

ORDINANCE NO. 556

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

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 first public hearing on the proposed Villebois Village Master Plan was conducted by the Wilsonville Planning Commission on July 9, 2003, and a second public hearing was conducted on July 23, 2003; and

WHEREAS, the Planning Commission recommended approval of the proposed Master Plan with amendments; and

WHEREAS, the City Council conducted a duly noticed public hearing on the proposed Master Plan on August 18, 2003; 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 11, 2003, attached as Exhibit A and 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 Villebois Village Master Plan as recommended by the Planning Commission on July 23, 2003, attached hereto and incorporated herein as Exhibit B, with additional amendments as contained in the August 11, 2003 staff report shown on Exhibit A, 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.

Section 3. Effective Date. The City Council hereby determines that given the State of Oregon's fast timeline for developer acquisition, the shortness of this remaining construction season, financial time commitments involved, and the legal necessity that this Master Plan precede additional, necessary development approvals for construction to support financing and acquisition, and the economic boost to the State's negative economy from beginning the estimated \$500 million dollar development this construction season, that time is so clearly of the essence that an emergency exists and it is in the public interest that this Ordinance shall take effect immediately upon final reading and passage by the Council.

SUBMITTED to the Wilsonville City Council for first and second reading at a regular meeting thereof the 18th day of August, 2003 at the hour of 7:00 p.m. at the Wilsonville Community Center, 7965 SW Wilsonville Road, Wilsonville, Oregon.




SANDRA C. KING, CMC, City Recorder

ENACTED by the City Council on the 18th day of August, 2003, by the following

votes:

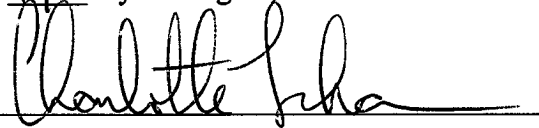
YEAS: -5-

NAYS: -0-



SANDRA C. KING, CMC, City Recorder

DATED and signed by the Mayor this 19th day of August, 2003.



CHARLOTTE LEHAN, Mayor

SUMMARY OF VOTES:

Mayor Lehan	Yes
Councilor Helser	Yes
Councilor Kirk	Yes
Councilor Holt	Yes
Councilor Scott-Tabb	Yes

WILSONVILLE PLANNING DIVISION
Wilsonville City Council
STAFF REPORT

HEARING DATE: August 18, 2003

DATE OF REPORT: August 11, 2003

APPLICATION NO.: 02PC07B

REQUEST: Adoption of the June 4, 2003 draft *Villebois Village Master Plan*, as amended by the Planning Commission. The proposed *Master Plan* generally directs creation of phased development described as a mixed-use urban village (residential/commercial) that integrates land use, transportation, and natural resource elements, and provides 2300 housing units. The proposed *Master Plan* is an implementing document of the *Villebois Village Concept Plan* (File No. 02PC06).

LOCATION: Approximately 520 acres bounded on the north by Tooze Road, west by Grahams Ferry Road, south by the Metro Urban Growth Boundary at Brown and Evergreen, and east to the current City limits.

LAND USE DESIGNATIONS: Wilsonville Comprehensive Plan Map Designations: "Residential-Village", "Industrial"; Clackamas County Comprehensive Plan Map Designation: "Agricultural"

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

APPLICANT: Costa Pacific Communities

STAFF REVIEWERS: Barbara Coles, Maggie Collins, Paul Lee, Eldon Johansen, Mike Stone, Chris Neamtzu, Kerry Rappold, Mike Kohlhoff, Dan Hoyt

- CRITERIA:** See Findings (Attachment B) to this Staff Report
- DESCRIPTION OF ACTION:** Adoption of Ordinance No. 556, which adopts the *Villebois Village Master Plan* as an implementing document to the *Villebois Village Concept Plan*, and as an ancillary document to the Wilsonville Comprehensive Plan.
- ATTACHMENTS & EXHIBITS:** See last page of this Report. Oversize exhibits and attachments are available for review in the Planning Division.
-

BACKGROUND:

A. History of Project

The Wilsonville City Council adopted *Villebois Village Concept Plan* by Ordinance No. 553 on June 2, 2003. This action culminates a process begun in 1995 to address a continuing interest by the City in the use and development of the former Dammasch Hospital site and surrounding properties by developing a land use concept for the 198 acres of the Dammasch State Hospital complex and for an additional 332 acres of surrounding properties within the Metro Urban Growth Boundary.

Villebois LLC and the City are developing agreements to assure the phased financing and development of the property as envisioned in the *Concept Plan*. A Memorandum of Understanding between the City and Villebois LLC regarding Villebois development identifies key intents: Diversity, Connectivity, Sustainability, Market Sensitivity, and Transit Orientation. 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 school, and
- A method of directing and controlling architectural standards for the development.

Costa Pacific Communities has prepared the *Villebois Village Master Plan* on behalf of Villebois LLC. Its principles have been reviewed by the citizens of Wilsonville, affected

property owners, the Wilsonville Planning Commission and City Council, Wilsonville staff, other elected officials, state officials, and other stakeholders.

B. The City Review and Adoption Process

Villebois Village Master Plan (File No. 02PC07B)

This is the third of a series that deals with Comprehensive Plan changes and/or additions. On June 2, 2003, the City Council adopted Ordinance No. 554, which added text and policy to the Comprehensive Plan about the Villebois Village Study Area (File No. 02PC07A). Also on June 2, 2003, the City Council adopted Ordinance No. 555, which amended the Comprehensive Plan Map to place approximately 481 acres within this same Study Area into a "Residential-Village" Plan Map designation (File No. 02PC07C), as identified in the *Concept Plan*.

C. Description of the Villebois Village Master Plan

The *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 bases 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.

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

Chapter Summaries

Chapter 1 – Purpose & Scope of Villebois Village Master Plan

Self-explanatory.

Chapter 2 – Land Use

Chapter 2 provides an land use implementation plan in graphic illustrations (Figures 1, 1a, 2, 2a, 3 and 4) and text that includes goals, policies and implementing measures, identification of residential neighborhood housing, a discussion of the Village Center, and a proposed school site. The Living Enrichment Center is recognized as an element of the *Master Plan* that will be required to submit its own Specific Area Plan. The "planning area" is reduced by approximately 39 acres from that shown in the *Concept Plan*, and adjustments have been made to open space allocations.

Figure 1a and its accompanying text were recommended for adoption by the Planning Commission. The Commission recommended that Figure 1a and related text may replace Figure 1 and text related to Figure 1 if the Planning Commission so approves the replacement within 180 days of the adoption of the *Villebois Village Master Plan*. Staff agrees with this approach. The Conclusionary Findings presented in Attachment B, however, exclude findings of compliance for Figure 1a and accompanying text.

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

Chapter 3 identifies areas to be used for parks and open spaces in Villebois and provides implementation that includes goals, policies, and implementing measures. A justification for the range and type of parks is offered, using the City's 1994 Parks and Recreation Master Plan (PRMP) as a guide. The PRMP had not envisioned residential development in the Dammasch area. As a result, the PRMP becomes a guideline, not a set of requirements, to be used when evaluating the *Villebois Village Master Plan*. Chapter 3 proposes parks and open spaces comparable to categories listed in the PRMP but introduces several new categories of parks facilities: 1) the proposed parks categories of urban plaza, linear green, and pocket parks have been evaluated as "neighborhood" parks; 2) the proposed park associated with the proposed school site is comparable to a "community" park; and 3) the proposed Villebois Greenway is considered in the "regional" parks category.

Staff feels that the *Villebois Village Master Plan* generally satisfies the recommended standards of the PRMP for several categories of parks. The development of Villebois does not require an amendment to the PRMP in order to be implemented. Villebois categories where PRMP standards are not being completely satisfied onsite can be addressed through an update to the PRMP.

Chapter 4 – Utilities

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.

Chapter 5 – Circulation

Chapter 5 outlines a proposed street plan, an on-street bike lane segment, 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 Villebois development does not require an amendment to the TSP in order to be implemented.

Staff's review of the proposal concluded: 1) the pedestrian and the bicycle linkages are exceptional on the internal system within Villebois; 2) the proposed street layout will function with at least a level of service D or better on the minor arterial and all major and minor collectors; 3) the proposed limited use 20-foot wide street sections across open space will minimize impacts; and 4) since there is no available traffic capacity at the Wilsonville Road/I-5 interchange, construction at the interchange needs to be funded and scheduled before the initial phases of Villebois can be constructed.

D. Planning Commission Actions

On March 12, 2003, the Planning Commission adopted a set of advisory guidelines as part of its favorable motion for adoption of the *Villebois Village Concept Plan*. The applicant responded to these guidelines in a satisfactory manner.

On July 9, 2003, the Planning Commission held its first public hearing on File No. 02PC07B, continuing the request to a second public hearing at a special meeting on July 23, 2003.

After taking public testimony at the second public hearing, the Planning Commission voted 6 to 1 to recommend adoption of the *Villebois Village Master Plan* with several amendments (Attachment A of this Staff Report). These were described at a City Council Worksession on August 4, 2003.

E. Council Discussion

As part of the August 4th Worksession, these concerns were addressed as follows:

- School Construction Schedule. The Planning Commission amendments include the requirement for a school site with a minimum of 10 buildable acres, composed of 7 acres for a school facility and 3 contiguous acres for athletic fields. For operating costs, the School District is dependent upon reimbursement by the State on a per pupil basis. In order to operate a new school onsite, the District will need to see virtually full enrollment when the school is open. The City is committed to working with the School District on the appropriate phasing schedule.

- Park Plan Specificity. As stated in this Staff Report, the Parks and Recreation Master Plan needs updating to include specifics of park-related plans for Villebois Village. Specific plans for fields, neighborhood parks, etc. will come forward as each development proposal is presented to the DRB for review and approval. At that time, the Parks and Recreation Advisory Board will review the proposed park segment of each DRB submittal.
- The DKS Traffic Report. Community Development Director Eldon Johansen reports that the *Villebois Village Master Plan* shows connections from Villebois Village to the development at the south at Montebello, Serenity Way, Brown and Yosemite (Figure 1). These connections were not included in the DKS report based on the understanding that the residents to the south, in all likelihood, would not want the connections. Figure 1a does not include the connection at Montebello; however, this is open to inclusion if desired. Concerning the schedule for Barbur, the overall schedule was based on using the existing streets and also the Boeckman Extension to the maximum extent possible while deferring the construction at Barbur as long as possible. Using these criteria, the construction of Barbur was delayed until actually needed to meet level of service requirements. This would not preclude earlier construction of Barbur.
- Access and Traffic Flow for Phase I. The original traffic report was based on maintenance of level of service using the streets in the Transportation Systems Plan. DKS is doing a separate traffic report for the south Specific Area Plan that will include four phases; will be based on the existing streets, plus the streets that are included in a Capital Improvements Plan, plus whatever streets would be conditioned for the developer. It is anticipated that one or more phases of Villebois can be developed using 110th Avenue and Brown Road as the main connections to Wilsonville Road, and ultimately to Interstate 5 for access. The number of phases that can be developed and still maintain an adequate level of service will be completed as part of the analysis for the first Villebois preliminary development plan. The access via 110th will decrease somewhat when the Boeckman Extension is completed so a higher percentage of the traffic goes north 110th to Boeckman Extension, and will further decrease when Barbur is completed. There will be a continued requirement for some access to Villebois from Brown Road.

ANALYSIS AND FINDINGS OF FACT:

See Attachment B to this Staff Report.

CONCLUSIONS AND RECOMMENDATIONS:

Based on the public hearing testimony and Conclusionary Findings, and on a public hearing duly noticed and conducted, Staff recommends a positive motion adopting Ordinance No. 556.

ATTACHMENTS:

- A. List of Amendments
- B. Conclusionary Findings, Planning File 02PC07B

ATTACHMENT A

ATTACHMENT A
List of Proposed Amendments to File 02PC07B
Villebois Village Master Plan,
August 11, 2003

GENERAL

- Add Implementation Measures 4.1.4.j and k as criteria for *Villebois Village Master Plan* approval criteria as follows:
Implementation Measure 4.1.4.j The City shall have a diverse range of housing types available within its City limits.

Implementation Measure 4.1.4.k The City shall adopt specific goals for low and moderate cost 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.
- Shade area along Grahams Ferry Road on Figures 1 and 7 to reflect the need for careful attention to access management, per the Implementation Measures of the *Villebois Village Master Plan* and the requirements of the Village (V) Zone.
- Amend Figure 2 to show the Central SAP boundary, including location of Loop Drive. **Note: Done. See Figure 2A.**
- Add to Page 9 an explanation of ORS 426.508 and what it requires.
- Re-add Footnote 6 to Table 5.
- Delete the definition from the *Villebois Village Master Plan*, "Glossary," page 60:
~~Commercial / Employment Overlay Area (CEOA):~~
~~The area within the Village Center that is designated for mixed use (residential and commercial) development, retail, and employment.~~
- Amend the Wilsonville Comprehensive Plan by adding the *Villebois Village Master Plan* to the Supporting Documents list on page 5.
- Amend Planning Condition of Approval 5: "The Master Planner and City Staff shall review and evaluate proposed Eastside Master Plan changes identified by *Figure 1A – Replacement Land Use Plan* for compliance with the City's Master Plans, as well as the updated *Villebois Village Master Plan* findings, text, and figures. Upon demonstration of compliance, the *Villebois Village Master Plan* shall be amended as appropriate. Evidence demonstrating compliance with previously cited documents shall be provided to the Planning Commission."

- Amend Planning Condition of Approval 6. “The Master Planner, City Staff, West Linn/Wilsonville School District personnel and affected property owners shall review and evaluate proposed locations for siting an elementary grade school as generally located in *Figure 1A – Replacement Land Use Plan*. The selected site shall be added as an amendment to the *Villebois Village Master Plan*, in conjunction with Condition #5 above. Similarly, evidence demonstrating compliance with all previously cited documents shall be provided to the Planning Commission.”

CHAPTER 2

- Replace original Chapter 2 Narrative with Exhibit 11 Narrative and Figures 2 and 2A as presented to Planning Commission on July 23, 2003.
- Add Exhibit 10 narrative and Figure 1A as presented to Planning Commission on July 23, 2003.
- Amend the title of Figure 3 as follows:
“**Conceptual Specific Area Plan Boundaries**”
- Amend the following bullet on page 6 as follows:
 - *Light Manufacturing/Research and Development: research and development, computer, technology.* **Note: Done.**
- Amend the text on page 6 as follows:
“The School District has indicated to the Master Planner that any location within one of the residential neighborhoods in the Villebois Village Master Plan would be acceptable. Though the Villebois Village Master Plan continues to illustrate the school site in the eastern portion of the plan area, the ultimate location of the school shall be west of 110th Street and shall be confirmed with the subsequent review stages as specified within the implementing Village zone.” ~~Land uses displaced by relocation of the school site shall be relocated to the currently proposed school location as commensurately as practicable. The planning team and the West Linn Wilsonville School district currently are discussing the programming and requirements for the site.”~~
- Amend the paragraph on page 7 as follows:
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 Areas Plans (SAPs). Specific Area Plan approval will occur subsequent to *Villebois Village Master Plan* approval and prior to submittal of development applications. Specific Area Plan’s 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 Plan's Plans will include a pattern book and community elements plan, as well as other items as specified in the implementing Village zone. The pattern book will be an illustrative document that depicts the architectural character of the Specific Area Plan. The Community Elements Plan 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.

- Amend Implementation Measure #2.2.3 on page 8 as follows:
 1. 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.**

- Amend General – Land Use Plan Policy 2.2.2 on page 8 as follows:
 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 Living Enrichment Center (LEC) 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*.**

- Add Implementation Measure #6 to Page 8 under General Land use Plan Implementation as follows:

The technical data supporting *Figure 1A – Replacement Land Use Plan* and the data and analyses to address the City’s master Plans, as well as the updated *Villebois Village Master Plan* findings, text and figures, as appropriate, shall be submitted by the Master Planner. City staff shall complete the necessary review, prepare staff report(s) and schedule Planning Commission action to accomplish approval within 180 days of approval of the *Villebois Village Master Plan*. This approval process is intended to streamline the legislative amendment process and retain Planning Commission authority to review legislative changes to the City’s Comprehensive Plan. *Figure 1A – Replacement Land Use Plan* shall be void if the approval process is not completed within the specified time, unless the Planning Commission should extend the time limit.

- Add Implementation Measure #3 to Page 9 as follows:
 3. **Develop Affordable Housing objectives for each Specific Area Plan, which shall contain, at a minimum, a desired mix and density of housing that will ensure an efficient and affordable housing opportunities for households of all income levels that live and work in the City of Wilsonville. Develop strategies to accomplish those desired mixes and densities, and indicate how buildout of the Specific Area Plan contributes to the overall Goals and Policies of the *Villebois Village Master Plan*.**

- Amend Residential Neighborhood Housing Policy #9 on page 9 to read as follows:
 9. High 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*.**

- Amend School Policy #1 as follows:

The plan for Villebois Village shall ~~consider provision of~~ **provide** an elementary school site in a location that provides safe and convenient access and complements the surrounding neighborhood.

- Amend School Implementation Measure #1 on page 11 as follows:
 3. Coordinate with the West Linn/Wilsonville School District throughout the planning stages of Villebois Village to address siting of a 550-student grade school ~~on a 10-acre site where recreational area is contiguous to the school facility~~ **and the total acreage is 10 acres. Upon selection of site, revise Figure 1 of the *Villebois Village Master Plan* to reflect the selected site.**

CHAPTER 3

- Amend reference from to “Eastside Park” to “Eastside Neighborhood Park.”

- Delete the two-paragraph description on Page 14 under the category “P-2 Community Parks PRMP Category. Add a paragraph under the P-1 Neighborhood Parks (PRMP category) that starts on Page 12 as follows:

Eastside Neighborhood Park (1.0 to 3.0 acres)
This park is located in the Village’s east neighborhood and will provide a primary open space for residents in the surrounding neighborhood. It will be developed with consideration of features designed for Neighborhood Parks.

- Add Implementation Measure #7 on page 24 as follows:
 7. **Design for neighborhoods parks greater than one acre in size shall include ~~play structures and consideration of basketball half-courts 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 parking as part of the Greenway in close proximity to the north and west neighborhood parks, and restrooms and parking in conjunction with the east side community park.

- Add the following as Implementation Measure #7:
The Parks and Recreation Advisory Board recommends the development of a community center beyond the school site that is sized to support at a minimum, the incoming population of Villebois. It is highly recommended that the development take advantage of existing facilities to utilize them as a community center with full sized basketball court, multipurpose room, meeting rooms, kitchen facilities and consideration of indoor/outdoor water feature and adjacent fields. The board would encourage the developer to explore partnerships to make these facilities available to local residents.

CHAPTER 4

- Change Implementation Measure #9 on page 47 as follows:
 8. Pursuant to the City's Stormwater Master Plan Policies 9.2.4 and 9.2.5, maintenance of stormwater conveyance facilities, including ~~open surface water detention/retention facilities such as Coffee Lake Creek~~, will be planned and implemented as part of the Specific Area Plans for the Villebois Village.
- Change Implementation Measure #10 and combine with Implementation Measure #12 on page 47 as follows:
 9. ~~Prepare Complete~~ study of Options A and B with regard to CIP Project CLC-10, **no later than 18 months after City adoption of the *Villebois Village Master Plan*. 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 Metro Tract. Obtain appropriate easements as required for said facility.
 - Prepare additional study of Arrowhead Creek to and including backup from Willamette River at location where 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.

CHAPTER 5

- Add the language of Wilsonville TSP Implementation Measure 4.1.1b(3) to Implementation Measure #4 on page 57 as follows:
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.
- Amend #E and #D of Figure 9A as follows: Change 8-foot parking and 5-foot bike lanes to 7-foot parking strips and 6-foot bicycle lanes. Amend Table 5 to reflect the changes in Figure 9A.

ATTACHMENT B

**DRAFT
ATTACHMENT B
CONCLUSIONARY FINDINGS
FILE NO. 02PC07B**

A. CITY OF WILSONVILLE COMPREHENSIVE PLAN.....	2
STANDARDS FOR APPROVAL OF PLAN AMENDMENTS	2
COMPREHENSIVE PLAN POLICIES	7
CITIZEN INVOLVEMENT	7
URBAN GROWTH MANAGEMENT	8
PUBLIC FACILITIES AND SERVICES	11
SANITARY SEWER COMPREHENSIVE PLAN POLICIES.....	12
WATER SERVICE COMPREHENSIVE PLAN POLICIES.....	14
ROADS AND TRANSPORTATION PLAN	15
STORM DRAINAGE PLAN.....	25
COMPLEMENTARY FACILITIES/SERVICES PLAN.....	33
PARKS/RECREATION/OPEN SPACE	33
LAND USE AND DEVELOPMENT	39
GENERAL DEVELOPMENT	39
COMMERCIAL DEVELOPMENT	40
INDUSTRIAL DEVELOPMENT.....	41
RESIDENTIAL DEVELOPMENT.....	42
ENVIRONMENTAL RESOURCES AND COMMUNITY DESIGN.....	47
RESIDENTIAL – VILLAGE (PROPOSED).....	53
WILSONVILLE COMPREHENSIVE PLAN MAP.....	55
B. CITY OF WILSONVILLE PLANNING & LAND DEVELOPMENT ORDINANCE.....	56
SECTION 4.008 APPLICATION PROCEDURE – IN GENERAL	56
SECTION 4.009 WHO MAY INITIATE APPLICATIONS.	56
SECTION 4.140 PLANNED DEVELOPMENT REGULATIONS.....	57
SECTION 4.198 COMPREHENSIVE PLAN CHANGES – ADOPTION BY THE CITY COUNCIL	61
C. METROPOLITAN SERVICE DISTRICT	64
TITLE 1: REQUIREMENTS FOR HOUSING AND EMPLOYMENT ACCOMMODATION	64
TITLE 2: REGIONAL PARKING POLICY.....	64
TITLE 3: WATER QUALITY, FLOOD MANAGEMENT AND FISH AND WILDLIFE CONSERVATION.....	65
REGIONAL TRANSPORTATION PLAN, CHAPTER 6 (REPLACES TITLE 6: REGIONAL ACCESSIBILITY)	66
TITLE 7: AFFORDABLE HOUSING	67
TITLE 11: PLANNING FOR NEW URBAN AREAS	68
D. STATE OF OREGON.....	75
STATEWIDE PLANNING GOALS AND GUIDELINES.....	75
GOAL 1: CITIZEN INVOLVEMENT	75
GOAL 2: LAND USE PLANNING	75
GOAL 3: AGRICULTURAL LANDS	76
GOAL 4: FOREST LANDS	76
GOAL 5: NATURAL RESOURCES, SCENIC AND HISTORIC AREAS, AND OPEN SPACES	77
GOAL 6: AIR, WATER AND LAND RESOURCES QUALITY	78
GOAL 7: AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS	78
GOAL 8: RECREATIONAL NEEDS	80
GOAL 9: ECONOMIC DEVELOPMENT.....	81
GOAL 10: HOUSING	82
GOAL 11: PUBLIC FACILITIES AND SERVICES.....	82
GOAL 12: TRANSPORTATION.....	83
GOAL 13: ENERGY CONSERVATION	84
GOAL 14: URBANIZATION	84
GOAL 15: WILLAMETTE RIVER GREENWAY	86
OREGON REVISED STATUTE	86
OREGON ADMINISTRATIVE RULE.....	87

A. CITY OF WILSONVILLE COMPREHENSIVE PLAN

The following section addresses the applicable criteria of the Wilsonville Comprehensive Plan. Staff finds that the following Goals, Policies, and Implementation Measures apply:

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.

FINDING A-1: 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 Residential-Village (City Ordinance No. 555, May 19, 2003). The Villebois Village Master Plan (City File 02PC07B) will be in compliance with the City of Wilsonville Comprehensive Plan upon the demonstration of compliance with other applicable City Master Plans, which are sub-elements of the City's Comprehensive Plan, and other applicable provisions of the Comprehensive Plan. The Villebois Village Master Plan evaluates compliance with the appropriate Comprehensive Plan sub-elements, as described in the following paragraphs.

The 1994 Parks and Recreation Master Plan (PRMP) did not envision residential development in the Dammasch area. As a result, the PRMP becomes a guideline, not a set of requirements, to be used when evaluating the Villebois Village Master Plan. However, the Parks and Open Space / Off-Street Pathways Chapter (Chapter 3) of the Master Plan demonstrates that Villebois meets the vision of the PRMP 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. Staff feels that the Villebois Village Master Plan generally satisfies the recommended standards of the PRMP for several categories of parks. However, it introduces several new categories of parks facilities. Those categories for which the recommended standards are not being completely satisfied onsite can be addressed through an update to the PRMP that includes the Villebois Village Master Plan area. This project does not require amendment of the City's Parks & Recreation Master Plan in order to be implemented.

Chapter 4 (Utilities) is broken into three sections: sanitary sewer, water, and storm drainage. 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 build out in the shortest amount of time (eight years), the need for plant expansion would be advanced two years to 2009. Staff

agrees that the Villebois Village Master Plan is generally consistent with, and meets the standards of, the City's Wastewater Collection System Master Plan.

The City's Water System Master Plan included the Villebois area but assumed a longer build out period. With the incorporation of the proposed project at a build out rate of 8-12 years, staff anticipates needing additional capacity approximately nine months earlier. Staff agrees that the Villebois Village Master Plan is generally consistent with, and meets the standards of, the City's Water System Master Plan.

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. It will also incorporate a Rainwater Management Program for onsite runoff with support facilities constructed on site. Staff feels that the Villebois Village Master Plan generally can satisfy the recommended standards of the Storm Water Master Plan. Inclusion of the Villebois Project can be addressed through an update to the City's Storm Water Master Plan to include the Villebois Area and the Capital Improvements that are required to support this area. There are two different study areas that will require ongoing analysis. The runoff to the south presently goes into Mill Creek. This was a diversion of flows from the original waterways approximately 50 years ago. The proposed solution to this project in the Master Plan was CLC-10 and inclusion of the work for CLC-10 would provide adequate runoff to the south for the Villebois Project. To return storm water to the natural drainage channel, Costa Pacific has proposed Option A and Option B. Option A would remove the flows from Mill Creek and reroute a large part of those flows back through a detention pond through the wetlands near Wood Middle School and out through Arrowhead Creek. Option B would only remove part of the flows from Mill Creek into the wetlands and Arrowhead Creek. Costa Pacific is conducting a detailed study of these alternatives and will complete the study within 18 months of the approval of the Villebois Village Master Plan. This study also would reroute approximately 21 acres of flow from Mill Creek back into the Coffee Lake drainage basin. The impact of this rerouting back to the historic drainage basin will be reviewed as part of the hydrology study for the Boeckman Extension and will be evaluated by Costa Pacific prior to completion of the Specific Area Plans that would be impacted.

Chapter 5 (Circulation) outlines a proposed street plan, an on-street bike lane segment, 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 Villebois development does not require an amendment to the TSP in order to be implemented.

*Staff's review of the proposal concluded: 1) the pedestrian and the bicycle linkages are exceptional on the internal system within Villebois; 2) the proposed street layout will function with at least a level of service D or better on the minor arterial and all major and minor collectors; 3) the proposed limited use 20-foot wide street sections across open space will minimize impacts; and 4) since there is no available traffic capacity at the Wilsonville Road/I-5 interchange, construction at the interchange needs to be funded and scheduled before the initial phases of Villebois can be constructed. **Staff feels that generally, the Villebois Village Master Plan satisfies the recommended standards of the TSP. However, disagreement with the master planner's proposal remains on one issue – allowing on-street parking on minor and major collectors within the Villebois Village (see Attachment B to this Staff Report).***

b. The granting of the amendment is in the public interest.

*FINDING A-2: ORS 426.508 requires that redevelopment of the Dammasch property be consistent with DATELUP. The Memorandum of Understanding between the State of Oregon and the City of Wilsonville regarding redevelopment identifies roles for the City and the Master Planner to master plan not only for the Dammasch property but also for the surrounding area subsequently identified in the Comprehensive Plan as Area of Special Concern B. These areas are designated Residential-Village on the Comprehensive Plan Map (City Ordinance No. 555, May 19, 2003); the Villebois Village Master Plan will apply to these areas. DATELUP is a conceptual land use plan for Area of Special Concern B that was developed in 1996 to address “. . . the Wilsonville community's needs for housing a growing population.” The Villebois Village Concept Plan has been found by the City to be consistent with DATELUP, which it replaced through City Ordinance No. 553, May 19, 2003. It calls for the development of the Villebois Village Master Plan to serve as an implementation guide for the Villebois Village Concept Plan. **Staff finds that the Villebois Village Master Plan is generally consistent with the Villebois Village Concept Plan as demonstrated later in this Section (see “Residential – Village”) and is, therefore, in the public interest.***

c. The public interest is best served by granting the amendment at this time.

FINDING A-3: The Villebois Village Master Plan provides for a phased development generally described as a mixed-use (residential/retail/office) urban village that integrates land use, transportation, and natural resource elements. This opportunity for a system of well integrated land uses, the infrastructure necessary to efficiently and effectively support those land uses, and the coordinated preservation and enhancement of natural resources prevent the area from inevitably being developed with numerous subdivisions that could be of varying quality and with amenities that are not often interrelated.

A development of the scope of Villebois becomes a catalyst for developing major transportation improvements and for attracting funding for which smaller developments could not qualify. The large scale development concept for the subject site responds to such state and regional planning policies as protecting and preserving open space, providing for a safe and efficient transportation system, and providing a range of housing types and densities. The concept and master planning approach also affords a more

extensive opportunity for citizens to review and participate in the planning process than would otherwise be afforded to them. Staff finds that 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.

FINDING A-4: The development of the Dammasch Area Transportation Efficient Land Use Plan (DATELUP) addressed the following factors: the suitability of 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. The Villebois Village Concept Plan, as a refinement of DATELUP, also reviewed these factors (City File 02PC06A). The Villebois Village Master Plan implements the Villebois Village Concept Plan, and has, thereby, been developed in consideration of the above-listed factors.

Figure 1 – Land Use Plan, reflects a project design that was developed in consideration of the above-listed factors. More specifically, Chapter 2 – Land Use, of the Villebois Village Master Plan addresses a land use plan that was developed in evaluation of the suitability of the site and surrounding area to determine the appropriate locations for proposed land uses and improvements. The development of the Land Use Plan also considered property values in terms of compatibility with adjacent areas and suitability of the site for proposed uses. Chapter 2 – Land Use, also addresses trends in land improvement and the density of the project at a level of review appropriate for a Master Plan by establishing goals, policies and implementation measures to guide subsequent development of the project.

Chapter 3 – Parks & Open Space, evaluates the proposed park and open space areas for suitability of the proposed uses, the incorporation of natural resources into the plan, and sets goals, policies and implementation measures to guide improvement of proposed park and open space areas. Chapter 4 – Utilities, evaluates the suitability of proposed utility improvements to support the project and their compatibility with the City's utilities and Master Plans. Chapter 4 also provides goals, policies and implementation measures to further development of the necessary utilities to serve the project. Chapter 5 – Circulation, addresses transportation access and its suitability for the proposed development, as well as provides goals, policies and implementation measures to assure that the proposed circulation system is developed in accordance with City requirements and the surrounding transportation facilities.

One of the end goals of Villebois Village is to meet a public need for a healthful, safe and aesthetic residential community. The Villebois Village Master Plan proposes to meet that goal through subsequent development of the project under the guidance of the goals,

policies and implementation measures of the Master Plan. Staff finds that the factors under consideration in this sub-section have been adequately addressed in the Villebois Village Master Plan.

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

FINDING A-5: Staff finds that the Villebois Village Master Plan does not result in conflicts with applicable Metro requirements as demonstrated by Section C of this Findings Report.

Comprehensive Plan Policies

CITIZEN INVOLVEMENT

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.

POLICY 1.1.1: The City of Wilsonville shall provide opportunities for a wide range of public involvement in City planning programs and processes.

*FINDING A-6: The Villebois Village Master Plan development and approval process continues a long and thorough public involvement process as required under the City procedures. Public hearings will be held before the City Planning Commission and the City Council on the Master Plan. The Planning Commission, serving as the Committee for Citizen Involvement, held a meeting on May 7, 2003, open to the public, on the Master Plan. It also held a workshop open to the public on May 14, 2003. This formal process is in addition to the ongoing informal public involvement process the Master Planner is conducting. A number of public meetings were held leading into the Villebois Village Concept Plan. The Master Planner is continuing an open dialog with individual property owners within and adjacent to the project boundaries. **Staff finds that this policy has been met.***

Implementation Measure 1.1.1.a: Provide for early public involvement to address neighborhood or community concerns regarding Comprehensive Plan and Development Code changes. Whenever practical to do so, City staff will provide information for public review while it is still in "draft" form, thereby allowing for community involvement before decisions have been made.

*FINDING A-7: The Villebois Village Master Plan is part of a long and thorough public involvement process as required under the City procedures. This formal process is in addition to the ongoing informal public involvement process the Master Planner is conducting. This is a follow-on to the public process started by DATELUP and continuing through the Concept Plan development (see also response to Policy 1.1.1, above). **Staff finds that this Implementation Measure has been met.***

GOAL 1.2: For Wilsonville to have an interested, informed, and involved citizenry.

POLICY 1.2.1: The City of Wilsonville shall provide user-friendly information to assist the public in participating in the City planning programs and processes.

Implementation Measures 1.2.1.a-c: [These measures address the City's responsibility to help clarify the public participation process, publicize ways to participate, and establish procedures to allow reasonable access to information.]

FINDING A-8: These Measures and other legal procedures have been followed for the public hearings considering this application. Staff finds that these Implementation Measures have been met.

POLICY 1.3.1: The City of Wilsonville shall coordinate with other agencies and organizations involved with Wilsonville's planning programs and policies.

Implementation Measure 1.3.1.b: Where appropriate, the City shall continue to coordinate its planning activities with affected public agencies and private utilities. Draft documents will be distributed to such agencies and utilities and their comments shall be considered and kept on file by the City.

FINDING A-9: The Master Planner has provided 150 copies of the draft Villebois Village Master Plan for distribution to affected public agencies and private utilities for their review and comment. This document has gone through extensive revision in coordination with the City. Copies of the revised document have been provided to the City for public hearings. Responses will be made a part of the public record. Staff finds that this Implementation Measure has been met.

URBAN GROWTH MANAGEMENT

GOAL 2.1: To allow for urban growth while maintaining community livability, consistent with the economics of development, City administration, and the provision of public facilities and services.

POLICY 2.1.1: The City of Wilsonville shall support the development of all land within the City, other than designated open space lands, consistent with the land use designation of the Comprehensive Plan.

FINDING A-10: The Villebois Village Master Plan planning area is proposed to be designated Residential – Village on the Comprehensive Plan map (City Ordinance No. 555, May 19, 2003). That designation requires development within the area to provide a minimum of 2,300 dwelling units at a density of at least 10 units per net acre. As shown on Figure 1 – Land Use Plan, the Master Plan provides 2,390 dwelling units and a density of 12.1 units per net acre. Staff finds that this Policy has been met.

Implementation Measure 2.1.1.a: Allow development within the City where zoning has been approved and other requirements of the Comprehensive Plan have been met.

FINDING A-11: Portions of the Villebois Village Master Plan area are currently outside of the City but within the Urban Growth Boundary. City Ordinances Nos. 554 and 555 created the new Residential – Village land use designation and applied it to approximately 480 acres on the Land Use Map. Staff finds that approval of the Villebois Village Master Plan and the forthcoming “Village zone”(City File No.02PC08), when completed and approved, will fulfill the remainder of this measure.

Implementation Measure 2.1.1.b: Allow urbanization to occur to provide adequate housing to accommodate workers who are employed within the City.

*FINDING A-12: The Villebois Village Master Plan will result in approximately 2,390 housing units, which are anticipated overtime to help improve the jobs/housing imbalance in Wilsonville. As shown in the table on Figure 1 – Land Use Plan, the Master Plan also anticipates a wide range of housing types and densities intended to accommodate a variety of income levels (see also Affordable Housing response to Title 11 in Section C of this document). **Staff finds that this Implementation Measure has been met.***

Implementation Measure 2.1.1.c: Encourage a balance between residential, industrial, and commercial land use, based on the provisions of this Comprehensive Plan.

*FINDING A-13: Though the Villebois Village Master Plan does envision some retail, office and employment uses, the primary land use within Villebois Village is residential. The proposal to provide 2,390 residential units is anticipated, overtime, to help improve the imbalance between retail/office/employment and residential uses within the City. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 2.1.1.f: To insure timely, orderly and efficient use of public facilities and services, while maintaining livability within the community, the City shall establish and maintain growth management policies consistent with the City's regional growth allocation and coordinated with a Capital Improvements Plan.

FINDING A-14: Per sub-section two of this measure, which encourages master planning of large land areas, the applicant has provided a Master Plan for this extensive portion of the City's planning area. The applicant has reviewed the City's facilities master plans and has provided demonstration of compliance with these sub-elements or identified the need for future amendments to those sub-elements in the Villebois Village Master Plan (Chapter 2 – Land Use, Chapter 3 – Parks and Open Space, Chapter 4 – Utilities, and Chapter 5 – Circulation). Appendix A of the Villebois Village Master Plan provides a list and cost estimates for projects identified on the City's CIP either directly or indirectly related to Villebois. The City is currently developing a Finance Plan establishing a capital improvements list, cost estimates, phasing, funding programs, and responsibilities for expanded facilities and services in the Villebois area to be approved by the City prior to development.

Staff has evaluated the Master Plan's potential effect on the existing CIP and finds that street capacity, water capacity, and wastewater capacity are available at a Master Planning level to support Villebois. (The water treatment Plant expansion would be needed approximately nine months sooner than anticipated and the wastewater treatment plant expansion would be moved forward approximately two years.) The Master Plans for these facilities had included the DATELUP area with its prescribed 2,300 housing

units. Both the Villebois Village Concept Plan and Master Plan have nearly the same number of housing units.

The Stormwater Master Plan and the Parks and Recreation Master Plan did not anticipate the Villebois area when they were written, although the goals, policies and implementing measures as described in each of these Master Plans remains valid for the Villebois area. Staff analysis indicates that the Villebois development can meet the Stormwater Master Plan requirements at the master planning level. Staff analysis of the Parks and Recreation Master Plan guidelines indicates that most recommended standards have been met and where they have not been completely satisfied, they can be addressed through an update to the City's Master Plan. Staff recommends that inclusion of Villebois be addressed through updates to these plans to include the applicable Implementing Measures which would be adopted if the Villebois Village Master Plan is adopted.

Staff finds that this Implementation Measure will have been met through existing growth management policies, anticipated updates to the facilities master plans (which are not needed for implementation of the Villebois Village Master Plan), and establishment of the Finance Plan.

POLICY 2.2.1: The City of Wilsonville shall plan for the eventual urbanization of land within the local planning area, beginning with land within the Urban Growth Boundary.

FINDING A-15: The Villebois Village Master Plan is an urbanization plan for an approximate 480-acre area that is currently underdeveloped, on land within the City's Urban Growth Boundary. Staff finds that this Policy has been met.

Implementation Measure 2.2.1.b: The City of Wilsonville, to the best of its ability based on infrastructure provided at the local, regional, and state levels, shall do its fair share to increase the development capacity of land within the Metro UGB.

FINDING A-16: The Villebois Village Master Plan complies with the Metro Functional Plan as discussed in the findings related to Metro (see Section C of this document). ORS 426.508 requires development of the planning area to be consistent with DATELUP (see Section D of this document); DATELUP sets the housing requirement at approximately 2,300 dwelling units (a density of 10.2 dwelling units per net acre). The Villebois Village Master Plan proposes a resulting density of 12.1 dwelling units per net acre. Both plans exceed Functional Plan requirements of 10 dwelling units per net acre. The Villebois Village Master Plan complies with the Statewide Planning Goals as discussed in Section D of this document. Staff finds that this Implementation Measure has been met.

Implementation Measure 2.2.1.f: Washington and Clackamas Counties have agreed that no new lots shall be created outside the City and within the Urban Growth Boundary that contain less than ten acres.

*FINDING A-17: The purpose of this measure is to assure that large enough parcels of land will be available to allow for creation of urban density lots and for efficient and cost-effective construction of infrastructure as an area urbanizes. Current Clackamas County zoning for unincorporated properties within the Master Plan area is Exclusive Farm Use (EFU) – 80-acre minimum lot size. No new higher density zoning can be applied until after property has been annexed into the City. The City has placed the Residential – Village land use designation on the subject area (City Ordinance No. 555). Per the language of this new designation (City Ordinance No. 554), a proposed new Village zone (City File 02PC08) will eventually be applied to these properties that provides for the appropriate development of properties within the Master Plan area. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 2.2.1.h: To assure consistency between Comprehensive Plans and establish the City's interest in the area, the City shall jointly adopt dual interest area agreements with Washington and Clackamas Counties for comprehensive planning of the land outside the City and within the UGB and the Wilsonville planning area.

*FINDING A-18: The City entered into an Urban Growth Management Agreement (UGMA) with Clackamas County in 1991, which included the area subsequently identified in the Villebois Village Master Plan. The UGMA requires coordination of comprehensive plan changes with the County. The County has been and will continue to be informed of all land use activities in that area until such time as the area is annexed to the City. Notification of the County prior to public hearings, as prescribed by the UGMA, has been done. **Staff finds that this Implementation Measure has been met.***

PUBLIC FACILITIES AND SERVICES

GOAL 3.1: To assure that good quality public facilities and services are available with adequate capacity to meet community needs, while also assuring that growth does not exceed the community's commitment to provide adequate facilities and services.

Implementation Measure 3.1.1.a: The City will continue to prepare and implement master plans for facilities/services, as sub-elements of the City's Comprehensive Plan. Facilities/services will be designated and constructed to help implement the City's Comprehensive Plan.

*FINDING A-19: The applicant has reviewed the City's facilities master plans and has provided demonstration that the Villebois Village Master Plan is in compliance with these sub-elements or has identified the need for future amendments to those sub-elements in Villebois Village Master Plan (Chapter 3 – Parks and Open Space, Chapter 4 – Utilities, and Chapter 5 – Circulation). Appendix A of the Villebois Village Master Plan provides a list and cost estimates for projects identified on the City's CIP either directly or indirectly related to Villebois. See also the response to Implementation Measure 2.1.1.f. **Staff finds that this Implementation Measure has been met.***

POLICY 3.1.3: The City of Wilsonville shall take steps to assure that the parties causing a need for expanded facilities and services or those benefiting from such facilities and services, pay for them.

FINDING A-20: The City is currently developing a Finance Plan establishing a capital improvements list, cost estimates, phasing, funding programs, and responsibilities for expanded facilities and services in the Villebois area to be approved by the City prior to development. Staff finds that this Policy has been met.

Sanitary Sewer Comprehensive Plan Policies

POLICY 3.1.4: The City of Wilsonville shall continue to operate and maintain the wastewater treatment plant and system in conformance with federal, state, and regional water quality standards.

FINDING A-21: Staff has reviewed and generally agrees with the analysis of compliance with the City's Wastewater Collection System Master Plan presented in Section 4.1 of the Villebois Village Master Plan and that the plan is in conformance with the City standards. Staff finds that this Policy has been met and recommends adoption of the applicant's proposed Goal, Policy, and Implementation Measures found in Section 4.1.4 of the Villebois Village Master Plan.

Implementation Measure 3.1.4.a: The City shall continue to maintain a sewer service capacity monitoring and expansion program to assure that adequate treatment and trunk main capacity is available to serve continued development, consistent with the City's urban growth policies and the concurrency standards noted above.

FINDING A-22: The Villebois Village Master Plan is in conformance with the City Wastewater Collection System Master Plan, which incorporates these standards as demonstrated in Chapter 4 (section 4.1) of the Villebois Village Master Plan. The Villebois area, including LEC, was included in the City Master Plan as part of service areas UPA-2 and RSV-1. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.4.b: The City shall continue to manage growth consistent with the capacity of sanitary sewer facilities.

FINDING A-23: The Villebois area (formerly DATELUP study area) was included in the City's Wastewater Collection System Master Plan. Staff analysis of the Villebois Village Master Plan has determined that the proposed plan does not exceed the facility's capacity because it anticipates approximately the same number of housing units as prescribed by DATELUP. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.4.c: Based on the service capacity and the permit monitoring program, the City shall plan and appropriately schedule future expansions of the wastewater treatment plant.

FINDING A-24: The City will analyze service capacity of the treatment plant during the evaluation of the infrastructure required with each phase of Villebois development. According to the May 7, 2003 Memorandum from Eldon Johansen provided to the Planning Commission for its May 14, 2003 work session:

The last expansion of the wastewater treatment plant was completed in 1998 and the plant had been projected to need additional expansion in 2015. With the construction of the Coffee Creek Correctional Facility and the wastewater load from that facility, our current projection is that the plant would need expansion in 2011 without Villebois. Using the 8-year Villebois build out projection and recognizing that this is the worst case, the estimated requirement for additional capacity at the wastewater treatment plant is in 2009 years or 2 years early.

... This will be an ongoing effort, independent of the construction of Villebois.

*The memorandum ends with the conclusion that wastewater capacity is "available at a master planning level to support Villebois." **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.4.d: While the City assumes the responsibility for maintaining the treatment plant and collection system, it does not assume the responsibility for extending lines to serve individual properties and developments.

*FINDING A-25: The Villebois Village Master Plan proposes the necessary extension of lines to serve Villebois. Overall funding will be addressed in the Finance Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.4.e: The City shall continue to require all urban level development to be served by the City's sanitary sewer system.

*FINDING A-26: Villebois Village will be served by the City's sanitary sewer system. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.4.f: The cost of all line extensions and individual services shall be the responsibility of the developer and/or property owner(s) seeking service. When a major line is to be extended, the City may authorize and administer formation of a Local Improvement District (LID). All line extensions shall conform to the City Sanitary Sewer Collection System Master Plan, urbanization policies, and Public Works Standards.

*FINDING A-27: Funding of the line extension will be addressed in the Finance Plan. As proposed the system will conform to the City Wastewater Collection System Master Plan, and urbanization policies by including all planned service extensions and service areas anticipated by the Master Plan. All construction drawings prepared for these lines will be in conformance with the Public Works Standards. **Staff finds that this Implementation Measure has been met.***

Water Service Comprehensive Plan Policies

POLICY 3.1.5: The City shall continue to develop, operate and maintain a water system, including wells, pumps, reservoirs, transmission mains and a surface water treatment plant capable of serving all urban development within the incorporated City limits, in conformance with federal, state, and regional water quality standards. The City shall also continue to maintain the lines of the distribution system once they have been installed and accepted by the City.

FINDING A-28: Staff has reviewed and generally agrees with the analysis of compliance with the City's Water System Master Plan presented in Section 4.2 of the Villebois Village Master Plan and that the plan is in conformance with the City standards. Staff finds that this Implementation Measure has been met and recommends adoption of the applicant's proposed Goal, Policy, and Implementation Measures found in Section 4.2.4 of the Villebois Village Master Plan.

Implementation Measure 3.1.5.a: The City shall review and, where necessary, update the Water System Master Plan to conform to the planned land uses shown in the Comprehensive Plan and any subsequent amendments to the Plan.

FINDING A-29: The Villebois area (formerly DATELUP study area) was included in the City's 2002 Water System Master Plan. Staff analysis of the Villebois Village Master Plan has determined that the proposed plan does not exceed facility capacity because it anticipates approximately the same number of housing units as prescribed by DATELUP. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.5.b: All major lines shall be extended in conformance to the line sizes indicated on the Master Plan and, at a minimum, provisions for future system looping shall be made. If the type, scale and/or location of a proposed development warrants minimum fire flows, the Development Review Board may require completion of looped water lines in conjunction with the development.

FINDING A-30: The water mains and sizes shown on Villebois Village Master Plan Figure 6 – Composite Utility Plan, are in conformance with the Water System Master Plan and include provisions for future system looping as anticipated by the Water System Master Plan. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.5.c: Extensions shall be made at the cost of the developer or landowner of the property being served. When a major line is extended that is sized to provide service to lands other than those requiring the initial extension, the City may:

1. Authorize and administer formation of a Local Improvement District to allocate the cost of the line improvements to all properties benefiting from the extension; or
2. Continue to utilize a pay-back system whereby the initial developer may recover an equitable share of the cost of the extension from benefiting property owners/developers as the properties are developed.

*FINDING A-31: The applicant states that major water line extensions shall be built subject to a Finance Plan approved by the City. **Staff finds that the Implementation Measure will be met upon City approval of the Finance Plan prior to development.***

Implementation Measure 3.1.5.d: All water lines shall be installed in accordance with the City's urban growth policies and Public Works Standards.

*FINDING A-32: Section 4.2 of the Villebois Village Master Plan documents that the plan is in compliance with the City's urban growth policies through consistency with the City's Water System Master Plan. The applicant states that all water lines will be installed in accordance with the City's Public Works Standards, which will be assured through review of subsequent development plans and construction drawings by the City Engineer. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.5.e: The City shall continue to use its Capital Improvements Program to plan and schedule major water system improvements needed to serve continued development (e.g., additional water treatment plant expansions, transmission mains, wells, pumps and reservoirs).

FINDING A-33: This project does not propose a change in the City Capital Improvement Program. According to the May 7, 2003 Memorandum from Eldon Johansen provided to the Planning Commission for its May 14, 2003 work session:

The water treatment plant came online in April 2002 with a capacity of 10 million gallons per day for Tualatin Valley Water District. Assuming use during a dry summer returns to pre 1994 rates our growth and customer projections prior to Villebois had indicated that we would need additional capacity in 2008. I have looked at capacity requirements as a result of the development of Villebois and it appears that the additional capacity could be needed in 2007 or approximately 9 months earlier than anticipated. . . .

The memorandum ends with the conclusion that water capacity is "available at a master planning level to support Villebois."

*Staff has indicated that transmission lines in or near the Villebois site are included in the City's Utilities Plan and can adequately serve the development. Reservoir capacity is adequate until 2015. However, the City will require SDCs that will be applied toward increased capacity needs at the appropriate time. **Staff finds that this Implementation Measure has been met.***

Roads And Transportation Plan

Staff makes a general finding that the recently adopted Transportation Systems Plan, although not yet codified, supersedes the Transportation Master Plan. Criteria to which the applicant is responding are equivalent. The reader should substitute "Transportation Systems Plan" or "TSP" for references to the Transportation Master Plan in the Implementation Measures which follow.

It should be noted that the City's transportation consultant (DKS Associates) has prepared a detailed traffic impact analysis and evaluation of the roads and streets in the Villebois Village Plan and how traffic generated by this development will impact existing and planned roadways throughout Wilsonville (see Appendix B of the Villebois Village Master Plan). 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 and 9B – Street & Trail Sections show the planned cross-sections for the streets and trails.

According to the May 7, 2003 Memorandum from Eldon Johansen provided to the Planning Commission for its May 14, 2003 work session:

The 2002 Transportation Systems Plan . . . included the Villebois area. The specific plan that was included in the Transportation Systems Plan was the Dammasch Area Transportation Efficient Land Use Plan. That plan had nearly the same number of homes as are now included in the Villebois Concept Plan; however, it had a more substantial employment and commercial center. As a result, we are sure that the overall system that was included in the Transportation Systems Plan will provide an adequate level of service for Villebois. We do anticipate some modifications of the collector road network as described in the Transportation Systems Plan to accommodate the internal development of Villebois. . . .

The memorandum ends with the conclusion that street capacity is “available at a master planning level to support Villebois.”

Implementation Measure 3.1.6.a: The Transportation Master Plan shall be used to establish the design standards for each arterial and major collector street. The conceptual location of proposed new major streets will also be identified. However, actual alignments may vary from the conceptual alignments based on detailed engineering specifications, design considerations, and consideration of the impacts of the road alignments on neighborhoods and natural resources, provided that the intended function of the street is not altered. While local residential streets are considered a part of the Transportation Master Plan, they are not typically shown in detail in the Plan. The alignment of local streets shall be evaluated on a project-by-project basis, but must function in coordination with the overall purposes of the Transportation Master Plan. Other streets not shown on the Plan may also be considered, if determined necessary for safe and convenient traffic circulation or increased connectivity.

FINDING A-34: 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 110th Avenue is slightly altered with the Villebois Village Master Plan and the link between 110th Avenue and Grahams Ferry Road is shown. The alignment of Villebois Drive (Major Collector) between 110th Avenue and Boeckman/Tooze Road is slightly altered with the Villebois Village Master Plan. Future amendments to the TSP will need to include the new alignments for Barber Street, west of Brown Road and Villebois Drive,

between 110th Avenue and Boeckman/Tooze Road as shown of Figure 8 – Proposed Arterial/Collector System of 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. The TSP has been developed to comply with the Oregon Transportation Planning Rule and the Non-single Occupant Vehicle Mobile Performance Standards for the City of Wilsonville. The specific actions that will be taken to comply with the Transportation Planning Rule are listed in paragraph 8.2 of the Transportation Systems Plan. In a memorandum dated January 13, 2003 (see Appendix B), DKS Associates evaluated the internal circulation for Villebois. They concluded that “the proposed roadway system will function as intended” with local streets generally carrying less than 80 vehicles during the PM peak hour and that all major intersections would function at a level of service of A or B, well above the City’s minimum acceptable service level of D. Therefore, the planned capacity and connectivity of the Wilsonville TSP is retained in the proposed Villebois Village Master Plan. **Staff finds that this Implementation Measure has been met.**

Implementation Measure 3.1.6.b: The Transportation Master Plan shall be used to establish the Functional Street Classification System and the physical design characteristics (right-of-way and pavement width, curbs, sidewalks, etc.) of the various street classifications.

FINDING A-35: The City’s Transportation Systems Plan establishes a functional classification system and physical design characteristics of the street classifications. The Villebois Village Master Plan proposes some variety in the physical design characteristics of streets in Villebois that fall within the functional classification system established in the TSP. Table 5 in Chapter 5 – Circulation of the Villebois Village Master Plan, provides a comparison of each relevant TSP figure with the correlating street sections proposed in the Villebois Village Master Plan. The physical design characteristics of the proposed Villebois street classifications are illustrated on Figures 9A and 9B – Street and Trail Sections.

The following major alterations are requested by the applicant to be approved by City Council with the Villebois Village Master Plan. (A description of the major alteration and the rationale for the requested major alteration are discussed in Section 4.7 of the Villebois Village Master Plan).

- *On-street parking on Major Collector (Villebois Village Master Plan street section D) and Minor Collector (street section E). On-street parking is proposed on Barber Street (Major Collector and 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.*
- *Increase planter width to 8’ and median to 19’ on Major Collector (street section D), which increases right-of-way to 65’ and curb-to-curb to 92’.*

- Increase sidewalk to 13.5' and have 13' median and no planter option on Residential Street (street section F), which increases curb-to-curb to 63' and right-of-way to 90' and also stripes parking and bike lanes.
- Increase planter width to 7.5' and stripe parking and bike lane on Residential Street (street section G), which increases curb-to-curb and right-of-way widths.
- Increase sidewalk widths on Residential Streets (street sections H, I, J, and K) and increase planter widths on Residential Streets (street sections I, J, K, L).
- Reduce curb-to-curb widths to 20' and not allow parking on Residential Streets (VVMP street sections J, K and M).

The applicant states that the proposed street sections are better than what is allowed in the TSP because they will allow design features that further the guiding principles of Villebois Village, without compromising the function of the street. The increased sidewalk widths are proposed in areas where increased pedestrian activity and more intensive uses are anticipated. Wider sidewalks will allow for more convenient connectivity in areas of more intensive use. The additional bike lanes are proposed around the Village Center where increased levels of activity are anticipated. Additional bike lanes will increase the options for moving around and through the Village Center, thereby contributing to the project's goals of diversity and connectivity. The wider planter strips and medians are proposed to 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. The allowance of on-street parking on collectors will encourage more "eyes-on-the-street" by contributing to greater levels of people activity along the street, which, in turn, fosters neighborhood connections. The proposed skinny street sections (20' wide, no parking) are planned for use in key areas that will reduce impervious areas and increase park areas, as well as protect existing trees. Thus, skinny streets will contribute to the community's sustainability. Therefore, the proposed physical design characteristics of streets in Villebois are crucial to the implementation of the overall vision of the community. **Staff has indicated that the applicant will need to work with the City to develop an agreement on the use, design, construction, and maintenance of facilities (e.g., the rainwater management system) which impact the public right-of-way.**

Staff has reviewed the functional street classifications and the street design characteristics proposed for Villebois and are generally in agreement with the master planner. Staff also agrees with all but one of the proposed major alterations, i.e., on-street parking on Major and Minor Collectors. The applicant has submitted a letter report dated June 4, 2003 (Exhibit 5) in support of the on-street parking. In Attachment B, Eldon Johansen (Community Development Director), Mike Stone (City Engineer), and Randy McCourt (DKS Associates), have submitted memoranda, expressing concerns about this specific element. Staff and the master planner have been unable to reach an agreement on this issue. The Planning Commission is being asked for their input towards resolution of this issue. **In general, staff finds that this Implementation Measure has been met and recommends adoption of the applicant's proposed Goal,**

Policy, and Implementing Measures in Section 5.4 of the Villebois Village Master Plan, with the exception of Implementation Measure 2(first item) – On-street parking on Major and Minor Collectors.

Implementation Measure 3.1.6.c: All streets shall be designed and developed in accordance with the Master Plan and street standards, except that the Development Review Board or City Council may approve specific modifications through the planned development process. Such modifications shall be made in consideration of existing traffic volumes and the Public Facilities and Services cumulative traffic generation potential of the land uses being developed. At a minimum, all streets must be developed with sufficient pavement width to provide two lanes of traffic, unless designated for one-way traffic flow. However, adequate emergency vehicle access and circulation must be provided.

FINDING A-36: The applicant states that the proposed street sections comply with the standards of the 2003 TSP. (The corresponding TSP figures are shown on Figure 7 of the Villebois Village Master Plan). The major alterations described under Implementation Measure 3.1.6.b, above are proposed. The applicant states that the proposed street sections have been designed in consideration of adequate emergency vehicle access and circulation. Staff finds that the emergency vehicle needs portion of this Implementation Measure has been met. As in the previous discussion, staff has indicated that the applicant will need to work with the City to develop an agreement on the use, design, construction, and maintenance of facilities, such as the rainwater management system, which impact the public right-of-way (See response for Implementation Measure 3.1.6.b, above.)

Implementation Measure 3.1.6.e: All arterial and collector streets shall be dedicated public streets. To insure adequate protection of potential future right-of-way needs, minimum setbacks shall be retained adjacent to arterial streets. In addition, to maintain efficient traffic flows, intersections with arterial streets shall be minimized, and property owners shall be encouraged and, where feasible, may be required to consolidate driveways.

FINDING A-37: The applicant states that all proposed arterial and collector streets will be dedicated as public streets with adequate right-of-way consistent with TSP standards (See Table 5 of Chapter 5 – Circulation). The Villebois Village Master Plan will minimize intersections with arterial streets, consistent with the provisions of the TSP and through the major alternative process allowed through TSP Implementation Measure 4.1.1.b(3) (process for review of proposals for waiver of standards). In this process the applicant will request access spacing less than the standard 600 feet on Grahams Ferry Road. While the proposed spacing is shown on several Figures of the Master Plan, Revised Figure 1 (Land Use Plan) and Figure 7 (Street Plan) highlight the accesses proposed for waivers. Staff cannot make a finding on compliance with this Implementation Measure at this time because the decision has been deferred. Final Land Use Plan and Street Plan figures will need to reflect the decision.

Implementation Measure 3.1.6.g: Minimum street service levels shall continue to be established. Dedication of adequate right-of-way, as established by the Street System Master Plan, or as otherwise approved by the Development Review Board or City Council shall be required prior to actual site development

*FINDING A-38: Dedication of adequate right-of-way will be provided through the platting process and in accordance with the approvals of the Development Review Board and/or the City Council. In the recommendations to the Development Review Board or City Council, staff will include the following Public Facilities recommendation: "The dedication of all public streets will be by warranty deed." **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.6.h: The City shall periodically review and update its street lighting standards in the interest of public safety. Energy conservation shall also be considered in setting these standards.

*FINDING A-39: Street lighting shall be provided within Villebois in accordance with this measure. Review of street lighting will occur with each Specific Area Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.6.i: The City is responsible for planning, scheduling, and coordinating all street improvements through the on-going Capital Improvements Plan. A priority is given to eliminating existing deficiencies and in upgrading the structural quality of the existing arterial system.

*FINDING A-40: The Villebois Village Master Plan area will be developed in compliance with the City Capital Improvements Plan and the Finance Plan. See also the response for Implementation Measure 3.1.3. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.6.o: The City shall take the following steps to reduce VMTs and overall reliance on single occupancy vehicles:

1. Review all land use/development proposals with regard to transportation impacts. All development proposals shall be required to pay for a transportation impact analysis, unless specifically waived by the City's Community Development Director because the information is not needed.

FINDING A-41.1: The overall transportation system for Villebois was included in the TSP. Consultants for the City (DKS Associates) evaluated the detailed street layout, trip generation, circulation, and phasing impacts resulting from the Villebois Village Master Plan (see Appendix B of the Villebois Village Master Plan). All subsequent development proposals will comply with City requirements as required.

2. Seek to minimize traffic congestion at the freeway interchanges as well as on local arterial and collector streets.

FINDING A-41.2: The circulation network for Villebois has been evaluated with two separate Memorandums from DKS Associates dated January 13, 2003 and February 28, 2003. The January 13, 2003 DKS Memorandum (see Appendix B of the Villebois Village Master Plan) specifically evaluates the Villebois internal street plan in the context of circulation needs in west Wilsonville. Appendix B of the Villebois Village Master Plan includes copies of the Memoranda prepared by DKS Associates, which comprise the traffic impact analysis for the Master Plan.

According to the January 13, 2003 DKS Memorandum, "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." The February 28, 2003 DKS Memorandum (see Appendix B of the Villebois Village Master Plan) evaluates the Villebois circulation network and phasing scheme (dated December 12, 2002) to determine the impact of the development of Villebois on the road system planned under the TSP and when improvements would be required to meet City level of service criteria.

In summary, the two DKS Memoranda evaluated the City's existing and planned external street network with the proposed Villebois internal street network and found that no mitigation is required beyond what is identified within the City's TSP. Thus, the Villebois Village will develop in a manner that mitigates the development's impact on traffic congestion at the freeway interchanges as well as on local arterial and collector streets.

3. Seek to reduce the number and length of home-to-work trips.

FINDING A-41.3: Locating the Villebois Village in close proximity to Wilsonville's existing employment land, providing multi-modal routes throughout the Village, and providing a Village Center that will contain retail/office/employment/civic uses providing basic day-to-day needs will help in reducing both the number and length of home-to-work trips.

4. Seek a balanced mix of activities which encourage consolidation of automobile oriented trips and encourage design and location of complementary activities that support public transit, ride-share programs, and use of other alternative modes of transportation.

FINDING A-41.4: The Villebois Village Master Plan places the Village Center and Neighborhood Centers strategically within walking distance of all areas of the Village (see Figure 2). Multi-modal streets connecting to

SMART transit routing within Villebois are based upon the concept of increasing transit ridership, and bicycling and walking as an alternative to the automobile (see Chapter 3 – Parks & Open Space for discussions of off-street pathways and Chapter 5 – Circulation for discussions of on-street bicycle and pedestrian systems).

5. Require large developments and high employment and/or traffic generators to design for mass transit and to submit programs to the City indicating how they will reduce transportation impacts. All such proposals shall be subject to review by SMART and, if applicable, ODOT. Maximum parking limits shall be used in conformity with Metro standards.

FINDING A-41.5: The applicant states that SMART has been consulted in the development of the Villebois Village Master Plan. The design accommodates transit stops at the Neighborhood Centers and the Village Center. Specific transit plans will be addressed at the time development applications are submitted.

7. Accommodate the expected growth in population and employment and the resulting transportation needs, the City by expanding local bus service in the residential and employment areas, continue to improve arterial and collector street networks, a bikeway system, ride-sharing programs including carpools and van pools and encourage staggered or flex-time, work-hour programs.

FINDING A-41.6: Villebois is designed to encourage transit ridership. In addition, the Villebois Village Master Plan includes an extensive bikeway system (see Figure 7 – Street Plan).

8. Take steps to improve connectivity between existing neighborhoods and between residential areas and traffic generator locations. Also, work to provide more and better options for travel from one side of the freeway, the railroad, and major drainage courses to the other. It is recognized that alignment decisions for streets may cause concerns for adjacent property owners or residents, whose suggestions may help to improve plans or designs. The testimony of neighboring property owners shall not be the sole justification to postpone the construction of planned streets.

FINDING A-41.7: The Villebois Village Master Plan conforms to the connectivity and circulation standards prescribed in the Wilsonville TSP. The Villebois Village Master Plan provides vehicular connection to all existing streets that 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. With the exception of situations where physical constraints prohibit,

streets and trails are connected. Through the proposed circulation system, connectivity is expected to be improved between existing neighborhoods and between residential areas and traffic generator locations.

9. Increase densities and intensities of development in or near the Town Center area and in other locations where transportation systems can meet those needs.

FINDING A-41.8: The Villebois Village Master Plan is located within in area where transportation systems can meet the needs of the development, as described in the response to Implementation Measure 3.1.6.o.2, above.

10. Improve the balance between housing, employment, and commercial activities within the City in order to reduce commuting.

FINDING A-41.9: The intent of the 2,300 minimum housing units required in DATELUP is to provide an opportunity to improve the balance of housing to employment in Wilsonville over time. The Villebois Village Master Plan, by providing approximately 2,390 housing units, meets that intent.

Staff finds that all sub-sections of this Implementation Measure have been met.

Implementation Measure 3.1.6.s: Pedestrian, bicycle, and equestrian travel are often considered a recreational activity. However, people commonly bike and walk throughout the City, and with increasing gasoline prices and traffic congestion, these forms of travel are likely to increase in popularity. For this reason, provisions for pedestrian and bicycle travel will be considered as a basic transportation element as well as a recreational element.

*FINDING A-42: The applicant states that a key component of the Villebois Village Master Plan is its emphasis on promoting greater pedestrian, bicycle and public transportation opportunities. The plan provides an interconnected street system providing a variety of routes within and through the Village, as illustrated on Figure 7 – Street Plan and Figures 9A and 9B – Street and Trail Sections. All designated collector streets will have bike routes. Sidewalks are set back from the roads to provide a more pedestrian friendly street system. The "neighborhood plan" for Villebois is intended to ensure that residents are within a five-minute walk of their Neighborhood Center. Off-street multiuse trails will accommodate both pedestrians and bicyclists. The off-street trails are shown on Figure 5 – Parks & Open Space Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.6.t: The Bicycle and Pedestrian Master Plan identifies the general alignment of primary routes for pedestrian and bicycle travel. It has been designed to provide connections between residential neighborhoods and major, industrial

and recreational activity centers throughout the City. The system has been coordinated with pathways planned in adjacent jurisdictions to allow for regional travel.

FINDING A-43: Staff believes the Villebois Village Master Plan supports and enhances the Bicycle and Pedestrian Master Plan by providing an exceptional network of bike and pedestrian opportunities for moving within the plan area as shown on Figure 7 – Street Plan, and Figures 9A and 9B – Street and Trail Sections. All designated collector streets will have bike routes. Off-street multiuse trails will accommodate both pedestrians and bicyclists. (The off-street trails are shown on Figure 5 – Parks & Open Space Plan). The proposed bicycle and pedestrian system provides alignments that are slightly altered from those shown in the TSP and adds some alignments to those shown in the TSP. Future amendments to the TSP should include the new bicycle/pedestrian systems shown within the Villebois Village Master Plan. The proposed system provides connectivity for pedestrians and bicyclists among the neighborhoods of Villebois and the surrounding area. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.6.w: All primary pathways shall be constructed in accordance with the Master Plan, with specific alignments to be approved by the Planning Commission, Development Review Board, or City Council. All major street construction or improvements shall be coordinated with the Pathway Master Plan.

FINDING A-44: The Villebois Village Master Plan provides an interconnected pedestrian pathway system providing a variety of routes within and through the Village, as illustrated on Figure 5 – Parks & Open Space Plan, and Figure 7 – Street Plan. Sidewalks are set back from the roads to provide a more pedestrian friendly street system. The "neighborhood plan" for Villebois is intended to ensure that residents are within a five-minute walk of their Neighborhood Center. Off-street multiuse trails are to accommodate both pedestrians and bicyclists. The off-street trails are shown on Figure 5 – Parks & Open Space Plan. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.6.x: The City shall schedule and coordinate all pathway improvements. A priority will be given to completing specific links of the system, thereby avoiding dead-end pathways. When land is developed which includes a designated pathway, appropriate dedication of right-of-way or easements shall be required. In cases where the proposed development will substantially increase the need for the path, construction may also be required prior to occupancy.

FINDING A-45: The applicant states that implementation of the pathway system within the Villebois Village Master Plan area will be phased logically to serve areas to be constructed. Appropriate dedication of right-of-way will be established as development occurs. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.6.aa: All bikeways are to be developed in conformity with the City's adopted Bicycle and Pedestrian Master Plan.

*FINDING A-46: (The Chapter 5 of the 2003 TSP replaces the 1993 Bicycle and Pedestrian Master Plan.) The Villebois Village Master Plan provides on-street bike lanes (as shown on Figure 7 – Street Plan) on all collector and arterial streets. Proposed bike lanes are illustrated on Figures 9A and 9B – Street and Trail Sections, consistent with TSP requirements. The proposed bicycle and pedestrian system provides alignments that are slightly altered from those shown in the TSP and some alignments in addition to those shown in the TSP. Future amendments to the TSP should include the new bicycle/pedestrian systems shown within the Villebois Village Master Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.6.cc: If adequate regional transportation services, including I-5 interchange modification or additions, and high capacity public transportation, cannot be provided, then the City shall reevaluate and reduce the level of development and/or timing of development anticipated by other elements of this Plan. Such reductions shall be consistent with the capacity of the transportation system at the time of re-evaluation.

*FINDING A-47: The Villebois Village Master Plan land use and various facilities sub-elements have been phased to ensure that there is adequate infrastructure to support each phase. Since it appears that the phasing may change from year to year, the concurrency for each phase will be tested in the preliminary or final plan approval by the Development Review Board. **Staff finds that this Implementation Measure has been met.***

Storm Drainage Plan

POLICY 3.1.7: The City of Wilsonville shall develop and maintain an adequate storm drainage system. However, where the need for new facilities is the result of new development, the financial burden for drainage system improvements shall remain primarily the responsibility of developers. The City will use systems development charges, user fees, and/or other funding sources to construct facilities to improve storm water quality and control the volume of runoff.

*FINDING A-48: Development of the Villebois Village Master Plan area will address storm drainage using environmentally sensitive techniques such as bio-swales, retention and detention features, and other low impact best management practices. The purpose of the system that will be employed is to manage rainwater naturally by reducing runoff and increasing infiltration within the Village. The project Finance Plan will address funding of these improvements and participation in the Systems Development Charge program. **Staff finds that this Policy has been met.***

Implementation Measure 3.1.7.a: In order to adequately provide for urban development, the City has established and will maintain a Stormwater Master Plan, development policies/standards for control of an on and off-site drainage, Public Works Standards, and a Capital Improvements Program to upgrade deficient structures and drainage ways.

*FINDING A-49: The City's Stormwater Master Plan did not include the Villebois area. However, the goals, policies and implementing measures remain valid, even though the specific locations of facilities have not been determined. The City plan requires that the Villebois Village Master Plan meet the necessary service level standards for the development onsite. This has been addressed in Section 4.3. City Storm Drain Project CLC-10 was previously identified as an offsite drainage improvement, which will be implemented during Phase 1 construction. The applicant states that all stormwater facilities will be designed in conformance with the Public Works Standards. The project Finance Plan will include the appropriate elements and responsibilities for the Capital Improvement Program for stormwater management. The City's Stormwater Master Plan will need to be updated to include the Villebois area. Staff has reviewed and generally agrees with the analysis of compliance with the City's Stormwater Master Plan presented in Section 4.3 of the Villebois Village Master Plan and that the plan is in conformance with City standards. **Staff finds that this Implementation Measure has been met and recommends adoption of the applicant's Goal, Policies, and Implementation Measures found in Section 4.3.4 of the Villebois Village Master Plan.***

Implementation Measure 3.1.7.b: To assure maximum efficiency and effectiveness of the drainage system, a maintenance program has also been established to assure compliance with the City's NPDES (National Pollution Discharge Elimination System) permit. In some circumstances, private maintenance of facilities (by homeowners associations or other entities) may be required, as has been the case for the maintenance of neighborhood parks in Wilsonville.

*FINDING A-50: The applicant states that the drainage system in Villebois will comply with the City's NPDES permit. Maintenance will be assured through the City's maintenance program. Private maintenance, where required, will be identified with the appropriate phase final development plans. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.c: A storm drainage systems development charge shall continue to be collected from developers prior to issuance of a building permit. The Stormwater Master Plan and the Capital Improvements Program will continue to be the basis of establishing Systems Development Charges for storm drainage. The funds are used to upgrade the storm drainage system beyond those improvements required to serve individual developments. Provision of drainage control within a given development shall remain the responsibility of the developer, with the City assisting only insofar as the system will also accommodate off-site drainage. In reviewing planned improvements, the City Engineer may specify the use of on-site or off-site storm water detention, based on specific site characteristics and drainage patterns of the area.

FINDING A-51: The Villebois Village Master Plan is being reviewed by the City to ensure that there is adequate infrastructure to support each phase of development. The analysis is being completed as part of the development of the Finance Plan and ultimately the development agreements between the property owners and the City. All

charges under this section will be addressed in the Finance Plan. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.7.d: Major natural drainage ways shall be retained and improved as the backbone of the drainage system and designated as open space. The integrity of these drainage ways shall be maintained as development occurs. Where possible, on-site drainage systems will be designed to complement natural drainage ways and designated open space to create an attractive appearance and will be protected by conservation, utility, or inundation easements. Alteration of minor drainage ways may be allowed provided that such alterations do not adversely impact stream flows and in-stream water quality of the major drainage ways and provide for more efficient use of the land. Such alteration must be approved by the City. Remnant creek channels, which previously carried water that has since been diverted, shall be evaluated for their wildlife habitat value before being selected for use as drainage ways. Where a remnant creek channel is found to provide unique habitat value without being a riparian zone, and that habitat value would actually be diminished through the re-introduction of storm water, alternate methods of conveying the storm water will be considered and, if feasible, used.

FINDING A-52: The applicant will be working closely with the City to incorporate concepts that use pre-development hydrology as part of the site design framework. This will allow for full implementation of the measure as well as an opportunity to design a progressive site sensitive drainage system. The applicant states that this system should improve the site's major drainage systems by providing better habitat, reducing downstream impact, and creating opportunities for integrating the urban form with the site's natural drainage areas. All major natural drainage ways have been retained and flows will be redirected in part to the natural drainage ways. As shown in Section 4.3 of the Villebois Village Master Plan, City Storm Drainage Project CLC-10 is proposed to redirect a portion of the historic flow to Arrowhead Creek. Two options to CLC-10 under consideration by the applicant are discussed in Section 4.3.2. They may provide opportunity to more fully restore the flows to Arrowhead Creek. A preliminary evaluation has been performed, and identified several areas needing additional study. Resolution of these options shall occur with Phase 1 improvements. The additional study will be completed within 18 months of approval of the Villebois Village Master Plan. If development of Phase I begins before the study is completed, the PF conditions for Phase 1 will require that a letter of credit or other acceptable financial instrument be deposited with the City to correct the outfall structure and minimize future erosion in Mill Creek. Staff finds that with the Villebois Village Master Plan support of CLC-10 this Implementation Measure has been met.

Implementation Measure 3.1.7.e: Existing culverted or piped drainage ways will be "daylighted" (converted from underground to surface facilities) when doing so will help to achieve the City's goals for storm drainage without overly conflicting with development.

FINDING A-53: Much of the natural drainage in the Villebois area is undisturbed and exists as surface drainage with the exceptions of the Arrowhead Creek basin.

*Improvements to Arrowhead Creek to restore original drainage to the basin and improve detention and enhance existing wetlands are identified as Project CLC-10 of the Stormwater Master Plan and will be incorporated into the proposed stormwater system. Daylighting of the existing Dammasch outfall is not anticipated as part of CLC-10. The applicant states that options A and B to CLC-10 will explore the potential to daylight this outfall. Final resolution will be determined within 18 months of approval of the Villebois Village Master Plan. If the development of Phase I is initiated before final resolution is completed, the public facilities condition of the planning approval will require that a letter of credit or other financial instrument be provided sufficient to ensure that the improvement of the outfall structure and minimization of future erosion in Mill Creek can be completed. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.f: Conversion of existing swales or drainage ways to culverted or piped systems shall be permitted only where the City Engineer determines that there is no other reasonable site development option.

*FINDING A-54: Construction of the Dammasch Hospital piped the upper reaches of the Arrowhead Creek basin running north-south through the western half of the village area. This drainage way is proposed to be daylighted and enhanced as part of a continuous greenbelt that incorporates plans to increase water's aesthetic impact and utilization by the community. Figure 6A – Onsite Stormwater Facilities, of the Villebois Village Master Plan shows the location of the drainage course in the Greenway Corridor. The Rainwater Management Plan will detail how rainwater will be integrated into this open space and will be part of Specific Area Plan – South. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.g: Conversion of existing meandering swales or drainage ways to linear ditches shall be permitted only when the City Engineer determines that there is no other reasonable site development option.

*FINDING A-55: The applicant states that no existing meandering swales or drainageways are being converted to linear ditches. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.h: Open drainage ways may be used to meet a portion of the landscaping and open space requirements for developments, provided that they meet the design requirements of the Development Review Board.

*FINDING A-56: The applicant states that open drainageways are included in landscaping and open spaces and will be reviewed by the Development Review Board with the appropriate Specific Area Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.i: It is the intent of these measures to maximize the use of the natural drainage system to allow for ground water infiltration and other benefits to

community aesthetics as well as habitat enhancement. This does not mean that natural drainage ways will be left unimproved.

*FINDING A-57: The Villebois Village Master Plan intends to implement this measure as a part of its extensive rainwater management system promoting the creation of multi-functional landscapes and improving degraded or damaged drainage areas. Section 4.3 of the Villebois Village Master Plan requires the approval of a Rainwater Management Program with Specific Area Plan – South. One function of this system is to maximize the potential of groundwater infiltration. Integration of these facilities in open spaces and other public places is intended to enhance community aesthetics. Implementation of CLC-10 will contribute to the restoration of Arrowhead Creek wetlands and the habitat associated with it. In Chapter 3 – Parks & Open Space/Of-Street Trails & Pathways, proposed Implementation Measure 5 states that 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. The wetland naturalization and enhancement plan shall be initiated and completed with the phased development of the Village. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.j: The natural system must also be improved and maintained to handle the anticipated run-off in a manner that meets the requirements of the Stormwater Master Plan. Where wetlands are constructed for the purpose of accommodating storm drainage, certain areas of those wetlands may be designed to accumulate sediment. The City will periodically dredge and maintain those areas in constructed wetlands, or will permit others to do so, as necessary to maintain the storm drainage functions of those constructed wetlands.

*FINDING A-58: The Villebois Village system has been designed with specific performance standards, which exceed those in the Stormwater Master Plan as discussed in the Compliance Analysis subsection of Section 4.3 of the Villebois Village Master Plan. The rainwater and storm management system is designed to minimize erosion, but will include areas for sediment to accumulate that can periodically be cleaned. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.k: One-hundred year flood plains and floodways have been established through the Federal Flood Insurance program, for all flood-prone areas of the City except Coffee Lake Creek, north of Barber Street. For that area along Coffee Lake Creek, a hydrology study to establish the 100-year flood elevation will be required prior to development approval. The floodways must continue to be protected from encroachment. Development within the flood plain shall be regulated consistent with the standards of the Federal Flood Insurance Act, and Title 3 of Metro's Urban Growth Management Functional Plan. Storm water runoff from upstream development shall be controlled so as to not adversely impact the peak flood flow in the main stream channels.

FINDING A-59: The only 100-year flood plain known to impact the Villebois Village area is associated with Coffee Lake Creek. A hydrology study to establish the 100-year

*flood plain elevation for Coffee Lake Creek will be prepared as a part of the Boeckman Extension project. As previously mentioned for the runoff into Mill Creek and the proposed restoration of flows into Arrowhead Creek, there are also 22.2 acres that were diverted into Mill Creek from Coffee Lake Creek at the time of construction of Dammasch Hospital. If these flows are redirected back to Coffee Lake Creek, the developer will be conditioned as part of the planning approval process to ensure that the runoff after development does not exceed flows that occurred with the 22.2 acres of flow diverted into the Mill Creek Basin. Subsequent Development Review will assure compliance with this measure. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.l: The City will regulate new land divisions to prevent the creation of additional lots for building sites within 100-year floodplains. This is not intended to prohibit the creation of new lots that are partially within flood plains, provided that the developable portion of each lot will be outside of the 100-year flood plain, and FEMA standards are met.

*FINDING A-60: Any work conducted within and adjacent to the 100-year floodplain will comply with this measure and applicable City regulations. In Chapter 3 of the Villebois Village Master Plan, proposed Policy 3 indicates that the flood plain delineation shown on various figures of the Master Plan is for illustrative purposes only and will be reviewed for compliance or exemption as more detailed information is provided. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.m: The City will regulate cuts and fills within flood plains to assure that the amount of fill material added will not exceed the amount of cut material that is removed.

*FINDING A-61: The applicant states that any work conducted within and adjacent to the 100-year floodplain will comply with applicable City regulations. See the response for Implementation Measure 3.1.7.l, above. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.n: Wilsonville has established a single-storm drainage runoff standard that is applied throughout the City. That standard requires developers to plan for at least a 25-year storm event. However, the differences in the natural characteristics of the Boeckman Creek and Seely Ditch Basins and their sub-area basins will require developers and their engineers to plan for different types of detention or retention facilities in one basin than would be used in another. The appropriate criteria will be established and implemented through the City's Public Works Standards.

FINDING A-62: The Villebois Village Master Plan will evaluate storm drainage consistent with the established criteria including the 25-year storm event as noted in Section 4.3 of the Villebois Village Master Plan. Natural stream characteristics will be considered for variable requirements as identified in the City's standards. The evaluation of more stringent detention criteria for the portion of the site draining to Coffee Lake Creek will be dependent upon the flood plain study to be done by the City as

part of the Boeckman Road project (per Implementation Measure 6, Section 4.3.4 of the Villebois Village Master Plan). Upon completion of said study, and prior to the development of the first phase of development within this basin, a study will be prepared defining any special detention requirements. Implementation Measure 8 in Section 4.3.4 indicates that pending resolution of the detailed study of Coffee Lake Creek drainage basin, adequate stormwater 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 is to be addressed with the submittal of Specific Area Plan for the affected drainage basin area. **Staff finds that this approach meets the intent of this Implementation Measure.**

Implementation Measure 3.1.7.o: Based on facility capacities identified in the Stormwater Master Plan, appropriate storm run-off standards shall be implemented through the City's Public Works Standards.

FINDING A-63: During the Development Review process the City will require that the system designed for Villebois meet the City's Public Works Standards per Policy 1, Section 4.3.4 of the Villebois Village Master Plan. By establishing this policy, staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.7.p: In the course of site development, developers may be required to retain or improve native vegetation in identified riparian zones and landslide prone areas to decrease the amount of surface water run-off, to shade areas of surface water, to preserve areas of natural percolation, help stabilize landslide-prone areas, and reduce erosion. Replacement, enhancement, and/or restoration of vegetation, including the Public Facilities and Services removal of invasive plants, may also be required depending on the type, scale, and location of development.

FINDING A-64: During the Preliminary Development Plan review process (as prescribed in the new Village zone – City File 02PC08) the City will be provided assurance that the system designed for Villebois will meet the City's Public Works Standards. In section 4.3.3 of the Villebois Village Master Plan, the applicant states that the Master Plan will follow all setback and buffer requirements, erosion control, and vegetation of streams and wetlands standards as defined by the City's Significant Resource Overlay Zone and Public Works Standards in compliance with Title 3 and the Goal 5 program. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.7.q: Natural drainage ways shall be stabilized as necessary below drainage and culvert discharge points for a distance sufficient to convey the discharge without channel erosion. The City Engineer may require the use of energy dissipaters to help minimize erosion.

FINDING A-65: The Villebois Village Master Plan (see Section 4.3) is designed to enhance natural drainage ways and meet or exceed the performance standards of the City Stormwater Master Plan, including the prevention of erosion or degradation of natural conveyance channels. The applicant states that "Construction on Villebois

*Village will conform to the City of Wilsonville Public Works Standards for erosion control and applicable 1200C permit...". The final design of all outfall structures are to include an evaluation of downstream erosion potential, and appropriate energy dissipaters as required per applicable City regulations and the City Engineer. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.r: Sediment and erosion control shall be provided consistent with the Public Works Standards. All approved open drainage channels and open detention/retention basins shall be designed, constructed, and maintained with appropriate safeguards to insure public health and safety.

*FINDING A-66: Facilities for conveying, storing or dissipating storm drainage will be established in accordance with Public Works Standards or other methods accepted and implemented by other jurisdictions/agencies upon review and approval by the City Engineer. Public health and safety will be evaluated in all cases. Proposed Implementation Measure 9, Section 4.3.4 of the Villebois Village Master Plan states that maintenance of stormwater conveyance facilities will be planned and implemented as part of the Specific Area Plans for the Villebois Village. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.s: All drainage facilities shall be designed to be consistent with state and federal standards for the passage of fish and wildlife.

*FINDING A-67: Where drainage facilities impact jurisdictional areas of fish and wildlife passage, necessary measures will be included in the construction drawings to comply with state and federal standards. In Section 4.3.3 of the Villebois Village Master Plan, the applicant states that, "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." **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.7.t: All development proposals shall be accompanied by a storm drainage plan and hydrologic analysis adequate to meet the above policies and standards, unless waived by the City Engineer for good cause. No development permit shall be issued for any project until a storm drainage plan has been approved by the City Engineer and/or the Development Review Board.

*FINDING A-68: The Villebois Village Master Plan incorporates appropriate elements of the City Stormwater Master Plan as shown in Section 4.3. Additional plans and hydrologic analysis shall be provided within the Specific Area Plans detailing overall system function. Individual development permit applications shall be accompanied by project specific storm drainage plans for approval by the City Engineer and/or the Development Review Board. (See also, the response to Implementation Measure 3.1.7.n, above.) **Staff finds that this Implementation Measure has been met.***

COMPLEMENTARY FACILITIES/SERVICES PLAN

Parks/Recreation/Open Space

POLICY 3.1.11: The City of Wilsonville shall conserve and create open space throughout the City for specified objectives including park lands.

Implementation Measure 3.1.11.a: Identify and encourage conservation of natural, scenic, and historic areas within the City.

FINDING A-69: The Villebois Village Master Plan identifies the natural, scenic and historic elements within the plan area (see Figure 5 – Parks and Open Space Plan). The applicant states that the plan has been designed to maximize these elements and conserve them to the greatest extent practicable. The Specific Area Plans will include review of the most current information for historic and cultural resources. The Villebois Village Master Plan directs a requirement for review of historic and cultural resource information with Parks and Open Space Implementation Measure 2. Implementation Measure 4 requires identifying existing important trees on the Villebois site and directs the creation of a Tree Preservation Plan to be developed for each Specific Area Plan. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.b: Provide an adequate diversity and quantity of passive and active recreational opportunities that are conveniently located for the people of Wilsonville.

FINDING A-70: The Villebois Village Master Plan has been designed to provide a substantial open space framework and mix of recreational opportunities (see Figure 5 – Parks & Open Space Plan). As shown on Figure 5, open space areas and recreational opportunities are provided throughout the community within a five-minute walk of each home. (Policy 1, Section 3.4 of the Villebois Village Master Plan requires identification of all public parks, trails, and open spaces.) These include a linear green, plaza, active ball fields, neighborhood commons, pocket parks, and trails, pathways, and greenways for passive opportunities. Active play areas (approximately 3 acres) will also be associated with the proposed school site. The LEC site has a series of trails within their property. Linkages from LEC to trails throughout the remainder of the Villebois Village area are anticipated as shown on Figure 5 – Parks and Open Space Plan. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.d: Continue the acquisition, improvement, and maintenance of open space.

FINDING A-71: Open space areas and recreational opportunities are provided throughout the community within a five-minute walk of each home, as identified on Figure 5 – Parks and Open Space Plan. The proposed open spaces are generally consistent with the locations identified on the Concept Plan. 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.

*Implementation Measure 5 of Chapter 3 – Parks and Open Space of the Villebois Village Master Plan states that, 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. The wetland naturalization and enhancement plan is to be initiated and completed with the phased development of the Village. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.11.e: Require small neighborhood parks (public or private) in residential areas and encourage maintenance of these parks by homeowner associations.

*FINDING A-72: Villebois provides small neighborhood parks distributed throughout the community as illustrated on Figure 5 – Parks and Open Space Plan. Each neighborhood area is well served by parks. 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. The proposed small neighborhood parks are provided generally in the locations identified on the Villebois Village Concept Plan and are described in Chapter 3 of the Villebois Village Master Plan. The South Neighborhood Park shown on the Concept Plan is revised to a pocket park in the Master Plan. This has been done to offset the increase in size to the school site/park. The southern portion of Villebois also will be served by the Metro Wilsonville Tract open space as well as other nearby park and open spaces within Villebois. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.11.f: Maintain and develop the current park system for centralized community-wide park facilities, but emphasize the future acquisition of small parks in localized areas.

FINDING A-73: The proposed open space framework within the Villebois Village Master Plan will be complementary to the City's Parks & Recreation Master Plan. Figure 5 – Parks and Open Space Plan illustrates the provision of many small parks throughout the Village area. Review of compliance with the City's current Parks & Recreation Master Plan is presented in Chapter 3 of the Villebois Village Master Plan (see Section 3.2 specifically). As previously stated, the City's 1994 Parks and Recreation Master Plan did not envision residential development in the Dammasch area. Therefore, the Master Plan provides guidelines, not requirements, for development in Villebois area. In addition, the Villebois Village Master Plan proposes several unique categories of parks facilities that are not contained in the City's Master Plan. The categories where the recommended standards are not being completely satisfied on site can be addressed through an update to the City's Master Plan as anticipated in Implementation Measure 1,

Section 3.4 of the Villebois Village Master Plan. Staff finds that this proposed approach satisfactorily addresses this Implementation Measure.

Implementation Measure 3.1.11.g: Where appropriate, require developments to contribute to open space.

FINDING A-74: As noted, open space makes up a substantial portion of the Villebois Village Master Plan. Approximately 153.1 acres (32%) of the approximate 481.6 acres is in open space or park land. DATELUP required provision of 25% open space. The Concept Plan increased the amount of open space provided to 32%, with which the Master Plan is consistent. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.i: Develop limited access natural areas connected where possible by natural corridors for wildlife habitat and watershed and soil/terrain protection. Give priority to preservation of contiguous parts of that network which will serve as natural corridors throughout the City for the protection of watersheds and wildlife.

FINDING A-75: A 150 ft +/- natural area corridor (Villebois Greenway) has been provided linking the Coffee Lake Creek wetland complex with Metro's Wilsonville Tract (see Figure 5 – Parks and Open Space Plan). The Villebois Greenway (totaling approximately 17 acres), 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 Metro Wilsonville Tract. This corridor implements Policy 5, Section 3.4 of the Villebois Village Master Plan, "Each park and open space tract shall be linked with a trail or pathway to adjacent neighborhoods and nearby parks and open spaces." Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.j: Identify areas of natural and scenic importance and where appropriate, extend public access to, and knowledge of such areas, to encourage public involvement in their preservation.

FINDING A-76: Figure 5 – Parks and Open Space Plan, shows multipurpose green spaces that will connect the community with the surrounding area's natural resources. The Applicant states that an effort has been made in the plan to maximize public frontage (ROW) on all natural areas and open spaces. A program for tree protection and a tree preservation plan will be included with each Specific Area Plan. The Master Plan is consistent with the Villebois Village Concept Plan. See also the response to implementation Measure 3.1.11.a. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.k: Protect the river-connected wildlife habitat.

FINDING A-77: The plan will contribute to the protection of river-connected wildlife by providing a natural corridor (Villebois Greenway) through the plan area linking the Coffee Creek wetland area and the Wilsonville Tract. In Section 3.3 of the Villebois

Village Master Plan, the applicant states, "Where applicable, fencing and other barriers to wildlife passage are not proposed in the Coffee Lake area... 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 Metro Wilsonville Tract." Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.1: Encourage the interconnection and integration of open spaces within the City and carefully manage development of the Willamette River Greenway.

FINDING A-78: The plan identifies an open space corridor (Villebois Greenway) that links the Coffee Creek wetland complex with Metro's Wilsonville Tract. Staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.n: Park classifications and standards shall be developed to guide a program for acquisition and development of a park and open space system to insure an adequate supply of usable open space and recreational facilities, directly related to the specific needs of the local residents.

FINDING A-79: The City's 1994 Parks & Recreation Master Plan had not envisioned residential development in the Dammasch area, which was outside the Urban Growth Boundary at that time. It provides guidelines and recommended standards, and will need to be updated to include Villebois and the categories of parks facilities proposed in the Villebois Village Master Plan. The Villebois Village Master Plan (Figure 5 – Parks and Open Space Plan) identifies the proposed park and open space uses and includes a comparison of the plan with the classifications and standards outlined in the Park & Recreation Master Plan is presented in Table 1 in Chapter 3 of the Villebois Village Master Plan (see Section 3.2). Staff finds that the Villebois Village Master Plan satisfies the recommended standards contained in the City's 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 can be addressed through an update to the City's Parks and Recreation Master Plan (as directed by Implementation Measure 1, Section 3.4 of the Villebois Village Master Plan. Staff is proposing five new Implementation Measures to Chapter 3 of the Villebois Village Master Plan towards that update. Staff is recommending adoption of the Goal, Policies, and Implementing Measures, as may be amended, listed in Chapter 3 of the Villebois Village Master Plan. The Parks and Recreation Advisory Board forwarded a unanimous recommendation of approval of Chapter 3 to the Planning Commission (Exhibit 4). Therefore, staff finds that this Implementation Measure has been met.

Implementation Measure 3.1.11.o: Individual park and recreational sites, as defined by the parks and open space standards and classification system will be developed according to the following priorities:

2. Parks should be planned to insure maximum benefit to the greatest number of local residents. For this reason, acquisition and development of community level parks should be given the highest park priority.

*FINDING A-80: The Villebois Village Master Plan identifies the proposed park and open space uses and compares the plan with the classifications and standards outlined in the Park & Recreation Master Plan (see Table 1 in Chapter 3). Several passive and active recreational opportunities are provided throughout the plan area as illustrated on Figure 5 – Parks & Open Space Plan. The athletic fields associated with the proposed school are considered a community park. See also the response for Implementation Measure 3.1.11.n, above. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.11.p: New developments shall be responsible for providing specified amounts of usable on-site open space depending on the density characteristics and location of the development. Where possible, recreational areas should be coordinated with and complement Willamette River Greenway, and other open space areas identified as environmentally sensitive or hazardous areas for development.

FINDING A-81: The Villebois Village Master Plan provides 43.9 acres of useable park areas and 109.2 acres of open space areas that include Significant Resource Overlay Zone (SROZ) areas. The Villebois Village Master Plan exceeds the 25% open space specified in DATELUP. Section 3.2 of the Master Plan compares the proposed usable park areas with the categories of the City's Parks & Recreation Master Plan. Section 3.2 concludes that the Villebois Village Master Plan satisfies the recommended standards contained in the City's 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 the next update to the City's Parks & Recreation Master Plan.

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 Metro's Wilsonville Tract regional open space to the south. 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 complex and the Metro Wilsonville Tract. The Master Planner is coordinating with the City and Metro on evaluation of storm drainage options (CLC-10 options) within the Metro Wilsonville Tract (see also Section 4.3 of the Villebois Village Master Plan). In addition, 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 (see also Implementation Measure 5 of Chapter 3 – Parks & Open Space of the Villebois Village Master Plan). **Staff finds that this Implementation Measure has been met.***

Implementation Measure 3.1.11.s: Facilities constructed to implement the Bicycle and Pedestrian Master Plan shall be designed to insure safe and convenient pedestrian, bike and, where appropriate, equestrian access from residential areas to park, recreational and school facilities throughout the City.

*FINDING A-82: Adequacy of facilities will be determined through the Development Review process. The applicant states that all facilities for accommodating bikes and pedestrians will be designed with the safety and security of the users in mind. **Staff finds that this approach satisfies the intent of this Implementation Measure.***

POLICY 3.1.2: The City of Wilsonville shall provide, or coordinate the provision of, facilities and services concurrent with need (created *Measure* by new development, redevelopment, or upgrades of aging infrastructure).

*FINDING A-83: The Villebois Village Master Plan proposes a phased development. To ensure that there is adequate infrastructure to support each phase, a separate analysis, independent of the Master Plan, is being completed by the City as part of the development of both the Financial Plan and ultimately the development agreements between the property owners and the City. Refinements to the Master Plan that may occur with the Specific Area Plans also will be reviewed to maintain concurrency. A final check of concurrency will be completed by the Development Review Board as part of the Preliminary Development Plan. **Staff finds that this approach satisfies the intent of this Policy.***

Implementation Measure 3.1.2.f: Coordinate with the appropriate school district to provide for additional school sites substantially ahead of the anticipated need.

*FINDING A-84: The Master Planner has coordinated with West Linn/Wilsonville School District representatives. Per this coordination, the Villebois Village Master Plan anticipates accommodating a 10-acre school site (inclusive of 3 acres of park/open space) as noted on Figure 1 – Land Use Plan. As discussed on page 6 of the Villebois Village Master Plan, the School District has indicated to the master planner that any location within one of the residential neighborhoods would be acceptable. The Master Plan provides a Goal, Policy, and Implementing Measure supporting coordination with the School District for provision of an elementary school in Villebois. **Staff finds that this Implementation Measure has been met.***

POLICY 3.1.8: The City of Wilsonville shall continue to coordinate planning for fire safety with the Tualatin Valley Fire and Rescue District.

and

POLICY 3.1.9: The City of Wilsonville shall continue to provide adequate police protection.

and

POLICY 3.1.10: The City of Wilsonville shall continue to coordinate planning for educational facilities with all three local school districts and Clackamas Community College.

FINDING A-85: The Villebois Village Master Plan has been circulated to these various agencies for their review and comment. This coordination will continue during review of subsequent applications including Specific Area Plans and Preliminary Development Plans. Staff finds that this Implementation Measure has been met.

LAND USE AND DEVELOPMENT

General Development

GOAL 4.1: To have an attractive, functional, economically vital community with a balance of different types of land uses.

FINDING A-86: The Villebois Village Master Plan highlights aspects of the Plan which are considered to contribute to a "complete community" that is "economically, socially, and environmentally sustainable." The Villebois Village Master Plan includes three distinct neighborhoods grouped around a Village Center; a Village Center which includes a main street with retail, high-density housing, a plaza and a central green; an elementary school site; and smaller centers in each neighborhood that include convenience retail, transit stops, and parks; an extensive system of parks and open spaces, including a trail system connecting natural areas to the north with the Metro Wilsonville Tract to the south; rainwater management systems; and an interconnected transportation system that de-emphasizes auto use and is connected with the regional transportation system. The Villebois Village Master Plan proposes to enhance the City's economic vitality by providing more local housing and retail/office/employment opportunities to serve those residences; increasing the City's tax base; and attracting public funding contributions for transportation projects. Staff finds that this Goal has been met.

Implementation Measure 4.1.1.k: A minimum of 15% of the total gross area of all developments shall be landscaped and, where possible, integrated with the open space system. Areas identified as having significant natural resources may require enhancement in order to be considered part of the required open space for a given development. Additional landscaping may be required by the Development Review Board depending on the scale of the proposed development and its compatibility with abutting properties and their respective uses.

*FINDING A-87: The Villebois Village Master Plan significantly exceeds the minimum requirement of 15% landscaping of the gross area. As shown on Figure 5 – Parks and Open Space Plan, approximately 32% of the 481.6 acres is dedicated to open space uses. Major areas have been preserved as natural open space areas and/or park areas. In section 4.3.3, the applicant also indicates that stormwater facilities will be landscaped using native materials when possible. The need for additional landscaping for specific development will be evaluated during the Development Review process. **Staff finds that this Implementation Measure has been met.***

Commercial Development

POLICY 4.1.2 The City of Wilsonville shall encourage commercial growth primarily to serve the local needs as well as adjacent rural and agricultural lands.

*FINDING A-88: The retail/office/employment development within the Villebois Village Master Plan area is intended to be of a scale and nature that would serve primarily the local needs of residents within Villebois and nearby neighborhoods (refer to Chapter 2 – Land Use). See also the response to Implementation Measure 4.1.2.a, below. **Staff finds that this Policy has been met.***

Implementation Measure 4.1.2.a: Encourage commercial uses which are compatible with the residential nature of the community, and are complementary to or supportive of industrial development in the City.

*FINDING A-89: The Villebois Village Master Plan proposes several Policies and Implementation Measures in section 2.2 which encourage commercial growth compatible with local needs. The retail/office/employment areas within the Villebois Village Master Plan area will primarily serve the residents of the village and are of a scale that is compatible with the residential nature of the community. Smaller retail/office areas may be provided in the Neighborhood Centers, while the Village Center will provide the majority of retail/office/employment opportunity in the Master Plan area. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.2.b: Provide opportunities for a basic mix of needed goods and services.

*FINDING A-90: The retail/office/employment uses within the Village are designed to meet the basic needs of the area's residents and will allow them to obtain these goods in close proximity to their homes. The permitted retail/office/employment uses will be addressed in the Village zone and will include the uses identified generally in Chapter 2 of the Villebois Village Master Plan. The Goal, Policies, and Implementation Measures proposed in section 2.2 for the Village Center support development of a mix of needed goods and services, thereby helping to reduce the vehicle miles traveled for residents. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.2.g: The location and development of commercial areas within the community should be given very careful consideration. Although they may occupy a relatively small percentage of the total land area, commercial developments customarily occur at points of maximum traffic movement and, therefore, have a tremendous impact on people's impressions of the visual quality of the community. If Wilsonville is to retain an image as a desirable place to live, its commercial areas must reflect that quality.

FINDING A-91: The retail/office/employment areas within Villebois are located primarily in the Village Center, which is located centrally to the project where the main internal streets intersect. Specific architectural and development standards will be defined in a new Village zone for this project (per Village Center Implementation Measure 1) to provide continuity of design and integration within the neighborhoods. The applicant states that this approach will create a desirable place to live and shop and reduce or remove any negative impacts caused by retail/office/employment uses (refer to Chapter 2 – Land Use). Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.2.i: As existing businesses are renovated and new ones are constructed, the Development Review Board will require high standards of compatibility with surrounding development, landscaping, architecture, and signage. The ability of a site to function properly in relation to the surrounding area will be emphasized.

FINDING A-92: Any existing businesses planning renovation or new businesses locating within the Villebois Village Master Plan area will be subject to review standards by the Development Review Board, the proposed Village zone standards and guidelines (City File 02PC08), and the proposed Pattern Book and/or Village Center Design standards (required by the Village zone) which will ensure quality of design and compatibility with the surrounding area. Staff finds that this Implementation Measure has been met.

Industrial Development

The Villebois Village Master Plan does not provide for any true industrial uses within the plan area. However, certain light manufacturing/research and development uses may be an appropriate use within the Village Center and could be approved by the appropriate City review authority.

POLICY 4.1.3 The City of Wilsonville shall encourage light industry compatible with the residential and urban nature of the City.

FINDING A-93: The Villebois Village Master Plan recognizes the potential of the adaptive reuse of the existing Dammasch Hospital buildings within the Village Center for a light manufacturing/research and development-based employer. The vision for the Village Center recognizes that over time this type of use may be accommodated within the Village Center. The forthcoming Village zone (City File 02PC08) will provide

language supportive of this (refer to Chapter 2 – Land Use). **Staff finds that this Policy has been met.**

Implementation Measure 4.1.3.g: Encourage energy-efficient, low-pollution industries.

*FINDING A-94: If a light manufacturing/research and development use were to locate within the Villebois Village Master Plan it would need to be energy-efficient and low-pollution to be compatible with the remainder of Villebois. The Village (V) zone will provide standards to accommodate these types of facilities. The City, during the Development Review process, has the ability to ensure that an industrial use meets these environmental aspirations. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.3.h: The City, in accordance with Title 4 of the Metro Urban Growth Management Functional Plan, supports appropriate retail development within Employment and Industrial Areas. Employment and Industrial areas are expected to include some limited retail commercial uses, primarily to serve the needs of people working or living in the immediate Employment or Industrial Areas, as well as office complexes housing technology-based industries.

*FINDING A-95: Any employment uses, including light manufacturing/research and development, will be located within the Village Center. The Village Center is planned to be a mix of residential and retail/office/employment uses supporting the intent of this measure (see Figure 2A – Village Center Land Use Plan and Chapter 2 – Land Use). **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.3.i: The City shall limit the maximum amount of square footage of gross leasable retail area per building or business in areas designated for industrial development.

*FINDING A-96: There is no industrial zoning or land use designation within the Villebois Village Master Plan area; therefore **Staff finds that this measure is not applicable.***

Residential Development

Implementation Measure 4.1.4.b: Plan for and permit a variety of housing types consistent with the objectives and policies set forth under this section of the Comprehensive Plan, while maintaining a reasonable balance between the economics of building and the cost of supplying public services. It is the City's desire to provide a variety of housing types needed to meet a wide range of personal preferences and income levels. The City also recognizes the fact that adequate public facilities and services must be available in order to build and maintain a decent, safe, and healthful living environment.

*FINDING A-97: Figure 1 – Land Use Plan identifies 12 housing types (plus potential for ancillary housing) and densities, which the Villebois Village Master Plan indicates will have price and rent levels that accommodate a range of incomes (see Affordable Housing discussion under Metro Functional Plan Title 11 in Section B of this document). Affordable, senior, and community housing (per ORS 426.508) are to be included. Densities will range from 3.2 to 50.9 units per net acre. Unit types will be comprised of apartments, condos, row homes, and single-family homes on small, medium, standard, large and estate lots. This mix of housing types and densities is consistent with the Villebois Village Concept Plan. Preceding Responses addressing Comprehensive Plan Policies for utilities and streets discuss concurrency and demonstrate that adequate public facilities and services will be available to serve the project. Most of the Residential Neighborhood Policies proposed by the Villebois Village Master Plan support this measure. See also the discussion under Section C (Metro Functional Plan Title 11(D)). **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.4.c: Establish residential areas that are safe, convenient, healthful, and attractive places to live while encouraging variety through the use of planned developments and clusters.

FINDING A-98: The applicant states that Villebois Village Master Plan design provides for safety in a number of ways. The alleys result in safer pedestrian areas because the sidewalks aren't conflicted with driveways serving garages in front. The extensive bikeways allow movement throughout the Village while being separated from automobile traffic. The design of houses with windows and front porches results in "eyes on the street" throughout the day and evening.

*Careful distribution of the densities in the Village has avoided grouping similar densities and types into "corrals," by dispersing housing types throughout the community. Efficient site layouts have each dwelling within a five-minute walk from a Neighborhood Center or the Village Center, and have easy access to parks and open spaces. This mix creates the atmosphere that this Implementation Measure strives to achieve. The arrangement of housing types and densities is consistent with Villebois Village Concept Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.4.d: Encourage the construction and development of diverse housing types, but maintain a general balance according to housing type and geographic distribution, both presently and in the future. Such housing types may include, but shall not be limited to: Apartments, single-family detached, single-family common wall, manufactured homes, mobile homes, modular homes, and condominiums in various structural forms.

*FINDING A-99: The Villebois Village Master Plan provides 12 different housing types, ranging from large lot single family to apartments over retail/office. These diverse housing types are distributed throughout the Master Plan area as shown on Figure 1 – Land Use Plan. The mix of housing types and densities is consistent with the Villebois Village Concept Plan. (See also Response to Implementation Measure 4.1.4.b, above). **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.4.j: The City shall have a diverse range of housing types available within its City limits.

FINDING A-100: *The Villebois Village Master Plan will provide more than the minimum 2,300 residential units specified by DATELUP, with both home ownership and rental opportunities available. The Villebois Village will include a diverse range of housing types as listed in Table A.*

Table A Villebois Village Ownership/Rental Opportunities

Villebois Village Home Ownership Opportunities					
Product Type	Units	Acres	Net Density	Product Percentage	Estimated Price Range¹
Mixed Use Condos	191	6.0	31.8	8%	\$127,000 - \$145,000
Specialty Condos	178	3.5	50	7.5%	\$125,000 - \$165,000
Condos	154	5.4	28.5	6%	\$155,000 - \$188,000
Row Houses	316	19.4	16.3	13%	\$174,000 - \$209,000
Small Detached	364	35.3	10.3	15%	\$193,000 - \$223,000
Medium Detached	350	40.5	8.6	15%	\$209,000 - \$244,000
Standard Detached	194	33.7	5.7	8%	\$244,000 - \$300,000
Large	65	13.5	4.8	3%	\$278,000 - \$341,000
Estate	63	19.7	3.2	3%	\$335,000 - \$405,000
Villebois Village Rental Housing Opportunities					
Product Type	Units	Acres	Net Density	Product Percentage	Anticipated Monthly Rent¹
Urban Apartments	214	7.1	30.1	9%	\$625 (1-bedroom)
Village Apartments	203	8.6	23.6	8.5%	\$700 - \$790 (2-bedroom)
Neighborhood Apartments	98	4.9	20.0	4%	\$900 (3-bedroom)

¹ Source: Market and Consumer Research Study, Villebois, August 28, 2002, prepared by Market Perspectives.

Figure 1 – Land Use Plan depicts the anticipated mix of housing types within Villebois. The land use pattern of Villebois is designed to create three neighborhoods that are defined by areas within a quarter-mile radius of one of three Neighborhood Centers (see Figure 2). Each neighborhood consists of a mixture of housing types that are generally characterized by higher densities near the Neighborhood Center and near the Village Center and lower densities near the edges of the Villebois Village Master Plan area. The Village Center will include the highest densities of residential units (condos, apartments, mixed use buildings). The Villebois Village will also include some unique housing opportunities through the provision of community housing in accordance with ORS 426.508 and the inclusion of ancillary dwellings. Thus, a diverse range of housing types will be available in Villebois Village, which will contribute to the diversity of housing types within the City of Wilsonville. See also the response to Implementation Measure 4.1.4.b. **Staff finds that this Implementation Measure has been met.**

Implementation Measure 4.1.4.k: The City shall adopt specific goals for low and moderate cost 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.

FINDING A-101: In January 2001 the Metro Council adopted an ordinance amending the Regional Framework Plan and the Urban Growth Management Functional Plan. The intent of this amendment was to ensure a choice of housing types and to help reduce regulatory barriers to affordable housing. Local governments were required to adopt comprehensive plan changes that ensure a diverse range of housing types, maintain the existing supply of affordable housing, increase opportunities for new affordable housing and increase opportunities for households of all income levels to live within their individual jurisdiction in affordable housing. Wilsonville Comprehensive Plan Implementation Measure 4.1.4.k is the enabling regulation adopted by the City as required by Metro. The City has not yet adopted the specific goals for affordable housing called for by the measure. However, the City recognizes the importance of the intent of the regulation and requires a demonstration of the provision of affordable housing in Villebois.

*In lieu of measurable criteria within City regulatory documents, Metro requires that the applicant demonstrate how residential development will include housing affordable to households with incomes at or below area median incomes for home ownership and at or below 80 percent of area median incomes for rental. Table A, above, lists the range of housing types and estimated prices that are anticipated within Villebois. This Table shows that a wide range of estimated home prices will be available. An analysis is provided in the response to subsection D of Metro Title 11 that indicates that home ownership opportunities and rental options will be available in Villebois at prices affordable to all income levels that live or have a member working within the City of Wilsonville (see response to subsection D of Metro Title 11). Residential Neighborhood Housing Implementation Measure 3 will assure that a mix of housing types and inclusion of affordability options is provided with each Specific Area Plan generally consistent with those shown in the Villebois Village Master Plan. **Staff finds that this Implementation Measure, while applicable, provides no criteria on which to evaluate the application. However, staff feels that the applicant's response to the Metro Functional Plan requirement satisfies the intent of this Implementation Measure.***

Implementation Measure 4.1.4.1: The City shall work to improve the balance of jobs and housing within its jurisdictional boundaries.

*FINDING A-102: Currently, the City of Wilsonville is underserved in housing. With 2,390 housing units and a density of over 12 units per acre, the plan significantly improves the opportunity to positively impact the jobs to housing mix in Wilsonville over time. The proposed number of housing units and densities is consistent with the Villebois Village Concept Plan. The Residential Neighborhood Policies of the Villebois Village Master Plan have been developed to help address this measure. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.4.o: The City will encourage the development of housing of various types and densities. Guided by the urbanization, public facilities, and economic elements, the City will, however, manage residential growth to ensure adequate provision of public facilities and that proposed housing satisfies local need and desires, i.e., type, price and rent levels.

*FINDING A-103: Public facilities are discussed in other portions of this document. The wide range of housing types and prices provides housing that will satisfy local needs. The Master Planner is coordinating with the City on development of a Finance Plan and updated Capital Improvement Program to identify specific projects and their associated costs as well as funding responsibility for these projects. (See also Affordable Housing discussion under Metro Functional Plan Title 11 in Section C of this document and the response to Implementation Measure 4.1.4.p, below). **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.4.p: In an effort to balance residential growth with the City's employment base, the City shall encourage the development of housing to meet the needs of the employees working in the City.

*FINDING A-104: The wide range of housing types and prices provides housing opportunities for the employees working in the City. Villebois is mandated to provide a minimum of 2,300 dwelling units by ORS 426.508 and DATELUP. The proposed mix of housing types and densities is consistent with the Villebois Village Concept Plan. (See also Affordable Housing discussion under Metro Functional Plan Title 11 in Section B of this document, below). Staff is proposing a new Implementation Measure for Residential Neighborhood Housing in the Villebois Village Master Plan that requires a demonstration by the master planner with each Specific Area Plan that the development continues to meet the housing needs of the City's residents at prices and rents affordable to a wide range of incomes. **With this addition, staff would find that this Implementation Measure has been met.***

Implementation Measure 4.1.4.t: Site plans will provide for adequate open space to (a) protect adjacent properties; and (b) provide ample yard space and play areas for residents. The residential character of established neighborhoods, particularly low density developments, shall also be protected as surrounding development occurs. Site development standards shall continue to be applied to ensure compatibility with adjacent land uses. High design standards will be established for signage and appearance, including the landscaping of setback areas and the designation of access points.

FINDING A-105: These requirements will be addressed through the Specific Area Plan and Development Review processes as the various phases of Villebois are developed. A Pattern Book is required as a part of the Specific Area Plan application (see Residential Neighborhood Housing Implementation Measures 1 and 2, Section 2.3, Villebois Village Master Plan), which will outline specific and general design guidelines that are intended to ensure site development is compatible with adjacent land uses. Open space areas and

the mix of uses are consistent with the Villebois Village Concept Plan. Staff finds that this approach will meet the intent of this Implementation Measure.

Implementation Measure 4.1.4.x: Apartments and mobile homes are to be located to produce an optimum living environment for the occupants and surrounding residential areas. Development criteria includes:

1. Buffering by means of landscaping, fencing, and distance from conflicting uses.
2. Compatibility of design, recognizing the architectural differences between apartment buildings and houses.
3. On-site recreation space as well as pedestrian and bicycle access to parks, schools, mass transit stops and convenience shopping.
4. The siting of buildings to minimize the visual effects of parking areas and to increase the availability of privacy and natural surveillance for security.

FINDING A-106: These provisions will be met at the time of development and will be monitored by the City through the permitting process and through adherence to the approved Pattern Book. The proposed locations and unit counts for apartments are consistent with the Villebois Village Concept Plan, and are adjacent to planned public facilities and services and park amenities. Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.4.y: Housing units shall be designed, constructed, and maintained so that the community is assured of safe, sanitary, and convenient living conditions in dwellings that are sound, energy efficient, and attractive in their appearance. Conservation of housing resources shall be encouraged through code enforcement, renovation, and rehabilitation of the existing housing stock.

FINDING A-107: These provisions will be met at the time of development and will be monitored by the City through the permitting process. The Villebois Village Master Plan requires the development of Pattern Books with Specific Area Plans for Villebois (Implementation Measures 1 and 2, Section 2.2). The Pattern Book will set architectural guidelines and standards for the housing developed within Villebois in compliance with this measure. Staff finds that this Implementation Measure has been met.

Environmental Resources and Community Design

Implementation Measure 4.1.5.a: Require the placement of utilities underground in new developments and seek means of undergrounding existing above-ground utilities, other than storm drainage facilities.

*FINDING A-108: The applicant states that all new utilities will be underground in Villebois. Existing above-ground utilities will be undergrounded if allowed by the franchisee. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.c: Provide a buffer use or transition zone between urban and adjacent agricultural areas.

*FINDING A-109: Perimeter buffer streets separate any agricultural lands outside the Urban Growth Boundary from uses within Villebois. The proposed uses and their locations are consistent with the Villebois Village Concept Plan; generally larger lot sizes (less density) occur around the Village perimeter. It should be noted that all land within the planning area not currently within Wilsonville's City limits is zoned "Agricultural" by Clackamas County. Upon annexation to the City, agricultural activities on these properties would still be permitted until rezoning and development takes place. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.d: Conserve and create open space throughout the City for specified objectives.

*FINDING A-110: The Villebois Village Master Plan is noteworthy for the amount of open space it includes. The plan provides 153.1 acres of open space or 32% of the plan area encompassing several types of passive and active recreational areas, natural areas, and trails as discussed in several Policies and implementation Measures in the Master Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.e: Protect the beneficial uses and functional values of resources within the Water Quality and Flood Management Areas identified by Metro by limiting or mitigating the impact on these areas from development activities.

*FINDING A-111: The intent of the design of the Villebois Village Master Plan is to comply with the City's SROZ overlay zone, which protects resources that exist within the Villebois Master Plan area. Boundaries for the SROZ and flood plain are shown for illustrative purposes only in the Master Plan. Any encroachments will be reviewed for compliance or exemption as more detailed information is provided that will affect these areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ and flood plain regulations, which will be demonstrated for the Specific Area Plans (Parks and Recreation Policy 3, Section 3.4 Villebois Village Master Plan). **Staff finds that this approach meets the intent of this Implementation Measure.***

Implementation Measure 4.1.5.g: Encourage identification and conservation of natural scenic and historic areas within the City.

FINDING A-112: Figure 5 – Parks and Open Space Plan of the Villebois Village Master Plan shows multipurpose green spaces that will connect the community with the surrounding area's natural resources. (Also see the response for Implementation

Measure 3.1.11.a.) The Plan is consistent with the Villebois Village Concept Plan. Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.5.h: Develop an attractive and economically sound community.

FINDING A-113: The applicant states that Villebois is an attractive and economically sound plan by design. Pattern Books, submitted during the Specific Area Plan process, will ensure an integrity of design is carried out throughout the Master Plan area. The Master Planner is coordinating with the City on development of a Finance Plan and updated Capital Improvement Program to identify specific projects and their associated costs as well as funding responsibility for these projects. (See response to Goal 4.1.) Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.5.i: Identify buildings of unusual or outstanding architectural style from earlier eras. Encourage preservation of these structures.

FINDING A-114: The applicant states that while it is not unusual or outstanding architecture, the Dammasch Hospital is being considered for adaptive reuse. This is being done for sustainability reasons (Village Center Policy 6, Section 2.2, Villebois Village Master Plan). Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.5.j: Ensure that open space conforms to the characteristics of the land, type of land use, adjacent land uses and City needs.

FINDING A-115: Open space in Villebois takes advantage of the characteristics of the land, the type of land use proposed and adjacent land uses and provides a continuous network to benefit wildlife and humans. The Villebois Village Master Plan (Figure 5 – Parks and Open Space Plan) identifies the proposed park and open space uses and compares the plan with the classifications and standards outlined in the Parks & Recreation Master Plan. Open spaces are generally in conformance with the Villebois Village Concept Plan. The next scheduled update of the City's Parks & Recreation Master Plan will need to include the addition of the Villebois Village Master Plan and address the increased needs of the City. See also the response to Implementation Measure 3.1.11.f. Staff finds that this approach meets the intent of this Implementation Measure.

Implementation Measure 4.1.5.k: Develop open, limited, or restricted access natural areas connected where possible by natural corridors, for wildlife habitat, watershed, soil and terrain protection. Preservation of contiguous natural corridors throughout the City for the protection of watersheds and wildlife will be given priority in land use decisions regarding open space.

FINDING A-116: The rainwater systems and the connectivity of the open spaces described elsewhere in this document go beyond what is normally found in development

proposals. Please also refer to the response for Implementation Measures 4.1.5.j and 3.1.11.k, above. **Staff finds that this Implementation Measure has been met.**

Implementation Measure 4.1.5.l: Identify areas of natural and scenic importance and give them priority in selection of public open space. Where legal rights of access have been acquired, extend public access to, and knowledge of such areas, in order to encourage public involvement in their preservation.

*FINDING A-117: The Villebois Village Master Plan provides access to the adjoining Metro Wilsonville Tract and Coffee Lake Creek areas. Pathways and circulation to these areas is consistent with the Villebois Village Concept Plan (see also response to Implementation Measure 3.1.11.j). **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.m: Protect the river-connected wildlife habitat and encourage the integration and inter-connection of the Willamette River Greenway to open space areas of the City. Continue to regulate development within the Greenway boundaries. Provide for public access to the river only through and within the City parks or other properties intended for public access.

*FINDING A-118: The Coffee Lake Creek wetland area is a river-connected wildlife habitat. This area of the Villebois Village Master Plan is protected through the City's SROZ. The Coffee Lake Creek wetland open space is consistent with the Villebois Village Concept Plan. See also the responses to Implementation Measures 3.1.11.j and k. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.r: Housing development, and any other development intended for human occupancy, shall occur, to the greatest extent possible, on lands designated for development that are free from flood hazard, severe soil limitations, or other hazards.

*FINDING A-119: The applicant states that no housing shall occur in the floodplain of Coffee Lake Creek. The future Specific Area Plans will identify the 100-year flood plain. Also see the response to Implementation Measure 3.1.7.a. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.s: Ensure adequate storm drainage.

*FINDING A-120: The applicant states that adequate storm drainage will be regulated by the City review process and will be assured. Preliminary analysis of the capacity of storm drainage facilities is provided in Section 4.3 of the Villebois Village Master Plan. Also see the responses for Implementation Measures 3.1.7.a and n. **Staff finds that the approach described by the Villebois Village Master Plan will meet the intent of this Implementation Measure.***

Implementation Measure 4.1.5.t: Define risks of development by using Federal Emergency Management Agency maps showing flood plains and floodways. Restrict buildings in the flood plains and prohibit buildings in the floodway.

FINDING A-121: The applicant states that no housing shall occur in the floodplain of Coffee Lake Creek. The Specific Area Plans will identify the 100-year flood plain. The Specific Area Plan(s) will refine the locations for housing, which are shown in the Master Plan. The limit of residential development is consistent with the Villebois Village Concept Plan. Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.5.z: Protected natural resources within the Significant Resource Overlay Zone are intended to remain undeveloped with the possible exceptions of passive recreation and underground public facilities. These areas include the following: (1) Riparian corridors, wetlands and wildlife habitat that are determined to be significant through the Goal 5 process and are included in the Significant Resource Overlay Zone. (2) Water quality resource areas as defined by Metro's Title 3 of the Urban Growth Management Functional Plan. Wilsonville Comprehensive Plan Page 77

FINDING A-122: Per Parks and Recreation Policy 3, Section 3.4 of the Villebois Village Master Plan, the Master Plan shall comply with the City of Wilsonville Significant Resource Overlay Zone (SROZ) regulations. Boundaries for 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. Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.5.aa: An Area of Limited Conflicting Use is defined as an area located between the riparian corridor boundary, riparian impact area or the Metro Urban Growth Management Functional Plan Title 3 Water Quality Resource Area boundary, whichever is furthest away from the wetland or stream and the outside edge of the SROZ or an isolated significant wildlife habitat area as defined by Goal 5. These areas can serve Land Use and Development as a buffer between development and conservation. Limited development impacts may be permitted in accordance with special development standards found within the Planning and Land Development Ordinance.

FINDING A-123: Specific Area Plans will identify the locations of the Areas of Limited Conflicting Use and proposed limited development impacts to these areas (see also response to Implementation Measure 4.1.5.z, above). Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.5.bb: Undeveloped portions of the Significant Resource Overlay Zone may be used towards satisfaction of open space requirements. A density transfer credit of not more than 50% of the designated Significant Resource Overlay Zone will also be allowed.

*FINDING A-124: The applicant states that the master planner may take advantage of this provision during development of the Specific Area Plans. **This Implementation Measure is advisory.***

Implementation Measure 4.1.5.cc: In vegetated areas, the positive visual impact of the trees, etc., is to be preserved. Any clearing of trees for development is subject to arboricultural standards and the requirements of the Planning and Land Development Ordinance.

*FINDING A-125: The Villebois Village Master Plan has carefully considered all important trees and made extensive efforts to preserve them. Any removal of other trees will be done in compliance with City Ordinances. Tree Protection Plans will be submitted concurrently with Specific Area Plans as directed by Parks and Recreation Goal 6 and Implementation Measure 4, Section 3.4 of the Master Plan. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.ff: Where possible, on-site drainage should be designed to preserve natural drainage channels and to allow for ground water infiltration. Man-made Land Use and Development structures should be designed to complement the natural system. It is not the intent of this Measure to encourage unsightly and unsafe open ditches. Rather, open drainage systems should be designed to accent natural creeks and drainage channels and provide an attractive natural area-like appearance.

*FINDING A-126: Per Stormwater Management Implementation Measure 2, Section 4.3.4 of the Villebois Village Master Plan, the proposed rainwater system will integrate drainage facilities into selected streetscapes, as well as into existing natural drainage ways (see Section 4.3 of the Villebois Village Master Plan) with goals of minimal negative impacts to the existing system and "a green, natural, aesthetically pleasing rainwater management system". The rainwater management program will be detailed with the first Specific Area Plan. **Staff finds that this approach meets the intent of this Implementation Measure.***

Implementation Measure 4.1.5.gg: Minimize the impact of urban development on adjacent rural and agricultural lands. A combination of open space and low density land use designation may be employed.

*FINDING A-127: Although adjacent rural and agricultural lands are separated from the planning area by Tooze Road and Grahams Ferry Road, Figure 1 – Land Use Plan, shows the Master Plan will mitigate impacts by placing the least dense residential development towards its outer edges and placing its most intense and dense uses in the Village Center. The lesser dense development will be across from the rural lands to the northwest and west. Open space is proposed across from the agricultural land to the north. **Staff finds that this Implementation Measure has been met.***

Implementation Measure 4.1.5.hh: The design of developments within the community can be regarded from two viewpoints: the design of structures as they relate to site and

function (architectural design) and, their relationship to the surrounding area (community design). Both aspects shall be considered to be of equal importance. Good architectural design is necessary to provide visual variety and allow for individual identity. At the same time, good community design provides a sense of unity with other development while eliminating conflicting appearances.

FINDING A-128: Architectural design will be controlled through the adoption of a Pattern Book with each Specific Area Plan as covered in other sections of this document. The applicant states that good community design has been an important ingredient of the development of this plan. Staff finds that this Implementation Measure has been met.

Residential – Village

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), with the following Policy and Implementation Measures. The Comprehensive Plan Map was amended to show the areas so designated (City Ordinance No. 555, May 19, 2003).

POLICY 4.1.6: Require the development of property designated "Residential – Village" on the Comprehensive Plan Map to create livable, sustainable urban areas which provide a strong sense of place through integrated community design, while also making efficient use of land and urban services.

FINDING A-129: The Villebois Village Master Plan has been created to provide for a livable, sustainable urban village of approximately 2,390 dwelling units at 12.1 units per net acre. The Village is designed to take advantage of multi-modal means of movement throughout the Village. The applicant states that the Master Plan incorporates sustainable design features that fulfill this measure. Pattern Books that will be submitted with each Specific Area Plan to provide design guidelines assuring a strong sense of place when Villebois is built out. Staff finds that this Policy has been met.

Implementation Measure 4.1.6.a: Development in the "Residential – Village" Map area shall be guided by the Villebois Village Concept Plan (depicting the general character of proposed land uses, transportation, natural resources, public facilities, and infrastructure strategies), and relevant Policies and Implementation Measures in the Comprehensive Plan, the "Village" Zone District, and any other provisions of the Wilsonville Planning and Land Development Ordinance that may be applicable.

FINDING A-130: The Villebois Village Master Plan has generally demonstrated consistency with the Villebois Village Concept Plan. Land uses, number of residential units, densities, open spaces and parks, public facilities and infrastructure and transportation, as depicted in the Villebois Village Master Plan, are consistent with the Villebois Village Concept Plan. Development of the Master Plan area will be guided by the forthcoming Village zone in City File 02PC08. Refinements to the Villebois Village Master Plan that may be needed as development proceeds will be evaluated during the

review process for the Specific Area Plans. The applicant has also demonstrated, and staff concurs, that, in general, the Villebois Master Plan complies with applicable sections of the Wilsonville Comprehensive Plan and other applicable regulatory requirements (see following sections of Findings). Staff has identified a limited number of exceptions and has proposed Implementing Directives (see Staff Recommendation) to ensure compliance with this Implementation Measure.

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 the proposed development as well as to the remaining Wilsonville environs.
3. Identification of opportunities for employment and services within the 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.

FINDING A-131: The Villebois Village Master Plan is comprehensive in nature and addresses land use, transportation, utilities, open space and natural resources in Chapters 2 through 5 and Figures 1, 2, and 5 through 9B. Figure 1 – Land Use Plan identifies a proposed mix of 2,390 dwelling units at a density of 12.1 units per net acre. Chapter 2 also discusses the Village Center, a mixed-use (residential-commercial) area which is intended to provide employment opportunities over time as the Village Center matures and evolves.

The proposed Village zone, City File 02PC08, will require Pattern Books with Specific Area Plan submittals addressing architectural patterns and types within each Specific Area Plan. Community housing will be provided consistent with ORS 426.508 (see also Section D of this document). Staff finds that this Implementation Measure has been met.

Implementation Measure 4.1.6.c: The "Village" Zone District shall be applied in all areas that carry the Residential – Village Plan Map designation.

FINDING A-132: The Village zone is proposed as a part of a forthcoming application by the master planner (City File 02PC08). Conversion of existing zoning to the Village zone for property within the Villebois Village Master Plan area will occur through applications made either prior to or concurrent with applications for Preliminary Development Plan approval. Staff finds that this approach meets the intent of this Implementation Measure and full compliance will be contingent upon approval of the pending application.

Implementation Measure 4.1.6.d: The "Village" Zone District shall allow a wide range of uses that benefit and support an "urban village", including conversion of existing structures in the core area to provide flexibility for changing needs of service, institutional, governmental and employment uses.

FINDING A-133: The Village zone, addressed in the forthcoming City File 02PC08, will respond to the directives of this measure whose intent has been demonstrated by the Villebois Village Master Plan text and Village Center Policy6, Section 2.2. Staff finds that this Implementation Measure has been met.

Wilsonville Comprehensive Plan Map

FINDING A-134: The City of Wilsonville Comprehensive Plan map has been revised to designate approximately 439 acres in the Dammasch area "Residential – Village" (City Ordinance No. 555). The Villebois Village Master Plan is proposed to be applied to this area in conformance with the Villebois Village Concept Plan. Staff finds that the Master Plan is generally consistent with the City's Comprehensive Plan Map (see Figure 1 – Land Use Plan).

B. CITY OF WILSONVILLE PLANNING & LAND DEVELOPMENT ORDINANCE

The next part of this report addresses the Wilsonville Planning and Land Development Ordinance (Wilsonville Code). Staff finds that the following sections apply: 4.003, 4.008, 4.009(.02), 4.010-4.020, 4.032(.01)(B), 4.033(.01)(B), 4.140(.01), and 4.198(A-D).

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 now or hereafter provide.

FINDING B-1: The Villebois Village Master Plan will become a sub-element of the Wilsonville Comprehensive Plan. These Findings have been prepared to demonstrate that the Villebois Village Master Plan is consistent with the Comprehensive Plan (see Section A of this document) and applicable State and Federal laws and regulations (see Section D of this document).

Section 4.008 Application Procedure – In General.

(.01) The general application procedures listed in Section 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:

- H. Changes to the text of the Comprehensive Plan, including adoption of new Plan elements or sub-elements, pursuant to Section 4.198;

FINDING B-2: The Villebois Village Master Plan will become a sub-element of the Wilsonville Comprehensive Plan. Compliance with Section 4.198 is demonstrated within Section B of this document. 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.

Section 4.009 Who May Initiate Applications.

(.02) Applications involving large areas of the community or proposed amendments to the text of this Chapter or the Comprehensive Plan may be initiated by any property owner, business proprietor, or resident of the City, as well as the City Council, Planning Commission, or Development Review Board acting by motion.

FINDING B-3: The Wilsonville Comprehensive Plan (p. 7, item 1.c under Plan Amendments) provides that an affected property owner or authorized agent may sign applications to initiate plan amendment. The State of Oregon as owner of the Dammasch Hospital property initiated a public competitive process for selection of a master

developer for the site. The City of Wilsonville participated in this competitive process. The Request For Proposals called for Developer proposals to purchase the Dammasch property from the State and to develop the entire DATELUP area. Villebois LLC was selected by the State and the City to purchase the Dammasch property and serve as the master developer. In December 2002, the City and Villebois LLC entered into a Memorandum of Understanding recognizing, in effect, that an agency relationship exists between the State as property owner and Villebois LLC as its designated master developer. Villebois LLC has designated Costa Pacific Communities as its representative in matters pertaining to development applications with the City. Application for the Villebois Village Master Plan has been initiated by the Master Planner for Villebois Village.

Sections 4.010-4.020 [These sections contain procedures to be followed for hearing a legislative application.]

FINDING B-4: *Staff finds that all appropriate and required procedures have been followed and carried out for developing and hearing this legislative proposal.*

Section 4.032(.01)(B) [This Section states that the Planning Commission has authority to make recommendations to the City Council on “legislative changes to, or adoption of new elements or sub-elements of the Comprehensive Plan.”]

Section 4.033(.01)(B) [This Section states that the City Council has final decision-making authority on “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.”]

Section 4.140 Planned Development Regulations.

(.01) Purpose.

- A. The provisions of Section 4.140 shall be known as the Planned Development Regulations. The purposes of these regulations are to encourage the development of tracts of land sufficiently large to allow for comprehensive master planning, and to provide flexibility in the application of certain regulations in a manner consistent with the intent of the Comprehensive Plan and general provisions of the zoning regulations and to encourage a harmonious variety of uses through mixed use design within specific developments thereby promoting the economy of shared public services and facilities and a variety of complimentary activities consistent with the land use designation on the Comprehensive Plan and the creation of an attractive, healthful, efficient and stable environment for living, shopping or working.

FINDING B-5: *The Villebois Village Master Plan is technically not subject to Section 4.140, Planned Development Regulations, since it is not a Planned Development. However, the purpose of Section 4.140 is discussed here since it bears the closest resemblance to master planning guidelines within the City of Wilsonville Code. Section*

4.140 does not contain the approval criteria for the Villebois Village Master Plan (see Section 4.198 for the approval criteria for the Villebois Village Master Plan).

The Villebois Village Master Plan covers an area approximately 480 acres in size, which is sufficiently large to allow for comprehensive master planning to occur. The Villebois Village Master Plan envisions a harmonious variety of uses and complimentary activities that incorporate mixed use designs and shared public services and facilities. Prior to or concurrent with approval of the Villebois Village Master Plan, the City of Wilsonville Comprehensive Plan text will be amended to include the Residential-Village 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). The Villebois Village Master Plan is intended to guide the creation of an attractive, healthful, efficient and stable environment for living, shopping or working.

B. It is the further purpose of the following section:

1. To take advantage of advances in technology, architectural design, and functional land use design;

FINDING B-6: The Villebois Village Master Plan takes advantage of advances in functional land use design as illustrated by Figure 1 – Land Use Plan and described in the Land Use Chapter (Chapter 2). As a mixed-use, pedestrian-oriented complete community, it has been designed under the guiding principles of connectivity, diversity, and sustainability. Villebois Village will also take advantage of advances in technology through the proposed rainwater management system outlined in Section 4.3 (Storm Drainage). The Village Center and residential neighborhoods are intended to showcase architectural design consistent with the vision of the Villebois Village Concept Plan (City File 02PC06). The Villebois Village Master Plan provides for development of a method for directing and controlling architectural standards for development with Residential Neighborhood Housing Implementation Measures 1 and 2.

2. To recognize the problems of population density, distribution and circulation and to allow a deviation from rigid established patterns of land uses, but controlled by defined policies and objectives detailed in the comprehensive plan;

FINDING B-7: DATELUP was a conceptual land use plan developed in 1996 to address “the Wilsonville community’s needs for housing a growing population.” The Villebois Village Concept Plan (City Ordinance No. 553, May 19, 2003) replaces DATELUP and calls for the development of the Villebois Village Master Plan to serve as an implementation guide for the Villebois Village Concept Plan. The Villebois Village Master Plan furthers the Villebois Village Concept Plan and builds on its response to the ever-growing challenges of increased growth.

3. To produce a comprehensive development equal to or better than that resulting from traditional lot land use development.

FINDING B-8: The Villebois Village Master Plan will produce a comprehensive development that is better than that resulting from traditional lot land use development. Figure 1 – Land Use Plan illustrates that the Villebois Village Master Plan will result in an efficient utilization of land that balances urban development with preservation of natural resources and provides for transitions in density and intensity of uses to define neighborhoods (see also response to Section 4.198(.01)(B)).

4. To permit flexibility of design in the placement and uses of buildings and open spaces, circulation facilities and off-street parking areas, and to more efficiently utilize potentials of sites characterized by special features of geography, topography, size or shape or characterized by problems of flood hazard, serve soil limitations, or other hazards;

FINDING B-9: Significant Resource Overlay Zone (SROZ) areas and a 100-year Flood Plain are present within the Villebois Village Master Plan area. Figure 5 – Parks and Open Space Plan of the Villebois Village Master Plan identifies the mapped SROZ boundary and the approximate 100-year Flood Plain. The SROZ boundary is taken from existing City maps. The 100-year Flood Plain line is approximated from Flood Insurance Rate Map 410025-0004-C dated February 14, 1987, which shows the northerly limit of the detailed study area having an elevation of 143 feet.

The Villebois Village Master Plan efficiently utilizes the potential of the site through its envisioned placement of buildings, open spaces, circulation facilities and off-street parking areas. SROZ boundaries and the 100-year Flood Plain line will be delineated, and refined as appropriate, with the Specific Area Plans as more detailed studies are prepared to define these areas. Specific Area Plans will include the review of any proposed encroachments within the SROZ and Flood Plain for compliance or exemption as applicable. Adjustments in plans, street alignments, and intersections, as well as rainwater facilities and pathways, may occur with the Specific Area Plans to assure compliance with SROZ and Flood Plain regulations.

5. To permit flexibility in the height of buildings while maintaining a ratio of site area to dwelling units that is consistent with the densities established by the Comprehensive Plan and the intent of the Plan to provide open space, outdoor living area and buffering of low-density development.

FINDING B-10: As noted above, 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). The Village zone will provide for flexibility in the height of buildings while maintaining a ratio of site area to dwelling units consistent with the densities established with the Residential-Village designation and the Villebois Village Master Plan. The Village zone will also provide standards for open space,

outdoor living areas and buffering of low-density development consistent with the Villebois Village Master Plan.

6. To allow development only where necessary and adequate services and facilities are available or provisions have been made to provide these services and facilities.

FINDING B-11: The Villebois Village Master Plan demonstrates that necessary and adequate services and facilities will be constructed in conjunction with development of Villebois Village (see Chapter 4 – Utilities and Chapter 5 – Circulation).

7. To permit mixed uses where it can clearly be demonstrated to be of benefit to the users and can be shown to be consistent with the intent of the Comprehensive Plan.

FINDING B-12: As noted previously, prior to approval of the Villebois Village Master Plan, the City of Wilsonville Comprehensive Plan text has been amended to the Residential-Village (R-V) land use designation and the Comprehensive Plan Map has been revised to designate the Villebois Village Master Plan area Residential-Village. The mixed uses 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). The proposed mixed uses have been clearly demonstrated to be of benefit to the users within the Villebois Village Concept Plan. The Villebois Village Master will be in compliance with the City of Wilsonville Comprehensive Plan upon the demonstration of compliance with other applicable City Master Plans, which are sub-elements of the City's Comprehensive Plan, and other applicable provisions of the Comprehensive Plan. The Villebois Village Master Plan evaluates compliance with the appropriate Comprehensive Plan sub-elements, as described in the response to Section 4.198(.01)(D), below.

8. To allow flexibility and innovation in adapting to changes in the economic and technological climate.

FINDING B-13: 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). 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). The Village zone will establish a procedure entitled Specific Area Plans to refine and further the Villebois Village Master Plan. The Village zone will also provide procedures for refinement and amendment of the Specific Area Plans, so that they may be adapted to changes in the economic and technological climate as appropriate. Additionally, the review process established in the Village zone will guide development in the Village Center and recognize that uses may evolve over time as this area matures.

Staff finds that the Villebois Village Master Plan is consistent with the purpose and intent of this section of the Wilsonville Code.

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;

FINDING B-14: ORS 426.508 requires that redevelopment of the Dammasch property be consistent with DATELUP. The Memorandum of Understanding between the State of Oregon and the City of Wilsonville regarding redevelopment identifies roles for the City and the Master Planner to master plan not only for the Dammasch property but also for the surrounding area subsequently identified in the Comprehensive Plan as Area of Special Concern B. These areas are designated Residential-Village on the Comprehensive Plan Map; the Villebois Village Master Plan will apply to these areas. DATELUP was a conceptual land use plan for Area of Special Concern B that was developed in 1996 to address “. . . the Wilsonville community’s needs for housing a growing population.” The Villebois Village Concept Plan replaces DATELUP and calls for the development of the Villebois Village Master Plan to serve as an implementation guide for the Villebois Village Concept Plan. The Villebois Village Master Plan furthers the Villebois Village Concept Plan and builds on its response to the ever-growing challenges of increased growth as discussed in detail in other sections of this document.

- 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;

FINDING B-15: The Villebois Village Master Plan provides for a phased development generally described as a mixed-use (residential/retail/office) urban village that integrates land use, transportation, and natural resource elements. This opportunity for a system of well integrated land uses, the infrastructure necessary to efficiently and effectively support those land uses, and the coordinated preservation and enhancement of natural resources prevent the area from inevitably being developed with numerous subdivisions that could be of varying quality and with amenities that are not often interrelated.

A development of the scope of Villebois becomes a catalyst for developing major traffic improvements and for attracting funding for which smaller developments could not qualify. The large scale development concept for the subject site responds to such state and regional planning policies as protecting and preserving open space, providing for a safe and efficient transportation system, and providing a range of housing types and densities. The concept and master planning approach also affords a more extensive opportunity for citizens to review and participate in the planning process than would otherwise be afforded to them.

- C. That the proposed amendment supports applicable Statewide Planning Goals or a Goal exception has been found to be appropriate; and

FINDING B-16: The Villebois Village Master Plan supports all applicable Statewide Planning Goals as demonstrated by Section D of this document.

- D. That the proposed change will not result in conflicts with any portion of the Comprehensive Plan that is not being amended.

FINDING B-17: Prior to approval of the Villebois Village Master Plan, 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 Residential-Village (City Ordinance No. 555, May 19, 2003).

The Villebois Village Master Plan (City File 02PC07B) will be in compliance with the City of Wilsonville Comprehensive Plan upon the demonstration of compliance with other applicable City Master Plans, which are sub-elements of the City's Comprehensive Plan, and other applicable provisions of the Comprehensive Plan. The Villebois Village Master Plan evaluates compliance with the appropriate Comprehensive Plan sub-elements, as described in the following paragraphs.

The Parks and Open Space / Off-Street Pathways Chapter (Chapter 3) demonstrates that Villebois 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 include the Villebois Village Master Plan area.

The Utilities Chapter (Chapter 4) is broken into three sections: sanitary sewer, water, and storm drainage. Each section provides a technical analysis and a policy analysis of compliance with the relevant City 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 the City's Stormwater Master Plan with the addition of the proposed Rainwater Management Program. However, the next scheduled update of the City's Stormwater Master Plan will include the addition of the Villebois Village Master area.

The Circulation Chapter (Chapter 5) 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 next scheduled update of the TSP will need to include the street system and bicycle/pedestrian system for Villebois.

Staff finds that the application complies with this section of the Wilsonville Code.

C. METROPOLITAN SERVICE DISTRICT

Wilsonville's planning programs are required to support Metro's 2040 Growth Concept and be consistent with the Urban Growth Management Functional Plan, both formally adopted by the Metro Council. The Functional Plan directs the region's urban growth and development. The regional policies of the Functional Plan are formulated from, and are consistent with, the Regional Urban Growth Goals and Objectives, including the Metro 2040 Growth Concept. The overall principles of the Greenspaces Master Plan are also incorporated in the Functional Plan. Staff finds that Functional Plan Titles 1-3, 6 (Regional Transportation Plan, Chapter 6), 7, and 11 apply.

Urban Growth Management Functional Plan

The regional policies listed in Metro's Urban Growth Management Functional Plan recommend and require changes to city and county comprehensive plans and implementing ordinances. This section will review applicable portions of the Functional Plan as it relates to the Villebois Village Master Plan.

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 regional urban growth boundary (UGB) over a 20 year planning horizon. Metro has enacted provisions in Title 1 intended to increase the capacity for development of land within the UGB. These provisions include establishing minimum density requirements for specific areas of the Metro region.

FINDING C-1: The Villebois Village Master Plan will ensure the City of Wilsonville meets its obligations as a regional partner by providing needed housing in an area of the region that currently has a jobs/housing imbalance. The Villebois Village Master Plan will provide approximately 2,390 dwelling units at an average density of 12.1 dwelling units per net acre. Table 3.07-1 of Metro's Functional Plan illustrates that Wilsonville has a dwelling unit capacity of 4,425 and a job capacity of 15,030. The additional housing opportunities provided by the Villebois Village Master Plan will allow more of the employees who work in Wilsonville to live in the city as well.

Further, providing these additional dwelling units at the proposed density of 12.1 dwelling units per net acre, coupled with the provision of ancillary dwellings as noted in the Land Use Chapter (Chapter 2), will reduce the demand to look outside the current UGB to meet the region's needs in compliance with Title 1.

Staff finds that the provisions of this Title have been met.

Title 2: Regional Parking Policy

The State's Transportation Planning Rule calls for reductions in vehicle miles traveled per capita and restrictions on construction of new parking spaces as a means of responding to transportation and land use impacts of growth. This title also calls for more compact

development as a means to encourage more efficient use of land, promote non-auto trips and protect air quality.

Cities and counties were required to establish specific performance standards to address the intent of Title 2. Section 4.155 of Wilsonville's Planning and Land Development Ordinance addresses parking, loading and bicycle parking.

FINDING C-2: As noted in the Title 1 response, above, the Villebois Village Master Plan provides a density of 12.1 units per net acre, exceeding the 10 units per net acre required by Metro. The Master Plan is predicated on three distinct neighborhoods surrounding a high density, mixed-use Village Center. Each of the three neighborhoods has a Neighborhood Center within easy walking distance and providing the opportunity for small-scale retail/office needs.

One of the primary goals of the Villebois Village Master Plan is to encourage pedestrian bicycle and transit use by providing safe and comfortable bicycle and pedestrian facilities and easy access to transit. A bicycle and pedestrian network is provided throughout the Village. The proposed street sections include alleyways, pedestrian separation from travel lanes, traffic calming measures, and on-street bike lanes on collector and arterial streets to create a safe and pleasant atmosphere for pedestrians and bicyclists (see Figures 7 – 9). To further reduce the reliance on auto trips, daily needs of residents will be met in neighborhood and Village retail/office/employment areas; within walking or biking distance of all homes. New SMART bus routes linking Villebois with schools and Wilsonville City Center are contemplated. Bike lanes, sidewalks and transit corridors will all have direct connections to transit stops. Parking and loading requirements for Villebois, which will be detailed in the implementing Village zone, will be appropriate for and supportive of compact development. The parking and loading standards for Villebois will be established through the implementing Village zone. These standards will comply with the City of Wilsonville's parking requirements, which are consistent with Title 2.

Staff finds that the provisions of this Title have been met.

Title 3: Water Quality, Flood Management and Fish and Wildlife Conservation

The intent of Title 3 is to protect the beneficial water uses and functions and values of resources within the Water Quality and Flood Management Areas by limiting or mitigating the impact on these areas from development activities, protecting life and property from dangers associated with flooding and working toward a regional coordination program of protection for Fish and Wildlife Habitat Areas.

Title 3 developed water quality performance standards designed to protect and improve water quality to support the designated beneficial water uses as defined in Title 10 and to protect the functions and values of the Water Quality Resource Areas. These standards include: providing a vegetated corridor to separate protected water features from development; maintain natural stream corridors, minimize erosion, nutrient and pollutant loading; filtering, infiltration and natural water purification; and stabilizing slopes.

FINDING C-3: Sustainability is one of the foundational tenets behind the design of the Villebois Village Master Plan. Prior to beginning work on the design of Villebois, environmental consultants were charged with developing an inventory of the site's wetland, stream and wildlife habitat areas. Those portions of the plan area located within the 100-year flood plain were also identified to ensure that no residential structures occur in the flood plain area.

The Villebois Village Master Plan implements state-of-the-art rainwater planning in recognition of the site's natural features and areas. Rainwater management will include bio-swales, retention and detention features as a means of reducing the effective impervious area. Villebois' systems have been designed to direct water back into the soil, minimizing urban runoff, and provide water for community's plant material. Additionally, Villebois will incorporate green building techniques using the US Green Building Council's LEED (Leadership in Energy and Environmental Design) checklist to assess each building's opportunities for green architecture.

The City has adopted the Significant Resource Overlay Zone (SROZ) to address natural resources, open space, environment, flood hazard and the Willamette River Greenway. The SROZ includes all land identified and protected under the City's Natural Resources Plan, which has been deemed to comply with Metro's Title 3. The Villebois Village Master Plan indicates that proposed encroachments within the SROZ and flood plain will be reviewed for compliance or exemption as more detailed information of boundary delineations is provided. Adjustments in plan, street alignments, and intersections, as well as rainwater facilities and pathways will be made to comply with SROZ regulations.

Staff finds that the provisions of this Title have been met.

Regional Transportation Plan, Chapter 6 (replaces Title 6: Regional Accessibility)

The intent of several sections of Chapter 6 is for the region to identify key measures of transportation effectiveness, which includes all modes of transportation. Amongst the design standards under this title is that new residential and mixed-use developments shall: provide local street plans that encourage pedestrian and bicycle travel by providing short, direct routes to nearby existing or planned commercial services, schools, parks and other neighborhood facilities; limit the use of cul-de-sacs; and serve a mix of land uses on contiguous streets.

FINDING C-4: The movement of people both within the Villebois Village Master Plan area, as well as to other parts of Wilsonville and the region was a key factor in the street system design for Villebois. Connectivity was another of the design tenets employed in planning Villebois. Villebois will comply with the City's design standards for connectivity, which have been deemed to be in compliance with Section 6.4.5 of the Regional Transportation Plan. The main roads within the plan area all lead to the Village Center. The plan provides a gridded street system serving pedestrians and bicyclists, as well as motorists, with a variety of routes within and through the plan area. A goal of the plan is to utilize planning techniques that will de-emphasize the automobile

and encourage pedestrian movement. The Villebois Village Master Plan is designed to create alternative circulation routes to and from west Wilsonville and to also take advantage of multi-modal transportation solutions. The Master Planner has been working with SMART officials to identify potential transit stops or stations within Villebois.

Villebois has been designed to create distinct neighborhoods with a quarter-mile radius containing convenience retail, transit commons, and/or recreation space near its center. Providing this mix of activities and services within a 5-minute walk of each neighborhood will help reduce vehicle miles traveled.

The plan for Villebois has taken the City's Transportation System Plan into account in designing the main roadways into the project area. This would include the extension of Boeckman Road to connect with Tooze Road providing access into Villebois from the north and extension of Barber Street into the plan area providing access from the south and east. Finally, Villebois has been designed to allow for the maximization of transit uses such as the City's SMART transit system.

Staff finds that the provisions of this Title have been met.

Title 7: Affordable Housing

The intent of Title 7 is to provide affordable housing in 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. The title further requires cities to include within their comprehensive plans and implementing ordinances:

1. Strategies to ensure a diverse range of housing types within their jurisdictional boundaries.
2. Include actions and measures designed to maintain the existing supply of affordable housing as well as increase the opportunities for new dispersed affordable housing within their boundaries.
3. Include policies, actions and measures aimed at increasing opportunities for households of all income levels to live within their jurisdictions.

FINDING C-5: The Villebois Village Master Plan provides a large range of housing choices for people at all economic levels and stages of life. As indicated on Figure 1 – Composite Land Use Plan, there will be 12 different housing types available within the Villebois Village Master Plan area. Amongst the housing choices are single-family detached homes on lots ranging from estate lots (10,000 square feet) to lots 2,500 square feet in area. Attached single-family opportunities are provided by the row home and condominium units located throughout the plan area.

Apartment and rental opportunities, comprising 21.5% of the proposed housing choices, are addressed by the various apartment styles ranging from 17.6 units per net acre in the neighborhood apartments to 30.8 units per net acre in the urban apartments located near the village center.

The mix of housing stock will include market rate for-sale and rental homes, affordable and senior housing including ancillary dwellings (granny flats), and community housing per ORS 426.508.

Staff finds that the provisions of this Title have been met.

Title 11: Planning for New Urban Areas

3.07.1120 Urban Growth Boundary Amendment Urban Reserve Plan Requirements

All territory added to the Urban Growth Boundary as either a major amendment or a legislative amendment pursuant to Metro Code chapter 3.01 shall be subject to adopted comprehensive plan provisions consistent with the requirements of all applicable titles of the Metro Urban Growth Management Functional Plan and in particular this Title 11. The comprehensive Plan provisions shall be fully coordinated with all other applicable plans. The comprehensive plan provisions shall contain an urban growth plan diagram and policies that demonstrate compliance with the RUGGO, including the Metro Council adopted 2040 Growth Concept design types.

FINDING C-6: The Villebois Village Master Plan area is already located within the Urban Growth Boundary. However, the adoption of the Villebois Village Master Plan as a sub-element of the City of Wilsonville Comprehensive Plan is a comprehensive plan amendment. The appropriate requirements of Title 11 for a comprehensive plan amendment are addressed below.

Comprehensive plan amendments shall include:

- A. Provision for annexation to a city or any necessary service districts prior to urbanization of the territory or incorporation of a city or necessary service districts to provide all required urban services.

FINDING C-6.1: Portions of the Villebois Village Master Plan area are already within the city limits and include approximately 135 acres of the former Dammasch Hospital property and 42.8 acres of the Living Enrichment Center. For those portions not yet in the city, an annexation process is currently underway to bring these areas into the City of Wilsonville.

- B. Provision for average residential densities of at least 10 dwelling units per net developable residential acre or lower densities, which conform to the 2040 Growth Concept Plan design type designation for the area.

FINDING C-6.2: Figure 1 – Land Use Plan of the Villebois Village Master Plan demonstrates that the project is planned with an average residential density of 12.1 dwelling units per net acre. The final built density of Villebois may vary from 12.1 dwelling units per net acre as the Plan is refined with subsequent studies and applications that are more detailed. However, the Villebois Village Master Plan includes Residential Neighborhood Housing Policy 3 that requires a mix of housing that provides an overall average density of at least 10 dwelling units per net residential acre. This will

be assured through subsequent review stages by demonstration of general consistency with the Villebois Village Concept Plan and the Villebois Village Master Plan.

- C. Demonstrable measures that will provide a diversity of housing stock that will fulfill needed housing requirements as defined by ORS 197.303. Measures may include, but are not limited to, implementation or recommendations in Title 7 of the Urban Growth Management Functional Plan.

FINDING C-6.3: As noted in previous responses, the range of housing choices will provide a broad variety of housing types and prices (please see response to Title 7). The Villebois Village Master Plan proposes a wide range of housing types as shown on Figure 1 – Land Use Plan, including 515 urban, neighborhood, and village apartments (22% of total dwelling units), 839 condominiums and row houses (35%), and 1,036 detached single family houses on a variety of lot sizes ranging from 2,500 square feet to 9,800 square feet. The Villebois Village Master Plan also envisions the provision of ancillary dwelling units, which will be enabled in the forthcoming Village zone.

- D. Demonstration of how residential developments will include, without public subsidy, housing affordable to households with incomes at or below area median incomes for home ownership and at or below 80 percent of area median incomes for rental as defined by U.S. Department of Housing and Urban Development for the adjacent urban jurisdiction. Public subsidies shall not be interpreted to mean the following: density bonuses, streamlined permitting processes, extensions to the time at which systems development charges (SDCs) and other fees are collected, and other exercises of the regulatory and zoning powers.

FINDING C-6.4: The Villebois Village Master Plan will provide opportunities for both home ownership and rental housing at affordable prices. Villebois Village includes more than the minimum 2,300 residential units specified by DATELUP with a range of housing types and estimated prices as listed in Table A.

Table A Villebois Village Ownership/Rental Opportunities

Villebois Village Home Ownership Opportunities					
Product Type	Units	Acres	Net Density	Product Percentage	Estimated Price Range¹
Mixed Use Condos	191	6.0	31.8	8%	\$127,000 - \$145,000
Specialty Condos	178	3.5	50	7.5%	\$125,000 - \$165,000
Condos	154	5.4	28.5	6%	\$155,000 - \$188,000
Row Houses	316	19.4	16.3	13%	\$174,000 - \$209,000
Small Detached	364	35.3	10.3	15%	\$193,000 - \$223,000
Medium Detached	350	40.5	8.6	15%	\$209,000 - \$244,000
Standard Detached	194	33.7	5.7	8%	\$244,000 - \$300,000
Large	65	13.5	4.8	3%	\$278,000 - \$341,000
Estate	63	19.7	3.2	3%	\$335,000 - \$405,000
Villebois Village Rental Housing Opportunities					
Product Type	Units	Acres	Net	Product	Anticipated

			Density	Percentage	Monthly Rent ¹
Urban Apartments	214	7.1	30.1	9%	\$625 (1-bedroom)
Village Apartments	203	8.6	23.6	8.5%	\$700 - \$790 (2-bedroom)
Neighborhood Apartments	98	4.9	20.0	4%	\$900 (3-bedroom)

¹ Source: Market and Consumer Research Study, Villebois, August 28, 2002, prepared by Market Perspectives.

Villebois Village also includes some unique housing opportunities through the provision of community housing in accordance with ORS 426.508 and the inclusion of ancillary dwellings. Villebois Village will be built out over a period of 7 to 12 years. It is difficult to accurately estimate home and rental prices and their affordability 7 to 12 years in the future. However, the following analysis utilizes the most current and reliable data available.

Home Ownership Affordability

According to the 2000 Census, the median household income in Wilsonville was \$52,515. A general "rule of thumb" is that one third or less of gross monthly income devoted to monthly mortgage payment is considered affordable (Source: Telephone conversation with Community Financial Corporation June 26, 2003 and email correspondence with Banner Bank July 1, 2003). The median household income of \$52,515 equates to a monthly income of \$4,376 ($\$52,515 / 12$), one third of which is \$1,444 ($\$4,376 \times 33\%$). Thus, a monthly mortgage payment of \$1,444 or less is affordable to household incomes at or below the median income for Wilsonville.

A number of mortgage calculators available over the Internet were researched to establish a home price and monthly mortgage payment available to "households with incomes at or below area median incomes." The Internet mortgage calculators have formulas imbedded within the calculation that establish an affordable home price and monthly mortgage payment based on annual and/or monthly income and average monthly debt. Table B depicts the results of this research.

Table B Range of Affordable Home Prices

Mortgage Calculator Source	Home Price w/ 6% Interest Rate ¹	Monthly Mortgage Payment	Home Price w/ 7% Interest Rate ¹	Monthly Mortgage Payment
Bloomberg.com	\$208,489	\$1,250	\$186,976	\$1,243
Fanniemae	\$150,132	\$1,275	\$139,347	\$1,275
Mortgage101.com	\$174,500	\$1,243	\$160,400	\$1,238
Homestore.com	\$170,535	\$1,217	\$159,916	\$1,225
Erate.com (conservative estimate)	\$161,047 - \$225,714	\$1,225 - \$1,363	\$148,828 - \$207,627	\$1,225 - \$1,363
Erate.com (aggressive estimate)	\$196,387 - \$276,446	\$1,494 - \$1,669	\$181,487 - \$254,293	\$1,494 - \$1,669

¹ Assumes median household income of \$52,515 annually, 30-year mortgage, and average monthly debt of \$300 - \$400 other than mortgage. Note: Historic interest rates were used rather than the current low interest rates available.

Except for the Erate.com aggressive estimate, all of the resulting monthly mortgage payments listed in Table B fall below the general "rule of thumb" described above as "one third or less of monthly income devoted to mortgage payment" for the 2000 median household income in Wilsonville (\$1,444). This confirms that the home prices listed in

Table B, with the conditions assumed in Table B (see footnote to Table B), may be used to establish a limit for home prices affordable to households at or below the median income in Wilsonville. An average of resulting range of home prices listed in the above table under both interest rate conditions, and excluding the Erate.com aggressive estimate, yields a home price of \$174,459.

Table A indicates that Villebois Village will include opportunities for home ownership at prices below \$174,459 within the variety of condominium units and row houses that are offered. Additionally, small detached units (\$193,000 - \$223,000) and some of the medium detached units (\$209,000 - \$244,000) will be offered within the higher end of the range of affordable home prices shown in Table B. Therefore, the range of ownership in Villebois Village will include affordable home ownership opportunities.

Rental Affordability

Metro defines affordability as "at or below 80 percent of area median incomes for rental as defined by U.S. Department of Housing and Urban Development for the adjacent urban jurisdiction." Eighty (80) percent of the area median income is \$42,012 ($\$52,515 \times 80\%$), which equates to a monthly income of \$3,501 ($\$42,012 / 12$). According to City of Portland Bureau of Housing and Community Development, a general "rule of thumb" is that 30 percent of monthly income devoted to rent is considered affordable. This equates to a monthly rent of \$1,050 ($\$3,501 \times 30\%$) being affordable for households at or below 80 percent of the median income in Wilsonville.

According to the U.S. Department of Housing and Urban Development Federal Register, dated September 30, 2002, the fair market rent for the Portland Metropolitan Area (includes Wilsonville) is \$508 for 0-bedroom units, \$625 for 1-bedroom units, \$771 for 2-bedroom units, \$1,073 for 3-bedroom units, and \$1,164 for 4-bedroom units. The City of Portland Bureau of Housing and Community Development also uses the fair market rent for the Portland Metropolitan Area established by the U.S. Department of Housing and Urban Development Federal Register as a guideline.

Apartments in Villebois Village will include 1-, 2- and 3-bedroom units at anticipated monthly rents of \$625, \$700 - \$790, and \$900, respectively. These rents match the fair market rent for a 1-bedroom unit, provide a range at and below the fair market rent for a 2-bedroom unit, and provide a rent below the fair market rent for a 3-bedroom unit. Additionally, these rent prices fall below the general "rule of thumb" described above as "30 percent of monthly income devoted to rent" (\$1,050). Therefore, the range of apartments in Villebois Village will provide affordable housing for renters.

- E. Provision for sufficient commercial and industrial development for the needs of the area to be developed consistent with 2040 Growth Concept design types. Commercial and industrial designations in nearby areas inside the Urban Growth Boundary shall be considered in comprehensive plans to maintain design type consistency.

FINDING C-6.5: The Villebois Village Master Plan identifies areas for retail/office/employment uses within the Village Center and Neighborhood Centers at a community scale. The Villebois Village Master Plan does not identify any industrial uses

at this time, however the Master Planner envisions the ability to allow Light Manufacturing/Research and Development-based employment over time. The forthcoming Village zone will provide the ability to allow this type of conversion of uses of the Village Center. Additionally, a substantial amount of industrial land is located directly east of Villebois on the west side of I-5, which implements the 2040 design type of Industrial Areas. Villebois will help support the nearby existing industrial land by helping the jobs/housing balance through the addition of a significant number of dwelling units to the City of Wilsonville that will be connected to these areas through an extensive street and trail system.

- F. A conceptual transportation plan consistent with the applicable provision of the Regional Transportation Plan, Title 6 of the Urban Growth Management Functional Plan, and that is also consistent with the protection of natural resources either identified in acknowledged comprehensive plan inventories or as required by Title 3 of the Urban Growth Management Functional Plan. The plan shall, consistent with OAR Chapter 660, Division 11, include preliminary cost estimates and funding strategies, including likely financing approaches.

FINDING C-6.6: A transportation plan (Figures 7, 8, 9A and 9B) is included within the Villebois Village Master Plan providing significant detail on the circulation system both within the Village and to points outside of the Villebois Village Master Plan area. Figure 8 – Proposed Arterial/Collectors Street System illustrates the collector and arterial roadways within and adjacent to the Villebois Village Master Plan area. Figure 7 – Street Plan illustrates the overall street and pathway/trail system for Villebois. Connectivity is a foundational design tenet in the design of Villebois with an emphasis on bike and pedestrian circulation. As described in preceding sections of this document, the Villebois Village Master Plan meets the RTP connectivity standards of Chapter 6. A draft Capital Improvement List and Cost Estimate is included as Appendix A to the Villebois Village Master Plan. Detailed cost estimates and funding strategies (i.e., system development charges, local improvement districts, urban renewal districts, etc.) will be addressed with the Finance Plan, which is under development through a separate review process.

- G. Identification, mapping and a funding strategy for protecting areas from development due to fish and wildlife habitat protection, water quality enhancement and mitigation, and natural hazards mitigation. A natural resource protection plan to protect fish and wildlife habitat, water quality enhancement areas and natural hazard areas shall be completed as part of the comprehensive plan and zoning for lands added to the Urban Growth Boundary prior to urban development. The plan shall include a preliminary cost estimate and funding strategy, including likely financing approaches, for options such as mitigation, site acquisition, restoration, enhancement, or easement dedication to ensure that all significant natural resources are protected.

FINDING C-6.7: The City has an adopted Significant Natural Resource Overlay Zone (SROZ) that will regulate development of inventoried resources and habitat within the Master Plan area. The SROZ process complies with Title 3 and Goal 5 requirements.

Analysis conducted as part of the Villebois Village Concept Plan directed the resulting Land Use Plan and the Parks and Open Space Plan in the Villebois Village Master Plan. This previous analysis included cataloging soil types, sensitive wildlife species potentially present within 2 miles, and a wetland delineation study found in the Appendix of the Villebois Village Concept Plan. A draft Capital Improvement List and Cost Estimate is included as Appendix A to the Villebois Village Master Plan. Detailed cost estimates and funding strategies (i.e., system development charges, local improvement districts, urban renewal districts, etc.) will be addressed with the Finance Plan, which is under development through a separate review process.

H. A conceptual public facilities and services plan for the provision of sanitary sewer, water, storm drainage, transportation, parks and police and fire protection. The plan shall, consistent with OAR Chapter 660, Division 11, include preliminary cost estimates and funding strategies, including likely financing approaches.

FINDING C-6.8: Proposed public facilities and services plans are presented on Figure 5 – Parks and Open Space Plan, Figure 6 – Composite Utilities Plan, Figure 7 – Street Plan, and Figure 8 – Proposed Arterial/Collectors Street System. Chapters 3 through 5 of the Master Plan provided analysis on existing public facilities and services and demonstrates any necessary improvements to these systems to allow development of Villebois. A draft Capital Improvement List and Cost Estimate is included as Appendix A to the Villebois Village Master Plan. Detailed cost estimates and funding strategies (i.e., system development charges, local improvement districts, urban renewal districts, etc.) will be addressed with the Finance Plan, which is under development through a separate review process.

I. A conceptual school plan that provides for the amount of land and improvements needed, if any, for school facilities on new or existing sites that will serve the territory added to the UGB. The estimate of need shall be coordinated with affected local governments and special districts.

FINDING C-6.9: The Master Planner has been in contact with the school district and in fact provides for a 10-acre grade school within the Villebois Village Master Plan area. Proposed water, sanitary sewer, and storm drainage services are depicted on Figure 6 – Composite Utilities Plan.

J. An urban growth diagram for the designated planning area showing, at least, the following, when applicable:

1. General locations of arterial, collector and essential local streets and connections and necessary public facilities such as sanitary sewer, storm sewer and water to demonstrate that the area can be served;
2. Location of steep slopes and unbuildable lands including but not limited to wetlands, floodplains and riparian areas;
3. General locations for mixed use areas, commercial and industrial lands;
4. General locations for single and multi-family housing;

5. General locations for public open space, plazas and neighborhood centers; and
6. General locations or alternative locations for any needed school, park or fire hall sites.

FINDING C-6.10: The Villebois Village Master Plan includes diagrams illustrating the above information. Figure 1 – Land Use Plan shows the general locations for mixed-use areas and retail/office/employment areas; single and multi-family housing; public open space, plazas and neighborhood centers; and general locations for school and park sites. No industrial lands are proposed within Villebois. Figure 5 – Parks & Open Space Plan shows general locations of unbuildable lands including wetlands, floodplains and riparian areas, and public open space. The Villebois Village Master Plan area does not include areas of steep slopes. Figure 6 – Composite Utilities Plan depicts necessary public facilities such as sanitary sewer, storm sewer and water to demonstrate that the area can be served. Figure 7 – Street Plan and Figure 8 – Proposed Arterial & Collector System illustrate the general locations of arterial, collector and essential local streets and connections.

- K. The plan amendments shall be coordinated among the city, county, school district and other service districts.

FINDING C-6.11: The Villebois Village Master Plan is being coordinated with the City of Wilsonville, Clackamas County, Metro, DLCD, and the West Linn – Wilsonville School District, as well as stakeholders and other various service providers.

Staff finds that the provisions of this Title have been met.

D. STATE OF OREGON

Statewide Planning Goals and Guidelines

The next section of the staff report covers the Statewide Planning Goals & Guidelines. Staff finds that the applicant must address Goals 1-14 and demonstrate that the Villebois Village Master Plan is either in compliance with each goal or that the goal is non-applicable.

GOAL 1: CITIZEN INVOLVEMENT

To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

The governing body charged with preparing and adopting a comprehensive plan shall adopt and publicize a program for citizen involvement that clearly defines the procedures by which the general public will be involved in the on-going land-use planning process. The citizen involvement program shall be appropriate to the scale of the planning effort. The program shall provide for continuity of citizen participation and of information that enables citizens to identify and comprehend the issues. Federal, state and regional agencies, and special- purpose districts shall coordinate their planning efforts with the affected governing bodies and make use of existing local citizen involvement programs established by counties and cities.

FINDING D-1: There has been substantial public involvement in the process for adopting the Villebois Village Master Plan that has complied with all applicable Comprehensive Plan policies. Several open houses were conducted even before the start of the formal process for adoption. The formal adoption process includes duly noticed public hearings before the Planning Commission and the City Council, consistent with Goal 1.

Staff finds that this application is consistent with Statewide Planning Goal 1.

GOAL 2: LAND USE PLANNING

PART I – 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 an adequate factual base for such decisions and actions.

City, county, state and federal agency and special district plans and actions related to land use shall be consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS Chapter 268. All land use plans shall include identification of issues and problems, inventories and other factual information for each applicable

statewide planning goal, evaluation of alternative courses of action and ultimate policy choices, taking into consideration social, economic, energy and environmental needs. The required information shall be contained in the plan document or in supporting documents. The plans, supporting documents and implementation ordinances shall be filed in a public office or other place easily accessible to the public. The plans shall be the basis for specific implementation measures. These measures shall be consistent with and adequate to carry out the plans. Each plan and related implementation measure shall be coordinated with the plans of affected governmental units.

All land-use plans and implementation ordinances shall be adopted by the governing body after public hearing and shall be reviewed and, as needed, revised on a periodic cycle to take into account changing public policies and circumstances, in accord with a schedule set forth in the plan. Opportunities shall be provided for review and comment by citizens and affected governmental units during preparation, review and revision of plans and implementation ordinances.

FINDING D-2: The City is currently in compliance with Goal 2 because it has an acknowledged Comprehensive Plan and regulations implementing the plan. The Villebois Village Master Plan is being adopted consistent with the planning policies in the Comprehensive Plan. The Villebois Village Master Plan is consistent with Goal 2 because it creates a more specific plan for a portion of the City that provides additional guidance for future regulations. The Villebois Village Master Plan also keeps the City current on its planning obligation for this developing area.

Staff finds that this application is consistent with Statewide Planning Goal 2.

GOAL 3: AGRICULTURAL LANDS

To preserve and maintain agricultural lands.

Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.

*FINDING D-3: The area covered by the Villebois Village Master Plan does not include any agricultural land, so **staff finds that this goal does not apply.** Agricultural land is defined in Goal 2 to exclude all land within an urban growth boundary. Because the Villebois Village Master Plan covers only areas within the UGB, it does not cover any agricultural lands.*

GOAL 4: FOREST LANDS

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

Forest lands are those lands acknowledged as forest lands as of the date of adoption of this goal amendment. Where a plan is not acknowledged or a plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.

FINDING D-4: The area covered by the Villebois Village Master Plan does not include any forest lands, so staff finds that this goal does not apply.

GOAL 5: NATURAL RESOURCES, SCENIC AND HISTORIC AREAS, AND OPEN SPACES

To protect natural resources and conserve scenic and historic areas and open spaces.

Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability. The following resources shall be inventoried:

- a. Riparian corridors, including water and riparian areas and fish habitat;
- b. Wetlands;
- c. Wildlife Habitat;
- d. Federal Wild and Scenic Rivers;
- e. State Scenic Waterways;
- f. Groundwater Resources;
- g. Approved Oregon Recreation Trails;
- h. Natural Areas;
- i. Wilderness Areas;
- j. Mineral and Aggregate Resources;
- k. Energy sources;
- l. Cultural areas.

Local governments and state agencies are encouraged to maintain current inventories of the following resources:

- a. Historic Resources;
- b. Open Space;
- c. Scenic Views and Sites.

Following procedures, standards, and definitions contained in commission rules, local governments shall determine significant sites for inventoried resources and develop programs to achieve the goal.

FINDING D-5: The City is already in compliance with Goal 5 as to all required inventories and through the implementation of the Significant Resource Overlay Zone (SROZ). The Villebois Village Master Plan is consistent with applicable Comprehensive Plan policies regarding natural resources, scenic and historic areas, and open spaces. Approximately 32% of the planning area is dedicated to parks and open space. Encroachments within the SROZ are shown for illustrative purposes on the Villebois Village Master Plan and will be reviewed for compliance or exemption as more detailed information is provided.

Staff finds that this application is consistent with Statewide Planning Goal 5.

GOAL 6: AIR, WATER AND LAND RESOURCES QUALITY

To maintain and improve the quality of the air, water and land resources of the state.

All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plans, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

FINDING D-6: The City's Comprehensive Plan has been acknowledged as being in compliance with Goal 6. The Villebois Village Master Plan is consistent with the air, water and land resources policies of the Comprehensive Plan. The Villebois Village Master Plan protects water and land resources by providing protection for natural resource areas and limiting development to areas that have less impact on natural resources. The Master Plan does not propose any residential structures within the 100-year flood plain. The Master Plan also calls for measures to use environmentally sensitive techniques for storm drainage. The Plan provides for a mixed-use, compact, interconnected Village that will provide transportation benefits by reducing the need for lengthy vehicle trips and increase the opportunity for bicycle and pedestrian transportation.

Staff finds that this application is consistent with Statewide Planning Goal 6.

GOAL 7: AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

To protect life and property from natural disasters and hazards.

A. NATURAL HAZARD PLANNING

1. Local governments shall adopt comprehensive plans (inventories, policies and implementing measures) to reduce risk to people and property from natural hazards.
2. Natural hazards for purposes of this goal are: floods (coastal and riverine), landslides,¹ earthquakes and related hazards, tsunamis, coastal erosion, and wildfires. Local governments may identify and plan for other natural hazards.

B. RESPONSE TO NEW HAZARD INFORMATION

1. New hazard inventory information provided by federal and state agencies shall be reviewed by the Department in consultation with affected state and local government representatives.
2. After such consultation, the Department shall notify local governments if the new hazard information requires a local response.
3. Local governments shall respond to new inventory information on natural hazards within 36 months after being notified by the Department of Land Conservation and Development, unless extended by the Department.

C. IMPLEMENTATION

- Upon receiving notice from the Department, a local government shall:
1. Evaluate the risk to people and property based on the new inventory information and an assessment of:
 - a. the frequency, severity and location of the hazard;
 - b. the effects of the hazard on existing and future development;
 - c. the potential for development in the hazard area to increase the frequency and severity of the hazard; and
 - d. the types and intensities of land uses to be allowed in the hazard area.
 2. Allow an opportunity for citizen review and comment on the new inventory information and the results of the evaluation and incorporate such information into the comprehensive plan, as necessary.
 3. Adopt or amend, as necessary, based on the evaluation of risk, plan policies and implementing measures consistent with the following principles:
 - a. avoiding development in hazard areas where the risk to people and property cannot be mitigated; and
 - b. prohibiting the siting of essential facilities, major structures, hazardous facilities and special occupancy structures, as defined in the state building code (ORS 455.447(1)(a)(b)(c) and (e)), in identified hazard areas, where the risk to public safety cannot be mitigated, unless an essential facility is needed within a hazard area in order to provide essential emergency response services in a timely manner.²
 4. Local governments will be deemed to comply with Goal 7 for coastal and riverine flood hazards by adopting and implementing local floodplain regulations that meet the minimum National Flood Insurance Program (NFIP) requirements.

D. COORDINATION

1. In accordance with ORS 197.180 and Goal 2, state agencies shall coordinate their natural hazard plans and programs with local governments and provide local governments with hazard inventory information and technical assistance including development of model ordinances and risk evaluation methodologies.
2. Local governments and state agencies shall follow such procedures, standards and definitions as may be contained in statewide planning goals and commission rules in developing programs to achieve this goal.

FINDING D-7: The City's Comprehensive Plan is acknowledged to be in compliance with this Goal, and the Villebois Village Master Plan is consistent with Comprehensive Plan policies (see Section A of this document). The Villebois Village Master Plan does not call for any residential structures within the 100-year flood plain. Any development within flood plains, such as parks, paths or roads, will be take into account the need to not increase flood hazards. The Villebois Village Master Plan calls for appropriate storm drainage that will not cause soil stability problems associated with heavy rainfall.

Staff finds that this application is consistent with Statewide Planning Goal 7.

GOAL 8: RECREATIONAL NEEDS

To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

RECREATION PLANNING

The requirements for meeting such needs, now and in the future, shall be planned for by governmental agencies having responsibility for recreation areas, facilities and opportunities: (1) in coordination with private enterprise; (2) in appropriate proportions; and (3) in such quantity, quality and locations as is consistent with the availability of the resources to meet such requirements. State and federal agency recreation plans shall be coordinated with local and regional recreational needs and plans.

DESTINATION RESORT SITING

Comprehensive plans may provide for the siting of destination resorts on rural lands subject to the provisions of the Goal and without a Goal 2 exception to Goals 3, 4, 11, or 14.

FINDING D-8: The Comprehensive Plan has been acknowledged to be consistent with Goal 8, and the Villebois Village Master Plan is consistent with Comprehensive Plan's recreational policies (see Section A of this document). The Master Plan provides for development of recreational areas to meet the needs of Village residents and workers. As shown on Figure 5 – Parks and Open Space Plan, the Master Plan provides for extensive recreational areas, including parks, paths and open spaces. The existing Tonquin regional trail adjoining the Master Plan area has been incorporated into the Master Plan to link with the Metro Wilsonville Tract to the south. As noted, approximately 32% of the plan area is devoted to parks and open space areas.

The Destination Resort provisions of this Goal are not applicable because a destination resort is not included in the plan.

Staff finds that this application is consistent with Statewide Planning Goal 8.

GOAL 9: ECONOMIC DEVELOPMENT

To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

Comprehensive plans and policies shall contribute to a stable and healthy economy in all regions of the state. Such plans shall be based on inventories of areas suitable for increased economic growth and activity after taking into consideration the health of the current economic base; materials and energy availability and cost; labor market factors; educational and technical training programs; availability of key public facilities; necessary support facilities; current market forces; location relative to markets; availability of renewable and non-renewable resources; availability of land; and pollution control requirements. Comprehensive plans for urban areas shall:

1. Include an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends;
2. Contain policies concerning the economic development opportunities in the community;
3. Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies;
4. Limit uses on or near sites zoned for specific industrial and commercial uses to those which are compatible with proposed uses. In accordance with ORS 197.180 and Goal 2, state agencies that issue permits affecting land use shall identify in their coordination programs how they will coordinate permit issuance with other state agencies, cities and counties.

FINDING D-9: The Comprehensive Plan has been acknowledged to be consistent with Goal 9, and the Villebois Village Master Plan is consistent with Comprehensive Plan economic development policies. The Villebois Village Master Plan furthers economic development by providing for a complete mixed-use community that will include retail/office and employment development as well as residential development.

Staff finds that this application is consistent with Statewide Planning Goal 9.

GOAL 10: HOUSING

To provide for the housing needs of citizens of the state.

Buildable lands for residential use shall be inventoried and plans shall encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density.

FINDING D-10: The Comprehensive Plan has been acknowledged to be consistent with Goal 10, and the Villebois Village Master Plan is consistent with Comprehensive Plan housing policies (see Section A of this document). Indeed, it meets an identified need to provide more housing to improve the balance between housing and employment and to rectify a lack of housing for the jobs provided in the City. The Villebois Village Concept Plan directs that a minimum of 2,300 housing units be provided in this area of the City. The Villebois Village Master Plan will provide approximately 2,390 housing units including 515 apartments, 839 condos, row homes, mixed-use condos, and 1,036 detached single-family homes on a variety of lot sizes. In addition to a wide range of housing choices, densities will range from 50.9 units per acre for the specialty condos to 3.2 units per acre for estate homes. The estimated price ranges and rent levels in Villebois will be commensurate with the financial capabilities of Wilsonville households as described under the response to Title 11 in Section C of this document. This selection of housing types and densities complies with Goal 10 by providing for substantial amounts of residential development of various costs.

Staff finds that this application is consistent with Statewide Planning Goal 10.

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.

Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable, and rural areas to be served. A provision for key facilities shall be included in each plan. Cities or counties shall develop and adopt a public facility plan for areas within an urban growth boundary containing a population greater than 2,500 persons. To meet current and long-range needs, a provision for solid waste disposal sites, including sites for inert waste, shall be included in each plan. Counties shall develop and adopt community public facility plans regulating facilities and services for certain unincorporated communities outside urban growth boundaries as specified by Commission rules. Counties Local Governments shall not allow the establishment or extension of new sewer systems outside urban growth boundaries or unincorporated community boundaries, or allow new extensions of sewer lines from

within urban growth boundaries or unincorporated community boundaries to serve land outside those boundaries, except where the new or extended system is the only practicable alternative to mitigate a public health hazard and will not adversely affect farm or forest land.

For land that is outside urban growth boundaries and unincorporated community boundaries, county land use regulations shall not rely upon the establishment or extension of a water system to authorize a higher residential density than would be authorized without a water system.

Local governments shall not rely upon the presence, establishment, or extension of a water or sewer system to allow residential development of land outside urban growth boundaries or unincorporated community boundaries at a density higher than authorized without service from such a system.

In accordance with ORS 197.180 and Goal 2, state agencies that provide funding for transportation, water supply, sewage and solid waste facilities shall identify in their coordination programs how they will coordinate that funding with other state agencies and with the public facility plans of cities and counties.

FINDING D-11: The Comprehensive Plan has been acknowledged to be consistent with Goal 11, and the Villebois Village Master Plan is consistent with Comprehensive Plan public facilities policies (see Section A of this document). The Master Plan is also consistent with the applicable provisions of the City's various utility plans (see Chapter 4 – Utilities of the Master Plan). It proposes to coordinate development with the provision of the public facility infrastructure in the area (see Figure 6 – Composite Utilities Plan). Development in the Villebois Village Master Plan area will be done in coordination with the City's Capital Improvement Program and the Finance Plan between the Master Planner and the City.

Staff finds that this application is consistent with Statewide Planning Goal 11.

GOAL 12: TRANSPORTATION

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

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

FINDING D-12: The City of Wilsonville has recently adopted their transportation systems plan (TSP), a sub-element of the City's comprehensive plan. The TSP is in compliance with goal 12. The Villebois Village Master Plan is consistent with the TSP by providing a plan for transportation system development for the Master Plan area that is integrated with the transportation system in the City and surrounding area. The Master Plan further complies with this goal by providing a compact mixed-use development that will bring residential development closer to retail/office and employment use. As a result, the number of motor vehicle trips is expected to be reduced and replaced by bicycle and pedestrian trips, and the length of other trips will be shortened by the reduced distance to employment and shopping.

The Master Plan provides plans (Figure 7 – Street Plan and Figure 8 – Proposed Arterial/Collectors Street System) for a transportation system that is integrated with the transportation system existing and proposed for the City and surrounding areas of Clackamas County. Proposed street sections (Figures 9A and 9B – Street and Trail Sections) are designed to slow traffic, encourage walking and bicycling, and create a pleasant environment. By encouraging the use of multiple modes of transportation, the number of motor vehicle trips is expected to be reduced and replaced by bicycle and pedestrian trips.

The Villebois Village Master Plan complies with the applicable requirements of the State Transportation Planning Rule as documented in the response to OAR 660-12-0060 later in this section of the staff report.

Staff finds that this application is consistent with Statewide Planning Goal 12.

GOAL 13: ENERGY CONSERVATION

To conserve energy.

Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

FINDING D-13: The Comprehensive Plan has been acknowledged to be consistent with Goal 13, and the Villebois Village Master Plan is consistent with Comprehensive Plan energy conservation policies (see Section A of this document). The Master Plan provides for a compact mixed-use development that will conserve energy by reducing the amount of and length of vehicle trips by making bicycle and pedestrian transportation viable alternatives for many trips. The Master Plan also provides for a substantial number of energy-efficient smaller sized and attached residential units.

Staff finds that this application is consistent with Statewide Planning Goal 13.

GOAL 14: URBANIZATION

To provide for an orderly and efficient transition from rural to urban land use.

Urban growth boundaries shall be established to identify and separate urbanizable land from rural land. Establishment and change of the boundaries shall be based upon considerations of the following factors:

- (1) Demonstrated need to accommodate long-range urban population growth requirements consistent with LCDC goals;
- (2) Need for housing, employment opportunities, and livability;
- (3) Orderly and economic provision for public facilities and services;
- (4) Maximum efficiency of land uses within and on the fringe of the existing urban area;
- (5) Environmental, energy, economic and social consequences;
- (6) Retention of agricultural land as defined, with Class I being the highest priority for retention and Class VI the lowest priority; and,
- (7) Compatibility of the proposed urban uses with nearby agricultural activities.

The results of the above considerations shall be included in the comprehensive plan. In the case of a change of a boundary, a governing body proposing such change in the boundary separating urbanizable lands from rural land, shall follow the procedures and requirements as set forth in the Land Use Planning goal (Goal 2) for goal exceptions. Any urban growth boundary established prior to January 1, 1975, which includes rural lands that have not been built upon shall be reviewed by the governing body, utilizing the same factors applicable to the establishment or change of urban growth boundaries. Establishment and change of the boundaries shall be a cooperative process between a city and the county or counties that surround it. Land within the boundaries separating urbanizable land from rural land shall be considered available over time for urban uses. Conversion of urbanizable land to urban uses shall be based on consideration of:

- (1) Orderly, economic provision for public facilities and services;
- (2) Availability of sufficient land for the various uses to insure choices in the market place;
- (3) LCDC goals or the acknowledged comprehensive plan; and,
- (4) Encouragement of development within urban areas before conversion of urbanizable areas. In unincorporated communities outside urban growth boundaries counties may approve uses, public facilities and services more intensive than allowed on rural lands by Goal 11 and 14, either by exception to those goals, or as provided by Commission rules which ensure such uses do not:

- (1) adversely affect agricultural and forest operations, and
- (2) interfere with the efficient functioning of urban growth boundaries.

Notwithstanding the other provisions of this goal, the commission may by rule provide that

this goal does not prohibit the development and use of one single-family dwelling on a lot or parcel

that:

- (a) was lawfully created;
- (b) lies outside any acknowledged urban growth boundary or unincorporated community boundary;
- (c) is within an area for which an exception to Statewide Planning Goal 3 or 4 has been acknowledged; and
- (d) is planned and zoned primarily for residential use.

FINDING D-14: The Comprehensive Plan has been acknowledged to be consistent with Goal 14, and the Villebois Village Master Plan is intended to be consistent with Comprehensive Plan urbanization policies and the recently adopted Residential – Village Land Use designation (see Section A of this document). The Master Plan complies with and furthers the intent of Goal 14 by providing a coordinated plan for urbanization of the Master Plan area that coordinates development of the area with development of public facilities, including the transportation system, and protects natural resources. The Master Plan provides more detailed plans for the urbanization of an area already determined to be within the City's urban growth boundary.

Staff finds that this application is consistent with Statewide Planning Goal 14.

GOAL 15: WILLAMETTE RIVER GREENWAY

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

FINDING D-15: Staff finds that this Goal is not applicable to the Villebois Village Master Plan because the plan area does not include any portion of the Willamette River Greenway.

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.

FINDING D-16: The Villebois Village Master Plan (City File 02PC07B) 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 interrelate the 109-acre Dammasch property with the surrounding area and the plan covered approximately 520 acres. 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 (City Ordinance No. 553), and, therefore, it is also consistent with ORS 426.508(3). The Villebois Village Master Plan is consistent with the Villebois Village Concept Plan, and is, thereby, consistent with DATELUP and ORS 426.508(3).

Staff finds that the application is consistent with this provision of ORS 426.508.

Oregon Administrative Rule

Oregon Administrative Rule (OAR) 660-012-0060 (Plan and Land Use Regulation Amendment):

- (1) Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility. This shall be accomplished by either:
 - (a) Limiting allowed land uses to be consistent with the planned function, capacity, and performance standards of the transportation facility;
 - (b) Amending the TSP to provide transportation facilities adequate to support the proposed land uses consistent with the requirements of this division;
 - (c) Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes; or
 - (d) Amending the TSP to modify the planned function, capacity and performance standards, as needed, to accept greater motor vehicle congestion to promote mixed use, pedestrian friendly development where multimodal travel choices are provided.

FINDING D-17: The Villebois Village Master Plan does not propose amendments to the TSP which would significantly affect transportation facilities identified in the City's 2002 Transportation Systems Plan (TSP) (See the discussion at OAR-660-012-0060(2) below). The Villebois Village area, with the densities planned in DATELUP, was included in the City's TSP (see City Traffic Analysis Zones 400A, 400C, 400D and 388A on Figure 3.2 – City of Wilsonville Transportation Model, Metro and City Traffic Analysis Zones of the April 17, 2003 TSP). The City's TSP was approved by the City Council on May 19, 2003.

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 hierarchical system of streets and trails that will connect users of the various modes to the major activities inside and outside the community. Figure 7 - Street Plan of the Villebois Village Master Plan shows the planned transportation system for Villebois. Figure 8 – Proposed Arterial & Collector System of the Villebois Village Master Plan 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.

- (2) A plan or land use regulation amendment significantly affects a transportation facility if it:
 - (a) Changes the functional classification of an existing or planned transportation facility;

FINDING D-17.1: The Villebois Village Master Plan does not propose to change the functional classification of an existing facility or one planned in the TSP. Villebois Village includes a range of street sections that fall within the functional classifications of the City's TSP. Table 5 of the Villebois Village Master Plan lists and compares each relevant TSP street section with the correlating street sections proposed in Villebois. The Villebois Village Master Plan street sections are depicted on Figures 9A and 9B – Street & Trail Sections, which includes notes to reference the relevant TSP figure. The locations where the Villebois Village Master Plan street sections are planned to be used are illustrated on Figure 7 – Street Plan, with the relevant TSP figure and functional classification notes. The location of the proposed Villebois street sections is integral to the overall design of the Villebois Village Plan.

(b) Changes standards implementing a functional classification system;

FINDING D-17.2: The Villebois Village Master Plan does not propose to change standards implementing a functional classification system (see also the discussion at OAR 660-012-0060(2)(a), above).

(c) Allows types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of a transportation facility; or

FINDING D-17.3: The Villebois Village Master Plan does not propose types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of a transportation facility. The circulation network for Villebois has been evaluated with two separate Memorandums from DKS Associates dated January 13, 2003 and February 28, 2003. The January 13, 2003 DKS Memorandum (see Appendix B of the Villebois Village Master Plan) specifically evaluates the Villebois internal street plan in the context of circulation needs in west Wilsonville. The improvements recommended in the DKS Memorandum are incorporated into the Villebois Village Master Plan as discussed in Chapter 5 – Circulation.

According to the January 13, 2003 DKS Memorandum, "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." The February 28, 2003 DKS Memorandum (see Appendix B of the Villebois Village Master Plan) evaluates the Villebois circulation network and phasing scheme (dated December 12, 2002) to determine the impact of the development of Villebois on the road system planned under the TSP and when improvements would be required to meet City level of service criteria.

In summary, the two DKS Memoranda evaluated the City's existing and planned external street network with the proposed Villebois internal street network and found that no mitigation is required beyond what is identified within the City's TSP.

(d) Would reduce the performance standards of the facility below the minimum acceptable level identified in the TSP.

FINDING D-17.4: The Villebois Village Master Plan would not reduce the performance standards of the facility below the minimum acceptable level identified in the TSP (see also the discussion at OAR 660-012-0060(2)(c), above).

Staff finds that the application is consistent with OAR 660-012-0060.

Ordinance No. 556
Exhibit B

This exhibit is
on file in the office
of the City Recorder
and filed with the
original ordinance.



Villebois

Villebois Village Master Plan
(City File No. 02PC07B)



submitted to:

The City of Wilsonville

4 June 2003

**Planning Commission
Recommended Draft
July 23, 2003**

Adopted by Ord. 556
8/18/03
Amendments from
Attachment 'A' are
included in this final
document.



Villebois

“Adopted”
Villebois Village Master Plan
(City File No. 02PC07B)



The City of Wilsonville

Adoption Date: August 18, 2003

APPLICATION NO. 02PC07B
VILLEBOIS VILLAGE MASTER PLAN

TABLE OF CONTENTS

CHAPTER 1 – PURPOSE & SCOPE OF VILLEBOIS VILLAGE MASTER PLAN..... 3

1.1 PURPOSE 3

1.2 SCOPE 3

CHAPTER 2 – LAND USE 5

2.1 INTRODUCTION / PROPOSAL 5

2.2 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION..... 11

CHAPTER 3 – PARKS & OPEN SPACE / OFF-STREET TRAILS & PATHWAYS 20

3.1 INTRODUCTION / PROPOSAL 20

3.2 PARKS & RECREATION MASTER PLAN COMPLIANCE ANALYSIS 26

3.3 PARKS & RECREATION MASTER PLAN POLICY ANALYSIS 31

3.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION..... 34

CHAPTER 4 – UTILITIES 36

4.1 SANITARY SEWER..... 36

4.1.1 INTRODUCTION / PROPOSAL..... 36

4.1.2 WASTEWATER COLLECTION SYSTEM MASTER PLAN COMPLIANCE ANALYSIS 36

4.1.3 WASTEWATER COLLECTION SYSTEM MASTER PLAN POLICY ANALYSIS 39

4.1.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION 43

4.2 WATER 44

4.2.1 INTRODUCTION / PROPOSAL..... 44

4.2.2 WATER SYSTEM MASTER PLAN COMPLIANCE ANALYSIS 44

4.2.3 WATER SYSTEM MASTER PLAN POLICY ANALYSIS 47

4.2.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION 48

4.3 STORM DRAINAGE..... 49

4.3.1 INTRODUCTION / PROPOSAL..... 49

4.3.2 STORMWATER MASTER PLAN COMPLIANCE ANALYSIS 49

4.3.3 STORMWATER MASTER PLAN POLICY ANALYSIS 55

4.3.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION 60

CHAPTER 5 – CIRCULATION..... 62

5.1 INTRODUCTION / PROPOSAL 62

5.2 TRANSPORTATION SYSTEMS PLAN COMPLIANCE ANALYSIS..... 62

5.3 TRANSPORTATION SYSTEMS PLAN POLICY ANALYSIS 69

5.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION..... 74

GLOSSARY 76

LIST OF REFERENCE DOCUMENTS 81

APPENDIX A 82

APPENDIX B..... 85

LIST OF FIGURES

FIGURE 1 – LAND USE PLAN

FIGURE 1A – REPLACEMENT LAND USE PLAN

FIGURE 2 – NEIGHBORHOOD CONCEPT DIAGRAM

FIGURE 2A – VILLAGE CENTER BOUNDARY AND LAND USE PLAN

FIGURE 3 – CONCEPTUAL SPECIFIC AREA PLAN BOUNDARIES

FIGURE 4 – SEQUENCE OF DEVELOPMENT

FIGURE 5 – PARKS AND OPEN SPACE PLAN

FIGURE 6 – COMPOSITE UTILITIES PLAN

FIGURE 6A – ON-SITE STORMWATER FACILITIES

FIGURE 6B – ON-SITE RAINWATER MANAGEMENT

FIGURE 7 – STREET PLAN

FIGURE 8 – PROPOSED ARTERIAL & COLLECTOR SYSTEM

FIGURE 9A – STREET & TRAIL SECTIONS - A

FIGURE 9B – STREET & TRAIL SECTIONS - B

Villebois Village Master Plan

Chapter 1:

Purpose & Scope of Villebois Village Master Plan

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);
- Commercial/Employment Overlay Area (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).

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 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.

Villebois Village Master Plan

Chapter 2:

Land Use

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 inclusion of 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 LEC. 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

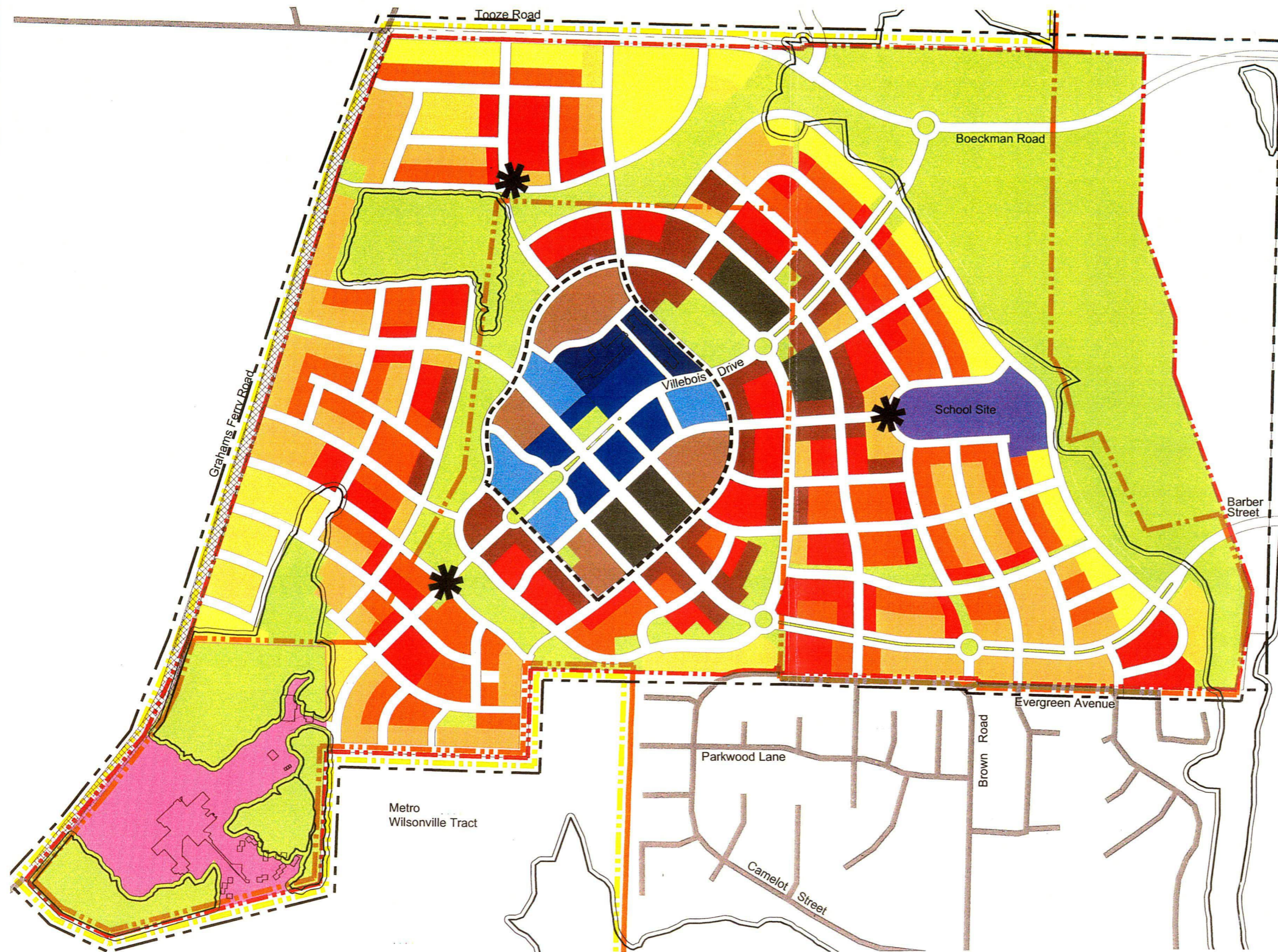
The neighborhood is the organizing land use principle for Villebois. Design elements characterizing the neighborhoods include:

- 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.

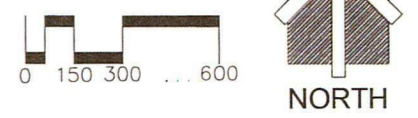
Figure 1



LAND USE	DENSITY	UNITS	ACRES
Specialty Condos	50.9 du/ac	178	3.5
Mixed Use Condos	31.8	191	6.0
Urban Apartments	30.1	214	7.1
Condos	28.5	154	5.4
Village Apartments	23.6	203	8.6
Neighborhood Apartments	20.0	98	4.9
Rowhouses	16.3	316	19.4
Small Detached (50 x 50)	10.3	364	35.3
Medium Detached (40 & 45 x 90)	8.6	350	40.5
Standard Detached (55 & 60 x 100)	5.7	194	33.7
Large (65 x 110 - 120 +)	4.8	65	13.5
Estate (70 x 140 or 80 x 120)	3.2	63	19.7
RESIDENTIAL UNITS TOTAL	12.1	2,390	197.6
School Site (Includes 3 ac of playfields)			10.0*
Openspace (Total does not include 3 ac of school playfields)			150.1
Living Enrichment Center			19.6
Area in R.O.W.			104.3
PLANNING AREA TOTAL			481.6

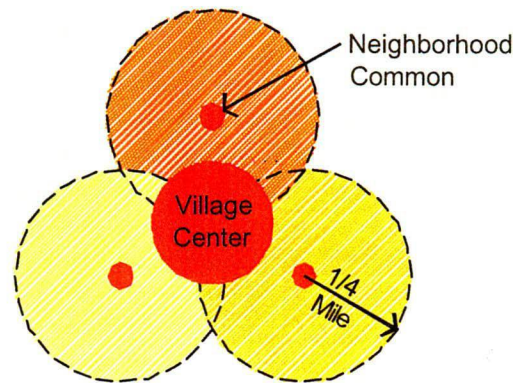
- Neighborhood Commons/Mixed Use
- Significant Resource Overlay Zone (SROZ) with 25' buffer
- Access Management Needed
- Commercial/Employment Overlay Area
- Urban Growth Boundary
- City Limits
- Village Area Boundary
- Dammasch Study Boundary

Note:
Boundary lines have been adjusted for graphic clarity.

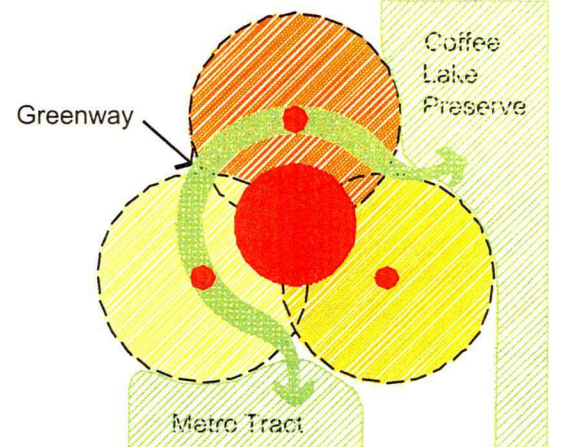


NOTES:
The Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Encroachments within the SROZ are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations.
* The SAP process will address an increase in size of the school site to 10 acres or a size otherwise agreed upon with the city and school district.

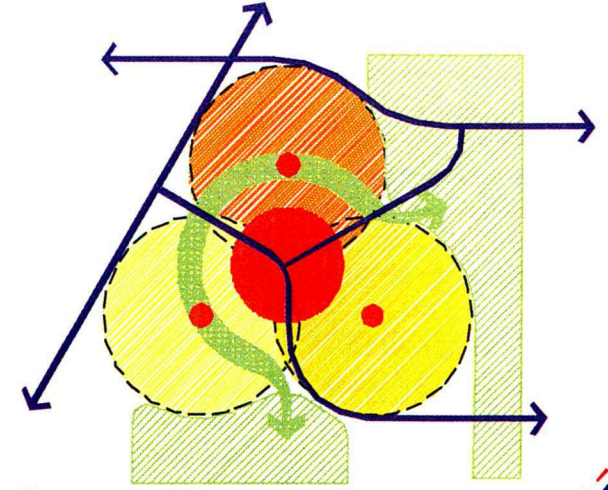
Figure 2



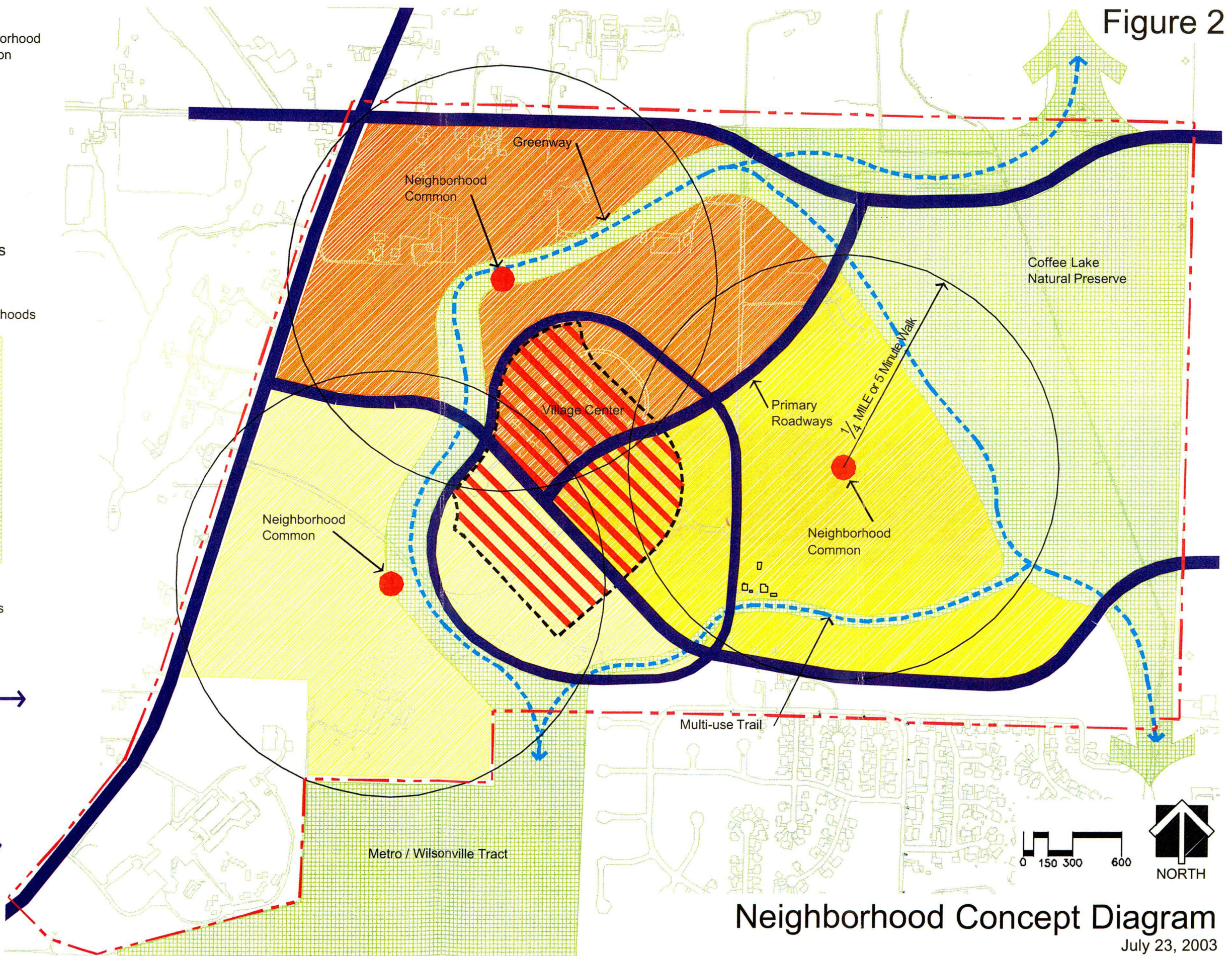
Conceptual Diagram - Neighborhoods
 - 1/4 mile radius neighborhood = 5 minute walking distance
 - Commons at neighborhood center
 - Village Center at the confluence of neighborhoods



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



Conceptual Diagram - Roadways
 - Roadway system defines neighborhood edges



Neighborhood Concept Diagram
 July 23, 2003

Each neighborhood will include a mix of housing types, including estate lots (average 9,600 square feet), large (average 7,150 square feet), standard (5,500 square feet), medium (3,600 square feet) and small single-family lots (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, LEC 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 34 acres at the center of Villebois (*see Figure 2A – Village Center Boundary & Land Use Plan*). Design elements, which characterize the Village Center include:

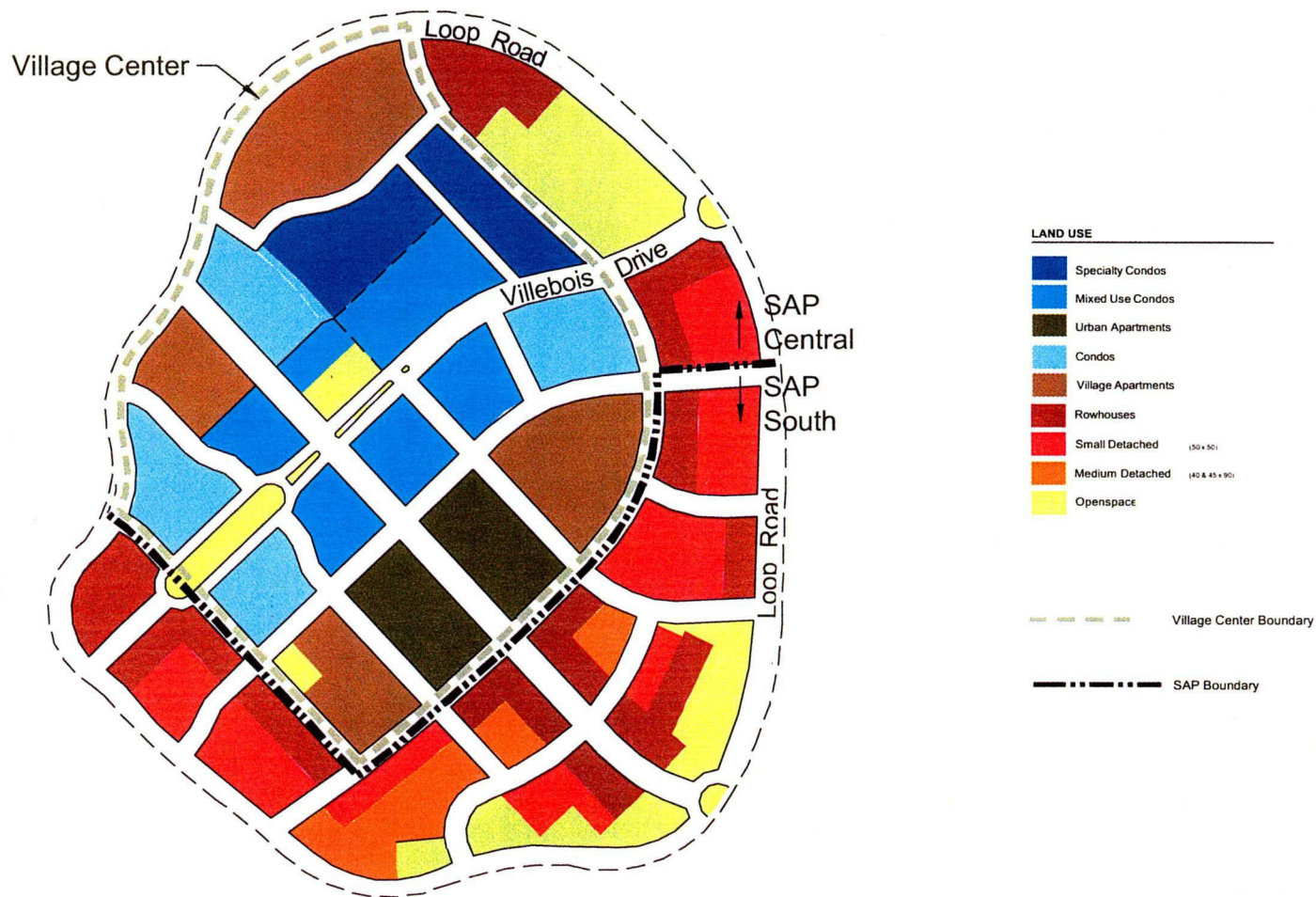
- Higher-density residential housing,
- Mixed-use development,
- A location inside a loop road connecting with three neighborhoods,
- Opportunities for office/commercial/light industrial/civic uses,
- Easy access to multi-modal transportation opportunities,
- Inclusion of parks and greenway features,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

July 23, 2003

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

At the recommendation and request of the West Linn/Wilsonville School District, a site has been included for a 550-student grade school. The School District has indicated that a 10-acre site is needed. The Master Planner will coordinate with the School District throughout the planning stages of Villebois Village to address siting of the school. An Implementation Measure is included to prescribe a 10-acre school site.

The School District has indicated to the Master Planner that any location within one of the residential neighborhoods in the *Villebois Village Master Plan* would be acceptable. Though the *Villebois Village Master Plan* continues to illustrate the school site in the eastern portion of the plan area (*Figure 1 – Land Use Plan*), the ultimate location of the school shall be west of 110th Street as shown in *Figure 1A – Replacement Land Use Plan* and shall be confirmed through the approval process for *Figure 1A* and as specified within the implementing Village zone. Upon selection of the site, *Figure 1 – Land Use Plan* and/or *Figure 1A – Replacement Land Use Plan* for the *Villebois Village Master Plan* will be revised to reflect the chosen location.

Living Enrichment Center (LEC)

Per the City's approval of City Files 02PC07A and 02PC07C, the Living Enrichment Center (LEC) has been included in the area to be designated Residential – Village on the Comprehensive Plan Land Use Map. LEC 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 LEC as part of the Residential – Village Comprehensive Plan land use designation and illustrates LEC within the boundaries of the Master Plan. Full analysis of LEC's compliance with the City's Comprehensive Plan and its various sub-elements is not included in this document (City File 02PC07B). LEC will be required to submit a Specific Area Plan (SAP) for their property (see Specific Area Plan description below). As a part of LEC's Specific Area Plan approval, they shall be required to 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. LEC 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*).

Replacement Land Use Plan (Figure 1A)

Figure 1A – Replacement Land Use Plan illustrates plan revisions east of 110th Avenue and identifies an area where the future elementary school will be located west of 110th Avenue. The *Replacement Land Use Plan* is consistent with the *Villebois Village Concept Plan* and the *Villebois Village Master Plan* by continuing to provide the design elements identified in the *Concept Plan* and continuing to meet the guiding principles established with the *Concept Plan*.

The *Replacement Land Use Plan* continues to provide three neighborhoods within the areas identified on *Figure 2 – Neighborhood Concept Diagram* that include the design elements that characterize neighborhoods. Each neighborhood continues to be approximately one-quarter mile radius in size with neighborhood edges defined by the roadway system. Each neighborhood continues to provide a mix of housing types that front on public rights-of-way and a Commons at the center of each neighborhood. The Village Center continues to be located at the confluence of the three neighborhoods and is unaltered by the *Replacement Land Use Plan*. Direct pedestrian and vehicular connection to the Village Center from each Neighborhood Commons continues to be provided. Parks and Open Space areas continue to provide linkages between neighborhoods and adjacent open space. Thus, the *Replacement Land Use Plan* continues to provide connectivity and diversity within the neighborhoods of Villebois.

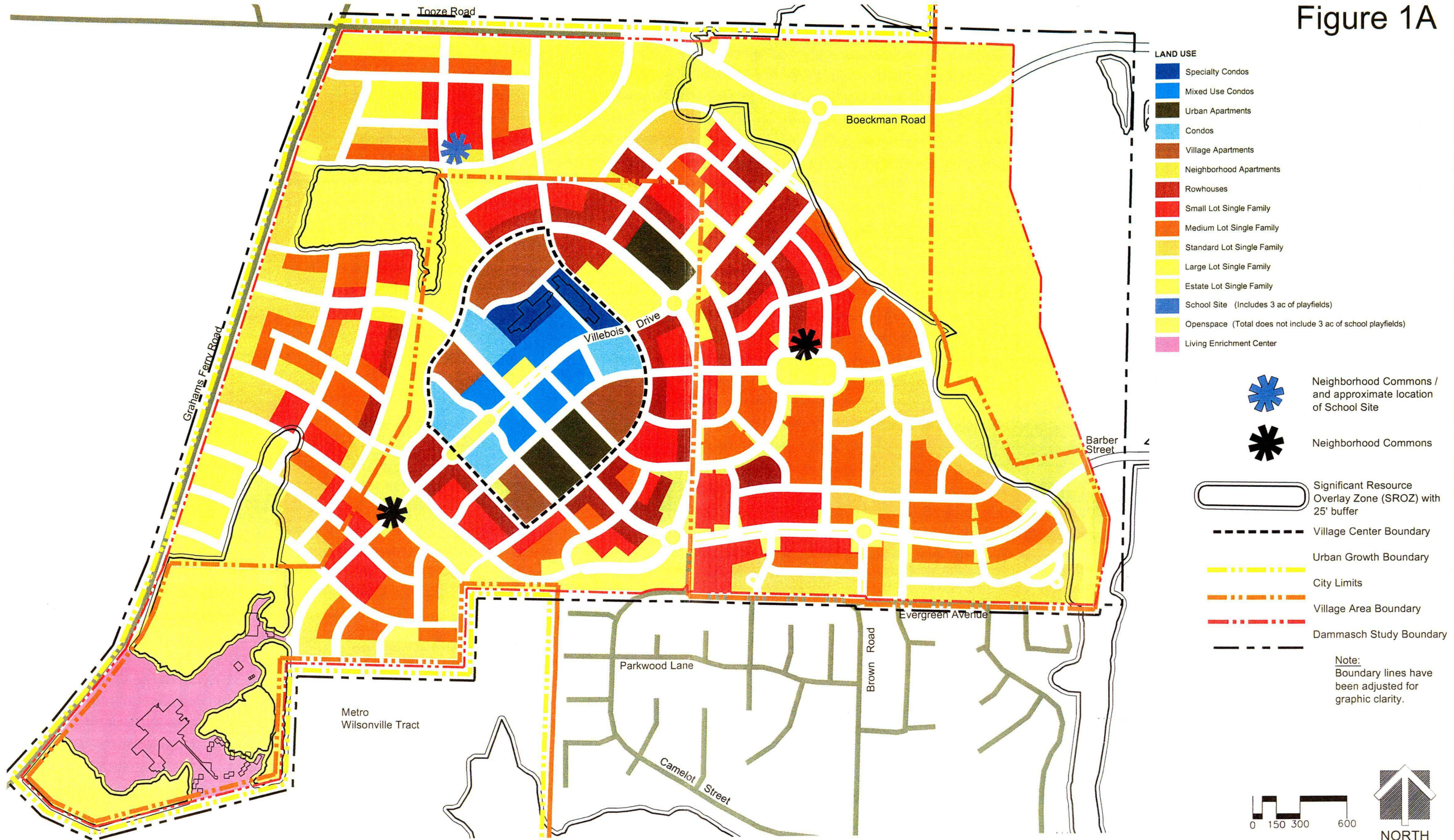
The *Replacement Land Use Plan* recognizes that an elementary school is a viable part of the community and is necessary to fulfill build-out of the vision of Villebois. The *Replacement Land Use Plan* identifies relocation of the future elementary school (10 acres inclusive of 3 acres of sports fields) to an area within the northwest portion of Villebois, west of 110th Avenue. This area is identified with an asterisk on *Figure 1A – Replacement Land Use Plan*. The final school location will be selected in consideration of vehicle and bus access, bike and pedestrian safety, future residential build-out in the area, and natural resources. Neighborhood walkability will be

assured throughout the process of school site selection and subsequent design, since connectivity and diversity in modes of travel are guiding principles in Villebois.

The *Replacement Land Use Plan* continues a land use pattern and street system that is designed in consideration of existing natural resources and incorporates these resources into parks and open space areas to protect resources as appropriate and emphasize amenities for the community. The *Replacement Land Use Plan* will continue the rainwater systems and environmental programs described in Chapters 3 through 5 of the *Villebois Village Master Plan*. Thus, the *Replacement Land Use Plan* meets the sustainability principles of Villebois.

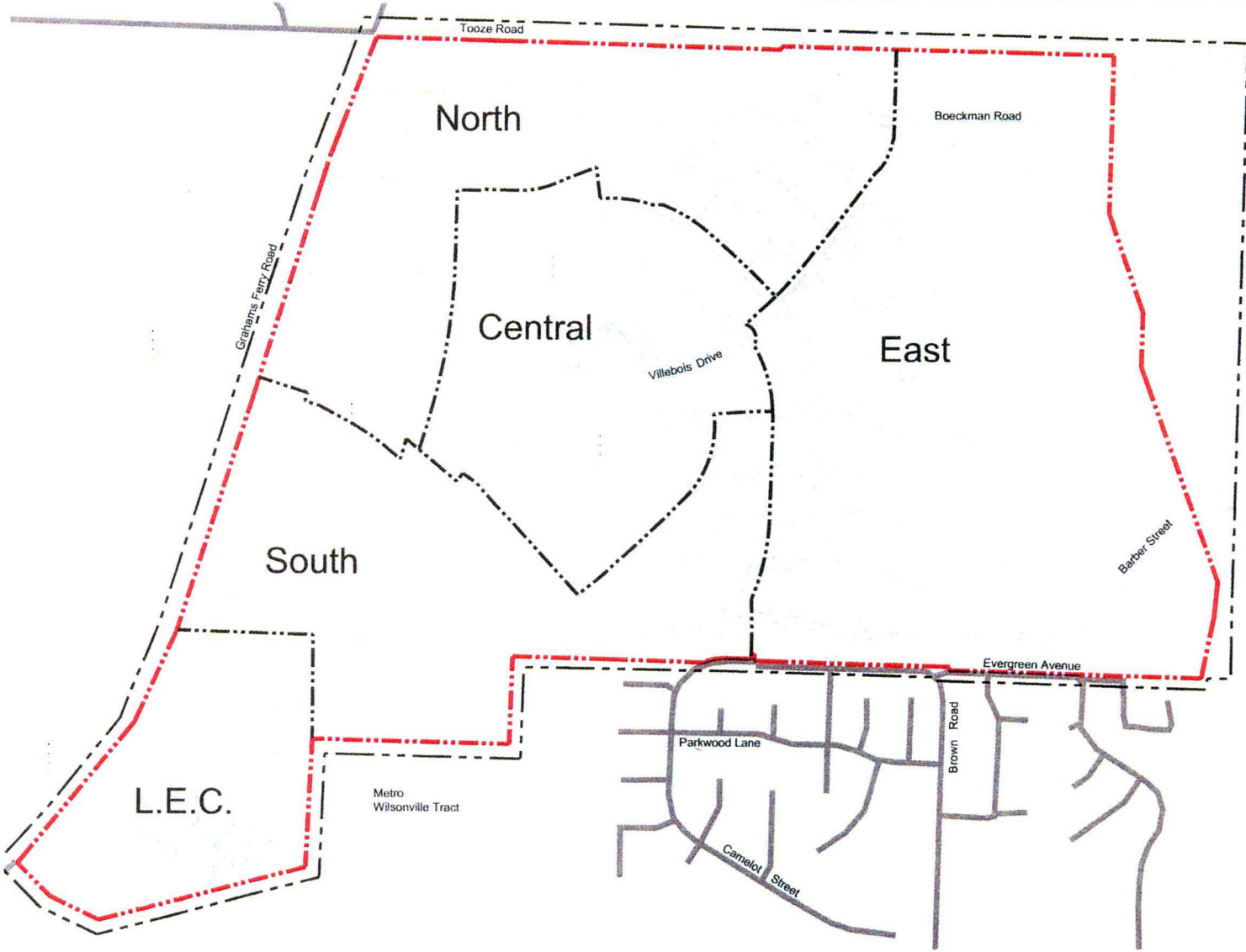
Figure 1A – Replacement Land Use Plan is in substantial conformance with the vision of Villebois Village as it includes the three identified neighborhoods, the Village Center, the elementary school, parks and open space linkages and circulation systems in a manner that is consistent with the guiding principles of connectivity, diversity and sustainability as set forth in the *Concept Plan* and the *Master Plan*. Further review and evaluation is needed to provide the data and analysis necessary to address the City's Master Plans; however *Figure 1A – Replacement Land Use Plan* is adequate to use for this future work.

Figure 1A



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.
 * The SAP process will address an increase in size of the school site to 10 acres or a size otherwise agreed upon with the city and school district.

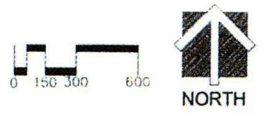
Figure 3



Legend

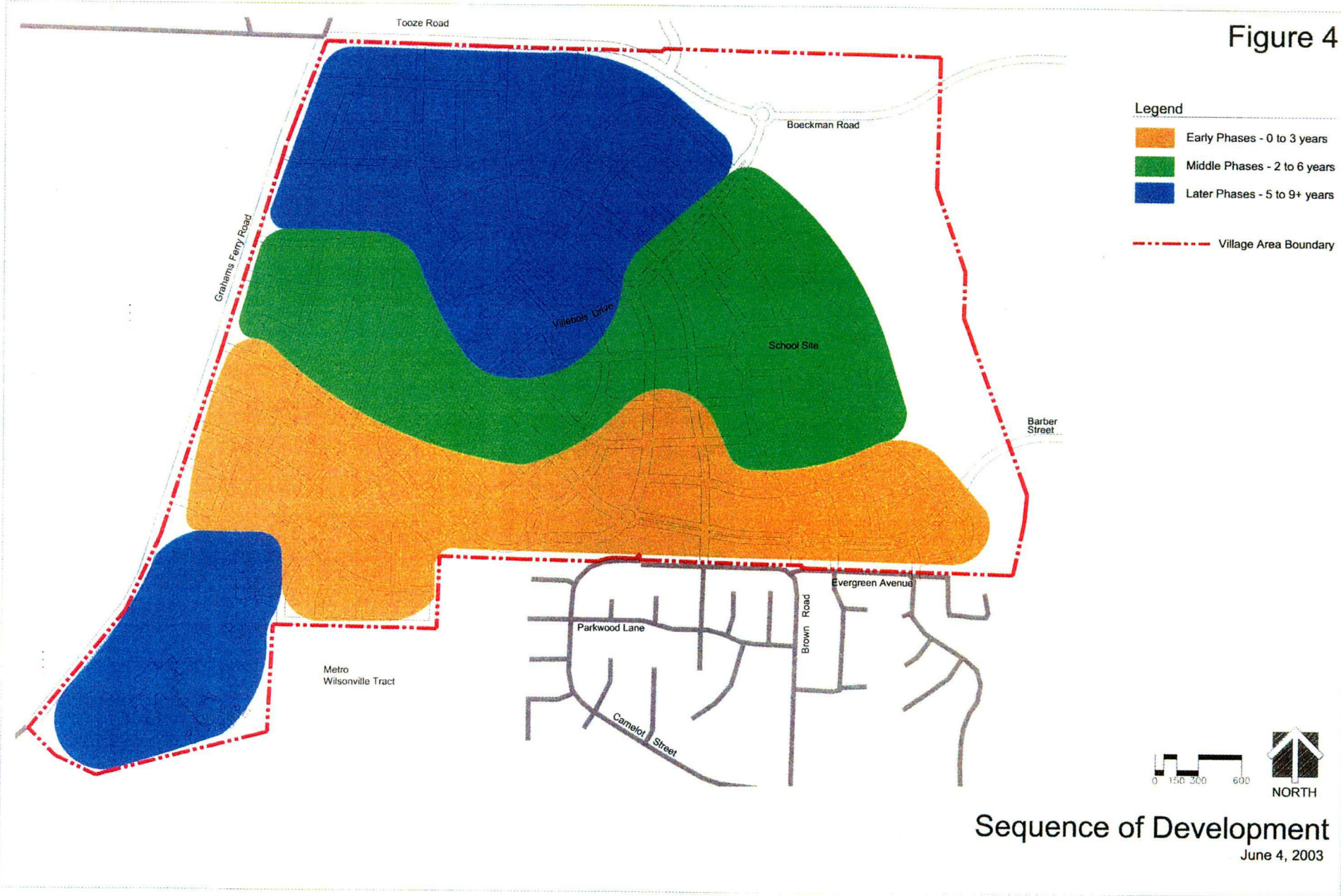
- - - - - S.A.P. Boundary
- Village Area Boundary
- Dammasch Study Boundary

Note:
Boundary lines have been adjusted for graphic clarity.



Conceptual Specific Area Plan Boundaries
July 23, 2003

Figure 4



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 Living Enrichment Center (LEC) 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) for LEC 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. LEC shall be responsible for obtaining any master plan or ordinance amendment(s) that may be necessitated by their proposal.
6. The technical data supporting *Figure 1A – Replacement Land Use Plan* and the data and analyses to address the City's Master Plans, as well as the updated *Villebois Village Master Plan* findings, text and figures, as appropriate, shall be submitted by the Master Planner. City staff shall complete the necessary review, prepare staff report(s), and schedule Planning Commission action to accomplish approval within 180 days of approval of the *Villebois Village Master Plan*. This approval process is intended to streamline the legislative amendment process and retain Planning Commission authority to review legislative changes to the City's Comprehensive Plan. *Figure 1A – Replacement Land use Plan* shall be void if the approval process is not completed within the specified time, unless the Planning Commission should extend the time limit.

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.

SCHOOL

Goal

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

Policy

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.

Implementation Measure

1. Coordinate with the West Linn/Wilsonville School District throughout the planning stages of Villebois Village to address siting of a 550-student grade school where a recreational area is contiguous to the school facility and the total acreage is 10 acres. Upon selection of a site, revise *Figure 1 – Land Use Plan and/or Figure 1A – Replacement Land Use Plan, as appropriate*, of the *Villebois Village Master Plan* to reflect the selected site.
2. Confirmation of the school site shall be included within the 180-day approval process for *Figure 1A – Replacement Land Use Plan (General Land Use Plan Implementation Measure 6)*.



Villebois Village Master Plan

Chapter 3:

Parks & Open Space/Off-Street Trails & Pathways

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), 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)

West Neighborhood Park (1.8 acres)

The park located in the Village's west neighborhood will provide the primary open space for residents in the surrounding neighborhood. This neighborhood park is a linkage in the greenway and hosts a section of the Coffee Lake–Wood 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.

North Neighborhood Park (2.3 acres)

This park space will provide an important area for both passive and active recreation. It will be a major point of interest as a linkage in the greenway and will also contain a section of the Coffee Lake–Wood Trail on its southern edge. A playfield will be provided to accommodate team sports and the space will emphasize views of Mt. Hood. The park will include paved walks, benches, picnic tables, lighting, and appropriate plant material.

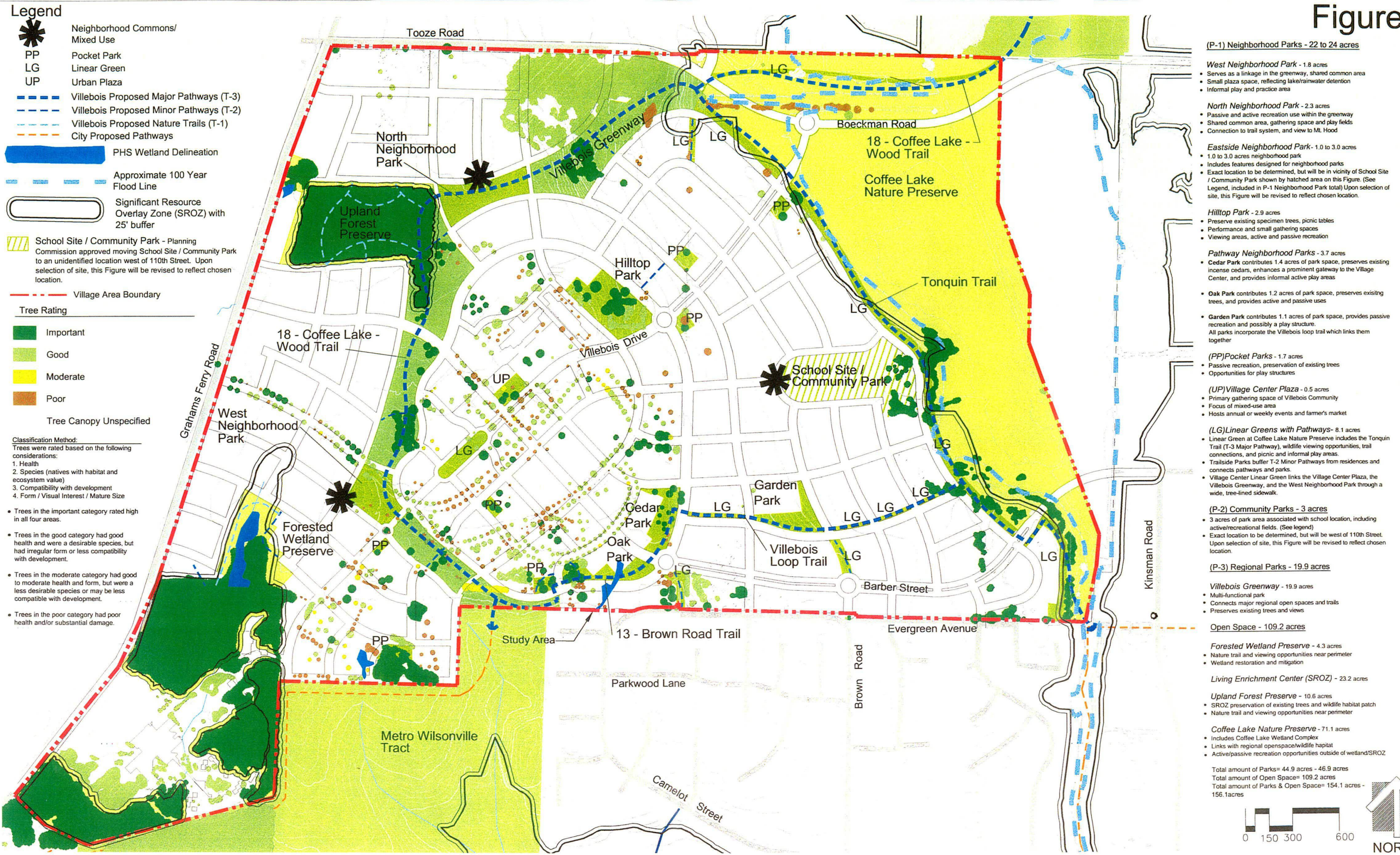
Hilltop Park (2.9 acres)

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.

Pathway Neighborhood Park – Cedar (1.4 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.

Figure 5

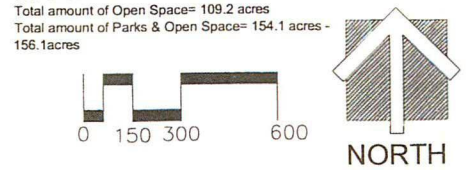


NOTES:
 The Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the 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.

Parks and Open Space Plan

July 23, 2003
 Revised November 2003

- (P-1) Neighborhood Parks - 22 to 24 acres**
 - West Neighborhood 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
 - North Neighborhood Park - 2.3 acres**
 - Passive and active recreation use within the greenway
 - Shared common area, gathering space and play fields
 - Connection to trail system, and view to Mt. Hood
 - Eastside Neighborhood Park - 1.0 to 3.0 acres**
 - 1.0 to 3.0 acres neighborhood park
 - Includes features designed for neighborhood parks
 - Exact location to be determined, but will be in vicinity of School Site / Community Park shown by hatched area on this Figure. (See Legend, included in P-1 Neighborhood Park total) Upon selection of site, this Figure will be revised to reflect chosen location.
 - Hilltop Park - 2.9 acres**
 - Preserve existing specimen trees, picnic tables
 - Performance and small gathering spaces
 - Viewing areas, active and passive recreation
 - Pathway Neighborhood Parks - 3.7 acres**
 - Cedar Park contributes 1.4 acres of park space, preserves existing incense cedars, enhances a prominent gateway to the Village Center, and provides informal active play areas
 - Oak Park contributes 1.2 acres of park space, preserves existing trees, and provides active and passive uses
 - Garden Park contributes 1.1 acres of park space, provides passive recreation and possibly a play structure.
 - All parks incorporate the Villebois loop trail which links them together
- (PP) Pocket Parks - 1.7 acres**
 - Passive recreation, preservation of existing trees
 - Opportunities for play structures
- (UP) Village Center Plaza - 0.5 acres**
 - Primary gathering space of Villebois Community
 - Focus of mixed-use area
 - Hosts annual or weekly events and farmer's market
- (LG) Linear Greens with Pathways - 8.1 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.
 - Village Center Linear Green links the Village Center Plaza, the Villebois Greenway, and the West Neighborhood Park through a wide, tree-lined sidewalk.
- (P-2) Community Parks - 3 acres**
 - 3 acres of park area associated with school location, including active/recreational fields. (See legend)
 - Exact location to be determined, but will be west of 110th Street. Upon selection of site, this Figure will be revised to reflect chosen location.
- (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 - 109.2 acres**
 - Forested Wetland Preserve - 4.3 acres**
 - Nature trail and viewing opportunities near perimeter
 - Wetland restoration and mitigation
 - Living Enrichment Center (SROZ) - 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 - 71.1 acres**
 - Includes Coffee Lake Wetland Complex
 - Links with regional openspace/wildlife habitat
 - Active/passive recreation opportunities outside of wetland/SROZ



Pathway Neighborhood Park – Oak (1.2 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 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.

Pathway Neighborhood Park – Garden (1.1 acres)

The Villebois Loop Trail crosses the southern edge of this park. Several houses will front on the park, benefiting from the amenity but also, providing a sense of security for the park. The park will include paved walks, benches, lighting and possibly a play structure. This park may be well suited as a location for neighborhood vegetable gardens. The slope may be too great for large active play areas but could accommodate several terraced garden sites.

Miscellaneous Pocket Parks (1.7 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.

Village Center Plaza (0.5 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.

Linear Green at Coffee Lake Nature Preserve

The Villebois Loop Trail will weave throughout the community via the greenway, across natural open space and traversing neighborhoods. Where it parallels Coffee Creek as the Tonquin Trail on the outer east edge of the Villebois residential neighborhoods, it 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, lighting, picnic areas and grassy areas for informal play.

Trailside Parks

A swath of parks will serve as buffers between Minor Pathways and surrounding houses. These greens highlight the locations of important pathways like the Villebois Loop Trail, the Tonquin 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.

Village Center Linear Green

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 Villebois Loop Trail into the Center. Another similar form of linear green is the landscaped Villebois Loop Trail Corridor, a wide space that runs the length of a road from the Village Center to Coffee Lake Nature Preserve, helping to visually and physically link the southern end of the greenway and the edge of the Metro Wilsonville Tract with the southern end of the preserve.

Eastside Neighborhood Park (1.0 to 3.0 acres)

This park is located in the Village's east neighborhood and will provide a primary open space for residents in the surrounding neighborhood. It will be developed with consideration of features designed for Neighborhood Parks.

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

Though the Villebois Village Master Plan continues to illustrate a 550-student grade school site in the eastern portion of the plan, the ultimate location of the school will be west of 110th Street and will be confirmed with subsequent review stages. A recreation area will be contiguous to the school facility and the total acreage will be 10 acres. The recreation area contiguous to the school facility is classified as a P-2 community park. Upon selection of the site, Figure 1 and Figure 5 of the Villebois Village Master Plan will be revised to reflect the selected site.

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 Metro's Wilsonville Tract regional open space. The Greenway will include amenities such as the Coffee Lake-Wood 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 109 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 (4.3 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.

Living Enrichment Center SROZ (23.2 acres)

This area will be further defined by the Living Enrichment Center 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 Coffee Lake 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 (71.1 acres)

Parts of the Coffee Lake area outside of the Wetland/SROZ will provide for recreational opportunities such as hiking, bicycling and wildlife viewing. 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 a Policy and Implementation Measure to encourage development of a naturalization and enhancement plan for the Coffee Lake wetland complex. The Coffee Lake 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.

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

- Less than 5,000 sf
- 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 5,000 sf
- 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 5,000 sf
- 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 Living Enrichment Center 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

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

Lake Nature Preserve. The Tonquin Trail has been incorporated into the Villebois Loop Trail. The Villebois Loop Trail's other segments provide connections to all neighborhood parks and links major open spaces within and to the north and south edges of the community.

Coffee Lake Wood Trail/Villebois Loop Trail

In addition to providing an important linkage between the regionally significant Tonquin Geologic Region to the north and the Metro Wilsonville Tract 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 Metro Wilsonville Tract, 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>Neighborhood Parks</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>West, North, Hilltop (7 Acres), 3 Pathway Parks-Cedar, Oak, Garden (3.7 Acres), 7-Pocket Parks (1.7 Acres), linear greens (8.1 Acres) and the urban plaza (.50 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 21 Acres 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>Community Parks</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>[example: Boones Ferry and Town Center Parks]</p>	<p>Eastside Neighborhood Park (3 Acres)</p> <p>This area can be used for organized play, community events, often contain multi-use sports fields, playgrounds, shelters, picnic areas, restrooms, parking and some passive functions.</p>	<p>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 Eastside Park is associated with the future elementary school.</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
<p>Regional Parks</p>	<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>
<p>Recreation Centers</p> <p>Minor Limited-Use/Minor Multi-Use</p>	<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>target of 1,400 square feet per 1,000 residents</p> <p>[example: limited-use - Wood Middle School]</p>	<p>Eastside 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 4,600-5,570 people, there would be a need for a minor limited use/minor multi-use recreation facility of 6,440-8,050 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>

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
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 4,600-5,570 people, there would be a need for a major limited use recreation facility of 6,440-8,050 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>[example: Wilsonville High School and Community Center]</p>	<p>Not identified</p>	<p>The 1994 P&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 4,600-5,570 people, there would be a need for a major multi use recreation facility of 12,880-16,100 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
Nature Trails	<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	21,100 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.
Minor Pathways	<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>	2,700 LF	21,100 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.
Major Pathways	<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> <p>target of 3,000 linear feet per 1,000 residents</p> <p>[example: Town Center Bike and Pedestrian Path]</p>	15,400 LF	21,100 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
Pocket Parks*	N/A	7 pocket parks (1.7 Acres)	Although pocket parks are not as large as neighborhood parks, they do offer some of the same elements such as opportunities for passive recreation.
Linear Green*	N/A	8.1 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.
Urban Plaza*	N/A	Urban Plaza (.50 Acres)-gathering space, mixed use area, annual or weekly events	The urban plaza could offer many of the same features and experiences that are found in neighborhood parks such as picnicking.

*Pocket Parks, linear greens and the urban plaza 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 Metro's Wilsonville Tract. The Villebois Greenway

provides a direct pathway connection to the Metro Wilsonville Tract 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 Metro Wilsonville Tract 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/Wilsonville Tract 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 Metro Wilsonville Tract.

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 Metro Wilsonville Tract. 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 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.

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. Coordinate with the West Linn/Wilsonville School District through the planning stages of the appropriate Specific Area Plan to determine locations of sports fields within the proposed elementary school site.
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 SAP 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 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 parking as part of the Greenway in close proximity to the north and west neighborhood parks, and restrooms and parking in conjunction with the east side community park.
8. The Parks and recreation Advisory Board recommends the development of a community center beyond the school site that is sized to support, at a minimum, the incoming population of Villebois. It is highly recommended that the development take advantage of existing facilities to utilize them as a community center with full-sized basketball court, multipurpose room, meeting rooms, kitchen facilities and consideration of indoor/outdoor water feature and adjacent fields. The Board would encourage the developer to explore partnerships to make these facilities available to local residents.

Villebois Village Master Plan

Chapter 4:

Utilities

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 LEC will add some additional flows to the system. An analysis of the site’s existing water usage, combined with 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 LEC facility. Hereafter, UPA-2 is used to designate only this proposal.

Figure 6 – 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, City staff 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.

City staff 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 LEC, 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

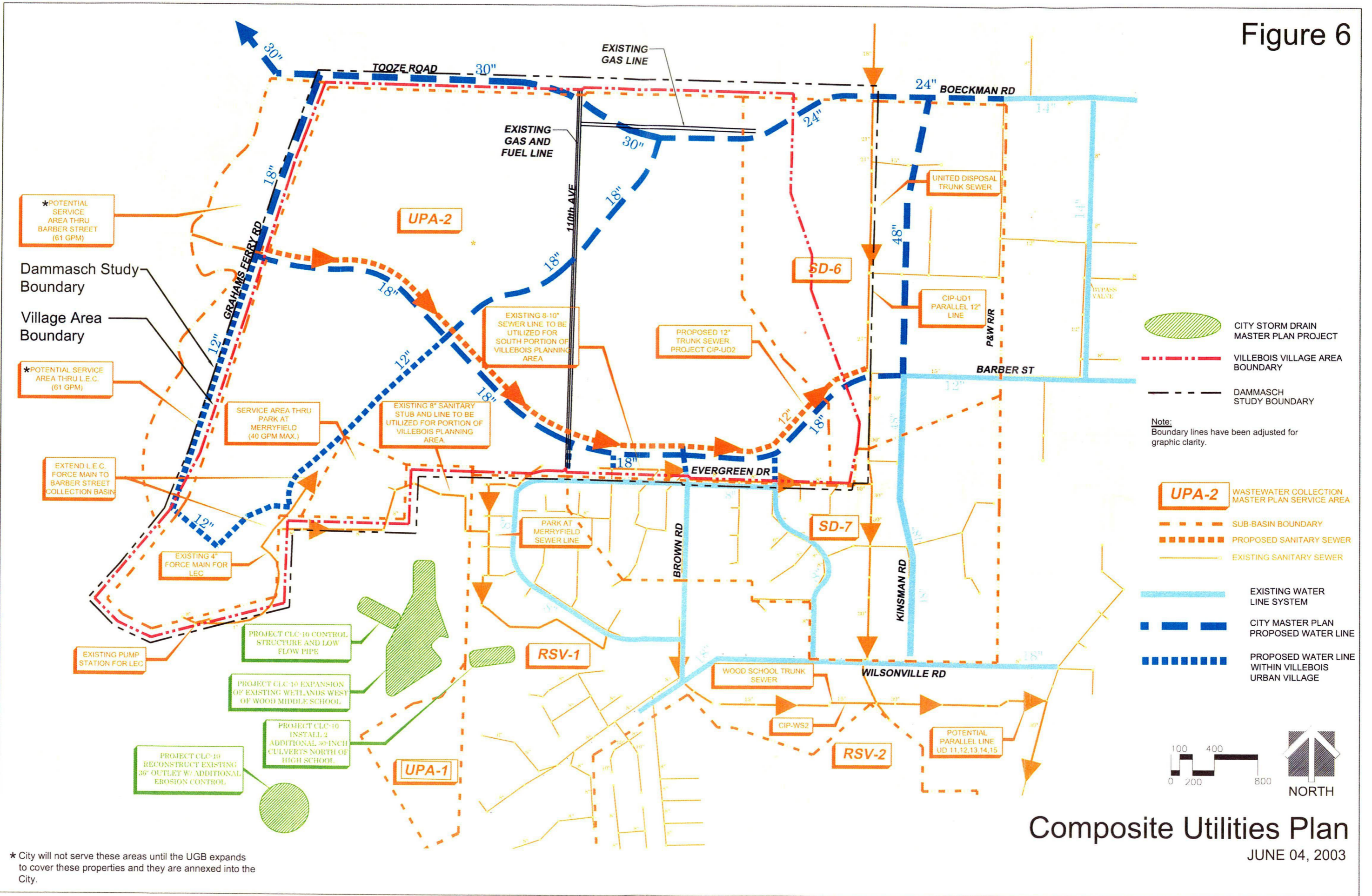
PURPOSE OF THE COMPLIANCE ANALYSIS

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



* 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 – 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. The total flow anticipated in the study area is 1,943 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:	1,235 gpm	(from UPA-2 & 3)
Evergreen Road:	347 gpm	(from UPA-2)
Park at Merryfield:	<u>361 gpm</u>	(158 from LEC + 122 from west
	1,943 gpm	of Grahams Ferry + 81 from Park at Merryfield)

Proposed routing:

Barber Street:	1346 gpm	(minimum from UPA-2 & 3 + 158 from LEC + 122 from Grahams Ferry area)
Evergreen Road:	476 gpm	(maximum = 99 existing flows + 377 from UPA-2)
Park at Merryfield:	<u>121 gpm</u>	(81 from Park at Merryfield + 40 from UPA-2)
	1,943 gpm	

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 377 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 LEC 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 – 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 – 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 order.

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 / 95th 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 Evergreen 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 110th Avenue
- 18-inch main in 110th Avenue from Boeckman Road to Evergreen Avenue
- 18-inch main from 110th 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 Village Center Drive
- 18-inch main in Village Center Drive from Boeckman to Barber
- 18-inch main in Barber from Village Center Drive to Grahams Ferry
- 18-inch main in Grahams Ferry from Barber to Tooze
- 12-inch main in extension of Village Center Drive from Barber to LEC
- 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 110th Avenue to Grahams Ferry Road

The Villebois proposed water plan:

- 30-inch main in Tooze Road from 110th Avenue 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 Evergreen from Kinsman Road to Brown Road
 - 2) 48-inch main from WTP in Kinsman Road from Barber Street to Boeckman Road / 95th Avenue.
 - 3) 24-inch main in Boeckman Road from Kinsman Road to 110th Avenue
 - 4) 18-inch main in 110th Avenue from Boeckman Road to Evergreen Avenue
 - 5) 18-inch main from 110th Avenue to Grahams Ferry
 - 6) 18-inch main in Grahams Ferry
 - 7) 30-inch main in Tooze Road from 110th Avenue to Grahams Ferry Road
 - 8) 12-inch main in extension of Village Center Drive from Barber to LEC
 - 9) 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 Metro Wilsonville Tract.

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.

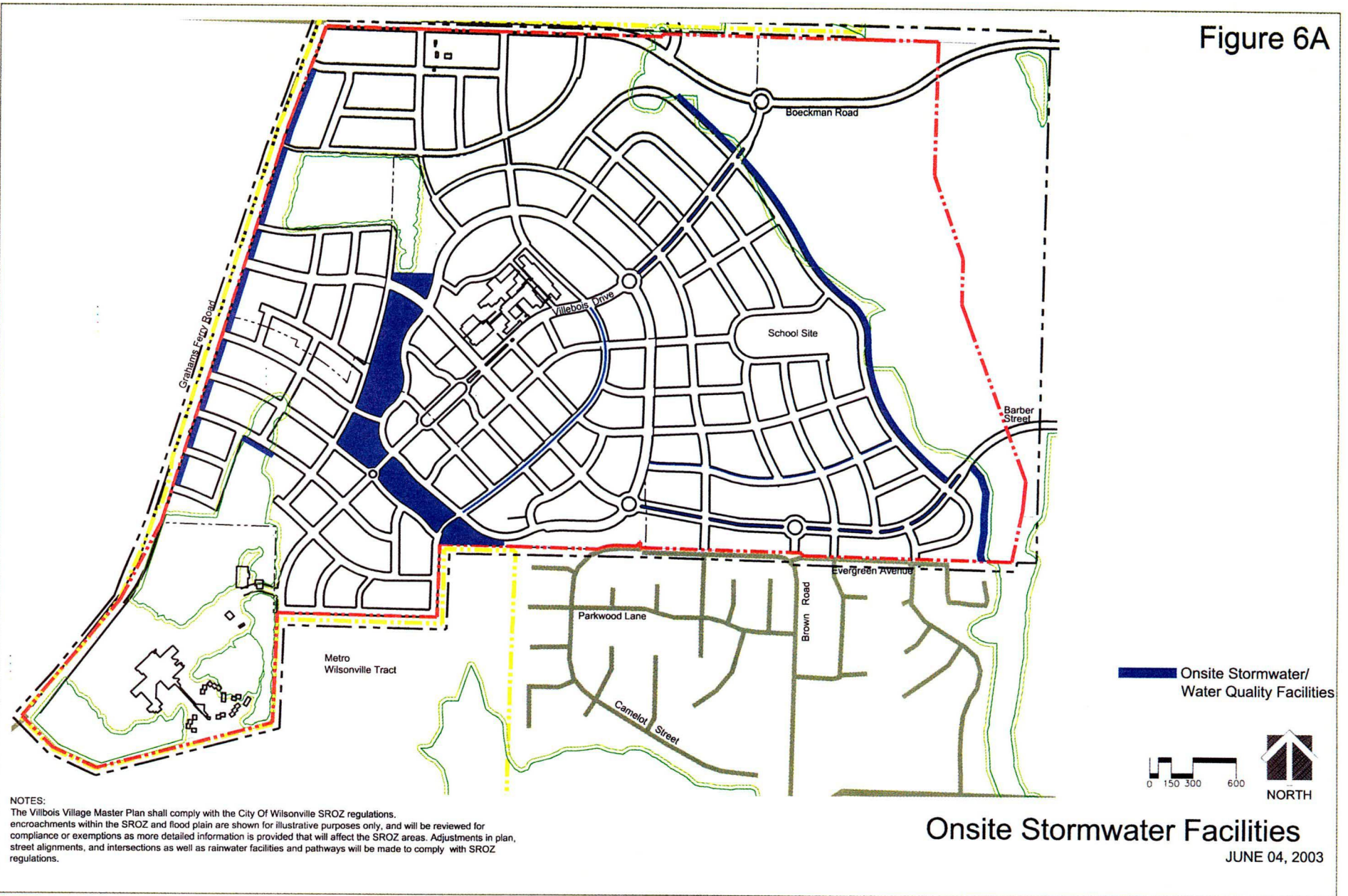
A third component incorporated into the design seeks to further reduce impacts from this development for smaller storms not addressed in the City of Wilsonville Stormwater Master Plan. Rainfall data indicates that 90% of all storms in this area have a 24-hour rainfall total of less than 0.26 inches. 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 – 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

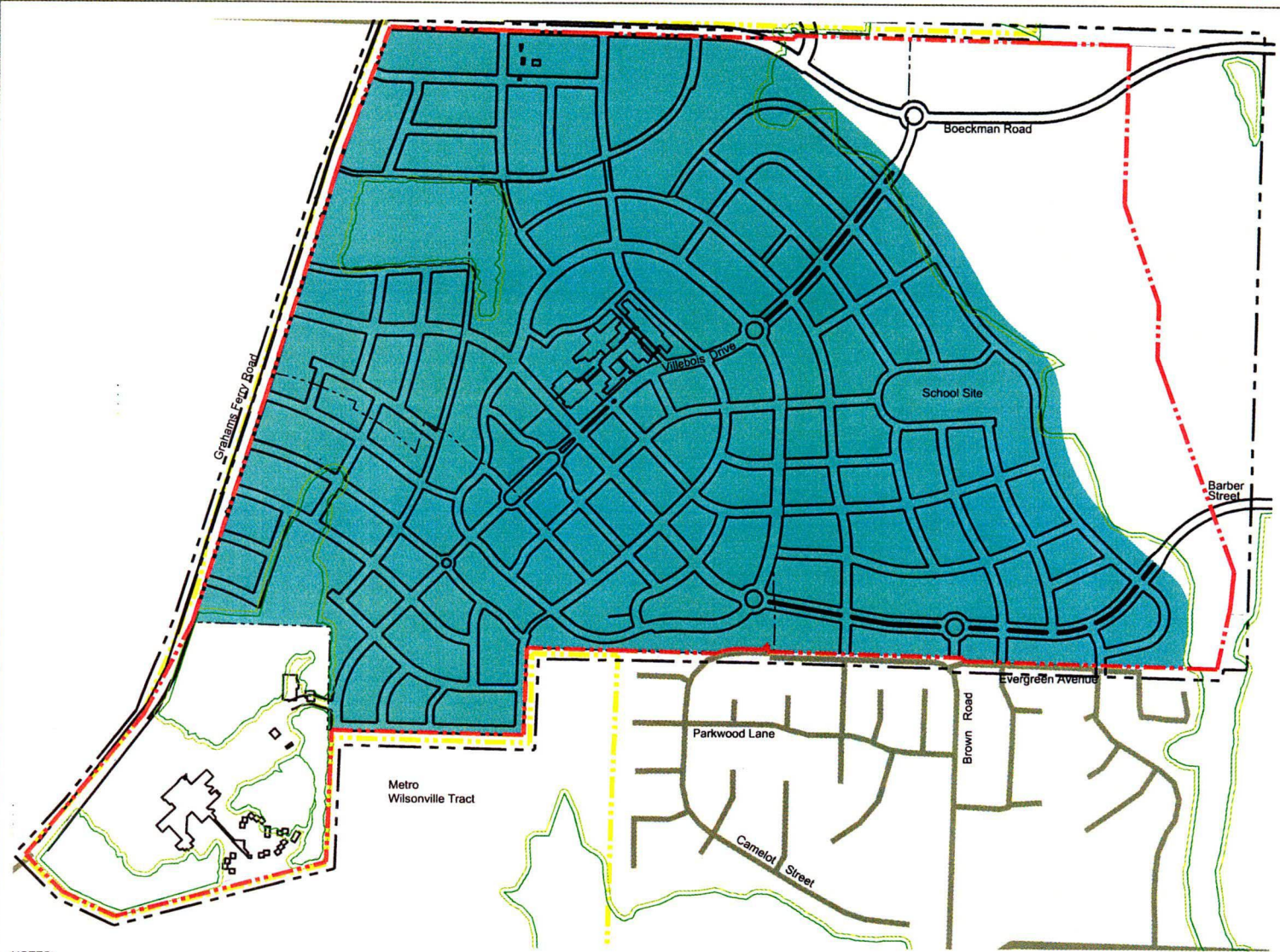
The City of Wilsonville Stormwater Master Plan analyzes the City's existing watersheds and storm system to identify Capital Improvement Projects (CIP's) and prescribe stormwater management policies. The *Villebois Village Master Plan* will show compliance with site related CIP's and recommended policies.

Figure 6A

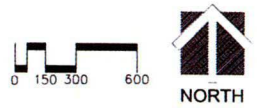


NOTES:
The Vilbois Village Master Plan shall comply with the City Of Wilsonville SROZ regulations. encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemptions as more detailed information is provided that will affect the SROZ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

Figure 6B



Onsite Rainwater Management Program & Facilities



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

JUNE 04, 2003

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 – 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 Metro Wilsonville Tract, 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.

	CLC-10 (minimum standard)	CLC-10 modified by Option A	CLC-10 modified by Option B
Location	Metro Wilsonville Tract	Metro Wilsonville Tract	Metro Wilsonville Tract, 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 Metro Wilsonville Tract 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

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

The *Villebois Village Master Plan* proposes to further analyze these options and determine their potential. A final determination, coordinated with the City of Wilsonville and Metro, will be made in conjunction with Phase 1 improvements. Options A and B may require a revision to the City Stormwater Master Plan.

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 "Dammach 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 90th percentile rain event, 0.26" in a 24-hr period. By addressing the 90th 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 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 90th 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 90th 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 within 18 months of approval of the *Villebois Village Master Plan*. Developer will establish a letter of credit or other financial instrument acceptable to the City Attorney for the cost of CLC-10 improvement if construction on Phase 1 begins before construction of CLC-10 or an option.
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, no later than 18 months after City adoption of the *Villebois Village Master Plan*. 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 Metro Tract. 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.

Villebois Village Master Plan

Chapter 5:

Circulation

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

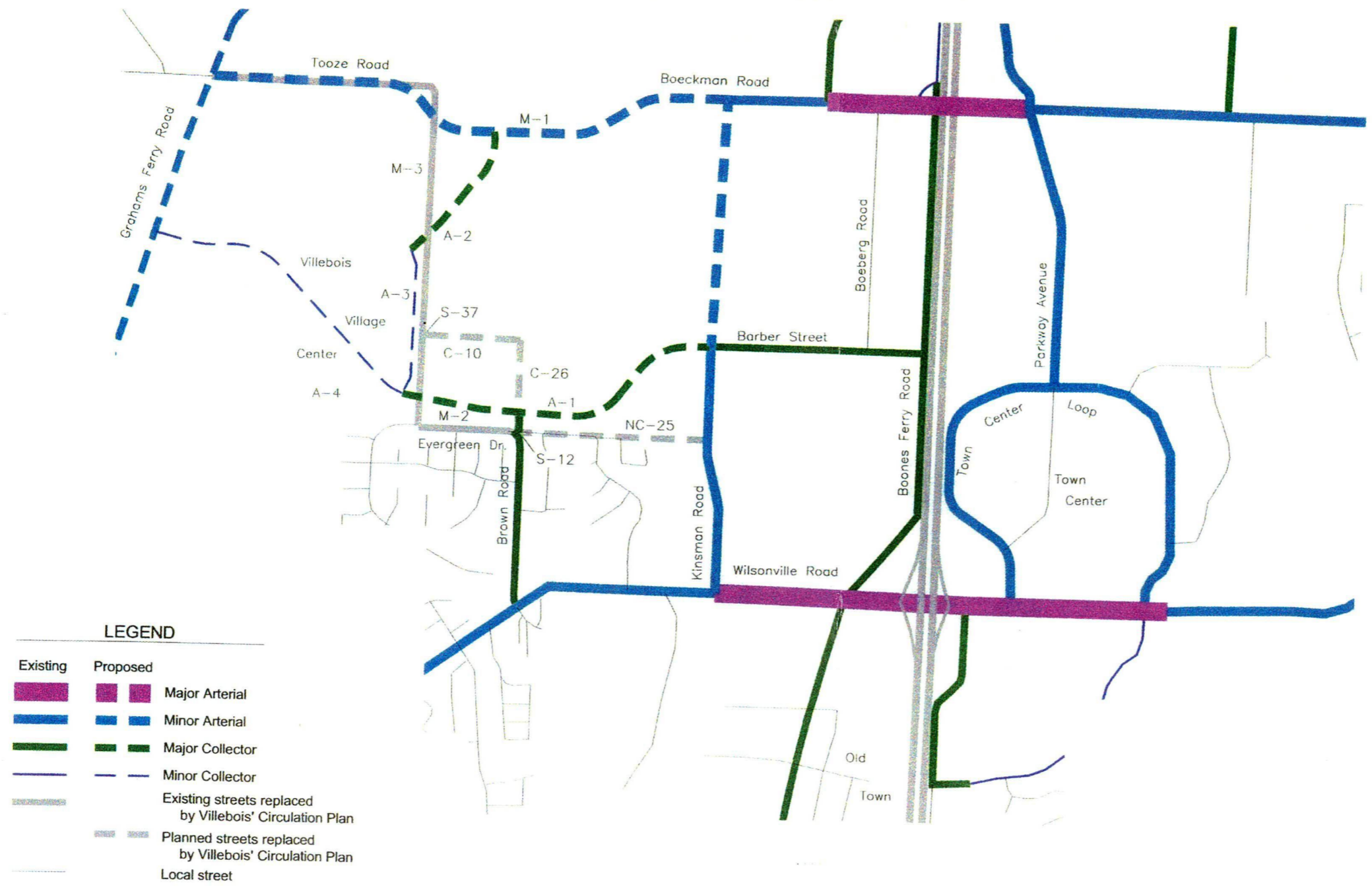
The referenced City transportation plan is titled “City of Wilsonville Transportation Systems Plan, June 2, 2003.” The *Villebois Village Master Plan* consists of *Figure 7 – Street Plan*, *Figure 8 – Proposed Arterial & Collector System*, and *Figures 9A & 9B – Street & Trail Sections*.

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:

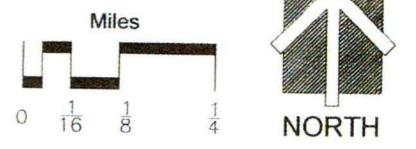
- Retains the north-south Collector through the site in a modified alignment of Brown Road-110th Avenue;
- Retains the east-west Arterial connection on the northern boundary of the site by providing a through connection from Kinsman Road to Grahams Ferry Road;
- Maintains a hierarchy of streets within 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 8



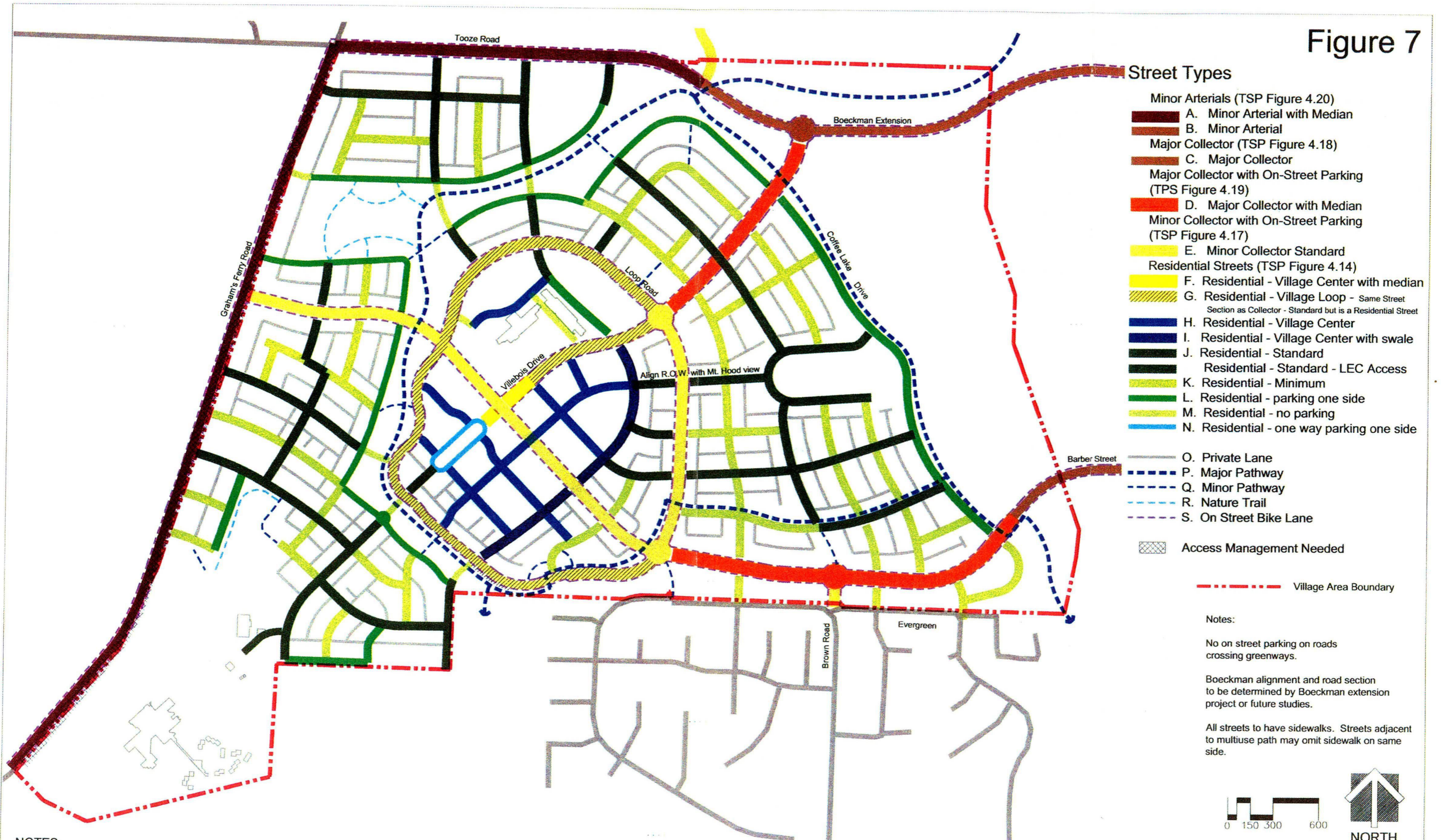
Note:
See Villebois Street Sections for specific Collector / Arterial configurations

(Source: 2003 TSP and Villebois Village Plan)



Proposed Arterial/Collectors Street System
June 4, 2003

Figure 7



- Street Types**
- Minor Arterials (TSP Figure 4.20)
 - A. Minor Arterial with Median
 - B. Minor Arterial
 - Major Collector (TSP Figure 4.18)
 - C. Major Collector
 - Major Collector with On-Street Parking (TPS Figure 4.19)
 - D. Major Collector with Median
 - Minor Collector with On-Street Parking (TSP Figure 4.17)
 - E. Minor Collector Standard
 - Residential Streets (TSP Figure 4.14)
 - F. Residential - Village Center with median
 - G. Residential - Village Loop - Same Street Section as Collector - Standard but is a Residential Street
 - H. Residential - Village Center
 - I. Residential - Village Center with swale
 - J. Residential - Standard
 - K. Residential - Standard - LEC Access
 - L. Residential - parking one side
 - M. Residential - no parking
 - N. Residential - one way parking one side
 - O. Private Lane
 - P. Major Pathway
 - Q. Minor Pathway
 - R. Nature Trail
 - S. On Street Bike Lane
- Access Management Needed
- Village Area Boundary

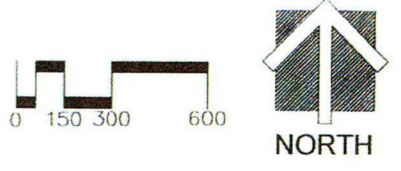
Notes:

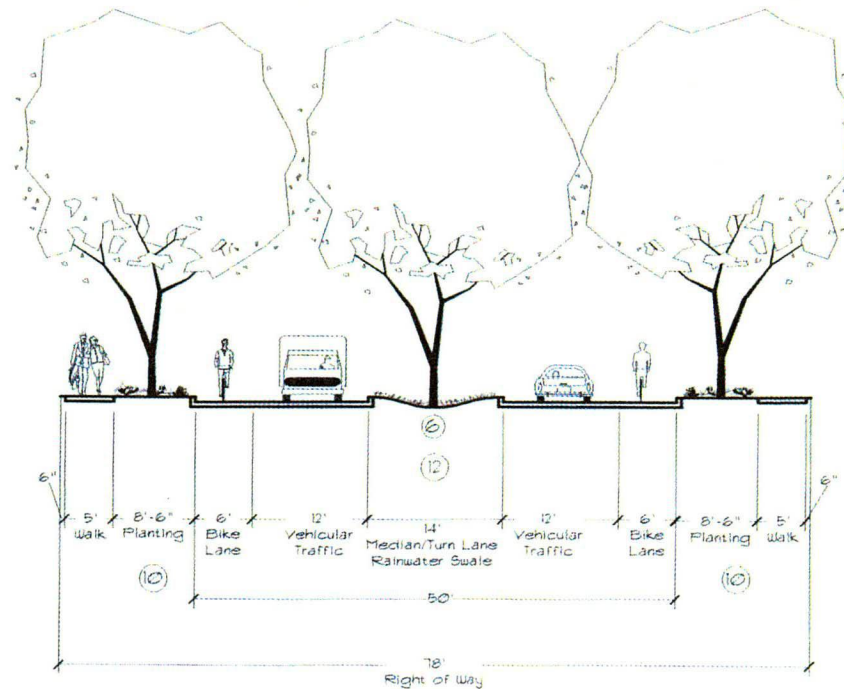
No on street parking on roads crossing greenways.

Boeckman alignment and road section to be determined by Boeckman extension project or future studies.

All streets to have sidewalks. Streets adjacent to multiuse path may omit sidewalk on same side.

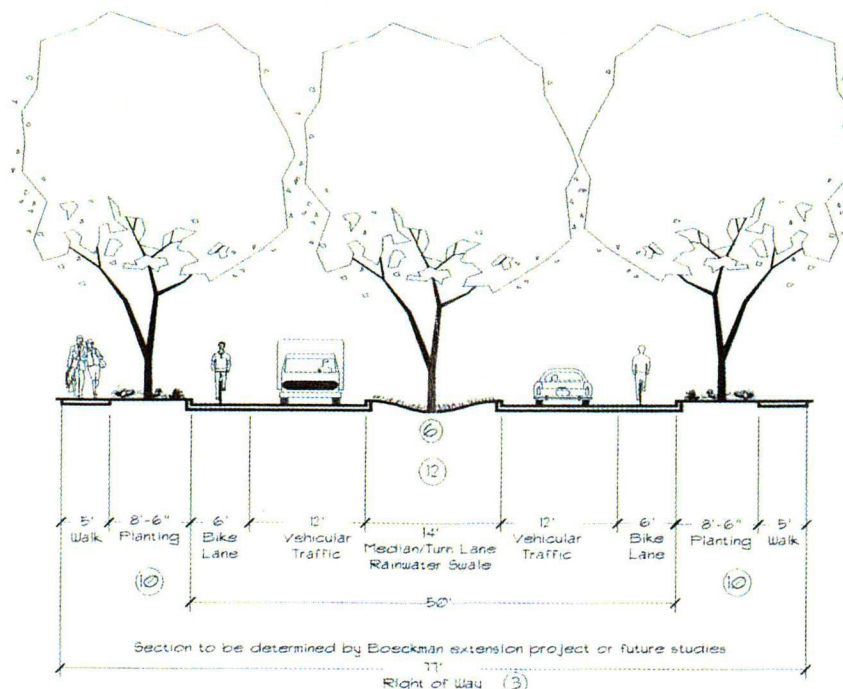
NOTES:
 The Villebois Village Master Plan shall comply with the city of Wilsonville SROZ regulations. Encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the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





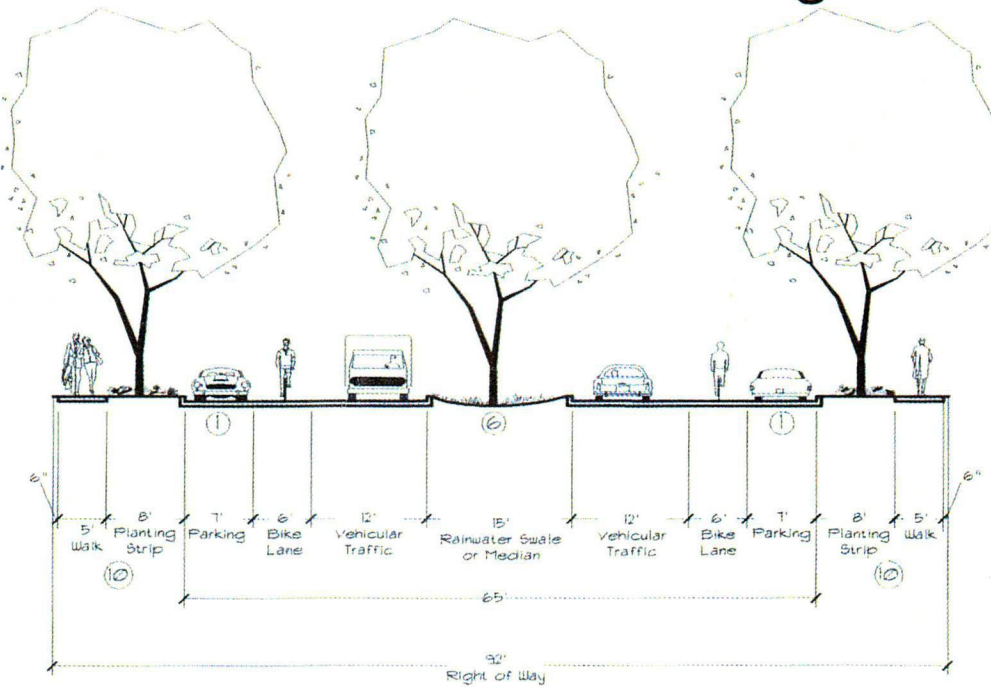
A. Minor Arterial with Median

Scale: 1" = 20'
(TSP Figure 4.20)



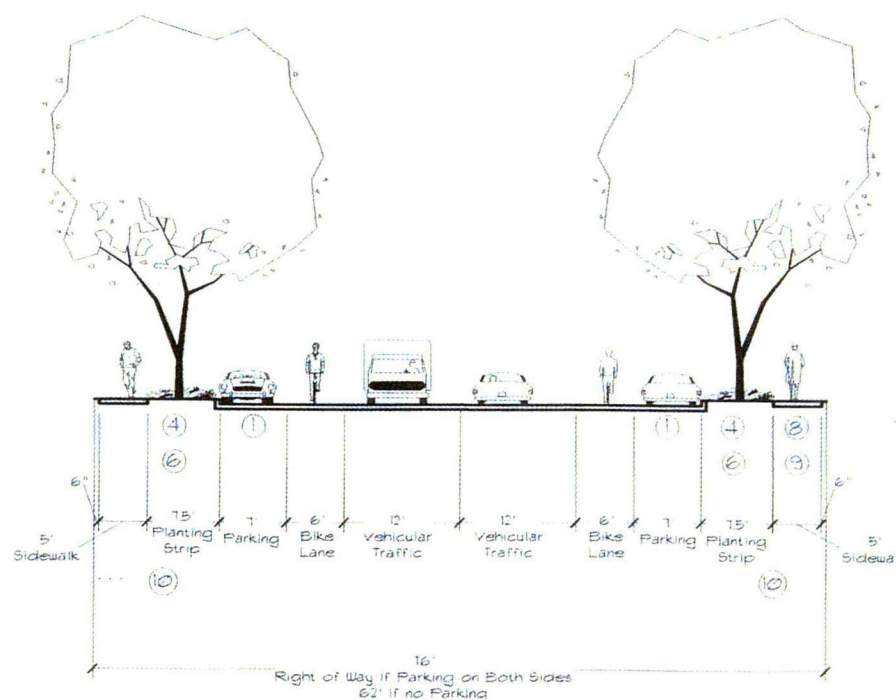
B. & C. Minor Arterial / Major Collector

Scale: 1" = 20'
Minor Arterial at Boeckman Road
Major Collector at Barber Road
(TSP Figure 4.20 / 4.18)



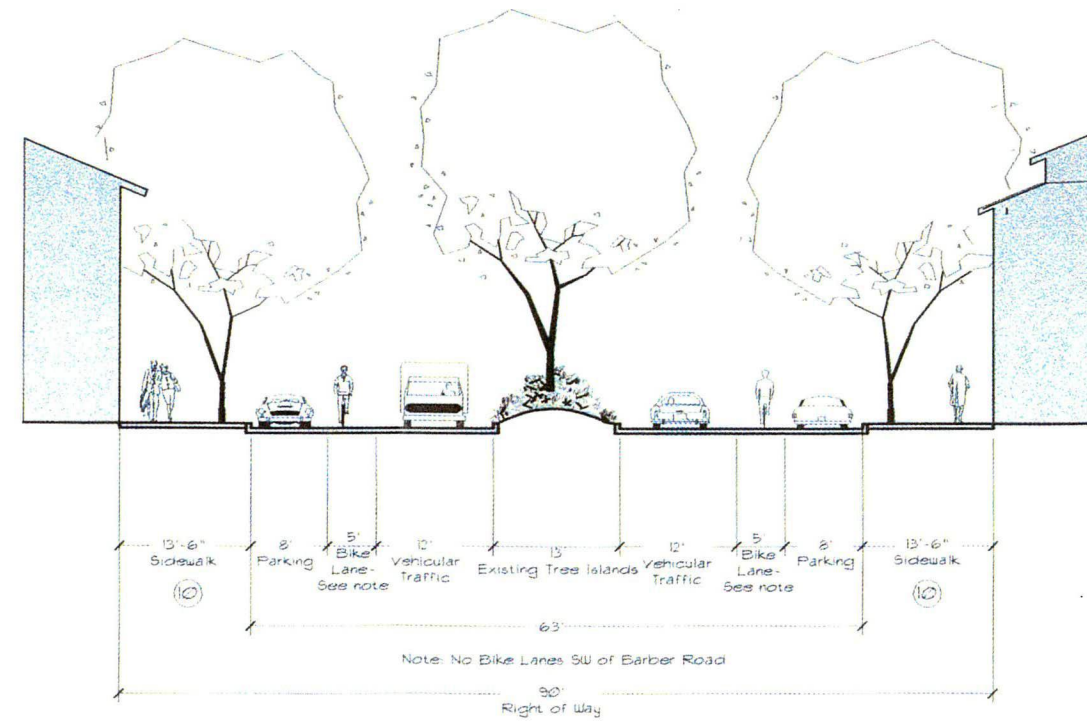
D. Major Collector with Median

Scale: 1" = 20'
(TSP Figure 4.19)



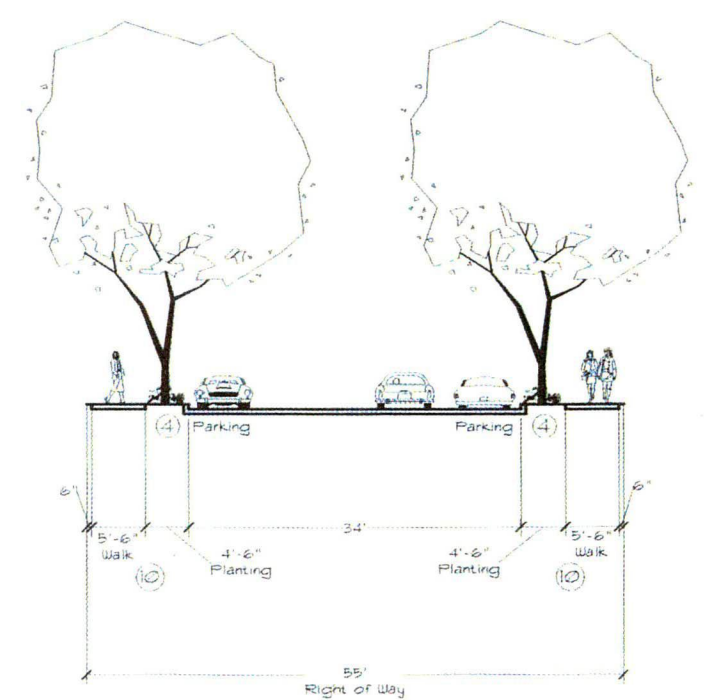
E. & G. Minor Collector Standard / Residential - Village Loop

Scale: 1" = 20'
(TSP Figure 4.17)
(TSP Figure 4.14)
Residential Village Loop - same street section as
Minor Collector - Standard but is a Residential Street



F. Residential - Village Center with Median

Scale: 1" = 20'
(TSP Figure 4.14)

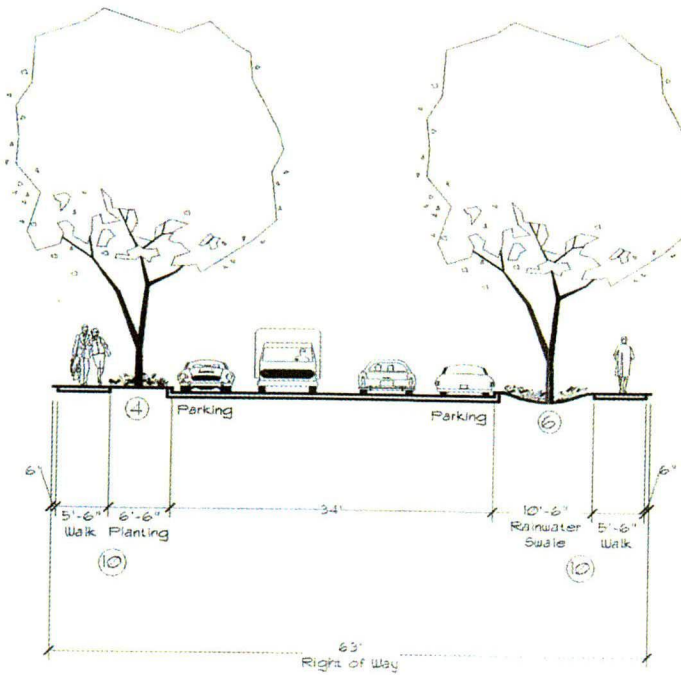


H. Residential - Village Center

Scale: 1" = 20'
(TSP Figure 4.14)

- 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 O&A 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 10' 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 lanes 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

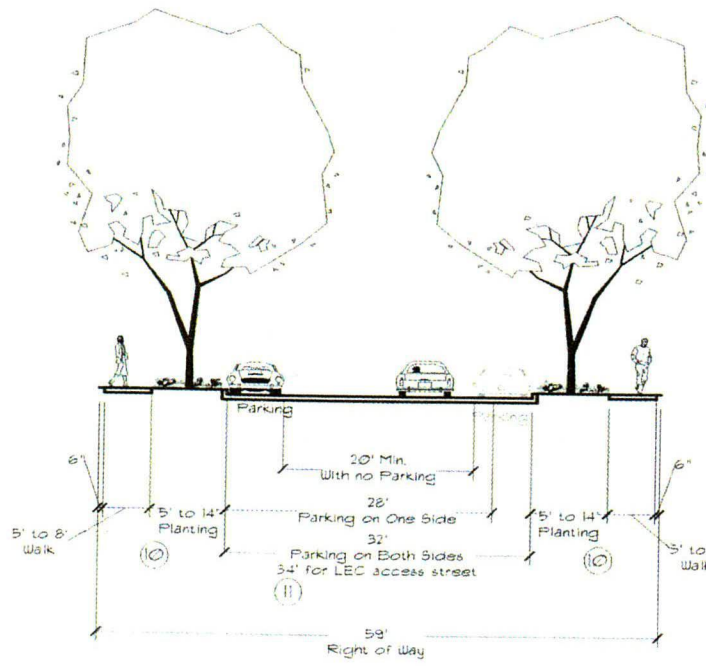
Figure 9B



I. Residential - Village Center with Swale

(TSP Figure 4.14)

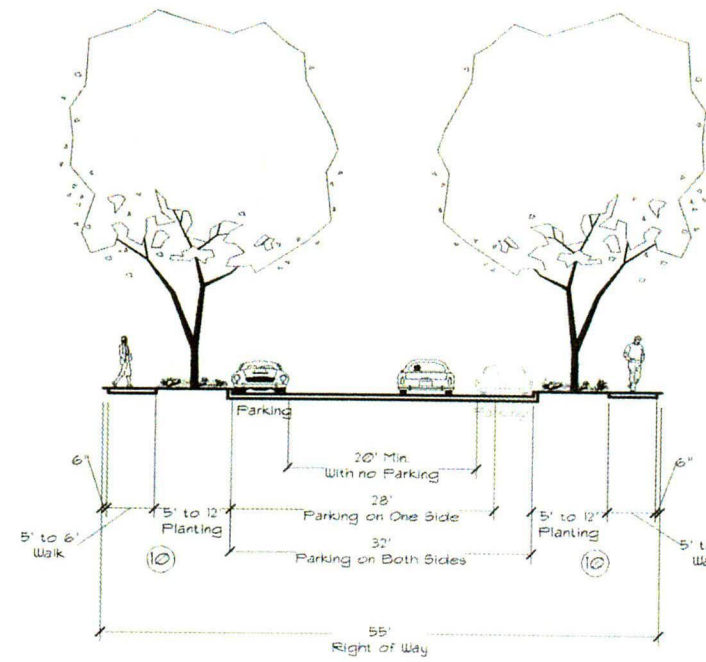
Scale: 1" = 20'



J. Residential - Standard - LEC Access

(TSP Figure 4.14)

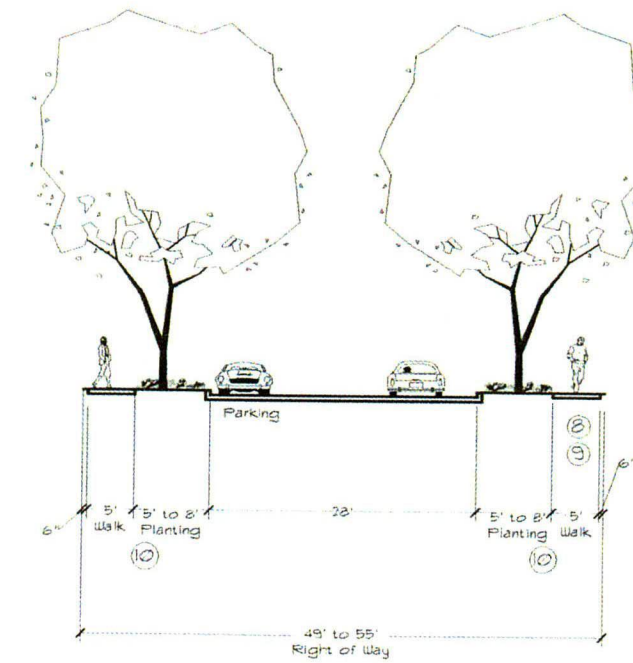
Scale: 1" = 20'



K. Residential - Minimum

(TSP Figure 4.14)

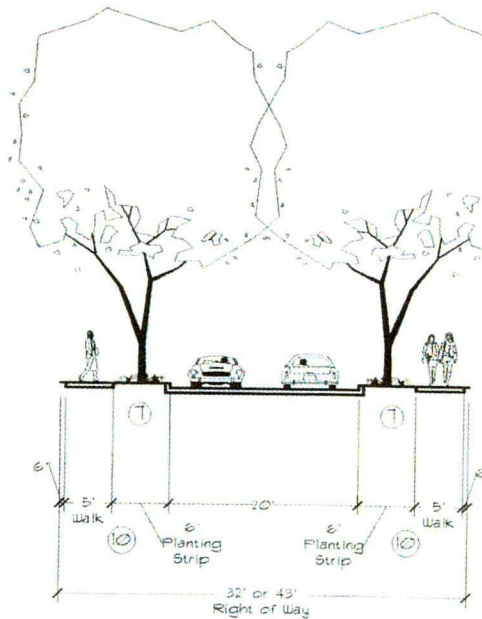
Scale: 1" = 20'



L. Residential - Parking One Side

(TSP Figure 4.14)

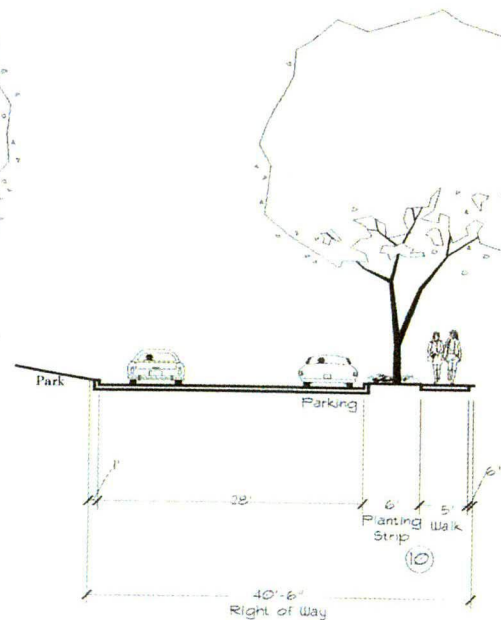
Scale: 1" = 20'



M. Residential - No Parking

(TSP Figure 4.14)

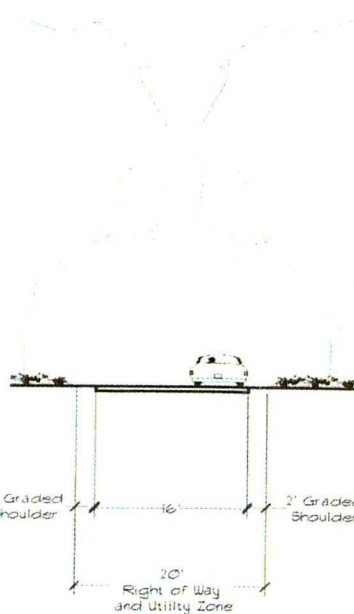
Scale: 1" = 20'



N. Residential - One Way Parking One Side

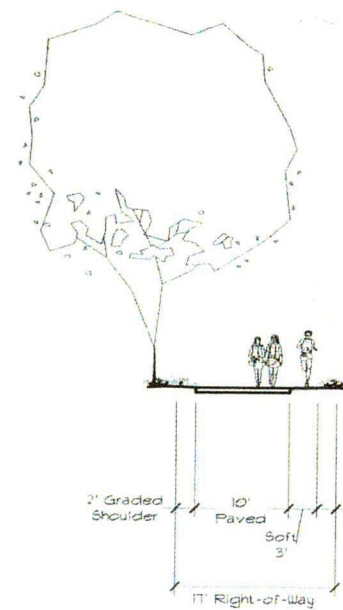
(TSP Figure 4.14)

Scale: 1" = 20'



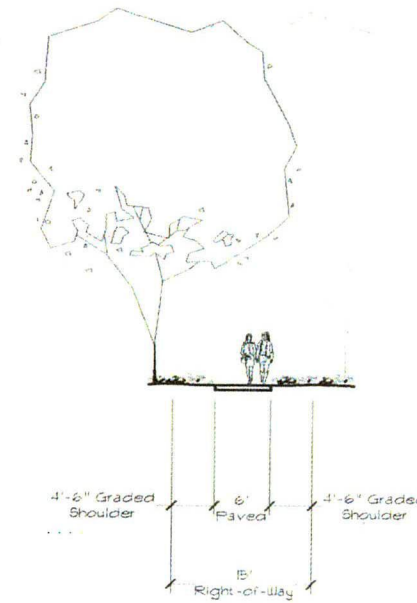
O. Private Lane

Scale: 1" = 20'



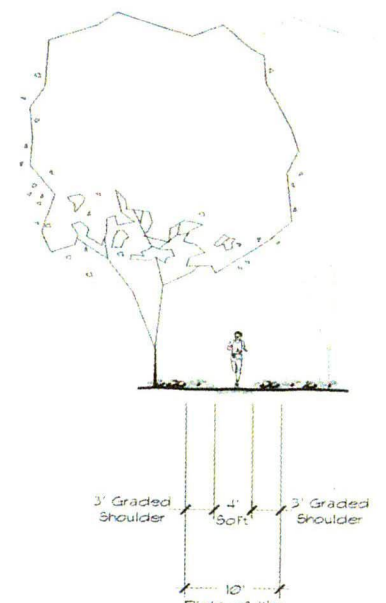
P. Major Pathway

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 Granam's Ferry Road.
2. Rainwater swales are not required for streets with grades in excess of 2%.
3. Section to be determined by Bosckman 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 O&A 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 Granam's Ferry Road.

Street and Trail Sections - B

June 4, 2003

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).

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 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 ¹	50 ³	5 ³	7 ½ ³	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 Center w/ Median (VVMP Section F)	90	63 ⁴	13 ½	-- ⁴	8	5	12	13 ⁴
Residential Village Loop (VVMP Section G)	76 ¹	50 ²	5 ³	7 ½ ³	8	5	12	None
Residential Village Center (VVMP Section H)	55	34	5 ½	4 ½	Not striped	Shared w/ cars	Not striped	None
Residential Village Center w/ Swale (VVMP Section I)	63	34	5 ½	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 ⁶	None
Residential Minimum (VVMP Section K)	55	20-32	5-6	5-12	Not striped	Shared w/ cars	Not striped ⁶	None
Residential Parking One Side (VVMP Section L)	49-55 ¹	28 ²	5 ³	5-8 ³	Not striped	Shared w/ cars	Not striped	None
Residential No Parking (VVMP Section M)	32-43 ¹	20 ²	5 ³	6 ³	Not striped	Shared w/ cars	Not striped ⁶	None
Residential One Way Parking One Side (VVMP Section N)	40 ½	28	5	6	Not striped	Shared w/ cars	Not striped	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.

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 110th Avenue and the Coffee Lake Wetland Complex and on Villebois Drive between the Loop Road and Boeckman Road. 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 sidewalk to 13 ½' and have 13' median and no planter strip option on Residential Street (VVMP Street Section F), which increases curb-to-curb to 63' and right-of-way to 90' and also stripes parking and bike lanes.

This alternative street section is within the Village Center, which will be an area of high pedestrian activity. The wider sidewalk will accommodate greater levels of pedestrian activity. The wider median will allow larger canopied trees to be planted (see above discussion).

- 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 110th Avenue is slightly altered with the *Villebois Village Master Plan* and the link between 110th Avenue and Grahams Ferry Road (Minor Collector) is shown. The alignment of Villebois Drive (Major Collector) between 110th 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 110th 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 sidewalk to 13 ½' and have 13' median and no planter strip option on Residential Street (VVMP street section F), which increases curb-to-curb to 63' and right-of-way to 90' and also stripes parking and bike lanes.
 - 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.

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 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.

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. and Colette Snuffin, P.E., DKS Associates, January 13, 2003.

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

DKS Associates

1400 SW 5th 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 Generation¹ and trip surveys of similar uses in Wilsonville².

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.

¹ *Trip Generation Informational Report*, 6th Edition, Institute of Transportation Engineers, 1997.

² 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 5th 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 110th 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 capacity¹.

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

¹ 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 Clutter 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.²

Forecasted PM peak hour operating conditions were determined based on the *2000 Highway Capacity Manual*³ methodology for signalized and unsignalized intersections. For roundabouts, operating conditions were determined based on the *1994 Highway Capacity Manual*⁴ 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.

² *City of Wilsonville Code*, Section 4.139, p. 163

³ Transportation Research Board, *Highway Capacity Manual* 2000, Chapters 16 and 17.

⁴ 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 collectors⁵.

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 Collector⁶ although its 85th 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)⁷. The proposed roadways are shown accessing Grahams Ferry Road as close as 250 feet apart. These should be relocated to no less than 600

⁵ *Transportation Master Plan*, City of Wilsonville, July 12, 1991, Table 6.
⁶ *Clackamas County Comprehensive Plan*, Map V-2b.
⁷ 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

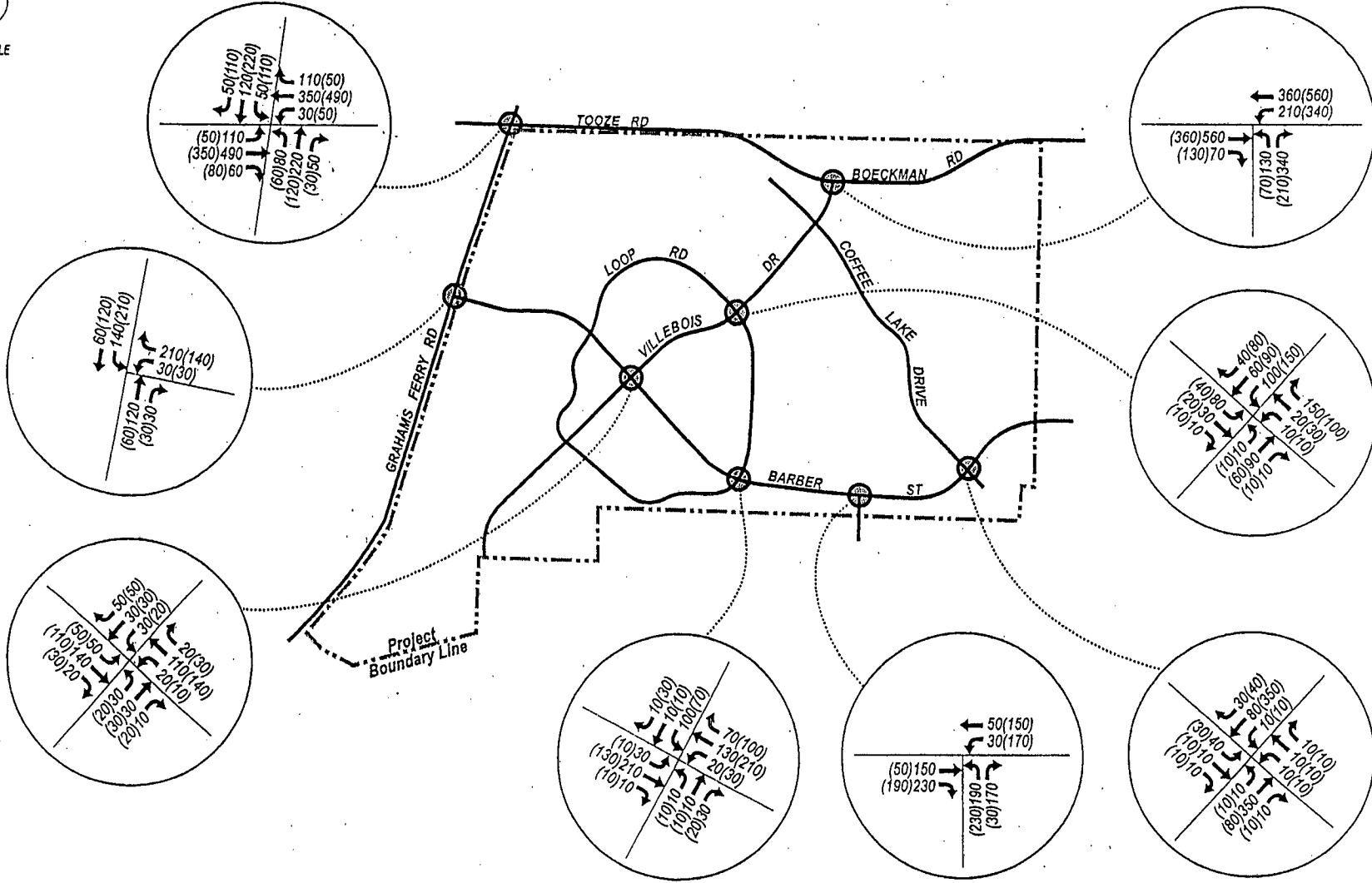
A good system of pedestrian facilities, including sidewalks and pathways, are proposed throughout the interior of Villebois. The interface between existing and possible future neighborhoods should be considered. For example, the Montebello Drive⁸ roadway connection is important for pedestrian/bicycle 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.⁹ Other crossings should be located at intersections wherever possible. Figure 3 shows recommendations for additional linkages and some crossing treatments.

\\PDXFILES\IX-DRIVE\Projects\2002\P02246 (Wilsonville Villebois Urban Village TIS)\Word\internal circ memo.doc

⁸ It should be noted that the traffic analysis was conducted with Montebello Drive connected to Barber Street.

⁹ "Standards for Pedestrian Treatments at Unsignalized Crossings", a memorandum by DKS Associates issued to the City of Wilsonville, November 13, 2002.



LEGEND



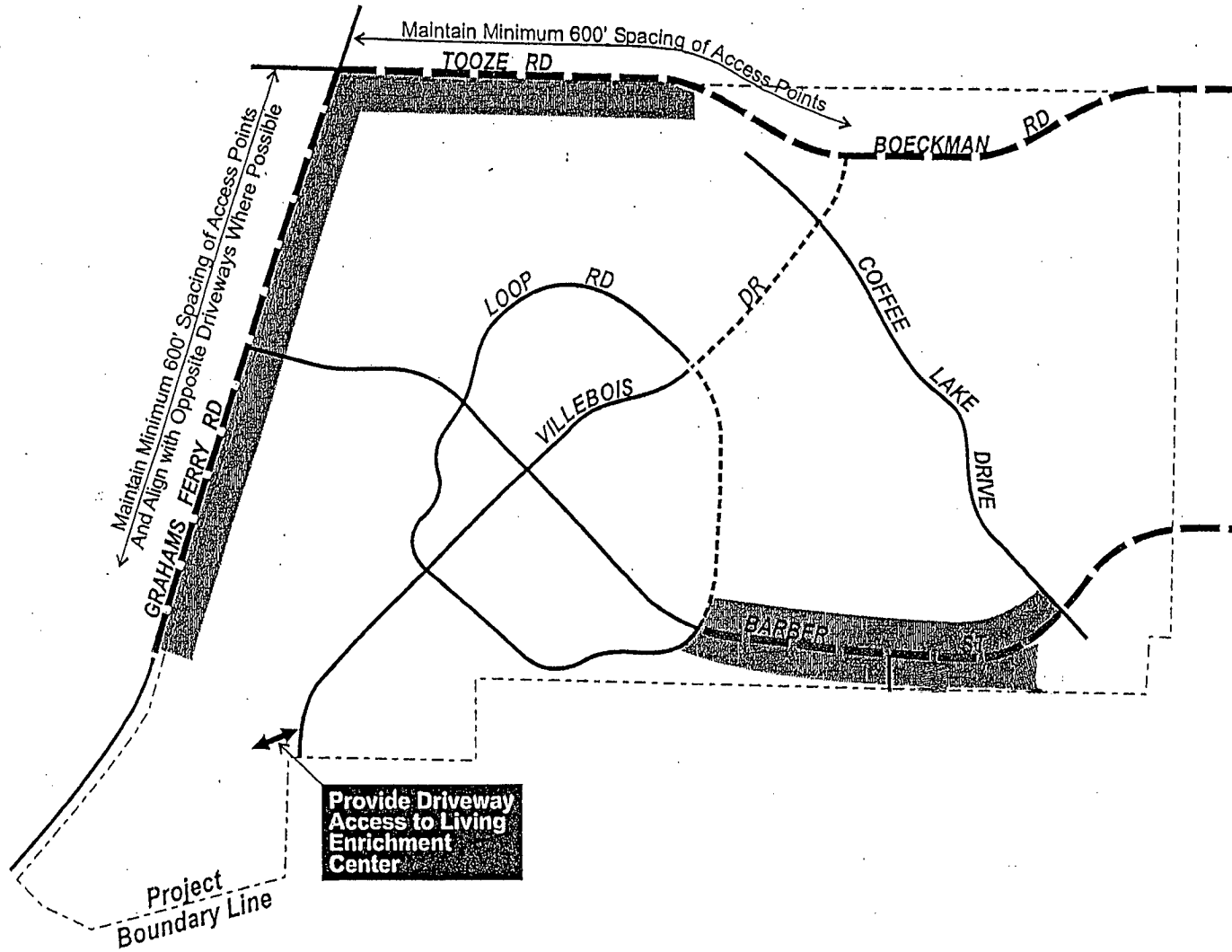
-  - Study Intersection
-  - AM(PM) - Peak Hour Traffic Volumes

Figure 1
Villebois Urban Village
INTERNAL CIRCULATION



LEGEND




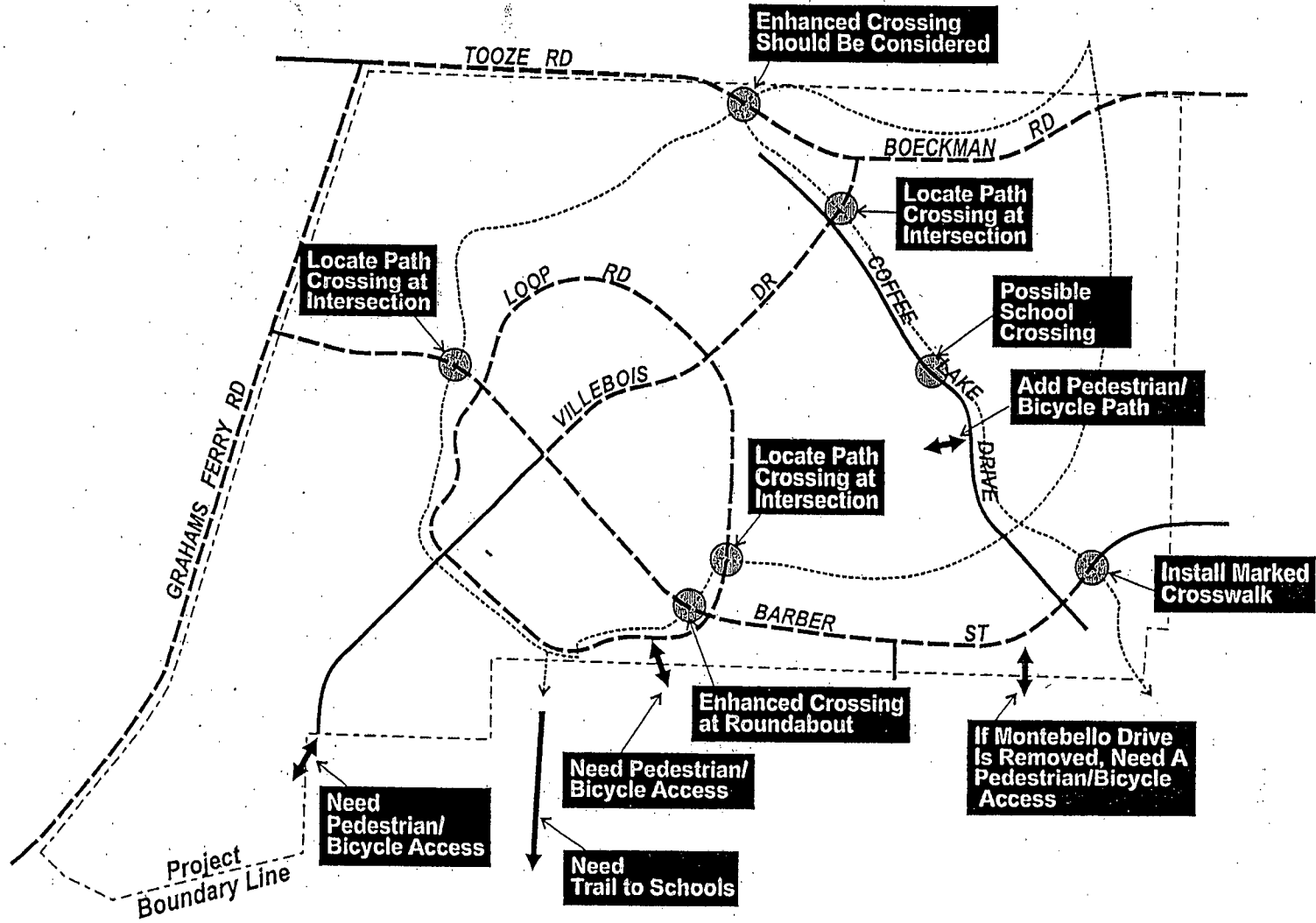
-  - No Parking
-  - Limited Parking
-  - No Driveway Access on Barber Street, Grahams Ferry Road or Tooze Road

Figure 2
Villebois Urban Village
ACCESS AND PARKING



LEGEND

- - - - - Bike Lanes
- Shared-Use Path

Figure 3
Villebois Urban Village
PEDESTRIAN/BICYCLE

DKS Associates

1400 SW 5th 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

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 th Avenue/Boeckman Road		✓		
15	Boberg Road/Boeckman Road		✓		
16	Boeckman Road/Parkway Avenue		✓		
17	Grahams Ferry Road/Clutter Road				✓
18	95 th Avenue/Ridder Road		✓		
19	Grahams Ferry Road/Day Road				✓
20	95 th 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
Total	1029	-	1039	839	-	453	515	-	319	35.0	-	461	2272

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.¹ 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.

¹ *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
Total	1029	-	968	839	-	421	515	-	298	35.0	-	324	2011

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.² 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*³ methodology for signalized and unsignalized intersections.

² *City of Wilsonville Code*, Section 4.140, p. 167 as revised by Ordinance No. 538 Exhibit A.

³ 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 th 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 th 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) ⁴
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 th 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

⁴ 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 th 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 th 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 th 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) ⁵
7 (2010)	Clutter Road/Grahams Ferry Road (I)	Add WB left turn lane
8 (2011)	-	-

⁵ 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 through 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
	I-5 NB Ramps/Wilsonville Road	F	1.14	B	E*	1.11*
2 (2005)	I-5 NB Ramps/Wilsonville Road	F	1.13	C	D	0.95
3 (2006)	-	-	-	-	-	-
4 (2007)	95 th Avenue/Boeckman Road	E	-	D	C	-
5 (2008)	Brown Road/Wilsonville Road	E	1.04	E	D	0.94
6 (2009)	95 th Avenue/Boeckman Road	F	-	F	B	0.49
	Parkway Avenue/Boeckman Road	E	0.98	G	D	0.83
	Boberg Road/Boeckman Road	E	-	-	B	-
7 (2010)	Clutter Road/Grahams Ferry Road	E	-	H	C	-
8 (2011)	-	-	-	-	-	-

* 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 th 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 th Avenue/Boeckman Road: Add WB right turn lane	5 (2008)	4 (2007)
95 th 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 95th Avenue/Elligsen Road (second NB left turn lane). The estimated timing for Brown Road/Wilsonville Road improvements is between 2012 and 2015. Improvements for 95th 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 95th Avenue, Kinsman Road extension north from Boeckman Road to Ridder Road or a new extension of 110th 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.

Amended by incorporating all
the change listed in
Attachment A to the Ord.

AK



Villebois

Villebois Village Master Plan

(City File No. 02PC07B)



**COSTA PACIFIC
COMMUNITIES**

submitted to:

The City of Wilsonville

4 June 2003

**Planning Commission
Recommended Draft
July 23, 2003**

APPLICATION NO. 02PC07B
VILLEBOIS VILLAGE MASTER PLAN

TABLE OF CONTENTS

CHAPTER 1 – PURPOSE & SCOPE OF VILLEBOIS VILLAGE MASTER PLAN	3
1.1 PURPOSE	3
1.2 SCOPE	3
CHAPTER 2 – LAND USE	5
2.1 INTRODUCTION / PROPOSAL	5
2.2 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION	8
CHAPTER 3 – PARKS & OPEN SPACE / OFF-STREET TRAILS & PATHWAYS	12
3.1 INTRODUCTION / PROPOSAL	12
3.2 PARKS & RECREATION MASTER PLAN COMPLIANCE ANALYSIS.....	17
3.3 PARKS & RECREATION MASTER PLAN POLICY ANALYSIS	21
3.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION	23
CHAPTER 4 – UTILITIES	25
4.1 SANITARY SEWER	25
4.1.1 INTRODUCTION / PROPOSAL.....	25
4.1.2 WASTEWATER COLLECTION SYSTEM MASTER PLAN COMPLIANCE ANALYSIS.....	25
4.1.3 WASTEWATER COLLECTION SYSTEM MASTER PLAN POLICY ANALYSIS	27
4.1.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION	31
4.2 WATER	32
4.2.1 INTRODUCTION / PROPOSAL.....	32
4.2.2 WATER SYSTEM MASTER PLAN COMPLIANCE ANALYSIS.....	32
4.2.3 WATER SYSTEM MASTER PLAN POLICY ANALYSIS	35
4.2.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION	36
4.3 STORM DRAINAGE	37
4.3.1 INTRODUCTION / PROPOSAL.....	37
4.3.2 STORMWATER MASTER PLAN COMPLIANCE ANALYSIS	37
4.3.3 STORMWATER MASTER PLAN POLICY ANALYSIS	41
4.3.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION	46
CHAPTER 5 – CIRCULATION	48
5.1 INTRODUCTION / PROPOSAL	48
5.2 TRANSPORTATION SYSTEMS PLAN COMPLIANCE ANALYSIS.....	48
5.3 TRANSPORTATION SYSTEMS PLAN POLICY ANALYSIS	51
5.4 VILLEBOIS VILLAGE MASTER PLAN IMPLEMENTATION	57
GLOSSARY.....	59
LIST OF REFERENCE DOCUMENTS.....	64
APPENDIX A	65
APPENDIX B	68

LIST OF FIGURES

FIGURE 1 – LAND USE PLAN

FIGURE 2 – VILLAGE CENTER LAND USE

FIGURE 3 – SPECIFIC AREA PLAN

FIGURE 4 – SEQUENCE OF DEVELOPMENT

FIGURE 5 – PARKS AND OPEN SPACE PLAN

FIGURE 6 – COMPOSITE UTILITIES PLAN

FIGURE 6A – ON-SITE STORMWATER FACILITIES

FIGURE 6B – ON-SITE RAINWATER MANAGEMENT

FIGURE 7 – STREET PLAN

FIGURE 8 – PROPOSED ARTERIAL & COLLECTOR SYSTEM

FIGURE 9A – STREET & TRAIL SECTIONS

FIGURE 9B – STREET & TRAIL SECTIONS

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 buildout 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);
- Commercial/Employment Overlay Area (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).

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 02PC06A). It provides goals, policies and implementation measures for the general land use plan, residential neighborhood housing, the Village Center, and the 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 inclusion of 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 LEC. 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:

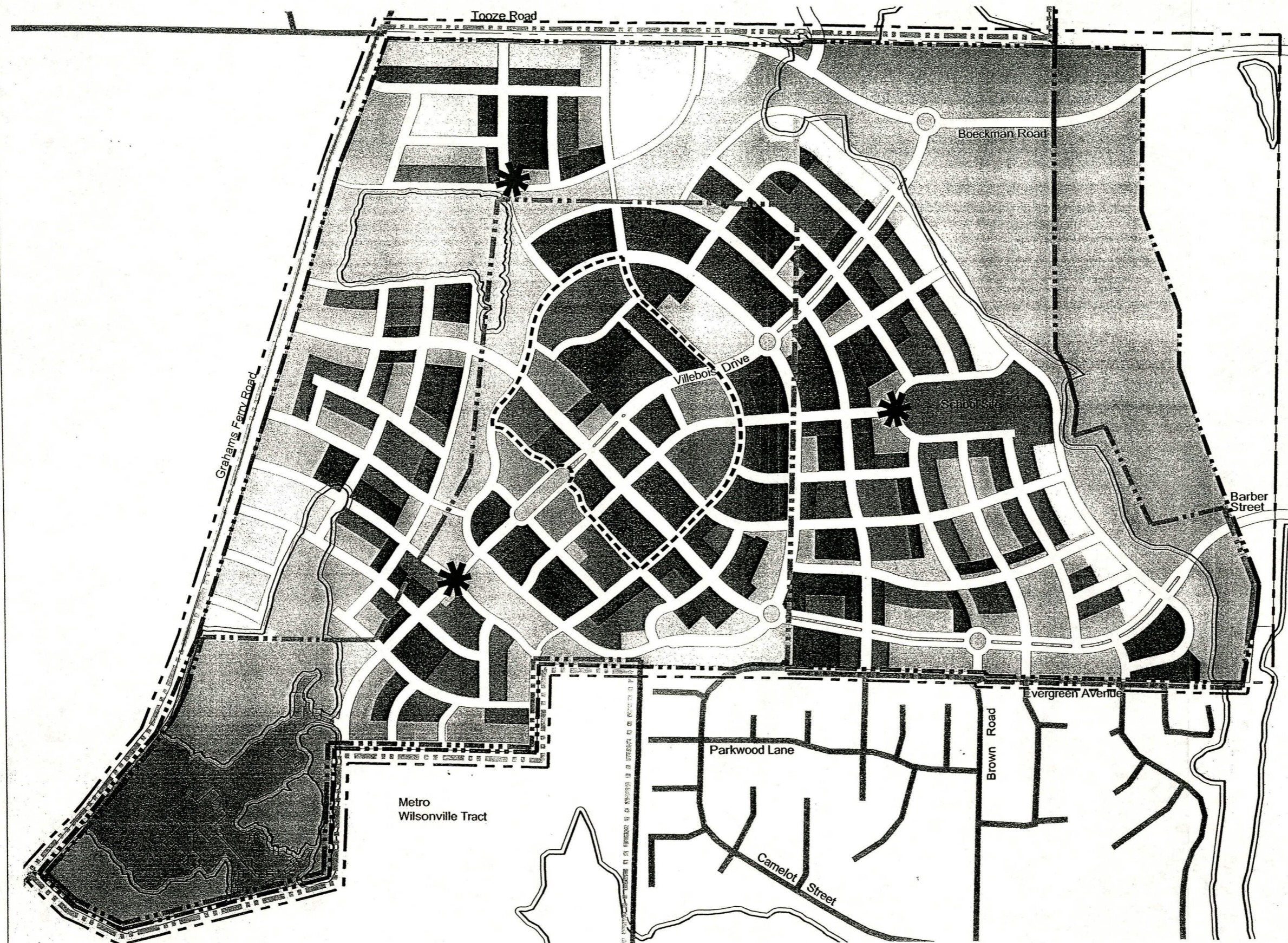
- One-quarter mile radius in size,
- Neighborhood edges defined by the roadway system,
- A mix of housing types,
- A commons at each neighborhood,
- The Village Center at the confluence of the neighborhoods, and
- Open space linkages between neighborhoods and to adjacent open space.

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.


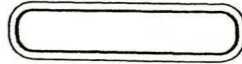





Convenient retail uses at the Neighborhood Center are intended to serve the basic needs of neighborhood residents and are small in scale (no more than 3,500 square feet in area), compared to the larger retail development within the Village Center.

Each neighborhood will include a mix of housing types, including estate lots (average 9,600 square feet), large (average 7,150 square feet), standard (5,500 square feet), medium (3,600

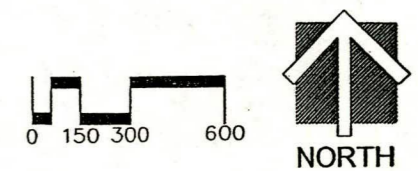
Figure 1



LAND USE	DENSITY	UNITS	ACF
Specialty Condos	50.9 du/ac	178	3.5
Mixed Use Condos	31.8	191	6.0
Urban Apartments	30.1	214	7.1
Condos	28.5	154	5.4
Village Apartments	23.6	203	8.6
Neighborhood Apartments	20.0	98	4.9
Rowhouses	16.3	316	19.4
Small Detached (50 x 50)	10.3	364	35.1
Medium Detached (40 & 45 x 90)	8.6	350	40.1
Standard Detached (55 & 60 x 100)	5.7	194	33.1
Large (65 x 110 - 120 +)	4.8	65	13.1
Estate (70 x 140 or 80 x 120)	3.2	63	19.1
RESIDENTIAL UNITS TOTAL	12.1	2,390	197
School Site (Includes 3 ac of playfields)			10.1
Openspace (Total does not include 3 ac of school playfields)			150
Living Enrichment Center			19.1
Area in R.O.W.			104
PLANNING AREA TOTAL			481

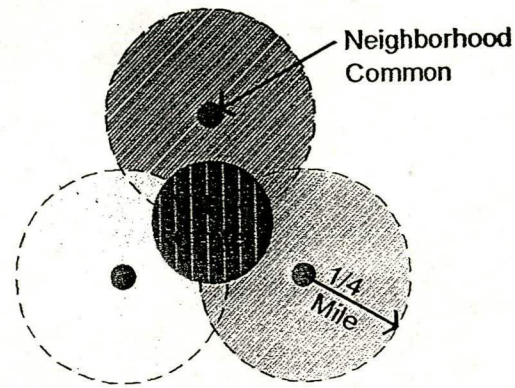
-  Neighborhood Commons/Mixed Use
-  Significant Resource Overlay Zone (SROZ) w 25' buffer
-  Commercial/Employment Overlay Area
-  Urban Growth Boundary
-  City Limits
-  Village Area Boundary
-  Dammasch Study Boundary

Note:
Boundary lines have been adjusted for graphic clarity.

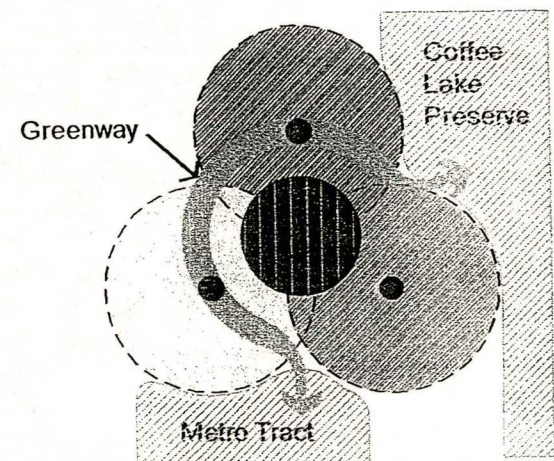


NOTES:
The Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Encroachments within the SROZ are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, and intersections as well as rainwater facilities and pathways will be made to comply with SROZ regulations.
* The SAP process will address an increase in size of the school site to 10 acres or a size otherwise agreed upon with the city and school district.

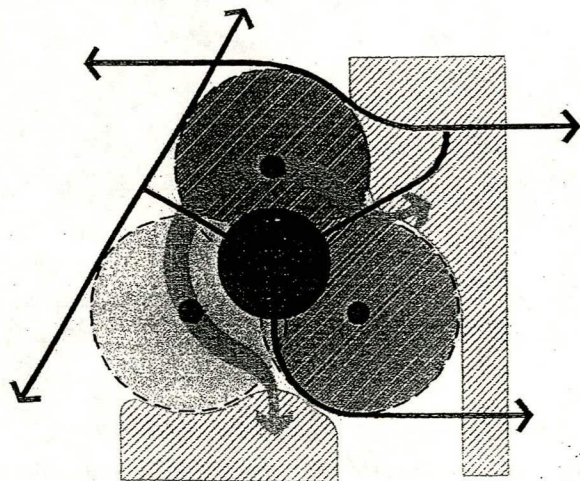
Figure 2



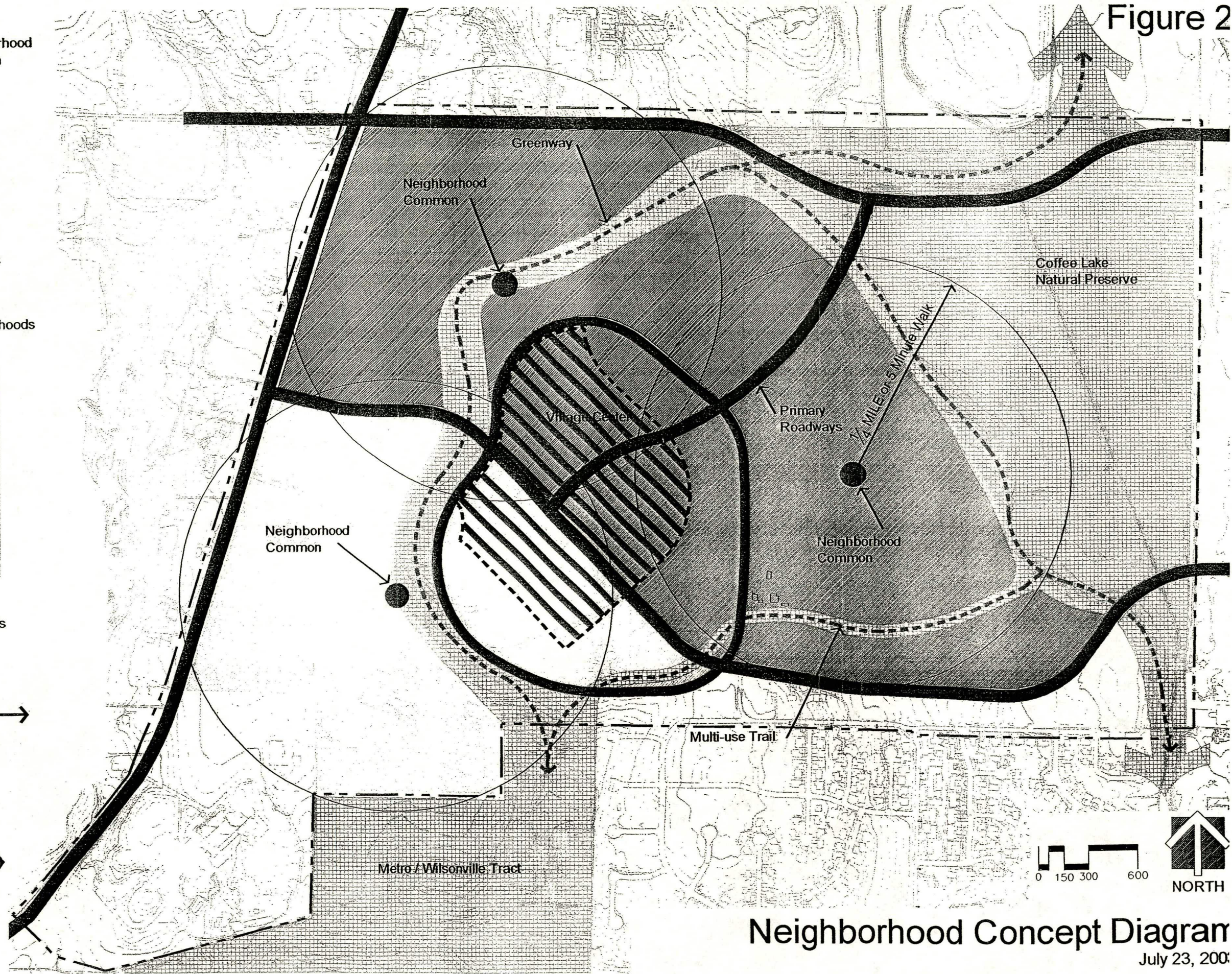
Conceptual Diagram - Neighborhoods
 - 1/4 mile radius neighborhood = 5 minute walking distance
 - Commons at neighborhood center
 - Village Center at the confluence of neighborhoods



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



Conceptual Diagram - Roadways
 - Roadway system defines neighborhood edges



Neighborhood Concept Diagram

July 23, 2003

Adopted by Planning Commission on July 23, 2003

square feet) and small single-family lots (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 larger single-family lots will be located adjacent to existing single-family homes along Brown and Evergreen roads to the south, LEC 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 34 acres at the center of Villebois (*see Figure 2A – Village Center Boundary & Land Use Plan*). Design elements, which characterize the Village Center include:

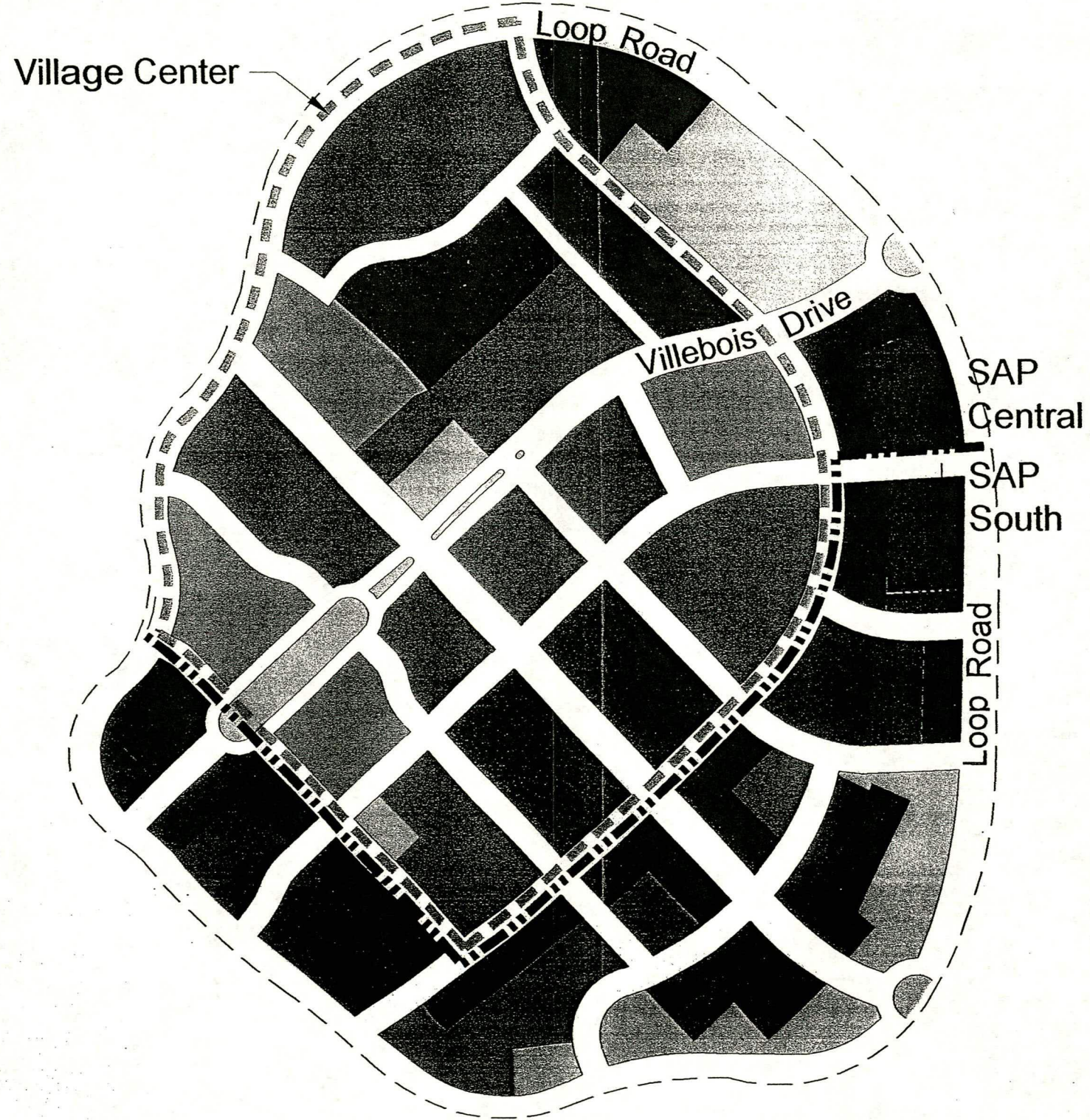
- Higher-density residential housing,
- Mixed-use development,
- A location inside a loop road connecting with three neighborhoods,
- Opportunities for office/commercial/light industrial/civic uses,
- Easy access to multi-modal transportation opportunities,
- Inclusion of parks and greenway features,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

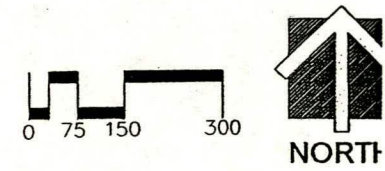
The Village Center is intended to create the opportunity for the core area of Villebois to have a higher concentration of employment uses than may be allowed with the underlying Village zone. This area is designated for mixed-use (residential, retail, civic, and office development) and related employment 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 2/



- LAND USE**
-  Specialty Condos
 -  Mixed Use Condos
 -  Urban Apartments
 -  Condos
 -  Village Apartments
 -  Rowhouses
 -  Small Detached (50 x 50)
 -  Medium Detached (40 & 45 x 90)
 -  Openspace
-
-  Village Center Boundary
 -  SAP Boundary

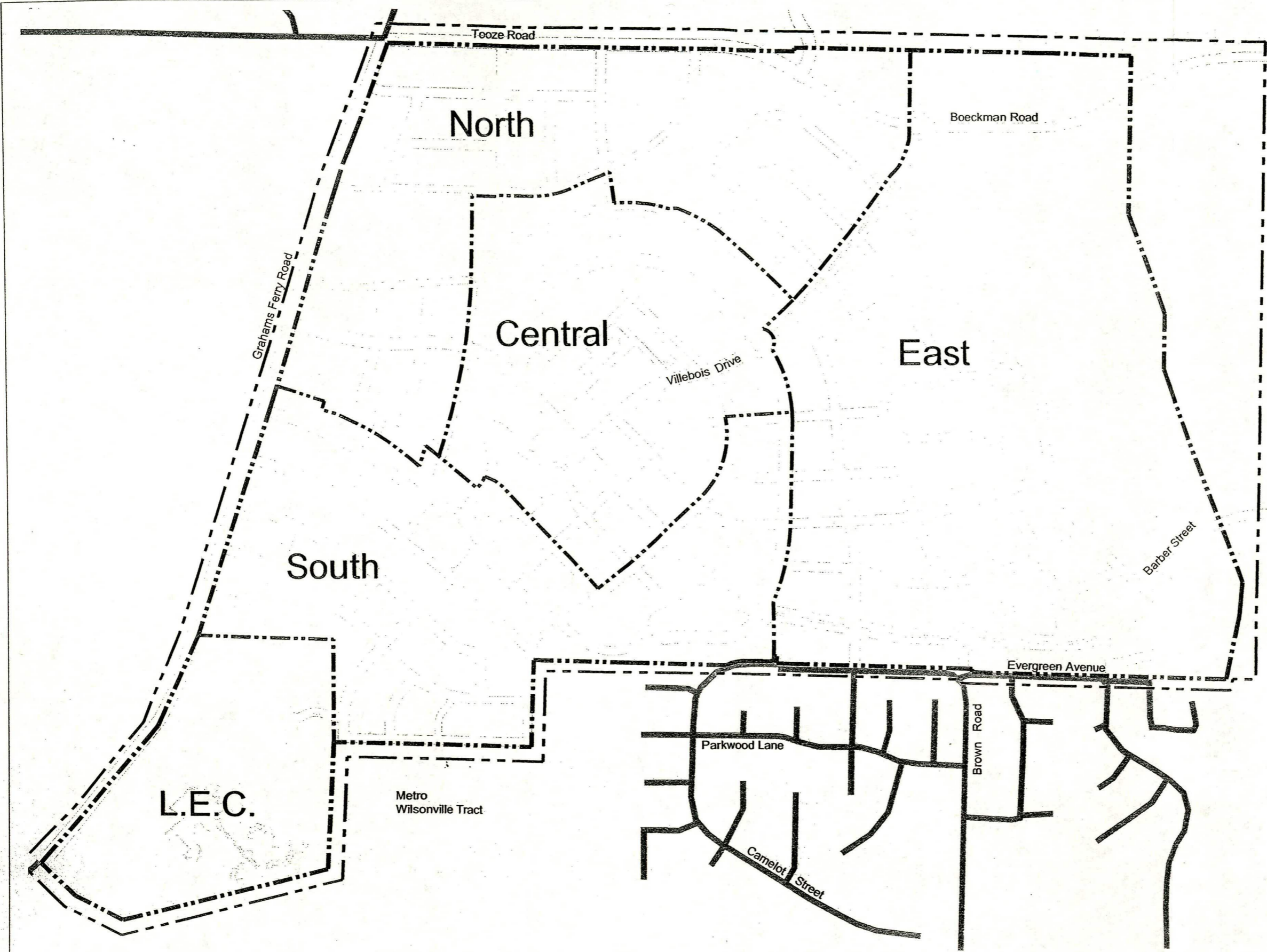


Village Center Boundary and Land Use Pla

July 23, 20

Adopted by Planning Commission on July 23, 2003

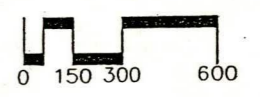
Figure 3



Legend

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

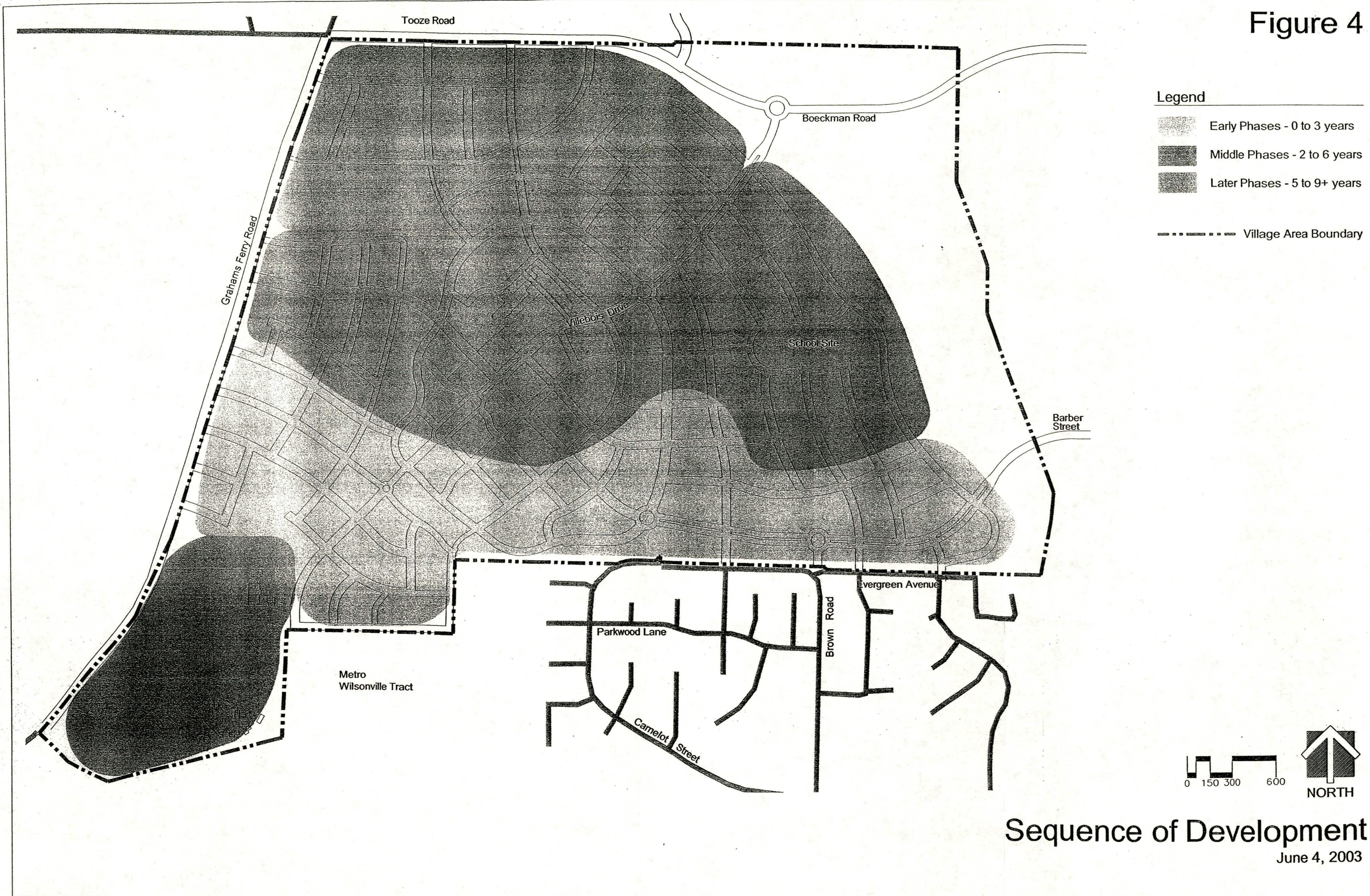
Note:
Boundary lines have been adjusted for graphic clarity



Specific Area Plan

June 4, 2003

Figure 4



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

At the recommendation and request of the West Linn/Wilsonville School District, a site has been included for a 550-student grade school. The School District has indicated that a 10-acre site is needed. The Master Planner will coordinate with the School District throughout the planning stages of Villebois Village to address siting of the school. An implementation measure is included to prescribe a 10-acre school site.

The School District has indicated to the Master Planner that any location within one of the residential neighborhoods in the *Villebois Village Master Plan* would be acceptable. Though the *Villebois Village Master Plan* continues to illustrate the school site in the eastern portion of the plan area (*Figure 1 – Land Use Plan*), the ultimate location of the school shall be west of 110th Street as shown in *Figure 1A – Replacement Land Use Plan* and shall be confirmed through the approval process for *Figure 1A* and as specified within the implementing Village zone. Upon selection of the site, *Figure 1 – Land Use Plan* and/or *Figure 1A – Replacement Land Use Plan* for the *Villebois Village Master Plan* will be revised to reflect the chosen location.

Living Enrichment Center (LEC)

Per the City's approval of City Files 02PC07A and 02PC07C, the Living Enrichment Center (LEC) has been included in the area to be designated Residential – Village on the Comprehensive Plan Land Use Map. LEC 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 LEC as part of the Residential – Village Comprehensive Plan land use designation and illustrates LEC within the boundaries of the Master Plan. Full analysis of LEC's compliance with the City's Comprehensive Plan and its various sub-elements is not included in this document (City File 02PC07B). LEC will be required to submit a Specific Area Plan (SAP) for their property (see Specific Area Plan description below). As a part of LEC's Specific Area Plan approval, they shall be required to 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. LEC 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 plan, 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 Plan 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*).

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 Living Enrichment Center (LEC) 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 Plans.
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 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 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) for LEC 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. LEC shall be responsible for obtaining any master plan or ordinance amendment(s) that may be necessitated by their proposal.

See also Implementation Measure 6
as adopted by Planning Commission
on July 23, 2003 (Next Page)

Insert the following to the bottom of Page 8 as General Land Use Plan Implementation Measure 6 of the *Villebois Village Master Plan*.

6. The technical data supporting *Figure 1A – Replacement Land Use Plan* and the data and analyses to address the City's Master Plans, as well as the updated *Villebois Village Master Plan* findings, text and figures, as appropriate, shall be submitted by the Master Planner. City staff shall complete the necessary review, prepare staff report(s) and schedule Planning Commission action to accomplish approval within 180 days of approval of the *Villebois Village Master Plan*. This approval process is intended to streamline the legislative amendment process and retain Planning Commission authority to review legislative changes to the City's Comprehensive Plan. *Figure 1A – Replacement Land Use Plan* shall be void if the approval process is not completed within the specified time, unless the Planning Commission should extend the time limit.

Alternative Language related to
Figure 1A based on proposed
Eastside SAP changes and adopted
by the Planning Commission on
July 23, 2003.

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 ORS 426.508.
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 buildout 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 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.

SCHOOL

Goal

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

Policy

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.

Implementation Measure

1. Coordinate with the West Linn/Wilsonville School District throughout the planning stages of Villebois Village to address siting of a 550-student grade school where a recreational area is contiguous to the school facility and the total acreage is 10 acres. Upon selection of a site, revise *Figure 1 – Land Use Plan* and/or *Figure 1A – Replacement Land Use Plan*, as appropriate, of the *Villebois Village Master Plan* to reflect the selected site.
2. Confirmation of the school site shall be included within the 180-day approval process for *Figure 1A – Replacement Land Use Plan* (General Land Use Plan Implementation Measure 6).

Replacement Land Use Plan (see Figure 1A)

Insert the following to the end of Page 7 of the *Villebois Village Master Plan*.

Figure 1A – Replacement Land Use Plan illustrates plan revisions east of 110th Avenue and identifies an area where the future elementary school will be located west of 110th Avenue. The *Replacement Land Use Plan* is consistent with the *Villebois Village Concept Plan* and the *Villebois Village Master Plan* by continuing to provide the design elements identified in the *Concept Plan* and continuing to meet the guiding principles established with the *Concept Plan*.

The *Replacement Land Use Plan* continues to provide three neighborhoods within the areas identified on *Figure 2 – Neighborhood Concept Diagram* that include the design elements that characterize neighborhoods. Each neighborhood continues to be approximately one-quarter mile radius in size with neighborhood edges defined by the roadway system. Each neighborhood continues to provide a mix of housing types that front on public rights-of-way and a Commons at the center of each neighborhood. The Village Center continues to be located at the confluence of the three neighborhoods and is unaltered by the *Replacement Land Use Plan*. Direct pedestrian and vehicular connection to the Village Center from each Neighborhood Commons continues to be provided. Parks and Open Space areas continue to provide linkages between neighborhoods and adjacent open space. Thus, the *Replacement Land Use Plan* continues to provide connectivity and diversity within the neighborhoods of Villebois.

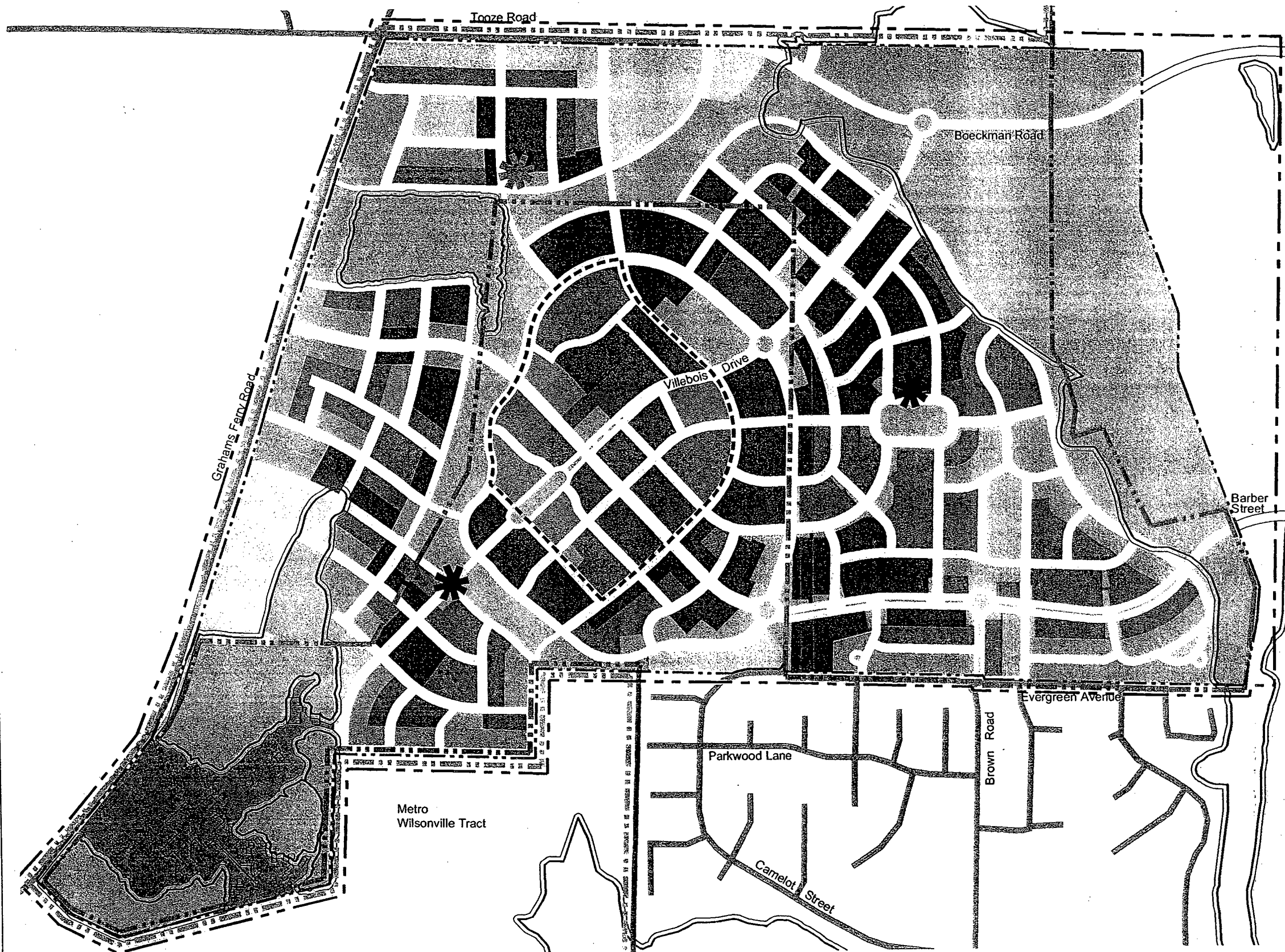
The *Replacement Land Use Plan* recognizes that an elementary school is a viable part of the community and is necessary to fulfill build-out of the vision of Villebois. The *Replacement Land Use Plan* identifies relocation of the future elementary school (10 acres inclusive of 3 acres of sports fields) to an area within the northwest portion of Villebois, west of 110th Avenue. This area is identified with an asterisk on *Figure 1A – Replacement Land Use Plan*. The final school location will be selected in consideration of vehicle and bus access, bike and pedestrian safety, future residential build-out in the area, and natural resources. Neighborhood walkability will be assured throughout the process of school site selection and subsequent design, since connectivity and diversity in modes of travel are guiding principles in Villebois.

The *Replacement Land Use Plan* continues a land use pattern and street system that is designed in consideration of existing natural resources and incorporates these resources into parks and open space areas to protect resources as appropriate and emphasize amenities for the community. The *Replacement Land Use Plan* will continue the rainwater systems and environmental programs described in Chapters 3 through 5 of the *Villebois Village Master Plan*. Thus, the *Replacement Land Use Plan* meets the sustainability principles of Villebois.

Figure 1A – Replacement Land Use Plan is in substantial conformance with the vision of Villebois Village as it includes the three identified neighborhoods, the Village Center, the elementary school, parks and open space linkages and circulation systems in a manner that is consistent with the guiding principles of connectivity, diversity and sustainability as set forth in the *Concept Plan* and the *Master Plan*. Further review and evaluation is needed to provide the data and analysis necessary to address the City's Master Plans; however *Figure 1A – Replacement Land Use Plan* is adequate to use for this future work.

Alternative Language related to
Figure 1A based on proposed
Eastside SAP changes and adopted
by the Planning Commission on
July 23, 2003.

Figure 1A



- LAND USE**
- Specialty Condos
 - Mixed Use Condos
 - Urban Apartments
 - Condos
 - Village Apartments
 - Neighborhood Apartments
 - Rowhouses
 - Small Lot Single Family
 - Medium Lot Single Family
 - Standard Lot Single Family
 - Large Lot Single Family
 - Estate Lot Single Family
 - School Site (Includes 3 ac of playfields)
 - Openspace (Total does not include 3 ac of school playfields)
 - Living Enrichment Center
-
- Neighborhood Commons / and approximate location of School Site
 - 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.
* The SAP process will address an increase in size of the school site to 10 acres or a size otherwise agreed upon with the city and school district.

Adopted by Planning Commission on July 23, 2003

Replacement Land Use Plan
JULY 23, 2003

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), 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)

West Neighborhood Park (1.8 acres)

The park located in the Village's west neighborhood will provide the primary open space for residents in the surrounding neighborhood. This neighborhood park is a linkage in the greenway and hosts a section of the Coffee Lake–Wood 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.

North Neighborhood Park (2.3 acres)

This park space will provide an important area for both passive and active recreation. It will be a major point of interest as a linkage in the greenway and will also contain a section of the Coffee Lake–Wood Trail on its southern edge. A playfield will be provided to accommodate team sports and the space will emphasize views of Mt. Hood. The park will include paved walks, benches, picnic tables, lighting, and appropriate plant material.

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.

Pathway Neighborhood Park – Cedar (1.4 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.

Figure 5

Legend

- Neighborhood Commons/ Mixed Use
- Pocket Park
- Villebois Proposed Major Pathways
- Villebois Proposed Minor Pathways
- Villebois Proposed Nature Trails
- City Proposed Pathways
- PHS Wetland Delineation
- Approximate 100 Year Flood Line
- Significant Resource Overlay Zone (SROZ) with 25' buffer
- Village Area Boundary

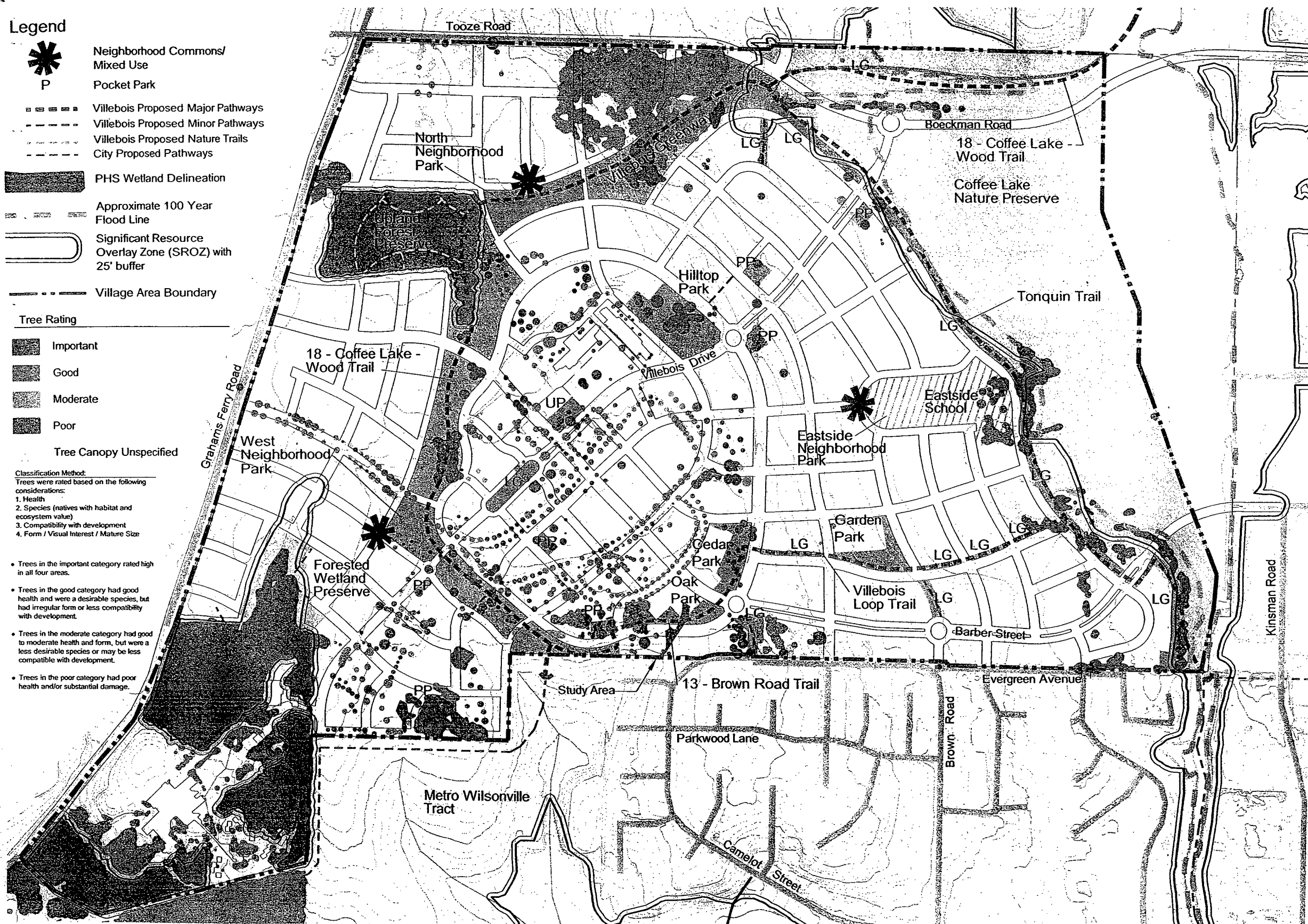
Tree Rating

- Important
- Good
- Moderate
- Poor

Tree Canopy Unspecified

- 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.



Neighborhood Parks - 21 acres

- West Neighborhood 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
- North Neighborhood Park - 2.3 acres**
 - Active recreation use within the greenway, possible play structure
 - Shared common area, gathering space and play fields
 - Connection to trail system, and view to Mt. Hood

- Hilltop Park - 2.9 acres**
 - Preserve existing specimen trees, picnic tables
 - Performance and small gathering spaces
 - Viewing areas, active and passive recreation

- Pathway Neighborhood Parks - 3.7 acres**
 - Oak Park contributes 1.2 acres of park space, preserves existing trees, and provides active and passive recreation opportunities
 - Cedar Park contributes 1.4 acres of park space, preserves existing incense cedars, enhances a prominent gateway to the Village Center, and provides passive and active recreation
 - Garden Park contributes 1.1 acres of park space, provides passive recreation and possibly a play structure.
 - All parks incorporate the Villebois loop trail which links them together

- (PP)Pocket Parks - 1.7 acres**
 - Passive / active recreation, preservation of existing trees
 - Opportunities for garden space, informal play and or play structures

- (LG)Linear Greens with Pathways- 8.1 acres**
 - Major pathway corridors and park space that provide viewing and overlook opportunities on the edges of major open spaces and include the Villebois Loop Trail, as well as interpretive and educational opportunities
 - Minor pathway corridors and park space link adjacent streets and provide pedestrian and bicycle connections throughout the community

- (UP)Urban Plaza - 0.5 acres**
 - Primary gathering space of Villebois Community
 - Focus of mixed-use area
 - Hosts annual or weekly events and farmer's market

Community Parks - 3 acres

- Eastside Park - 3.0 acres**
 - 3 acres of elementary school open space shared with neighborhood
 - Located adjacent to Coffee Lake Nature Preserve and Tonquin Trail
 - Hatch Indicates unspecified location of playfields within school site

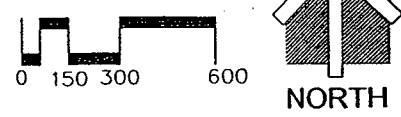
Regional Parks - 19.9 acres

- Villebois Greenway - 19.9 acres**
 - Connects major regional open spaces
 - Incorporates proposed City trails and Villebois Loop trail
 - Preserves existing trees and views, collects and treats rainwater
 - Provides gathering spaces in select areas

Open Space - 109.2 acres

- Coffee Lake Nature Preserve - 71.1 acres**
 - Adjacent to Linear Greens with pathways, wildlife habitat and corridor
 - Active/passive recreation opportunities outside of wetland/SROZ
- Forested Wetland Preserve - 4.3 acres**
 - Nature trail and viewing opportunities near perimeter
 - Wetland restoration and mitigation
- Living Enrichment Center (SROZ) - 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

Total amount of Parks = 43.9 acres
Total amount of Open Space = 109.2 acres
Total amount of Parks & Open Space = 153.1 acres



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.

Parks and Open Space Plan

June 4, 2003

Pathway Neighborhood Park – Oak (1.2 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 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.

Pathway Neighborhood Park – Garden (1.1 acres)

The Villebois Loop Trail crosses the southern edge of this park. Several houses will front on the park, benefiting from the amenity but also, providing a sense of security for the park. The park will include paved walks, benches, lighting and possibly a play structure. This park may be well suited as a location for neighborhood vegetable gardens. The slope may be too great for large active play areas but could accommodate several terraced garden sites.

Miscellaneous Pocket Parks (1.7 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.

Village Center Plaza (0.5 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.

Linear Green at Coffee Lake Nature Preserve

The Villebois Loop Trail will weave throughout the community via the greenway, across natural open space and traversing neighborhoods. Where it parallels Coffee Creek as the Tonquin Trail on the outer east edge of the Villebois residential neighborhoods, it 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, lighting, picnic areas and grassy areas for informal play.

Trailside Parks

A swath of parks will serve as buffers between Minor Pathways and surrounding houses. These greens highlight the locations of important pathways like the Villebois Loop Trail, the Tonquin 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.

Village Center Linear Green

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 Villebois Loop Trail into the Center. Another similar form of linear green is the landscaped Villebois Loop Trail Corridor, a wide space that runs the length of a road from the Village Center to Coffee Lake Nature Preserve, helping to visually and physically link the southern end of the greenway and the edge of the Metro Wilsonville Tract with the southern end of the preserve.

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

Eastside Park (3.0 acres)

This park shares the Village's proposed elementary school grounds and playfields. These playfields will serve as practice and play facilities for local sports teams. The West-Linn/Wilsonville School District and the City Park and Recreation Department have developed a relationship, which is very supportive of shared use of Park facilities.

The site contains a stand of large fir trees directly adjacent to the Coffee Lake Nature Preserve. This proximity provides both access to the natural area for the Elementary School and linkage to the park and school from the Villebois Loop Trail. This trail provides access points to both Boones Ferry Primary and Wood Middle Schools through future connections within the Metro Wilsonville Tract, as well as to the proposed school through the connection with the Tonquin Trail along the edge of the Coffee Lake Nature Preserve.

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 Metro's Wilsonville Tract regional open space. The Greenway will include amenities such as the Coffee Lake-Wood 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 109 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 (4.3 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.

Living Enrichment Center SROZ (23.2 acres)

This area will be further defined by the Living Enrichment Center 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 Coffee Lake 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 (71.1 acres)

Parts of the Coffee Lake area outside of the Wetland/SROZ will provide for recreational opportunities such as hiking, bicycling and wildlife viewing. Implementation Directive 11 of the *Villebois Village Concept Plan* (City File 02PC06A) calls for development of "a wetland naturalization and enhancement plan" for the Coffee Lake wetland complex. The *Villebois Village Master Plan* includes a policy and implementation measure to encourage development of a naturalization and enhancement plan for the Coffee Lake wetland complex. The Coffee Lake 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.

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 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 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 plan includes 700 lineal feet of nature trails around the edge of the forested wetland, connecting the Living Enrichment Center 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

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

Lake Nature Preserve. The Tonquin Trail has been incorporated into the Villebois Loop Trail. The Villebois Loop Trail's other segments provide connections to all neighborhood parks and links major open spaces within and to the north and south edges of the community.

Coffee Lake Wood Trail/Villebois Loop Trail

In addition to providing an important linkage between the regionally significant Tonquin Geologic Region to the north and the Metro Wilsonville Tract 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 Metro Wilsonville Tract, 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

Parks Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
<p>Neighborhood Parks</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>West, North, Hilltop (7 Acres), 3 Pathway Parks-Cedar, Oak, Garden (3.7 Acres), 7-Pocket Parks (1.7 Acres), linear greens (8.1 Acres) and the urban plaza (.50 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 21 Acres 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>Community Parks</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>[example: Boones Ferry and Town Center Parks]</p>	<p>Eastside Neighborhood Park (3 Acres)</p> <p>This area can be used for organized play, community events, often contain multi-use sports fields, playgrounds, shelters, picnic areas, restrooms, parking and some passive functions.</p>	<p>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 Eastside Park is associated with the future elementary school.</p> <p>The Parks and Recreation Master Plan includes school site recreational facilities in the inventory for Community Parks.</p>
<p>Regional Parks</p>	<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>

Table 1 Parks and Recreation Plan Comparison

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
Recreation Centers			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.
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>target of 1,400 square feet per 1,000 residents</p> <p>[example: limited-use - Wood Middle School]</p>	Eastside School	<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 4,600-5,570 people, there would be a need for a minor limited use/minor multi-use recreation facility of 6,440-8,050 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>
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 4,600-5,570 people, there would be a need for a major limited use recreation facility of 6,440-8,050 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>[example: Wilsonville High School and Community Center]</p>	Not identified	<p>The 1994 P&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 4,600-5,570 people; there would be a need for a major multi-use recreation facility of 12,880-16,100 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>

Table 1 Parks and Recreation Plan Comparison

Park Classification	1994 Parks & Recreation Master Plan	Villebois Village Plan	Compliance Analysis
Nature Trails	4-8 feet wide within a 10 foot right-of-way soft surface serves park and open space sites no requirement per 1,000 residents pedestrians only [example: Memorial and Tranquil Parks]	3,000 LF	21,100 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.
Minor Pathways	6-10 feet wide within a 15 foot right-of-way paved surface with 4 foot optional soft surface shoulder lighting, signage and benches target of 1,500 linear feet per 1,000 residents [example: Merryfield Park Path]	2,700 LF	21,100 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.
Major Pathways	10-17 feet wide within 15-25 foot right-a-way paved surface with 4 foot optional soft surface shoulder lighting, signage and benches target of 3,000 linear feet per 1,000 residents [example: Town Center Bike and Pedestrian Path]	15,400 LF	21,100 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.
Pocket Parks*	N/A	7 pocket parks (1.7 Acres)	Although pocket parks are not as large as neighborhood parks, they do offer some of the same elements such as opportunities for passive recreation.
Linear Green*	N/A	8.1 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.
Urban Plaza*	N/A	Urban Plaza (.50 Acres)-gathering space, mixed use area, annual or weekly events	The urban plaza could offer many of the same features and experiences that are found in neighborhood parks such as picnicing.

*Pocket Parks, linear greens and the urban plaza 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 plan has made a considerable effort to anticipate connections to the schools southeast of Metro's Wilsonville Tract. The Villebois Greenway provides a direct pathway connection to the Metro Wilsonville Tract 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 Metro Wilsonville Tract 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/Wilsonville Tract 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 Metro Wilsonville Tract.

Issue 18 – Rehabilitate creeks and streams

Response: Prior to the development of Dammasch State Mental 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 Metro Wilsonville Tract. 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 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.

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. Coordinate with the West Linn/Wilsonville School District through the planning stages of the appropriate Specific Area Plan to determine locations of sports fields within the proposed elementary school site.
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 Plan (with each SAP 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.

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 LEC will add some additional flows to the system. An analysis of the site’s existing water usage, combined with 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 LEC facility. Hereafter, UPA-2 is used to designate only this proposal.

Figure 6 – 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, City staff 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.

City staff 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 LEC, be through the Villebois site in exchange for the small portion of Villebois, which must be discharged through 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:

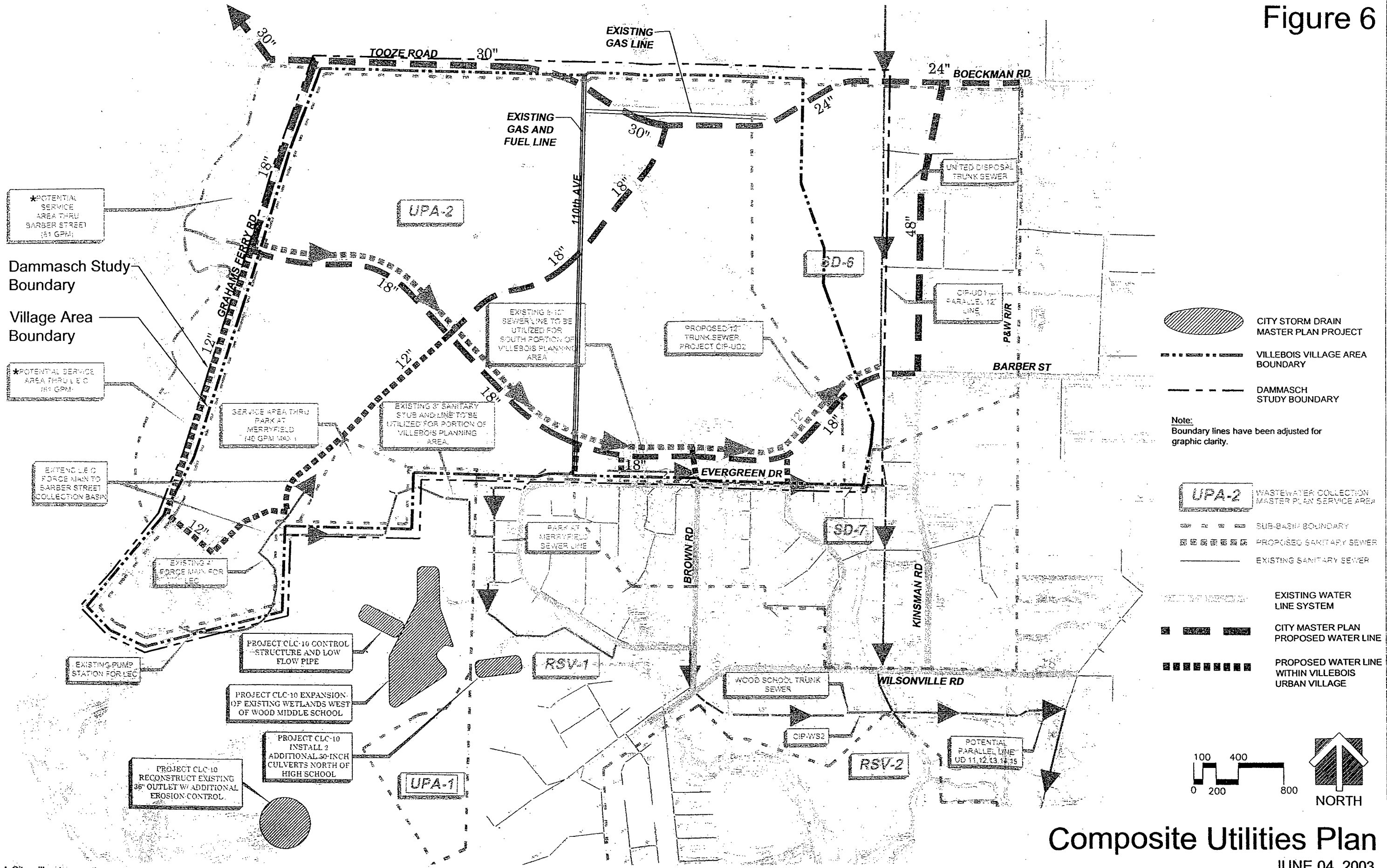
- The existing conveyance system in the immediate area.
- The proposed conveyance system.

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.

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

Figure 6



*POTENTIAL SERVICE AREA THRU BARBER STREET (81 GPM)

Damasch Study Boundary

Village Area Boundary

*POTENTIAL SERVICE AREA THRU L.E.C. (81 GPM)

EXTEND L.E.C. FORCE MAIN TO BARBER STREET COLLECTION BASIN

EXISTING 2" FORCE MAIN FOR L.E.C.

EXISTING PUMP STATION FOR L.E.C.

PROJECT CLC-10 CONTROL STRUCTURE AND LOW FLOW PIPE

PROJECT CLC-10 EXPANSION OF EXISTING WETLANDS WEST OF WOOD MIDDLE SCHOOL

PROJECT CLC-10 INSTALL 2 ADDITIONAL 30-INCH CULVERTS NORTH OF HIGH SCHOOL

PROJECT CLC-10 RECONSTRUCT EXISTING 36" OUTLET W/ ADDITIONAL EROSION CONTROL

UPA-2

EXISTING GAS AND FUEL LINE

EXISTING GAS LINE

EXISTING 8-INCH SEWER LINE TO BE UTILIZED FOR SOUTH PORTION OF VILLEBOIS PLANNING AREA




PROPOSED 12" TRUNK SEWER, PROJECT CIP-UD2

EXISTING 3" SANITARY STUB AND LINE TO BE UTILIZED FOR PORTION OF VILLEBOIS PLANNING AREA


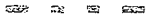


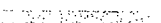
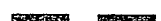

PARK AT MERRYFIELD SEWER LINE

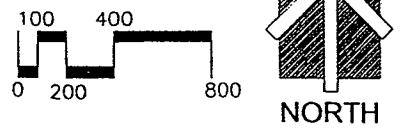
WOOD SCHOOL TRUNK SEWER

POTENTIAL PARALLEL LINE UD 11, 12, 13, 14, 15

-  CITY STORM DRAIN MASTER PLAN PROJECT
-  VILLEBOIS VILLAGE AREA BOUNDARY
-  DAMMASCH STUDY BOUNDARY

Note: Boundary lines have been adjusted for graphic clarity.

-  WASTEWATER COLLECTION MASTER PLAN SERVICE AREA
-  SUB-BASIN BOUNDARY
-  PROPOSED SANITARY SEWER
-  EXISTING SANITARY SEWER
-  EXISTING WATER LINE SYSTEM
-  CITY MASTER PLAN PROPOSED WATER LINE
-  PROPOSED WATER LINE WITHIN VILLEBOIS URBAN VILLAGE



Composite Utilities Plan
JUNE 04, 2003

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

Sanitary Sewer Master Plan is a portion of *Figure 6 – 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. The total flow anticipated in the study area is 1,943 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:	1,235 gpm	(from UPA-2 & 3)
Evergreen Road:	347 gpm	(from UPA-2)
Park at Merryfield:	<u>361 gpm</u>	(158 from LEC + 122 from west
	1,943 gpm	of Grahams Ferry + 81 from Park at Merryfield)

Proposed routing:

Barber Street:	1346 gpm	(minimum from UPA-2 & 3 + 158 from LEC + 122 from Grahams Ferry area)
Evergreen Road:	476 gpm	(maximum = 99 existing flows + 377 from UPA-2)
Park at Merryfield:	<u>121 gpm</u>	(81 from Park at Merryfield + 40 from UPA-2)
	1,943 gpm	

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 377 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 LEC 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 of 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 – 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 – 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 order.

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 / 95th 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 Evergreen 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 110th Avenue
- 18-inch main in 110th Avenue from Boeckman Road to Evergreen Avenue
- 18-inch main from 110th 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 Village Center Drive
- 18-inch main in Village Center Drive from Boeckman to Barber
- 18-inch main in Barber from Village Center Drive to Grahams Ferry
- 18-inch main in Grahams Ferry from Barber to Tooze
- 12-inch main in extension of Village Center Drive from Barber to LEC
- 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 110th Avenue to Grahams Ferry Road

The Villebois proposed water plan:

- 30-inch main in Tooze Road from 110th Avenue 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 Evergreen from Kinsman Road to Brown Road
 - 2) 48-inch main from WTP in Kinsman Road from Barber Street to Boeckman Road / 95th Avenue.
 - 3) 24-inch main in Boeckman Road from Kinsman Road to 110th Avenue
 - 4) 18-inch main in 110th Avenue from Boeckman Road to Evergreen Avenue
 - 5) 18-inch main from 110th Avenue to Grahams Ferry
 - 6) 18-inch main in Grahams Ferry
 - 7) 30-inch main in Tooze Road from 110th Avenue to Grahams Ferry Road
 - 8) 12-inch main in extension of Village Center Drive from Barber to LEC
 - 9) 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 Metro Wilsonville Tract.

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 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 – 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.

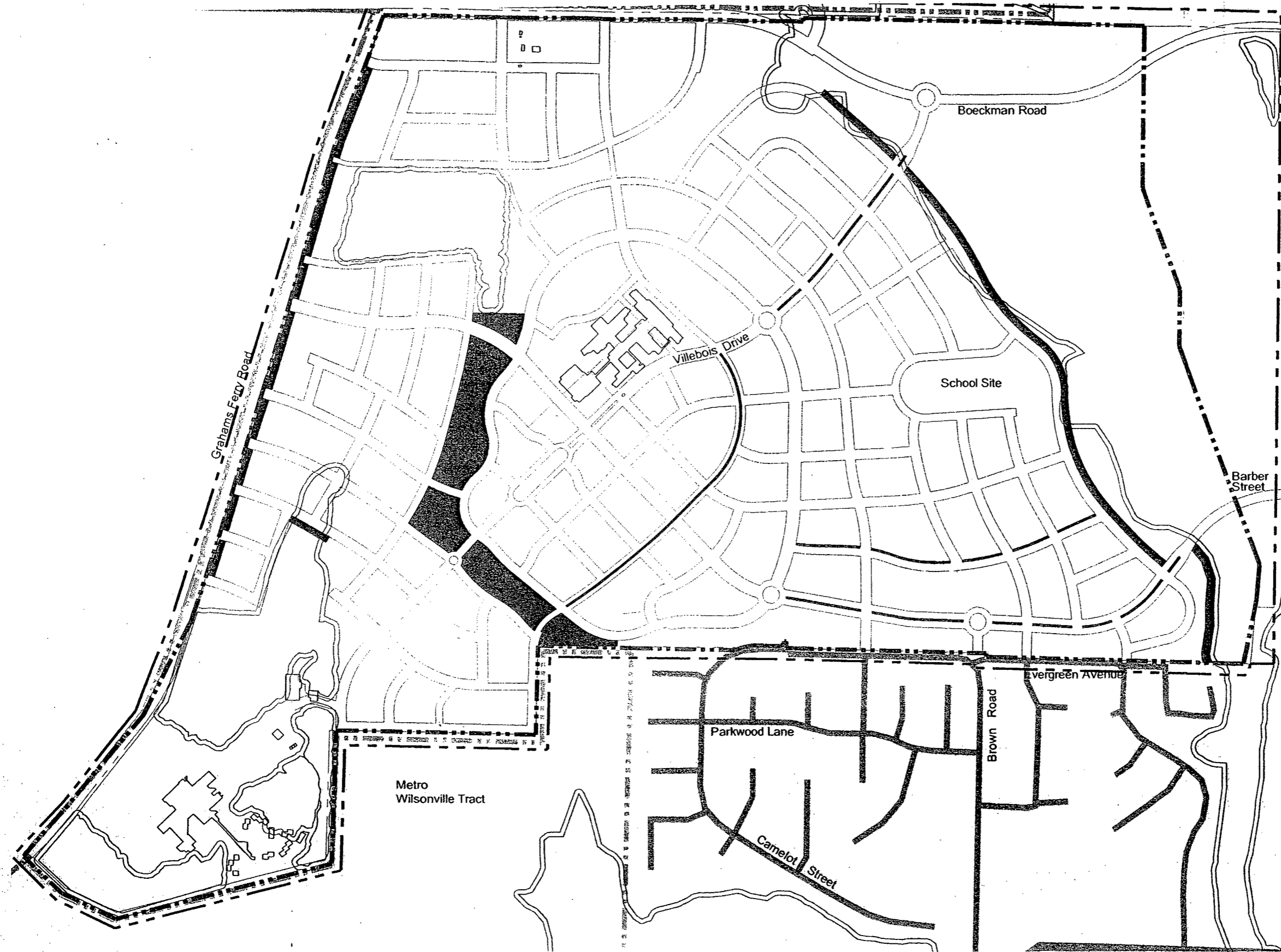
4.3.2 STORMWATER MASTER PLAN COMPLIANCE ANALYSIS

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.

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 – Composite Utilities Plan*, is a part of the

Figure 6A



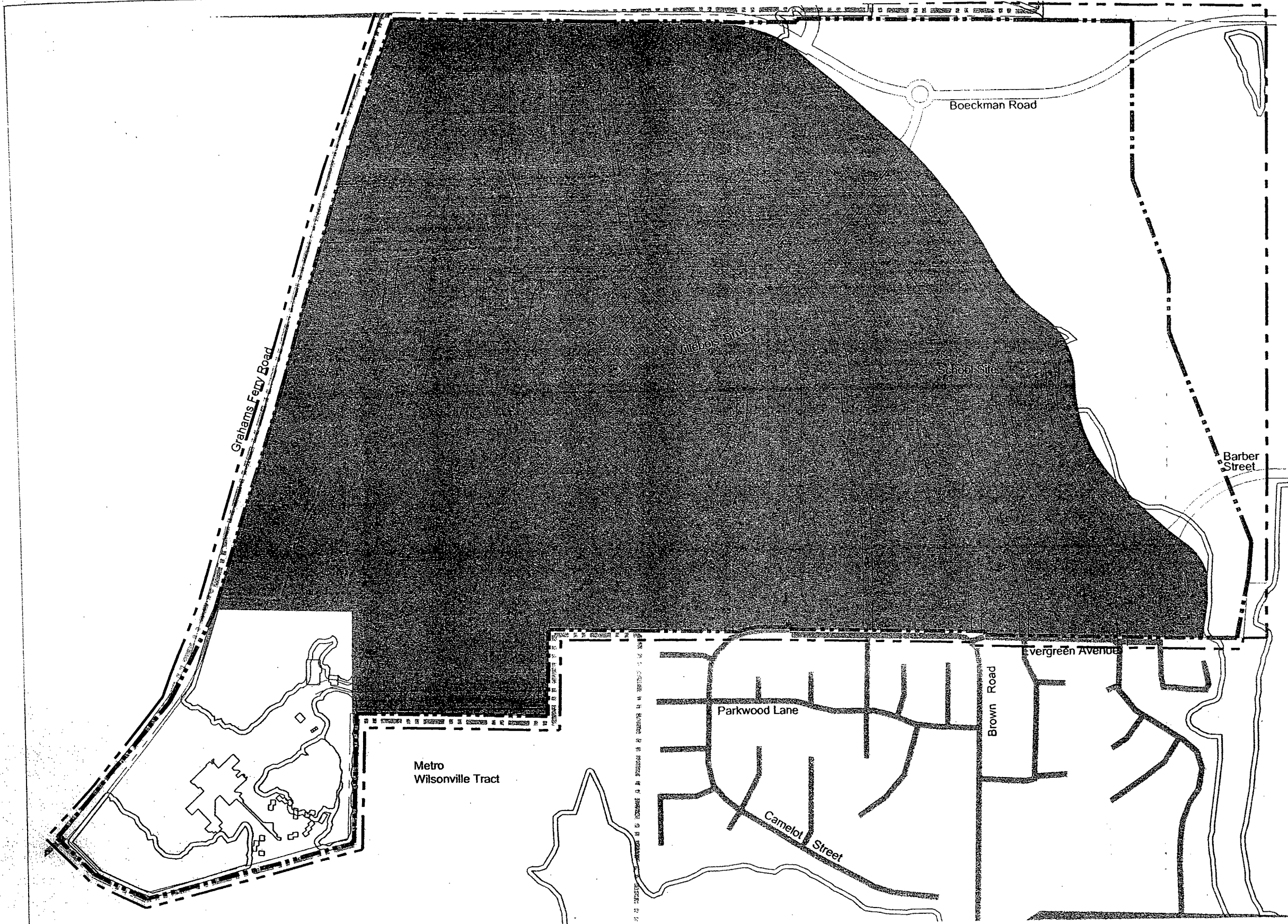
NOTES:

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 Stormwater Facilities

JUNE 04, 200

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

JUNE 04, 20

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 Metro Wilsonville Tract, 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.

	CLC-10 (minimum standard)	CLC-10 modified by Option A	CLC-10 modified by Option B
Location	Metro Wilsonville Tract	Metro Wilsonville Tract	Metro Wilsonville Tract, 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 Metro Wilsonville Tract 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

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

The Villebois Village Master Plan proposes to further analyze these options and determine their potential. A final determination, coordinated with the City of Wilsonville and Metro, will be made in conjunction with Phase 1 improvements. Options A and B may require a revision to the City Stormwater Master Plan.

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 "Damasch 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 90th percentile rain event, 0.26" in a 24-hr period. By addressing the 90th 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 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 90th 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 90th 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 within 18 months of approval of the *Villebois Village Master Plan*. Developer will establish a letter of credit or other financial instrument acceptable to the City Attorney for the cost of CLC-10 improvement if construction on Phase 1 begins before construction of CLC-10 or an option.
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 open surface water facilities such as Coffee Lake Creek, will be planned and implemented as part of the Specific Area Plans for the Villebois Village.
10. Prepare study of Options A and B with regard to CIP Project CLC-10.
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.
12. Additional actions required to obtain approval of City Engineer and implement Option A or B of CIP Project CLC-10 include:
 - 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 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 Metro Tract. 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.

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 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

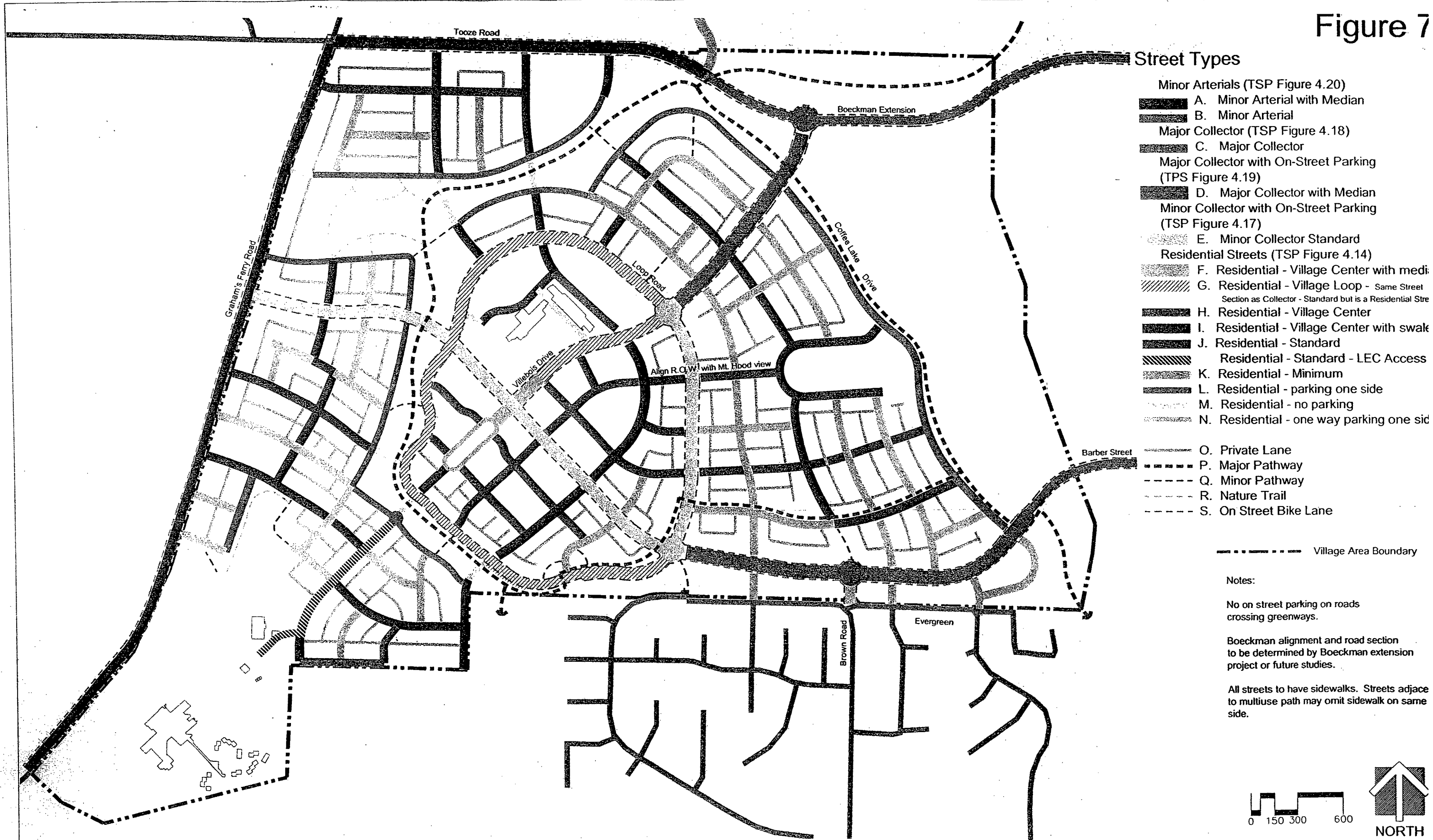
Figure 7 - Street Plan of the Villebois Village Master Plan shows a system of Residential, Collector and Arterial streets that interconnect between modes and activities within and outside Villebois Village. The *Villebois Village Master Plan* is generally consistent with the Wilsonville TSP in that it:

- Retains the north-south Collector through the site in a modified alignment of Brown Road-110th 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.

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

- Street designations;
- Roundabouts;
- Parking on Collectors;

Figure 7



Street Types

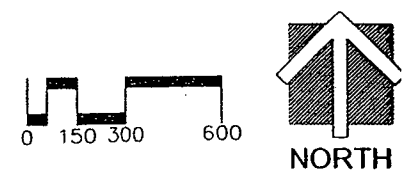
- Minor Arterials (TSP Figure 4.20)
 - A. Minor Arterial with Median
 - B. Minor Arterial
- Major Collector (TSP Figure 4.18)
 - C. Major Collector
 - D. Major Collector with Median
 - E. Minor Collector Standard
- Major Collector with On-Street Parking (TPS Figure 4.19)
 - F. Residential - Village Center with medi
 - G. Residential - Village Loop - Same Street Section as Collector - Standard but is a Residential Stre
- Minor Collector with On-Street Parking (TSP Figure 4.17)
 - H. Residential - Village Center
 - I. Residential - Village Center with swalk
 - J. Residential - Standard
 - K. Residential - Standard - LEC Access
 - L. Residential - parking one side
 - M. Residential - no parking
 - N. Residential - one way parking one side
- Residential Streets (TSP Figure 4.14)
 - O. Private Lane
 - P. Major Pathway
 - Q. Minor Pathway
 - R. Nature Trail
 - S. On Street Bike Lane
- Village Area Boundary

Notes:

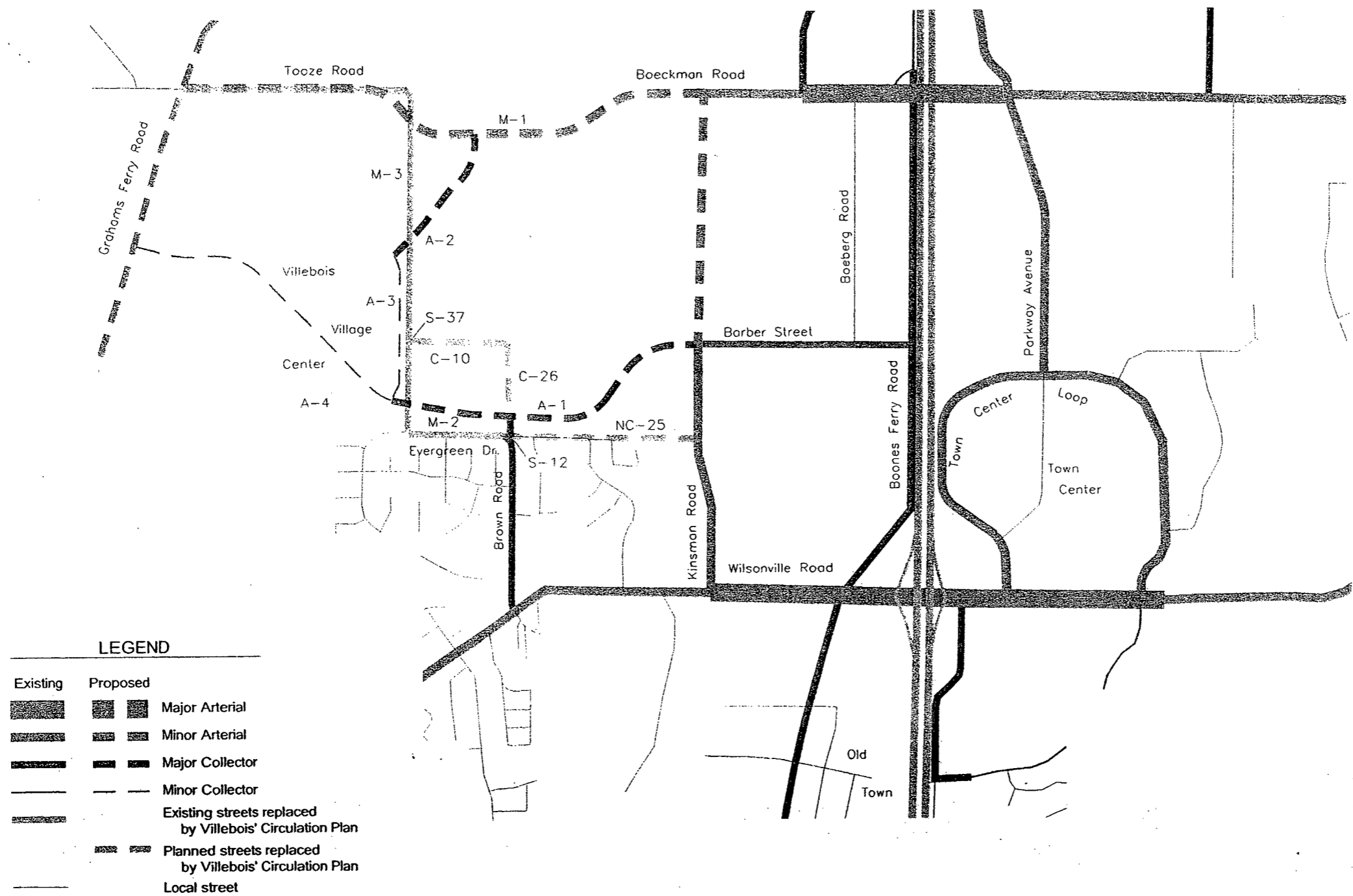
No on street parking on roads crossing greenways.

Boeckman alignment and road section to be determined by Boeckman extension project or future studies.

All streets to have sidewalks. Streets adjace to multiuse path may omit sidewalk on same side.

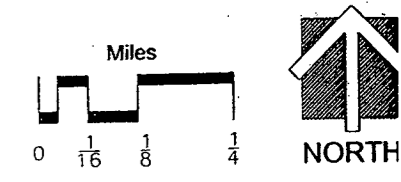


NOTES:
 The Villebois Village Master Plan shall comply with the city of Wilsonville SROZ regulations. Encroachments within the SROZ and flood plain are shown for illustrative purposes only, and will be reviewed for compliance or exemption as more detailed information is provided that will affect the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



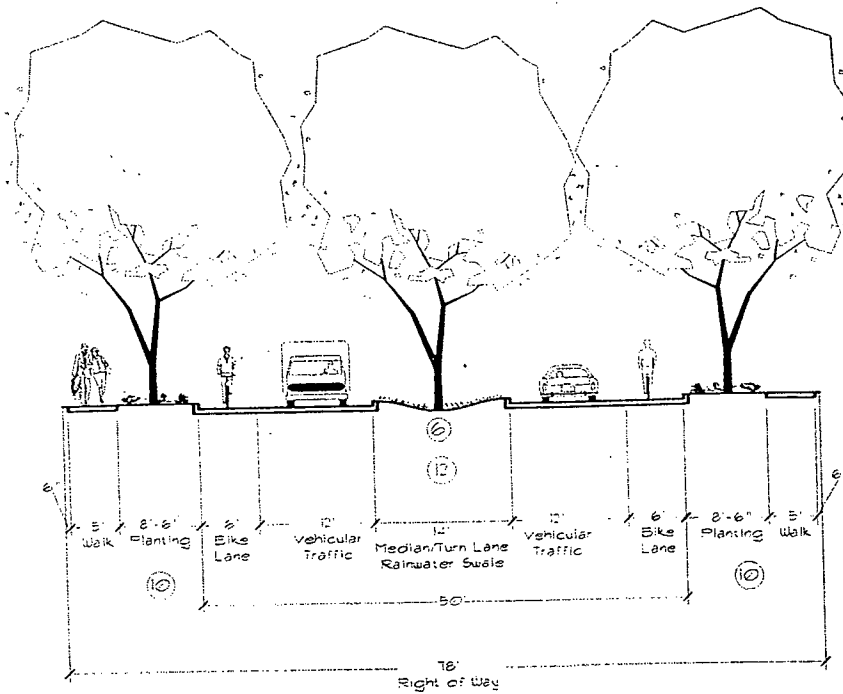
Note:
See Villebois Street Sections for specific Collector / Arterial configurations

(Source: 2003 TSP and Villebois Village Plan)

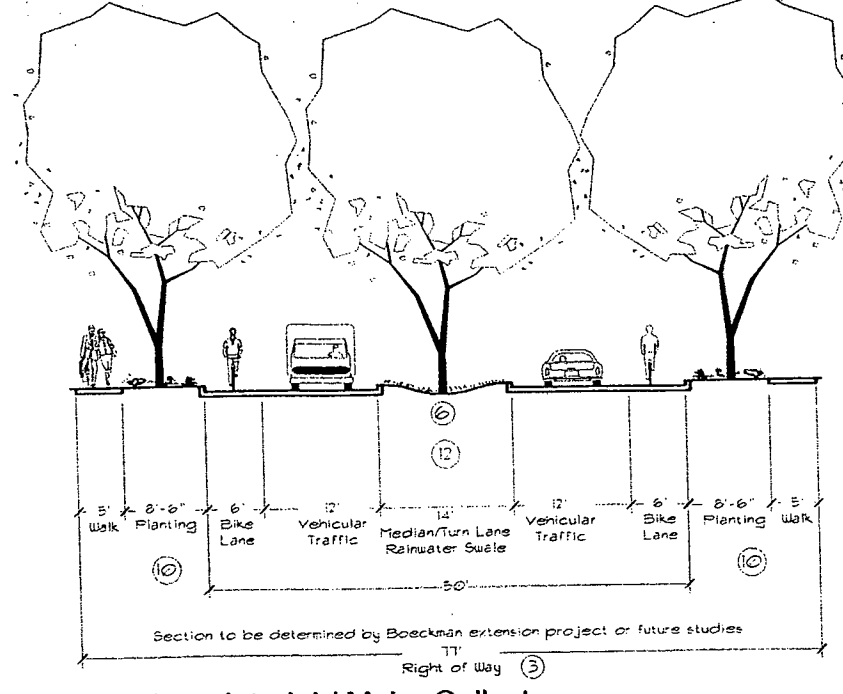


Proposed Arterial/Collectors Street System

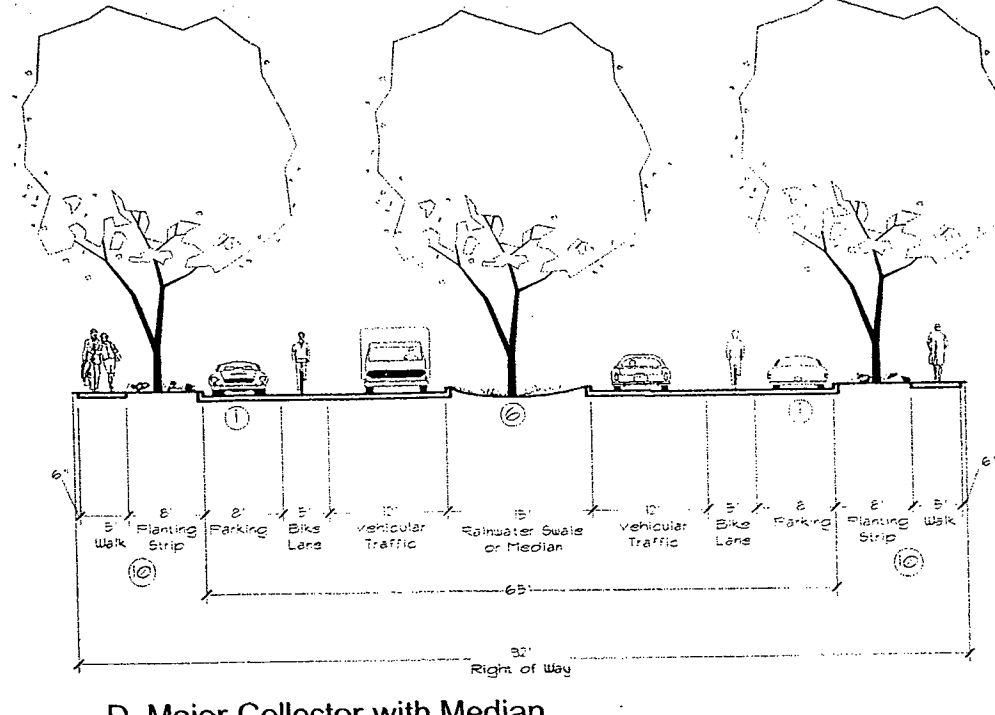
June 4, 200



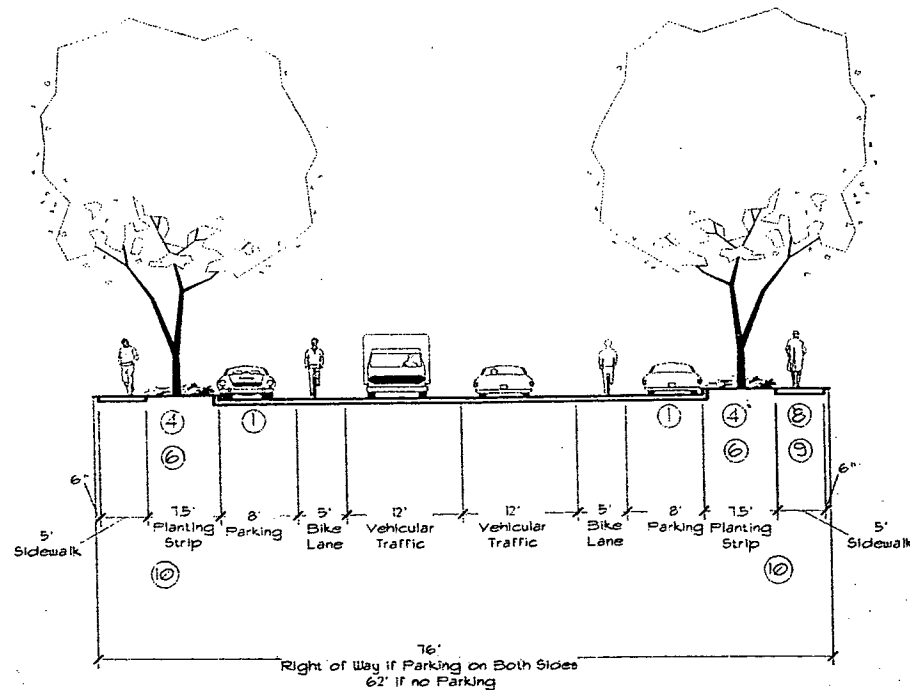
A. Minor Arterial with Median
 Scale: 1" = 20'
 (TSP Figure 4.20)



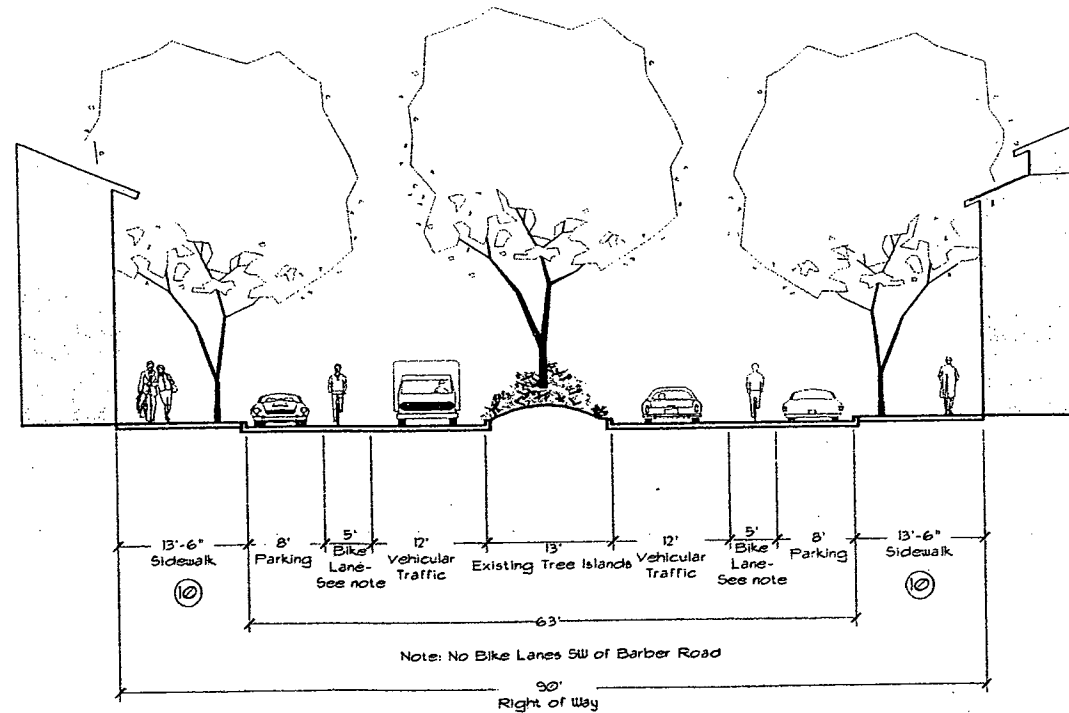
B. & C. Minor Arterial / Major Collector
 Scale: 1" = 20'
 (TSP Figure 4.20 / 4.18)



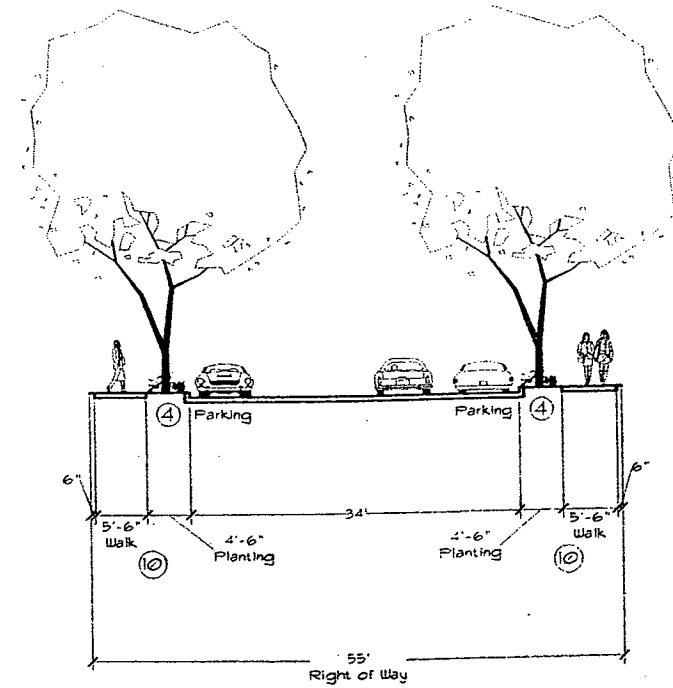
D. Major Collector with Median
 Scale: 1" = 20'
 (TSP Figure 4.19)



E. & G. Minor Collector Standard / Residential - Village Loop
 Scale: 1" = 20'
 (TSP Figure 4.17)



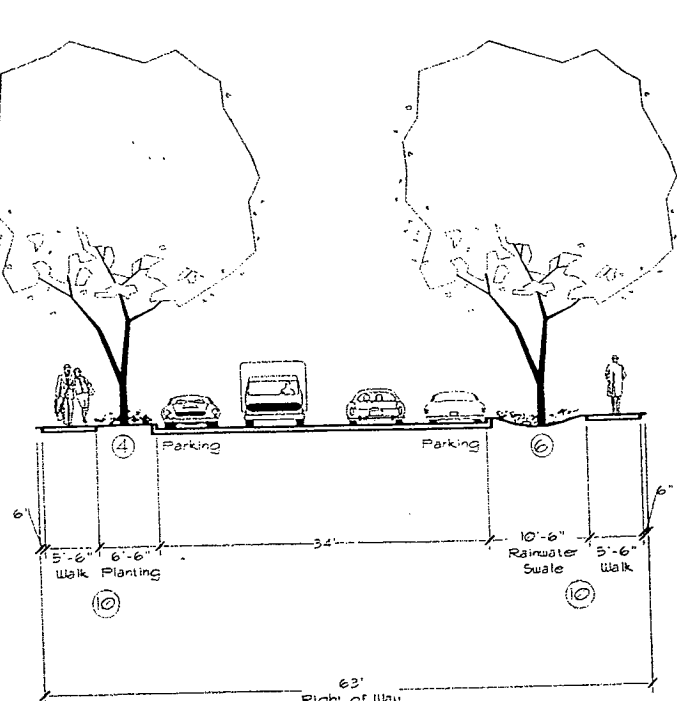
F. Residential - Village Center with Median
 Scale: 1" = 20'
 (TSP Figure 4.14)



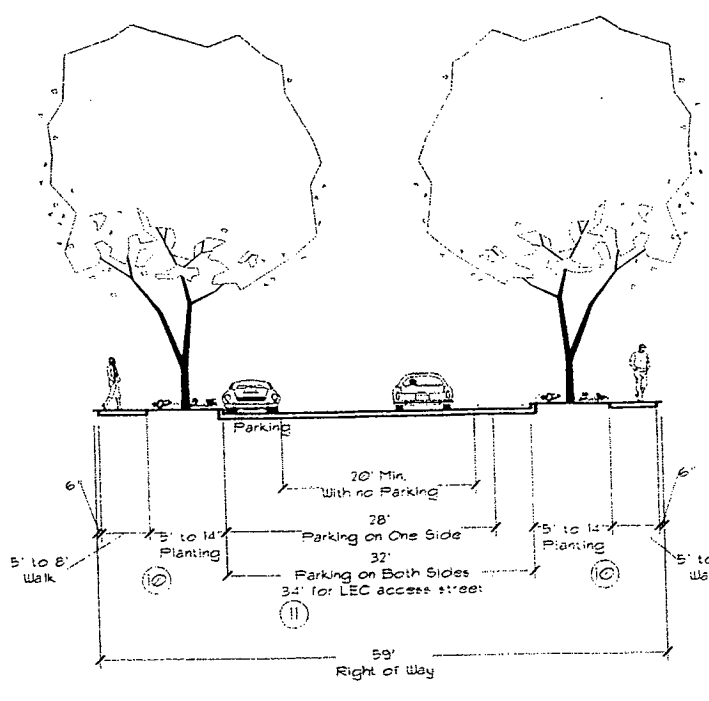
H. Residential - Village Center
 Scale: 1" = 20'
 (TSP Figure 4.14)

NOTES:

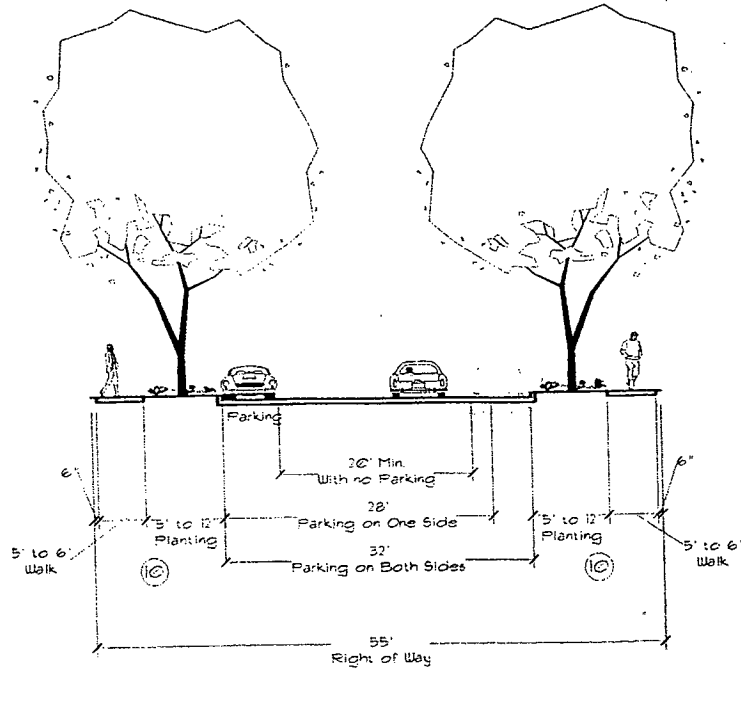
1. No parking where turn lanes are required at intersections or at Graham's Ferry Road.
2. Rainwater swales are not required for streets with grades in excess of 2%.
3. Section to be determined by Boeckman extension project or future studies.
4. In the village center the sidewalk may be widened to include 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 Quaving streets.
6. See O&A 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 lanes 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.



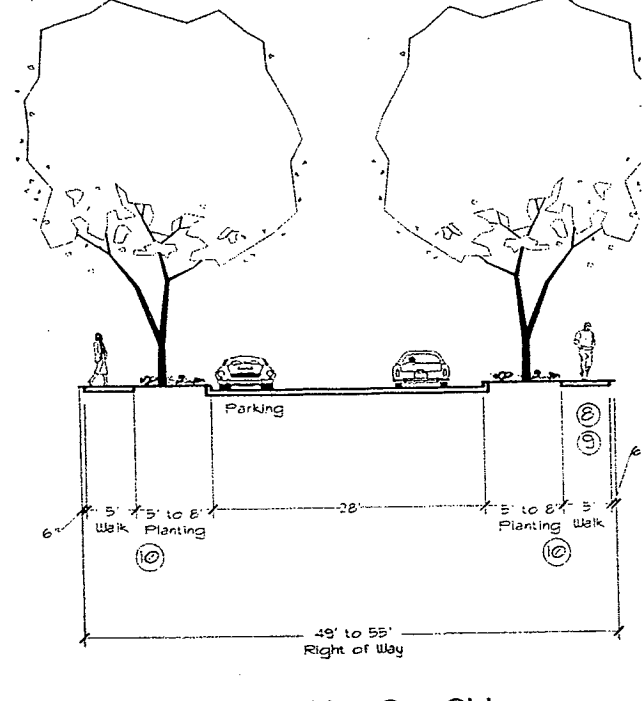
I. Residential - Village Center with Swale
 Scale: 1" = 20'
 (TSP Figure 4.14)



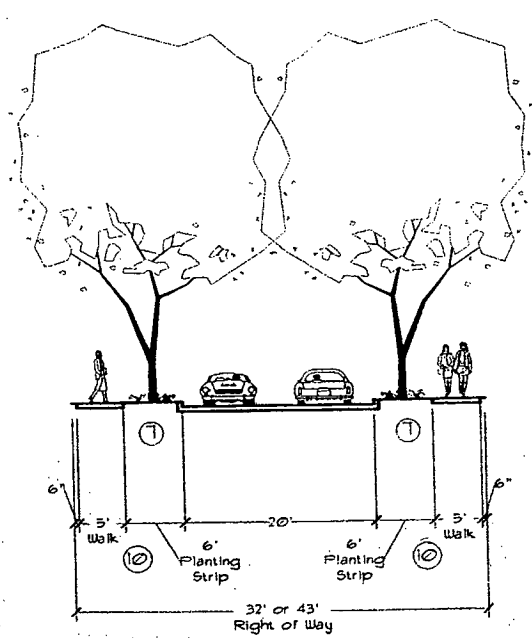
J. Residential - Standard - LEC Access
 Scale: 1" = 20'
 (TSP Figure 4.14)



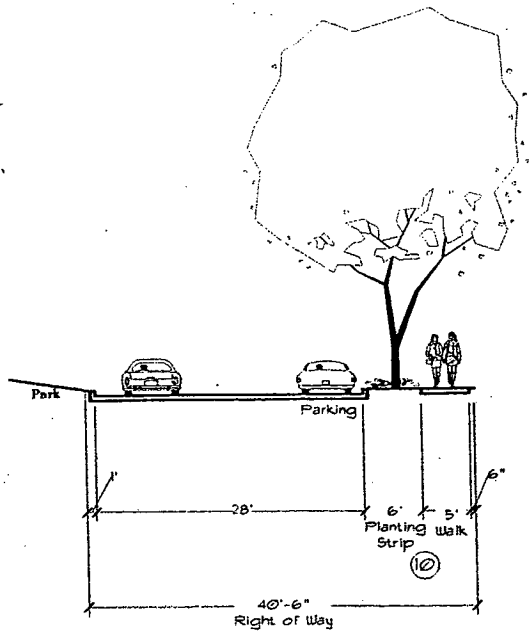
K. Residential - Minimum
 Scale: 1" = 20'
 (TSP Figure 4.14)



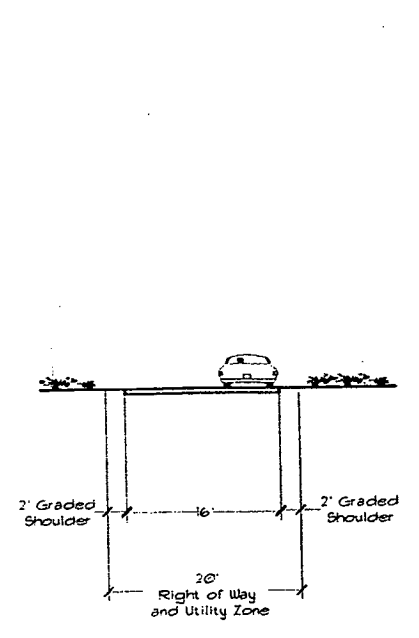
L. Residential - Parking One Side
 Scale: 1" = 20'
 (TSP Figure 4.14)



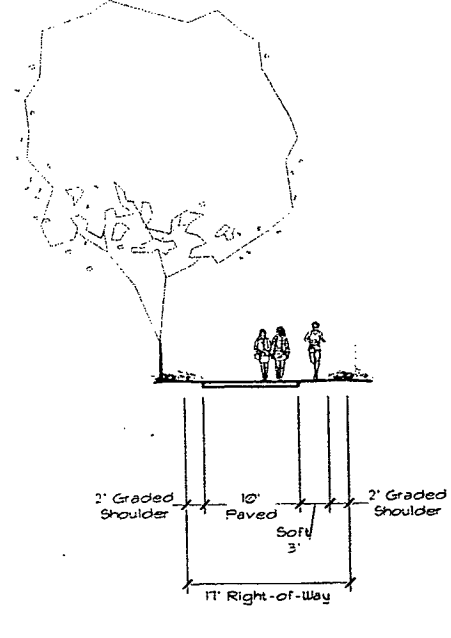
M. Residential - No Parking
 Scale: 1" = 20'
 (TSP Figure 4.14)



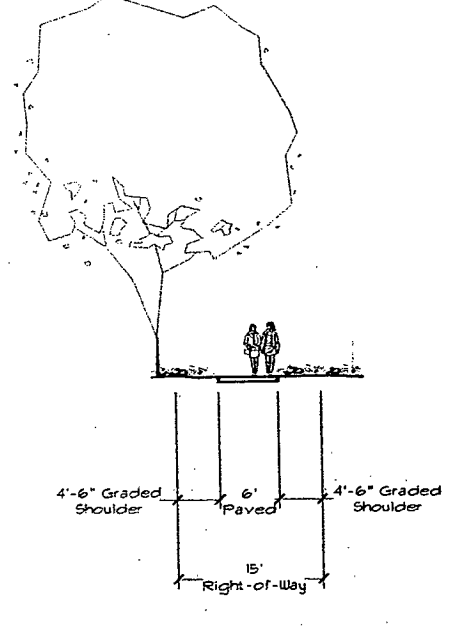
N. Residential - One Way Parking One Side
 Scale: 1" = 20'
 (TSP Figure 4.14)



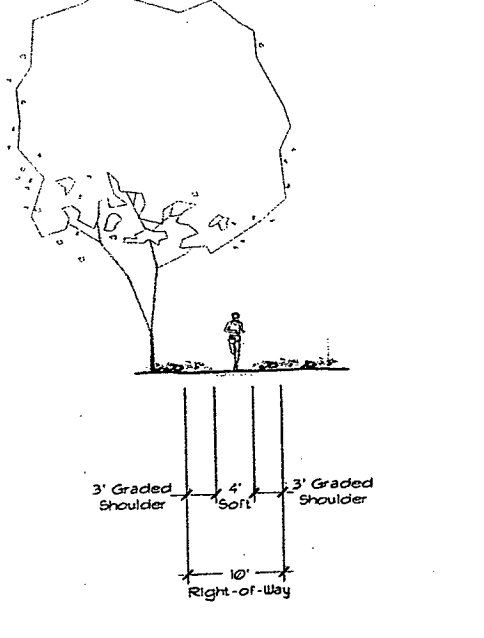
O. Private Lane
 Scale: 1" = 20'



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 O&A 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 services 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.

- 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).

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 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 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)	Bikeline Width (ft)	Travel Lane Width (ft)	Center Median/Turn Lane Width (ft)
<i>Minor Arterial (TSP Figure 4.20)</i>	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 Graham's Ferry Road)
Minor Arterial (VVMP Section B)	77	50	5	8 ½	-	6	12	14
<i>Major Collector (TSP Figure 4.18)</i>	71-77	50	5	8 ½	-	6	12	14
Major Collector (VVMP Section C)	77	50	5	8 ½	-	6	12	14
<i>Major Collector w/ On-Street Parking (TSP Figure 4.19)</i>	85-87	64	5	6 ½	8	5	12	14
Major Collector w/ Median (VVMP Section D)	92	65	5	8	8	5	12	15
<i>Minor Collector w/ On-Street Parking (TSP Figure 4.17)</i>	69-73	50	5	6 ½	8	5	12	None
Minor Collector Standard (VVMP Section E)	76	50	5	7 ½	8	5	12	None
<i>Residential Street (TSP Figure 4.14)</i>	47-51	28-32	5	4 ½	Not striped	Shared w/ cars	Not striped	None
Residential Village Center w/ Median (VVMP Section F)	90	63	13 ½	-	8	5	12	15
Residential Village Loop (VVMP Section G)	76	50	5	7 ½	8	5	12	None
Residential Village Center (VVMP Section H)	55	34	5 ½	4 ½	Not striped	Shared w/ cars	Not striped	None
Residential Village Center w/ Swale (VVMP Section I)	63	34	5 ½	6 ½-10	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	None
Residential Minimum (VVMP Section K)	55	20-32	5-6	5-12	Not striped	Shared w/ cars	Not striped	None
Residential Parking, One Side (VVMP Section L)	49-55	28	5	5-8	Not striped	Shared w/ cars	Not striped	None
Residential No Parking (VVMP Section M)	32-43	20	5	6	Not striped	Shared w/ cars	Not striped	None
Residential One Way Parking, One Side (VVMP Section N)	40 ½	28	5	6	Not striped	Shared w/ cars	Not striped	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.

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 110th Avenue and the Coffee Lake Wetland Complex and on Villebois Drive between the Loop Road and Boeckman Road. 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 sidewalk to 13 ½' and have 13' median and no planter strip option on Residential Street (VVMP street section F), which increases curb-to-curb to 63' and right-of-way to 90' and also stripes parking and bike lanes.

This alternative street section is within the Village Center, which will be an area of high pedestrian activity. The wider sidewalk will accommodate greater levels of pedestrian activity. The wider median will allow larger canopied trees to be planted (see above discussion).

- 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 110th Avenue is slightly altered with the *Villebois Village Master Plan* and the link between 110th Avenue and Grahams Ferry Road (Minor Collector) is shown. The alignment of Villebois Drive (Major Collector) between 110th 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 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 110th 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 sidewalk to 13 ½' and have 13' median and no planter strip option on Residential Street (VVMP street section F), which increases curb-to-curb to 63' and right-of-way to 90' and also stripes parking and bike lanes.
 - 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.
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 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.

NA...02PC07B VB Master Plan July 23 Staff Report and Attachments\072303 07B SR Rev2.doc

GLOSSARY

Glossary

Circulation Framework:

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

Commercial / Employment Overlay Area (CEOA):

The area within the Village Center that is designated for mixed-use (residential and commercial) development, retail, and employment.

Community Elements Plan:

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, 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. and Colette Snuffin, P.E., DKS Associates, January 13, 2003.

APPENDIX A

APPENDIX A

Capital Improvement List and Cost Estimate

DRAFT

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

DRAFT

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

DKS Associates

1400 SW 5th 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 Generation¹ and trip surveys of similar uses in Wilsonville².

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.

¹ *Trip Generation Informational Report*, 6th Edition, Institute of Transportation Engineers, 1997.

² 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 5th 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 110th 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 capacity¹.

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

¹ 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 Clutter 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.²

Forecasted PM peak hour operating conditions were determined based on the *2000 Highway Capacity Manual*³ methodology for signalized and unsignalized intersections. For roundabouts, operating conditions were determined based on the *1994 Highway Capacity Manual*⁴ 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.

² *City of Wilsonville Code*, Section 4.139, p. 163

³ Transportation Research Board, *Highway Capacity Manual 2000*, Chapters 16 and 17.

⁴ 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 collectors⁵.

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 Collector⁶ although its 85th 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)⁷. The proposed roadways are shown accessing Grahams Ferry Road as close as 250 feet apart. These should be relocated to no less than 600

⁵ *Transportation Master Plan*, City of Wilsonville, July 12, 1991, Table 6.
⁶ *Clackamas County Comprehensive Plan*, Map V-2b.
⁷ 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 Drive⁸ 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.⁹ Other crossings should be located at intersections wherever possible. Figure 3 shows recommendations for additional linkages and some crossing treatments.

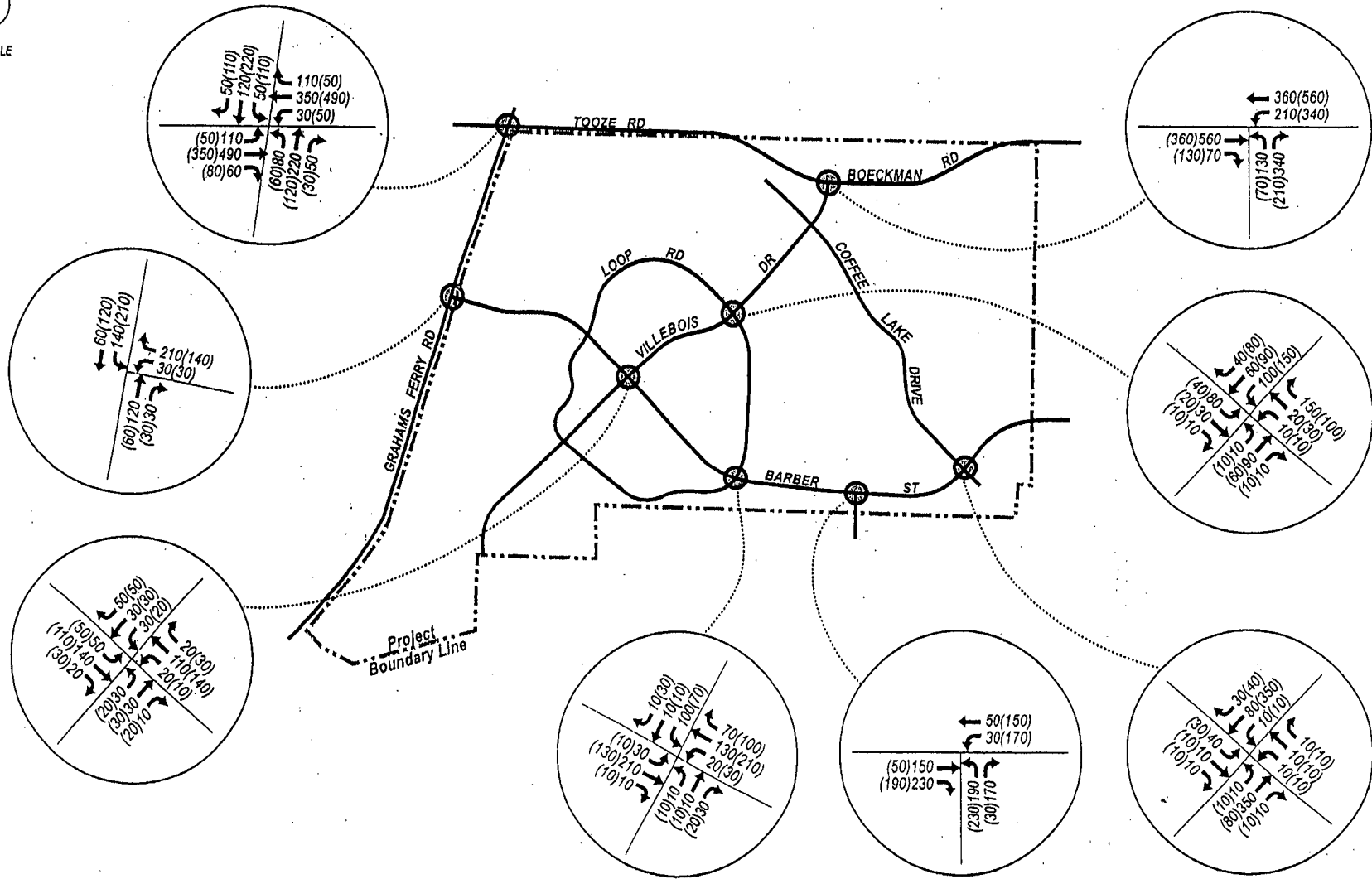
\\PDXFILES\X-DRIVE\Projects\2002\P02246 (Wilsonville Villebois Urban Village TIS)\Word\internal circ memo.doc

⁸ It should be noted that the traffic analysis was conducted with Montebello Drive connected to Barber Street.

⁹ "Standards for Pedestrian Treatments at Unsignalized Crossings", a memorandum by DKS Associates issued to the City of Wilsonville, November 13, 2002.



NOT TO SCALE



LEGEND



- Study Intersection

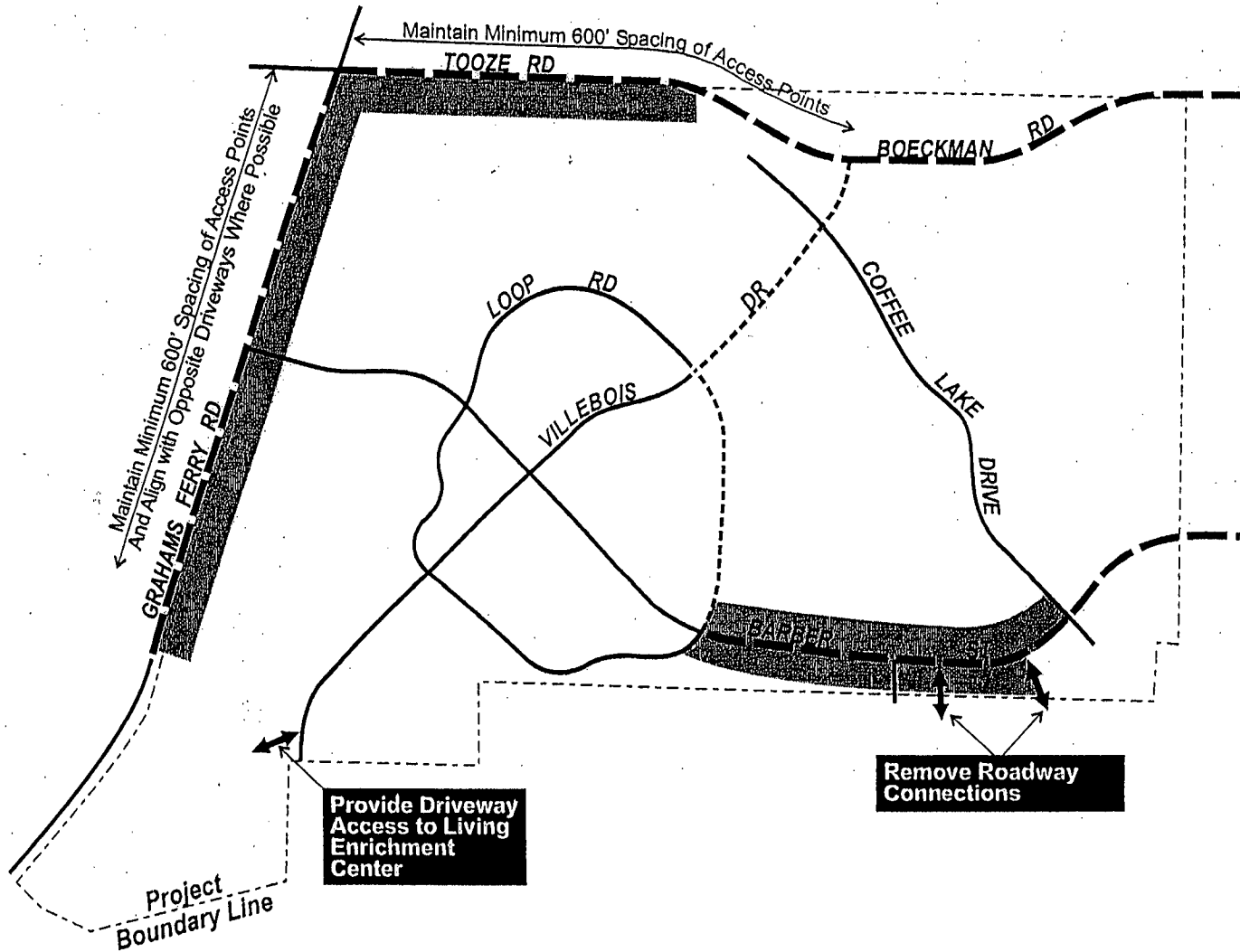


- AM(PM) - Peak Hour Traffic Volumes

Figure 1
Villebois Urban Village
INTERNAL CIRCULATION



NOT TO SCALE



LEGEND




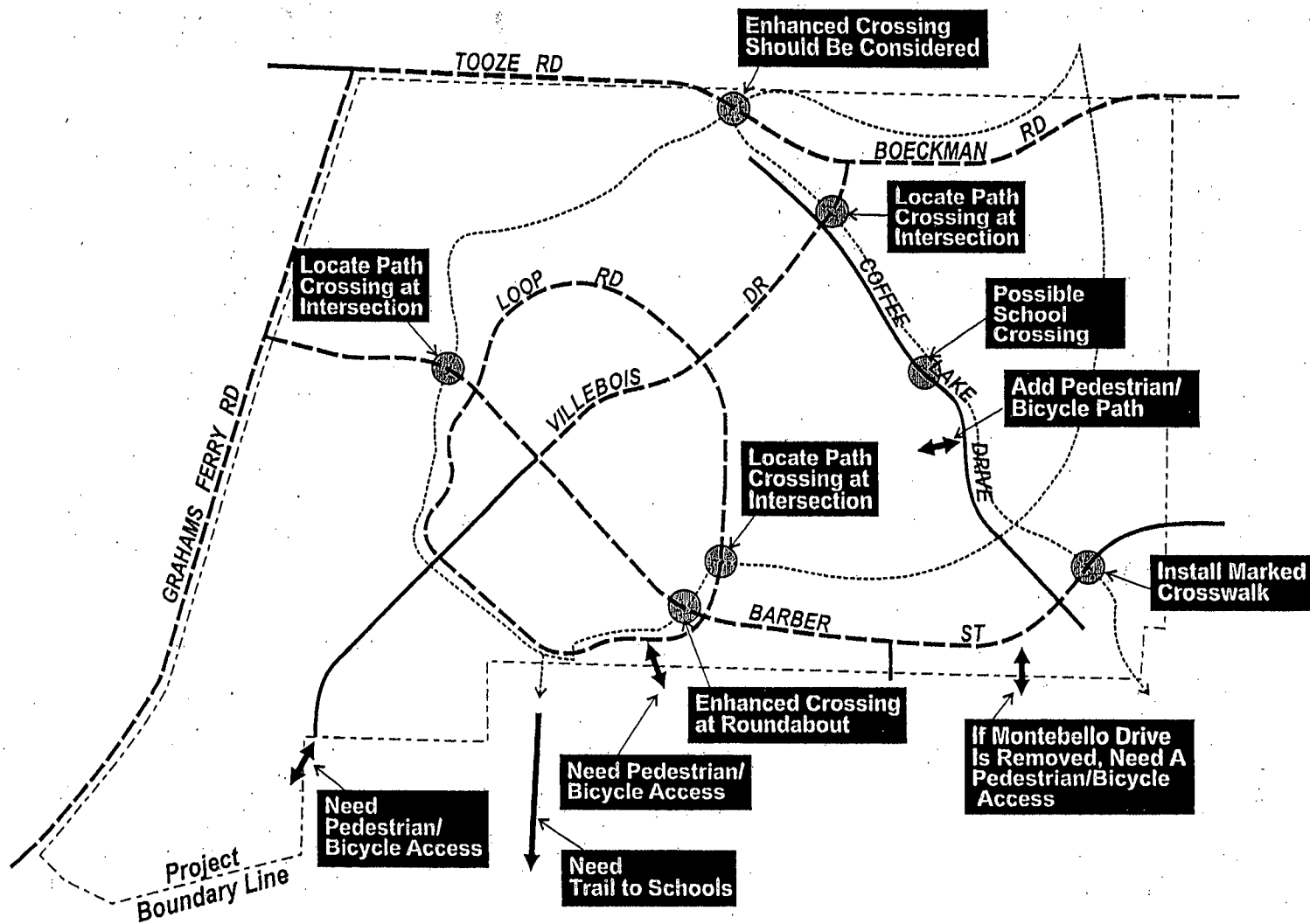
-  - No Parking
-  - Limited Parking
-  - No Driveway Access on Barber Street, Grahams Ferry Road or Tooze Road

Figure 2
Villebois Urban Village
ACCESS AND PARKING



LEGEND

- - - - - Bike Lanes
- Shared-Use Path

Figure 3
Villebois Urban Village
PEDESTRIAN/BICYCLE

DKS Associates

1400 SW 5th 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

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 th Avenue/Boeckman Road		✓		
15	Boberg Road/Boeckman Road		✓		
16	Boeckman Road/Parkway Avenue		✓		
17	Grahams Ferry Road/Clutter Road				✓
18	95 th Avenue/Ridder Road		✓		
19	Grahams Ferry Road/Day Road				✓
20	95 th 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
Total	1029	-	1039	839	-	453	515	-	319	35.0	-	461	2272

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.¹ 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.

¹ *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
Total	1029	-	968	839	-	421	515	-	298	35.0	-	324	2011

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.² 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*³ methodology for signalized and unsignalized intersections.

² *City of Wilsonville Code*, Section 4.140, p. 167 as revised by Ordinance No. 538 Exhibit A.

³ 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 th 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 th 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) ⁴
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 th 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

⁴ 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 th 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 th 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 th 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) ⁵
7 (2010)	Clutter Road/Grahams Ferry Road (I)	Add WB left turn lane
8 (2011)	-	-

⁵ 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	After Mitigation	
		LOS	V/C	Code	LOS	V/C
1 (2004)	I-5 SB Ramps/Wilsonville Road	F	1.14	A	D	0.94
	I-5 NB Ramps/Wilsonville Road	F	1.14	B	E*	1.11*
2 (2005)	I-5 NB Ramps/Wilsonville Road	F	1.13	C	D	0.95
3 (2006)	-	-	-	-	-	-
4 (2007)	95 th Avenue/Boeckman Road	E	-	D	C	-
5 (2008)	Brown Road/Wilsonville Road	E	1.04	E	D	0.94
6 (2009)	95 th Avenue/Boeckman Road	F	-	F	B	0.49
	Parkway Avenue/Boeckman Road	E	0.98	G	D	0.83
	Boberg Road/Boeckman Road	E	-	-	B	-
7 (2010)	Clutter Road/Grahams Ferry Road	E	-	H	C	-
8 (2011)	-	-	-	-	-	-

* 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 th 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 th Avenue/Boeckman Road: Add WB right turn lane	5 (2008)	4 (2007)
95 th 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 95th Avenue/Elligsen Road (second NB left turn lane). The estimated timing for Brown Road/Wilsonville Road improvements is between 2012 and 2015. Improvements for 95th 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 95th Avenue, Kinsman Road extension north from Boeckman Road to Ridder Road or a new extension of 110th 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.