as low as condominium or apartment vehicle trip rates, these units appear to generate about 20 percent fewer trips in the evening peak hour. This is likely due to the size of the units. Both of these examples provide samples of what could be done to reduce vehicle trip impacts of the proposed Villebois master plan. If the Villebois design team decides to pursue the option of small lots, additional trip surveys will be required in similar developments like Orenco Station or Sunnyside Village to validate reduced trip rates.

# DKS Associates

1400 SW 5<sup>th</sup> Avenue, Suite 500  
Portland, OR 97201  
Phone: (503) 243-3500  
Fax: (503) 243-1934

## MEMORANDUM

**TO:** Eldon Johansen, City of Wilsonville

**FROM:** Ransford S. McCourt, P.E.  
Colette Snuffin, P.E.

**DATE:** January 13, 2003

**SUBJECT:** Villebois Urban Village Internal Circulation Evaluation

P02246

This memorandum presents findings for the initial evaluation of the Villebois internal roadway network as proposed on December 12, 2002. External capacity needs have been addressed based upon 2020 forecasts conducted for the I-5 Freeway Access Study from ODOT and the City of Wilsonville TSP. These studies identify a series of integrated transportation improvements that would be necessary to meet future demands with adequate roadway capacity in 2020 including Villebois. Those studies did not evaluate the circulation needs in west Wilsonville with the proposed Villebois street plan, but the analysis discussed in this memo does.

### Methodology

The 2020 enhanced travel demand forecast model (includes significant local roadway improvements and improvements to the Wilsonville Road interchange) was used as the base model for this master plan analysis. The objective was to assess detailed circulation needs within Villebois to determine if the roadway system proposed could accommodate both Villebois and future growth needs in the area. Sensitivity analysis was also performed using the 2020 scenario that includes enhanced I-5 capacity.

The Villebois area is represented by three transportation analysis zones (TAZ) in the regional travel demand model (TAZ's 33, 71, and 73). The total vehicle trips from those zones are listed in Table 1. The vehicle trips included in the model are comparable to those generated by ITE land use rates for the number and type of units included in the Villebois plan as of December 12, 2002. The analysis is considered conservative because the number of vehicle trips has not been reduced for internal or pass-by trips.

**Table 1: Evening Peak Hour Vehicle Trips**

	In	Out
Metro TAZ's 33, 71, and 73	1382	865
ITE trip generation with no reductions for internal or pass-by trips	- 1375	903

For more detailed analysis, the three Metro TAZ's were disaggregated into forty zones to represent smaller pieces of Villebois that would have distinct travel patterns. The smaller zones are more representative of the detailed travel that could be expected in the future when Villebois is completed. The disaggregation allowed for trips to be assigned internally within Villebois as well as externally to other parts of Wilsonville and the region in general, providing the best representation of travel pattern in the future with full build out of Villebois. The phased development of Villebois and its impacts will be assessed in the next technical memo for this project.

Key network assumptions in the modeling were that all the Villebois streets were two lanes and 25 miles per hour speeds with two general exceptions:

- Barber Street and a north-south collector route including portions of Villebois Drive and Loop Road (acting as 110<sup>th</sup> Avenue south to Barber Street) were assumed to have speeds of 30 miles per hour and greater than two-lane capacity;
- Boeckman Road and Grahams Ferry Road were assumed to have speeds similar to existing conditions with greater than two-lane capacity<sup>1</sup>.

In testing the internal roadway network, there were three key issues to consider:

- Do the local street operate with traffic volumes below 1,000 to 2,000 vehicles per day (which is generally the environmental capacity of a livable street)?
- Do the collector streets carry the through traffic adequately and meet the City's performance standards? Are turn lanes necessary at key intersections and how do the roundabouts function as compared to conventional intersections in terms of level of service? (Warrants were utilized to check these conditions, but typically between 5,000 and 10,000 vehicles per day roadways will commonly transition to the need for center left turn lanes.)
- Are the access spacing needs of the arterial and collector routes adequate for safety purposes?

#### **Interior Network Findings**

The major interior roadway network for Villebois as proposed on December 12, 2002, includes Barber Street as an east-west collector, Loop Road circling the mixed-use central core, and a north-south collector route created with a series of roundabouts. The north-south collector route starts at the south end on Brown Road, passes through three roundabouts (Brown Road/Barber Street, Barber Street/Loop Road, and Loop Road/Villebois Drive), and ends at a fourth roundabout at the intersection of Boeckman Road/Villebois Drive. This indirect north-south route was of particular concern for the analysis. The remainder of the internal roadway network was intended to function as local streets. The disaggregation of zones was intended to test these local streets.

Assuming that posted speeds are slightly higher on the major network roadways than on the local streets, the model shows that the proposed roadway network will function as intended. With a

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<sup>1</sup> This means that where demand and warrants requires turn lanes, they were added to key intersections on these roadways.

few exceptions in the higher-density areas adjacent to Villebois Drive, local streets are carrying less than 80 vehicles during the PM peak hour (that would be less than 1,000 vehicles per day). Interior roadway volumes for the more major roadways are summarized in Table 2. The resulting volumes for intersection turn movements are shown in Figure 1. Two lane roads would be adequate for all of the interior local streets. The collector and arterial streets vary between the need for two and three lanes (depending upon location). Basically if roundabouts are utilized the key three lane roadways would be Grahams Ferry Road, Boeckman Road and locations on Villebois Drive to the north and Barber Street to the east of the loop road. If roundabouts are utilized, Villebois and Barber could be retained as two lane roadways (except as noted below).

**Table 2: Villebois Roadway Volumes**

	Approximate Average Daily Traffic
Barber Street from Grahams Ferry Road to Loop Road East	3,500 - 5,000
Barber Street from Loop Road East to Brown Road	5,000 - 6,000
Barber Street from Brown Road to Coffee Lake Drive	3,500 - 4,500
Brown Road from Wilsonville Road to Barber Street	5,500 - 7,500
Loop Road East from Barber Street to Villebois Drive	2,000 - 3,500
Villebois Drive from Loop Road to Boeckman Road	5,000 - 7,500
Tooze Road west of Grahams Ferry Road	10,000 - 11,500
Tooze Road/Boeckman Road from Grahams Ferry Road to Kinsman Road	10,000 - 15,000
Grahams Ferry Road from the Living Enrichment Center to Chutter Road	1,000 - 7,500

**Intersection Performance**

While analysis of traffic flows is useful in attempting to reach an understanding of the general nature of traffic in an area, traffic volume alone indicates neither the ability of the street network to carry additional traffic nor the quality of service provided by the street facilities. For this reason, the concept of level of service (LOS) has been developed to correlate traffic volume data to subjective descriptions of traffic performance at intersections. Intersections 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.

An intersection's level of service (LOS) is similar to a "report card" rating, based on average vehicle delay. Level of service A, B and C indicate conditions where vehicles can move freely. Level of service D and E are progressively worse. For signalized intersections, level of service F represents conditions where the average delay for all vehicles through the intersection exceeds

80 seconds per vehicle, generally indicated by long queues and delays. Level of service D is the City's minimum acceptable service level during peak periods.<sup>2</sup>

Forecasted PM peak hour operating conditions were determined based on the *2000 Highway Capacity Manual*<sup>3</sup> methodology for signalized and unsignalized intersections. For roundabouts, operating conditions were determined based on the *1994 Highway Capacity Manual*<sup>4</sup> methodology. The study intersection turn movements derived from the 2020 enhanced travel demand forecast model are shown in Figure 1.

The eight highest volume intersections within or adjacent to Villebois were analyzed. Each was first analyzed as an unsignalized intersection. Two intersections, Grahams Ferry Road/Tooze Road and Boeckman Road/Tooze Road/Villebois Drive, performed at level of service F, but the remaining intersections met the Wilsonville's standard of level of service D or better. The two arterial intersection fail due to the lack of turn lanes or adequate traffic control. Tests of conventional signalized intersections with turn lanes and roundabouts were performed.

Roundabouts are shown on the proposed Villebois plan at four intersections. In addition to the four, a fifth possible location for a roundabout was added for analysis at Grahams Ferry Road/Tooze Road. All five roundabouts performed at level of service B or better. At both Grahams Ferry Road/Tooze Road and Boeckman Road/Tooze Road/Villebois Drive, a signal would provide a comparable level of service to a roundabout. If roundabouts are considered on Boeckman Road or Grahams Ferry Road, the curb to curb diameter would need to approach 200 feet due to the arterial nature of these facilities. The interior roundabout locations may be designed with 125 to 175 foot curb to curb diameters.

In addition to level of service, turn lane needs were also assessed if roundabout was not to be installed. It should be noted that if the five roundabouts are not installed, two intersections would require signals and turn lanes and four intersections could function as unsignalized intersections with turn lanes. Installation of five roundabouts eliminates all signals and turn lanes at all but one intersection – allowing the use of medians or smaller, two lane roadway cross sections.

Intersection performance and turn lane needs are summarized in Table 3.

<sup>2</sup> *City of Wilsonville Code*, Section 4.139, p. 163

<sup>3</sup> Transportation Research Board, *Highway Capacity Manual* 2000, Chapters 16 and 17.

<sup>4</sup> Transportation Research Board, *Highway Capacity Manual* 1994, Chapter 10.

**Table 3: Intersection Level of Service Summary**

Intersection	Unsignalized LOS			Roundabout LOS	Signalized LOS		Turn Lane Needs without Roundabout
	AM	PM	Control		AM	PM	
Grahams Ferry Road/ Tooze Road	F	F	4-way Stop	B	B	B	Left turn lanes for all approaches
Boeckman Road/ Tooze Road/Villebois Drive	F	F	2-way Stop	B	B	B	WB left turn lane, NB left and right turn lanes
Villebois Drive/ Loop Road North	C	C	2-way Stop	A	-	-	WB right turn lane, SB left turn lane
Barber Street/Loop Road East	C	B	2-way Stop	A	-	-	WB right turn lane
Barber Street/Brown Road	C	D	2-way Stop	A	-	-	EB right turn lane, NB left and right turn lanes
Barber Street/ Grahams Ferry Road	B	B	2-way Stop	-	-	-	SB left turn lane, WB left turn lane
Barber Street/Villebois Drive	B	B	2-way Stop	-	-	-	-
Barber Street/ Coffee Lake Drive	B	B	2-way Stop	-	-	-	-

**Access Spacing**

Access spacing is directly related to functional classification. In the Wilsonville Transportation Master Plan (TMP), minimum access spacing is specified as 1000 feet for major arterials, 600 feet for minor arterials, 100 feet for major collectors, and 50 feet for minor collectors<sup>5</sup>.

For the proposed plan, Tooze Road and Boeckman Road are minor arterials. Minimum access spacing for these roadways should be 600 feet, but it falls about 50 feet short in a couple of locations at the north boundary.

Clackamas County classifies Grahams Ferry Road as a Collector<sup>6</sup> although its 85<sup>th</sup> percentile speeds are in the range of 50 to 55 miles per hour. Roadway volumes at Tooze Road and Barber Street are high enough to warrant left turn lanes on Grahams Ferry Road even if speeds were lower. Although left turn lanes would not be warranted by volumes at other intersections along Grahams Ferry Road, safety is a major concern on this corridor and the deceleration distances and turn lanes nearly extend into each other from Tooze Road to Barber Street, therefore a center turn lane is recommended along the length of Grahams Ferry Road adjacent to Villebois. Provision of left turn lanes requires adequate space for vehicles to decelerate and enter a left turn pocket safely – in this area vehicles should not encounter conflicts from cross street traffic that may reduce safety. These left turn lane and deceleration needs would be the controlling aspect of access spacing on Grahams Ferry Road. To determine safe spacing, ODOT standards were utilized for determining deceleration and left turn lane lengths and needs. Left turn lanes of approximately 150 feet and deceleration lengths for 290 to 370 feet would be required for safe design (total distance of 590 to 670 feet)<sup>7</sup>. The proposed roadways are shown accessing Grahams Ferry Road as close as 250 feet apart. These should be relocated to no less than 600

<sup>5</sup> *Transportation Master Plan, City of Wilsonville, July 12, 1991, Table 6.*

<sup>6</sup> *Clackamas County Comprehensive Plan, Map V-2b.*

<sup>7</sup> *Oregon Department of Transportation Standard Drawing No. TM539, May 2001.*

foot spacing and should consider the position of existing access locations on the west side of Grahams Ferry Road to avoid offset intersections.

Single-family residential driveways should not access Tooze Road, Grahams Ferry Road, Villebois Drive (north), Loop Road (east), or Barber Street (east). If driveways cannot be avoided on the interior collectors, care should be taken to place them as far from roadway intersections as possible and to minimize vehicular access. Pedestrian access to the public sidewalks is appropriate, but not vehicle driveways and backing maneuvers.

Figure 2 summarizes access recommendations.

### Parking

Auto parking for Villebois can be accommodated with a combination of on-street and off-street spaces. On-street parking is proposed for all roadways except Grahams Ferry Road, Tooze Road/Boeckman Road, Barber Street east of Coffee Lake Drive, some short local streets that cross park areas and private lanes. For the roadways that create the north-south collector route (Villebois Drive and Loop Road between roundabouts) as well as Barber Street east of the Loop Road roundabout, on-street parking should not be allowed. Higher volumes and speeds combined with the presence of bike lanes and parking maneuvers will create a safety issue. Lots in these areas should limit auto access to the rear only. The remaining parking is permissible as shown. Figure 2 shows access and parking recommendations.

The total number of auto parking spaces that should be provided for residential component of Villebois is summarized in Table 4 (approximately 5,000 spaces). Commercial requirements will need to be evaluated separately once more detailed site plans are available.

**Table 4: Parking Recommendations**

	Autos per Household*	Number of Proposed Households	Total Autos
Owned Household	1.9	1,871	3,555
Rented Household	1.4	515	721
Visitor	0.2	2,386	477
Total Parking (On-street and Off-street)			4,753

\* Based on Wilsonville Auto Census 2000 for owned and rented households. Visitor parking recommendation based on allowing one space per five households.

### Bicycle Lanes

Bike lanes are proposed on Grahams Ferry Road, Tooze Road/Boeckman Road, Barber Street, Brown Road, Loop Road, and Villebois Drive north of Barber Street. Especially on higher volume and speed segments, the routes with bicycle lanes should have minimal on-street parking to avoid conflicts with cyclists. This is discussed in greater detail in the previous section. Figure 3 shows the proposed bike lane routes as well as recommendations for additional linkages and crossing treatments.

### **Pedestrian Linkages**

A good system of pedestrian facilities, including sidewalks and pathways, are proposed throughout the interior of Villebois. The interface between existing and possible future neighborhoods should be considered. For example, the Montebello Drive<sup>8</sup> roadway connection is important for pedestrian/bicycle circulation between Villebois and the existing neighborhood to the south, but it is unnecessary for vehicular circulation. If the roadway is removed, provisions should be made for a pedestrian/bicycle path.

A shared-use path is proposed to circulate through the park and greenway areas within Villebois. It is shown crossing Tooze Road approximately 800 feet west of Villebois Drive. At this location, average daily traffic is likely to be in the range of 10,000 to 11,000 with a posted speed of 35 miles per hour. Under these conditions on a three-lane roadway, a pedestrian crossing can be problematic. An enhanced crossing, including a marked crosswalk with signs and an in-roadway lighting system, should be considered.<sup>9</sup> Other crossings should be located at intersections wherever possible. Figure 3 shows recommendations for additional linkages and some crossing treatments.

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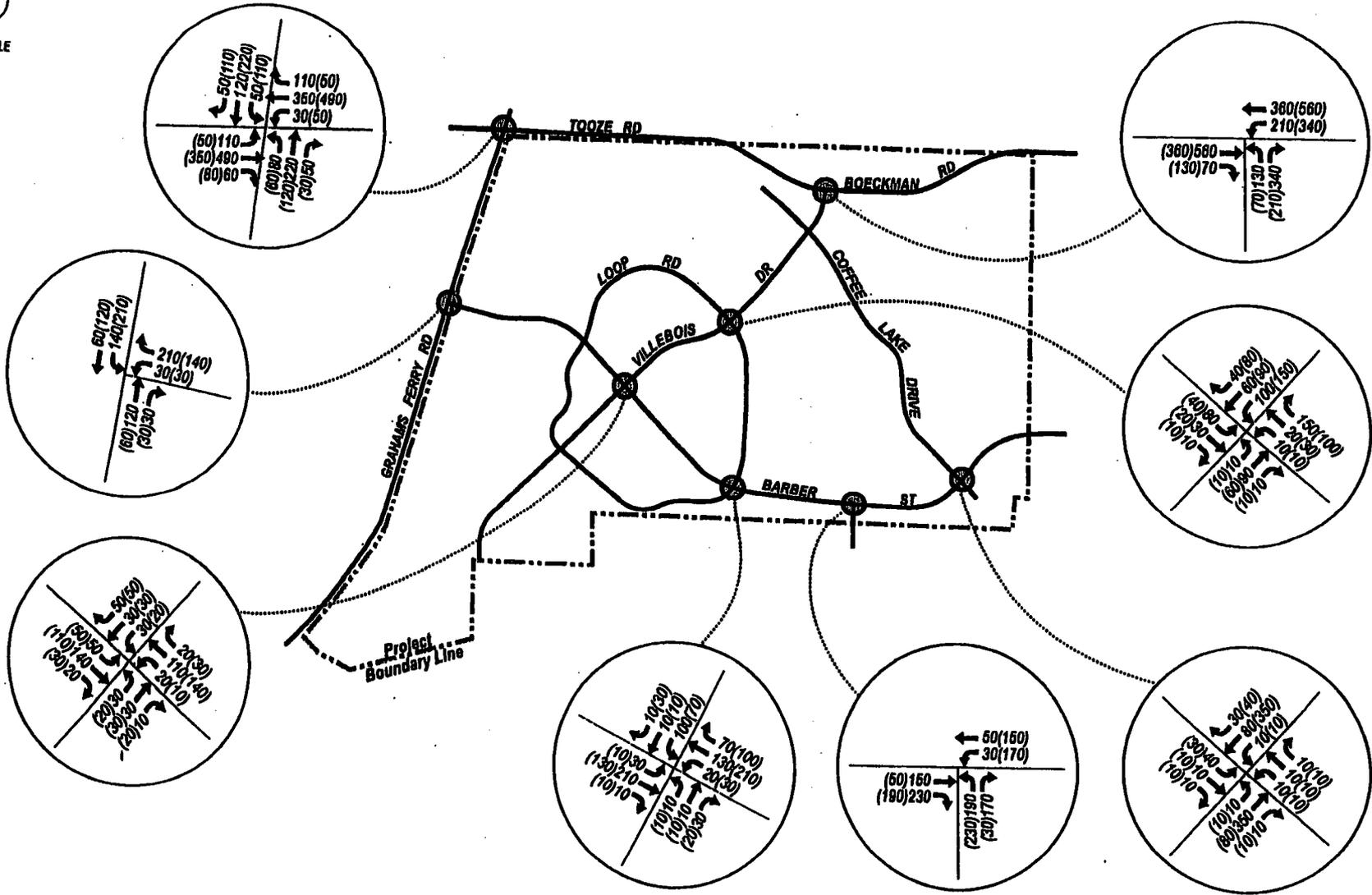
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<sup>8</sup> It should be noted that the traffic analysis was conducted with Montebello Drive connected to Barber Street.

<sup>9</sup> "Standards for Pedestrian Treatments at Unsignalized Crossings", a memorandum by DKS Associates issued to the City of Wilsonville, November 13, 2002.



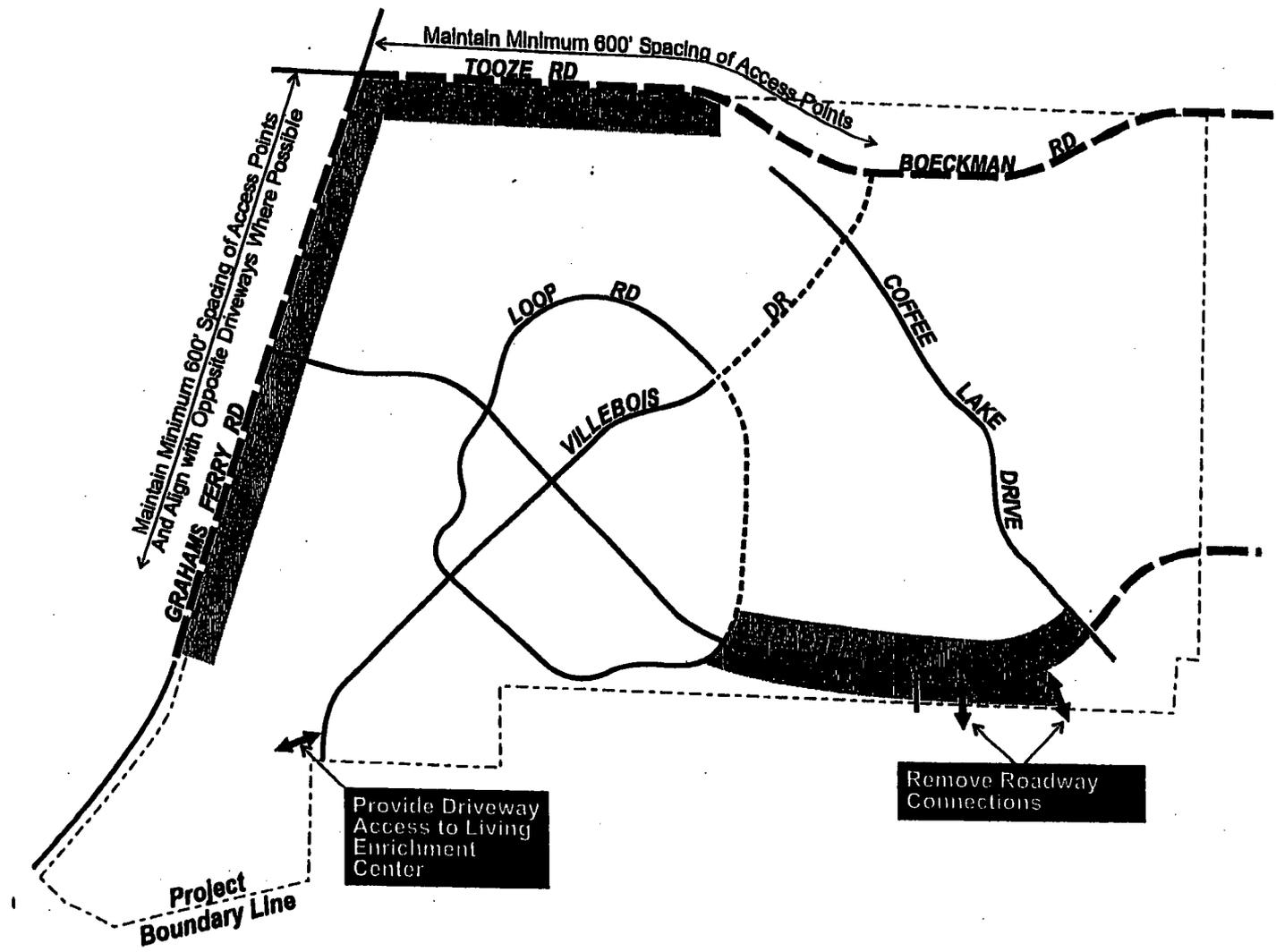
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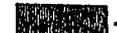
**LEGEND**

- Study Intersection
- AM(PM) - Peak Hour Traffic Volumes

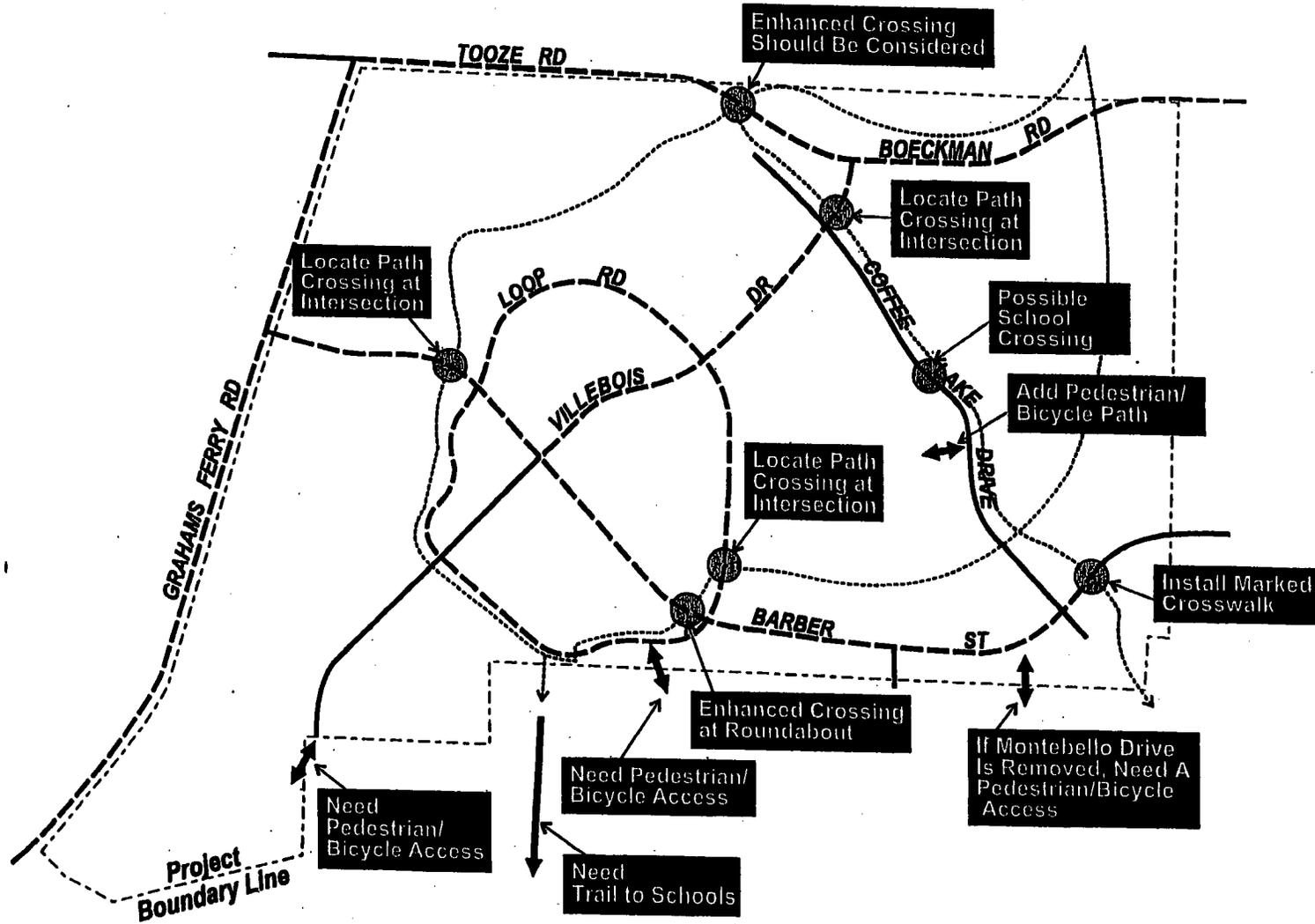
**Figure 1**  
**Villebois Urban Village**  
**INTERNAL CIRCULATION**



**LEGEND**

-  - No Parking
-  - Limited Parking
-  - No Driveway Access on Barber Street, Grahams Ferry Road or Tooze Road

**Figure 2**  
**Villebois Urban Village**  
**ACCESS AND PARKING**



**LEGEND**

- - - - - Bike Lanes
- ..... Shared-Use Path

**Figure 3**  
**Villebois Urban Village**  
**PEDESTRIAN/BICYCLE**

# DKS Associates

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1400 SW 5<sup>th</sup> Avenue, Suite 500  
Portland, OR 97201  
Phone: (503) 243-3500  
Fax: (503) 243-1934

## MEMORANDUM

**TO:** Eldon Johansen, City of Wilsonville

**FROM:** Ransford S. McCourt, P.E.  
Colette Snuffin, P.E.

**DATE:** February 28, 2003

**SUBJECT:** Villebois Urban Village Transportation Off-Site Mitigation  
Phasing Analysis

P02246

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This memorandum presents findings for the phasing analysis of future Villebois traffic based upon the site plan and phasing scheme of December 12, 2002 provided by the development sponsors. This memo focuses on the off-site transportation mitigation needs for the motor vehicle system. The on-site circulation and access needs have been evaluated as part of a separate memorandum dated January 13, 2003. Roadway network deficiencies and appropriate mitigations are identified as each phase of Villebois is added incrementally. A separate analysis of deficiencies and mitigations including Villebois with background growth is also covered.

There are a total of twenty-two study intersections considered for this analysis. Eleven off-site study intersections were selected for analysis in consultation with City of Wilsonville staff. Eight study intersections were included in the analysis of the internal circulation of Villebois dated January 13, 2003. Two intersections on Bell Road were added because of concerns about adding traffic to rural intersections, one of which has an approach at an severe angle. One additional intersection was included in this study as it became apparent that it could be adversely impacted by Villebois trips. The twenty-two study intersections fall under jurisdiction of at least one of several jurisdictions that include Oregon Department of Transportation (ODOT), City of Wilsonville, Clackamas County, and Washington County. The study intersections are shown in Figure 1.

**Table 1: Study Intersections and Jurisdictions**

Number	Intersection	ODOT	City	Clackamas County	Washington County
1	Brown Road/Wilsonville Road		✓		
2	Kinsman Road/Wilsonville Road		✓		
3	Boones Ferry Road/Wilsonville Road		✓		
4	I-5 SB Ramps/Wilsonville Road	✓	✓		
5	I-5 NB Ramps/Wilsonville Road	✓	✓		
6	Barber Street/Grahams Ferry Road			✓	
7	Barber Street/Villebois Drive		✓		
8	Barber Street/Loop Road East		✓		
9	Brown Road/Barber Street		✓		
10	Barber Street/Coffee Lake Drive		✓		
11	Loop Road North/Villebois Drive		✓		
12	Grahams Ferry Road/Tooze Road			✓	
13	Boeckman Road/Tooze Road/ Villebois Drive		✓		
14	95 <sup>th</sup> Avenue/Boeckman Road		✓		
15	Boberg Road/Boeckman Road		✓		
16	Boeckman Road/Parkway Avenue		✓		
17	Grahams Ferry Road/Clutter Road				✓
18	95 <sup>th</sup> Avenue/Ridder Road		✓		
19	Grahams Ferry Road/Day Road				✓
20	95 <sup>th</sup> Avenue/Elligsen Road		✓		
21	Bell Road/Grahams Ferry Road			✓	
22	Bell Road/Wilsonville Road			✓	

**Methodology**

The consideration of motor vehicle improvements with the proposed Villebois project was done two different ways. First a separate analysis of added Villebois traffic (by itself) was conducted adding the proposed development traffic by each phase incrementally on top of a base condition of existing traffic plus other Stage II approvals. Existing plus Project plus Stage II is the common scenario evaluated for traffic impact studies in the City of Wilsonville. This scenario indicates mitigations that are likely triggered by a particular development.

A second analysis was conducted that evaluated the phasing of the proposed Villebois traffic impacts with forecasted estimates of background traffic growth (beyond the existing plus approved Stage II scenario). Because this project spans several years, it is important to also evaluate deficiencies and mitigations when background growth is added to determine the timing of necessary mitigations as well as additional mitigations that will be triggered by other development.

To conduct the analysis of proposed Villebois phasing and background growth requires the use of the City of Wilsonville's travel demand forecast model. This travel model was cooperatively developed by the City of Wilsonville, Metro, and ODOT to be used for the City's Transportation System Plan and the I-5 Freeway Access Study. Background growth rates were determined by corridor and are consistent with overall growth by 2020 as forecasted by the Metro regional travel demand model. It should be noted that growth has been added incrementally which prorates the effects of the introduction of a large traffic generator such as Fred Meyer. Future

development of this size might generate 500 to 1,000 vehicles in the peak hour, but the analysis methodology has spread this growth over 20 years since the exact year of opening cannot be pinpointed. If the larger developments that are included in growth between 2000 and 2020 models happen earlier or later, some of the recommended mitigations may also need to happen earlier or later than predicted by this study.

**Trip Generation**

Trip generation based on the Villebois phasing and land use information provided on December 12, 2002, and ITE rates as documented in the memorandum dated November 15, 2002.

**Table 2: PM Peak Vehicle Trips Generated by Phase**

Phase (Proposed Year)	Single-Family			Condo/ Townhouse			Apartments			Commercial/School			All Trips
	DU	Rate	Trips	DU	Rate	Trips	DU	Rate	Trips	KSF	Rate	Trips	
1 (2004)	149	1.01	150	47	0.54	25	8	0.62	5	-	-	-	180
2 (2005)	173	1.01	175	-	-	-	-	-	-	-	-	-	175
3 (2006)	127	1.01	128	38	0.54	21	202	0.62	125	-	-	-	274
4 (2007)	156	1.01	158	111	0.54	60	154	0.62	95	5.0	8.98	45	358
5 (2008)	121	1.01	122	320	0.54	173	31	0.62	19	17.5	8.98	157	471
6 (2009)	107	1.01	108	130	0.54	70	30	0.62	19	10.0	8.98	90	287
7 (2010)	81	1.01	82	81	0.54	44	10	0.62	6	2.5	8.98	22	154
8 (2011)	115	1.01	116	112	0.54	60	80	0.62	50	-	-	-	226
*School	-	-	-	-	-	-	-	-	-	47.0	3.12	147	147
<b>Total</b>	<b>1029</b>	<b>-</b>	<b>1039</b>	<b>839</b>	<b>-</b>	<b>453</b>	<b>515</b>	<b>-</b>	<b>319</b>	<b>35.0</b>	<b>-</b>	<b>461</b>	<b>2272</b>

DU = Dwelling Unit

KSF = 1,000 Square Feet

\* School is physically located in Phase 4 (2007) however it will not likely be built until Phase 8 (2011). According to Jerry Palmer at Alpha Engineering, the school district will not be interested in discussing the additional school until the area is developed and occupied.

A mixed-use development like Villebois provides opportunities for trip reductions due to internal trips. Some trips will impact only the internal roadways and not the surrounding roadway network. For example, a person may leave their home, pick up their children from school, and stop at the shopping center before returning home, all without leaving the development.

The ITE Trip Generation Handbook includes a method of calculating trip generation and internal capture rates for multi-use development.<sup>1</sup> Based on these calculations, internal trip reductions for residential, commercial, and school are 7, 13 and 66 percent, respectively. Table 3 includes these trip reductions and the resulting external trips.

<sup>1</sup> Trip Generation Handbook, Chapter 7, Institute of Transportation Engineers, October 1998.

**Table 3: PM Peak Vehicle Trips Generated by Phase after Reductions for Internal Trips**

Phase (Proposed Year)	Single-Family			Condo/ Townhouse			Apartments			Commercial/School			All Trips
	DU	Rate	Trips	DU	Rate	Trips	DU	Rate	Trips	KSF	Rate	Trips	
1 (2004)	149	0.94	140	47	0.50	24	8	0.58	5	-	-	-	169
2 (2005)	173	0.94	163	-	-	-	-	-	-	-	-	-	163
3 (2006)	127	0.94	119	38	0.50	19	202	0.58	117	-	-	-	255
4 (2007)	156	0.94	147	111	0.50	56	154	0.58	89	5.0	7.81	39	331
5 (2008)	121	0.94	114	320	0.50	160	31	0.58	18	17.5	7.81	137	429
6 (2009)	107	0.94	108	130	0.50	65	30	0.58	17	10.0	7.81	78	261
7 (2010)	81	0.94	76	81	0.50	41	10	0.58	6	2.5	7.81	20	143
8 (2011)	115	0.94	108	112	0.50	56	80	0.58	46	-	-	-	210
*School	-	-	-	-	-	-	-	-	-	47.0	1.06	50	50
<b>Total</b>	<b>1029</b>	<b>-</b>	<b>968</b>	<b>839</b>	<b>-</b>	<b>421</b>	<b>515</b>	<b>-</b>	<b>298</b>	<b>35.0</b>	<b>-</b>	<b>324</b>	<b>2011</b>

DU = Dwelling Unit

KSF = 1,000 Square Feet

\* School is physically located in Phase 4 (2007) however it will not likely be built until Phase 8 (2011). According to Jerry Palmer at Alpha Engineering, the school district will not be interested in discussing the additional school until the area is developed and occupied.

### Trip Distribution

Trip distribution was based on Wilsonville's regional travel demand model. Figure 2 shows the assumed distribution of external project trips on the existing street network.

### Intersection Performance

While analysis of traffic flows is useful in attempting to reach an understanding of the general nature of traffic in an area, traffic volume alone indicates neither the ability of the street network to carry additional traffic nor the quality of service provided by the street facilities. For this reason, the concept of level of service (LOS) has been developed to correlate traffic volume data to subjective descriptions of traffic performance at intersections. Intersections 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.

An intersection's level of service (LOS) is similar to a "report card" rating, based on average vehicle delay. Level of service A, B and C indicate conditions where vehicles can move freely. Level of service D and E are progressively worse. For signalized intersections, level of service F represents conditions where the average delay for all vehicles through the intersection exceeds 80 seconds per vehicle, generally indicated by long queues and delays. Level of service D is the City's minimum acceptable service level during peak periods.<sup>2</sup> The ODOT performance standard is volume-to-capacity ratio of 0.99.

Forecasted PM peak hour operating conditions were determined based on the *2000 Highway Capacity Manual*<sup>3</sup> methodology for signalized and unsignalized intersections.

<sup>2</sup> City of Wilsonville Code, Section 4.140, p. 167 as revised by Ordinance No. 538 Exhibit A.

<sup>3</sup> Transportation Research Board, *Highway Capacity Manual* 2000, Chapters 16 and 17.

## **Results**

The I-5 ramp intersections at Wilsonville Road exceed both ODOT and City of Wilsonville standards prior to adding additional proposed Villebois traffic to the Existing Conditions plus Stage II scenario. Because these intersections are already failing, specific improvements are needed at the outset of the phasing plan and were documented as being part of Phase 1 (2004).

Mitigations were chosen primarily from the list of roadway improvements that were recommended in the Transportation System Plan and the Freeway Access Study for the scenario that does not include the Boeckman Interchange. The analysis uses as a base the existing roadway network and local access streets as needed to build each phase. Roadway extensions were added to the network as needed to mitigate deficiencies for each phase. Numerous combinations of improvements were tested to determine the following phasing plan.

### *Existing Conditions plus Project plus Stage II*

The resulting deficiencies and mitigations for this scenario are listed in Table 4. In Table 5 the performance of the mitigation measure in resolving the capacity deficiency is noted. Other measures were evaluated along off-site study area roadways such as turn lane warrants and traffic signal warrants.

**Table 4: Deficiencies and Mitigations by Phase for Existing plus Project plus Stage II**

Phase (Year)	Deficiencies (Code)	Mitigations
1 (2004)	I-5 SB Ramps/Wilsonville Road (A) I-5 NB Ramps/Wilsonville Road (B)	Boeckman Road extension: From 95 <sup>th</sup> Ave west to Tooze Road Kinsman Road extension: Barber Street to Boeckman Road Parkway Avenue/Boeckman Road: Add EB right turn lane
2 (2005)	I-5 SB Ramps/Wilsonville Road (C)	Add second WB left turn lane
3 (2006)	-	-
4 (2007)	-	-
5 (2008)	I-5 NB Ramps/Wilsonville Road (D) 95 <sup>th</sup> Avenue/Boeckman Road (E)	Add off-ramp lanes and lengthen ramps (NB and SB) Add WB right turn lane and traffic signal
6 (2009)	Brown Road/Wilsonville Road (F) Clutter Road/Grahams Ferry Road Boberg Road/Boeckman Road (G)	Barber Street extension: From Villebois east to Kinsman Road Add SB left turn lane (based on turn lane warrants) Restrict Boberg Road to right-in/right-out with a median on Boeckman Road (or alternative solutions) <sup>4</sup>
7 (2010)	Parkway Avenue/Boeckman Road (H)	Add SB right turn lane
8 (2011)	Clutter Road/Grahams Ferry Road (I)	Add WB left turn lane

**Table 5: Level of Service Before and After Mitigation by Phase for Existing plus Project plus Stage II**

Phase (Year)	Deficiencies	Before Mitigation		Mitigation Code	After Mitigation	
		LOS	V/C		LOS	V/C
1 (2004)	I-5 SB Ramps/Wilsonville Road	F	1.13	A	E*	1.12*
	I-5 NB Ramps/Wilsonville Road	E	1.13	B	E*	1.10*
2 (2005)	I-5 SB Ramps/Wilsonville Road	F	1.13	C	D	0.94
3 (2006)	-	-	-	-	-	-
4 (2007)	-	-	-	-	-	-
5 (2008)	I-5 NB Ramps/Wilsonville Road	F	1.13	D	D	0.95
	95 <sup>th</sup> Avenue/Boeckman Road	F	-	E	B	0.44
6 (2009)	Brown Road/Wilsonville Road	E	1.05	F	D	0.95
	Boberg Road/Boeckman Road	E	-	G	B	-
7 (2010)	Parkway Avenue/Boeckman Road	E	0.96	H	D	0.82
8 (2011)	Clutter Road/Grahams Ferry Road	E	-	I	D	-

\* Mitigations return intersections to pre-project level of service.

**Existing Conditions plus Project plus Stage II plus Background Growth**

<sup>4</sup> Deficiencies at Boberg Road/Boeckman Road could be mitigated by eliminating the north leg of the intersection that is part of the Stage II approval for the Wilsonville Business Center. This intersection operates at an acceptable level of service though all phases of Villebois as a T-intersection. If the north leg is constructed, the level of service is deficient in Phase 5 (2008) and can be mitigated with the addition of a median on Boeckman Road that limits Boberg Road to right-in/right-out access. Another alternative solution would involve the design of the proposed Commuter Rail station and parking lot adjacent to Boberg Road. If a roadway from the south entrance of the Commuter Rail lot crossed the tracks and extended to Kinsman Road (utilizing the existing private crossing), circulation in the area would be improved and there would be less need for vehicles to utilize the intersection at Boberg Road/Boeckman Road reducing the negative impacts of future growth.

A separate analysis was conducted comparing motor vehicle performance with growth in background traffic beyond Villebois and Stage II approvals. The resulting deficiencies and mitigations for this scenario are listed in Table X.

**Table 6: Deficiencies and Mitigations by Phase for Existing plus Project plus Stage II plus Background Growth**

Phase (Year)	Deficiencies	Mitigations
1 (2004)	I-5 SB Ramps/Wilsonville Road (A) I-5 NB Ramps/Wilsonville Road (B)	Boeckman Road extension: From 95 <sup>th</sup> Ave west to Tooze Road Kinsman Road extension: Barber Street to Boeckman Road Parkway Avenue/Boeckman Road: Add EB right turn lane I-5 SB Ramps/Wilsonville Road: Add second WB left turn lane
2 (2005)	I-5 NB Ramps/Wilsonville Road (C)	Add off-ramp lanes and lengthen ramps (NB and SB)
3 (2006)	-	-
4 (2007)	95 <sup>th</sup> Avenue/Boeckman Road (D)	Add WB right turn lane
5 (2008)	Brown Road/Wilsonville Road (E)	Barber Street extension: From Villebois east to Kinsman Road
6 (2009)	95 <sup>th</sup> Avenue/Boeckman Road (F) Parkway Avenue/Boeckman Road (G) Clutter Road/Grahams Ferry Road Boberg Road/Boeckman Road (H)	Add traffic signal Add SB right turn lane Add SB left turn lane (based on turn lane warrants) Restrict Boberg Road to right-in/right-out with a median on Boeckman Road (or alternative solutions) <sup>5</sup>
7 (2010)	Clutter Road/Grahams Ferry Road (I)	Add WB left turn lane
8 (2011)	-	-

<sup>5</sup> Deficiencies at Boberg Road/Boeckman Road could be mitigated by eliminating the north leg of the intersection that is part of the Stage II approval for the Wilsonville Business Center. This intersection operates at an acceptable level of service though all phases of Villebois as a T-intersection. If the north leg is constructed, the level of service is deficient in Phase 5 (2008) and can be mitigated with the addition of a median on Boeckman Road that limits Boberg Road to right-in/right-out access. Another alternative solution would involve the design of the proposed Commuter Rail station and parking lot adjacent to Boberg Road. If a roadway from the south entrance of the Commuter Rail lot crossed the tracks and extended to Kinsman Road (utilizing the existing private crossing), circulation in the area would be improved and there would be less need for vehicles to utilize the intersection at Boberg Road/Boeckman Road reducing the negative impacts of future growth.

**Table 7: Level of Service Before and After Mitigation by Phase for Existing plus Project plus Stage II plus Background Growth**

Phase (Year)	Deficiencies	Before Mitigation		Mitigation Code	After Mitigation	
		LOS	V/C		LOS	V/C
1 (2004)	I-5 SB Ramps/Wilsonville Road	F	1.14	A	D	0.94
2 (2005)	I-5 NB Ramps/Wilsonville Road	F	1.14	B	E*	1.11*
3 (2006)	I-5 NB Ramps/Wilsonville Road	F	1.13	C	D	0.95
4 (2007)	-	-	-	-	-	-
5 (2008)	95 <sup>th</sup> Avenue/Boeckman Road	E	-	D	C	-
6 (2009)	Brown Road/Wilsonville Road	E	1.04	E	D	0.94
7 (2010)	95 <sup>th</sup> Avenue/Boeckman Road	F	-	F	B	0.49
8 (2011)	Parkway Avenue/Boeckman Road	E	0.98	G	D	0.83
	Boberg Road/Boeckman Road	E	-		B	-
	Clutter Road/Grahams Ferry Road	E	-	H	C	-
	-	-	-	-	-	-

\* Mitigations return intersection to pre-project level of service.

**Table 8: Summary of Mitigations Triggered during Villebois Development (2004 – 2011)**

Mitigation	Phase (Year) Mitigation Required	
	Without Background Growth	With Background Growth
Boeckman Road extension: From 95 <sup>th</sup> Ave west to Tooze Road	1 (2004)	1 (2004)
Kinsman Road extension: Barber Street to Boeckman Road	1 (2004)	1 (2004)
Parkway Avenue/Boeckman Road: Add EB right turn lane	1 (2004)	1 (2004)
I-5 SB Ramps/Wilsonville Road: Add second WB left turn lane	2 (2005)	1 (2004)
I-5 NB and SB Ramps/Wilsonville Road: Add off-ramp lanes and lengthen ramps	5 (2005)	2 (2005)
95 <sup>th</sup> Avenue/Boeckman Road: Add WB right turn lane	5 (2008)	4 (2007)
95 <sup>th</sup> Avenue/Boeckman Road: Add traffic signal	5 (2008)	6 (2009)
Barber Street extension: From Villebois east to Kinsman Road	6 (2009)	5 (2008)
Restrict Boberg Road to right-in/right-out with a median on Boeckman Road	6 (2009)	6 (2009)
Clutter Road/Grahams Ferry Road: Add SB left turn lane	6 (2009)	6 (2009)
Parkway Avenue/Boeckman Road: Add SB right turn lane	7 (2010)	6 (2009)
Clutter Road/Grahams Ferry Road: Add WB left turn lane	8 (2011)	7 (2010)

**Other Off-Site Issues**

The timing of future improvements between 2011 and 2020 has also been evaluated within the study area. As with the previous recommendations for improvements, this evaluation is based on the assumption of linear growth. The addition of large traffic generators may cause shifting in the estimated timing of projects.

Major improvements for the Wilsonville Interchange were recommended in the I-5 Freeway Access Study, including side-by-side double left turn lanes, setback of the abutment walls, and upgrading the vertical geometry of Wilsonville Road. It is estimated that the final phase of recommended improvements at Wilsonville Interchange would be needed between 2012 and 2015.

As part of the improvements recommended by the I-5 Freeway Access Study, intersection turn lane additions were identified at Boones Ferry Road/Wilsonville Road. These improvements would likely be triggered the day of opening for a large new traffic generator in the Old Town area south of the intersection. It is difficult to determine timing without knowing when such a development might occur, but due to construction phasing needs it would be reasonable to time the improvement with the I-5 interchange work on Wilsonville Road (noted above).

Other improvements recommended by the I-5 Freeway Access Study include improvements to the intersections at Brown Road/Wilsonville Road (left turn lanes on all approaches) and 95<sup>th</sup> Avenue/Elligsen Road (second NB left turn lane). The estimated timing for Brown Road/Wilsonville Road improvements is between 2012 and 2015. Improvements for 95<sup>th</sup> Avenue/Elligsen Road are likely to be needed between 2014 and 2017.

The potential need for a center left turn lane on Grahams Ferry Road north of the Villebois site was evaluated. The need for the center turn lane could be created by increased advancing traffic generated by Villebois and background growth (noted in the PM peak hour). The reason for the lane is to avoid safety implications of obstructed traffic caused by stopped or slowing left-turning vehicles (potential rear end collisions and conflicts). At lower volumes of traffic on Grahams Ferry Road, the turn lane would not be warranted (future advancing volume of about 700 vehicles per hour and opposing volume of about 400 vehicles per hour). Most driveways on Grahams Ferry Road would generate less than five turns during the PM peak hour. At this level, a center left turn lane would not be warranted even in 2020. It would either take through volumes increased to 800 vehicles during the peak hour or left turn volumes increased to ten during the peak hour to warrant a left turn lane. Malloy Way and Wheatland Drive are two locations that may potentially generate ten left turns during the peak hour. Should volumes increase more than forecasted, this segment of Grahams Ferry Road should be evaluated for future needs. Alternatives to a three-lane Grahams Ferry Road improvement would involve substantial right-of-way impacts and capacity deficiencies along 95<sup>th</sup> Avenue, Kinsman Road extension north from Boeckman Road to Ridder Road or a new extension of 110<sup>th</sup> Avenue north to Grahams Ferry Road from Boeckman Road. Since the travel forecasts indicated the impact on Grahams Ferry Road, this analysis addressed the mitigation on Grahams Ferry Road.

The intersections of Bell Road/Grahams Ferry Road and Bell Road/Wilsonville Road were evaluated because of their rural character and concerns about adding traffic to these small intersections. Because the volumes are quite low and the additional traffic is in the range of 20 to 40 vehicles during the peak hour, these intersections will continue to operate at an acceptable level of service. The intersection of Bell Road/Grahams Ferry Road has one approach at a severe angle, but as long as the volumes remain low, there should not be significant impacts. Grade and alignment refinements may be necessary for background traffic.

## APPENDIX C

## MEMORANDUM OF UNDERSTANDING

This memorandum of understanding is intended to guide responsible control of stormwater flow over property within the ownership and/or management responsibilities of City of Wilsonville ("the City"), Villebois LLC ("Villebois"), and Metro Regional Parks and Greenspaces ("Metro").

### Background

Historical overland flow of precipitation runoff from the proposed Villebois Village (Villebois) site in Wilsonville has been significantly altered by the construction of the former Dammasch Hospital Facility. Historic runoff flowed into three local stream basins: Coffee Lake Creek, Arrowhead Creek, and Mill Creek. Currently, all runoff from the Costa Pacific portion of the Villebois site is collected and conveyed into an unnamed intermittent stream located on Metro property known as Graham Oaks. This out-of-basin transfer of flow has resulted in significant degradation of the intermittent stream channel, herein referred to as "tributary of Mill Creek", on property owned and managed by Metro. The out of basin transfer has been estimated as approximately 57 cfs.

Currently, stormwater from approximately 112 acres of the Villebois site is conveyed through a concrete stormwater pipe beneath the surface of Metro property to the tributary of Mill Creek. The integrity of the outfall structure on the tributary to Mill Creek is compromised by severe erosion caused by these stormwater flows. Down cutting and head cutting of the stream channel has resulted in an outfall structure that is on the verge of collapse. Until the out-of-basin transfer of stormwater flow is eliminated from the tributary of Mill Creek, stream channel instability will continue to threaten the outfall structure.

Returning stormwater flows to historic basins will reduce the erosion occurring in the tributary of Mill Creek but may have other impacts on property downstream of the Villebois site. The impacts of returning the historic flows into the Coffee Lake Creek and Arrowhead Creek basins are not known at this time. Villebois has been conditioned by the City to prepare an engineering report addressing the impacts and to construct the improvements necessary to minimize/eliminate the impacts on the receiving basins. Potential impacts may include property damage due to flooding, and alterations to the hydrology of existing wetlands.

The City of Wilsonville Stormwater Master Plan states the ultimate goal for managing stormwater at the Villebois site is to return stormwater to the historical drainage basins, a goal supported by the City, Metro and Villebois. Meeting this goal will reduce the current degradation of the tributary to Mill Creek and allow for its restoration. In working toward this goal, several interim steps must be taken.

The City of Wilsonville has conditioned SAP South, Phase 1 of Villebois to construct certain improvements before allowing a connection to the concrete stormwater pipe within the Metro property from the newly constructed improvements within Phase 1. These improvements may include, but are not limited to re-enforcement/reconstruction of the outfall structure and replacement/repair of damaged sections of the underground stormwater pipe on Metro property. Due to the onset of wet weather conditions of winter 2004-05, it has been agreed upon by all parties that to minimize any adverse impacts on the Metro property that these repairs will be temporarily delayed until July 15, 2005 or sooner as determined by the City and Metro.

### **Resolution**

City of Wilsonville, Villebois LLC ("Villebois"), and Metro agree to the following:

1. By March 1, 2005 Villebois will submit to the City and Metro a comprehensive plan for the replacement of the damaged sections of the concrete stormwater pipe, with suitable materials as approved by the City, and stabilization/reconstruction of the outfall structure. City and Metro agree to review said plan and will respond to Villebois with appropriate comments by March 30, 2005.
2. All costs associated with said improvements shall be borne by Villebois.
3. No construction shall commence until this agreement, all applicable construction plans and permits have been secured, and a minimum of 48-hour notice is provided to the City and Metro.
4. Villebois agrees to defend and hold harmless the City and Metro, and their respective officers, agents and employees, from any and all liability, causes of action, claims, losses, damages or other costs or expenses, in connection with any claim, demand, or cause of action made or brought by a third party, which in any way arises from Villebois' failure and delay in complying with the condition respecting re-enforcement or reconstruction of the outfall structure and replacement/repair of the damaged section of the underground storm water pipe on Metro property.
5. During the interim period of winter 2004/05, Villebois shall monitor the conditions of the outfall for potential failure of the stormwater conveyance pipe and outfall structure. In the event there is a structural failure that may further compromise the function of the conveyance system, as determined by the City, Villebois will take immediate action to remedy the problem. Any remedial action occurring on Metro property must be approved by Metro prior to the activity occurring on site.
6. A hydrologic and wetland habitat enhancement study of Arrowhead Creek is required to determine the amount of stormwater that can be safely returned to the creek. Villebois has been conditioned to prepare this study by the City. The City, Villebois and Metro are however, collectively proceeding in securing funds for conducting the study of Arrowhead Creek basin through the U.S. Army Corps of Engineers (Corps). In the event sufficient funds are secured for completion of the Arrowhead Creek study through the Corps, by

October 1, 2005, it is anticipated that study results will define feasible alternatives for diverting stormwater flows in a manner consistent with historical conditions. Should the study funding through the Corps not be obtained by October 6, 2005, Villebois will initiate these improvements by October 1, 2006.

7. If sufficient funds for the study are <sup>not</sup> secured by October 2005, then the City will determine with the information available at that time, improvements to be made by Villebois necessary for acceptance of the storm water conveyance pipe and outfall as a public utility. Villebois will make these improvements on or before October 1, 2006.

Signatures

Villebois LLC

Mike Rogge  
Name

VILLEBOIS PROJ MGR.  
Title

12.21.04  
Date

Metro

Jane [Signature]  
Name

Director, Metro Regional  
Title Parks & Greenspaces

1/4/2005  
Date

City of Wilsonville

[Signature]  
Name

City Manager  
Title

12/21/04  
Date

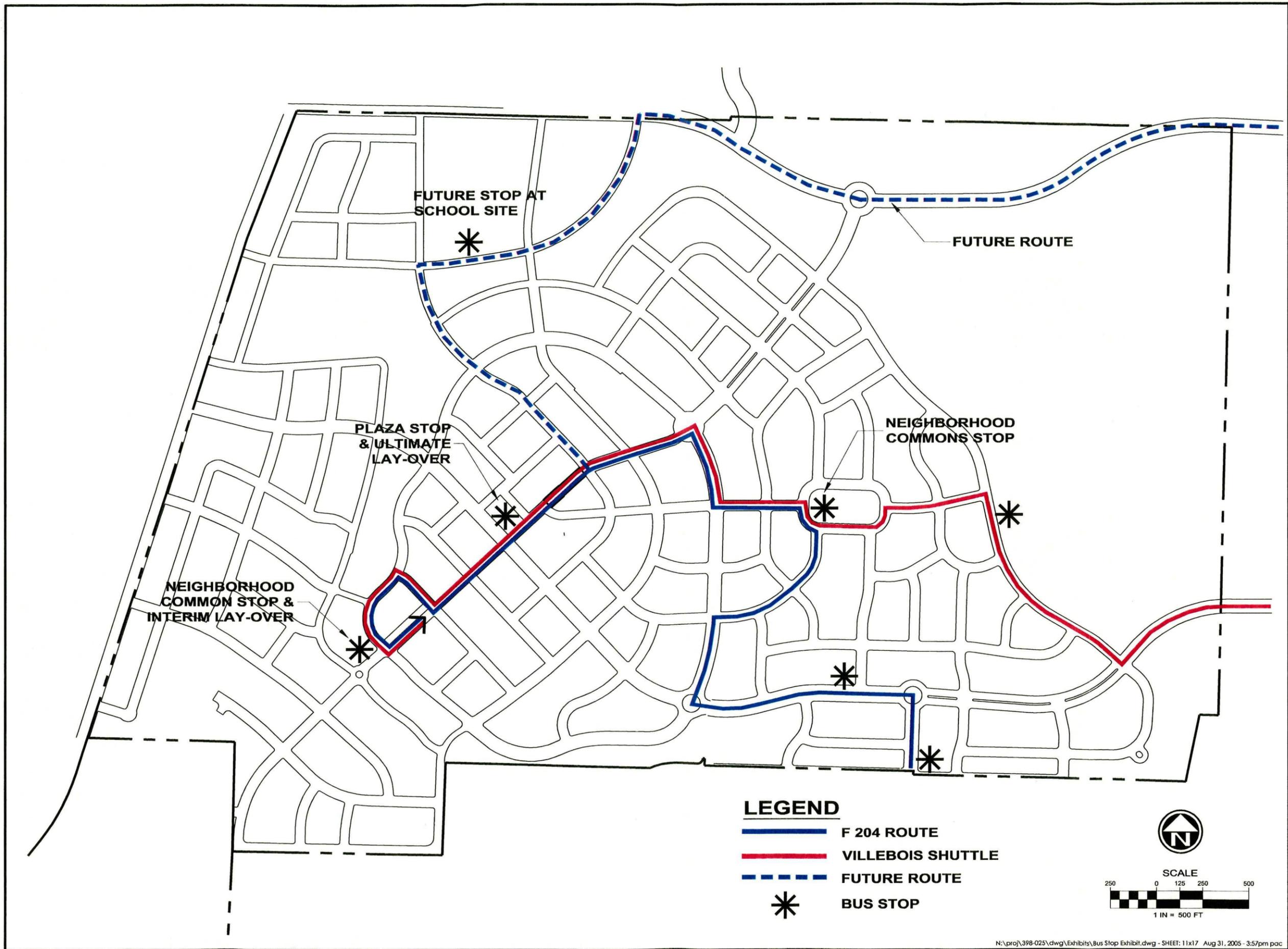
## APPENDIX D

REVISIONS	
NO.	DATE

VILLEBOIS

BUS STOP  
EXHIBIT

PROJECT NO.:  
TYPE:  
DATE: 8/16/05  
REV. 8-3-05



**LEGEND**

-  F 204 ROUTE
-  VILLEBOIS SHUTTLE
-  FUTURE ROUTE
-  BUS STOP

