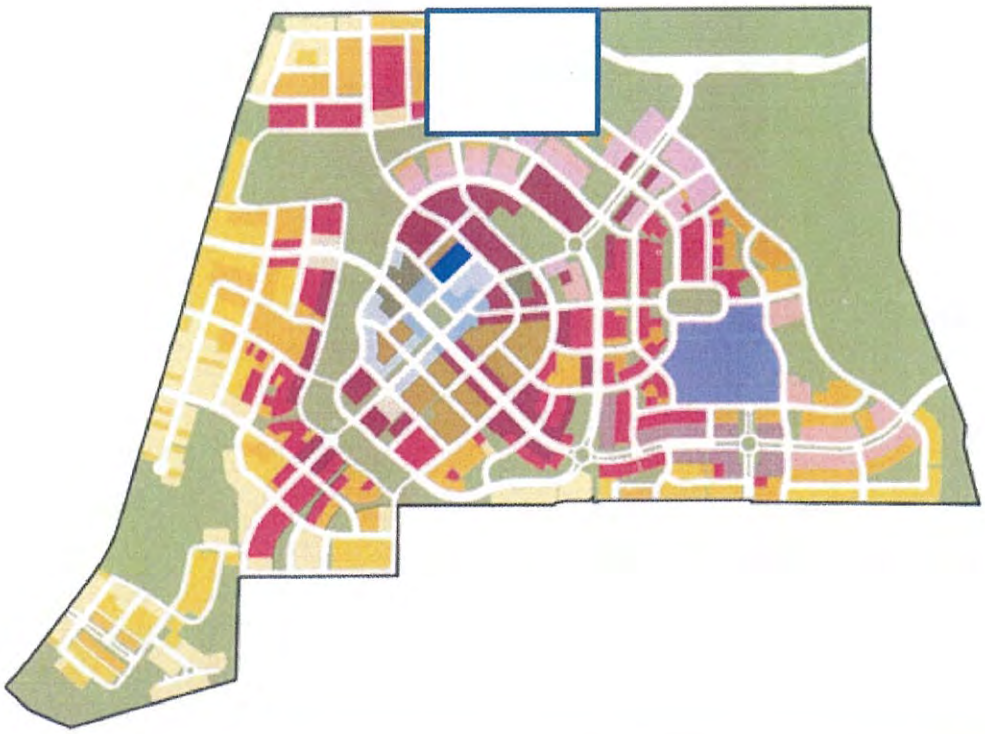

"Clermont" – PDP 5N
89-unit Single-Family Residential Development
SAP Amendment & SROZ Map Refinement, PDP, Tentative Plat, Zone Change, Tree Removal Plan, & FDP

The City of Wilsonville, Oregon **July 26, 2018**

Applicant:

Jason Baker
Polygon WLH, LLC.
703 Broadway St, Suite 510
Vancouver, WA 98660
[P] 360-695-7700

Applicant's Representative:

Stacy Connery, AICP
Pacific Community Design, Inc
12564 SW Main Street
Tigard, Oregon 97223
[P] 503-941-9484

Section 1) General Information

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FOR
PDP 5 - NORTH

IA) Introductory Narrative

INTRODUCTORY NARRATIVE

PHASE 5 - NORTH

SAP NORTH AMENDMENT & SROZ MAP REFINEMENT, PRELIMINARY DEVELOPMENT PLAN, TENTATIVE PLAT, ZONE CHANGE, TREE REMOVAL PLAN, FINAL DEVELOPMENT PLAN

SECTION I

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I. GENERAL INFORMATION

Applicant:	Polygon WLH, LLC 109 E. 13th Street Vancouver, WA 98660 Tel: (503) 314-0807 Fax: (360) 693-4442 Contact: Fred Gast
Property Owner:	Tax Lots 7200, 7300, 7400, 7500, 7600 Victor C. Chang, Allen Y. Chang 28201 SW 110th Ave, Wilsonville, OR 97070
Design Team:	
Primary Contact:	Stacy Connery Pacific Community Design, Inc. Tel: (503) 941-9484 Fax: (503) 941-9485 Email: stacy@pacific-community.com
Process Planner/Civil Engineer/Surveyor/ Landscape Architect:	Pacific Community Design, Inc. 12564 SW Main Street Tigard, OR 97223 Tel: (503) 941-9484 Fax: (503) 941-9485 Contact: Stacy Connery, AICP Jessie King, PE Travis Jansen, PLS/PE Kerry Lankford, RLA
Arborist:	Morgan Holan Morgan Holan & Associates, LLC 3 Monroe Parkway, Suite P 220 Lake Oswego, OR 97035 Tel: (971) 409-9354

Site and Proposal Information:

Site:	31W15AB TL 7200, 7300, 7400, 7500, 7600
Size:	23.04 gross acres
Comprehensive Plan Designation:	City - Exclusive Farm Use (EFU)
Specific Area Plan:	SAP - North
Proposal:	Amendment to Specific Area Plan - North SROZ Map Refinement Preliminary Development Plan - 5N Tentative Plat Zone Change to Village Tree Removal Plan Final Development Plan
Unit Count:	89 single family detached dwelling units
Net Residential Density:	3.86 units/acre
Project Name:	Villebois PDP 5 - North "Clermont"

II. REQUEST

This is an application for PDP 5N. A concurrent amendment to SAP North is included which updates phasing and adds information for Phase 5. This PDP application is submitted in conformance with SAP North, as amended to include Phase 5.

This application requests approval of the following seven (6) applications for the Phase 5 area of SAP North.

- Amendment to Specific Area Plan North, including Master Plan Refinements and a SROZ Map Refinement – Section II of Notebook
- Preliminary Development Plan (PDP 5N) – Section III of Notebook
- Tentative Plat Approval (PDP 5N) – Section IV of Notebook
- Zone Change to Village (V) Section V of this Notebook
- Tree Preservation/Removal Plan for PDP 5N area – Section VI of Notebook
- Final Development Plan for PDP 5N area – Section VII of Notebook

The applications are arranged in the order that approval should be granted based upon provisions in the development code. Each application is placed in a separate section within the Notebook labeled Sections II through VII respectively, with all supporting documentation needed for that application placed in the appropriate subsection.

The attached Supporting Compliance Reports (see Sections IIA, IIIA, IVA, VA, VIA, and VIIA), in conjunction with the attached plan sheets and other exhibits, demonstrate compliance with the applicable review criteria.

III. PROPOSED ZONE CHANGE

The subject site is a part of Villebois Village and is intended to be developed under the guidance of the *Villebois Village Master Plan* and the Village zone. The subject Tax Lots have a zoning designation of Exclusive Farm Use (EFU).

The entire site has a City of Wilsonville comprehensive plan designation of Residential-Village (V). The Village (V) zone is the intended district for Residential-Village areas. However, the subject taxlots are not currently zoned Village, therefore, a concurrent Zone Change application to apply the Village zone is provided in Notebook Section V.

IV. PLANNING CONTEXT

VILLEBOIS VILLAGE MASTER PLAN & SAP NORTH

The proposed Phase 5 area is located within the northern portion of the *Villebois Village Master Plan* as illustrated on the Notebook Cover. Section II of this Notebook includes a SAP North Amendment, which updates phasing and adds information for Phase 5. The SAP North Amendment includes updating maps in the SAP North Architectural Pattern Book, Community Elements Book, and Signage and Wayfinding Master Plan.

V. PROPOSAL DESCRIPTION

Phase 5 of Specific Area Plan North (also known as PDP 5N) includes approximately 23.04 gross acres. PDP 5N consists of five tax lots (7200, 7300, 7400, 7500, 7600) located south of SW Tooze Road, east of Calais East, and north of Berlin Avenue. PDP 5N proposes 89 single family detached dwellings, a new regional park, the completion of RP-5, the addition of a linear greens, and associated infrastructure improvements.

LAND USES

PDP 5N proposes 89 single family detached dwellings – 32 small lots, 8 medium lots, 43 standard lots, and 6 large lots. The proposed number and type of units is compatible with adjacent land uses. The table in Section IIC of this Notebook lists the residential units broken down by development phase for all of SAP North. PDP 5N is submitted with the concurrent FDP for linear greens (see Section VII of the Notebook). PDP 1, PDP 2, PDP 3, and PDP 4 are built.

A concurrent application is included to amend SAP North, which adds information for Phase 5, and includes Master Plan refinements. PDP 5N is submitted in conformance with the concurrent amendment to SAP North (Section II).

PARKS & OPEN SPACE

The *Master Plan* shows RP-6, a portion of RP-5, Linear Greens 15 and 16, and Pocket Park 9. The proposed SAP North Amendment for Phase 5 updates the location of RP- and adds a linear green in the western portion of the development in order to retain more important and good trees. Additionally, Linear Green 15 & 16 will be provided along the eastern property line. Pocket Park 9 will also be included along the eastern property line. Regional Park 6 will include a dog park, benches, picnic tables, a child play structure as shown in the *Master Plan*. Two tennis courts shown I RP-6 are being relocated to RP-5 so they are not located under trees. A breakdown of the parks and their amenities is provided in Section IIA of this notebook. A concurrent Final Development Plan (FDP) for the park areas is included with this submittal.

UTILITIES

Sanitary Sewer

The sanitary sewer system for Phase 5N is shown on the *Composite Utility Plan* in Section IB of this Notebook. The sanitary sewer will be a gravity system that will discharge to the existing sanitary sewer line within SW Tooze Road. Sanitary sewer service can be adequately provided to this area in compliance with the Villebois Village Master Plan, as demonstrated in the attached Sanitary Sewer Capacity Memorandum (see Notebook Section IIIB).

Water

The proposed water system for Phase 5N is shown on the *Composite Utility Plan* (see Notebook Section IIIB). The proposed public water system will consist of 8" diameter pipes and will connect to the existing 18" water line within Tooze Road and the 8" water line installed with the adjacent Calais development. The system will be looped throughout the development to maximize flows. Water service can adequately be

provided to this area in compliance with the *Villebois Village Master Plan* and the City's Water System Master Plan.

Stormwater

Stormwater runoff from the developed site will be collected by a series of catch basins leading to an underground piping system. This system will transport the runoff to a water quality swale located on the northeast corner of the site. The treated water will then be discharged into an existing wetland, where it will then go into an existing off site main line found within Tooze Road, eventually discharging into the Coffee Lake Creek outlet. Water quality areas are provided in the stormwater report. The City of Wilsonville Stormwater Master Plan currently does not require detention within this portion of the Coffee Creek basin. Stormwater pipes are shown on the *Composite Utility Plan (See Notebook Section IIIB)*.

Rainwater

A Rainwater Management Plan is included with the Supporting Utility Reports in Notebook Section IC. Rainwater management within PDP 5N will be provided through street trees and bio-retention cells located in planter strips in rights-of-way, as shown within the attached plans (see Notebook Section IIIB) and described in the PDP Compliance Report (see Notebook Section IIIA).

CIRCULATION

The transportation infrastructure proposed for PDP 5 North will provide convenient neighborhood circulation and a range of transportation options. The *Circulation Plan* (see Exhibit IIIB) illustrates the circulation system within this Preliminary Development Plan area.

PHASING

Construction of PDP 5N will be completed in one phase. PDP 5N is planned to be built in 2019-2020.

TREE PRESERVATION

Phase 5 is currently used as horse pasture with existing trees concentrated within the center portion of the site. The applicant has aligned parks to retain as many important trees as possible within Regional Park 6 and a new linear green. Measures have been taken to protect the "Important" trees on the site. The trees will be preserved along SW Palermo Street within a linear green connection between SW Palermo Street and SW Berlin Avenue. Additional "important" trees are to be preserved within the space provided in RP-6. Location of the homes and streets for Phase 5 are constrained by the topography of the site and the street connections that have been established with the development of Phase 4 and Tonquin Meadows. Morgan Holen, certified arborist, has prepared a Tree Report (see Notebook Section VIB) for PDP 5 North. The attached Tree Report includes a tree inventory, which indicates the tree common name and species name, DBH, condition, and recommended treatment (i.e. retain or remove). The determination to remove trees was based upon an assessment of which trees were necessary to remove due to the poor or hazardous health of the tree, whether or not they interfered with the health of other tree, and whether removal is necessary for

utility and street construction or the construction of residential dwellings. A listing of trees to be removed is included in the attached Tree Report (see Section VIB).

VI. REFINEMENTS TO MASTER PLAN

The following sections of this Narrative describe the proposed refinements to the *Master Plan* that are included in the included SAP North Amendment application (Section II). Detailed findings regarding the requested refinements can be found in the SAP North Amendment Supporting Compliance Report in Section IIIA of this Notebook.

LAND USES

The *Master Plan* for the subject area shows large, standard, medium, small, and neighborhood apartment uses within the Phase 5 area. PDP 5N proposes 89 single family detached dwellings – 32 small lots, 9 medium lots, 41 standard lots, and 7 large lots. The refinements to the *Master Plan* include a change in mix and unit counts. The transition from standards and larges moving toward the Villebois Greenway, then south of the Greenway with smalls and mediums, increasing in density and massing toward the core of the Village Center is consistent with the *Master Plan*.

The *Land Use Plan* (see Notebook Section IIB) illustrates that Specific Area Plan – North will continue to provide for the wide variety of housing options and home ownership options identified in the *Villebois Village Master Plan.* Phase 5 will contribute to the availability of housing options in Specific Area Plan - North with the provision of small, medium, standard, and large residential lots. The Master Plan shows smalls, mediums, standards, larges, and estate lots within Phase 5; this proposed amendment is generally consistent with the mix of residential lot types shown in the Master Plan. Estate lots are no longer proposed. However, Phase 5N will introduce single-level homes with the proposed large lots and some of the standard lots. The single-level homes are identified in the concurrent PDP (See Notebook Section IIIB).

Table A below shows the number of units in each land use category currently approved within SAP North and the number of units in the SAP with the proposed refinement as well as the percent change in each aggregate land use category.

Table A. Comparison of Currently Approved and Proposed Unit Counts

	Currently Approved Unit Count in SAP N	Proposed Unit Count in SAP N	% Change
Medium/Standard/ Large/Estate	179	197	10%
Small Detached/ Small Cottage/ Row Homes/ Neighborhood Apt.	246	271	10%
Total	425	468	10%

NOTE: Currently approved Unit Count for SAP Central reflects the final SAP North Amendment that occurred in conjunction with PDP 3N, which set unit counts for SAP North.

Table A shows that the proposed refinements do not exceed the 10% standard. This proposal results in a total of 2,558 units within Villebois. This is above the density of 2,300 units required to be obtained across Villebois, meeting the refinement criteria.

PARKS & OPEN SPACE

The proposed plan provides for a completion of RP-5 to the southwest of the site as shown in the *Master Plan* and the construction of RP-6 in the northwest portion of the subject site. Linear greens 15 and 16, as well as, Pocket Park 9 will be constructed along the eastern property line. Additional linear parks will be developed between SW Stockholm Street and SW Berlin Avenue in order to preserve Important Trees. Regional Park 6 will have multiple amenities, including but not limited to: Sports courts, a play area, a dog park, and a water quality swale. The linear greens and the pocket park to the east will also have amenities including a creative play space. A complete breakdown of the amenities within the parks can be found in Section IIA of this Notebook.

UTILITIES

Storm, water, and sanitary are consistent with the *Master Plan.* Rainwater components are updated for Phase 5 with this SAP Amendment.

CIRCULATION

A comparison of the *Circulation Plan* from the proposed SAP North Amendment for Phase 5 (see Exhibit IIB) and the *Circulation Plan* from the *Master Plan* shows updates to the circulation system. The *Master Plan* showed two connections at the northern edge of the site connecting with SW Tooze Road. The City has since evaluated planned improvements for Tooze Road and determined to limit to one access point which exists in PDP 4N. Therefore, the previously shown street connection to Tooze Road in PDP 5N has been eliminated. There are now no vehicular connections to Tooze Road within Phase 5. Additionally, when Tonquin Meadows was reviewed, the extension of Coffee Lake Drive across Villebois Drive was eliminated in order to retain an existing wetland area along the eastern portion of the property. This has resulted in some minor changes to the residential streets in these intervening areas. Verdun loop and Stockholm Avenue now provide the connections from Tonquin Meadows across Villebois Drive into the site and both streets extend west to meet SW Palermo Street at RP-6. The proposed street alignment was chosen in order to preserve as many healthy trees as possible. RP-6 has been moved to the western portion of the site where the bulk of the trees are located. Local streets (Barcelona, Orleans, and Palermo) surround RP-6 and linear greens have been proposed to both preserve important trees and to provide better pedestrian and cyclist circulation. Specifically, a linear green is proposed between SW Palermo Street and SW Berlin Avenue to preserve three important trees. A second linear green has replaced the street segment between Cherbourg Lane and Berlin Avenue due to the steepness of the terrain and to minimize grading and thereby enable more tree preservation. A pedestrian and cyclist accessway is provided between SW Barcelona Street and Tooze Road and pedestrian/cyclist connections are provided throughout RP-6, which abuts and connects to Tooze Road.

VII. PROPOSAL SUMMARY & CONCLUSION

This Introductory Narrative, in conjunction with the referenced sections, describes the proposed SAP North Amendment and SROZ Map Refinement, Preliminary Development Plan, Tentative Plat, Zone Change, Tree Preservation/Removal Plan, and Final Development Plan. The Supporting Compliance Reports located in Sections II through VII, respectively, support these requests for approval of the subject applications and demonstrate compliance with the applicable standards of the Wilsonville Planning and Land Development Ordinance.

IB) Form/Ownership Documentation*

**See also Exhibit B6*

WILSONVILLE
OREGON

29799 SW Town Center Loop E, Wilsonville, OR 97070
Phone: 503.682.4960 Fax: 503.682.7025
Web: www.ci.wilsonville.or.us

Planning Division
Development Permit Application

Final action on development application or zone change is required within 120 days in accordance with provisions of ORS 227.175

A pre application conference is normally required prior to submittal of an application. Please visit the City's website for submittal requirements

Pre-Application Meeting Date: _____

Incomplete applications will not be scheduled for public hearing until all of the required materials are submitted.

Applicant:
Name: Jason Baker
Company: Polygon WLH, LLC.
Mailing Address: 703 Broadway Street, Ste #510
City, State, Zip: Vancouver, WA 98660
Phone: 360-695-7700 Fax: _____
E-mail: Jason.Baker@PolygonHomes.com

Authorized Representative:
Name: Stacy Connery, AICP (Applicant's Representative)
Company: Pacific Community Design, Inc.
Mailing Address: 12564 SW Main Street
City, State, Zip: Tigard, OR 97223
Phone: 503-941-9484 Fax: _____
E-mail: Stacy@pacific-community.com

Property Owner:
Name: (See Attached)
Company: _____
Mailing Address: _____
City, State, Zip: _____
Phone: _____ Fax: _____
E-mail: _____

Property Owner's Signature:

_____

Printed Name: _____ Date: _____

Applicant's Signature: (If different from Property Owner)

_____

Printed Name: Jason Baker Date: 4/17/18

Site Location and Description:
Project Address if Available: 11490 SW Tooze Rd & 28201 SW 110th Avenue Suite/Unit _____
Project Location: South of Tooze/Boeckman Road and North of Berlin Avenue, Villebois
Tax Map #(s): 31W15AB Tax Lot #(s): 7200,7300,7400,7500,7600 County: ☐ Washington ■ Clackamas

Request:
The applicant is proposing an Amendment of SAP North, a Preliminary Development Plan / Tentative Subdivision for 89 single-family units, and a Tree Removal Permit, and a Final Development Plan for Parks and Open Space.

Project Type: Class I ☐ Class II ☐ Class III ☐

■ Residential ☐ Commercial ☐ Industrial ☐ Other: _____

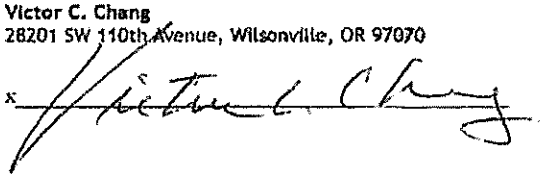
Application Type(s):

☐ Annexation	☐ Appeal	☐ Comp Plan Map Amend	☐ Parks Plan Review
☐ Final Plat	☐ Major Partition	☐ Minor Partition	☐ Request to Modify Conditions
☐ Plan Amendment	☐ Planned Development	☐ Preliminary Plat	
☐ Request for Special Meeting	☐ Request for Time Extension	☐ Signs	☐ Site Design Review
☐ SROZ/SRIR Review	☐ Staff Interpretation	☐ Stage I Master Plan	☐ Stage II Final Plan
☐ Type C Tree Removal Plan	☐ Tree Permit (B or C)	☐ Temporary Use	☐ Variance
☐ Villebois SAP	☐ Villebois PDP	☐ Villebois FDP	☐ Other (describe)
☐ Zone Map Amendment	☐ Waiver(s)	☐ Conditional Use	_____

Chang Property Owners List - Development Application

31W15AB Tax Lot 7200, 7300, 7400, 7500, 7600

Victor C. Chang
28201 SW 110th Avenue, Wilsonville, OR 97070

x 

Allen Y. Chang
28201 SW 110th Avenue, Wilsonville, OR 97070

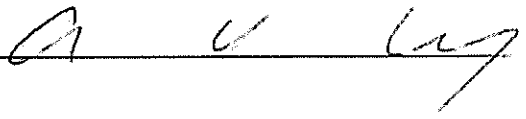
x_____

Chang Property Owners List - Development Application

<u>31W15AB Tax Lot 7200, 7300, 7400, 7500, 7600</u>
Victor C. Chang
28201 SW 110th Avenue, Wilsonville, OR 97070

x_____

Allen Y. Chang
28201 SW 110th Avenue, Wilsonville, OR 97070

x 

IC) Fee Calculation
ID) Mailing List

These sections have been omitted.

Section II) Special Area North Amendment (Master Plan Refinements)

IIA) Supporting Compliance Report

AMENDMENT OF SPECIFIC AREA PLAN - NORTH
SUPPORTING COMPLIANCE REPORT

SECTION II

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I. VILLEBOIS VILLAGE MASTER PLAN

LAND USE

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 Master Plan* shall provide 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.

Response: Specific Area Plan – North has been designed to be generally consistent with the *Villebois Village Master Plan.* Amendments to SAP North and refinements to the *Master Plan* do not alter the overall vision of the *Villebois Village Master Plan* for a complete community with a wide range of living choices, transportation choices, and working and shopping choices. Phase 5 contributes to the mix of housing types and densities identified in the amended *Villebois Village Master Plan* through the provision of smalls, mediums, standards, and larges. The number of dwelling units shown exceeds the minimum requirement of 2,300 dwelling units within the *Master Plan* area. The applicable Village zone criteria for refinements are addressed below in Section II of this report.

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* and as refined by Specific Area Plans. The proposed uses for the Future Study Area Specific Area Plan Amendment to SAP South shall be those identified in Figure 1 - Land Use Plan, which includes residential uses being limited to single-family lots in the medium to estate land use category identified in Wilsonville Code Subsection 4.125 (.18) F. 1. a. iv. arranged in a similar pattern as other areas on the edges of Villebois. Due to its location outside the general trapezoidal shape of Villebois and distance from the Village Center and neighborhood commons as well as its relatively small size, the Future Study Area Specific Area Plan Amendment to SAP South shall not be considered a neighborhood plan as defined in Section 2.1 of the Villebois Village Master Plan.

Response: Specific Area Plan – North has been designed to be consistent with the concepts of *Villebois Village Master Plan* for the site area. SAP North, as depicted on the attached SAP drawings (see Notebook Section II), provides land uses, roadways, and parks and open space in general compliance with the configuration shown on the proposed *Figure 1 - Land Use Plan* of the *Villebois Village Master Plan*. Within Phase 5, minor refinements to the *Master Plan* have been made to the mix of land uses and residential density, parks and open spaces, stormwater/rainwater facilities, and street alignment and location, as described in subsequent sections. Proposed residential uses continue to be arranged in a pattern similar to other areas on the edges of Villebois. Compliance with Section 4.125 (.18) is addressed in Section II of this Report.

3. The *Villebois Village* shall provide civic, recreational, educational and open space opportunities.

Response: Specific Area Plan - North provides civic, recreational, educational and open space opportunities that are generally consistent with those identified in the *Villebois Village Master Plan* for the subject area. Phase 5 will provide additional linear greens opportunities in Specific Area Plan – North than anticipated with the *Master Plan*. 0.5 acres of Regional Park 5 will be constructed, and the park will be completed with this development. Regional Park 6, a 6.43-acre park, will be constructed in the northern and western portions of the site. Additionally, with this proposed development, Linear Greens 15 and 16, as well as Pocket Park 9, will be partially constructed along the right-of-way of 110th Avenue.

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.

Response: Specific Area Plan - North currently provides public services, including: transportation, rainwater management; water; sanitary sewer; fire and police services; recreation, parks and open spaces; education; and transit. The attached Drawings (see Notebook Section IIB) demonstrate that Specific Area Plan – North will continue to provide public services, including: transportation, rainwater management; water; sanitary sewer; recreation, and parks and open spaces. Therefore, SAP North, including Phase 5, will continue to have full public services.

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).

Response: The Finance Plan has already been adopted for Villebois. Development within Specific Area Plan – North will comply with guiding measures of the Finance Plan. Specific Area Plan – North will not alter the assumptions within the City's Capital Improvement Plan.

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.

Response: The proposed SAP North amendment includes Drawings (see Notebook Section IIB), an Updated Master Plan and SAP Unit Counts (Section IIC), Historic/Cultural Resource Inventory (see Notebook Section IID), and Tree Report (see Notebook Section IIE) for Phase 5. An Architectural Pattern Book, Community Elements Book, Master Signage and Wayfinding Plan, and Rainwater Management Program were originally created and approved with Specific Area Plan – North. This SAP Amendment includes updating the maps within these books to include information to guide the design and build out of Phase 5 (see Sections IIF, IIG, and IIH).

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.

Response: This application submittal includes a request to zone the property Village (V) (See Section V).

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.**

Response: SAP North (see Notebook Section IIB – *Reduced Drawings*) provides land uses, roadways, and parks and open space in general compliance with the configuration shown on the proposed *Figure 1- Land Use Plan* of the *Villebois Village Master Plan*. Within Phase 5, minor refinements to the *Master Plan* have been made to the mix of land uses and residential density, parks and open spaces, stormwater/rainwater facilities, and street alignment and location, as described in subsequent sections. Compliance with Section 4.125 (.18) is addressed in Section II of this Report.

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.

Response: The applicant will work with the City to establish a development agreement for this phase.

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

Response: This is a request to amend SAP North. Therefore, this policy is not applicable.

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.

Response: The *Land Use Plan* (see Notebook Section IIB) illustrates that Specific Area Plan – North will continue to provide for the wide variety of housing options and home ownership options identified in the *Villebois Village Master Plan.* Phase 5 will contribute to the availability of housing options in Specific Area Plan - North with the provision of small, medium, standard, and large residential lots. The Master Plan shows smalls, mediums, standards, larges, and estate lots within Phase 5; this proposed amendment is generally consistent with the mix of residential lot types shown in the Master Plan. Estate lots are no longer proposed. However, Phase 5N will introduce single-level homes with the proposed large lots and some of the standard lots. The single-level homes are identified in the concurrent PDP (See Notebook Section IIIB).

2. Affordable housing within Villebois shall include rental and home ownership opportunities.

Response: Rental and home ownership opportunities will continue to be available within Specific Area Plan – North. Phase 5 of SAP North includes rental and ownership opportunities through the provision of single-family dwellings of varying sizes.

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.

Response: With the proposed amendment, Villebois Village will continue to maintain an overall average density of at least 10 dwelling units per net residential acre. The density within Phase 1, Phase 2, Phase 3, and Phase 4 has been approved. The number of units proposed within Phase 5 of SAP North is 89 within 10.29 net acres (approximately 8.65 units per net acre). The residential density of SAP North Phase 5 is consistent with other areas of Villebois Village in which larger lots are located along the edges of development. Furthermore, Phase 5 is located further from higher residential density associated with areas closer to the Village Center.

4. The Villebois Village shall accommodate a total of at least 2,300 dwelling units within the boundary of the *Villebois Village Master Plan*.

Response: This SAP North amendment will result in a total of 2,558 dwelling units within Villebois Village. Therefore, this request will not alter the ability of the overall project to meet the minimum requirement of 2,300 minimum dwelling units.

5. The Villebois Village shall provide a mix of housing types within each neighborhood and on each street to the greatest extent practicable.

Response: The attached plans (see Notebook Section IIB) illustrate that SAP North provides a mix of housing types generally consistent with the *Master Plan*. Phase 5 provides a mix of housing types to the greatest extent possible, ranging from small to large, while also providing a similar land use pattern to the other edges of Villebois. Additionally, this request adds single-level homes to the range of housing options in through a minor refinement to the *Master Plan*.

6. The Villebois Village shall include community housing types consistent with Oregon Revised Statute 426.508(4), which requires 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.

Response: The proposed amendment to Specific Area Plan – North will not impact the provision of community housing consistent with ORS 426.508 and contractual agreements between the State and the Master Planner.

7. The development standards and Specific Area Plans required by the Village zone **shall be consistent with the Governor's Quality Development Objecti**ves and the **Governor's Livability Initiative.**

Response: The Governor's Quality Development Objectives (QDO's), part of the Oregon Livability Initiative adopted in 1997, have guided the design and development of Villebois. The Development Objectives promote the building of strong livable communities, economic growth and the efficient use of public resources, and are listed as follows.

- Promote compact development within urban growth boundaries.
- Give priority to a quality mix of development that addresses the economic and community goals of a community and region.
- Encourage mixed-use, energy efficient development.
- Support development that is compatible with community and regional environmental concerns and available natural resources.
- Support development for a balance of jobs and affordable housing within a community.
- Promote sustainable local and regional economies.

The *Villebois Village Concept Plan,* the *Villebois Village Master Plan,* and the Village zone were developed to help guide the creation of a community that is consistent with these objectives. As demonstrated by compliance with the Goals, Policies and Implementation Measures of the *Villebois Village Master Plan* (see Section I of this report) and compliance with the Village zone (see Section II of this report), SAP North has been designed to be consistent with the Governor's Quality Development Objectives and the Governor's Livability Initiative. SAP North is part of a compact development within an urban growth boundary that gives priority to a quality mix of residential and mixed uses. SAP North was designed to address economic and community goals of the community and region by providing an energy efficient development pattern that offers multi-modal opportunities, maintaining compatibility

with community and regional environmental concerns and available natural resources through wetland and tree preservation, providing housing within a community concerned about increasing housing options, including affordable housing opportunities, and promoting a sustainable community through neighborhood character that encourages residents to interact with their community. As demonstrated by this report, Specific Area Plan – North is consistent with the *Villebois Village Master Plan* and is thereby consistent with the Governor's Quality Development Objectives.

8. Each neighborhood shall be designed to increase transportation options. Neighborhoods shall be bike and pedestrian friendly.

Response: The *Circulation Plan* and the *Park/Open Space/Pathways Plan* (see Notebook Section IVB) illustrate how SAP North is designed to increase transportation options for residents. This area is designed to 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*.

Response: Phases 1 – 4 have been approved and are in different stages of construction. Phase 5 includes small, medium, standard, and large lots that will provide for detached residential units. Residential units will be of a scale and design consistent with the desired vision for Villebois as expressed in the *Villebois Village Concept Plan* and Policies and Implementation Measures of the *Villebois Village Master Plan*. This will be assured through compliance with the *Architectural Pattern Book* and the Design Standards of the Village zone.

10. Natural features shall be incorporated into the design of each neighborhood to maximize their aesthetic character while minimizing impacts to said natural features.

Response: The *Park/Open Space/Pathways Plan* (see Notebook Section IIB) shows how the design of SAP North incorporates natural features to maximize their aesthetic character and minimize impacts to natural features. There are two wetland areas on the subject site. The wetland that is along the eastern property line will be retained as part of a linear green, whereas the wetland in the northwestern corner will be filled. The proposed development will not have a significant adverse effect upon an SROZ area as none exist on the site. A portion of the northeast part of the property was previously mapped as including an SROZ wetland. Mirth Walker, with SWCA, has evaluated the existing wetlands and found them to be isolated and not locally significant. SWCA has determined these wetlands should not be classified as locally significant. The SAP Amendment supporting compliance report includes a request to remove the SROZ designation from the site (See Notebook Section VII). Currently, Phase 5 of SAP North predominantly consists of trees and pasture area. To minimize the impacts to natural features, a park (RP-6) is proposed through the northern and western portions of the subject site. The applicant has configured the site to retain as many healthy trees as possible using a regional park (RP 6) and additional linear greens. Important trees will be preserved along SW Palermo Street where a lot has been removed and replaced with a linear green connection between SW Palermo Street and SW Berlin Avenue. Location of the homes and streets for Phase 5 are constrained by the topography of the site and the street connections that have been

established with the development of Phase 4 and Tonquin Meadows. The Tonquin Trail connects to Tooze Road in the northeast, meanders through the subject site via Regional Parks 5 and 6, and then continues through the Villebois development to the southwest.

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*.

Response: The design and scale of dwellings will be 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* through compliance with the Village zone Design Standards and the approved Architectural Pattern Book for SAP North. These tools provide guidelines for evaluating the design and scale of dwellings within the subject area. Compliance with these tools will assure compatibility with the compact, pedestrian-oriented character of the project.

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.

Response: The Architectural Pattern Book adopted in 2005 and updated in 2013 includes architectural styles and elements, scale and proportions, and land use patterns with lot diagrams, and has been developed in accordance with the appropriate Village zone standards. An amendment to the Architectural Pattern Book is proposed with this application to add the subject area into the Book and to update the standard lot minimum width dimension (see Notebook Section IIIG).

3. Develop Affordable Housing objectives for Villebois. Develop strategies to accomplish desired variety of mixes and densities, and indicate how buildout of the Specific Area Plan implements those strategies and contributes to the overall Goals and Policies of the *Villebois Village Master Plan*. The affordable housing objectives and plan is to be submitted before, or together with the application for SAP Central.

Response: Strategies to accomplish the desired variety of mixes and densities have been submitted and approved with earlier phases of Villebois Village. Villebois is expected to exceed the minimum 2,300 residential units specified by DATELUP, with a total of 2,558 dwelling units resulting from this SAP North amendment. Villebois offers a range of housing types and estimated prices as well as some unique housing opportunities through the provision of community housing in accordance with ORS 426.508 and the inclusion of accessory dwellings. SAP North continues to provide a mix of housing options. Phase 5 contributes to the mix of housing options within SAP North with the provision of smalls, mediums, standards, and larges. Additionally, Phase 5 will add single-level homes into the mix for Large and Standard lots.

PARKS & OPEN SPACE / OFF-STREET TRAILS & PATHWAYS

Goal

The Parks system within Villebois Village shall create a range of experiences for its residents and visitors through an interconnected network of pathways, parks, trails, open **space and other public spaces that protect and enhance the site's natural resources and** connect Villebois to the larger regional park/open space system.

Policies

1. Parks and open space areas shall incorporate existing trees where feasible and large shade trees shall be planted in appropriate locations in parks and open spaces.

Response: Phase 5 is currently used as horse pasture with existing trees concentrated within the center portion of the site. The applicant has configured the site to retain as many healthy trees as possible using regional park (RP 6) and additional linear greens. Measures have been taken to protect the "important" trees in the northwestern portion of the site and in the southern portion of the site. The tree in the southern portion will be preserved along SW Orleans Avenue where a lot has been removed and replaced with a linear green connection between SW Orleans Avenue and SW Capri Lane. Location of the homes and streets for Phase 5 are constrained by the topography of the site and the street connections that have been established with the development of Phase 4 and Tonquin Meadows.

2. An interconnected trail system shall be created linking the park and open spaces and key destination points within Villebois and to the surrounding neighborhoods. The trails system shall also provide loops of varying length to accommodate various activities such as walking, running and rollerblading.

Response: The *Park/Open Space/Pathways Plan* (see Notebook Section IIIB) show a system of interconnected trails and pathways that connect SAP North and parks and open spaces to surrounding neighborhoods and key destinations. Destination points include the parks and open space areas within SAP North and other areas of Villebois, the Village Center, and the elementary school within Villebois. The trail system within SAP North, includes loops of varying length that will accommodate various types of activities. This phase of SAP North connects the major pathway system within the Villebois Greenway. The *Park/Open Space/Pathways Plan* (see Notebook Section IIB) shows that Phase 5 contributes to the interconnected trail system by providing a connection to Tooze Road to the North and connections to Regional Park 5 to the Southwest.

3. Parks shall encourage the juxtaposition of various age-oriented facilities and activities, while maintaining adequate areas of calm.

Response: SAP North provides a variety of age-oriented facilities, ranging from child play structures to more active, hard-surface sport courts. Opportunities for quiet reflection and passive interaction are also provided within Regional Park 6, Linear Greens 15 and 16, and Pocket park 9. SAP North provides numerous other age-oriented facilities, passive and active activities, and areas of calm, as depicted on the *Parks/Open Space/Pathways Plan* in Notebook Section IIB. Phase 5 adds linear greens to the *Parks/Open Space/Pathways Plan.*

4. Park designs shall encourage opportunities for wildlife habitat, such as plantings for wildlife foraging and/or habitat, bird, and/or bat boxes and other like elements.

Response: SAP North encourages opportunities for wildlife habitat by minimizing impacts to natural resources. Phase 5 includes a regional park (RP-6) and adds linear greens that will retain existing trees in the subject property within parks.

5. Gathering spaces in parks shall generate social interaction by adding layers of activity (Power of Ten).

Response: SAP North includes a range of activities and facilities within gathering spaces of parks and open spaces, as described above and depicted on the *Parks/Open Space/Pathways Plan* in Notebook Section IIIB.

6. Build-out of the Villebois Village Master Plan shall comply with the City of Wilsonville SROZ regulations. Any encroachment into the SROZ will be reviewed for compliance or exemption as more detailed information is provided that will affect the SROZ areas. Adjustments in plan, street alignments, an intersections as well as rainwater facilities and pathways shall be made to comply with SROZ regulations.

Response: The proposed development will not have a significant adverse effect upon an SROZ area as none exist on the site. A portion of the northeast part of the property was previously mapped as including an SROZ wetland. Mirth Walker, with SWCA, has evaluated the existing wetlands and found them to be isolated and not locally significant. SWCA has determined these wetlands should not be classified as locally significant. The SAP Amendment supporting compliance report includes a request to remove the SROZ designation from the site (See Notebook Section VII).

9. Parks and recreation spaces shall provide for flexibility over time to allow for **adaptation to future community's park, recreation and** open space needs.

Response: The parks and recreation spaces depicted on the *Park/Open Space/Pathways Plan* (see Notebook Section IIIB) include designs that will be flexible overtime allowing for adaptation to future needs.

10. Integrated pest management practices, and other similar measures, shall be specified for the operation and maintenance of sports fields and other park uses in and adjacent to the floodplain.

Response: The floodplain is located in the eastern portion of Villebois and is associated with the Coffee Lake wetland complex. Therefore, this requirement does not apply to SAP North.

11. On-street parking will not be allowed along the frontages of parks and open spaces where views into and out of park spaces should be protected. Parking will be allowed along parks and open spaces in circumstances where it is necessary for the function of the park and will not obstruct the views into and out of the park area.

Response: On-street parking is not provided along the frontages of the parks and open spaces in order to provide for views into and out of park spaces. A small parking lot is also provided along Tooze Road just to the east of the dog park. The dog park is likely to attract visitors who are not from the neighborhood and therefore, additional vehicular parking is warranted. The *Circulation Plan* and *Street Sections* (see Notebook Section IIIB) identify where parking is planned.

Implementation Measures

1. Future and pending development applications within Villebois (Specific Area Plans, Preliminary Development Plans and Final Development Plans) shall comply with the park, trail, open space system proposed in Figure 5 - Parks and Open Space Plan, Figure 5A - Recreational Experiences Plan, and Table 1: Parks Programming. Refinements may be approved in accordance with Village Zone section 4.125(.18)(F).

Response: Phase 5 of SAP North is generally consistent with Figure 5, Figure 5A and Table 1 of the *Master Plan*. A dog park is included in RP-6, as well as child play areas and sport courts, which are all represented in The *Master Plan.* Linear parks and a pocket park are shown along the east edge of the property. Compliance with Section 4.125(.18)(F) is addressed in this Narrative.

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

Response: The amendment to Chapter 3 referenced in Implementation Measure 2, above, occurred in 2006. As demonstrated by this Supporting Compliance Report, the proposed plan complies with the applicable provisions of Chapter 3 – Parks and Open Space of the Villebois Village Master Plan.

3. Parks and open spaces shall be designed to incorporate native vegetation, landforms, and hydrology to the fullest extent possible.

Response: As shown on the *Park/Trail/Open Space Plan* (see Notebook Section IIB), native vegetation, landforms, and hydrology are incorporated in parks and open spaces to the extent feasible. Parks and open space areas in SAP North are designed to incorporate native vegetation by retaining existing trees in park areas where feasible. Landforms are incorporated through minimal grading within parks. Hydrology is incorporated in parks through the retention of the existing wetland along the eastern boundary of the site. Phase 5 does not alter SAP North's compliance with this Implementation Measure.

4. Each Specific Area Plan shall include a Community Elements Book that (1) meets the requirements of Master Plan Chapter 3; (2) specifies the value system and methodology for tree preservation, protection and tree planting; and (3) provides a proposed plant list. The Community Elements Book also includes specifications for site furnishings and play structures. Proposed parks shall closely comply with the specifications of the applicable Community Elements Book.

Response: A Community Elements Book was submitted and approved with the 2007 application for Specific Area Plan – North (DB07-0054 et al). This application includes proposed amendments to Specific Area Plan – North Community Elements Book to achieve add information to the Maps for Phase 5 (see Notebook Sections IIF, IIG, and IIH).

5. Artwork is encouraged to be incorporated into parks.

Response: Space has been reserved for placement of artwork in parks closer to the Village Center and within neighborhood and community gathering spaces. This SAP amendment does not alter this approach.

6. The interface with Graham Oaks Natural Areas should contain enhancements such as trail connections, landscaping, gateway features, seating and overlook opportunities.

Response: The Graham Oaks Natural Area is located to the south of Villebois Village, abutting areas of SAP South. Therefore, this policy is not applicable to SAP North.

7. The ability to recreate year round shall be preserved through measures such as: the provision of some hard surfaces that function in the wet season; areas shaded from the sun; areas protected from the rain; safely lit areas and indoor recreation opportunities.

Response: Specific Area Plan – North includes a variety of year-round recreation and open space opportunities, including multi-use trails, hard surface sports areas, and play and park structures. Through the preservation of existing trees within parks, shade from the sun and rain is provided within Regional Park 6.

9. The design of Villebois shall retain the maximum number of existing trees **practicable that are six inches or more DBH in the "Important" or "Good" tree** rating categories, which are defined in the Community Elements Books. Trees rated **"Moderate" shall be evaluated on an individual basis as regard**s retention. Native species of trees and trees with historical importance shall be given consideration for retention.

Response: The attached *Tree Preservation Plan* (see Notebook Section IIIB) depicts the approved tree preservation and removal for Phase 5. The *Tree Preservation Plan* identifies the inventoried existing trees, their classification and whether they will be retained or removed. For Phase 5, specific methodology used to determine DBH and tree ratings is described in the Tree Report (see Notebook Section IIIE). SAP North complies with this policy by retaining trees that are six inches or more in DBH and rated "Important" and "Good" to the extent feasible.

The majority of Phase 5 is currently being used as a horse pasture area, with trees concentrated in the western and center portions of the site. To minimize the impacts to existing trees within Phase 5, RP-6 is proposed with this SAP amendment through the northwestern portion of the site. The applicant is aiming to retain as many trees that are in good condition as possible. The street configuration of Phase 5 is constrained by the provided connections from Phase 4 to the west and Tonquin Meadows to the east, as well as the wetland areas along the eastern border of the property adjacent to 110th Avenue. A linear green has been added to preserve three trees with an "Important" rating. Additional description of the proposed *Tree Preservation Plan* for Phase 5 is provided in subsequent sections of this report and in the Tree Report prepared by the project Arborist.

10. Each Specific Area Plan, Preliminary Development Plan and Final Development Plan shall include tree preservation plans and planting plans to indicate proposed tree planting within parks and along streets and descriptions of the size of trees when planted and upon maturity.

Response: The attached SAP Drawings (see Notebook Section IIIB) include specific information on tree preservation and street tree plans for Phase 5 and reflect Phase 1, Phase 2, Phase 3, and Phase 4 approvals.

12. 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 wetland complex. These wetlands are adjacent to Coffee Creek and within the boundary of Villebois. The wetland naturalization and enhancement plan shall be initiated and completed with the phased development of the Village.

Response: The Coffee Lake wetland area is adjacent to the eastern portion of Villebois. Therefore, this policy measure is not applicable to Specific Area Plan - North.

13. The Villebois Master Plan shall comply with the Significant Resource Overlay Zone (SROZ) regulations. Proposed encroachments into the SROZ for exempt and non-exempt development shall be reviewed for compliance with the requirements of Section 4.139 of the Wilsonville Code.

Response: The proposed development will not have a significant adverse effect upon an SROZ area as none exist on the site. A portion of the northeast part of the property was previously mapped as including an SROZ wetland. Mirth Walker, with SWCA, has evaluated the existing wetlands and found them to be isolated and not locally significant. SWCA has determined these wetlands should not be classified as locally significant. The SAP Amendment supporting compliance report includes a request to remove the SROZ designation from the site (See Notebook Section VII).

14. A conceptual plan for lighting of park spaces throughout Villebois is provided on the plan included in Appendix H. Future development applications shall comply with the lighting system proposed in Appendix H. Refinements may be approved in accordance with Village Zone Section 4.125(.18)(F).

Response: The conceptual plan for lighting of park spaces addresses major parks and open spaces within SAP North, such as the Tonquin Trail and the Neighborhood Commons. Phase 5 does not alter compliance of SAP North with this implementation measure.

15. Each child play area shall include uses suitable for a range of age groups.

Response: The attached *Park/Open Space/Pathways Plan* (see Notebook Section IIB) illustrates the child play areas approved with Phase 1, Phase 2, Phase 3, and Phase 4. Phase 5 will include child play areas in RP-6, a large regional park in the northwestern portion of the subject site, and creative play areas along the eastern boundary of the site. These areas will be suitable for a range of age groups.

18. The park spaces included within each phase of development will be completed prior to occupancy of 50% of the housing units in that particular phase unless weather or other special circumstances prohibit completion, in which case bonding for the improvements shall be permitted.

Response: The Applicant/Developer will provide for completion of parks prior to occupancy of 50% of the housing units.

20. The adequacy, amount and location of the proposed parking (including ADA parking) necessary to serve the proposed park uses shall be evaluated in detail at the SAP and PDP level. Off-street parking may be required to serve the various park users.

Response: Phase 5 will include a small parking lot along Tooze Road that will be intended for dog park users. Additionally, some on-street parking on Verdun Loop will be provided for dog park users.

UTILITIES

Sanitary Sewer

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.
5. At the time of development of the Future Study Area, replace private pump station with Public Sanitary Sewer Lift Station build consistent with Technical Appendix I.

Response: The *Utility Plan* (see Notebook Section IIIB) shows the approved sanitary system within Phase 1, Phase 2, Phase 3, Phase 4 and the proposed sanitary system within Phase 5. The sanitary system within Phase 5 of SAP North will comply with Policies 1 through 7 of the City of Wilsonville Wastewater Master Plan, as demonstrated by the *Utility Plan* and the attached Utility & Drainage Report (see Notebook Section IIIC). No refinements to sanitary sewer are proposed.

Water

Goal

The Villebois Village shall include adequate water service.

Policy

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

Implementation Measures

1. Implement the following list of Water System Master Plan policies and projects with development of Villebois Village:

   - Policies: 1-7
   - Projects:
     1) 18-inch main in Barber Street from Kinsman Road to Brown Road
     2) 48-inch main in Kinsman Road from Barber Street to Boeckman Road
     3) 24-inch main in Boeckman Road from Kinsman Road to Villebois Drive
     4) 18-inch main in Villebois Drive from Boeckman Road to Barber Street
     5) 18-inch main from Barber Street from Brown Road to Grahams Ferry
     6) 18-inch main in Grahams Ferry Road from Barber Street to Tooze Road
     7) 12-inch main in Grahams Ferry Road from the Future Study Area to Barber Street
     8) 30-inch main in Tooze Road from Villebois Drive to Grahams Ferry Road
     9) 12-inch main in extension of Villebois Drive from Barber to the Future Study Area
     10) 12-inch main connections from Barber Street to Evergreen

Response: The *Utility Plan* (see Notebook Section IIIB) shows the water system for SAP North, reflecting Phase 1, Phase 2, Phase 3, Phase 4 approvals, and the proposed water system for Phase 5. The proposed water system will comply with Policies 1 through 7 of the Water System Master Plan. None of the projects above will be constructed along with this development as they are not geographically applicable.

2. Incorporate the construction of the above referenced projects into the Finance Plan.

Response: Construction of water systems projects was incorporated into the Finance Plan in previous phases of Villebois.

Storm Drainage

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 stormwater system for Villebois shall meet the necessary requirements of the City of Wilsonville Stormwater Master Plan and Public Works Standards.

Response: The *Utility Plan* (see Notebook Section IIIB) shows the stormwater system for SAP North, reflecting Phase 1, Phase 2, Phase 3, Phase 4 approvals, and the proposed stormwater system for Phase 5. A supporting Utility and Drainage Report is included in Notebook Section IIIC, which demonstrates that the stormwater system will 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.

Response: Rainwater Management Systems are integrated into parks and open space areas as shown on the *Park/Open Space/Pathways Plan* (see Notebook Section IIIB). Rainwater management within PDP 5N will be provided through street trees and bio-retention cells located in planter strips in rights-of-way, as shown within the attached plans (see Notebook Section IIIB).

Implementation Measures

3. 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.

Response: The *Utility Plan* (see Notebook Section IIIB) shows the stormwater system for Specific Area Plan – North, reflecting Phase 1, Phase 2, and Phase 3, Phase 4 approvals, and the proposed stormwater system for Phase 5. A supporting utility report in Notebook Section IIIC demonstrates that the stormwater system will meet the necessary requirements of the City of Wilsonville Stormwater Master Plan and Public Works Standards. CLC-10 was completed several years ago with phasing of Specific Area Plan – South. This proposed amendment does not alter this Implementation Measure.

4. Develop a Rainwater Management Program with the first Specific Area Plan that will provide opportunities for integrating water quality and **detention 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.

Response: Rainwater management within PDP 5N will be provided through street trees and bio-retention cells located in planter strips in rights-of-way, as shown within the attached plans (see Notebook Section IVB).

5. Construct CLC-10 as defined or implement Option A or B as proposed. Construction of CLC-10, or selection of an option to modify CLC-10, is to occur in accordance with the terms specific in the memorandum of understanding between the City/Villebois and Metro (Metro contract #926225).

6. Incorporate the construction of CLC-10 or as modified by Option A or B into the Finance Plan.

Response: CLC-10 was completed several years ago with phasing of Specific Area Plan – South. This is a request for amendment to SAP North. Therefore, this proposed amendment does not alter this Implementation Measure.

7. Insure that on-going costs to maintain rainwater systems in public right-of-way are included in the Finance Plan.

11. **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.

Response: Ownership and maintenance of stormwater conveyance facilities for Phase 1, Phase 2, Phase 3, and Phase 4 has been addressed through the Ownership & Maintenance Agreement prepared with PDP 1N, PDP 2N, and PDP 4N. An Ownership & Maintenance Agreement addressing ownership and maintenance of stormwater conveyance facilities in Phase 5 will be prepared at the final plat review stage.

12. Complete the study of Options A and B with regard to CIP Project CLC-10 in accordance with the terms specified in the memorandum of understanding between the City/Villebois and Metro (Metro contract #926225). The study shall consider at least the following actions, which are required to obtain approval of the City Engineer:

    - Coordinate with and obtain approval of Metro and the City of Wilsonville for integration of a potential detention facility into the design of the Graham Oaks Natural Area. Obtain appropriate easements as required for said facility.

13. 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.

Response: CLC-10 was completed several years ago with phasing of Specific Area Plan – South. Amendments are proposed to SAP North to reflect previous approvals and add information for Phase 5. Therefore, this proposed amendment does not alter this Implementation Measure.

CIRCULATION

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

2. The *Villebois Village Master Plan* includes the following alternative street sections. Any proposed alterative street sections not included in the list below shall follow the review of 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 section D), which** increase right-of-**way to 65' and curb**-to-**curb to 92'.**
- **Increase planter to 7.5' 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 allowing parking on Residential Streets** (VVMP street sections J, K, and M).

Response: SAP – North implements the street sections approved with the *Villebois Village Master Plan*. Phase 5 includes minor refinements to the street network to accommodate changes that have occurred in adjacent phases. The City has since evaluated planned improvements for Tooze Road and determined to limit to one access point which exists in PDP 4N. Therefore, the previously shown street connection to Tooze Road in PDP 5N has been eliminated. Additionally, when Tonquin Meadows was reviewed, the extension of Coffee Lake drive across Villebois Drive was eliminated in order to retain an existing wetland area. This has resulted in some minor changes to the residential streets in these intervening areas. Verdun loop and Stockholm Avenue now provide the connections from Tonquin Meadows across Villebois Drive into the site and both streets extend west to meet SW Palermo Street at RP-6. Local streets (Barcelona, Orleans, and Palermo) surround RP-6 and linear greens have been proposed to provide pedestrian connections throughout the development. The site provides a pedestrian-friendly layout that contains a regional trail system, sidewalks, and pedestrian/cyclist accessways.

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.

Response: Phase 1, Phase 2, Phase 3, and Phase 4 have been approved and are in different stages of construction. No roundabouts are included with Phase 5 of SAP North.

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.

Response: SAP – North provides more than the required 600 foot access spacing on Tooze Road (see Notebook Section IIIB). This SAP amendment does not include a request for a major alternative for access spacing.

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.

Response: The *Circulation Plan* (see Notebook Section IIIB) includes the approved placement of curb extensions within Phase 1, Phase 2, and Phase 3 and the proposed placement of curb extensions within Phase 4. The placement of the curb extensions within Phase 5 is consistent with the Curb Extension Concept Plan in the SAP North Community Elements Book.

6. Street and pathway alignments shall be demonstrated to be in compliance with Significant Resource Overlay Zone (SROZ) regulations with Specific Area Plans.

Response: The proposed development will not have a significant adverse effect upon an SROZ area as none exist on the site. A portion of the northeast part of the property was previously mapped as including an SROZ wetland. Mirth Walker, with SWCA, has evaluated the existing wetlands and found them to be isolated and not locally significant. SWCA has determined these wetlands should not be classified as locally significant. The SAP Amendment supporting compliance report includes a request to remove the SROZ designation from the site (See Notebook Section VII).

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

Response: The *Circulation Plan* and the *Street Sections* (see Notebook Section IIIB) illustrate the street system within SAP North, including shared roadways for bicyclists and sidewalks. The *Park/Open Space/Pathways Plan* (see Notebook Section IIB) shows pedestrian/bicycle connections to adjacent streets or parks and open spaces throughout SAP North. Amendments to add specific information for Phase 4 continue this approach.

II. VILLAGE (V) ZONE

(.02) PERMITTED USES

Examples of principle uses that typically permitted:

A. Single Family Detached Dwellings

H. Non-commercial parks, plazas, playgrounds, recreational facilities, community buildings and grounds, tennis courts, and other similar recreational and community uses owned and operated either publicly or by an owners association.

Response: Land uses within Phase 1, Phase 2, Phase 3, and Phase 4 have been approved. Proposed uses within SAP North that are permitted pursuant to subsection (.02) are generally shown on the *Land Use Key* and *Land Use Plan* (see Notebook Section IIIB). SAP North continues to include a range of single-family detached dwellings and park areas.

(.05) DEVELOPMENT STANDARDS APPLYING TO ALL DEVELOPMENTS IN THE VILLAGE ZONE

In addition to other applicable provisions of the Wilsonville Planning and Land Development Ordinance, all development in the Village zone shall be subject to Tables V-1 through V-4, and to the following. If there is conflict between the provisions of the Village zone and other portions of the Code, then the provisions of this section shall apply.

A. Block, Alley, Pedestrian and Bicycle Standards:

1. Maximum Block Perimeter: 1,800 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent a block perimeter from meeting this standard.

2. Maximum spacing between streets for local access: 530 feet, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent street extensions from meeting this standard. Under such circumstances, intervening pedestrian and bicycle access shall be provided, with a maximum spacing of 330 feet from those local streets, unless the Development Review Board makes a finding that barriers such as existing buildings, topographic variations, or designated Significant Resource Overlay Zone areas will prevent pedestrian and bicycle facility extensions from meeting this standard.

Response: Circulation patterns within Phase 1, Phase 2, Phase 3, Phase 4, and Phase 5 are shown on the attached SAP Drawings (see Notebook Section IIIB). Circulation patterns within Phase 5 of SAP North are dictated by the 600-foot access spacing standard along SW Tooze Road, located along the northern site boundary (City of Wilsonville Transportation System Plan requirement for a minor arterial) and by the planned locations for the Villebois Greenway as well as existing street patterns west, east and south of Phase 5. The City has preferred that the applicant reduce the number of vehicular connections to Tooze Road and because of this decision, no connection to Tooze Road is proposed with PDP 5N. The spacing between the Tooze Road Connection in Phase 4 and the connection to Tooze Road in Tonquin Meadows exceeds the City's spacing requirements. Bicycle and pedestrian connections will be provided between SW Barcelona/Verdun Loop and Tooze Road, throughout the

development, and specifically throughout RP-6, in order to meet the 330 foot spacing requirement.

B. Access: All lots with access to a public street, and an alley, shall take vehicular access from the alley to a garage or parking area, except as determined by the City Engineer.

Response: As shown on the attached drawings (see Notebook Section IIIB), all lots in Phase 5 with access to a public street and an alley shall take vehicular access from the alley to a garage or parking area. Compliance with this standard for Phase 1, Phase 2, Phase 3, and Phase 4 was addressed with previous approvals.

C. Trailers, travel trailers, mobile coaches, or any altered variation thereof shall not be used for the purpose of conducting a trade or calling, or for storage of material, unless approved for such purpose as a temporary use.

Response: No trailers, travel trailers, mobile coaches, or such vehicles will be used for the purpose of conducting a trade or calling for the storage of material unless approved as a temporary use.

D. Fences:

i. General Provisions:

a. Fencing in the Village Zone shall be in compliance with the Master Fencing Program in the Adopted Architectural Pattern Book for the appropriate SAP.

b. When two or more properties with different properties abut, the property with the largest front yard setback requirement shall be used to determine the length and height of the shared side yard fence, as required by Section 4.125(0.05)(D)(1)(a).

c. The Development Review Board may, in their discretion, require such fencing as deemed necessary to promote and provide traffic safety, noise mitigation, and nuisance abatement, and the compatibility of different uses permitted on adjacent lots of the same zone and on adjacent lots of different zones.

2. Residential:

a. The maximum height of any fence located in the required front yard of a residential development shall not exceed three (3) feet.

b. Fences on residential lots shall not include chain link, barbed wire, razor wire, electrically charged wire, or be constructed of sheathing material such as plywood or flake board. Fences in residential areas that protect wetlands, or other sensitive areas, may be chain link.

Response: The SAP North Master Fencing Plan is part of the SAP – North Architectural Pattern Book. The SAP North Master Fencing Plan maps are proposed to be updated to include information for Phase 5.

Residential lot fencing occurs when each home is constructed, details of which are provided with Building Permit review. Residential lot fencing will occur in compliance with the fencing specified for the specific lot type and style in accordance with the SAP North Master Fencing Plan.

E. Recreational Area in Multi-Family Residential and Mixed Use Developments

Response: Phase 1 through Phase 5 of SAP North include lots for the single family residential homes; therefore this standard does not apply.

F. Fire Protection:

1. All structures shall include a rated fire suppression system (i.e., sprinklers), as approved by the Fire Marshal

Response: All of the homes within the proposed SAP – North Phase 5 will include appropriate fire suppression systems. This will be verified with review of future building permit applications.

Table V-1 Development Standards

Response: All of the lots will be developed with single family detached dwelling units that meet minimum lot size specifications as defined in the SAP – North Architectural Pattern Book. No buildings are proposed with this application. Compliance with these standards will be reviewed with the Tentative Plat in conjunction with the PDP application and the subsequent Final Plat.

Single-Family Dwellings

Minimum lot size: 2,250 square feet

Minimum lot width: 35 feet

Minimum lot depth: 50 feet

Response: Lots will be designed to meet the applicable minimum lot size requirement and meet the applicable minimum lot width and depth specified for Small, Medium, Standard, and Large lots in the SAP – North Architectural Pattern Book, with allowed variations for site features, e.g. road alignment and site topography. The Tentative Plat depicting proposed lot sizes and dimensions will be reviewed in conjunction with the PDP.

(.06) STANDARDS APPLYING TO COMMERCIAL USES

A. All commercial uses shall be subject to the following:

1. A Neighborhood Center shall only be located at a Neighborhood Commons

Response: Areas of SAP North are located within the conceptual neighborhood area in the northern portion of Villebois Village. As shown on the Neighborhood Concept Diagram in the *Master Plan*, a Neighborhood Commons is a part of Regional Park 5, the Final Development Plan for which was approved on 8/25/15 as DB15-0054 et seq.

(.07) GENERAL REGULATIONS - OFF-STREET PARKING, LOADING & BICYCLE PARKING

Except as required by Subsections (A) through (D), below, the requirements of Section 4.155 shall apply within the village zone.

A. General Provisions:

1. The provision and maintenance of off-street parking spaces is a continuing obligation of the property owner. The standards set

forth herein shall be considered by the Development Review Board as minimum criteria.

2. The Board shall have the authority to grant variances or refinements to these standards in keeping with the purposes and objectives set forth in this zone.

Response: The applicant acknowledges that the provision and maintenance of off-street parking is the continuing obligation of the property owner. There are no variances or refinements to the standards of this section proposed with this application.

B. Minimum and Maximum Off-Street Parking Requirements:

1. Table V-2, Off-Street Parking Requirements, below, shall be used to determine the minimum and maximum parking standards for noted land uses. The number of required parking spaces shown in Table V-2 shall be determined by rounding to the nearest whole parking **space…**

Table V-2: Off-Street Parking Requirements

Category	Min. Vehicle Spaces	Max. Vehicle Spaces	Bicycle Short Term	Bicycle Long Term
Single Family Detached Dwelling Units	1.0 / DU	NR	NR	NR
Row Houses	1.0 / DU	NR	NR	NR

Response: Each of the proposed homes will provide a minimum of a two-car garage in compliance with this standard.

C. Minimum Off-Street Loading Requirements:

Response: SAP – North includes lots for development of single family homes; therefore no loading areas are required.

D. Bicycle Parking Requirements:

Response: SAP – North includes single family detached dwelling units. There is no bicycle parking requirement for these unit types, as noted in *Table V-2* above, therefore these standards do not apply.

(.08) OPEN SPACE

Open space shall be provided as follows:

A. In all residential developments and in mixed-use developments where the majority of the developed square footage is to be in residential use, at least twenty-five percent (25%) of the area shall be open space, excluding street pavement and surface parking. In multi-phased developments, individual phases are not required to meet the 25% standard as long as an approved Specific Area Plan demonstrates that the overall development shall provide

a minimum of 25% open space. Required front yard areas shall not be counted towards the required open space area. Required rear yard areas and other landscaped areas that are not within required front or side yards may be counted as part of the required open space.

B. Open space area required by this Section may, at the discretion of the Development Review Board, be protected by a conservation easement or dedicated to the City, either rights in fee or easement, without altering the density or other development standards of the proposed development. Provided that, if the dedication is for public park purposes, the size and amount of the proposed dedication shall meet the criteria of the City of Wilsonville standards. The square footage of any land, whether dedicated or not, which is used for open space shall be deemed a part of the development site for the purpose of computing density or allowable lot coverage. See SROZ provisions, Section 4.139.10.

C. The Development Review Board may specify the method of assuring the long-term protection and maintenance of open space and/or recreational areas. Where such protection or maintenance are the responsibility of a **private party or homeowners' association, the City Attorney shall review** and approve any pertinent bylaws, covenants, or agreements prior to recordation.

Response: *Figure 5 - Parks & Open Space Plan* of the *Villebois Village Master Plan* indicates that there are 58.42 acres of parks and 101.31 acres of open space for a total of 159.73 acres within Villebois, approximately 33%. Parks and open spaces in Phase 1, Phase 2, Phase 3, and Phase 4 have already received approval. Phase 5 of SAP – North is proposing larger parks and more open space than what is in the *Parks & Open Space Plan* of the *Villebois Village Master Plan.* Therefore, there is a sufficient amount of parks and open space.

(.09) STREET & ACCESS IMPROVEMENT STANDARDS

A. Except as noted below, the provisions of Section 4.177 apply within the Village zone:

1. General provisions:

a) All street alignment and access improvements shall conform to Figures 7, 8, 9A, and 9B of the Villebois Village Master Plan, or as refined in the Specific Area Plan, Preliminary Development Plan, or Final Development Plan and the following standards:

Response: SAP – North implements the street sections approved with the *Villebois Village Master Plan*. Phase 5 includes minor refinements to the street network to accommodate changes that have occurred in adjacent phases. The City has since evaluated planned improvements for Tooze Road and determined to limit to one access point, which exists in PDP 4N. Therefore, the previously shown street connection to Tooze Road in PDP 5N has been eliminated. Additionally, when Tonquin Meadows was reviewed, the extension of Coffee Lake drive across Villebois Drive was eliminated in order to retain an existing wetland area. This has resulted in some minor changes to the residential streets in these intervening areas. Verdun loop and Stockholm Avenue now provide the connections from Tonquin Meadows across Villebois Drive into the site. Both of these roads extend from the southeastern boundary of the subject property and connect with SW Palermo Street, which is adjacent to RP-6 and runs towards the southwestern boundary of the subject site. The

proposed street alignment was chosen in order to preserve as many healthy trees as possible. RP-6 has been moved to the western portion of the site where the bulk of the trees are located. Local streets (Barcelona, Orleans, and Palermo) surround RP-6 and linear greens have been proposed to both preserve important trees and to provide better pedestrian and cyclist circulation. Specifically, a linear green is proposed between SW Palermo Street and SW Berlin Avenue to preserve three important trees. A second linear green has replaced the street segment between Cherbourg Lane and Berlin Avenue due to the steepness of the terrain and the amount of healthy quality trees nearby.

i. All street improvements shall conform to the Public Works Standards and shall provide for the continuation of streets through proposed developments to adjoining properties or subdivisions, according to the Master Plan.

Response: Phase 1, Phase 2, Phase 3, and Phase 4 have already been constructed. Street improvements within Phase 5 of SAP North will comply with the applicable Public Works Standards. The street system within Phase 5 is designed to provide for the continuation of streets within Villebois and to adjoining streets according to the *Master Plan*. The street system within Phase 5 is shown on the *Circulation Plan* (see Notebook Section IIB).

ii. All streets shall be developed according to the Master Plan.

Response: The street system of SAP North is illustrated on the *Circulation Plan* (see Notebook Section IIB). All streets in Phase 5 will be developed in accordance with the *Master Plan*, with the minor refinements described in this report.

2. General provisions:

a) Angles: Streets shall intersect one another at angles not less than 90 degrees, unless existing development or topography makes it impractical.

b) Intersections: If the intersection cannot be designed to form a right angle, then the right-of-way and paving within the acute angle shall have a minimum of thirty (30) foot centerline radius and said angle shall not be less than sixty (60) degrees. Any angle less than ninety (90) degrees shall require approval by the City Engineer after consultation with the Fire District.

Response: The attached drawings (see Notebook Section IIB) demonstrate that all proposed streets will intersect at angles consistent with the above standards.

c) Offsets: Opposing intersections shall be designed so that no offset dangerous to the traveling public is created. Intersections shall be separated by at least:

1) 1000 ft. for major arterials
2) 600 ft. for minor arterials
3) 100 ft. for major collector
4) 50 ft. for minor collector

Response: The attached drawings (see Notebook Section IIIB) demonstrate that opposing intersections on public streets are offset, as appropriate, so that no danger to the traveling public is created.

d) Curb Extensions:

1) Curb extensions at intersections shall be shown on the Specific Area Plans required in subsection 4.125(.18)(C) through (F), below, and shall:

- Not obstruct bicycle lanes on collector streets.
- Provide a minimum 20 foot wide clear distance between curb extensions all local residential street intersections shall have, shall meet minimum turning radius requirements of the Public Works Standards, and shall facilitate fire truck turning movements as required by the Fire District.

Response: Proposed curb extensions within Phase 5 are shown on the *Circulation Plan* (see Notebook Section IIB), none of which are located on collector streets. The attached drawings illustrate that all street intersections will have a minimum 20 foot wide clear distance between curb extensions.

3. Street grades shall be a maximum of 6% on arterials and 8% for collector and local streets. Where topographic conditions dictate, grades in excess of 8%, but not more than 12%, may be permitted for short distances, as approved by the City Engineer, where topographic conditions or existing improvements warrant modification of these standards.

Response: Phases 1-4 have already been constructed. The *Grading Plan* (see Notebook Section IIB) demonstrates that proposed streets within Phase 5 can comply with this standard.

4. Centerline Radius Street Curves:

The minimum centerline radius street curves shall be as follows:

a) Arterial streets: 600 feet, but may be reduced to 400 feet in commercial areas, as approved by City Engineer.

b) Collector streets: 600 feet, but may be reduced to conform with the Public Works Standards, as approved by the City Engineer.

c) Local streets: 75 feet

Response: Phases 1-4 have already been constructed. The *Circulation Plan* (see Notebook Section IIB) demonstrates that all streets with Phase 5 will comply with the above standards.

5. Rights-of-way:

a) See (.09) (A), above.

Response: Proposed rights-of-way within Phase 5 of SAP North are shown on the attached drawings (see Section IIB). Rights-of-way will be dedicated and a waiver of remonstrance against the formation of a local improvement district will be recorded with recordation of final plat(s) in accordance with Section 4.177.

6. Access drives.

a) See (.09) (A), above.

b) 16 feet for two-way traffic.

Response: The attached drawings (see Notebook Section IIB) demonstrate that all proposed access drives within Phase 5 of SAP North will have a minimum improvement width of 16 feet and will provide two-way travel. In accordance with Section 4.177, all access drives will be constructed with a hard surface capable of carrying a 23-ton load. All access drives will include dedicated easements for fire access and will be designed to provide a clear travel lane free from any obstructions.

7. Clear Vision Areas

   a) See (.09) (A), above.

Response: The *Circulation* Plan (see Notebook Section IIB) illustrates that clear vision areas can be provided in compliance with the Section 4.177.

8. Vertical clearance:

   a) See (.09) (A), above.

Response: The *Circulation* Plan (See Notebook Section IIB) illustrates that vertical clearance can be provided in compliance with the Section 4.177.

9. Interim Improvement Standard:

   a) See (.09) (A), above.

Response: There are no interim improvements for this development. Therefore, this standard is not applicable.

(.10) SIDEWALK AND PATHWAY IMPROVEMENT STANDARDS

A. The provisions of Section 4.178 shall apply within the Village zone.

Response: As previously described, Phases 1-4 have already been constructed. All sidewalks and pathways within Phase 5 of SAP North will be constructed in accordance with the standards of Section 4.178 and the *Villebois Village Master Plan*.

(.11) LANDSCAPING, SCREENING AND BUFFERING

A. Except as noted below, the provisions of Section 4.176 shall apply in the Village zone:

   1. Streets in the Village zone shall be developed with street trees as described in the Community Elements Book.

Response: The Community Elements Book includes the Street Tree Master Plan for SAP – North. The SAP North Community Elements Book will be amended with this application to update maps to include information for Phase 5 (see Notebook Section IIF). Phase 5 of SAP North will comply with the amended Street Tree Master Plan and the appropriate standards of Section 4.176.

(.12) MASTER SIGNAGE AND WAYFINDING

A. All signage and wayfinding elements within the Village Zone shall be in compliance with the adopted Signage and Wayfinding Master Plan for the appropriate SAP.

B. Provisions of Section 4.156.01 through 4.156.11 shall apply in the Village Zone except subsections 4.156.07 and 4.156.08. Portions of Section

4.156.08 pertaining to Town Center may be used for comparison purposes to assess conceptually whether signage is allowed in an equitable manner throughout the City. Sections 4.156.01 through 4.156.11 are not to be used for direct comparison of sign standards.

C. The Master Signage and Wayfinding Plan is the Master Sign Plan for the applicable SAP.

D. In the event of conflict between applicable standards of Section 4.156.11 and this subsection or the applicable Master Signage and Wayfinding Plan, this subsection and the Master Signage and Wayfinding Plan shall take precedence.

E. The following signs may be permitted in the Village Zone, subject to the conditions of this Section.

1. Site Signs

    a. Signs that capture attention establishing a sense of arrival to Villebois and to areas within Villebois.

2. Site Directional

    a. Permanent mounted signs informing and directing the public to major destinations within Villebois.

3. Retail Signs

    a. Signs which identify the retail uses, including bulkhead signs, blade signs, temporary window signs and permanent window signs designed to identify storefronts and provide information regarding the retail uses.

4. Informational Signs

    a. Permanent mounted signs located along and adjacent to travel ways providing information to residents and visitors traveling within Villebois.

5. Flags and Banners

    a. Permanent and temporary pole mounted signage intended to identify the graphic identity of Villebois and to identify seasonal events taking place within the Villebois Community.

F. Dimensions and square footage of signs are defined in the Master Signage and Wayfinding Plan for the appropriate SAP.

G. Signage locations are specified in the Master Signage and Wayfinding Plan for the appropriate SAP.

H. The number of signs permitted is specified in the Master and Signage Wayfinding Plan for the appropriate SAP.

Response: No special signage or wayfinding is proposed with Phase 5 (see Section IIH).

(.13) DESIGN PRINCIPLES APPLYING TO THE VILLAGE ZONE

A. The following design principles reflect the fundamental concepts, and support the objectives of the *Villebois Village Master Plan*, and guide the fundamental qualities of the built environment within the Village zone.

1. The design of landscape, streets, public places and buildings shall create a place of distinct character.

2. The landscape, streets, public places and buildings within individual development projects shall be considered related and connected components of the *Villebois Village Master Plan*.

3. The design of buildings shall functionally relate to adjacent open space, gateways, street orientation, and other features as shown in the *Villebois Village Master Plan*.

4. The design of buildings and landscape shall functionally relate to sunlight, climate, and topography in a way that acknowledges these conditions as particular to the Willamette Valley.

5. The design of buildings shall incorporate regional architectural character and regional building practices.

6. The design of buildings shall include architectural diversity and variety in its built form.

7. The design of buildings shall contribute to the vitality of the street environment through incorporation of storefronts, windows, and entrances facing the sidewalk.

8. The design of streets and public spaces shall provide for and promote pedestrian safety, connectivity and activity.

9. The design of buildings and landscape shall minimize the visual impact of, and screen views of off-street parking from streets.

10. The design of exterior lighting shall minimize off-site impacts, yet enable functionality.

Response: The SAP Drawings (see Notebook Section IIB), the Architectural Pattern Book, and the Community Elements Book are intended to guide the Preliminary Development Plan and Final Development Plan applications to achieve a built environment that reflects the fundamental concepts and objectives of the *Master Plan*. The Design Principles of Section (.13) have driven the development of the SAP Drawings. Phase 5 will work in concert with the Design Principles, the amended SAP North Architectural Pattern Book, and the amended SAP North Community Elements Book to assure that the vision of Villebois is realized. This report demonstrates that the components SAP North are consistent with the Goals, Policies and Implementation Measures of the *Villebois Village Master Plan*.

(.14) DESIGN STANDARDS APPLYING TO THE VILLAGE ZONE

A. The following design standards implement the Design Principles found in (.13), above, and enumerate the architectural details and design requirements applicable to buildings and other features within the Village (V) zone. The Design Standards are based primarily on the features, types, and details of the residential traditions in the Northwest, but are not intended to mandate a particular style or fashion. All development within the Village zone shall incorporate the following:

1. Generally:

a. Flag lots are not permitted.

Response: No flag lots are proposed. Compliance with this standard will be assured during review of the PDP application.

b. The minimum lot depth for a single-family dwelling with an accessory dwelling unit shall be 70 feet.

Response: The Architectural Pattern Book standardizes lot depth of Medium, Standard, and Large Lots at lengths that exceed 70 feet (minimum of 71 ft. for Medium Lots, and 90 ft. for Standard Lots and Large Lots). Therefore, Medium, Standard, and Large Lots meet the minimum lot depth requirement for a single family dwelling with an accessory dwelling unit. However, no accessory dwelling units are proposed with this application.

c. Village Center lots may have multiple front lines.

Response: SAP North is not located in the Village Center; therefore this standard does not apply.

d. For Village Center lots facing two or more streets, two of the facades shall be subject to the minimum frontage width requirement. Where multiple buildings are located on one lot, the facades of all buildings shall be used to calculate the Minimum Building Frontage Width.

Response: SAP North is not located in the Village Center; therefore this standard does not apply.

2. Building and site design shall include:

a. Proportions and massing of architectural elements consistent with those established in an approved Architectural Pattern Book or Village Center Architectural Standards.

b. Materials, colors and architectural details executed in a manner consistent with the methods included in an approved Pattern Book, Community Elements Book or approved Village Center Design.

c. Protective overhangs or recesses at windows and doors.

d. Raised stoops, terraces or porches at single-family dwellings.

e. Exposed gutters, scuppers, and downspouts, or approved equivalent.

f. The protection of existing significant trees as identified in an approved Community Elements Book.

g. A landscape plan in compliance with Sections (.07) and (.11), above.

h. Building elevations of block complexes shall not repeat an elevation found on an adjacent block.

i. Building elevations of detached buildings shall not repeat an elevation found on buildings on adjacent lots.

j. A porch shall have no more than three walls.

k. A garage shall provide enclosure for the storage of no more than three vehicles.

Response: The above Design Standards are incorporated into the Architectural Pattern Book, which is intended to identify architectural details and design features for use with SAP North. The above Design Standards are also incorporated into the Community Elements Book, which is intended to identify important contributing elements that establish a coherent community identity. Conformance with the Pattern Book and Community Elements Book will assure consistency with the Design Standards of subsection (.14). This application includes amendments to both of these books to add map information for Phase 5. Subsequent applications will review building and site design for consistency with the amended Pattern Book and Community Elements Book.

The *Park/Open Space/Pathways Plan* (see Notebook Section IIB) conceptually depicts the landscape and program elements for the park/trail/open space areas of SAP North. The *Tree Preservation Plan* (see Notebook Section IIB) identifies and inventories existing trees, their condition, and whether they are proposed to be retained or removed. Phases 1-4 have been constructed. The concurrent Preliminary Development Plan and Final Development Plan applications for Phase 5 North advance these drawings with detailed analysis of site-specific development.

3. Lighting and site furnishings shall be in compliance with the approved Architectural Pattern Book, Community Elements Book, or approved Village Center Architectural Standards.

Response: A standardized design for lighting and site furnishings is included in the approved SAP North Community Elements Book. This application includes an amendment to update map information for Phase 5. Conformance with the amended Community Elements Book will assure consistency of lighting and site furnishings within Phase 5.

4. Building systems, as noted in Tables V-3 and V-4 (Permitted Materials and Configurations), below, shall comply with the materials, applications and configurations required therein.

Response: The criteria of Tables V-3 and V-4 (Permitted Materials & Configurations) are referenced in the SAP North Architectural Pattern Book. Subsequent building permit applications will review buildings for consistency with the criteria of Tables V-3 and V-4 and the Pattern Book.

(.18) VILLAGE ZONE DEVELOPMENT PERMIT PROCESS

C. Specific Area Plan (SAP) Application Procedures.

1. Purpose - A SAP is intended to advance the design of the Villebois Village Master Plan.

2. If not initiated by the City Council, Planning Commission or Development Review Board, an application for SAP approval shall be submitted by the Master Planner, and shall be accompanied by payment **of a fee established in accordance with the City's fee schedule.**

Response: The proposed amendments to SAP North to add information for Phase 5, is intended to advance the design of the *Villebois Village Master Plan*. The proposed SAP North amendment has been initiated by the Master Planner. The submittal of the SAP North amendment was accompanied by payment for a fee established by the City (see Notebook Section IC).

D. SAP Application Submittal Requirements:

1. Existing Conditions - An application for SAP approval shall specifically and clearly show the following features and information on maps, drawings, application form or attachments. The SAP shall be drawn at a scale of 1" = 100' (unless otherwise indicated) and may include multiple sheets depicting the entire SAP area, as follows:

   a) Date, north arrow and scale of drawing.

   b) The boundaries of the Specific Area Plan as may be refined and in keeping with the inten**t of the Villebois Village Master Plan's** conceptual location of SAPs.

   c) A vicinity map showing the location of the SAP sufficient to define its location and boundaries and Clackamas County Tax Assessor's map numbers of the tract boundaries. The vicinity map shall clearly identify the nearest cross streets.

   d) An aerial photograph (at 1" = 500') of the proposed site and properties within 50 feet of the SAP boundary.

   e) The size, dimensions, and zoning of each lot or parcel tax lot and Tax Assessor's map designations for the SAP and properties within 50 feet of the SAP boundary.

   f) The location, dimensions and names, as appropriate, of existing and platted streets and alleys on and within 50 feet of the perimeter of the SAP, together with the location of existing and planned easements, sidewalks, bike routes and bikeways, trails, and the location of other important features such as section lines, section corners, and City boundary lines. The plan shall also identify all trees 6 inches and greater d.b.h. on the project site only.

   g) Contour lines 1shall relate to North American Vertical Datum of 1988 and be at minimum intervals as follows:

      i) One (1) foot contours for slopes of up to five percent (5%);
      ii) Two (2) foot contours for slopes from six percent (6%) to twelve (12%);
      iii) Five (5) foot contours for slopes from twelve percent (12%) to twenty percent (20%). These slopes shall be clearly identified, and
      iv) Ten (10) foot contours for slopes exceeding twenty percent (20%).

   h) The location of areas designated Significant Resource Overlay Zone (SROZ), and associated 25-foot Impact Areas, within the SAP and within 50 feet of the SAP boundary, as required by Section 4.139.

Response: The attached drawings for SAP North (see Notebook Section IIB) provide the information required above, as applicable to this request.

2. SAP Development Information - The following information shall also be shown at a scale of 1" = 100' and may include multiple sheets depicting the entire SAP area.

   a) A site circulation plan showing the approximate location of proposed vehicular, bicycle and pedestrian access points and circulation patterns, and parking and loading areas.

b) The approximate location of all proposed streets, alleys, other public ways, curb extensions, sidewalks, bicycle and pedestrian accessways, neighborhood commons, and easements on. The map shall identify existing subdivisions and development and un-subdivided land ownerships adjacent to the proposed SAP site.

c) The approximate projected location, acreage, type and density of the proposed development. For the residential portions of the SAP, the master developer shall identify: 1) the overall minimum and maximum number of housing units to be provided and 2) the overall minimum and maximum number of housing units to be provided, by housing type.

d) The approximate locations of proposed parks, playgrounds or other outdoor play areas, outdoor common areas, usable open spaces, and natural resource areas or features proposed for preservation. This information shall include identification of areas proposed to be dedicated or otherwise preserved for public use and those open areas to be maintained and controlled by the owners of the property and their successors in interest for private use. This information shall be provided in tabular form, and shall reconcile all such areas as may have been adjusted through prior approvals.

e) A composite utility plan illustrating existing and proposed water, sanitary sewer, and storm drainage facilities necessary to serve the SAP.

f) A grading plan illustrating existing and proposed contours as prescribed previously in this section.

g) A development sequencing plan

h) A utilities sequencing plan

i) A bicycle and pedestrian circulation plan

j) A tree removal and tree protection plan

Response: The attached drawings (see Notebook Section IIB) provide the applicable information required above.

k) A property owner list, as required by Section 4.035.

Response: A mailing list for property owners within 250 feet of the subject site is provided with this application (see Notebook Section ID).

l) **At the applicant's expense, the City shall have a Traffic Impact** Analysis prepared, as required by Section 4.030(.02)(B), to review the anticipated traffic impacts of the proposed development. This traffic report shall include an analysis of the impact of the SAP on the local street and road network, and shall specify the maximum projected average daily trips and maximum parking demand associated with buildout of the entire SAP, and it shall meet Subsection 4.140(.09)(J)(2).

Response: A copy of the Traffic Impact Analysis is provided in Notebook Section IIID.

m) A master signage and wayfinding plan

Response: This application includes a proposed amendment to the Signage and Wayfinding Master Plan to update the map for the updated lot layout.

n) A rainwater management program

Response: No amendments are proposed to the Rainwater Management Book.

3. Architectural Pattern Book - An Architectural Pattern Book shall be submitted to all development outside the Village Center Boundary, addressing the following:

a) Illustrate areas within the Specific Area Plan covered by the Architectural Pattern Book.

b) An explanation of how the Architectural Pattern Book is organized, and how it is to be used.

c) Define specific standards for architecture, color, texture, materials, and other design elements.

d) Include a measurement or checklist system to facilitate review of development conformity with the Architectural Pattern Book.

e) Include the following information for all row houses, duplexes, and single-family detached housing inside and outside of the Village Center, and for all other buildings outside of the Village Center, including Neighborhood Center(s) within the SAP:

i. Illustrate and describe the Regional and Climatic conditions affecting the SAP, and the proposed building types including:

- Relationship of indoor and outdoor spaces.
- Design for rainwater paths including roof forms, gutters, scuppers and downspouts.
- Design for natural day-lighting.
- Massing and materials

f) Illustrate and describe examples of appropriate architectural styles and how they would be applied to specific land use types, including the definitions (i.e., specifications) of the elements, massing, and façade composition for each style including:

i. Architectural precedent and/or historic relevance of each style.
ii. Massing, proportions, and roof forms, including details.
iii. Doors, windows and entrances showing trim types and details.
iv. Porches, chimneys and unique features or details.
v. Materials, colors, light fixtures and accents.
vi. Downspouts and gutters.

g) Illustrate and describe examples of appropriate exterior lighting types, and how their design:

i. Minimizes glare.
ii. Minimizes emission of light beyond the boundaries of a development site.
iii. Conserves energy.

iv. Maintains nighttime safety, utility, security, and productivity.
v. Minimizes the unnatural brightening of the night sky.

h) A Master Fencing Program illustrating and describing the specifications and materials for fencing within the SAP.

Response: The SAP – North Architectural Pattern Book (see Notebook Section IIG) includes information addressing all of the above items. This application includes a request to amend SAP – North Architectural Pattern Book to include Plan Area 5. Specific amendments proposed with Plan Area 5 are as follows:

- Update Guiding Principles of the Village Master Plan, page A4
- Update Lot Types and Sustainability in the Specific Area Plan North, page A5
- Update Standard Detached Lot Diagrams, page B3
- Update Locations of Community Fencing and Monumentation, page E3
- Update SAP North Locations of Community Fencing and Monumentation, page E4

4. Community Elements Book - A Community Elements Book shall be submitted, including the following:

a) Lighting Master Plan and Specifications, which address the requirements of Section 4.125(.18)(D)(3)(g)
b) Lighting Master Plan and Specifications
c) Site Furnishings Master Plan Specifications
d) Curb Extensions Master Plan and Specifications
e) Street Sign Master Plan and Specifications meeting Street Tree Master Plan and Specifications
f) Post Box Specifications
g) Bollard Specifications
h) Trash Receptacle Specifications
i) Recycling Receptacle Specifications
j) Bench Specifications
k) Bicycle Rack and Locker Specifications
l) Playground Equipment Specifications
m) Master Plan List and Specification

Response: A standardized design for the above-listed elements is included in the SAP North Community Elements Book (see Notebook Section IIF). This application includes a request to amend the Community Elements Book to include updated information to include Phase 5. Specific amendments proposed with Plan Area 5 are listed below:

- Update Lighting Master Plan Diagram, page 4
- Update Curb Extension Concept Plan Diagram, page 5
- Update Street Tree Master Plan Diagram, page 7
- Update Mailbox Location Map Diagram, page 11

5. Rainwater Management Program - A Rainwater Management Program shall be submitted, addressing the following:
a) Provision for opportunities to integrate water quality, detention, **and infiltration into SAP's natural features and proposed** development areas;

b) Provision of methods reducing the increase in runoff from the 90th percentile of all rain events and meet pre-development hydrology to the greatest extent practicable;

c) Identification of guidelines and standards for the design of all Rainwater Management Systems within the SAP, that:

i. Manage the ¼-inch, 24-hour rainfall event at pre-development levels.
ii. Mitigate 100% of impervious area from private areas within public areas and/or private areas (i.e. parks and open space areas, public street rights-of-way).
iii. Mitigate 100% of impervious area from all public areas within public areas (i.e. parks and open space areas, public street rights-of-way).
iv. Remove 70% of Total Suspended Solids (TSS) for ¼-inch, 24-hour storm event for all development areas.
v. Remove 65% of Phosphorus for ¼-inch, 24-hour storm event for all development areas.
vi. Integrate compost-amended topsoil in all areas to be landscaped to help detain runoff, reduce irrigation and fertilizer needs, and create a sustainable, low-maintenance landscape.
vii. Treatment associated with stormwater runoff will be considered in meeting Total Suspended Solids (TSS) and Phosphorus removal requirements.

Response: A standardized design for the above-listed elements is included in the approved Rainwater Management Book. No amendments to the Rainwater Management Book are proposed.

6. Master Signage and Wayfinding - A Master Signage and Wayfinding Plan shall be submitted with an SAP application and shall address the following:

a) Illustrate the boundaries of the SAP covered by the Master Signage and Wayfinding Plan.
b) An explanation of how the Master Signage and Wayfinding Plan is organized and how it will be used.
c) Define specific standards for signage and wayfinding elements within the subject SAP.
d) Define specifications for logo, typography, symbols and color palate.

Response: A standardized design for the above-listed elements is included in the approved SAP North Master Signage and Wayfinding Plan. This application includes a proposed amendment to the Signage and Wayfinding Master Plan, to update map information for the inclusion of Phase 5. Specific Amendments proposed with Phase 5 are listed below:

- Update to Master Signage and Wayfinding Plan, page G0.4

8. SAP Narrative Statement - A narrative statement shall be submitted addressing the following:
a) A description, approximate location and timing of each proposed phase of development within the SAP.

Response: The Introductory Narrative (see Section IA) includes a description and timing of the proposed development phasing for SAP North. This is further detailed in the concurrent PDP application for Phase 5.

b) An explanation of how the proposed complies with the applicable standards of this section.

Response: Section II of this report provides explanation of how the proposed development is consistent with the standards of the Village zone.

c) A statement describing the impacts of the proposed development on natural resources within the SAP and how the proposed development complies with the applicable requirements of Chapter 4.

Response: The Introductory Narrative (see Section IA) provides a description of the impacts of the proposed development on natural resources within Phase 5 of SAP North. Compliance with the applicable requirements of Chapter 4 is demonstrated in Section II of this report.

d) Includes a description of the goals and objectives of the Villebois Village Master Plan and the Design Principles of the V Zone, and how they will be met for the specified land use area.

Response: Section I of this report provides an explanation of how the proposed development is generally consistent with the *Villebois Village Master Plan*. Section II of this report provides an explanation of how the proposed development will meet the Design Principles of the Village zone.

e) Includes information demonstrating how the Pattern Book satisfies the goals and concepts of the Villebois Village Master Plan, the Design Principles and Design Standards of the Village zone.

Response: Section I of this report provides an explanation of how the proposed Pattern Book amendments satisfy the goals and concepts of the *Villebois Village Master Plan*. Section II of this report provides an explanation of how the amended Pattern Book continues to meet the Design Principles and Design Standards of the Village zone.

f) **Where applicable, a written description of the proposal's** conformance with the Village Center Design Principles and Standards.

Response: Specific Area Plan – North does not include areas within the Village Center. Therefore, the above standard is not applicable to this application.

a) Notice of a public hearing before the Development Review Board regarding a proposed SAP shall be made in accordance with the procedures contained in Section 4.012.

Response: In accordance with the procedures contained in Section 4.012, the City shall provide notice of a public hearing before the Development Review Board on the proposed amendment to SAP North.

b) The Development Review Board may approve an application for SAP approval only upon finding the following approval criteria are met:

1. That the proposed SAP:

    a) Is consistent with the standards identified in this section.

Response: Section II of this report provides an explanation of how the proposed amendment to SAP North is consistent with the standards of the Village zone.

    b) Complies with the applicable standards of the Planning and Land Development Ordinance, and

Response: Section III of this report provides an explanation of how the proposed amendment is consistent with the applicable standards of the Planning and Land Development Ordinance.

    c) Is consistent with the Villebois Village Master Plan. Those elements of the Village Master Plan with which the SAP must **be consistent are the Plan's Goals, Policies, and** Implementation Measures, and, except as the text otherwise provides, Figures 1, 5, 6A, 7, 8, 9A and 9B.

Response: Section I of this report provides an explanation of how the proposed SAP amendment with minor refinements is consistent with the Goals, Policies and Implementation Measures and Figures of the *Villebois Village Master Plan*, as applicable to this request.

2. If the SAP is to be phased, as enabled by Section 4.125(.18)(D)(2)(g) and (h), that the phasing schedule is reasonable.

Response: The attached *Phasing Plan* (see Notebook Section IIB) depicts the phasing of SAP North, adding the proposed Phase 5.

F. Refinements to Approved Villebois Village Master Plan

1. In the process of reviewing a SAP for consistency with the Villebois Village Master Plan, the Development Review Board may approve refinements, but not amendments, to the Master Plan. Refinements to the Villebois Village Master Plan may be approved by the Development Review Board as set forth in Section (.18)(F)(2), below. Amendments to the Villebois Village Master Plan may be approved by the Planning Commission as set forth in Section 4.032(.01)(B).

    a) Refinements to the Master Plan are defined as:

        i. Changes to the street network or functional classification of streets that do not significantly reduce circulation system function or connectivity for vehicles, bicycles, or pedestrians.

Response: A comparison of the *Circulation Plan* from the proposed SAP North Amendment for Phase 5 (see Exhibit IIB) and the *Circulation Plan* from the *Master Plan* shows updates to the circulation system. The *Master Plan* showed two connections at the northern edge of the site connecting with SW Tooze Road. The City has since evaluated planned improvements for Tooze Road and determined to limit to one access point which exists in PDP 4N. Therefore, the previously shown street connection to Tooze Road in PDP 5N has been eliminated. There are now no vehicular connections to Tooze Road within Phase 5. Additionally, when Tonquin Meadows was reviewed, the extension of Coffee Lake Drive across Villebois Drive was eliminated in order to

retain an existing wetland area along the eastern portion of the property. This has resulted in some minor changes to the residential streets in these intervening areas. Verdun loop and Stockholm Avenue now provide the connections from Tonquin Meadows across Villebois Drive into the site and both streets extend west to meet SW Palermo Street at RP-6. The proposed street alignment was chosen in order to preserve as many healthy trees as possible. RP-6 has been moved to the western portion of the site where the bulk of the trees are located. Local streets (Barcelona, Orleans, and Palermo) surround RP-6 and linear greens have been proposed to both preserve important trees and to provide better pedestrian and cyclist circulation. Specifically, a linear green is proposed between SW Palermo Street and SW Berlin Avenue to preserve three important trees. A second linear green has replaced the street segment between Cherbourg Lane and Berlin Avenue due to the steepness of the terrain and to minimize grading and thereby enable more tree preservation. A pedestrian and cyclist accessway is provided between SW Barcelona Street and Tooze Road and pedestrian/cyclist connections are provided throughout RP-6, which abuts and connects to Tooze Road.

i. Changes to the nature or location of parks, trails or open space that to not significantly reduce function, usability, connectivity, or overall distribution or availability of these uses in the Specific Area Plan.

Response: The proposed refinements to RP-6, LG-15 & 16, and PP-9 do not significantly reduce function, usability, connectivity, or overall distribution or availability of these park uses in the PDP. The table below offers a side-by-side look at the Parks Master Plan and the proposed plan. Changes are highlighted in bold font. A brief description of the refinements follows the individual table, explaining how the proposed design meets the goal for the Villebois Village Parks Master Plan. Relevant policies and implementation measures from the Villebois Village Master Plan are noted in parentheses in the following descriptions:

Master Plan	Proposed Plan
RP-6	
5.93 Acres in size	6.42 Acres in size
Stormwater/Rainwater Features: Cell	Stormwater/Rainwater Features: Swale
Minor Water Feature: 1	Dog Bowl Fountain / Minor Water Feature
Benches	Benches
Picnic Tables	Picnic Tables
Child Play Structure: 1	Play Area - Totlot
Sport Court: 2 Tennis Courts	Moved to RP-5
Dog Park: 1.07 Acres	Dog Park: 0.5 Acres
RP-5	
No Special Features Provided	2 Tennis Courts
LG-15	
0.35 Acres in size	0.05 Acres in size (plus 0.25 in Tonquin Meadows)
Lawn Play: 0.11 Acres (30' x 80') (40' x 50')	Lawn Play (7,207 square feet or 0.17 acres)
LG-16	
0.19 Acres in size	0.36 Acres in size (plus area in Right-of-Way
Lawn Play: 0.2 Acres (60' x 70') (60' x 70')	Lawn Play (22,557 square feet or 0.52 acres)
PP-9	
0.21 Acres in size	0.13 Acres in size (plus 0.04 in Tonquin Meadows and Right-of-Way)
Child Creative Play: 1	Child Creative Play: 1

The proposed RP-6 will retain multiple healthy trees that are currently existing on the subject site. This park is split into two halves by SW Barcelona Street with the western portion accessible by SW Barcelona Street, SW Orleans Avenue, and SW Palermo Street. The other half of the park is located in the northeastern quadrant of the subject site and is accessible by Tooze Road, SW Barcelona Street and Verdun Loop. RP-5, which is in the southwestern quadrant of the subject site will be completed with this development. The proposed parks in Phase 5 each have an asphalt trail system that connects to the wider Tonquin Trail, a regional trail that meanders through the Villebois development. These hard trail systems allow for the ability to recreate in all seasons of the year (*Implementation Measure 7)* and they allow for an improved pedestrian network. The trail also provides loops of varying lengths for running, walking, and roller blading (*Policy 2).* The proposed RP-6 park system provides a play structure in the left half and a dog park in the right while the proposed portion of RP-5 that is to be completed with this development will include two tennis courts. LG-15, LG-16 and PP-9 were partially constructed with the Tonquin Meadows development to the east and will include additions of a Lawn Play area and a Child Creative Play

area, respectively, with the proposed development. These proposed uses add potential layers of social interaction to the park system (*Policy 5)* and encourage a juxtaposition of various age-oriented facilities and activities, while maintaining adequate areas of calm (*Policy 3, Implementation Measure 15).* The location of the dog park in RP-6 has moved closer to SW Tooze/Boeckman Road than was shown in the *Master Plan*, but the use and the availability of the dog park is not hindered by the new location. The dog park has been moved to the northeastern end of RP-6 so that it can be accessed by SW Tooze/Boeckman Road and be near the small parking lot along the northeastern border of the subject site. Additionally, the applicant is proposing to construct a Rainwater Swale instead of a Rainwater Cell as shown on the *Master Plan*, which will be located in the western portion of RP-6. These parks will be relatively similar in size to that are shown in the *Master Plan*.

ii. Changes to the nature or location of utilities or storm water facilities that do not significantly reduce the service or function of the utility or facility.

Response: The *Master Plan* for the subject area shows Onsite Water Quality along Tooze Road and a larger area reserved for Rainwater Management. Tooze Road improvements affect the location and space of onsite stormwater and rainwater facilities. Water quality facilities have been moved off-site and retrofitted to meet Tooze Road improvements. The refinements to rainwater management within PDP 5N include street trees and bio-retention cells located in planter strips in rights-of-way, as well as a water quality swale instead of a rainwater cell within RP-6, as shown within the attached utility plans (see Notebook Section IIIB), in order to utilize the space available.

iii. Changes to the location or mix of land uses that do not significantly alter the overall distribution or availability of uses in the affected SAP.

iv. A change in density that does not exceed ten percent, provided such density change does not result in fewer than 2,300 dwelling units in the Village.

Response: The *Master Plan* for the subject area shows large, standard, medium, small, and neighborhood apartment uses within the Phase 5 area. PDP 5N proposes 89 single family detached dwellings - 32 small lots, 9 medium lots, 41 standard lots, and 7 large lots. The refinements to the *Master Plan* include a change in mix and unit counts. The refinement removes estate lots but introduces single-level homes in the large and standard-sized lots. The transition from standards and larges moving toward the Villebois Greenway, then south of the Greenway with smalls and mediums, increasing in density and massing toward the core of the Village Center is consistent with the *Master Plan*.

The attached plans (see Notebook Section IIB) illustrate that SAP North provides a mix of housing types generally consistent with the *Master Plan*. Phase 5 provides a mix of housing types to the greatest extent possible, ranging from small to large, while also providing a similar land use pattern to the other edges of Villebois. Additionally, this request adds single-level homes to the range of housing options through a minor refinement to the *Master Plan*.

Table A below shows the number of units in each land use category currently approved within SAP North and the number of units in the SAP with the proposed refinement as well as the percent change in each aggregate land use category.

Table A. Comparison of Currently Approved and Proposed Unit Counts

	Currently Approved Count in SAP N	Proposed Unit Count in SAP N	% Change
Medium/Standard/ Large/Estate	179	197	10%
Small Detached/ Small Cottage/ Row Homes/ Neighborhood Apt.	246	271	10%
Total	425	468	10%

NOTE: Currently approved Unit Count for SAP North reflects the SAP North Amendment that occurred in conjunction with PDP 3N which set unit counts for SAP North.

Table A shows that the proposed refinements do not exceed the 10% standard. This proposal results in a total of 2,558 units within Villebois. This is above the density of 2,300 units required to be obtained across Villebois, meeting the refinement criteria.

None of the conditions of approval for SAP North are specific to the proposed refinements. As the proposed refinements will not compromise the project's ability to comply with SAP conditions of approval, they will equally meet the conditions of approval of SAP North.

The proposed refinements will equally or better meet the following Goals, Policies, and Implementation Measures of the *Villebois Village Master Plan* than the SAP North plan, as described below and within Section I of this report.

b) **As used herein, "significant" means:**

1) More than ten percent of any quantifiable matter, requirement, or performance measure, as specified in (.18)(F)(1)(a), above, or,

2) That which negatively affects any important, qualitative feature of the subject, as specified in (.18) (F)(1)(a), above.

Response: The refinements described above are not "significant" according the to the above code definition. The proposed refinements are not more than 10% of any quantifiable matter, requirement, or performance measure. The proposed refinements do not negatively affect any important, qualitative feature of the project.

1. Refinements meeting the above definition may be approved by the DRB upon the demonstration and finding that:

a) The refinements will equally or better meet the Goals, Policies and Implementation Measures of the Villebois Village Master Plan.

Response: As demonstrated with Section I of this report, SAP North, along with the proposed refinements to the Master Plan for Phase 5, equally or better meets the

Goals, Policies and Implementation Measures of the *Villebois Village Master Plan*. The refinements described above improve the overall aesthetic and functional use of the proposed plan by better protecting the function of Tooze Road and by providing a better mix of land uses with each block and along each street frontage.

The proposed refinements will better meet the following Goals, Policies and Implementation Measures of the *Villebois Village Master Plan*.

- *General - Land Use Plan, Policy 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.*

  The attached plans (see Notebook Section IIB) illustrate that SAP North provides a mix of housing types generally consistent with the *Master Plan*. Phase 5 provides a mix of housing types to the greatest extent possible, ranging from small to large, while also providing a similar land use pattern to the other edges of Villebois. Additionally, this request adds single-level homes to the range of housing options in through a minor refinement to the *Master Plan*.

- *Residential Neighborhood Housing, Policy 10 – Natural features shall be incorporated into the design of each neighborhood to maximize their aesthetic character while minimizing impacts to said natural features.*

  The *Park/Open Space/Pathways Plan* (see Notebook Section IIB) shows how the design of SAP North incorporates natural features to maximize their aesthetic character and minimize impacts to natural features. There are two wetland areas on the subject site. The wetland that is along the eastern property line will be retained as part of a linear green, whereas the wetland in the northwestern corner will be filled. The proposed development will not have a significant adverse effect upon an SROZ area as none exist on the site. A portion of the northeast part of the property was previously mapped as including an SROZ wetland. Mirth Walker, with SWCA, has evaluated the existing wetlands and found them to be isolated and not locally significant. SWCA has determined these wetlands should not be classified as locally significant. The SAP Amendment supporting compliance report includes a request to remove the SROZ designation from the site (See Notebook Section VII). Currently, Phase 5 of SAP North predominantly consists of trees and pasture area. To minimize the impacts to natural features, a park (RP-6) is proposed through the northwestern portion of the subject site. The applicant has configured the site to retain as many healthy trees as possible by using regional park (RP 6) and by addding a linear green. Important trees will be preserved along SW Palermo Street where a lot has been removed and replaced with a linear green connection between SW Berlin Avenue and SW Palermo Street. Location of the homes and streets for Phase 5 are constrained by the topography of the site and the street connections that have been established with the development of Phase 4 and Tonquin Meadows. The Tonquin Trail connects to Tooze Road in the northeast, meanders through the subject site via Regional Parks 5 and 6, and then continues through the Villebois development to the southwest.

- *Parks and Open Space/Off-Street Trails and Pathways Implementation Measure 9 – The design of Villebois shall retain the maximum number of existing trees practicable that are six inches or more DBH in the "Important" and "Good" tree rating categories, which are defined in the Community Elements Books. Trees rated "Moderate" shall be evaluated on an individual basis about retention. Native species of trees and trees with historical importance shall be given special consideration for retention.*

  The attached *Tree Preservation Plan* (see Notebook Section IIIB) depicts the approved tree preservation and removal for Phase 5. The *Tree Preservation Plan* identifies the inventoried existing trees, their classification and whether they will be/were retained or removed. For Phase 5, specific methodology used to determine DBH and tree ratings is described in the Tree Report (see Notebook Section IIIE). SAP North complies with this policy by retaining trees that are six inches or more in DBH and rated "Important" and "Good" to the extent feasible.

  The majority of Phase 5 is currently being used as a horse pasture area, with trees concentrated in the western and center portions of the site. To minimize the impacts to existing trees within Phase 5, RP-6 is proposed with this SAP amendment through the northwestern portion of the site. The applicant is aiming to retain as many trees that are in good condition as possible. The street configuration of Phase 5 is constrained by the provided connections from Phase 4 to the west and Tonquin Meadows to the east, as well as the wetland areas along the eastern border of the property adjacent to 110th Avenue. A linear green has been added in order to preserve trees with an "Important" rating. Additional description of the proposed *Tree Preservation Plan* for Phase 5 is provided in subsequent sections of this report and in the Tree Report prepared by the project Arborist.

b) The refinement will not result in significant detrimental impacts to the environment or natural or scenic resources of the SAP and Village area, and

Response: As described throughout this report, the proposed refinements will not result in significant detrimental impacts to the environment or natural or scenic resources within Phase 5 and the Village area.

c) The refinement will not preclude an adjoining or subsequent SAP area from development consistent with the Master Plan.

Response: Phase 4 of SAP North is located immediately to the west of Phase 5 and was approved with PDP 4N. Tonquin Meadows is located directly to the east and Tonquin Woods is located to the south. Both of these projects have also been approved by the City. This SAP amendment adds information for Phase 5 and is consistent with planned circulation patterns. Therefore, the proposed amendment will not preclude an adjoining SAP area from development consistent with the *Master Plan*.

3. Amendments are defined as changes to elements of the Master Plan not constituting a refinement. Amendments to the Master Plan must follow the same procedures applicable to adoption of the Master Plan itself.

Response: This application does not include any amendment to the *Master Plan*. All of the proposed changes fall within the definition of refinements and are addressed within this report.

III. WILSONVILLE PLANNING & LAND DEVELOPMENT ORDINANCE

SECTION 4.139 SIGNIFICANT RESOURCE OVERLAY ZONE

Response: The City of Wilsonville has designated a portion along the eastern boundary of the subject property to be considered within the Significant Resource Overlay Zone, or SROZ. A standard Significant Resource Impact Report, or SRIR (see Notebook Section II-I), has been prepared by SWCA Environmental Consultants to investigate and delineate the wetland areas onsite. The included SRIR finds the lands on the property site to be isolated and less than 0.5 acres and therefore, they do not qualify as Locally Significant Wetlands according to the City of Wilsonville's definitions. Therefore, the applicant is requesting to have the SROZ designation on the subject site removed. This application for PDP 5N includes a request for approval of the following:

- Significant Resource Overlay Zone (SROZ) Map Refinement.

Section 4.139.04 Uses and Activities Exempt from These Regulations

A request for exemption shall be consistent with the submittal requirements listed under Section 4.139.06(.01)(B - I), as applicable to the exempt use and activity.

Response: The applicant is not seeking an exception for the proposed development. As noted above, the applicant has hired a wetland consultant to conduct a Significant Resource Impact Report (SRIR) (See Notebook Section II-I). These areas are found to not be significant according to the SRIR report provided.

The proposed development will not have a significant adverse effect upon an SROZ area as none exist on the site. A portion of the northeast part of the property was previously mapped as including an SROZ wetland. Mirth Walker, with SWCA, has evaluated the existing wetlands and found them to be isolated and not locally significant. SWCA has determined these wetlands should not be classified as locally significant. The SAP Amendment supporting compliance report includes a request to remove the SROZ designation from the site (See Notebook Section VII).

Section 4.139.05 Significant Resource Overlay Zone Map Verification.

Response: A standard SRIR has been prepared by C. Mirth Walker, a Professional Wetland Scientist with SWCA Environmental Consultants. The report is in compliance with the applicable application requirements of Section 4.139.06 (.02). This section is addressed in the provided Significant Resource Impact Report (See Notebook Section II-I).

Section 4.139.06 Significant Resource Impact Report (SRIR) and Review Criteria.

Response: A standard SRIR has been prepared by C. Mirth Walker, a Professional Wetland Scientist with SWCA Environmental Consultants. The report is in compliance with the applicable application requirements of Section 4.139.06 (.02). The included SRIR report addresses the review criteria for a Significant Resource Impact Report (See Notebook Section II-I).

Section 4.139.07 Mitigation Standards

Response: As previously mentioned, the applicant is submitting a request to have the SROZ designation onsite removed via the SRIR provided (See Notebook Section II-I). Therefore, the current SROZ designation does not apply and site mitigation is not necessary.

Section 4.139.08 Activities Requiring a Class I Administrative Review Process

Response: As previously mentioned, the applicant is submitting a request to have the SROZ designation onsite removed according to the findings of the SRIR provided (See Notebook Section II-I). Therefore, there are no encroachments into the significant resource and no Class I activities are proposed with this development proposal.

Section 4.139.09 Activities Requiring a Class II Administrative Review Process

(.01) The review of any action requiring an SRIR except:
- A. Activities and uses exempt under this Section;
- B. Adjustments permitted as a Class I Administrative Review;
- C. Adjustments permitted as part of a Development Review Board public hearing process.

Response: This request for SRIR review is submitted in conjunction with a SROZ map refinement. The proposed SROZ map refinement elevates this review to the DRB review process.

Section 4.139.10 Development Review Board (DRB) Process

The following actions require review through a Development Review Board quasi-judicial process. Nothing contained herein shall be deemed to require a hearing body to approve a request for a permit under this Section.

(.01) Exceptions. The following exceptions may be authorized through a Development Review Board quasi-judicial review procedure.

D. Map Refinement Process. The applicant may propose to amend the SROZ boundary through a Development Review Board quasi-judicial zone change where more detailed information is provided, such as a state approved wetland delineation. The criteria for amending the SROZ are a follows:

1. Any map refinement must be evaluated by considering the riparian corridor types contained in this ordinance.

2. Other supporting documents to be considered in evaluating a proposal to refine a map include, but are not limited to:

3. An SRIR must be prepared by the applicant in conformance with the provisions of this Section.

4. The Hearing Body (including City Council) may amend the Significant Resource Overlay Zone (in or out) upon making a determination that the land area in question is or is not a significant

resource. The criteria for determining that land is significant shall be based on finding that the site area has at least one rating of **"high" using the function criteria listed in the Natural Resource** Function Rating Matrices.

Response: This application includes a request to refine the SROZ boundary as shown on the City of Wilsonville's SROZ Map. As noted previously, a SRIR is included in this report (see Notebook Section II-I) that addresses the criteria of Section 4.139.09(.01)D., as applicable.

SECTION 4.154 ON-SITE PEDESTRIAN ACCESS AND CIRCULATION

(.02) On-site Pedestrian Access and Circulation

A. The purpose of this section is to implement the pedestrian access and connectivity policies of the Transportation System Plan. It is intended to provide for safe, reasonably direct, and convenient pedestrian access and circulation.

Response: PDP 5N will be in compliance with Section 4.154 and provide for safe, reasonably direct, and convenient pedestrian access and circulation, as described below.

B. Standards. Development shall conform to all the following standards:

1. Continuous Pathway System. A pedestrian pathway system shall extend throughout the development site and connect to adjacent sidewalks, and to all future phases of the development, as applicable.

Response: Pedestrian pathway systems (sidewalks) in PDP 5N extend throughout the development site and connect to adjacent sidewalks. Pathways exist to facilitate crossings throughout the middle of the site and RP-6.

2. Safe, Direct, and Convenient. Pathways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas/playgrounds, and public rights-of-way and crosswalks based on all of the following criteria:

Response: Pathways provide safe, reasonably direct, and convenient connections between adjacent RP-6 in the northwestern portion of the site. A pedestrian connection is made to provide a connection to Tooze Road from the north of the site.

a. Pedestrian pathways area designed primarily for pedestrian safety and convenience, meaning they are free from hazards and provide a reasonably smooth and consistent surface.

Response: Pedestrian pathways will be free from hazards and will provide a reasonably smooth and consistent surface.

b. The pathway is reasonably direct. A pathway is reasonably direct when it follows a route between

destinations that does not involve a significant amount of unnecessary out-of-direction travel.

Response: The pathways will be reasonably direct and will not involve a significant amount of unnecessary out-of-direction travel.

c. The pathway connects to all primary building entrances and is consistent with the Americans with Disabilities Act (ADA) requirements.

Response: The pathways connect to the front of each home and are consistent with the Americans with Disabilities Act (ADA) requirements.

d. All parking lots larger than three acres in size shall provide an internal bicycle and pedestrian pathway pursuant to Section 4.155(.03)(B.)(3.)(d.).

Response: There are no parking lots larger than three acres within PDP 5N; Therefore, this criteria is not applicable.

3. Vehicle/Pathway Separation. Except as required for crosswalks, per subsection 4, below, where a pathway abuts a driveway or street it shall be vertically or horizontally separated from the vehicular lane. For example, a pathway may be vertically raised six inches above the abutting travel lane, or horizontally separated by a row of bollards.

Response: Pedestrian pathways will be separated from the vehicle lane by a mountable curb.

4. Crosswalks. Where a pathway crosses a parking area or driveway, it shall be clearly marking with a contrasting paint or paving materials (e.g., pavers, light-color concrete inlay between asphalt, or similar contrast).

Response: A small parking lot is being proposed adjacent to Tooze Road. This parking lot will be marked clearly in a way that is visible for all modes of transportation.

5. Pathway Width and Surface. Primary pathways shall be constructed concrete, asphalt, brick/masonry pavers, or other durable surface, and not less than five (5) feet wide. Secondary pathways and pedestrian trails may have an alternative surface except as otherwise required by the ADA.

Response: Primary pathways will be constructed of concrete that are at least five (5) feet in width.

6. All pathways shall be clearly marked with appropriate standard signs.

Response: Pathways will be clearly marked with appropriate standard signs.

SECTION 4.156 SIGN REGULATIONS

Response: This application includes an amendment to the SAP North Master Signage and Wayfinding Plan to add map information for Phase 5 (see Section IIH).

SECTION 4.171 GENERAL REGULATIONS - PROTECTION OF NATURAL FEATURES & OTHER RESOURCES

(.02) General Terrain Preparation

A. All developments shall be planned designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant land forms.

B. All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code.

C. In addition to any permits required under the Uniform Building Code, all developments shall be planned, designed, constructed and maintained so as to:

1. Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.

2. Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats.

3. Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.

Response: The SAP Drawings (see Notebook Section IIB) demonstrate that SAP North and Phase 4 have been designed with maximum regard to natural terrain features and topography. Phases 1-3 have been constructed and Phase 4 is under construction. No hillside areas or floodplains are located within Phase 5. The *Tree Preservation Plan* shows proposed tree preservation and the *Grading Plan* conceptually shows proposed grading within the subject area. All subsequent grading, filling, and excavating will be done in accordance with the Uniform Building Code. Disturbance of soils and removal of trees and other native vegetation will be limited to the extent necessary to construct the proposed development. Construction will occur in a manner that avoids substantial probabilities of accelerated erosion; pollution, contamination or siltation of lakes, rivers, streams and wetlands; damage to vegetation; and injury to wildlife and fish habitats.

(.03) Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:

Response: Phase 5 of SAP – North does not include any areas of slopes in excess of 25%. Therefore, this standard does not apply to this application.

(.04) Trees and Wooded Areas.

A. All developments shall be planned, designed, constructed and maintained so that:

1. Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.

2. Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.

3. Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.

B. Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:

1. Avoiding disturbance of the roots by grading and/or compacting activity.

2. Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.

3. Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.

4. Requiring, if necessary, a special maintenance, management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.

Response: The *Tree Preservation Plan* (see Notebook Section IIIB) depicts existing trees and identifies and ranks trees to be retained or removed in SAP North. The *Tree Preservation Plan* is updated for Phase 5. The Tree Report includes a tree inventory indicating the common and species names, DBH, condition, and recommended treatment of on-site trees in Phase 5.

The majority of Phase 5 is pasture with trees concentrated in the center of the site. Existing trees within these areas are preserved to the extent feasible. The locations of residential lots, street improvements, alleys, and utilities were generally planned within areas that are mostly open.

(.05) High Voltage Power line Easements and Rights of Way and Petroleum Pipeline Easements:

A. Due to the restrictions placed on these lands, no residential structures shall be allowed within high voltage powerline easements and rights of way and petroleum pipeline easements, and any development, particularly residential, adjacent to high voltage powerline easements and rights of way and petroleum pipeline easement shall be carefully reviewed.

B. Any proposed non-residential development within high voltage powerline easements and rights of way and petroleum pipeline easements shall be coordinated with and approved by the Bonneville Power Administration, Portland General Electric Company or other appropriate utility, depending on the easement or right of way ownership.

Response: Phase 5 does not contain any high voltage powerline or petroleum pipeline easements or rights of way.

(.06) Hazards to Safety: Purpose:

A. To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.

B. To protect lives and property from damage due to soil hazards.

C. To protect lives and property from forest and brush fires.

D. To avoid financial loss resulting from development in hazard areas.

Response: Development of the subject area will occur in a manner that minimizes potential hazards to safety.

(.07) Standards for Earth Movement Hazard Areas:

A. No development or grading shall be allowed in areas of land movement, slump or earth flow, and mud or debris flow, except under one of the following conditions.

Response: Development of the subject area will occur in a manner that minimizes potential hazards to safety. No earth movement hazard areas have been identified within the subject area.

(.08) Standards for Soil Hazard Areas:

A. Appropriate siting and design safeguards shall insure structural stability and proper drainage of foundation and crawl space areas for development on land with any of the following soil conditions: wet or high water table; high shrink-swell capability; compressible or organic; and shallow depth-to-bedrock.

B. The principal source of information for determining soil hazards is the State DOGAMI Bulletin 99 and any subsequent bulleting and accompanying maps. Approved site-specific soil studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the soil hazards database accordingly.

Response: Development of the subject area will occur in a manner that minimizes potential hazards to safety. No soil hazard areas have been identified within the subject area.

(.09) Historic Protection: Purpose:

A. To preserve structures, sites, objects, and areas within the City of Wilsonville having historic, cultural, or archaeological significance.

Response: A Historic and Cultural Resources Inventory for Phase 5 of SAP North is provided in Notebook Section IID.

SECTION 4.172 FLOOD PLAIN REGULATIONS

Response: Phase 5 of SAP – North does not include any areas impacted by a 100-year flood plain. Therefore, the standards of Section 4.172 are not applicable.

SECTION 4.176 LANDSCAPING, SCREENING & BUFFERING

Response: The standards of Section 4.176 (Landscaping, Screening & Buffering) are not directly applicable to review of Phase 4 of SAP – North, since development is

not proposed with the requested SAP amendment. Compliance of a proposed development phase(s) with the applicable landscaping, screening and buffering standards is addressed the associated Preliminary Development Plan and Final Development Plan (Site Design Review), as applicable to the respective review stage.

SECTION 4.600 TREE PRESERVATION AND PROTECTION

Section 4.600.50. Application For Tree Removal Permit

(.02) Time of Application. Application for a Tree Removal Permit shall be made before removing or transplanting trees, except in emergency situations as provided in WC 4.600.40 (1)(B) above. Where the site is proposed for development necessitating site plan or plat review, application for a Tree Removal Permit shall be made as part of the site development application as specified in this subchapter.

Section 4.160.00 Application Review Procedure

(.03) Reviewing Authority.

B. Type C. Where the site is proposed for development necessitating site plan review or plat approval by the Development Review Board, the Development Review Board shall be responsible for granting or denying the application for a Tree Removal Permit, and that decision may be subject to affirmance, reversal or modification by the City Council if subsequently reviewed by the Council.

Response: This request is for amendment to SAP North. No construction activities or tree removal are proposed with this application. However, the application materials provided with this SAP Amendment include a *Tree Preservation Plan* (see Notebook Section IIIB) and a Tree Report (See Notebook Section IIIE), which together depict the proposed tree preservation and removal for Phase 5. An application for a Type C - Tree Preservation/Removal Plan is included in the concurrent Preliminary Development Plan application for Phase 5. Compliance with Sections 4.610.10 (.01) is described below, demonstrating the feasibility of the proposed *Tree Preservation Plan*.

Section 4.610.10. Standards for Tree Removal, Relocation or Replacement

(.01) Except where an application is exempt, or where otherwise noted, the following standards shall govern the review of an application for a Type A, B, C or D Tree Removal Permit:

A. Standard for the Significant Resource Overlay Zone. The standard for tree removal in the Significant Resource Overlay Zone shall be that removal or transplanting of any tree is not inconsistent with the purposes of this chapter.

B. Preservation and Conservation. No development application shall be denied solely because trees grow on the site. Nevertheless, tree preservation and conservation as a principle shall be equal in concern and importance as other design principles.

C. Development Alternatives. Preservation and conservation of wooded areas and trees shall be given careful consideration when there are feasible and reasonable location alternatives and design options on-site for proposed buildings, structures or other site improvements.

D. Land Clearing. Where the proposed activity requires land clearing, the clearing shall be limited to designated street rights-of-way and areas necessary for the construction of buildings, structures or other site improvements.

E. Residential Development. Where the proposed activity involves residential development, residential units shall, to the extent reasonably feasible, be designed and constructed to blend into the natural setting of the landscape.

F. Compliance with Statutes and Ordinances. The proposed activity shall comply with all applicable statutes and ordinances.

G. Relocation or Replacement. The proposed activity shall include necessary provisions for tree relocation or replacement, in accordance with WC 4.620.00, and the protection of those trees that are not to be removed in accordance with WC 4.620.10.

H. Limitation. Tree removal or transplanting shall be limited to instances where the applicant has provided completed information as required by this chapter and the reviewing authority determines that removal or transplanting is necessary based on the criteria of this subsection.

1. Necessary for Construction. Where the applicant has shown to the satisfaction of the reviewing authority that removal or transplanting is necessary for the construction of a building, structure or other site improvement and that there is no feasible and reasonable location alternative or design option on-site for a proposed building, structure or other site improvement; or a tree is located too close to an existing or proposed building or structures, or creates unsafe vision clearance.

2. Disease, Damage, or Nuisance, or Hazard. Where the tree is diseased, damaged, or in danger of falling, or presents a hazard as defined in WC 6.208, or is a nuisance as defined in WC 6.200 it seq., or creates unsafe vision clearance as defined in this code.

3. Interference. Where the tree interferes with the healthy growth of other trees, existing utility service or drainage, or utility work in a previously dedicated right-of-way, and it is not feasible to preserve the tree on site.

4. Other. Where the applicant shows that tree removal or transplanting is reasonable under the circumstances.

Response: The *Tree Preservation Plan* (see Notebook Section IVB) depicts existing trees and identifies and ranks trees to be retained or removed in SAP North. The *Tree Preservation Plan* adds proposed tree preservation and removal for Phase 5.

A Tree Report (see Notebook Section IIIE) has been prepared by Morgan Holen & Associates, LLC that inventories and evaluates the existing trees in Phase 5. The Tree Report includes a tree inventory indicating the common and species names, DBH, condition, and recommended treatment of on-site trees in Phase 5.

The majority of Phase 5 is pasture with trees concentrated in the center of the site. Existing trees are preserved to the extent feasible. The locations of residential lots, street improvements, alleys, and utilities were generally planned in the open areas of the site.

The applicable standards for a Type C Tree Removal Permit/Plan for tree removal are addressed in detail with the concurrent Preliminary Development Plan application materials. Trees that are preserved will be protected during site preparation and construction in accordance with City Public Works design specifications and Section 4.171(.04).

IV. CONCLUSION

This Supporting Compliance Report demonstrates compliance with the applicable Goals, Policies and Implementation Measures of the *Villebois Village Master Plan*, the applicable requirements of the Village zone, and other applicable requirements of the City of Wilsonville Planning & Land Development Ordinance. Therefore, the Applicant requests approval of the SAP North Amendment.

IIB) Reduced Drawings

SPECIFIC AREA PLAN - NORTH
VILLEBOIS
CITY OF WILSONVILLE, OREGON

APPLICANT:

POLYGON WLH, LLC
109 E. 13TH ST.
VANCOUVER, WA 98660
[P] 503-221-1920
CONTACT: JASON BAKER

PLANNER:

PACIFIC COMMUNITY DESIGN, INC
12564 SW MAIN STRET
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: STACY CONNERY, AICP

CIVIL ENGINEER:

PACIFIC COMMUNITY DESIGN, INC
12564 SW MAIN STREET
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: JESSIE KING, PE

SURVEYOR:

PACIFIC COMMUNITY DESIGN, INC
12564 SW MAIN STREET
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: TRAVIS JANSEN, PLS, PE

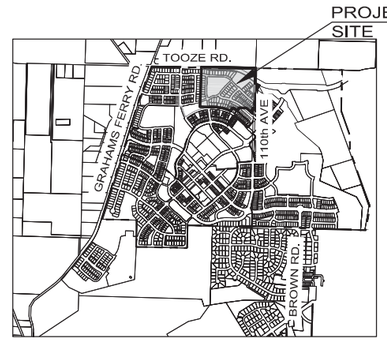
LANDSCAPE ARCHITECT:

PACIFIC COMMUNITY DESIGN, INC
12564 SW MAIN STREET
TIGARD, OR 97223
[P] 503-941-9484
CONTACT: KERRY LANKFORD, RLA

GEOTECHNICAL ENGINEER:

GEODESIGN, INC.
15575 SW SEQUOIA PARKWAY, SUITE 100
PORTLAND, OR 97224
[P] 503-968-8787
CONTACT: SHAWN DIMKE, PE

ELEVATION DATUM: NAVD 88



VICINITY MAP

UTILITIES & SERVICES:

WATER:	CITY OF WILSONVILLE
STORM:	CITY OF WILSONVILLE
SEWER:	CITY OF WILSONVILLE
POWER:	PORTLAND GENERAL ELECTRIC
GAS:	NORTHWEST NATURAL
FIRE:	TUALATIN VALLEY FIRE & RESCUE
POLICE:	CLACKAMAS COUNTY SHERIFF
SCHOOL:	WEST LINN / WILSONVILLE SCHOOL DISTRICT 3JT
PARKS:	CITY OF WILSONVILLE
PHONE:	FRONTIER
WASTE DISPOSAL:	UNITED DISPOSAL SERVICE
CABLE:	COMCAST

BENCHMARK:

OREGON STATE PLANE COORDINATE 5818 LOCATED IN MONUMENT BOX IN CENTERLINE OF TOOZE ROAD .2 MILES WEST OF 110TH.

ELEVATION DATUM: NAVD 88, ELEVATION = 202.991

SHEET INDEX:

N

SCALE
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1 INCH = 300 FEET

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

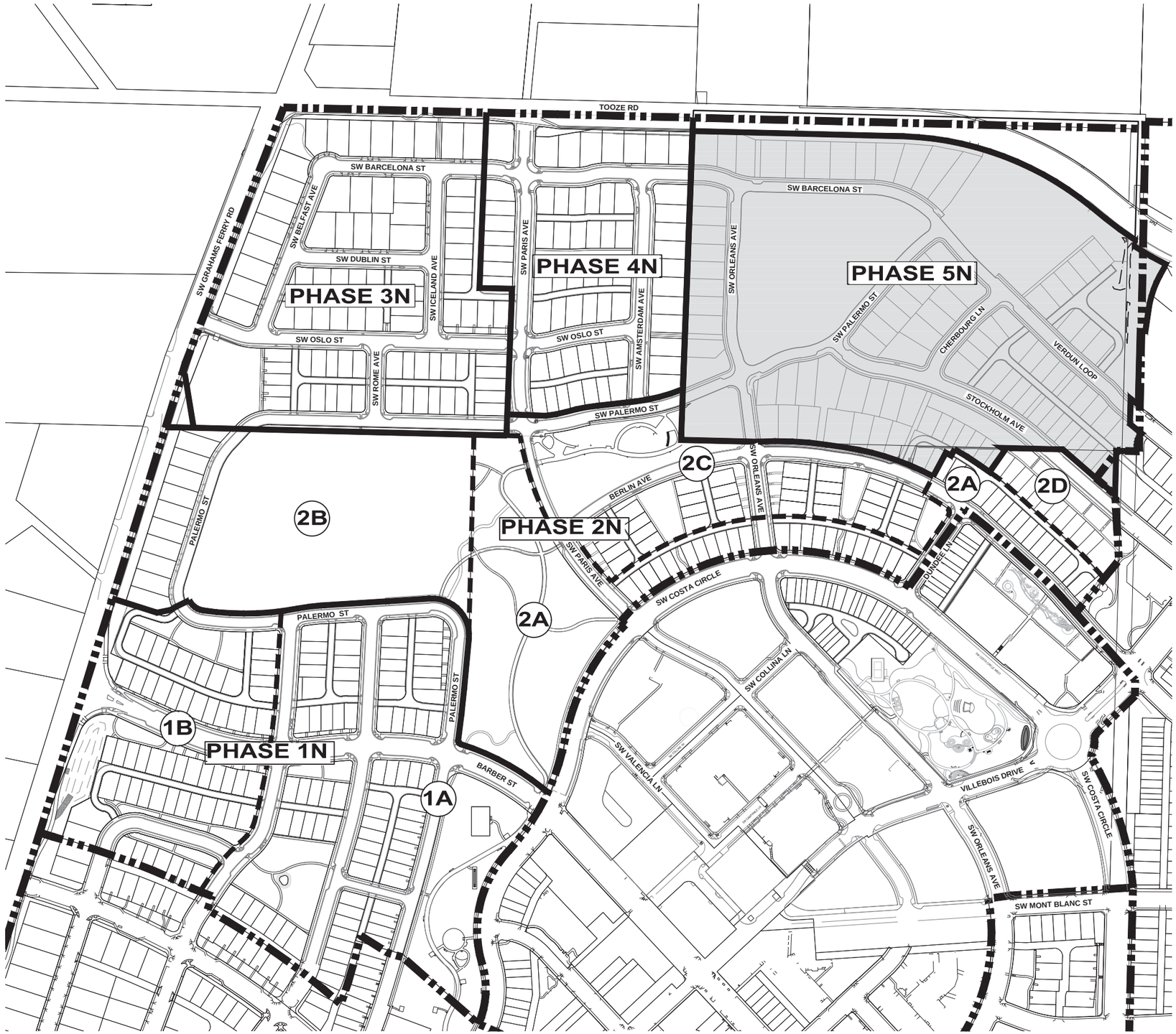
Specific Area Plan

Cover Sheet

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

1



LEGEND:

- S.A.P. LINE
- S.A.P. PHASE LINE
- P.D.P. CONSTRUCTION PHASE LINE
- PHASE 1N — S.A.P. PHASE NUMBER
- 1A — P.D.P. CONSTRUCTION PHASE NUMBER

PHASE 1N

APPROVED 08/25/11
DB11-0024 (PDP MODIFICATION)
DB11-0025
(SAP MODIFICATIONS & REFINEMENTS)

PHASE 2N

APPROVED 06/11/13
DB13-0020 (PDP)
DB11-0025
(SAP MODIFICATIONS & REFINEMENTS)

PHASE 3N

APPROVED 5/12/14
DB14-0011 (PDP)
DB14-0012 & DB14-0013
(SAP MODIFICATIONS, REFINEMENTS & AMENDMENTS)

PHASE 4N

APPROVED 2/9/16
DB15-0087 (PDP)
DB15-0085 & DB15-0086
(SAP MODIFICATIONS, REFINEMENTS & AMENDMENTS)

PHASE 5N

PROPOSED

SCALE
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1 INCH = 150 FEET

ELEVATION DATUM: NAVD 88

Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

Phasing Plan

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

2

N:\proj\395-079\09 Drawings\03 Planning\Sheets - Planning SAP Submittal\395079.(2) PHASE.dwg - SHEET: Layout1 Sep. 28, 18 - 10:38 AM jjk

TAX MAP REFERENCE:

TOWNSHIP 3 SOUTH, RANGE 1 WEST, SECTION 15, W.M., WILSONVILLE OREGON.

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ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

Existing Conditions

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

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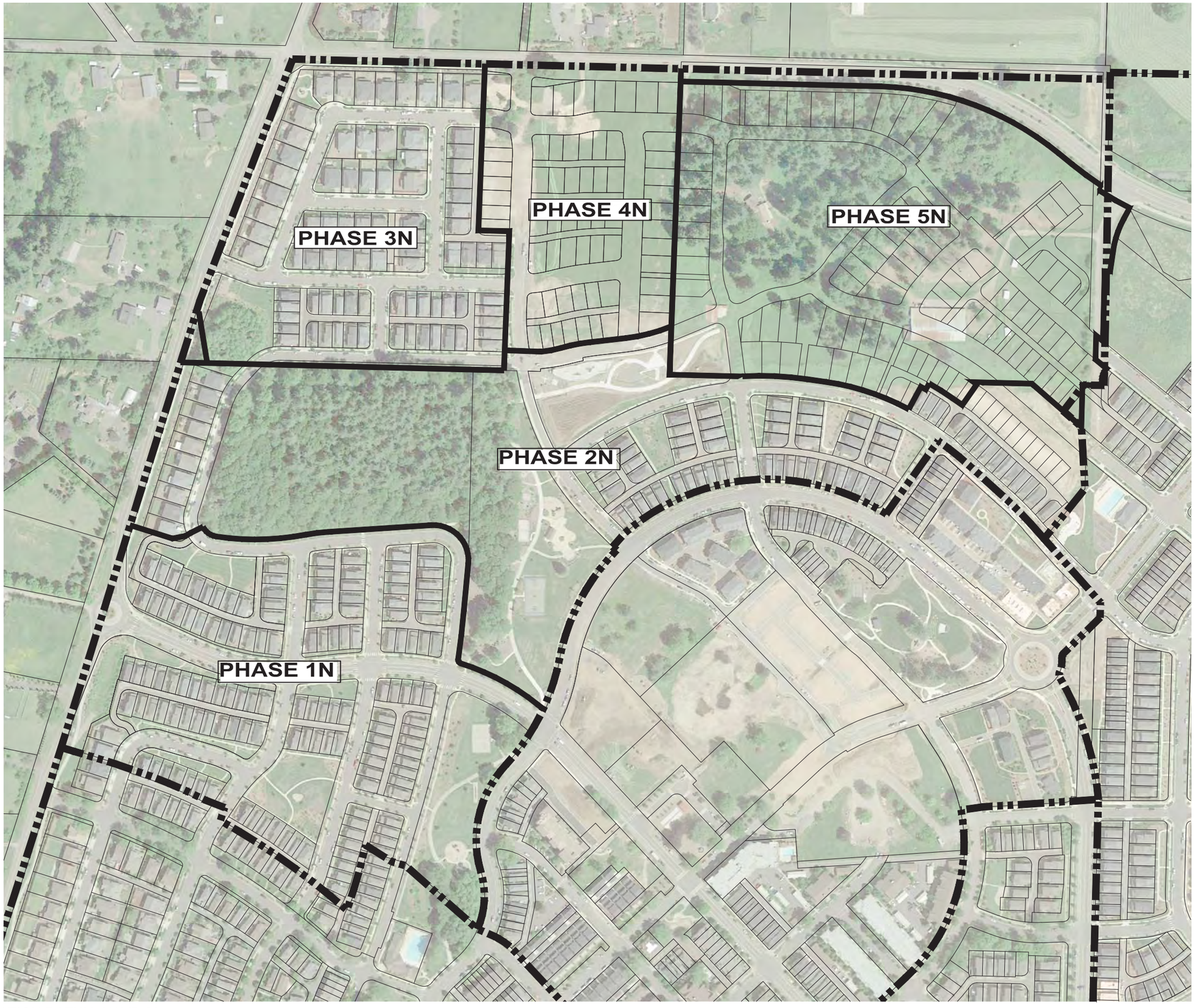

ELEVATION DATUM: NAVD 88

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SCALE
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1 INCH = 150 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH
VILLEBOIS

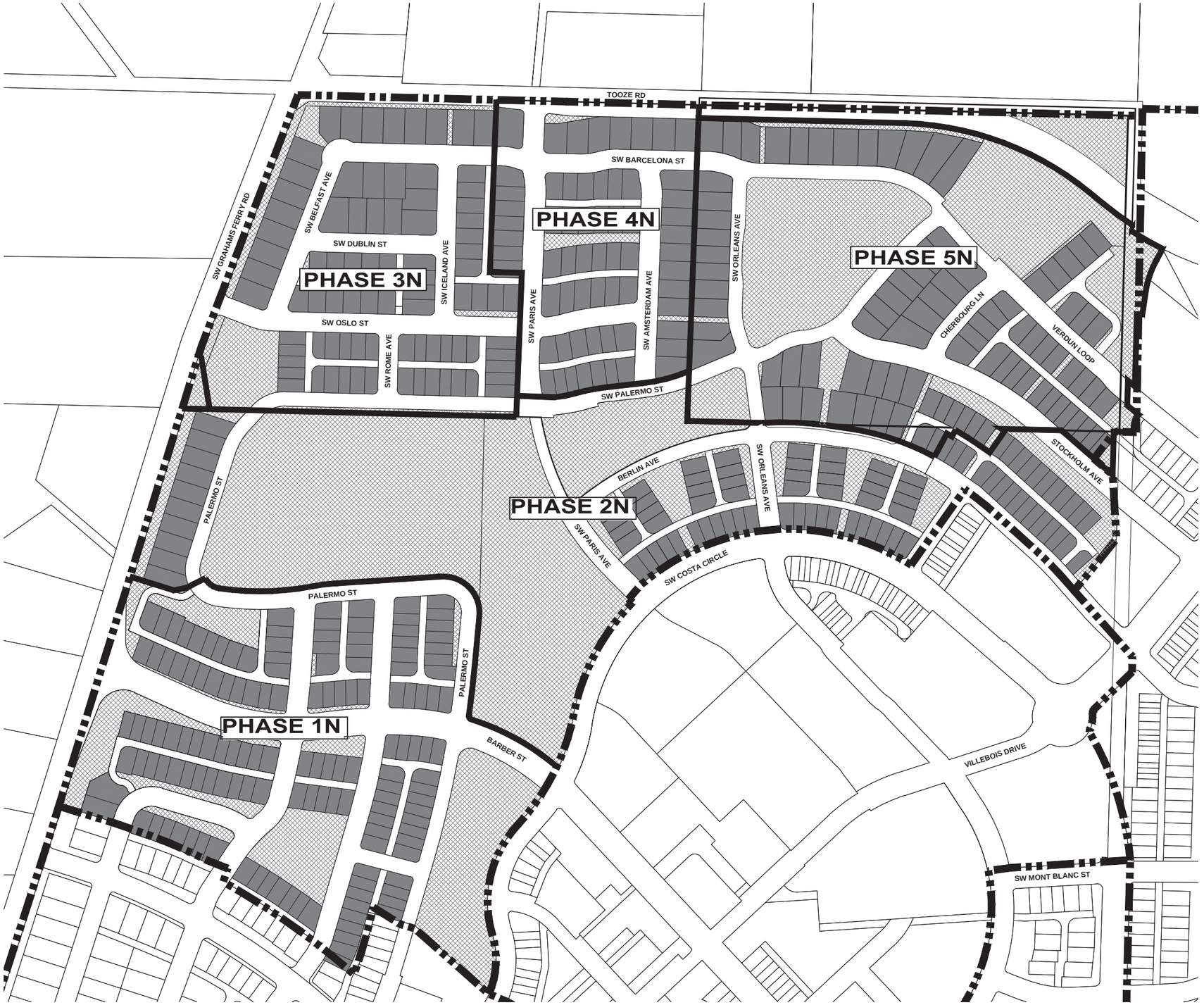
Specific
Area Plan

Aerial
Photograph

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

4



LEGEND:

- RESIDENTIAL
- PARK/OPEN SPACE
- PUBLIC ROADS, PRIVATE ALLEYS

N

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ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH
VILLEBOIS

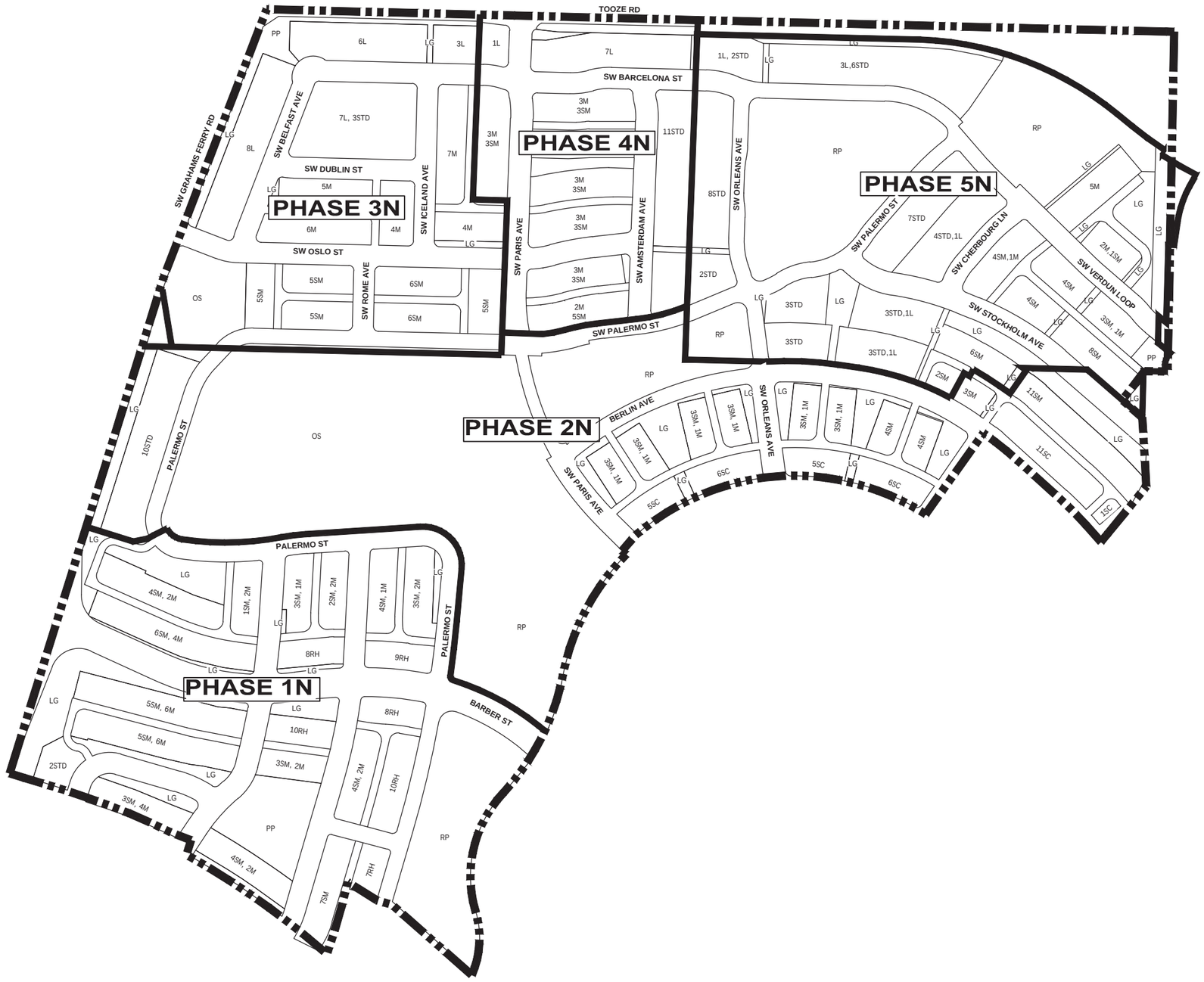
Specific
Area Plan

Land Use
Key

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

5



LEGEND:

	SAP SOUTH BOUNDARY
RH	ROW HOME LOTS
SC	COTTAGE LOTS
SM	SMALL LOTS
STD	STANDARD LOTS
M	MEDIUM LOTS
L	LARGE LOTS
E	ESTATE LOTS
OS	OPEN SPACE
PARK	PARK SPACE
RP	REGIONAL PARK
PP	POCKET PARK
LG	LINEAR GREEN
OS	OPEN SPACE

SCALE
150 0 75 150
1 INCH = 150 FEET

ELEVATION DATUM: NAVD 88

Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

Land Use Plan

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

6

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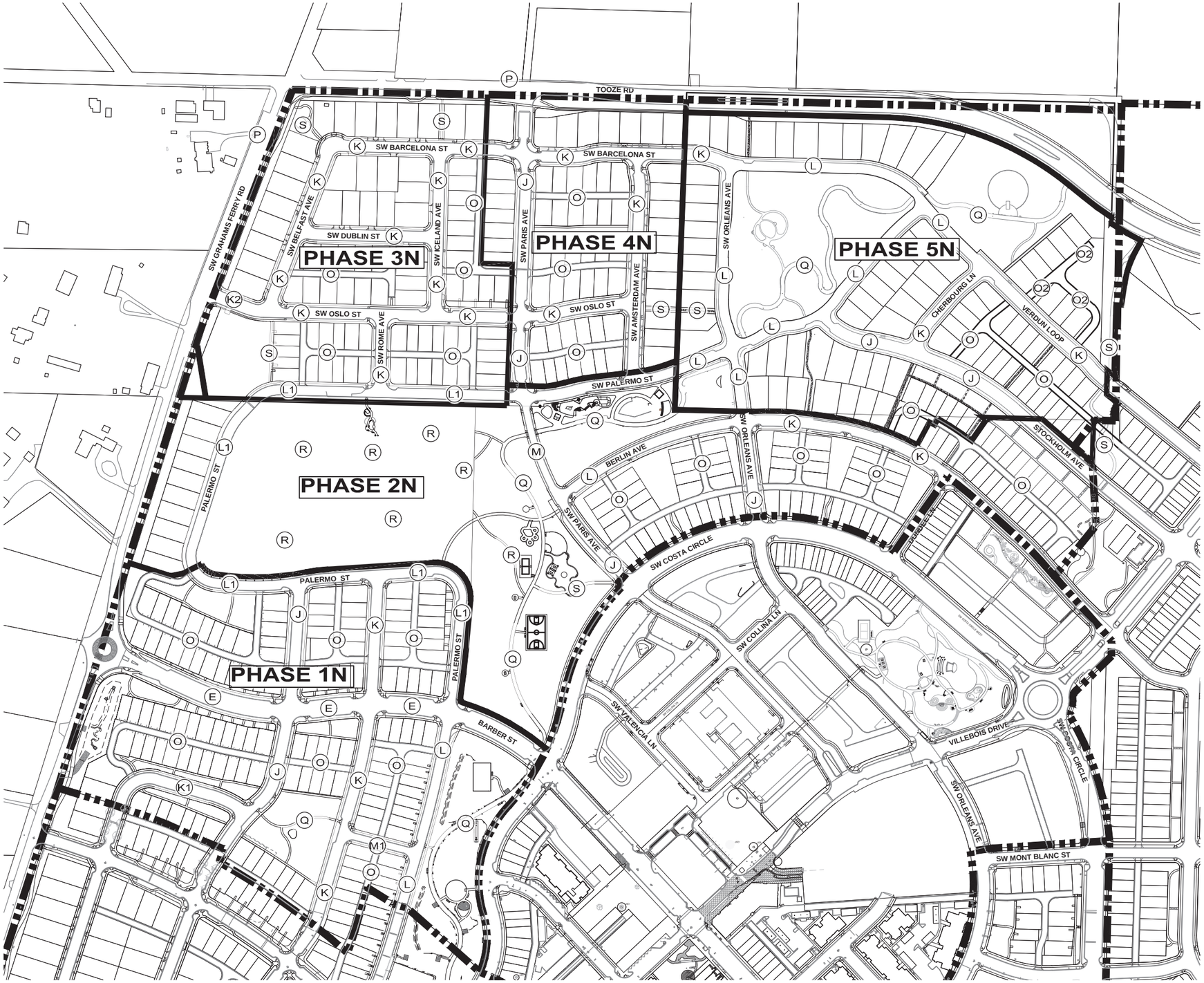

LEGEND:

(L) ROAD SECTION TYPE
SEE SHEET 8 FOR DETAILS

SAP NORTH

SCALE
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ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH
VILLEBOIS

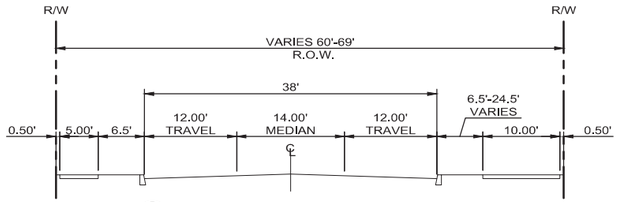
Specific Area Plan

Circulation Plan

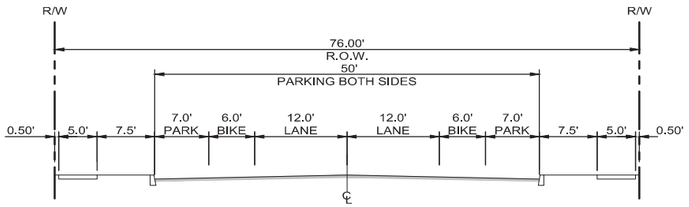
PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

7



(P) MINOR ARTERIAL
NTS



(E) MINOR COLLECTOR
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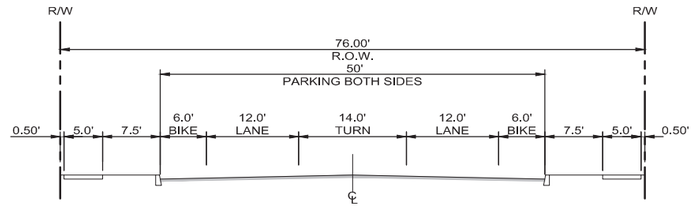
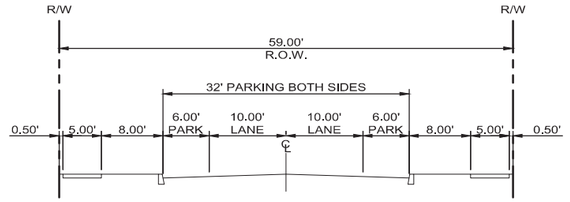


(E1) MINOR COLLECTOR W/LEFT TURN POCKET
NTS



(J) RESIDENTIAL-STANDARD
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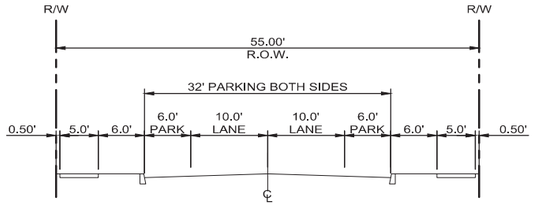
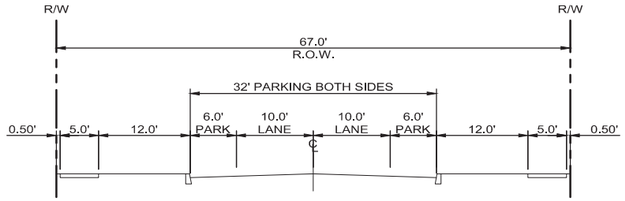


(K) RESIDENTIAL-MINIMUM
NTS



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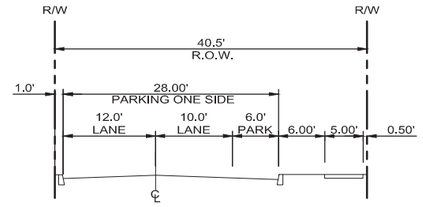
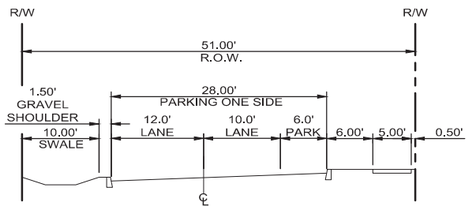


(L) RESIDENTIAL PARKING ONE SIDE
NTS



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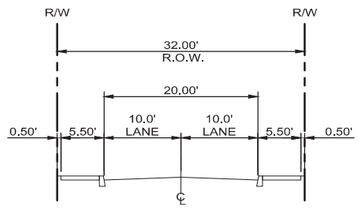

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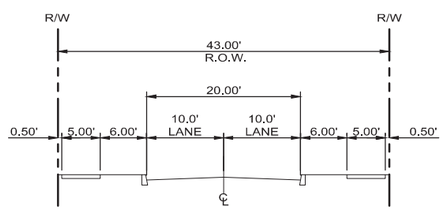

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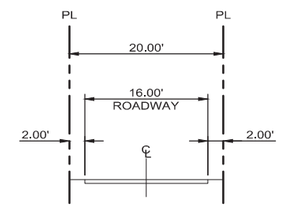

(O) PRIVATE LANE
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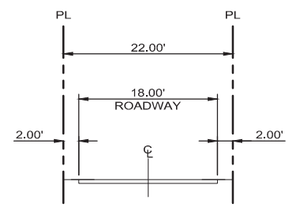

(O2) PRIVATE LANE
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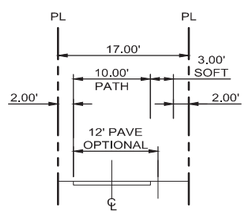
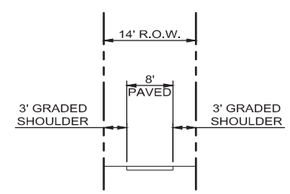
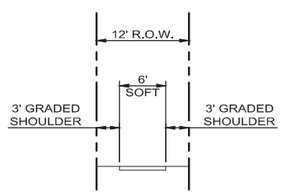


(Q) MAJOR PATHWAY
NTS



(S) MINOR PATHWAY
NTS



(R) NATURE PATHWAY
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ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

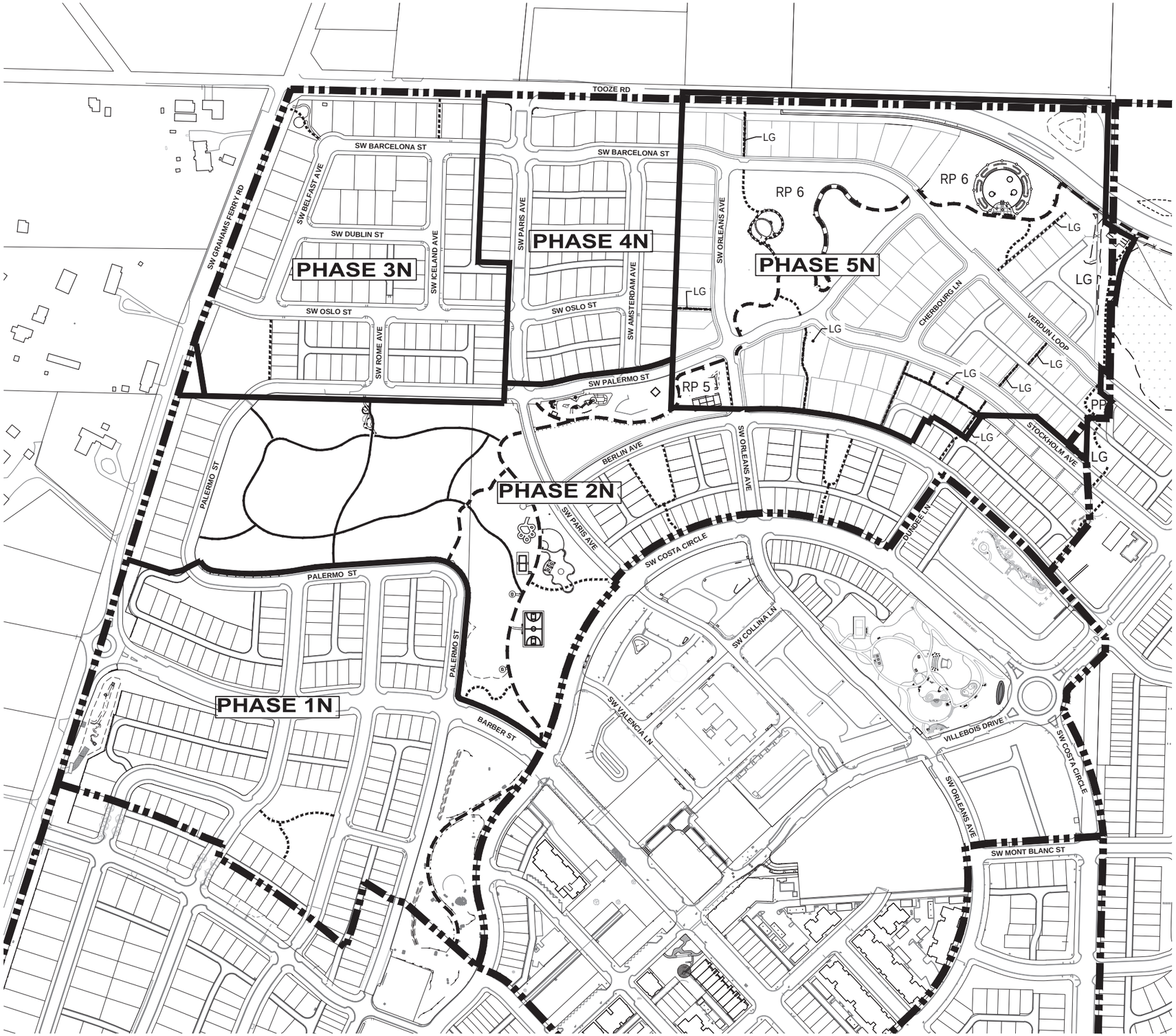
SAP NORTH VILLEBOIS

Specific Area Plan

Street Sections

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018



ELEVATION DATUM: NAVD 88

LEGEND:

- MAJOR PATHWAYS
- MINOR PATHWAYS
- NATURE TRAILS

RP-3
Within SAP North, Regional Park component 3 includes a child play structure, a creative play area, a volleyball court, a large lawn area (200'x140'), benches, picnic tables, and may have stormwater / rainwater features.

RP-4 (6.14 acres)
Regional Park component 4 is contiguous to the Upland Forest Preserve (OS-2). The Villebois Loop Trail traverses the park. This park includes a creative play area, a basketball court, a multipurpose sport court, and a large lawn area (160'x300'). In addition, the park includes a shelter with a barbeque, benches, picnic tables, a drinking fountain, and may have stormwater / rainwater features.

RP-5 (2.24 acres)
Regional Park component 5 is located south of the approximately 10-acre City-owned parcel. Planning for the park includes a neighborhood commons area with a skate plaza, a transit stop, restrooms, picnic tables, benches, a barbeque, shelter, play structure, an overlook view to Mt. Hood, a drinking fountain, water feature, a lawn area (100'x500'), and may include a stormwater/ rainwater feature.

RP-6 (5.93 acres)
Regional Park component 6 preserves several large groves of trees while also providing active and passive recreation opportunities. The park includes a two tennis court facility, a child play structure, a dog park, picnic tables, benches, a minor water feature and may include stormwater/rainwater features.

OS-2: Upland Forest Preserve (10.60 acres)
This site is dominated by a large grove of conifer with some deciduous trees mixed in. The Villebois plan advocates removal of invasive species within this area (any work or impacts within the upland forest area shall comply with SROZ regulations). The forest is contiguous with the Villebois Greenway and the Villebois Loop Trail's Tonquin segment. Smaller soft-surface nature trails will meander through the forest and link neighborhoods on either side. This second-growth forest ecosystem will act as a habitat patch, valuable to small mammals, invertebrates and birds. Along the nature trails two benches for wildlife viewing and quiet contemplation will complement the undeveloped nature of this open space. Picnic tables, and a child play structure will provide recreation opportunities while complementing the existing site features.

Pocket Parks (PP)
Small open spaces, or pocket parks, will be interspersed throughout the Villebois community. These spaces will incorporate important existing trees and provide recreational opportunities for residents. These open spaces will provide areas for community use that are convenient while helping to serve as a buffer between adjoining uses.

Linear Greens (LG)
Linear Greens are small park areas that provide connectivity among parks and through blocks. Linear Greens include trails.

Nature Trails - Soft-surface trails within natural open spaces.

Minor Pathways - Pedestrian and bicycle connections between neighborhoods, traversing parks and linear greens.

Major Pathways - The Tonquin Trail, the Villebois Loop Trail, and the Coffee Lake-Wood Trail

N

SCALE
150 0 75 150
1 INCH = 150 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

Park / Open Space / Pathways Plan

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

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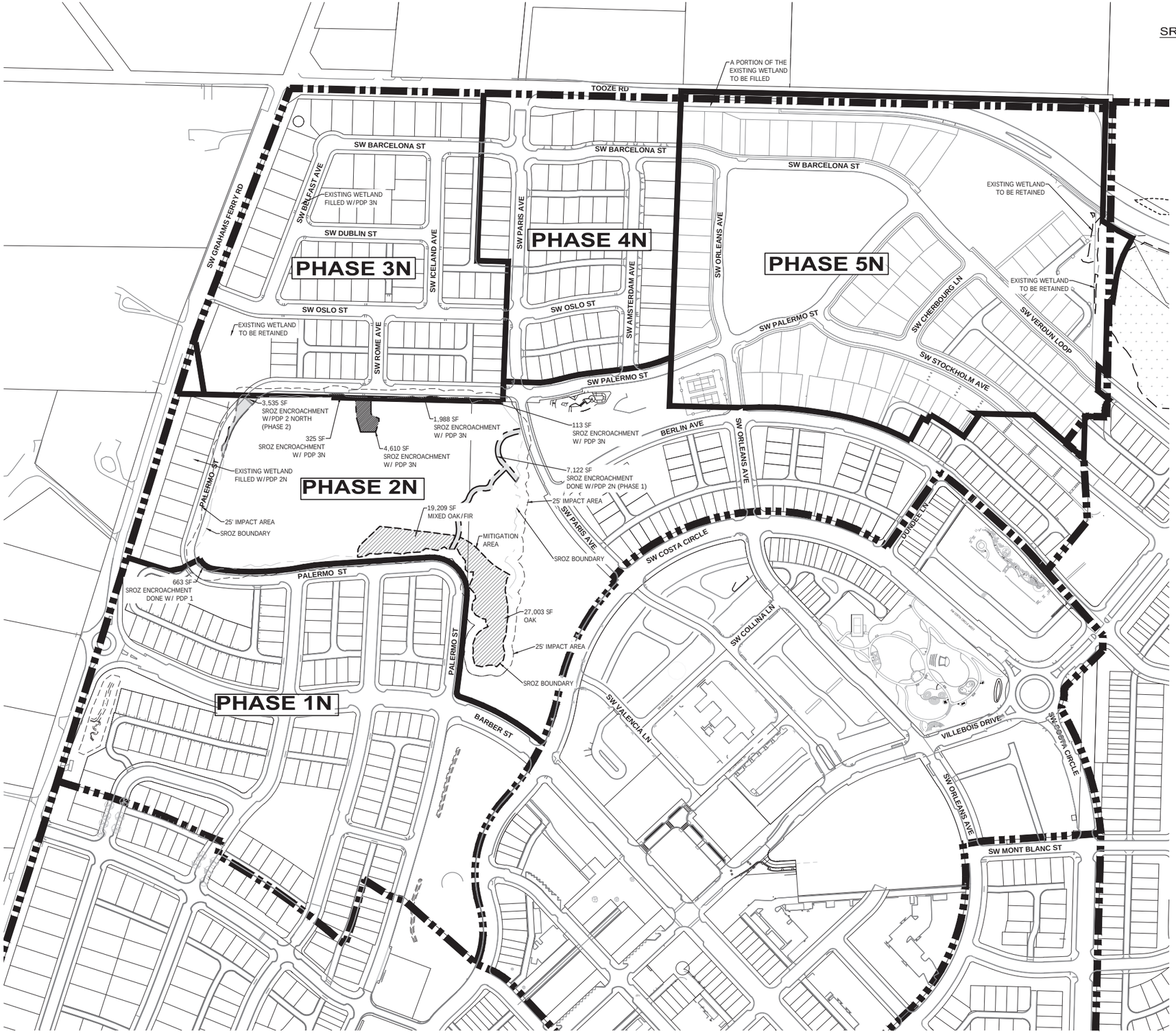

SROZ ENCROACHMENTS AND MITIGATION

AREA OF LIMITED CONFLICT USE	430,988 SF
TOTAL AREA OF IMPACT PREVIOUSLY APPROVED	18,356 SF = 4.3%
PDP 5N AREAS OF IMPACT	0 SF
ADJUSTED TOTAL IMPACT AREA	18,356 SF = 4.3%
ADJUSTED MITIGATION AREA REQUIRED AT 2.5:1 RATIO	45,890 SF
PREVIOUSLY APPROVED MITIGATION AREA TO BE PROVIDED	46,212 SF

SCALE
150 0 75 150
1 INCH = 150 FEET

ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

SROZ Plan

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

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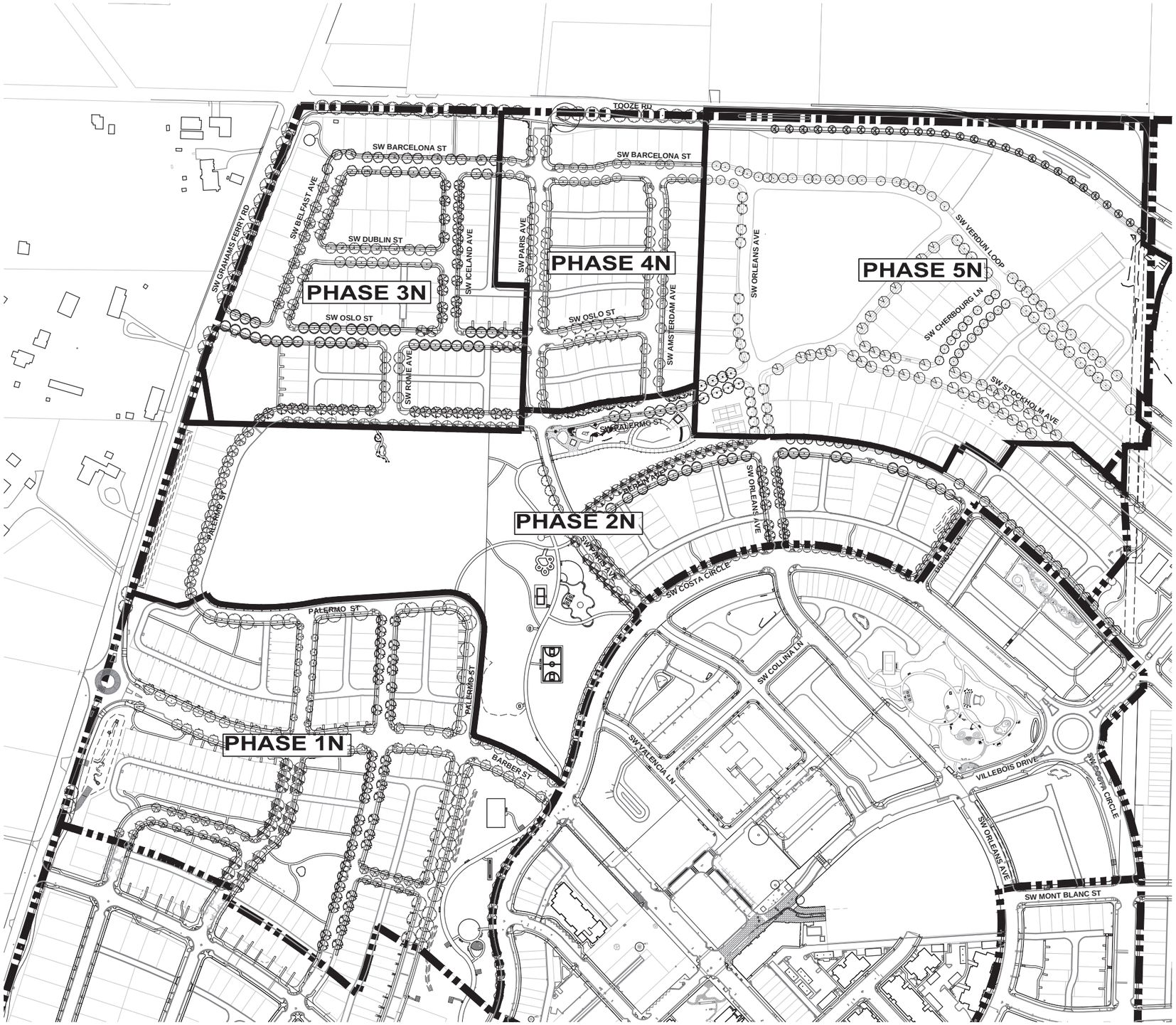

ELEVATION DATUM: NAVD 88

STREET TREE LEGEND: PHASE 1

SYMBOL	BOTANICAL NAME / Common Name	SIZE	SPACING
	QUERCUS ALBA White Oak	2" cal.	30' o.c.
	LIRIODENDRON TULIPIFERA Tulip Tree	2" cal.	30' o.c.
	ACER x FREEMANII 'AUTUMN BLAZE' Autumn Blaze Maple	2" cal.	30' o.c.
	TILIA x EUCHLORA Crimean Linden	2" cal.	30' o.c.
	ACER RUBRUM "RED SUNSET" Red Sunset Maple	2" cal.	30' o.c.
	ZELKOVA SERR. "VILLAGE GREEN" Tulip Tree	2 1/2" cal.	35' o.c.
	CORNUS FLORIDA Flowering Dogwood	2" cal.	30' o.c.
	FAGUS SYLVATICA European Beech	2 1/2" cal.	40' o.c.

STREET TREE LEGEND: PHASE 2

SYMBOL	BOTANICAL NAME Common Name	SIZE	SPACING
	ACER x FREEMANII "AUTUMN BLAZE" Autumn Blaze Maple	2" cal.	30' o.c.
	CLADRASTIS KENTUKEA Yellowwood	2" cal.	30' o.c.
	FAGUS SYLVATICA European Beech	2" cal.	30' o.c.
	LIRIODENDRON TULIPIFERA Tulip Tree	2 1/2" cal.	25' o.c.
	QUERCUS ALBA White Oak	2" cal.	30' o.c.
	AESCULUS X CARNEA 'BRIOTTI' Red Horsechestnut	2" cal.	30' o.c.
	QUERCUS ALBA White Oak	2" cal.	30' o.c.
	ZELKOVA SERRATA 'GREEN VASE' Green Vase Zelkova	2" cal.	30' o.c.
	QUERCUS PALUSTRIS Pin Oak	2" cal.	30' o.c.

STREET TREE LEGEND: PHASE 3

SYMBOL	BOTANICAL NAME Common Name	SIZE	SPACING
	ACER x FREEMANII 'AUTUMN BLAZE' Autumn Blaze Maple	2" cal.	30' o.c.
	ACER PSEUDOPLANTANUS Sycamore Maple	2" cal.	30' o.c.
	FAGUS SYLVATICA European Beech	2" cal.	30' o.c.
	NYSSA SYLVATICA Black Tupelo	2" cal.	30' o.c.
	QUERCUS COCCINEA Scarlett Oak	2" cal.	30' o.c.
	QUERCUS RUBRA White Oak	2 1/2" cal.	40' o.c.
	TILIA TOMENTOSA Silver Linden	2 1/2" cal.	40' o.c.
	ZELKOVA SERRATA 'GREEN VASE' Green Vase Zelkova	2" cal.	30' o.c.

STREET TREE LEGEND: PHASE 4

SYMBOL	BOTANICAL NAME / Common Name	SIZE	SPACING
	ACER x FREEMANII 'AUTUMN BLAZE' Autumn Blaze Maple	2" cal., B&B	30' o.c.
	FAGUS SYLVATICA European Beech	2 " cal., B&B	30' o.c.
	QUERCUS ROBUR English Oak	2" cal., B&B	30' o.c.
	ACER PSEUDOPLANTANUS Sycamore Maple	2" cal., B&B	30' o.c.
	CRATAEGUS VIRDIS "WINTER KING" Winter King Hawthorne	2" cal., B&B	30' o.c.

STREET TREE LEGEND: PHASE 5

SYMBOL	BOTANICAL NAME Common Name	SIZE	SPACING
	ACER x FREEMANII 'AUTUMN BLAZE' Autumn Blaze Maple	2" cal.	30' o.c.
	ACER PSEUDOPLANTANUS Sycamore Maple	2" cal.	30' o.c.
	FAGUS SYLVATICA European Beech	2" cal.	30' o.c.
	NYSSA SYLVATICA Black Tupelo	2" cal.	30' o.c.
	QUERCUS COCCINEA Scarlett Oak	2" cal.	30' o.c.
	QUERCUS RUBRA White Oak	2 1/2" cal.	40' o.c.
	TILIA TOMENTOSA Silver Linden	2 1/2" cal.	40' o.c.
	ZELKOVA SERRATA 'GREEN VASE' Green Vase Zelkova	2" cal.	30' o.c.

SCALE
150 0 75 150
1 INCH = 150 FEET

Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

Street Tree Plan

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

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LEGEND:

I	IMPORTANT
G	GOOD
M	MODERATE
P	POOR
NE	NOT EXAMINED
	EXISTING TREES TO REMAIN
	EXISTING TREES LIKELY TO BE REMOVED
	EXISTING TREES TO BE REMOVED

NOTE: SEE SHEET 12.2 FOR MORE DETAILED VIEW OF PDP 5N

SCALE
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1 INCH = 150 FEET

ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH
VILLEBOIS

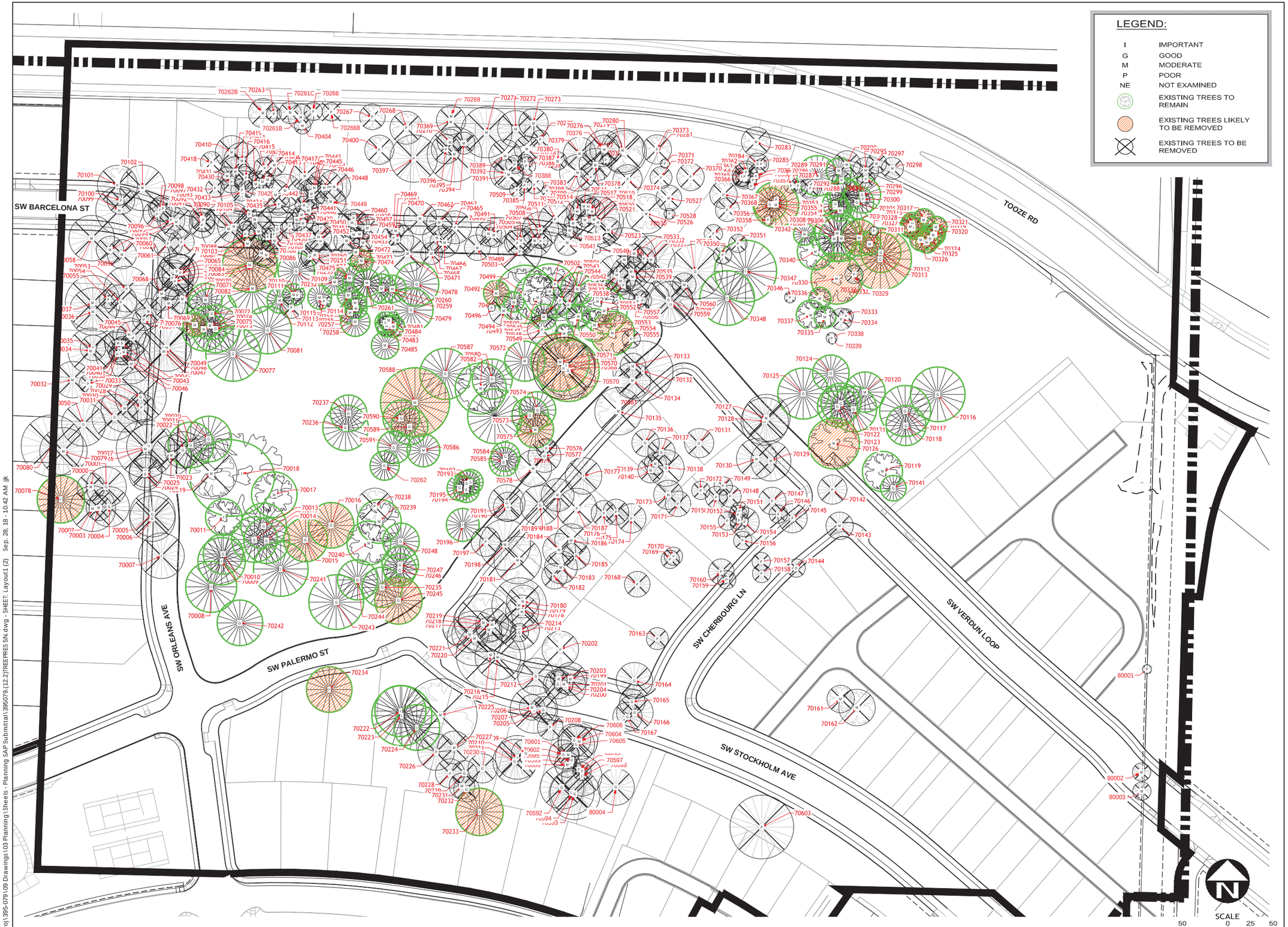
Specific Area Plan

Tree Preservation Plan

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

12.1



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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

Tree Preservation Plan (Phase 5N)

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

12.2

LEGEND:

- 175 EX 5-FT CONTOUR
- 200 EX 25-FT CONTOUR
- 175 PROPOSED 5-FT CONTOUR
- 200 PROPOSED 25-FT CONTOUR
- LIMITS OF GRADING
- SPECIFIC AREA PLAN BOUNDARY

N

SCALE
150 0 75 150
1 INCH = 150 FEET

ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

GRADING PLAN

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

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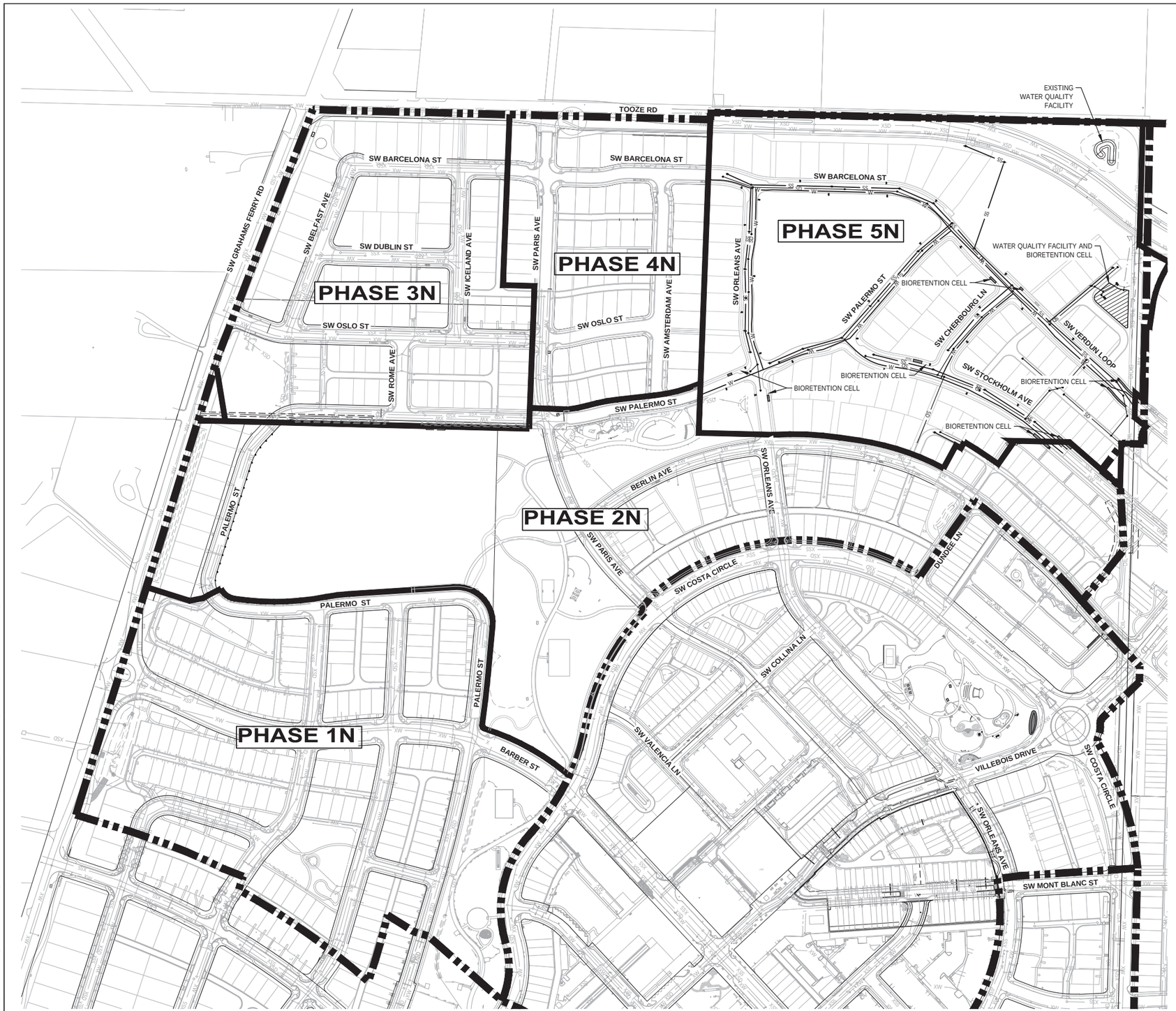

LEGEND:

XSD	EXISTING STORM
XSS	EXISTING SANITARY
XW	EXISTING WATER
SD	PROPOSED STORM
SS	PROPOSED SANITARY GRAVITY MAIN
W	PROPOSED WATER
	BIORETENTION

SCALE
150 0 75 150
1 INCH = 150 FEET

ELEVATION DATUM: NAVD 88

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Villebois

POLYGON NW COMPANY

Pacific Community Design

GEODESIGN, INC

SAP NORTH VILLEBOIS

Specific Area Plan

UTILITY PLAN

PROJECT NUMBER: 395-079

2ND SUBMITTAL DATE 9/28/2018

14

IIC) Updated Master Plan and SAP Unit Counts

Villebois (updated 7/18/18)

Land Use Table

LAND USE	SAP NORTH	SAP SOUTH	SAP EAST	SAP CENTRAL	TOTAL
Estate	0	0	0	0	0
Large	37	104	0	0	141
Standard	69	68	49	0	186
Medium	91	127	112	0	330
subtotal	**197**	**299**	**161**	**0**	**657**
Small Detached	222	158	226	8	614
Small Attached / Cottage	49	0	147	9	205
Rowhouse	0	103	42	376	521
Nbhd Apartments	0	21	0	0	21
Village Apartments	0	0	0	307	307
Condos	0	0	0	85	85
Urban Apartments	0	0	0	58	58
Mixed Use Condos	0	0	0	90	90
Specialty Condos	0	0	0	0	0
subtotal	**271**	**282**	**415**	**933**	**1,901**
TOTAL UNITS	**468**	**581**	**576**	**933**	**2,558**

SAP North (updated 9/26/18)

Existing

Product Type	PDP 1N**	PDP 2N***	3N****	4N*	5N	Total
Estate	0	0	0	0	17	17
Large	0	0	23	8	16	47
Standard	2	10	3	11	0	26
Medium	30	6	26	21	6	89
Small	98	37	32	23	7	197
Small Cottage	12	37	0	0	0	49
Row House	0	0	0	0	0	0
Nbhd Apartment	0	0	0	0	0	0
Total	**142**	**90**	**84**	**63**	**46**	**425**

* Includes PDP 4 North approved in 2016.
**Includes PDP 1 North modifications approved in 2011 & 2013.
***Includes PDP 2 North approved in 2013.
****Includes PDP 3 North approved in 2014.

Proposed

Product Type	PDP 1N	PDP 2N	PDP 3N	PDP 4N	5N	Total
Estate	0	0	0	0	**0**	0
Large	0	0	23	8	**7**	38
Standard	2	10	3	11	**41**	67
Medium	30	6	26	21	**9**	92
Small	98	37	32	23	**32**	222
Small Cottage	12	37	0	0	**0**	49
Row House	0	0	0	0	**0**	0
Nbhd Apartment	0	0	0	0	**0**	0
Total	**142**	**90**	**84**	**63**	**89**	**468**

IID) Historic/Cultural Resource Inventory

CULTURAL RESOURCES INVENTORY FOR THE CHANG PROPERTY PROJECT, WILSONVILLE, CLACKAMAS COUNTY, OREGON

JUNE 2018

PREPARED BY

SWCA Environmental Consultants

PREPARED FOR

Polygon WLH LLC

CULTURAL RESOURCES INVENTORY FOR THE CHANG PROPERTY DEVELOPMENT PROJECT, WILSONVILLE, CLACKAMAS COUNTY, OREGON

Prepared for

Polygon WLH LLC
703 Broadway Street, Suite 510
Vancouver, WA 98660

Prepared by

Zach Windler
Adrienne Donovan-Boyd
Sarah Basso

SWCA Environmental Consultants
1220 SW Morrison Street, Suite 700
Portland, Oregon 97205
(503) 224-0333
www.swca.com

SWCA Project No. 21087.30
SWCA Cultural Resources Report No. 18-415

June 26, 2018

MANAGEMENT SUMMARY

SWCA Environmental Consultants (SWCA) was contracted by Polygon WLH LLC to conduct a cultural resources inventory for the Chang Property Development Project, which consists of approximately 22 acres of privately owned land proposed for residential development in the City of Wilsonville, Clackamas County, Oregon. The project is located in the NW ¼ NE ¼, Section 15, Township 3 South, Range 1 West, Willamette Meridian.

The project is subject to the requirements of the City of Wilsonville's Villebois Village Specific Area Plan (SAP) North Amendment. A cultural resources inventory is an application component of the SAP. In support of the project, SWCA conducted background research and pedestrian survey, excavated 44 shovel probes, and conducted a survey of the built environment in order to determine if cultural resources would be affected by the proposed project.

No archaeological resources were previously recorded within the project area, and no archaeological resources were identified as a result of SWCA's cultural resources investigations. Two aboveground historic-period resources (Young House and the equipment barn) were identified during the survey. SWCA found both the Young House and the equipment barn lack sufficient historic significance to be considered eligible for the National Register of Historic Places. SWCA recommends there will be *no effects to historic properties* for the project.

CONTENTS

Figures

Tables

1 INTRODUCTION

SWCA Environmental Consultants (SWCA) was contracted by Polygon WLH LLC to conduct a cultural resources inventory for the Chang Property Development Project, which consists of approximately 22 acres of privately owned land proposed for residential development in the City of Wilsonville, Clackamas County, Oregon. The area includes four separate tax lots. The project is located in the NW ¼ NE ¼, Section 15 in Township (T) 3 South (S), Range (R) 1 West (W), Willamette Meridian (Figure 1-1). Project activities for residential developments, while not yet designed for the Chang Property, typically include mechanical excavation and grading, utility trenching, constructing roads, and establishing temporary access roads and staging areas.

The project is subject to the requirements of the City of Wilsonville's Villebois Village Specific Area Plan (SAP) North Amendment. A cultural resources inventory is an application component of the SAP. In support of the project, SWCA conducted background research, an archaeological field survey including pedestrian survey subsurface testing, and a survey of the built environment. This report summarizes the results of the cultural resources inventory and makes recommendations regarding the project's potential to impact cultural resources.

1.1 Project Area

The project area encompasses approximately 22 acres of semi-rural land within the City of Wilsonville (see Figure 1-1). It measures approximately 1,213 feet (370 m) east-west by 853 feet (260 m) north-south and is bounded by SW Tooze Road to the north, SW 110th Avenue to the east (also known as Costa Circle East, and SW Berlin Avenue to the south. At the time of this report, a residential development was under construction adjacent to the west edge of the project area.

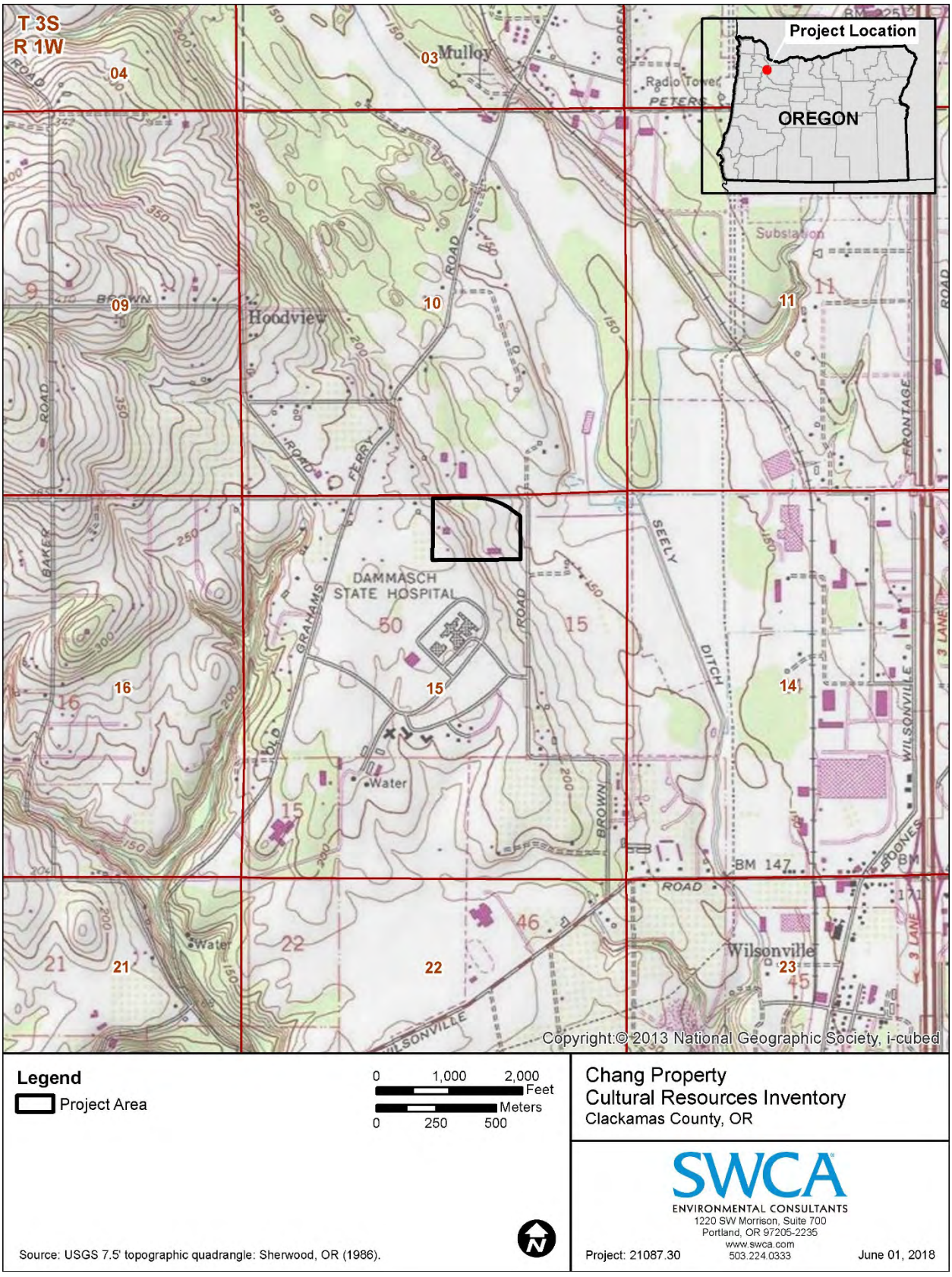

Figure 1-1. Chang Property Development Project location.

2 ENVIRONMENTAL SETTING

2.1 Physiographic Province

The project is located at the northern extent of the Willamette Valley physiographic province within the southwest foothills of the Tualatin Plains. The Willamette Valley is a broad structural depression between the Cascade and Coast Ranges that extends from the Columbia River, in the north, to Cottage Grove, Oregon, in the south (Franklin and Dyrness 1973:6, 11–12; Orr and Orr 2012:186–187).

The Willamette Valley is represented by broad alluvial flats separated by low hills (Franklin and Dyrness 1973:15). The majority of the alluvium was deposited by the late Pleistocene Missoula Floods. These floods occurred when glacial Lake Missoula repeatedly breached its ice dam, sending catastrophic floodwaters across the Channeled Scablands and down the Columbia River valley to the Pacific Ocean between 19,000 and 13,000 years before present (B.P.) (Benito and O'Connor 2003:624, 637). At constrictions in the Columbia River valley along the flood route, the flow of the floodwaters was temporarily impeded, causing ponding behind the narrowed flow channels. One such constriction at Kalama Gap, northwest of Portland, caused water to backflood south into the Willamette Valley as far south as Eugene (Minervini et al. 2003). The flood waters that ponded in the Willamette Valley reached an estimated maximum height of 400 feet above mean sea level (amsl) and swept through the gap in the Tualatin Mountains at Lake Oswego northwesterly into the Tualatin Valley. The Project is located at 143 to 313 feet amsl and would have been affected by these flood waters. Other flood channels were probably created by the subsequent ebb and flow of floodwaters into and out of the Tualatin Valley to the east through the "Rock Creek gap" between the Tualatin Valley and the Willamette River (O'Connor et al. 2001:20–21).

2.2 Hydrology and Soils

The project area is located within the Coffee Lake Creek drainage area located at the northern extension of the Middle Willamette River subbasin. The Middle Willamette drains a large area in Clackamas, Marion, and Yamhill Counties. The Willamette River originates in the Cascade Range southeast of Eugene and empties into the Columbia River approximately 24 miles to the north of the project. Coffee Lake Creek is a tributary of the Willamette River (Oregon Department of Environmental Quality 2006).

The Quatama series loam is mapped throughout the more elevated southwestern half of the project area, while the Latourell series loam and Aloha series, Willamette series, and Woodburn series silt loams are soils mapped in the lower northeastern half of the project area (Gerig 1985; Natural Resources Conservation Service [NRCS] 2018). All of the soil series within the project area formed in stratified glaciolacustrine deposits from the Missoula Floods (Gerig 1985; NRCS 2002, 2006, 2009, 2017a, 2017b). The Quatama, Latourell, Woodburn, and Willamette soil series consist of deep to very deep, moderately well-drained to well-drained soils, while the Aloha soil series consist of very deep, somewhat poorly drained soils.

The soil series identified within the project area are usually moist and saturated with water during the winter and spring but dry during the summer. They have been historically used for small grain, clover seed, hay, berries, and timber production and pasture. Uncultivated areas where these soils series occur have been known to contain vegetation such as Douglas-fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*), Oregon white oak (*Quercus garryana*), Oregon ash (*Fraxinus latifolia*), big-leaf maple (*Acer macrophyllum*), Oregon grape (*Mahonia aquifolium*), trailing blackberry (*Rubus ursinus*), California hazel (*Corylus cornuta*), red alder (*Alnus rubra*), vine maple (*Acer circinatum*), snowberry

(*Symphoricarpos*), rose (*Rosa acicularis*), grasses, and forbs (Gerig 1985; NRCS 2002, 2006, 2009, 2017a, 2017b).

2.3 Floral and Faunal Resources

The northern Willamette Valley is mapped within the western hemlock (*Tsuga heterophylla*) vegetation zone (Franklin and Dyrness 1973:70). The vegetation in this zone consists primarily of Douglas-fir, western hemlock, and western redcedar. However, historically, the area around the project area was largely savanna dominated by widely spaced oaks (*Quercus* spp.) and other deciduous trees such as ash (*Fraxinus latifolia*) and cottonwood (*Populus* sp.) found along stream banks (Suttles 1990:21).

Prior to European American settlement starting in the mid-1800s, there was an oak savanna landscape present throughout the Willamette Valley, in part the result of centuries of annual grassland burning by the Native peoples. This burning created large prairies that were interspersed with stands of fire-resistant white and black oaks and riparian woodlands along the floodplains of major drainages. Periodic incineration also promoted the growth of important food plants. The fresh growth of grasses and forbs that followed the fires would have attracted wild game. Native peoples in the area likely practiced annual burning for 3,000 years or more prior to the arrival of European Americans (Bowen 1978; Boyd 1986; Franklin and Dyrness 1973).

European American settlement of the region brought deliberate fire suppression, intensive agricultural and forestry practices, and introduced non-native plants. Areas of the Willamette Valley that once supported oak savannas, riverside forests, expansive wetlands, and open prairies were replaced with high-population urban centers, agricultural areas, and rural homes (Hulse et al. 1998:92–109).

While not as abundant as in the Columbia River and its other tributaries, salmon were historically—and still are—present in the Willamette River and its tributaries. Other native fish species within the Middle Willamette River include cutthroat trout (*Oncorhynchus clarkii*), western brook lamprey (*Lampetra richardsoni*), reticulate sculpin (*Cottus perplexus*), largescale sucker (*Catostomus platyrhynchus*), redside shiner (*Richardsonius balteatus*), speckled dace (*Rhinichthys osculus*), and northern pikeminnow (*Ptychocheilus oregonensis*) (Hawksworth 2001:53).

Common mammals that would have been locally available to people living in this region in the past include black-tailed deer (*Odocoileus hemionus*), white-tailed deer (*O. virginianus*), elk (*Cervus canadensis*), brush rabbit (*Sylvilagus bachmani*), mountain beaver (*Aplodontia rufa*), western grey squirrel (*Sciurus griseus*), and, hunted but not typically a food resource, coyote (*Canis latrans*), black bear (*Ursus americanus*), and bobcat (*Lynx rufus*). Birds historically common in this area of the Willamette Valley included sooty grouse (*Dendragapus fuliginosus*), evening grosbeaks (*Coccothraustes vespertinus*), and ducks (*Anas* spp.) (Aikens 1993:189; Bailey 1936:21; Jacobs 1945:21–27; Suttles 1990:26–27).

3 CULTURAL SETTING

3.1 Precontact Period

There have been several cultural chronologies formulated for the Willamette Basin and the Northwest Coast. The following overview uses the terminology set forth in the general Willamette Basin chronology developed by Beckham et al. (1981), which was based primarily on estimated dates for when changes in projectile point types occurred. The chronology has been modified by Toepel (1985) and Baxter (1986).

The earliest precontact populations in the Willamette Valley floodplain have been documented based on a few fluted projectile points (Allely 1975:551; Connolly 1994; Gerity 1960; Heinz 1971; Minor 1985:35; Ozbun and Stueber 2001), which are assumed to be associated with Clovis cultures defined in other parts of the Northwest Coast (Waters and Stafford 2007; Waters et al. 2011; Willig et al. 1998). Evidence of Clovis cultures has been tightly dated to between 12,800 and 13,250 calibrated years before present (cal B.P.) (Waters and Stafford 2007). Recent research has also suggested that large stemmed projectile points may be associated with populations that predate Clovis cultures (i.e., Wisner 1998), though none have been found near the project area. In particular, research at Paisley Caves in south-central Oregon has identified human coprolites dating to as old as 14,525 cal B.P. and stemmed projectile points associated with radiocarbon dates as old as 13,293–13,519 cal B.P. (Jenkins et al. 2014:486, 498).

The time period between Clovis and the Early Archaic period has been commonly referred to as the Paleoindian period. The period has been poorly understood with no clear defining characteristics. The Early Archaic period has been characterized by a reliance on hunting and typified by leaf- or lanceolate-shaped projectile points ("Cascade" points) (Beckham et al. 1981:165). The Early Archaic has been described as extending between 7950 and 5950 cal B.P., but somewhat older sites with the same characteristics have been documented, suggesting that the Early Archaic cultural period may actually have begun around 10,000 B.P. Cascadia Cave (35LIN111), situated in the Cascade foothills to the southeast of the project area, has been dated to at least 8650 cal B.P. and provided evidence for hunting and nut collection (Baxter 1989; Newman 1966). Extensive excavations and analysis in the Long Tom River floodplain of the Upper Willamette Valley have revealed cultural deposits dating to 10,910 cal B.P. at 35LA658 (Stamp Site), 9905 cal B.P. at 35LA439 (Long Tom Site), and 8500 cal B.P. at 35LA647 (Hannavan Creek Site) (Cheatham 1984:102; O'Neill et al. 2004:34).

Slightly younger sites representing the Middle Archaic period (5950 to 1950 cal B.P.) are also found in the Willamette Valley and have been well studied. The Middle Archaic has been characterized by an increased reliance on vegetal resources and processing as well as broad-necked, stemmed projectile points (Beckham et al. 1981:167). Artifact assemblages and food resource remains suggestive of hunting, cooking, camas processing, and the use of fruits and nuts have been documented at many sites. In the Middle Willamette Valley, the Middle Archaic is represented by the Mill Creek Prehistoric Site Complex that dates from ca. 6000 cal B.P. and continues into the historic period. In the Upper Willamette Valley, the Middle Archaic is represented by the Flanagan Site (35LA218) that dates to 3460 cal B.P., the Chalker Site (35LA420) that dates to 4610 cal B.P., and a component of the Long Tom Site (35LA439) (Connolly et al. 1998; Kramer 2000; Minor and Toepel 1995; Norris 2005; O'Neill et al. 2004:211; Tasa 2003; Toepel 1985).

The Late Archaic period (1950 to 200 cal B.P.) was a time of population growth in the Willamette Valley. This period is characterized by the shift from dart to arrow projectile point technology, narrow-necked projectile points, evidence of extensive trade, and changes in mortuary practices (Aikens 1993:142; Beckham et al. 1981:170). Mound sites are a relatively unique feature of the Willamette Valley found particularly along the Calapooia River (Roulette 2006). These sites have been mostly lost due to relic hunters, agriculture, and construction activities, but mounds that have been studied represent midden deposits and tend to date to the Late Archaic. Most of the well-studied archaeological sites in the Willamette Valley and Cascade foothills either date to the Late Archaic or have components that fall in this period.

3.2 Ethnographic Period

The Kalapuya occupied almost all of the Willamette Valley and were divided into 13 bands or "tribes" at the time of European American contact. The project is mapped as being within the traditional territory of the Tualatin/Atfalati band of the Kalapuya, with the Yamhill and Ahanfchuyuk bands of the Kalapuya

nearby and to the south (Aikens 1993:186; Aikens et al. 2011:285; Mackey 2004:12; Zenk 1990:548, 552). The Kalapuyans were linked by ties of language and culture, but each band and its component village groups was politically independent. The population of individual Kalapuyan bands is uncertain. Boyd (1990) estimated that there were about 16,000 Kalapuyans prior to the onset of European diseases in the late eighteenth century and about 8,500 at the time of the Lewis and Clark Expedition (1805–1806).

During the winter months, the Tualatin—like other Kalapuyan bands—occupied permanent villages on the major tributary systems of the Willamette River, around the shores of lakes and other wetlands, and on prairies. The villages consisted of clusters of rectangular houses occupied by one or more families. The house walls were banked on the outside with dirt to provide additional insulation, and the floors were excavated to a depth of 0.5 to 1 m (2–3 feet) (Jacobs 1945:39; Zenk 1990:548–549).

During the drier part of the year, families moved out of the villages and lived in temporary camps near resource-gathering areas; these temporary camps were often nothing more than shelters in a grove of trees or brush windbreaks (Zenk 1990). Western redcedar was used for house planks, posts, beams, and canoes, wherever available, and western hemlock and Douglas-fir saplings were used for poles and weirs. Red alder was used for utensils and dishes and vine maple was used for small tools (Suttles 1990:24).

The most important plant resources to the Kalapuya were camas, tarweed, and wapato. The Kalapuya burned the grasslands every year to maintain an open environment, a practice that was probably started thousands of years earlier and created the prairie and oak savanna that was characteristic of the valley (Aikens et al. 2011:285; Beckham 1977). Other secondary plant resources gathered by the Kalapuya included hazelnuts and various berries. Game resources used by the Kalapuya included small mammals, black-tailed and mule deer, elk, and black bear. Other live foods included lamprey, grasshopper, and certain types of caterpillar. Grasshoppers were gathered from the burned-over prairies, and caterpillars were either pit-roasted or boiled (Zenk 1976, 1990:548).

The Kalapuyan way of life was greatly affected by European presence in North America, even before people began to settle in the Willamette Valley. In the 1770s, a smallpox epidemic devastated the Native American population of western Oregon, with an estimated mortality rate of 30 percent or more. Further epidemics struck the area through the 1850s, with an outbreak of malaria in the 1830s killing an estimated 90 percent of the total Kalapuya population. By 1840, approximately 600 Kalapuyans remained (Boyd 1990).

One of the first recorded contacts between Kalapuyans and European Americans took place in 1812, when a Pacific Fur Company expedition, led by Donald Mackenzie, scouted the Willamette Valley for fur resources (Mackie 1998:17). By the 1830s, the first European American settlers and missionaries arrived in the Willamette Valley and established permanent settlements. European American settlement of the region increased, and by the early 1850s, the Native groups of the valley signed a series of treaties in which they ceded ownership of most of their traditional lands to the U.S. government (Beckham 1990:182–183; Mackey 2004:151).

3.3 Historic Period

The Willamette Valley was one of the primary destinations of the first European American settlers in the Pacific Northwest. Beginning in 1841, a massive migration of Americans crossed the continent on the Oregon Trail, generally departing from Missouri and crossing to The Dalles, where they then traveled down the Columbia River or travelled overland to the Willamette Valley (Bassett et al. 1998).

The Tualatin Plains area, just north-northwest of the project area, was among the first areas to be settled and converted for use as farmland, beginning in the early 1840s. This open plain, crisscrossed by creeks

and already cleared by Native annual burns, was an attractive area to early settlers because of the ready state of the land for farming and the relatively easy access to the markets at Oregon City and, by the late 1840s, the fast-growing community at Portland. The earliest claims were in the vicinity of the Project, along the larger rivers (such as the Tualatin River) and close to the established roads leading to Oregon City and Portland. At the time, Portland was only reachable by water or (after 1849) along the difficult Portland–Tualatin Valley Plank Road (now Canyon Road), which descended a canyon into the lowlands south of Portland (Corning 1956:250). As these lands filled up, the next to be claimed were those somewhat farther to the north and west, made more attractive by the increasing reach and improving conditions of the road network. By 1854, nearly all of the Willamette Valley had been claimed, though the extent to which this definition of the Willamette Valley reached the far margins and foothills of the surrounding mountain ranges is unclear. Certainly by that time, the lands in the Tualatin Plains had been settled, and farms and small farming communities had been firmly established (Bourke and DeBats 1995:62–65).

3.3.1 Early ownership

On the 1852 General Land Office (GLO) map of the area, a structure labeled “Samuel Frankleton” is depicted roughly 0.5 mile southwest of the project (Figure 3-1). This likely refers to the same Samuel B. Franklin who claimed an approximately 320-acre plot (Donation Land Claim [DLC] No. 50), including the project area (GLO 1865). Franklin’s land claim is clearly delineated on the 1855 GLO map of the area (GLO 1852, 1855). The 1870 U.S. Territorial Census suggests Franklin was born in 1830 in Kentucky. He was married in 1870 to Frances Franklin (born in Missouri) and the couple had six children between the ages of 2 and 12. All six children were born in Oregon, suggesting the couple had arrived in Oregon before 1858 (U.S. Bureau of the Census 1870).

By the early decades of the twentieth century, the large claims made under the 1850 Donation Land Act (allowing a married couple to claim up to 640 acres) had largely been subdivided into smaller farms more manageably farmed by families. By 1928, Metsker Maps show the Samuel B. Franklin DLC had been subdivided into much smaller parcels (Metsker Maps 1928). The portion of the property that encompasses the project area was owned by Gus Jaeger. Jaeger may have owned the property prior to 1917, as the *Oregonian* suggested that he owned some of the “best horses in the state” and at the time he was living in the Wilsonville area (*The Oregonian* 1917:25). At this time the property extended to the south and an access road is shown on the south half of the property. This suggests historically there may have been a house to the south of the project area.

By 1937, H. A. Newman owned the property that included the project area (Metsker Maps 1937). His ownership continued into the 1960s, as he appears on an ownership map in 1951 and 1964 (Metsker Maps 1951, 1966). The 1951 Metsker map also shows a road to the south of the project area with two structures at the end of the drive (south of the APE) (Metsker Maps 1951). This is also shown in the 1954 USGS topographic map of the Sherwood area (USGS 1954). Very little information was available about H. A. Newman. The 1966 Metsker map appears to be out of date, as the Dammasch State Hospital was constructed in 1960 and 1961 and it is not reflected on the map.

Tax records indicate the ranch house currently within the project area was constructed in 1963. It is likely that the parcel was divided before construction of the state hospital in 1961. In 1966 and 1971 D. S. Young is listed as the owner of the northern portion of the H. A. Newman parcel, which includes the entirety of this project area (Metsker Maps 1966, 1971).

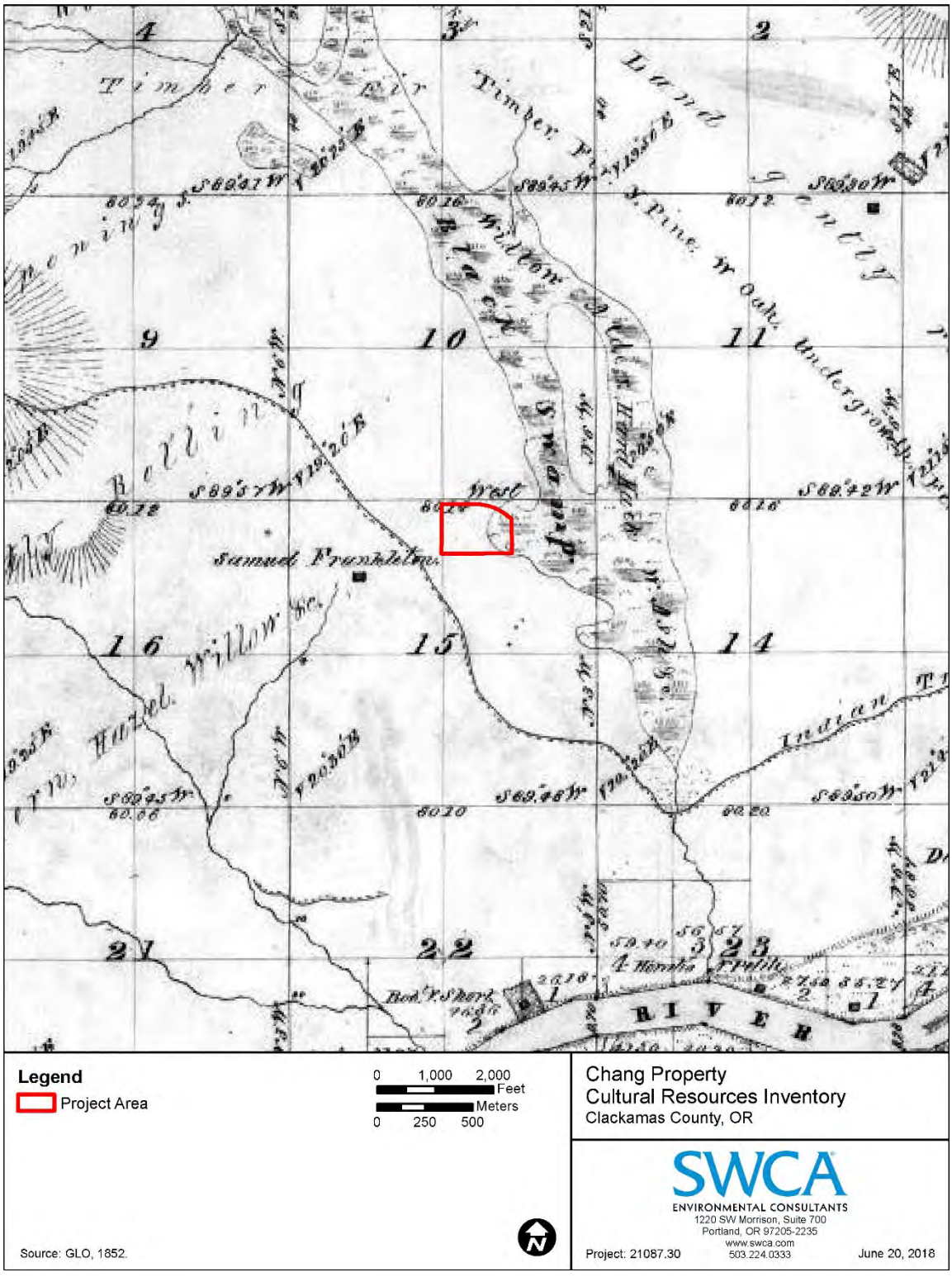

Figure 3-1. General Land Office plat map, 1852, showing the project area.

3.3.2 Site Development

The house that sits on the west side of the subject property is approximately 5,252 square feet and was constructed ca. 1963. The Dammasch State Hospital was constructed to the south in 1961. It is likely that the project area was sold at this time for residential development. The house does not appear to be connected to the hospital development, but the land may have become available as part of that sale.

The 1954 USGS topographic map of the area shows there are no structures within the project area (Figure 3-2) (USGS 1954). By 1970, the house and equipment barn are visible on topographic maps, but the rest of the site appears undeveloped (USGS 1970). It seems likely the equipment barn was constructed during the same period as the house, ca. 1963. A 1975 USGS map of the area continues to show only the house and equipment barn (USGS 1975). A 1985 topographic map shows the barn/arena and the southwest barn are present (Figure 3-3) (USGS 1985). Tax records indicate the caretaker's house was constructed in 1978, and it is possible the horse barn/arena and southwest barn were constructed around this time (Clackamas County Tax Assessor 2018). The three horse sheds on the east side of the property show on satellite imagery after 2006 (Google Earth 2018).

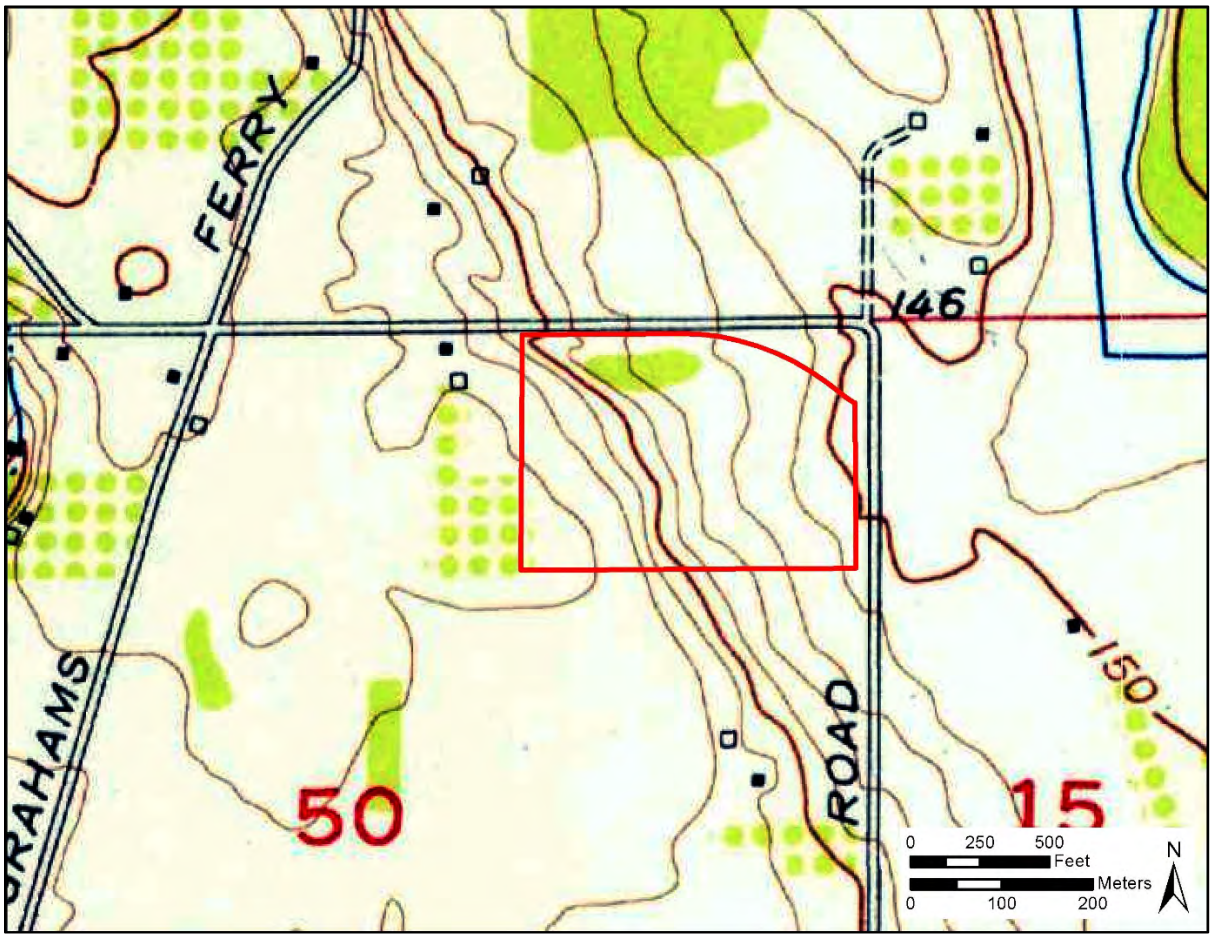

Figure 3-2. USGS topographic map, Sherwood Quadrangle, 1954, showing project area.

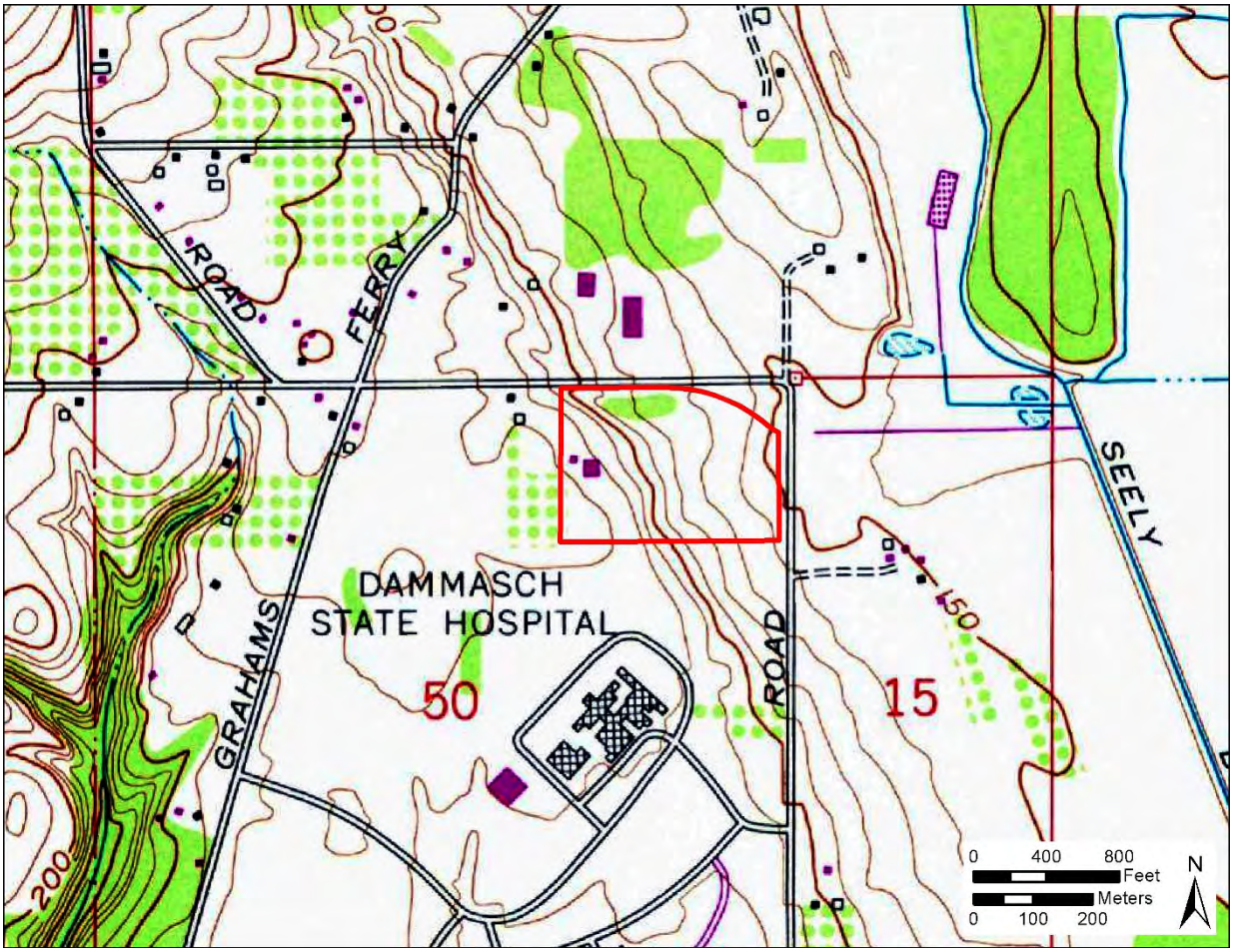

Figure 3-3. USGS topographic map, Sherwood Quadrangle, 1985, showing project area.

4 BACKGROUND RESEARCH

4.1 Previous Archaeological Studies and Results

SWCA reviewed records from the Oregon State Historic Preservation Office (SHPO) Oregon Archaeological Records Remote Access (OARRA) database to determine if cultural resources had been recorded in or near the project area and if any cultural resource surveys have been conducted in the vicinity or in the project. GLO maps and other historical maps were examined to determine the likelihood for precontact or historic resources within the project area.

No cultural resource inventories were previously conducted within the project area, and no cultural resources have been previously identified in the project area. Nineteen cultural resources inventories have been previously conducted within a 1-mile radius of the project area (Table 4-1), resulting in the identification of three archaeological sites (35CL317, 35CL398, and 35CL401) and three archaeological isolates (Table 4-2).

Archaeological site 35CL317 is a historic-period farmstead site identified on the ground surface during a survey of the central area of the Villebois Village SAP North Phase 3 development project area (Darby 2005). Artifacts identified at the site include a flow blue ceramic fragment, a salt glazed earthenware

Table 4-1. Previous Cultural Resource Investigations within 1 mile of the Project Area

SHPO No.	Survey Project *Principal Investigator, Year, Affiliation*	Location	Methods	Results	Distance/ Direction from Project
13764	Wilsonville Road Project Cultural Resources Survey: Shovel Testing *Wilson, Douglas C., 1993, Archaeological Investigations Northwest, Inc.*	T3S, R1W, Section 22	Subsurface testing	Positive (1 precontact isolate)	1 mile SE
13765	Wilsonville Road Project Cultural Resources Survey *Wilson, Douglas C., 1993, Archaeological Investigations Northwest, Inc.*	T3S, R1W, Section 22	Pedestrian survey	Positive (2 precontact isolates)	1 mile SE
18588	Cultural Resources Survey and Assessment of a Portion of the Former Holdings of the Dammasch State Hospital Tax Lot 31W502990 in Clackamas County, Oregon *Darby, Melissa C., 2003, Lower Columbia Research & Archaeology*	T3S, R1W, Section 15	Pedestrian survey, subsurface testing	Negative	0.2 mile SW
19234	Cultural Resource Assessment of the Proposed Villebois Rainwater Management Program, Clackamas County *Darby, Melissa C., 2004, Lower Columbia Research & Archaeology*	T3S, R1W, Section 15	Pedestrian survey	Negative	0.2 mile S
19816	Cultural Resource Assessment of the Central SAP Area of the Proposed Villebois Development *Darby, Melissa C., 2005, Lower Columbia Research & Archaeology*	T3S, R1W, Section 15	Pedestrian survey	Positive (35CL317, 1 precontact isolate)	0.1 mile S
19850	Letter Report: Archaeological Survey of the Boeckman Road-Tooze Road Connector Project, Clackamas County, Oregon *McCornack, Kevin C. and Kathryn Anne Toepel, 2005, Heritage Research Associates, Inc.*	T3S, R1W	Pedestrian survey	Negative	<0.1 mile N
19995	Letter Report: Supplementary Archaeological Survey of the Boeckman Road-Tooze Road Connector Project, Clackamas County, Oregon *McCornak, Kevin, and Kathryn Toepel, 2005, Heritage Research Associates, Inc.*	T3S, R1W	Pedestrian survey	Negative	0.3 mile E
20548	Cultural Resource Survey and Assessment of a Portion of the Villebois Proposed Development *Darby, Melissa C., 2004, Lower Columbia Research & Archaeology*	T3S, R1W, Section 14	Pedestrian survey	Positive (3 aboveground)	<0.1 mile E
20569	Archaeological Survey of Select Portions of the Washington County Wilsonville to Beaverton Commuter Rail Project Alignment *McDaniel, Sarah, 2006, URS Corporation*	T3S, R1W, Section 14	Pedestrian survey	Negative	0.7 mile SE
21165	A Cultural Resources Survey for the BPA/Tri-Met Pole Relocation, Wilsonville, OR *Brannan, Nicole F., and Sunshine R. Clark, 2007, Bonneville Power Administration*	T3S, R1W, Section 14	Pedestrian survey	Positive (1 aboveground and CCS flake)	0.7 mile E
22372	A Cultural Resources Reconnaissance Survey of the Proposed Tualatin Basin Water Supply Project (Willamette Pipeline), Clackamas and Washington Counties, Oregon *Smits, Nicholas, Elizabeth O'Brien, Jason Allen, and David V. Ellis, 2006, Archaeological Investigations Northwest, Inc.*	T1S, R1W; T2S, R1W; T3S, R1W	Reconnaissance survey	Negative	0.6 mile E
22373	Cultural Resource Survey and Selected Subsurface Testing for the Proposed Tualatin River Basin Water Supply Project, Clackamas and Washington Counties, Oregon *Punke Michele, Todd Ogle, David Ellis, and Elizabeth O'Brien, 2007, Archaeological Investigations Northwest, Inc*.	T1S, R1W; T2S, R1W; T3S, R1W	Pedestrian survey, subsurface testing	Positive	0.3 mile W

SHPO No.	Survey Project *Principal Investigator, Year, Affiliation*	Location	Methods	Results	Distance/ Direction from Project
23709	Archaeological Survey of the Barber Street Extension/Kinsman Road Extension Project, Clackamas County, Oregon *Lloyd-Jones, Jeff, and John L. Fagan, 2010, Archaeological Investigations Northwest, Inc*.	T3S, R1W, Section 14	Pedestrian survey, subsurface testing	Negative	0.6 mile E
24835	A Cultural Resources Survey for the Pearl Substation Expansion Project, Clackamas County, Oregon *Brannan, Nicole F., 2011, Bonneville Power Administration*	T3S, R1W, Section 11	Pedestrian survey	Negative	1 mile NE
26339	Cultural Resources Inventory for the Villebois Villages SAP North Phase 3 Development, Clackamas County, Oregon *Blake, Karry L., 2014, SWCA*	T3S, R1W, Section 15	Pedestrian survey, subsurface testing	Positive (35CL401)	0.2 mile W
26372	Archaeological Monitoring Report for Portions of the Retherford Meadows Project Area, Wilsonville, Clackamas County, Oregon *Maceyko, Jeff, and Alexander Gall, 2013, Archaeological Services LLC*	T3S, R1W, Section 14	Monitoring	Positive (Historic Site 35CL398)	0.3 mile E
26648	Archeological Survey of the Washington County Wilsonville to Beaverton Commuter Rail Project Alignment: Wilsonville Park-And-Ride Facility *McDaniel, Sarah, 2007, URS*	T3S, R1W, Section 14	Pedestrian survey	Negative	0.7 mile SE
26799	Cultural Resources Inventory for the Proposed SAP South-Plan Area 2 Residential Development, Clackamas County, Oregon *Windler, Zach, 2014*	T3S, R1W, Sections 15, 16	Pedestrian survey, subsurface testing	Positive (Precontact Isolate)	0.6 mi SW
27885	Cultural Resources Survey and Inventory of the Villebois PDP 4N Property Development, Clackamas County *Darby, Melissa, 2015, Lower Columbia Research and Archaeology LLC*	T3S, R1W, Section 15	Pedestrian survey, mechanical discing	Negative	<0.1 mile W

Table 4-2. Previously Recorded Archaeological Resources within 1 Mile of the Project Area

Site Number	Type	Description	NRHP Eligibility	Distance/ Direction from Project
35CL317	Historic farmstead	Jaeger Family Farm	Unevaluated	0.2 mi S
35CL398	Historic refuse scatter	–	Not eligible	0.3 mi E
35CL401	Historic homestead	Historical foundation and well features	Not eligible	0.3 mi W
	Precontact isolate	OBS Cascade-style projectile point	Not eligible	0.3 mi S
	Precontact isolate	CCS flake	Not eligible	0.7 mi E
	Precontact isolate	CCS side-notched projectile point	Not eligible	1 mi SW

CCS = cryptocrystalline silicate; OBS = obsidian

fragment, a ceramic insulator fragment, beer bottle fragments, tile brick fragments, and a bathroom fixture fragment. The Jaeger family historic farmstead was recommended eligible for the National Register of Historic Places (NRHP) under Criteria D, but the site is currently listed on the OARRA as unevaluated.

Archaeological site 35CL398 is a historic-period refuse scatter site identified at the edge of an agricultural field during monitoring for construction of the Retherford Meadows Project (Maceyko 2013). Identified artifacts consisted of cobalt glass fragments, other glass fragments, whiteware fragments, and metal debris. The site has been determined not eligible for the NRHP.

Archaeological site 35CL401 is a historic-period homestead site identified during the pedestrian survey for the Villebois Village SAP North Phase 3 Development Project (Blake 2014). The site consisted of two features recorded on the surface, a structural foundation and a trough. No artifacts were recorded in the vicinity, either on the surface or within the shovel probes excavated nearby. The site has been determined not eligible for the NRHP.

The three isolates previously identified are precontact lithic artifacts/artifact scatters discovered on the ground surface or during subsurface investigations. In Oregon, recorded precontact isolates typically consist of nine or fewer lithic tools and lithic debris related to tool manufacture. Materials in the three isolates consist of cryptocrystalline silicate (CCS) and obsidian. The landforms where each of the three isolates were located are relatively flat terraces near drainages or other bodies of water.

4.2 Previously Recorded Aboveground Resources

Records from the Oregon Sites Database were also reviewed to identify aboveground resources that have been previously recorded in or near the project.

No aboveground resources have been previously identified within the project area. Six resources that have been previously identified are located within approximately 1 mile of the project area (Table 4-3). All of these previously identified resources were determined eligible for the NRHP.

Table 4-3. Previously Recorded Above Ground Resources within 1 mi of the Project Area

Oregon Resource ID	Historic Name	Address	Year of Construction	NRHP Eligibility Determination
658663	Seely Ditch		ca. 1860	Eligible
31113	Seely, George B. Farm	11001 SW Tooze Road	ca. 1895	Eligible
31114	Camehl House	11681 SW Tooze Road	ca. 1895	Eligible
31110	Seely, Joseph B. & Mary Jan S. Farm	26940 SW Grahams Ferry Road	ca. 1925	Eligible
31111	Seely, Joseph B. & Mary Jan S. Barn #1	26940 SW Grahams Ferry Road	ca. 1900	Eligible
31112	Seely, Joseph B. Barn #2	26940 SW Grahams Ferry Road	ca. 1900	Eligible

4.3 Archaeological Expectations

The geomorphic and cultural setting, along with the previously identified resources in close proximity to the project, indicates that the project area has a moderate potential to contain precontact sites such as resource gathering camps and lithic material scatters. The areas in and near the project area likely had a variety of uses over time and may have functioned as one or more fishing camps, hunting sites, and/or lithic reduction sites. The project area's relatively flat terraces in the southwest and east are landforms similar to where other precontact camp sites and lithic scatters that have been found in the area. Nonetheless, in heavily vegetated portions of the project area, it is unlikely that precontact archaeological resources would have been identified prior to conducting archaeological subsurface investigations.

Additionally, the documented early- to mid-nineteenth-century European American activity, land patents, and mapped settlements in the vicinity of the project suggest that there is a high probability for historic-period structural remains, refuse scatters, and other agriculture-related material to be present. However, similar to the expectations for identifying precontact resources, SWCA expected a low likelihood of identifying historic-period resources during the pedestrian survey prior to conducting subsurface investigations.

5 METHODS

5.1 Archaeological Investigations

The cultural resource field investigations followed SHPO guidelines. The methods included a pedestrian survey and excavation of 44 shovel probes in the project area to determine whether the project has the potential to impact cultural resources. Transects were walked across the entire 22-acre project area. Pedestrian transects were spaced between 5 and 20 m apart. Soil exposures were inspected for the presence of cultural materials. Observations about topography, vegetation, surface visibility, and disturbances were recorded in the project field notebook. Overview and close-up photographs were taken, and each photograph was recorded on a standardized photo log.

The excavated shovel probes measured approximately 30 cm in diameter and were excavated to a minimum depth of 50 cm below surface (cmbs). Excavated soils were screened through ¼-inch mesh hardware cloth. Texture, color, and structure of soil horizons observed in each shovel probe were recorded, and the probe was backfilled. The locations of the shovel probes were marked on project field maps and recorded using a Trimble GeoXT global positioning system (GPS) unit.

5.2 Architectural Investigations

SWCA architectural historian Adrienne Donovan-Boyd conducted a cultural resources survey of the Chang Property on May 16, 2018. During the survey, photographs and notes were taken of the eight structures on the site. The property was evaluated following the Guidelines for Historic Resource Surveys in Oregon (SHPO 2011).

5.3 Resource Evaluation

Evaluation methods used the following guidelines established by the National Park Service (NPS):

To be individually eligible for listing in the NRHP, a property must be significant within a historic context. To evaluate significance, the following five things must be determined:

1. the facet of prehistory or history of the local area, state, or nation that the property represents;
2. whether the facet of history is significant;
3. whether it is a type of property that has relevance and importance in illustrating the historic context;
4. how the property illustrates that history; and
5. whether the property possesses the physical features necessary to convey the aspect of history with which it is associated (NPS 1997:44).

The significance (Items 1–3 above) of a resource must be established before assessing integrity (Items 4 and 5). The significance of a resource within its historic context must relate to one or more of the following:

A. Under Criterion A, properties can be determined eligible for listing in the NRHP if they are associated with events that have made a significant contribution to the broad patterns of our history.

B. Under Criterion B, properties can be determined eligible for listing in the NRHP if they are associated with the lives of persons significant in our past (i.e., persons whose activities are demonstrably important within a local, state, or national context).

C. Under Criterion C, properties can be determined eligible for listing in the NRHP if they embody the distinctive characteristics of a type, period, or method of construction, or represent the works of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (i.e., are part of a district). Discrete features, a particular building for example, may best be documented under this criterion, though collections of resources may also have significance under Criterion C for architecture or engineering association.

D. Under Criterion D, properties may be eligible for listing in the NRHP if they have yielded, or may be likely to yield, information important in history. To be eligible under Criterion D, the property must have, or have had, information to contribute to our understanding of human history and that information must be considered "important." Most commonly applied to archaeological sites, buildings, structures, and objects may be eligible under Criterion D if they are the principal source of information (NPS 1997:21).

Integrity is the ability of a property to convey its significance. To be eligible for the NRHP, a property must not only be shown to be significant under NRHP criteria (A–D above), but it must also have integrity. The evaluation of integrity is grounded in an understanding of a property's physical features and how they relate to its significance. Historic properties either retain integrity (that is, convey their significance) or they do not. To retain integrity, a property will always possess several, and usually most, of the seven aspects of integrity, which are (NPS 1997:44–45, 2000:35–36):

1. *Location* is the place where the historic property was constructed or the place where the historic event occurred.

2. *Design* is the combination of elements that create the form, plan, space, structure, and style of a property.

3. *Setting* is the physical environment of a historic property.

4. *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

5. *Workmanship* is the physical evidence of crafts of a particular culture or people during any given period in history or prehistory.

6. *Feeling* is the property's expression of the aesthetic or historic sense of a particular period of time.

7. *Association* is the direct link between an important historic event or person and a historic property.

6 RESULTS

6.1 Archaeological Investigations

6.1.1 Pedestrian Survey

SWCA archaeologists Zach Windler and Sam Crockett conducted the pedestrian survey of the entire 22-acre project area on May 16, 2018 (Figure 6-1). Transects were walked generally east-west through the project area. Areas of impenetrable Himalayan blackberry (*Rubus armenicus*) growth were avoided. The southwestern half of the project area contains a high, slightly open terrace that slopes down to the northeastern half of the project, which is roughly 30 m lower in elevation. Ground visibility within the project varied slightly, but it generally ranged from 0 to 20 percent mineral soil visibility. No archaeological resources were identified during the pedestrian survey.

SWCA identified six high probability areas (HPAs) as a result of the pedestrian survey. Nearly all of these areas are delineated by fenced boundaries throughout the site. Four of the HPAs are used as horse pastures with relatively sparse vegetation. Grasses, Himalayan blackberry, and fir trees are common in the northeastern and southwestern pastures. Fir trees are present within the central pasture along with some low-profile grasses. The surface area of the southeastern pasture is completely covered in medium- to high-profile grasses with dense Himalayan blackberry along the southern and eastern fence line. The northern HPA is densely forested with fir, hawthorn (*Cratageus* spp.) trees, Himalayan blackberry, stinging nettle (*Urtica dioica*), English ivy (*Hedera helix*), sword fern (*Polystichum munitum*), and various other vegetation.

6.1.2 Subsurface Testing

SWCA archaeologists Sarah Basso, Sam Crockett, and Dianna Wilson conducted a shovel probe investigation within the project area on May 23, 2018. Shovel probes were excavated approximately 20 to 30 m apart where appropriate within the designated HPAs. No previously recorded archaeological resources were within the project area, and no archaeological resources were identified during subsurface testing.

Forty-four shovel probes were excavated across the project area to sample for subsurface archaeological resources (Table 6-1). Soil excavated during this investigation was predominately silty clay. Shovel Probes (SPs) 1 to 4 were very compact, grayish-brown, silty clay with minimal root intrusions (Figure 6-2). Small rounded pebbles were common within these shovel probes. SPs 5–10 were excavated within the more forested western half of the northeastern HPA and exhibited much looser and slightly darker brown silty clay with root intrusions being more common. The central HPA sediments were extremely compact and grayish brown silty clay. Some large roots were encountered along the northern segment of this HPA. Brown, green, and colorless glass fragments were observed on the surface and at depths ranging from 0 to 20 cm within several of the six shovel probes (SPs 11–16) placed in this HPA.

Five shovel probes were excavated within the southwestern HPA, with placement largely impacted by dense Himalayan blackberry and visible tree roots along the surface. The sediments in SPs 17–21 were brown silty clay and relatively loose along the westernmost side of the HPA with several root intrusions and small rounded rocks. The horses primarily occupy the eastern half of this pasture, leaving the ground much more compact. A small area west of the house and pool located on the property was tested using three shovel probes. The ground at this location was somewhat disturbed due to utility line installation and landscaping. The sediment within SPs 22 to 25 was loose with few root intrusions and small rounded pebbles.

The northernmost HPA is densely forested with very minimal ground visibility, and limited access due to thick Himalayan blackberry, nettles, and downed trees (Figure 6-3). Shovel probe placement was largely influenced by accessibility with regards to screening equipment as well as proximity to large trees and visible roots that suggested a high probability of intrusions preventing excavation successfully reaching a minimum of 50 cm in depth. Of the seven shovel probes (SPs 26–32) excavated within this HPA, all sediments removed were very loose and brown silty clay. Root intrusions were common and soil profiles were consistent to depth.

Twelve shovel probes were excavated in the southeastern pasture. Sediments were grayish-brown silty clay and somewhat looser compared to the central pasture approximately 10 m to the west, primarily due to the root structures of the medium to tall grasses present within this area (Figure 6-4). Thin root intrusions and small rounded pebbles were common within SPs 32–44.

No cultural materials were identified.

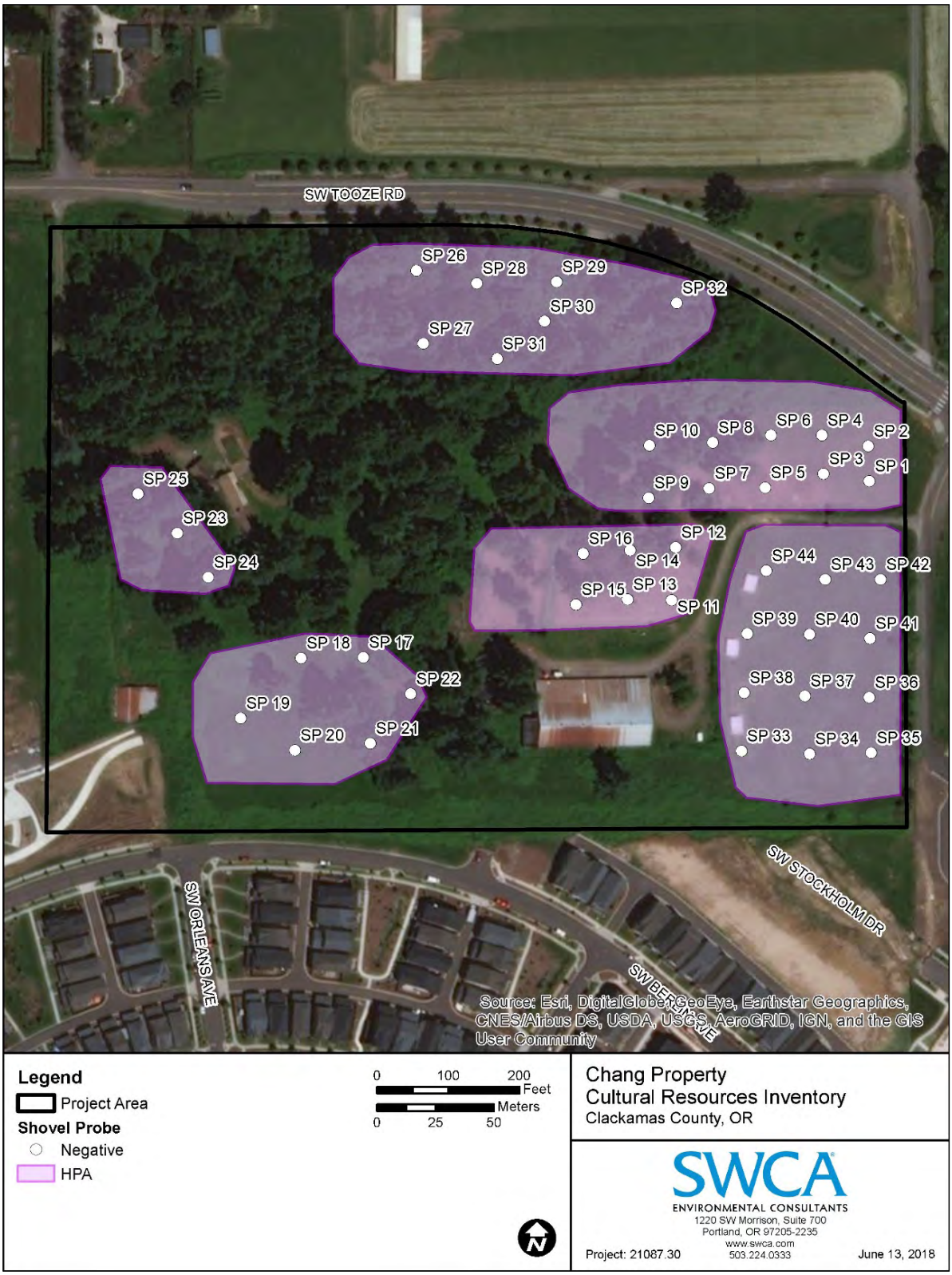

Figure 6-1. Aerial photograph, showing the high probability areas and shovel probe locations.

Figure 6-2. SP 1

Figure 6-3. Southwest facing overview of SP 26.

Figure 6-4. West facing overview of SP 41 and 42.

Table 6-1. Summary of Shovel Probe Results within the Project Area

SP No.	Date	Depth (cmbs)	Location	Results	Comments (cmbs)
1	5/23/18	50	Northeast Pasture	No Artifacts	Light grayish-brown silty clay 0–50.
2	5/23/18	53	Northeast Pasture	No Artifacts	Light grayish-brown silty clay 0–32; brown silty clay and sub-rounded pebbles 32–53.
3	5/23/18	50	Northeast Pasture	No Artifacts	Light grayish-brown silty clay 0–50.
4	5/23/18	50	Northeast Pasture	No Artifacts	Light grayish-brown silty clay 0–50.
5	5/23/18	55	Northeast Pasture	No Artifacts	Light grayish-brown silty clay 0–35; light grayish-brown silty clay with orange marbling 35–55.
6	5/23/18	52	Northeast Pasture	No Artifacts	Light grayish-brown silty clay 0–50.
7	5/23/18	50	Northeast Pasture	No Artifacts	Light grayish-brown silty clay 0–25; brown silty clay 25–50.
8	5/23/18	50	Northeast Pasture	No Artifacts	Light reddish-brown clay silt 0–50.
9	5/23/18	50	Northeast Pasture	No Artifacts	Brown silty clay 0–50.
10	5/23/18	50	Northeast Pasture	No Artifacts	Brown silty clay 0–50.
11	5/23/18	52	Central Pasture	No Artifacts	Grayish-brown silty clay with colorless, brown and green glass fragments 0–20; grayish-brown silty clay with sub-rounded pebbles 20–52.
12	5/23/18	52	Central Pasture	No Artifacts	Grayish-brown silty clay 0–52.

SP No.	Date	Depth (cmbs)	Location	Results	Comments (cmbs)
13	5/23/18	50	Central Pasture	No Artifacts	Light grayish-brown silty clay with gravel, colorless and brown glass fragments 0–15; light reddish-brown silty clay 15–50.
14	5/23/18	50	Central Pasture	No Artifacts	Light grayish-brown silty clay with gravel 0–15; light reddish-brown silty clay 15–50.
15	5/23/18	50	Central Pasture	No Artifacts	Light grayish-brown silty clay with gravel 0–5; light reddish-brown silty clay 5–50.
16	5/23/18	50	Central Pasture	No Artifacts	Grayish-brown silty clay with some gravel 0–20; brown silty clay with brown glass fragment 20–50.
17	5/23/18	50	Southwest Pasture	No Artifacts	Brown silty clay with rodent bone and bioturbation 0–50.
18	5/23/18	50	Southwest Pasture	No Artifacts	Light reddish-brown silty clay with sub-rounded pebbles 0–50.
SP19	5/23/18	50	Southwest Pasture	No Artifacts	Light reddish-brown silty clay with sub-rounded pebbles 0–50.
20	5/23/18	50	Southwest Pasture	No Artifacts	Grayish-brown silty clay and gravel 0–40; brown silty clay with gravel 40–50.
21	5/23/18	51	Southwest Pasture	No Artifacts	Brown silty clay with rodent bioturbation 0–51.
22	5/23/18	57	Southwest Pasture	No Artifacts	Brown silty clay with gravel 0–57.
23	5/24/18	55	Northwest HPA	No Artifacts	Brown silty clay with gravel 0–23; Dark brown silty clay 23–43; reddish-brown silty clay with sub-rounded pebbles 43–55.
24	5/24/18	50	Northwest HPA	No Artifacts	Light reddish-brown silty clay with sub-rounded pebbles 0–50.
25	5/24/18	50	Northwest HPA	No Artifacts	Brown silty clay 0–35; reddish-brown silty clay with sub-rounded pebbles 35–50.
26	5/24/18	50	Northern Forest	No Artifacts	Brown silt 0–35; reddish-brown silty clay with sub-rounded pebbles 35–50.
27	5/24/18	50	Northern Forest	No Artifacts	Dark brown silt 0–40; dark brown silty clay with sub-rounded pebbles 40–50.
28	5/24/18	50	Northern Forest	No Artifacts	Light reddish-brown silty clay with sub-rounded pebbles 0–50.
29	5/24/18	50	Northern Forest	No Artifacts	Brown silty clay 0–50.
30	5/24/18	50	Northern Forest	No Artifacts	Brown silt 0–35; reddish-brown silty clay 35–50.
31	5/24/18	35	Northern Forest	No Artifacts	Light reddish-brown silty clay 0–35. Terminated at large root.
32	5/24/18	50	Northern Forest	No Artifacts	Brown silty clay 0–50.
33	5/24/18	54	Southeast Pasture	No Artifacts	Brown silty clay 0–50.
34	5/24/18	50	Southeast Pasture	No Artifacts	Grayish-brown silty clay with sub-rounded pebbles 0–50.
35	5/24/18	50	Southeast Pasture	No Artifacts	Grayish-brown silty clay with sub-rounded pebbles 0–50.
36	5/24/18	50	Southeast Pasture	No Artifacts	Grayish-brown silty clay with sub-rounded pebbles 0–50.
37	5/24/18	50	Southeast Pasture	No Artifacts	Grayish-brown silty clay with sub-rounded pebbles 0–50.
38	5/24/18	50	Southeast Pasture	No Artifacts	Light grayish-brown silty clay with sub-rounded pebbles 0–50.
39	5/24/18	50	Southeast Pasture	No Artifacts	Light grayish-brown silty clay with sub-rounded pebbles 0–50.
40	5/24/18	50	Southeast Pasture	No Artifacts	Light grayish-brown silty clay with sub-rounded pebbles 0–50.
41	5/24/18	50	Southeast Pasture	No Artifacts	Light grayish-brown silty clay with sub-rounded pebbles 0–50.
42	5/24/18	50	Southeast Pasture	No Artifacts	Light grayish-brown silty clay with sub-rounded pebbles 0–50.

SP No.	Date	Depth (cmbs)	Location	Results	Comments (cmbs)
43	5/24/18	50	Southeast Pasture	No Artifacts	Light grayish-brown silty clay with sub-rounded pebbles 0–50.
44	5/24/18	51	Southeast Pasture	No Artifacts	Light grayish-brown silty clay with sub-rounded pebbles 0–51.

6.2 Architectural Investigations

The architectural assessment identified the Young House and the Equipment Barn as having been constructed during the historic period (Figure 6-7). The six remaining structures on the site were found to have been constructed between ca. 1978 and 2006 (Table 6-2).

The Chang Property consists of four tax lots, 31W15AB07300, 31W15AB07400, 31W15AB07500, and 31W15AB07600. The four parcels combined total 22 acres (Clackamas County Tax Assessor 2018). The Chang Property has been owned by Ju-Tsun Chang since 1996. Prior to the current house's ca. 1963 construction, it does not appear there was a house within the project area. A 1954 USGS topographic map shows there are no structures in the project area (see Figure 3-2).

The Chang property shares a boundary on the north with SW Tooze and Bockman Roads, to the east with SW110th Avenue, to the south with SW Berlin Avenue, and to the west with a newly developed area that is under construction. A driveway leads south from Tooze Road and curves to the east, leading to the house. The equipment barn is located to the south of the driveway, just beyond where it curves to the east. A mowed path continues south from the equipment barn and leads to the southwest barn. The horse barn and arena, caretaker's house, and the three horse sheds are best accessed from a dirt driveway off SW 110th Avenue, which connects to Verdun Loop in the developing area to the east. The site slopes gently up to the west, with its highest point being in the southwest corner of the project area.

The house and equipment barn are the only two structures on the site that are more than 50 years old. Evaluation of tax data, historic topographic maps, and historic aerials and satellite imagery proved the horse barn/arena, the caretaker's home, and the southwest barn were all constructed after the historic period.

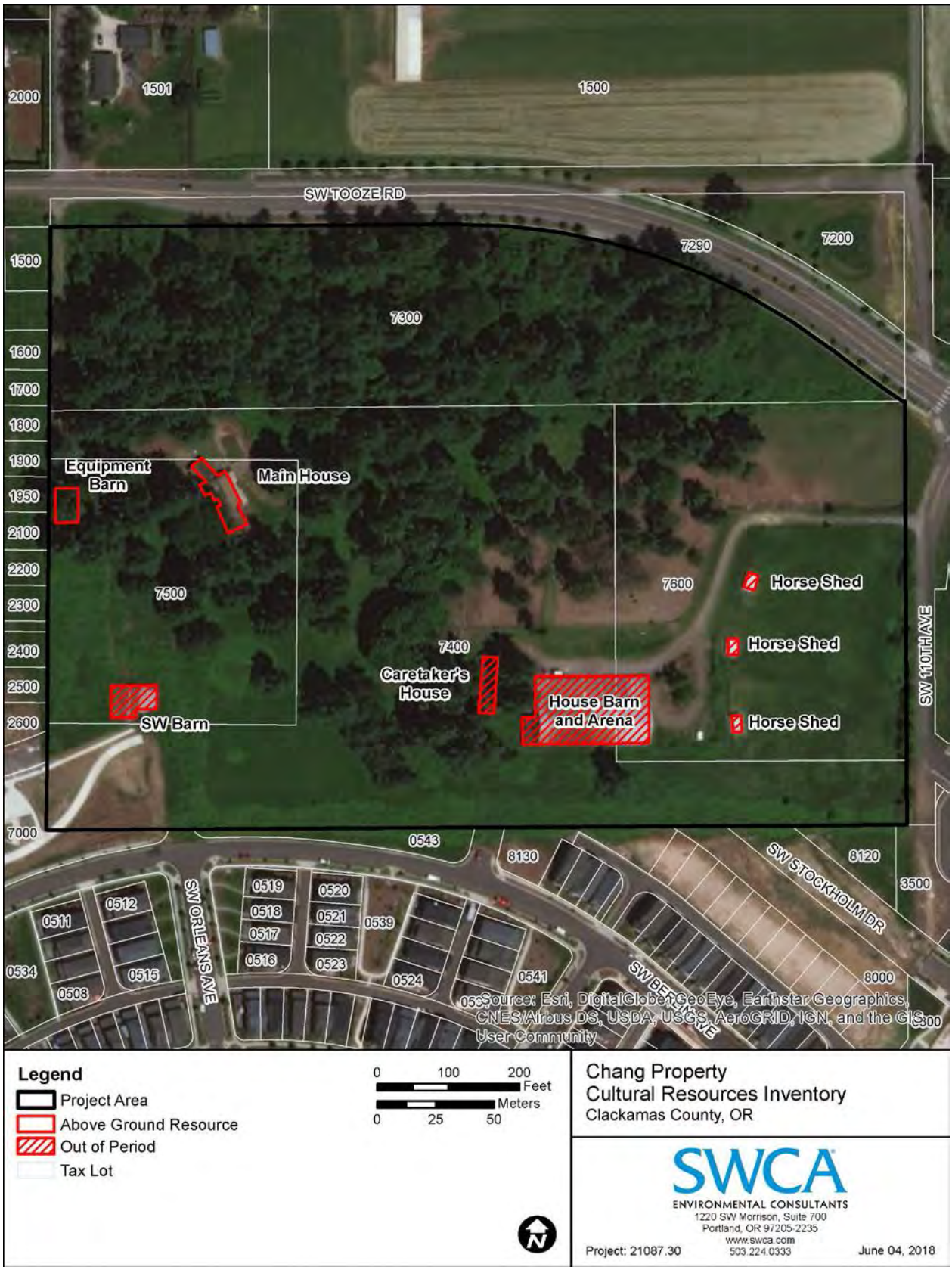

Figure 6-5. Aerial photograph showing results of the aboveground historic resources survey.

Table 6-2. Resources Identified During the Architectural Investigation

Resource Name	Location within Project Area	Year of Construction	NRHP Eligibility
Young House	Tax Lots 31W15AB07500 and 31W15AB07400, at end of driveway off Tooze Road in the west side of project area	ca. 1963	Recommended not eligible
Equipment barn	Tax Lot 31W15AB07500, southwest of the driveway off Tooze Road in the west side of project area	ca. 1963	Recommended not eligible
Horse barn and arena	Tax Lots 31W15AB07400 and 31W15AB07600, in the southeast quadrant of the project area	Between 1977 and 1985	Out of period
Three horse sheds	Tax Lot 31W15AB07600, in the southeast quadrant of the project area	ca. 2006	Out of period
Caretakers house	Tax Lot 31W15AB07400, located in the south central portion of the project area	ca. 1978	Out of period
Southwest barn	Tax Lot 31W15AB07500 in the southwest portion of the project area	Between 1977 and 1985	Out of period

6.2.1 Young House, 11490 SW Tooze Road

The Young House located at 11490 SW Tooze Road was constructed ca. 1963. The house and equipment barn are located on Tax Lot 31W15AB07500, a rectangular 2.99-acre lot on the west side of the property.

The house sits at an angle on the north side of the tax lot. The garage is attached to the house by a breezeway with its doors opening to the northwest. The house has a rectangular plan with a small projection on the north end, near the garage and breezeway (Figure 6-8). The modern styled, split-level house has a low-pitched, side-gable roof, with wide eave overhangs. The roof is clad in cedar shingles. The double-door front entrance is roughly centered on the west façade. A deck, accessed by a metal sliding door, is located on the south façade (Figure 6-9).

Figure 6-6. Young House, looking west.

Figure 6-7. Young House, looking northwest at south façade and new deck.

The house is clad in board-and-batten siding on the upper portion of the house and brick on the lower portion on the primary façade. The house has a variety of window shapes, the majority of which are aluminum. It is unclear if these are original. The house sits on a concrete foundation.

An in-ground pool is located to the northeast of the house. Based on satellite imagery it appears the pool was filled with earth in 2014 (Google Earth 2018).

A 1966 Metsker Map shows the owner of the parcel near the time of the house's construction is "D. S. Young" (Figure 6-10) (Metsker Maps 1966). This is likely Mr. Dorris Shelby "Cy" Young, a retired manager of Portland General Electric (*The Capital Journal* 1970:9). The Find a Grave database suggests Young started the Wilsonville Electric Company and the Wilsonville Water Company. It also suggests he recruited the State of Oregon to locate Dammasch Hospital in Wilsonville (Find a Grave 2018). This seems plausible, as the hospital is directly to this property's south.

Ownership after Young's death in 1970 is unclear, but D. S. Young is still noted as the owner on a 1971 and 1992 Metsker Map (Metsker Maps 1971, 1992). The house may have stayed in the Young family, but that is unknown at this time. The property was owned by Chin-Ming Tseng in 1996 when he sold a percent to Ju-Tsun Chang (Clackamas County Assessor's Office, personal communication, June 18, 2018). Very little information was readily available about either of these later owners.

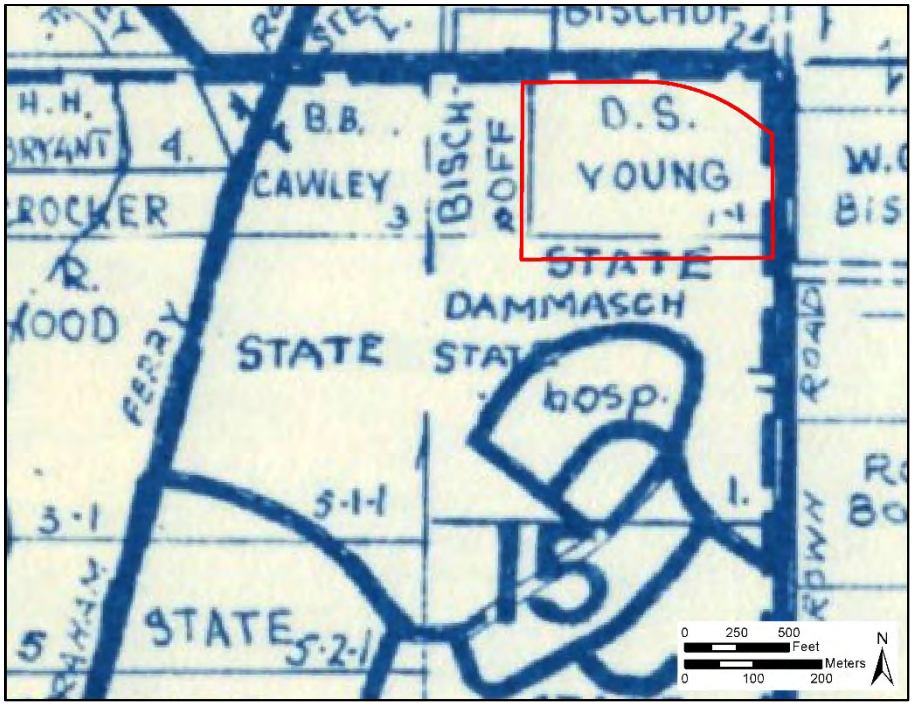

Figure 6-8. Mesker Map, 1966, showing project area.

EVALUATION

The Young House is a mid-century ranch home on a large parcel of land. Historically the house would have been situated among large farmhouses and agricultural fields. The house is a good example of suburbanization of farmland that began in earnest after the end of World War II. The town of Wilsonville was steadily growing. This growth continued and in 1969 the city of Wilsonville incorporated. This house was well beyond the city's boundary at the time, but as the city has grown, the parcel is now almost entirely surrounded by housing developments and was recently annexed into the city boundaries.

Criterion A

Resources evaluated under NRHP Criterion A are determined eligible for the NRHP if they are associated with an event, a series of events or activities, or patterns of an area's development. The house does not appear to be part of a larger movement or event. SWCA recommends the house is not eligible for the NRHP under Criterion A.

Criterion B

Resources evaluated under Criterion B are determined eligible for the NRHP if they are associated with life of an important person. Dorris Young does appear to have been active in the Wilsonville community, but does not appear from a cursory search to be NRHP significant. Very few newspaper articles were found about Young and other information found was not easily verified. SWCA recommends the house is not eligible for the NRHP under Criterion B.

Criterion C

Resources evaluated under Criterion C are determined eligible for the NRHP if they embody distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high

artistic value; and/or represent a significant and distinguishable entity whose components may lack individual distinction. This Ranch-style house has a number of the character-defining features of modern ranch houses, but the aluminum windows, which do not appear to be original, preclude the house from being the best example of a 1960s ranch house. The house is recommended not eligible under Criterion C.

Criterion D

Resources evaluated under Criterion D are considered eligible for the NRHP if they have yielded, or have high probability to yield, information important to the history of the region. The most common type of property nominated under this criterion is the archaeological site (or a district composed of archaeological sites). Buildings, objects, and structures (or districts composed of these property types), however, can also be eligible for their information potential. It is unlikely that the house will yield information that contributes to our understanding of human history or prehistory and therefore is recommended not eligible under Criterion D.

Integrity

The NPS recognizes a resource's integrity through seven qualities: location, design, setting, materials, workmanship, feeling, and association. A historic property must retain enough integrity to convey its historic significance. The house has not retained a high level of integrity. The house has retained integrity of location and setting, but has lost integrity of design, materials, and workmanship with the replacement of the historic-period windows and some sliding doors. The integrity of feeling and association are somewhat compromised by the development of the area, the house is no longer in a rural setting, instead surrounded on three sides by new neighborhoods with hundreds of new housing units.

Conclusion

The Young House does not appear to be significant under Criterion A, B, C, or D. SWCA recommends the house not eligible for the NRHP under any criterion.

6.2.2 Equipment Barn, 11490 SW Tooze Road

The equipment barn appears to have been associated with the house and appears in a 1970 aerial photograph. It is assumed that it was constructed around the time that the house was constructed, ca. 1963. The equipment barn is at the west end of the property with its west façade running along the property boundary.

The equipment barn is rectangular in shape and the doors face east. The side gable roof has a low pitch and a shed roof addition, with a lower pitch, along the entire west façade. The roof is clad in corrugated metal. The doors of the structure slide on metal rails and are constructed of plywood and two-by-fours. A side-sliding door is also located on the south façade. The barn has five bays, all with side-sliding doors. The remaining three façades are clad in board-and-batten siding. The equipment barn sits on a concrete pad (Figures 6-11 and 6-12).

The equipment barn was likely constructed at the same time, or just after, the Young House. They have always shared a tax lot and their ownership history is the same.

Figure 6-9. Equipment barn, looking west at the east façade.

Figure 6-10. Equipment barn, looking southwest at the north and east facades.

EVALUATION

The equipment barn was likely constructed after the house as a way to hold equipment needed for the site. It's unclear if the property was being used for grazing or agriculture at the time of construction. Equipment barns, such as this one, are common in rural communities across America.

Criterion A

Resources evaluated under NRHP Criteria A are determined eligible for the NRHP if they are associated with an event, a series of events or activities, or patterns of an area's development. The equipment barn does not appear to be part of a larger movement or event. SWCA recommends it is not eligible for the NRHP under Criterion A.

Criterion B

Resources evaluated under Criterion B are determined eligible for the NRHP if they are associated with life of an important person. Dorris Young does appear to have been active in the Wilsonville community, but does not appear from a cursory search to be NRHP significant. Very few newspaper articles were found about Young and other information found was not easily verified. SWCA recommends the barn is not eligible for the NRHP under Criterion B.

Criterion C

Resourced evaluated under Criterion C are determined eligible for the NRHP if they embody distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic value; and/or represent a significant and distinguishable entity whose components may lack individual distinction. The equipment barn is constructed in a very utilitarian style, and lacks many stylistic elements. It is clear that it is a barn from the 1960s, as the board-and-batten siding was popular at that time. The equipment barn does not appear to embody a distinctive characteristic of a type, period, or method of construction. The equipment barn is recommended not eligible under Criterion C.

Criterion D

Resourced evaluated under Criterion D are considered eligible for the NRHP if they have yielded, or have high probability to yield, information important to the history of the region. The most common type of property nominated under this criterion is the archaeological site (or a district comprised of archaeological sites). Buildings, objects, and structures (or districts composed of these property types), however, can also be eligible for their information potential. It is unlikely that the equipment barn will yield information to contribute to our understanding of human history or prehistory and therefore is not recommended to be eligible under Criterion D.

Integrity

The NPS recognizes a resource's integrity through seven qualities: location, design, setting, materials, workmanship, feeling, and association. A historic property must retain enough integrity to convey its historic significance. The house has not retained a high level of integrity. The equipment barn has retained integrity of location, setting, design, materials, and workmanship. The integrity of feeling and association are somewhat compromised by the development of the area, the equipment barn is no longer in a rural setting, instead surrounded on three sides by new neighborhoods with hundreds of new housing units.

Conclusion

The equipment barn does not appear to be significant under Criterion A, B, C, or D. SWCA recommends the barn is not eligible for the NRHP under any criterion.

7 CONCLUSIONS AND RECOMMENDATIONS

Cultural resource investigations for the project consisted of background research, archaeological field survey (pedestrian survey and shovel probes), and aboveground historic resources survey of the entire project area. The project lies on private property owned by Ju-Tsun Chang. No cultural resources were previously recorded within the project area. No archaeological resources were identified during the archeological investigation. Two aboveground historic resources (the Young House and the equipment barn) were identified as a result of SWCA's cultural resource investigations. SWCA encountered six buildings that were constructed after the historic period (the caretaker's house, the horse barn/arena, the southwest barn, and the three horse sheds).

The house and equipment barn were recommended not eligible for the NRHP. Neither appeared to be the best example of their types in the Wilsonville area and both had lost integrity because of the development of the surrounding rural area.

SWCA recommends a finding of *no effects to historic properties* for the undertaking, as proposed. If the project area or scope changes, additional cultural resource investigations may be needed. Should unanticipated archaeological resources be encountered during the project construction, all ground-disturbing activity near the find shall be halted, and Oregon SHPO shall be promptly notified to ensure compliance with relevant state and federal laws and regulations. If evidence of human burials is encountered, all ground-disturbing activity in the vicinity shall be halted immediately, and the SHPO, the Clackamas County Sheriff's Office, and the appropriate Tribes shall be notified.

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IIE) Tree Report

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Villebois PDP 5N Clermont – Wilsonville, Oregon
Tree Maintenance and Protection Plan
July 29, 2018
Revised: October 7, 2018

MHA18034

Purpose

This Tree Maintenance and Protection Plan for the Villebois Preliminary Development Plan (PDP) 5N Clermont project located in Wilsonville, Oregon, is provided pursuant to City of Wilsonville Development Code, Section 4.610.40. This arborist report describes the existing trees located on the project site, as well as recommendations for tree removal, retention, mitigation, and protection. This report is based on observations made by International Society of Arboriculture (ISA) Board Certified Master Arborist Morgan Holen (PN-6145B) during site visits conducted on June 12, 2018 and June 26-28, 2018, an on-site project team meeting on September 12, 2018 to review site plan modifications for increased tree retention, and subsequent coordination with the design team. A complete description of individual trees is provided in the enclosed tree inventory data.

Scope of Work and Limitations

Morgan Holen & Associates, LLC, was contracted by Polygon Northwest Company to visually assess existing trees measuring six inches and larger in diameter and coordinate with Pacific Community Design (PCD) to develop a tree maintenance and protection plan for the project. The site is planned for residential development. A site plan was provided by Pacific Community Design illustrating the location of trees and tree survey point numbers and potential construction impacts.

Visual Tree Assessment (VTA) was performed on individual trees located across the project site. VTA is a standard process whereby the inspector visually assesses the tree from a distance and up close looking for defect symptoms and evaluating overall condition and vitality of individual trees. Trees were evaluated in terms of general condition and potential construction impacts. Following the inventory fieldwork, we coordinated with PCD to discuss and finalize treatment recommendations in terms of the proposed site plan which underwent several iterations and refinements in an effort to preserve a greater number of existing viable trees, which was challenging based on grading requirements, street connections, and lot layouts. Treatment recommendations include remove, retain, and likely to retain; likely to retain trees require reassessment during construction as described in detail later in this report.

The client may choose to accept or disregard the recommendations contained herein or seek additional advice. Neither this author nor Morgan Holen & Associates, LLC, have assumed any responsibility for liability associated with the trees on or adjacent to this site.

General Description

The Villebois PDP 5N Clermont project site is located south of SW Tooze Road west of 110th Avenue. The site includes tax lots 31W15AB07300, 31W15AB07400, 31W15AB07500, 31W15AB07600, with an existing house at 11490 SW Tooze Road and the former *Hand to Heart Stables* with horse pastures, a barn, and residence. The project proposes a residential subdivision with new streets, homes, and a Metro regional park.

There are no Significant Resource Overlay Zone areas on the site or Oregon white oaks (*Quercus garryana*), native yews (*Taxus brevifolia*), or any species listed by either the state or federal government as rare or endangered.

The site is heavily treed, primarily with an even-aged stand of Douglas-firs (*Pseudotsuga menziesii*) which account for 64% of the inventoried trees. Individual Douglas-firs range in size from 7- to 60-inches in diameter and are variable in condition due to natural stand dynamics with open grown trees, edge trees, and trees at wider spacings being most dominant with good height to diameter ratios and relatively long live crowns. Trees in the interior of the stand or at denser spacings have more competition for growing space; as a result, some are codominant in crown class while others are becoming suppressed.

Overall, the stand as a whole is in excellent condition as an intact undisturbed group. No widespread disease or insect problems were observed. However, Douglas-firs located within the horse pastures are generally in poor condition including dead and dying trees which is likely a result of soil compaction. In addition, several windthrown trees and trees with symptoms of decline were observed near the northern boundary in the central-western quadrant of the site which is likely due to seasonal saturation. Trees located within and adjacent to the SW Tooze Road right of way showed signs of recent impacts from street improvement work including root damage and excess fill at tree trunks. Invasive English ivy was most prevalent in the northwestern quadrant of the stand and thickets of blackberry throughout the stand had recently been mowed down for site access; the understory was not remarkable. During the fieldwork I observed two red-tailed hawks frequenting the site, one fawn, two pileated woodpeckers, and heard owls in the evening time.

Bigleaf maple (*Acer macrophyllum*) was the second-most common species accounting for 11% of the inventoried trees. They range in size from 6- to 36-inches in diameter and were scattered amongst the firs primarily in and around the horse pastures and in the central portion of the site. Most of the maples had moderate defects including poor structure, crown dieback and decay.

Two invasive tree species, English hawthorn (*Crataegus monogyna*) and sweet cherry (*Prunus avium*), account for 13% of the inventoried trees and were most common in the northern quadrant of the site between the horse pastures and SW Tooze Road.

The most unique trees on the site are located within the yard on the west side of the house at 11490 SW Tooze Road including a 37-inch diameter red oak (*Quercus rubra*) and a multi-stemmed saucer magnolia (*Magnolia* × *soulangeana*) which are both in excellent condition and with good structure, and planned for retention.

In all, 543 trees measuring 6-inches and larger in diameter were inventoried including 16 different tree species. Table 1 provides a summary of the count of trees by species. A complete description of individual trees is provided in the enclosed tree data. Individual trees were assigned a general condition rating in the tree data as defined by the Villebois Specific Area Plan Community Elements Book. Ratings include:

P: Poor Condition;

M: Moderate Condition;

G: Good Condition; and,

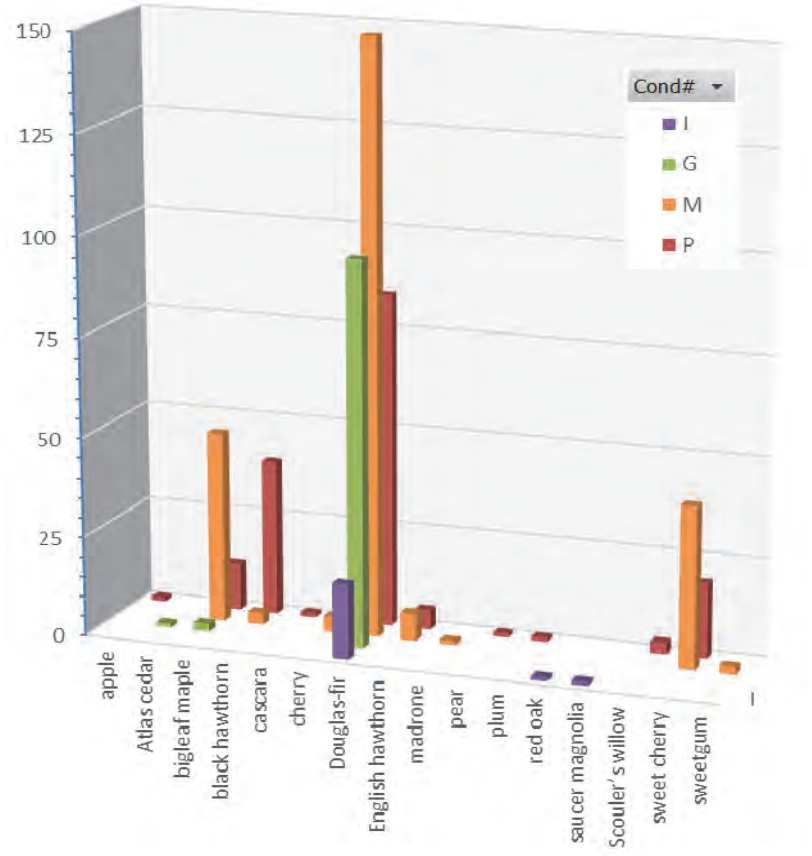
I: Important Condition.

Figure 1 illustrates the count of inventoried trees by species and condition rating.

Table 1. Count of Trees by Species – Villebois PDP 5N Clermont.

Common Name	Species Name	Total	%
apple	*Malus* spp.	1	0.2%
Atlas cedar	*Cedrus atlantica*	1	0.2%
bigleaf maple	*Acer macrophyllum*	62	11.4%
black hawthorn	*Crataegus douglasii*	42	7.7%
cascara	*Rhamnus purshiana*	1	0.2%
cherry	*Prunus* spp.	5	0.9%
Douglas-fir	*Pseudotsuga menziesii*	349	64.3%
English hawthorn	*Crataegus monogyna*	12	2.2%
madrone	*Arbutus menziesii*	1	0.2%
pear	*Pyrus* spp.	1	0.2%
plum	*Prunus* spp.	1	0.2%
red oak	*Quercus rubra*	1	0.2%
saucer magnolia	*Magnolia × soulangeana*	1	0.2%
Scouler's willow	*Salix scouleriana*	3	0.6%
sweet cherry	*Prunus avium*	60	11.0%
sweetgum	*Liquidambar styraciflua*	2	0.4%
Total		**543**	**100%**

Figure 1. Count of Trees by Species and Condition Rating – Villebois PDP 5N Clermont.



Tree Plan Recommendations

Following the tree inventory fieldwork, PCD used the tree data to plot dripline circles and condition ratings onto each individual tree on the site plan. I reviewed iterations of the plan to evaluate potential impacts within tree driplines and coordinated with PCD in regard to treatment recommendations.

The location of the regional park was modified to increase retention of viable trees and paths and other park features were adjusted to maximize tree protection. These site plan revisions resulted in nearly twice as many viable trees being planned for retention. Protection fencing is shown at tree driplines on the tree preservation plan, but adjustments will be needed for paths and other park amenities. To avoid root zone excavation, paths will be built up from native grade which will require fill over a relatively small percentage of the total critical root zone. Excavation that may be required to install play structures and other park amenities should be performed under arborist supervision.

Due to the extent of site improvements proposed in proximity to protected trees, trees in the park area are primarily classified as likely to retain. Trees classified as likely to retain are planned for protection during construction but should be re-evaluated at the time of site clearing to assess suitability for preservation with adjacent tree removal and monitored closely during construction to minimize root zone impacts. If the project arborist determines that a tree is no longer sustainable either because of a decline in condition or because of unavoidable construction impacts that would be detrimental to the health or stability of the tree, the arborist shall submit a brief memorandum to the City documenting reasons that the tree is no longer suitable for preservation in order to seek written authorization to proceed with removal and mitigation.

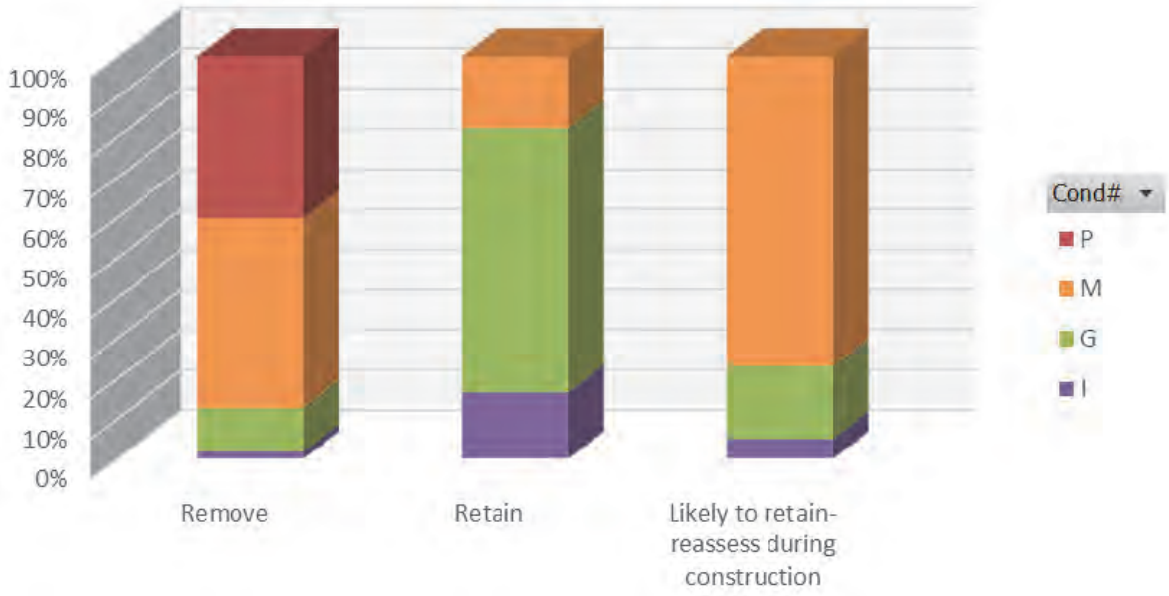
Trees in rear yard setbacks were closely examined as candidates for preservation. However, most are in poor condition or in moderate condition with structural defects except for trees 70078, 70080, 70233 and 70234, which are each classified as important. Trees 70078, 70223 and 70234 are likely to be retained but will require special consideration in regard to future home construction. The actual building footprints should minimize encroachment beneath the dripline area and the developer should coordinate with the project arborist to provide final tree protection measures based on plot plans and on-the-ground staking of foundation corners. Tree 70080 cannot be adequately protected considering demolition of the adjacent barn building and removal of codominant tree 70079 which is located within the existing bard structure.

Of the 543 inventoried trees, 415 (~76%) trees are planned for removal because of poor condition or for the purposes of construction, 67 (~13%) trees are planned for retention and require special protection during construction, and the remaining 61 (~11%) trees are likely to be retained but require reassessment at the time of site clearing and construction. Table 2 provides a summary of the count of trees by treatment and general condition rating, which is illustrated as a percentage in figure 2.

Table 2. Count of Trees by Treatment and Condition Rating.

Treatment Recommendation	General Condition Rating				Total	%
	P	M	G	I		
Remove	167	196	45	7	**415**	76%
Retain	-	12	44	11	**67**	13%
Likely to Retain	-	47	11	3	**61**	11%
Total	**167**	**255**	**100**	**21**	**543**	100%
Percent	31%	47%	18%	4%		

Figure 2. Percentage of Trees by Treatment and Condition Rating.



The 61 likely to retain trees should be treated no differently than trees planned for retention and they are in fact likely to be preserved. However, having flexibility to reassess them during site clearing and construction and seek authorization for removal if they are deemed unsuitable for retention without costly delay is critical. This approach worked well at Grande Pointe and in other areas of Villebois and has resulted in very little additional tree removal. Morgan Holen & Associates is on contract with Polygon to provide tree protection monitoring services on many projects throughout Wilsonville, Tigard, and other jurisdictions. We work closely with their contractors to ensure that the tree plan is followed and presume that this project will proceed in the same way.

The tree protection standards provided in this report should be copied onto construction documents.

Mitigation Requirements

All 543 inventoried trees are greater than 6-inches in diameter including 415 trees planned for removal. Removal of these 415 trees requires mitigation per Section 4.620.00; removed trees shall be replaced on a basis of one tree planted for each tree removed. Therefore, 415 trees measuring at least 2-inch in diameter shall be planted as mitigation for tree removal. Additional tree-for-tree mitigation will be required if any of the 61 likely to retain trees are authorized for removal during construction.

In accordance with Section 4.620.00(.03), replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture Nursery Grade No. 1 or better. Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two years after the planting date. A "guaranteed" tree that dies or becomes diseased during that time shall be replaced. Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat. All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade. A mitigation or replacement tree plan is required prior to planting.

Where it is not feasible to replace trees on site or at another approved location in the City, the Tree Removal Permit grantee shall pay into the City Tree Fund an amount of money approximately equal to the value of the replacement trees that would otherwise be required.

Tree Protection Standards

Trees designated for retention will need special consideration to assure their protection during construction. Tree protection measures include:

1. **Preconstruction Conference.** The contractor shall coordinate with the project arborist in a timely manner to review tree protection measures and address questions on-site prior to the start of construction activity.
2. **Protection Fencing.** Trees to remain on site shall be protected by installation of tree protection fencing as depicted on the Tree Preservation Plan in order to prevent injury to tree trunks or roots, or soil compaction within the root protection area. Fences shall be a minimum 6-foot high 2-inch chain link mesh secured to a minimum 1.5-inch steel or aluminum posts steel on concrete blocks or driven into the ground. The contractor is responsible for coordinating with the project arborist prior to opening, adjusting, or removing tree protection fencing.
3. **Tree Protection Zone.** Without authorization from the Project Arborist, none of the following shall occur beneath the dripline of any protected tree:
    a. Grade change or cut and fill;
    b. New impervious surfaces;
    c. Utility or drainage field placement;
    d. Staging or storage of materials and equipment; or
    e. Vehicle maneuvering.

    Root protection zones may be entered for tasks like surveying, measuring, and, sampling. Fences must be closed upon completion of these tasks.
4. **Erosion Control.** Silt fencing required to be installed within the RPZ shall not be trenched in per manufacturer specifications to avoid root damage. Instead, roll the base of the silt fence around a straw wattle and stake the wattle securely into the ground.
5. **Tree and Stump Removal.** Trees to be removed shall be clearly identified with tree-marking paint or other methods approved in advanced by the project arborist. Stumps from removed trees located within tree protection zones shall remain in the ground where feasible. Otherwise, stumps may be removed by stump grinding or extracted from the ground under arborist supervision.
6. **Pruning.** Pruning may be needed to provide for overhead clearance and to remove dead and defective branches for safety. The project arborist can help identify where pruning is necessary once trees recommended for removal have been removed and the site is staked and prepared for construction. Tree removal and pruning shall be performed by a Qualified Tree Service.
7. **Excavation.** The project arborist shall provide on-site consultation during all excavation activities beneath the dripline of protected trees. Excavation immediately adjacent to roots larger than 2-inches in diameter within the root protection zone of retained trees shall be by hand or other non-invasive techniques to ensure that roots are not damaged. Where feasible, major roots shall be protected by tunneling or other means to avoid destruction or damage. Exceptions can be made if, in the opinion of the project arborist, unacceptable damage will not occur to the tree.

8. **Surfacing.** Where surfacing is proposed beneath the dripline of protected trees, coordinate with the project arborist to provide recommendations for adjustments to protection fencing and to monitor construction in the tree protection zone. Avoid excavation and use a modified profile to build up from existing grade (Figure 1). The profile includes a layer of permeable geotextile fabric on the ground surface and crushed rock to raise the grade as needed. Surfacing may include asphalt, concrete, or other materials. If excavation is necessary, work shall be performed under arborist supervision.

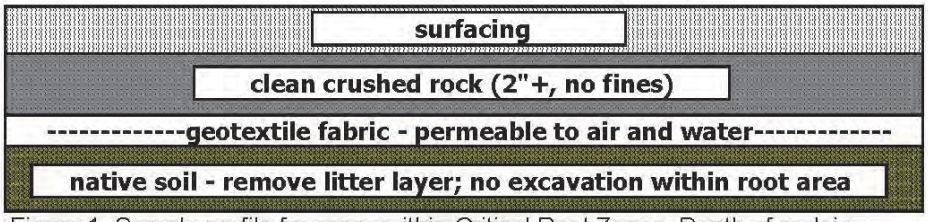


Figure 1. Sample profile for areas within Critical Root Zones. Depth of rock is dependent on grading. Technique based on best management practices.

9. **Landscaping.** Following construction and where landscaping is desired, apply approximately 3-inches of mulch beneath the dripline of protected trees, but not directly against tree trunks. Shrubs and ground covers may be planted within tree protection areas. If irrigation is used, use drip irrigation or low flow emitters installed at native grade (no trenching) only beneath the driplines of protected trees. Landscaping shall be performed by hand and with hand tools only beneath protected tree driplines; adjust the location of plants to avoid tree root impacts.

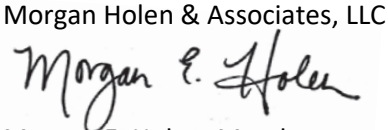
10. **Quality Assurance.** The project arborist should supervise proper execution of this plan during construction activities that could encroach on retained trees. Tree protection site inspection monitoring reports should be provided to the Client and City on a regular basis throughout construction.

Summary

In summary, 128 trees are planned for retention or are likely to be retained with construction and 415 trees are planned for removal either because of poor condition or for the purposes of site development. The trees to be retained will require special consideration in accordance with arborist recommendations for tree protection and regular monitoring during construction. The 415 trees planned for removal will require mitigation on a one-for-one basis; any other trees determined to no longer be suitable for preservation during the course of construction will also require mitigation if removal is authorized by the City.

Thank you for choosing Morgan Holen & Associates, LLC, to provide consulting arborist services for the Villebois PDP 5N Clermont project in Wilsonville. Please contact us if you have questions or need any additional information.

Thank you,
Morgan Holen & Associates, LLC



Morgan E. Holen, Member
ISA Board Certified Master Arborist, PN-6145B
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: MHA18034 Clermont - Tree Data 6-28-18 Rev. 10-7-18

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70000	Douglas-fir	*Pseudotsuga menziesii*	36	15	M	Dead and broken branches	Remove
70001	Douglas-fir	*Pseudotsuga menziesii*	40	22	G	Codominant stems	Remove
70002	Douglas-fir	*Pseudotsuga menziesii*	2x30	25	M	Codominant stems, old broken leader	Remove
70003	Douglas-fir	*Pseudotsuga menziesii*	24	14	M	Active pitch seam 0-8' NW face, poor structure	Remove
70004	Douglas-fir	*Pseudotsuga menziesii*	30	22	G		Remove
70005	Douglas-fir	*Pseudotsuga menziesii*	30	25	G		Remove
70006	Douglas-fir	*Pseudotsuga menziesii*	2x26	25	G	Codominant stems	Remove
70007	Douglas-fir	*Pseudotsuga menziesii*	46	25	I		Remove
70008	Douglas-fir	*Pseudotsuga menziesii*	44	28	I	Forked leaders	Retain
70009	Douglas-fir	*Pseudotsuga menziesii*	56	26	I	Forked leaders	Retain
70010	Douglas-fir	*Pseudotsuga menziesii*	36	22	G		Retain
70011	saucer magnolia	*Magnolia × soulangeana*	2x6, 2x10,12	20	I		Retain
70012	Douglas-fir	*Pseudotsuga menziesii*	32	25	G		Retain
70013	Douglas-fir	*Pseudotsuga menziesii*	36	25	G		Retain
70014	Douglas-fir	*Pseudotsuga menziesii*	35	25	G		Retain
70015	Douglas-fir	*Pseudotsuga menziesii*	35	24	G		Likely to retain- reassess during construction
70016	Douglas-fir	*Pseudotsuga menziesii*	50	25	G	Active pitch seam 0-5' SW face	Likely to retain- reassess during construction
70017	cherry	*Prunus* spp.	30	25	M	Ornamental, moderate structure, dead branches	Likely to retain- reassess during construction
70018	red oak	*Quercus rubra*	37	58W, 36N, 36E,45S	I	Crown radius measured in four quadrants	Retain
70019	cherry	*Prunus* spp.	8,2x10,16	28	M	Ornamental, moderate structure	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70020	Douglas-fir	*Pseudotsuga menziesii*	38	25	G		Likely to retain- reassess during construction
70021	Douglas-fir	*Pseudotsuga menziesii*	35	25	G		Likely to retain- reassess during construction
70022	Douglas-fir	*Pseudotsuga menziesii*	39	20	G	Epicormics	Remove
70023	Douglas-fir	*Pseudotsuga menziesii*	26	22	M	Spur leader, major asymmetry	Remove
70024	Douglas-fir	*Pseudotsuga menziesii*	26	18	G		Remove
70025	Douglas-fir	*Pseudotsuga menziesii*	36	18	G		Remove
70026	Douglas-fir	*Pseudotsuga menziesii*	38	32	M	Crook in lower trunk	Remove
70027	Douglas-fir	*Pseudotsuga menziesii*	21	24	M		Remove
70028	Douglas-fir	*Pseudotsuga menziesii*	29	30	G		Remove
70029	Douglas-fir	*Pseudotsuga menziesii*	30	28	G		Remove
70030	Douglas-fir	*Pseudotsuga menziesii*	37	26	M	Codominant stems at ~25’	Remove
70031	Douglas-fir	*Pseudotsuga menziesii*	34	25	G		Remove
70032	Atlas cedar	*Cedrus atlantica*	28	20	G	Base surrounded by blackberry, multiple leaders	Remove
70033	Scouler’s willow	*Salix scouleriana*	12	10	P	Poor structure, decay, dieback	Remove
70034	Douglas-fir	*Pseudotsuga menziesii*	32	25	M		Remove
70035	Douglas-fir	*Pseudotsuga menziesii*	26	14	P	Poor structure	Remove
70036	Douglas-fir	*Pseudotsuga menziesii*	26	26	M	Ivy	Remove
70037	Douglas-fir	*Pseudotsuga menziesii*	42	30	M	Ivy	Remove
70038	Douglas-fir	*Pseudotsuga menziesii*	22	24	P	Poor structure, Phellinus pini conks	Remove
70039	Douglas-fir	*Pseudotsuga menziesii*	10,18	12	P	Very poor structure	Remove
70040	Douglas-fir	*Pseudotsuga menziesii*	16	13	P	Very poor structure	Remove
70041	Douglas-fir	*Pseudotsuga menziesii*	16	15	M	Very one-sided	Remove
70042	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	Suppressed	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70043	Douglas-fir	*Pseudotsuga menziesii*	24	14	M		Remove
70044	Douglas-fir	*Pseudotsuga menziesii*	32	18	M	Extensive poison oak	Remove
70045	Douglas-fir	*Pseudotsuga menziesii*	28	18	M	Extensive poison oak	Remove
70046	Douglas-fir	*Pseudotsuga menziesii*	32	22	M	Spur leader	Remove
70047	Douglas-fir	*Pseudotsuga menziesii*	24,30	30	M		Remove
70049	Douglas-fir	*Pseudotsuga menziesii*	26	26	M		Remove
70050	Douglas-fir	*Pseudotsuga menziesii*	36	24	G	Somewhat sheltered by 70079 & 70080	Remove
70051	Douglas-fir	*Pseudotsuga menziesii*	24	12	P	Small live crown, extensive poison oak	Remove
70052	Douglas-fir	*Pseudotsuga menziesii*	31	14	M		Remove
70053	Douglas-fir	*Pseudotsuga menziesii*	2x25	25	P	Very extensive ivy high up trunks	Remove
70054	English hawthorn	*Crataegus monogyna*	8	18	P	Invasive species, trunk decay	Remove
70055	black hawthorn	*Crataegus douglasii*	8	0	P	Overtopped by ivy	Remove
70057	Douglas-fir	*Pseudotsuga menziesii*	38	15	M	Extensive ivy	Remove
70058	Douglas-fir	*Pseudotsuga menziesii*	48	25	M	Ivy, crown asymmetry, over-extended laterals	Remove
70060	Douglas-fir	*Pseudotsuga menziesii*	36	16	M	Extensive ivy	Remove
70061	Douglas-fir	*Pseudotsuga menziesii*	36	16	P	Top blown out, numerous dead and broken branches, extensive ivy	Remove
70062	Douglas-fir	*Pseudotsuga menziesii*	20	14	P	Poor structure, very one-sided small live crown	Remove
70063	sweet cherry	*Prunus avium*	10	20	P	Invasive species, poor structure	Remove
70064	sweet cherry	*Prunus avium*	18	20	P	Invasive species, extensive ivy	Remove
70065	sweet cherry	*Prunus avium*	8	20	P	Invasive species, extensive ivy	Remove
70066	sweet cherry	*Prunus avium*	16	20	P	Invasive species, poor structure	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70067	sweet cherry	*Prunus avium*	20	20	P	Invasive species, extensive ivy	Remove
70068	Douglas-fir	*Pseudotsuga menziesii*	30	18	M	High live crown, surrounded by blackberry, ivy	Remove
70069	Douglas-fir	*Pseudotsuga menziesii*	26	18	M	High live crown, surrounded by blackberry	Remove
70070	Douglas-fir	*Pseudotsuga menziesii*	28	16	M	High live crown, surrounded by blackberry	Remove
70071	Douglas-fir	*Pseudotsuga menziesii*	34	18	M	High live crown, surrounded by blackbe	Likely to retain- reassess during construction
70072	Douglas-fir	*Pseudotsuga menziesii*	34	28	G	Surrounded by blackberry	Likely to retain- reassess during construction
70073	Douglas-fir	*Pseudotsuga menziesii*	26	26	G	Surrounded by blackberry	Likely to retain- reassess during construction
70074	Douglas-fir	*Pseudotsuga menziesii*	14	12	M	Surrounded by blackberry	Likely to retain- reassess during construction
70075	Douglas-fir	*Pseudotsuga menziesii*	20,22	24	M	Surrounded by blackberry	Likely to retain- reassess during construction
70076	Douglas-fir	*Pseudotsuga menziesii*	16	13	M	Poor structure, surrounded by blackberry	Likely to retain- reassess during construction
70077	Douglas-fir	*Pseudotsuga menziesii*	40	30	G		Retain
70078	Douglas-fir	*Pseudotsuga menziesii*	38	26	I	Old forked leader failure, surrounded by blackberry	Likely to retain- reassess during construction
70079	Douglas-fir	*Pseudotsuga menziesii*	38	26	M	Old broken top, forked leaders, sweep in mid-trunk	Remove
70080	Douglas-fir	*Pseudotsuga menziesii*	38	34	I	Limited access limited assessment	Remove
70081	Douglas-fir	*Pseudotsuga menziesii*	38	26	G	Surrounded by blackberry	Retain

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70082	Douglas-fir	*Pseudotsuga menziesii*	2x26	28	M		Likely to retain- reassess during construction
70083	Douglas-fir	*Pseudotsuga menziesii*	20	13	M	Dead and broken branches, very one-sided crown	Likely to retain- reassess during construction
70084	Douglas-fir	*Pseudotsuga menziesii*	28	30	M	Old broken top, dead and broken branches	Likely to retain- reassess during construction
70085	Douglas-fir	*Pseudotsuga menziesii*	20	14	M	High live crown	Remove
70086	Douglas-fir	*Pseudotsuga menziesii*	20	14	M	High live crown crook in upper trunk	Remove
70087	bigleaf maple	*Acer macrophyllum*	6	16	M	Poor structure below dominant canopy	Remove
70088	sweet cherry	*Prunus avium*	6	10	P	Invasive species, poor structure, low vigor	Remove
70089	Douglas-fir	*Pseudotsuga menziesii*	25	18	M	Natural lean, small live crown	Remove
70090	Douglas-fir	*Pseudotsuga menziesii*	28	30	M	One-sided crown, Phellinus pini conks	Remove
70091	Douglas-fir	*Pseudotsuga menziesii*	25	14	P	Extensive ivy, very one-sided crown	Remove
70092	Douglas-fir	*Pseudotsuga menziesii*	20	13	P	Extensive ivy, very one-sided crown	Remove
70093	Douglas-fir	*Pseudotsuga menziesii*	24	14	P	Extensive ivy, very one-sided crown	Remove
70094	bigleaf maple	*Acer macrophyllum*	10	18	M	Below dominant fir canopy, ivy	Remove
70095	Douglas-fir	*Pseudotsuga menziesii*	30	15	P	Very extensive ivy high up trunk	Remove
70096	Douglas-fir	*Pseudotsuga menziesii*	28	15	P	Very extensive ivy high up trunk	Remove
70097	Douglas-fir	*Pseudotsuga menziesii*	28	14	P	Very extensive ivy high up trunk	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70098	Douglas-fir	*Pseudotsuga menziesii*	20	13	P	Very extensive ivy high up trunk, mostly dead	Remove
70099	Douglas-fir	*Pseudotsuga menziesii*	28	26	M	Extensive poison oak	Remove
70100	Douglas-fir	*Pseudotsuga menziesii*	16	15	P	Intermediate crown class	Remove
70101	pear	*Pyrus* spp.	2x12	22	P	Very poor structure	Remove
70102	Douglas-fir	*Pseudotsuga menziesii*	42	25	M	Extensive ivy	Remove
70103	Douglas-fir	*Pseudotsuga menziesii*	29	18	M		Remove
70104	Douglas-fir	*Pseudotsuga menziesii*	24	18	M		Remove
70105	Douglas-fir	*Pseudotsuga menziesii*	16	8	P	Suppressed	Remove
70106	Douglas-fir	*Pseudotsuga menziesii*	13	0	P	Dead, snag	Remove
70107	Douglas-fir	*Pseudotsuga menziesii*	22	14	M		Remove
70108	Douglas-fir	*Pseudotsuga menziesii*	17	10	P	Very poor structure	Remove
70109	Douglas-fir	*Pseudotsuga menziesii*	42	20	G	Surrounded by blackberry	Retain
70110	Douglas-fir	*Pseudotsuga menziesii*	13	6	P	Suppressed	Remove
70111	Douglas-fir	*Pseudotsuga menziesii*	19	12	M	Poor lateral branch distribution	Likely to retain- reassess during construction
70112	Douglas-fir	*Pseudotsuga menziesii*	2x22	14	M		Likely to retain- reassess during construction
70113	Douglas-fir	*Pseudotsuga menziesii*	29	12	P	Low vigor, small live crown	Remove
70114	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	Suppressed	Remove
70115	Douglas-fir	*Pseudotsuga menziesii*	20	13	M		Likely to retain- reassess during construction
70116	Douglas-fir	*Pseudotsuga menziesii*	50	30	G	Codominant stems	Retain
70117	Douglas-fir	*Pseudotsuga menziesii*	33	28	G	Codominant stems	Retain
70118	Douglas-fir	*Pseudotsuga menziesii*	45	22	G		Retain
70119	bigleaf maple	*Acer macrophyllum*	29	22	M	Codominant stems, trunk and crown decay	Retain

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70120	Douglas-fir	*Pseudotsuga menziesii*	16,2x24	22	M		Retain
70121	Douglas-fir	*Pseudotsuga menziesii*	42	25	G		Retain
70122	Douglas-fir	*Pseudotsuga menziesii*	26	22	G		Retain
70123	Douglas-fir	*Pseudotsuga menziesii*	28	22	G		Retain
70124	Douglas-fir	*Pseudotsuga menziesii*	38	20	G		Retain
70125	Douglas-fir	*Pseudotsuga menziesii*	48	28	G		Retain
70126	bigleaf maple	*Acer macrophyllum*	32	28	M	Old trunk wound north face, crown decay	Remove
70127	Douglas-fir	*Pseudotsuga menziesii*	36	26	M	Old broken top	Remove
70128	Douglas-fir	*Pseudotsuga menziesii*	30	26	G		Remove
70129	Douglas-fir	*Pseudotsuga menziesii*	32	22	M	Reduced vigor	Remove
70130	Douglas-fir	*Pseudotsuga menziesii*	30	22	M	Reduced vigor	Remove
70131	Douglas-fir	*Pseudotsuga menziesii*	32	16	G	Lateral branch failures, pitch seams	Remove
70132	Douglas-fir	*Pseudotsuga menziesii*	42	33	I		Remove
70133	Douglas-fir	*Pseudotsuga menziesii*	18	14	M		Remove
70134	Douglas-fir	*Pseudotsuga menziesii*	22,24	20	M		Remove
70135	bigleaf maple	*Acer macrophyllum*	26	26	M	Trunk and crown decay	Remove
70136	Douglas-fir	*Pseudotsuga menziesii*	34	15	G		Remove
70137	Douglas-fir	*Pseudotsuga menziesii*	31	15	G		Remove
70138	bigleaf maple	*Acer macrophyllum*	22	20	G	Metal wire compartmentalized in trunk	Remove
70139	Douglas-fir	*Pseudotsuga menziesii*	24	12	M		Remove
70140	Douglas-fir	*Pseudotsuga menziesii*	16	14	M		Remove
70141	Douglas-fir	*Pseudotsuga menziesii*	30	14	G	Broken terminal leader, forked new tops	Retain
70142	bigleaf maple	*Acer macrophyllum*	18	16	P	Declining, trunk and crown decay	Remove
70143	Douglas-fir	*Pseudotsuga menziesii*	28	15	M	Low vigor	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70144	Douglas-fir	*Pseudotsuga menziesii*	24	0	P	Dead	Remove
70145	Douglas-fir	*Pseudotsuga menziesii*	26	16	P	Severe decline	Remove
70146	Douglas-fir	*Pseudotsuga menziesii*	18	0	P	Dead	Remove
70147	Douglas-fir	*Pseudotsuga menziesii*	30	15	P	Declining	Remove
70148	Douglas-fir	*Pseudotsuga menziesii*	16	12	P	Severe decline	Remove
70149	Douglas-fir	*Pseudotsuga menziesii*	28	0	P	Dead	Remove
70150	Douglas-fir	*Pseudotsuga menziesii*	2x16	12	P	Severe decline	Remove
70151	Douglas-fir	*Pseudotsuga menziesii*	12	0	P	Dead	Remove
70152	Douglas-fir	*Pseudotsuga menziesii*	12	0	P	Dead	Remove
70153	Douglas-fir	*Pseudotsuga menziesii*	14	0	P	Dead	Remove
70154	Douglas-fir	*Pseudotsuga menziesii*	22	16	P	Declining	Remove
70155	Douglas-fir	*Pseudotsuga menziesii*	18	0	P	Dead	Remove
70156	Douglas-fir	*Pseudotsuga menziesii*	2x14	0	P	Dead	Remove
70157	Douglas-fir	*Pseudotsuga menziesii*	2x24	0	P	Dead, decay	Remove
70158	Douglas-fir	*Pseudotsuga menziesii*	2x24	0	P	Dead	Remove
70159	Douglas-fir	*Pseudotsuga menziesii*	26	0	P	Dead	Remove
70160	Douglas-fir	*Pseudotsuga menziesii*	28	14	P	Declining	Remove
70161	sweetgum	*Liquidambar styraciflua*	18	15	M		Remove
70162	sweetgum	*Liquidambar styraciflua*	20	20	M		Remove
70163	Douglas-fir	*Pseudotsuga menziesii*	26	12	P	Severe decline	Remove
70164	Douglas-fir	*Pseudotsuga menziesii*	2x24,30	20	G		Remove
70165	Douglas-fir	*Pseudotsuga menziesii*	25	14	G		Remove
70166	Douglas-fir	*Pseudotsuga menziesii*	38	20	G		Remove
70167	Douglas-fir	*Pseudotsuga menziesii*	26	16	G		Remove
70168	Douglas-fir	*Pseudotsuga menziesii*	22	14	P	Mostly dead	Remove
70169	Douglas-fir	*Pseudotsuga menziesii*	20	10	P	Mostly dead	Remove
70170	Douglas-fir	*Pseudotsuga menziesii*	18	0	P	Dead	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70171	Douglas-fir	*Pseudotsuga menziesii*	18	14	P	Declining	Remove
70172	Douglas-fir	*Pseudotsuga menziesii*	18	0	P	Dead	Remove
70173	Douglas-fir	*Pseudotsuga menziesii*	22	16	M	Reduced vigor	Remove
70174	Douglas-fir	*Pseudotsuga menziesii*	28	16	P	Declining	Remove
70175	Douglas-fir	*Pseudotsuga menziesii*	22	14	P	Declining	Remove
70176	Douglas-fir	*Pseudotsuga menziesii*	22	14	P	Declining	Remove
70177	Douglas-fir	*Pseudotsuga menziesii*	28	20	I		Remove
70178	bigleaf maple	*Acer macrophyllum*	24	18	M	Codominant crown class with 70179 & 70180	Remove
70179	bigleaf maple	*Acer macrophyllum*	36	30	M	Reduced vigor in upper crown	Remove
70180	bigleaf maple	*Acer macrophyllum*	22	18	M	Codominant crown class with 70178 & 70179	Remove
70181	bigleaf maple	*Acer macrophyllum*	6x12	26	M	Moderate structure	Remove
70182	Douglas-fir	*Pseudotsuga menziesii*	24	14	P	Declining	Remove
70183	bigleaf maple	*Acer macrophyllum*	16	18	M	Reduced vigor	Remove
70184	bigleaf maple	*Acer macrophyllum*	20	18	M	Reduced vigor	Remove
70185	Douglas-fir	*Pseudotsuga menziesii*	32	15	P	Broken top, declining	Remove
70186	bigleaf maple	*Acer macrophyllum*	22	18	M	Codominant stems, reduced vigor	Remove
70187	bigleaf maple	*Acer macrophyllum*	20	22	P	Basal and crown decay, crown dieback	Remove
70188	bigleaf maple	*Acer macrophyllum*	2x14	18	M	Trunk and crown decay	Remove
70189	Douglas-fir	*Pseudotsuga menziesii*	30	22	G		Remove
70190	Douglas-fir	*Pseudotsuga menziesii*	22	16	G	Codominant crown class with 70191	Remove
70191	Douglas-fir	*Pseudotsuga menziesii*	24	20	G	Codominant crown class with 70190	Remove
70192	Douglas-fir	*Pseudotsuga menziesii*	26	14	G	Dense codominant group	Retain

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70193	Douglas-fir	*Pseudotsuga menziesii*	18	14	G	Dense codominant group	Retain
70194	Douglas-fir	*Pseudotsuga menziesii*	26	14	G	Dense codominant group	Retain
70195	Douglas-fir	*Pseudotsuga menziesii*	24	14	G	Dense codominant group	Retain
70196	Douglas-fir	*Pseudotsuga menziesii*	30	18	I		Retain
70197	Douglas-fir	*Pseudotsuga menziesii*	28	16	P	Broken leader, trunk decay	Remove
70198	bigleaf maple	*Acer macrophyllum*	26	28	M		Remove
70199	Douglas-fir	*Pseudotsuga menziesii*	2x18	18	M		Remove
70200	Douglas-fir	*Pseudotsuga menziesii*	14,24	22	M		Remove
70201	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		Remove
70202	bigleaf maple	*Acer macrophyllum*	2x6,8	20	P	Poor structure, stump sprout, trunk decay	Remove
70203	Douglas-fir	*Pseudotsuga menziesii*	12	9	M	Intermediate crown class, lean	Remove
70204	Douglas-fir	*Pseudotsuga menziesii*	22	16	G		Remove
70205	Douglas-fir	*Pseudotsuga menziesii*	26	14	G		Remove
70206	Douglas-fir	*Pseudotsuga menziesii*	26	14	M		Remove
70207	Douglas-fir	*Pseudotsuga menziesii*	38	26	G		Remove
70208	Douglas-fir	*Pseudotsuga menziesii*	26	14	P	Declining	Remove
70209	Douglas-fir	*Pseudotsuga menziesii*	30	16	G		Remove
70210	Douglas-fir	*Pseudotsuga menziesii*	34	24	I		Remove
70211	Douglas-fir	*Pseudotsuga menziesii*	24	24	G		Remove
70212	Douglas-fir	*Pseudotsuga menziesii*	32	20	G		Remove
70213	Douglas-fir	*Pseudotsuga menziesii*	32	0	P	Dead	Remove
70214	bigleaf maple	*Acer macrophyllum*	20	22	M	Very poor structure	Remove
70215	bigleaf maple	*Acer macrophyllum*	18,22	25	M	Previous codominant leader failure, lower trunk decay, cable/brace if retained	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70216	bigleaf maple	*Acer macrophyllum*	17,21	38	M	Codominant crown class with 70215	Remove
70217	Douglas-fir	*Pseudotsuga menziesii*	15,29	14	M	Poor structure	Remove
70218	bigleaf maple	*Acer macrophyllum*	20	18	M	Old trunk wound, poor structure	Remove
70219	bigleaf maple	*Acer macrophyllum*	26	32	M		Remove
70220	bigleaf maple	*Acer macrophyllum*	22	30	M		Remove
70221	Douglas-fir	*Pseudotsuga menziesii*	26	20	M		Remove
70222	Douglas-fir	*Pseudotsuga menziesii*	34	28	I		Retain
70223	Douglas-fir	*Pseudotsuga menziesii*	41	33	I		Retain
70224	Douglas-fir	*Pseudotsuga menziesii*	30	25	I		Retain
70225	sweet cherry	*Prunus avium*	3x26	40	M	Invasive species, poor structure	Remove
70226	Douglas-fir	*Pseudotsuga menziesii*	32	20	P	Declining	Remove
70227	Douglas-fir	*Pseudotsuga menziesii*	34	18	M	Dead and broken branches, epicormics	Remove
70228	Douglas-fir	*Pseudotsuga menziesii*	26	16	P	Severe decline	Remove
70229	Douglas-fir	*Pseudotsuga menziesii*	24	14	G	Codominant crown class	Remove
70230	Douglas-fir	*Pseudotsuga menziesii*	34	16	G		Remove
70231	Douglas-fir	*Pseudotsuga menziesii*	23	14	M		Remove
70232	Douglas-fir	*Pseudotsuga menziesii*	30	14	G	Few small Phellinus pini conks at old branch stubs	Remove
70233	Douglas-fir	*Pseudotsuga menziesii*	43	26	I		Likely to retain- reassess during construction
70234	Douglas-fir	*Pseudotsuga menziesii*	40	25	I		Likely to retain- reassess during construction
70235	Douglas-fir	*Pseudotsuga menziesii*	44	22	G	Surrounded by blackberry	Retain
70236	Douglas-fir	*Pseudotsuga menziesii*	40	25	G		Retain
70237	Douglas-fir	*Pseudotsuga menziesii*	34	2	G		Retain

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70238	cherry	*Prunus* spp.	22	20	P	Ornamental, poor structure, damaged by failed tree	Remove
70239	cherry	*Prunus* spp.	22	24	M	Ornamental, poor structure	Likely to retain- reassess during construction
70240	cherry	*Prunus* spp.	18	24	M	Ornamental, poor structure	Likely to retain- reassess during construction
70241	Douglas-fir	*Pseudotsuga menziesii*	40	30	I		Retain
70242	Douglas-fir	*Pseudotsuga menziesii*	48	25	G	Codominant stems	Retain
70243	Douglas-fir	*Pseudotsuga menziesii*	50	30	G	Forked leaders	Retain
70244	Douglas-fir	*Pseudotsuga menziesii*	26	22	G	Old broken top, surrounded by blackberry	Retain
70245	Douglas-fir	*Pseudotsuga menziesii*	2x36	26	G		Likely to retain- reassess during construction
70246	Douglas-fir	*Pseudotsuga menziesii*	24	18	G		Retain
70247	Douglas-fir	*Pseudotsuga menziesii*	32	20	G		Retain
70248	Douglas-fir	*Pseudotsuga menziesii*	40	20	G		Retain
70249	Douglas-fir	*Pseudotsuga menziesii*	10,16	10	P	Decline, small live crown	Remove
70250	Douglas-fir	*Pseudotsuga menziesii*	36	18	M		Remove
70251	bigleaf maple	*Acer macrophyllum*	12	16	M		Remove
70252	Douglas-fir	*Pseudotsuga menziesii*	2x12	14	M		Likely to retain- reassess during construction
70254	Douglas-fir	*Pseudotsuga menziesii*	16	12	M		Likely to retain- reassess during construction
70255	Douglas-fir	*Pseudotsuga menziesii*	16	12	M		Likely to retain- reassess during construction
70256	Douglas-fir	*Pseudotsuga menziesii*	20	12	M		Likely to retain- reassess during construction

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70257	Douglas-fir	*Pseudotsuga menziesii*	13	12	M		Likely to retain- reassess during construction
70258	Douglas-fir	*Pseudotsuga menziesii*	42	16	M		Likely to retain- reassess during construction
70259	Douglas-fir	*Pseudotsuga menziesii*	38	16	M		Likely to retain- reassess during construction
70260	Douglas-fir	*Pseudotsuga menziesii*	30	15	M		Likely to retain- reassess during construction
70261	Douglas-fir	*Pseudotsuga menziesii*	20	15	M		Likely to retain- reassess during construction
70261B	madrone	*Arbutus menziesii*	7,14	14	M	Healthy crown, moderate structure, assessment limited by dense debris at base, species is very sensitive to disturbance	Remove
70261C	sweet cherry	*Prunus avium*	16	12	M	Invasive species	Remove
70262	Douglas-fir	*Pseudotsuga menziesii*	28	16	G	Surrounded by blackberry	Retain
70262B	sweet cherry	*Prunus avium*	16	16	M	Invasive species, poor structure ivy	Remove
70263	sweet cherry	*Prunus avium*	10	8	P	Invasive species, poor structure, trunk buried in fill	Remove
70266	English hawthorn	*Crataegus monogyna*	6,10	10	P	Very poor structure advanced trunk decay previous stem failure	Remove
70266B	sweet cherry	*Prunus avium*	11	14	P	Invasive species, moderate structure, old trunk wound N face, basal damage from recent ROW work	Remove
70267	plum	*Prunus* spp.	9	14	P	Very poor structure	Remove
70268	black hawthorn	*Crataegus douglasii*	10	18	P	Poor structure, dieback	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70269	Douglas-fir	*Pseudotsuga menziesii*	32	16	M	Pistolbutt at base, old wound lower trunk N face	Remove
70270	Douglas-fir	*Pseudotsuga menziesii*	12	14	M	Intermediate crown class	Remove
70271	Douglas-fir	*Pseudotsuga menziesii*	2x32	28	M	Codominant stems	Remove
70272	Douglas-fir	*Pseudotsuga menziesii*	36	20	M	Dead and broken branches, some excess fill at base from recent ROW construction, some bark separation and pitch on lower trunk, looks to have girdling wound at ~15'	Remove
70273	Douglas-fir	*Pseudotsuga menziesii*	26	16	M	Relatively reduced vigor, likely impacted by recent ROW construction	Remove
70274	bigleaf maple	*Acer macrophyllum*	11	14	M	Very poor structure, portion of bark stripped from lower trunk	Remove
70275	Douglas-fir	*Pseudotsuga menziesii*	30	0	P	Dead, decay, snag	Remove
70276	Douglas-fir	*Pseudotsuga menziesii*	32	20	M	Old trunk wound 0-25' S face, relatively reduced vigor	Remove
70279	bigleaf maple	*Acer macrophyllum*	13	24	M		Remove
70280	bigleaf maple	*Acer macrophyllum*	14	24	M		Remove
70283	English hawthorn	*Crataegus monogyna*	14	16	M	Invasive species, poor structure, previous leader failure	Remove
70284	English hawthorn	*Crataegus monogyna*	7	12	P	Invasive species, very poor structure	Remove
70285	black hawthorn	*Crataegus douglasii*	6	6	P	Mostly dead	Remove
70286	black hawthorn	*Crataegus douglasii*	8	8	P	Very poor structure	Remove
70287	black hawthorn	*Crataegus douglasii*	7	8	P	Very poor structure	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70288	Douglas-fir	*Pseudotsuga menziesii*	18	12	P	Poor structure, ivy	Remove
70289	Douglas-fir	*Pseudotsuga menziesii*	44	22	M	Dead and broken branches, minor pistolbutt	Likely to retain- reassess during construction
70290	Douglas-fir	*Pseudotsuga menziesii*	22	15	M	Poor structure	Remove
70291	Douglas-fir	*Pseudotsuga menziesii*	20	14	M	Poor structure	Remove
70292	Douglas-fir	*Pseudotsuga menziesii*	18	10	P	Severe decline	Remove
70293	Douglas-fir	*Pseudotsuga menziesii*	20	18	M		Retain
70294	Douglas-fir	*Pseudotsuga menziesii*	25	18	M		Retain
70295	Douglas-fir	*Pseudotsuga menziesii*	24	14	M	Poor structure	Remove
70296	Douglas-fir	*Pseudotsuga menziesii*	22	10	P	Severe decline	Remove
70297	Douglas-fir	*Pseudotsuga menziesii*	20	11	M	Poor structure	Remove
70298	Douglas-fir	*Pseudotsuga menziesii*	22	12	M	Poor structure	Remove
70299	Douglas-fir	*Pseudotsuga menziesii*	29	20	G		Retain
70300	Douglas-fir	*Pseudotsuga menziesii*	9	7	P	Suppressed	Remove
70301	Douglas-fir	*Pseudotsuga menziesii*	24	18	G		Retain
70302	Douglas-fir	*Pseudotsuga menziesii*	28	14	G		Retain
70303	Douglas-fir	*Pseudotsuga menziesii*	20	12	M	Major asymmetry, epicormics	Likely to retain- reassess during construction
70304	Douglas-fir	*Pseudotsuga menziesii*	12	7	P	Suppressed	Remove
70306	Douglas-fir	*Pseudotsuga menziesii*	29	25	M		Retain
70307	Douglas-fir	*Pseudotsuga menziesii*	26	25	M		Retain
70308	Douglas-fir	*Pseudotsuga menziesii*	29	25	M		Retain
70309	Douglas-fir	*Pseudotsuga menziesii*	36	20	M	Codominant stems	Likely to retain- reassess during construction
70310	Scouler's willow	*Salix scouleriana*	12	0	P	Mostly dead, failed trunk	Remove
70311	Douglas-fir	*Pseudotsuga menziesii*	16	12	M	Major asymmetry, epicormics	Likely to retain- reassess during construction

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70312	Douglas-fir	*Pseudotsuga menziesii*	36	22	G		Likely to retain- reassess during construction
70313	Douglas-fir	*Pseudotsuga menziesii*	40	34	G		Likely to retain- reassess during construction
70315	sweet cherry	*Prunus avium*	16	12	M	Invasive species, poor structure	Remove
70317	sweet cherry	*Prunus avium*	12	12	M	Invasive species, poor structure	Remove
70319	sweet cherry	*Prunus avium*	10	12	M	Invasive species, poor structure	Remove
70320	sweet cherry	*Prunus avium*	10	12	M	Invasive species, poor structure	Remove
70321	sweet cherry	*Prunus avium*	12	12	M	Invasive species, poor structure	Remove
70324	sweet cherry	*Prunus avium*	10	12	M	Invasive species, poor structure	Remove
70325	sweet cherry	*Prunus avium*	10	12	M	Invasive species, poor structure	Remove
70326	sweet cherry	*Prunus avium*	12	12	M	Invasive species, poor structure	Remove
70327	sweet cherry	*Prunus avium*	14	12	M	Invasive species, poor structure	Remove
70328	sweet cherry	*Prunus avium*	14	12	M	Invasive species, poor structure	Remove
70329	black hawthorn	*Crataegus douglasii*	10	10	P	Mostly dead, decay	Remove
70330	bigleaf maple	*Acer macrophyllum*	14,26	28	M	Moderate structure	Likely to retain- reassess during construction
70333	black hawthorn	*Crataegus douglasii*	2x8	8	P	Mostly dead	Remove
70334	black hawthorn	*Crataegus douglasii*	8	12	P	Mostly dead	Remove
70335	English hawthorn	*Crataegus monogyna*	10	12	M	Invasive species	Remove
70336	bigleaf maple	*Acer macrophyllum*	8	12	M	Poor structure	Likely to retain- reassess during construction
70337	English hawthorn	*Crataegus monogyna*	6,2x10	16	M	Invasive species	Remove
70338	black hawthorn	*Crataegus douglasii*	6	6	P	Mostly dead	Remove
70339	black hawthorn	*Crataegus douglasii*	6	4	P	Mostly dead	Remove
70340	English hawthorn	*Crataegus monogyna*	12	20	M	Invasive species, poor structure	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70342	Douglas-fir	*Pseudotsuga menziesii*	24	12	M		Likely to retain- reassess during construction
70346	black hawthorn	*Crataegus douglasii*	6,8	6	P	Mostly dead	Remove
70347	Douglas-fir	*Pseudotsuga menziesii*	40	34	I		Retain
70348	Douglas-fir	*Pseudotsuga menziesii*	30	30	I		Retain
70349	Douglas-fir	*Pseudotsuga menziesii*	42	30	G	Spur leader, some ivy	Remove
70350	black hawthorn	*Crataegus douglasii*	6	0	P	Dead	Remove
70351	black hawthorn	*Crataegus douglasii*	2x8	0	P	Dead	Remove
70352	black hawthorn	*Crataegus douglasii*	9	0	P	Dead	Remove
70353	Douglas-fir	*Pseudotsuga menziesii*	7	5	P	Suppressed	Remove
70354	Douglas-fir	*Pseudotsuga menziesii*	24	25	M	Codominant stems	Likely to retain- reassess during construction
70355	Douglas-fir	*Pseudotsuga menziesii*	9	8	P	Suppressed	Remove
70356	Douglas-fir	*Pseudotsuga menziesii*	32	18	G	Crown asymmetry, dead and broken branches	Likely to retain- reassess during construction
70357	black hawthorn	*Crataegus douglasii*	7	0	P	Dead	Remove
70358	black hawthorn	*Crataegus douglasii*	7	6	P	Very poor structure	Remove
70360	black hawthorn	*Crataegus douglasii*	7	0	P	Dead	Remove
70361	black hawthorn	*Crataegus douglasii*	7	0	P	Dead	Remove
70362	black hawthorn	*Crataegus douglasii*	7	12	P	Severe decline, very poor structure, one-sided to west	Remove
70363	black hawthorn	*Crataegus douglasii*	2x9	14	P	Mostly dead, poor structure	Remove
70364	black hawthorn	*Crataegus douglasii*	8	0	P	Dead	Remove
70365	black hawthorn	*Crataegus douglasii*	7	0	P	Dead	Remove
70366	black hawthorn	*Crataegus douglasii*	7	0	P	Dead	Remove
70367	black hawthorn	*Crataegus douglasii*	2x4,6,8	15	P	Poor structure, dead and broken branches	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70368	cascara	*Rhamnus purshiana*	9	13	P	Poor structure, crown decay	Remove
70370	English hawthorn	*Crataegus monogyna*	2x10	15	P	Invasive species, previous leader failures	Remove
70371	black hawthorn	*Crataegus douglasii*	6	5	P	Very poor structure	Remove
70372	black hawthorn	*Crataegus douglasii*	8	12	P	Very poor structure	Remove
70373	black hawthorn	*Crataegus douglasii*	7,12	16	P	Poor structure, declining	Remove
70374	black hawthorn	*Crataegus douglasii*	6,9,11	16	P	Very poor structure, previous codominant stem failure	Remove
70375	Scouler's willow	*Salix scouleriana*	13	6	P	Failed leader	Remove
70376	bigleaf maple	*Acer macrophyllum*	7	16	M	Pistolbutt	Remove
70378	Douglas-fir	*Pseudotsuga menziesii*	32	18	M	Terminal leader is dead	Remove
70379	Douglas-fir	*Pseudotsuga menziesii*	44	18	M	Old broken top, crooked leader	Remove
70380	sweet cherry	*Prunus avium*	8	10	M	Invasive species, moderate structure	Remove
70382	sweet cherry	*Prunus avium*	8	0	P	Dead	Remove
70383	sweet cherry	*Prunus avium*	8	6	P	Invasive species, very poor structure	Remove
70385	sweet cherry	*Prunus avium*	10	8	P	Invasive species, trunk decay, dead and broken branches	Remove
70386	black hawthorn	*Crataegus douglasii*	10	0	P	Mostly dead, very poor structure	Remove
70387	black hawthorn	*Crataegus douglasii*	7	8	P	Poor structure, dieback	Remove
70388	black hawthorn	*Crataegus douglasii*	7	10	P	Poor structure, declining	Remove
70389	bigleaf maple	*Acer macrophyllum*	10	18	M	Old broken top, multiple leaders	Remove
70391	English hawthorn	*Crataegus monogyna*	8	16	M	Invasive species, poor structure	Remove
70392	English hawthorn	*Crataegus monogyna*	2x10	18	M	Invasive species, poor structure	Remove
70394	English hawthorn	*Crataegus monogyna*	6,9	12	M	Invasive species, poor structure	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70395	Douglas-fir	*Pseudotsuga menziesii*	2x28	30	M	Codominant stems, old broken leader with new top, ivy	Remove
70396	bigleaf maple	*Acer macrophyllum*	22	16	P	Hollows with advanced trunk decay, poor structure	Remove
70397	Douglas-fir	*Pseudotsuga menziesii*	41	26	P	Basal decay with hollow S face, no buttress root NE face	Remove
70398	sweet cherry	*Prunus avium*	18	20	M	Invasive species	Remove
70399	sweet cherry	*Prunus avium*	8	15	P	Invasive species, poor structure, trunk damage	Remove
70400	apple	*Malus* spp.	10	16	P	Very poor structure	Remove
70403	bigleaf maple	*Acer macrophyllum*	11	16	M	Below dominant canopy	Remove
70404	sweet cherry	*Prunus avium*	9	9	M	Invasive species	Remove
70406	sweet cherry	*Prunus avium*	8	12	M	Invasive species, growing from stump of failed cherry	Remove
70410	Douglas-fir	*Pseudotsuga menziesii*	32	18	M	Extensive ivy crown asymmetry	Remove
70411	Douglas-fir	*Pseudotsuga menziesii*	18,25	20	M	Codominant stems, extensive ivy, reduced vigor	Remove
70412	sweet cherry	*Prunus avium*	7	12	P	Invasive species, poor structure	Remove
70413	Douglas-fir	*Pseudotsuga menziesii*	8	7	P	Suppressed	Remove
70414	Douglas-fir	*Pseudotsuga menziesii*	22	12	M		Remove
70415	Douglas-fir	*Pseudotsuga menziesii*	28	12	M		Remove
70416	bigleaf maple	*Acer macrophyllum*	10	12	P	Very poor structure, below dominant canopy	Remove
70417	sweet cherry	*Prunus avium*	18	18	M	Invasive species	Remove
70418	sweet cherry	*Prunus avium*	12	12	P	Invasive species, very poor structure	Remove
70419	bigleaf maple	*Acer macrophyllum*	10	16	M	Below dominant canopy	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70429	bigleaf maple	*Acer macrophyllum*	6	12	P	Very poor structure, below dominant canopy	Remove
70430	Douglas-fir	*Pseudotsuga menziesii*	16	12	P	Mostly dead	Remove
70431	sweet cherry	*Prunus avium*	6	10	M	Invasive species	Remove
70432	Douglas-fir	*Pseudotsuga menziesii*	30	0	P	Dead, top blown out, trunk overtopped by ivy	Remove
70433	Douglas-fir	*Pseudotsuga menziesii*	26	24	M	Reduced vigor, dead and broken branches	Remove
70434	bigleaf maple	*Acer macrophyllum*	7	16	M	Below dominant canopy, failed snag leaning against trunk	Remove
70435	sweet cherry	*Prunus avium*	10	12	P	Invasive species, poor structure	Remove
70436	bigleaf maple	*Acer macrophyllum*	22	26	G		Remove
70437	Douglas-fir	*Pseudotsuga menziesii*	13	8	P	Dead, decay, failing	Remove
70438	Douglas-fir	*Pseudotsuga menziesii*	26	12	M		Remove
70439	Douglas-fir	*Pseudotsuga menziesii*	22	11	M		Remove
70440	sweet cherry	*Prunus avium*	7	10	M	Invasive species, poor structure	Remove
70441	sweet cherry	*Prunus avium*	6	10	M	Invasive species, poor structure	Remove
70442	sweet cherry	*Prunus avium*	7	10	M	Invasive species, poor structure	Remove
70443	Douglas-fir	*Pseudotsuga menziesii*	24	16	M		Remove
70444	Douglas-fir	*Pseudotsuga menziesii*	24	14	M	Lower trunk sweep, reduced vigor	Remove
70445	sweet cherry	*Prunus avium*	7	12	M	Invasive species, poor structure	Remove
70446	sweet cherry	*Prunus avium*	16	20	M	Invasive species, poor structure	Remove
70448	sweet cherry	*Prunus avium*	16	18	M	Invasive species, poor structure	Remove
70449	Douglas-fir	*Pseudotsuga menziesii*	24	16	M	Very one-sided, reduced vigor	Remove
70450	Douglas-fir	*Pseudotsuga menziesii*	14	0	P	Mostly dead	Remove
70451	Douglas-fir	*Pseudotsuga menziesii*	22	14	M		Remove
70452	bigleaf maple	*Acer macrophyllum*	11	18	M		Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70453	Douglas-fir	*Pseudotsuga menziesii*	16	10	M		Remove
70454	Douglas-fir	*Pseudotsuga menziesii*	18	11	M	Intermediate crown class	Remove
70455	Douglas-fir	*Pseudotsuga menziesii*	20	14	M		Remove
70456	Douglas-fir	*Pseudotsuga menziesii*	22	16	M		Remove
70457	Douglas-fir	*Pseudotsuga menziesii*	20	16	M		Remove
70459	Douglas-fir	*Pseudotsuga menziesii*	25	12	M		Remove
70460	Douglas-fir	*Pseudotsuga menziesii*	12	6	P	Suppressed	Remove
70461	Douglas-fir	*Pseudotsuga menziesii*	14	9	M		Remove
70462	Douglas-fir	*Pseudotsuga menziesii*	34	18	M	Reduced vigor	Remove
70463	Douglas-fir	*Pseudotsuga menziesii*	28	14	M	Poor structure, codominant stems, ivy	Remove
70465	bigleaf maple	*Acer macrophyllum*	21	18	P	Poor structure, extensive ivy	Remove
70466	Douglas-fir	*Pseudotsuga menziesii*	29	16	M		Remove
70467	Douglas-fir	*Pseudotsuga menziesii*	22	16	M		Remove
70468	bigleaf maple	*Acer macrophyllum*	6	12	M		Remove
70469	Douglas-fir	*Pseudotsuga menziesii*	12	8	P	Very small high live crown	Remove
70470	sweet cherry	*Prunus avium*	18	18	M	Invasive species	Remove
70471	Douglas-fir	*Pseudotsuga menziesii*	30	20	M	Reduced vigor	Remove
70472	Douglas-fir	*Pseudotsuga menziesii*	16	10	M	Broken top	Remove
70473	Douglas-fir	*Pseudotsuga menziesii*	26	16	M		Remove
70474	Douglas-fir	*Pseudotsuga menziesii*	2x18	12	M		Likely to retain- reassess during construction
70475	Douglas-fir	*Pseudotsuga menziesii*	20,22	16	M		Likely to retain- reassess during construction
70478	Douglas-fir	*Pseudotsuga menziesii*	34	24	G		Retain
70479	Douglas-fir	*Pseudotsuga menziesii*	32	24	G		Retain
70481	sweet cherry	*Prunus avium*	10	12	M	Invasive species	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70482	sweet cherry	*Prunus avium*	8	12	M	Invasive species	Remove
70483	sweet cherry	*Prunus avium*	12	12	M	Invasive species	Remove
70484	sweet cherry	*Prunus avium*	12	12	M	Invasive species	Remove
70485	Douglas-fir	*Pseudotsuga menziesii*	40	15	M	Old broken top, forked leaders	Retain
70489	Douglas-fir	*Pseudotsuga menziesii*	36	14	M	Spur leader, extensive poison oak	Remove
70490	Douglas-fir	*Pseudotsuga menziesii*	26,30	14	M	Poor structure, ivy	Remove
70491	Douglas-fir	*Pseudotsuga menziesii*	26	13	M	Lower trunk sweep, epicormics, ivy	Remove
70492	Douglas-fir	*Pseudotsuga menziesii*	28	14	M		Likely to retain- reassess during construction
70493	Douglas-fir	*Pseudotsuga menziesii*	25	11	M	Trunk sweep near base	Likely to retain- reassess during construction
70494	Douglas-fir	*Pseudotsuga menziesii*	34	16	M		Remove
70496	black hawthorn	*Crataegus douglasii*	7	4	P	Very poor structure, trunk decay, excessive lean, mostly dead	Remove
70499	bigleaf maple	*Acer macrophyllum*	15	32	M	Poor structure, ivy	Likely to retain- reassess during construction
70500	bigleaf maple	*Acer macrophyllum*	14	26	M	Extensive ivy	Likely to retain- reassess during construction
70501	bigleaf maple	*Acer macrophyllum*	26	30	M	Extensive ivy infestation	Likely to retain- reassess during construction
70502	Douglas-fir	*Pseudotsuga menziesii*	11,18	12	P	Codominant stems, one is a snag, other with severe ivy infestation and poor structure	Remove
70503	Douglas-fir	*Pseudotsuga menziesii*	36	24	P	Very poor structure	Remove
70504	black hawthorn	*Crataegus douglasii*	7	14	P	Very poor structure	Remove
70505	bigleaf maple	*Acer macrophyllum*	7	16	M	Poor structure	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70506	sweet cherry	*Prunus avium*	12,14	20	P	Invasive species, poor structure, extensive ivy	Remove
70507	Douglas-fir	*Pseudotsuga menziesii*	22	18	M	Dead and broken branches, ivy, adjacent tree failed in past	Remove
70508	Douglas-fir	*Pseudotsuga menziesii*	10	8	P	Suppressed, very poor structure	Remove
70509	sweet cherry	*Prunus avium*	12	8	P	Invasive species, poor structure, declining	Remove
70511	sweet cherry	*Prunus avium*	12,16	18	P	Codominant stems, poor structure, extensive ivy	Remove
70512	sweet cherry	*Prunus avium*	2x16	10	M	Invasive species, ivy	Remove
70513	sweet cherry	*Prunus avium*	12	8	M	Invasive species, poor structure, ivy	Remove
70514	sweet cherry	*Prunus avium*	16	12	M	Invasive species	Remove
70515	sweet cherry	*Prunus avium*	9	8	M	Invasive species, poor structure	Remove
70516	sweet cherry	*Prunus avium*	12	12	M	Invasive species, trunk damage	Remove
70517	sweet cherry	*Prunus avium*	14	12	M	Invasive species	Remove
70518	sweet cherry	*Prunus avium*	6,16	14	M	Invasive species	Remove
70519	sweet cherry	*Prunus avium*	10	8	P	Invasive species, poor structure	Remove
70520	sweet cherry	*Prunus avium*	14	28	M	Invasive species	Remove
70521	sweet cherry	*Prunus avium*	18	28	M	Invasive species	Remove
70523	sweet cherry	*Prunus avium*	6	14	M	Invasive species	Remove
70526	bigleaf maple	*Acer macrophyllum*	13	22	M	Self-correcting lean, dead and broken branches	Remove
70527	black hawthorn	*Crataegus douglasii*	11,12	14	M	Dead and broken branches	Remove
70528	black hawthorn	*Crataegus douglasii*	7	6	P	Declining, poor structure	Remove
70531	Douglas-fir	*Pseudotsuga menziesii*	40	26	M	Extensive ivy	Remove
70532	English hawthorn	*Crataegus monogyna*	6	12	P	Invasive species, poor structure	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70533	Douglas-fir	*Pseudotsuga menziesii*	14	10	M	Intermediate crown class	Remove
70534	bigleaf maple	*Acer macrophyllum*	2x16	35	M		Remove
70535	Douglas-fir	*Pseudotsuga menziesii*	20	16	M		Remove
70536	Douglas-fir	*Pseudotsuga menziesii*	30	22	M		Remove
70537	Douglas-fir	*Pseudotsuga menziesii*	18	16	M		Remove
70538	Douglas-fir	*Pseudotsuga menziesii*	14	8	P	Suppressed	Remove
70539	Douglas-fir	*Pseudotsuga menziesii*	32	25	M		Remove
70540	black hawthorn	*Crataegus douglasii*	2x6	4	P	Mostly dead	Remove
70541	sweet cherry	*Prunus avium*	13	14	M	Invasive species	Remove
70542	Douglas-fir	*Pseudotsuga menziesii*	28	18	M	Extensive ivy	Likely to retain- reassess during construction
70543	bigleaf maple	*Acer macrophyllum*	3x10,15	22	P	Poor structure crown decay, extensive ivy	Remove
70544	Douglas-fir	*Pseudotsuga menziesii*	36	15	P	Extensive ivy infestation, codominant stems	Remove
70545	bigleaf maple	*Acer macrophyllum*	2x10	6	P	Mostly dead, extensive ivy	Remove
70547	Douglas-fir	*Pseudotsuga menziesii*	32	14	M	Extensive ivy	Likely to retain- reassess during construction
70548	bigleaf maple	*Acer macrophyllum*	8	16	P	Very poor structure	Remove
70549	bigleaf maple	*Acer macrophyllum*	8	10	M	Poor structure	Likely to retain- reassess during construction
70550	bigleaf maple	*Acer macrophyllum*	8	13	M	Poor structure	Likely to retain- reassess during construction
70551	bigleaf maple	*Acer macrophyllum*	13	25	M	Moderate structure, ivy	Retain
70552	bigleaf maple	*Acer macrophyllum*	26	25	M	Moderate structure	Retain
70553	bigleaf maple	*Acer macrophyllum*	12	18	M	Poor structure	Likely to retain- reassess during construction

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70554	bigleaf maple	*Acer macrophyllum*	16	24	M	Moderate structure, top dieback	Likely to retain- reassess during construction
70555	black hawthorn	*Crataegus douglasii*	6	0	P	Mostly dead	Remove
70556	black hawthorn	*Crataegus douglasii*	6	0	P	Mostly dead	Remove
70557	black hawthorn	*Crataegus douglasii*	7	0	P	Mostly dead	Remove
70558	Douglas-fir	*Pseudotsuga menziesii*	26	26	G		Remove
70559	Douglas-fir	*Pseudotsuga menziesii*	38	25	G		Remove
70560	Douglas-fir	*Pseudotsuga menziesii*	12,16	13	M	Codominant stems, intermediate crown class	Remove
70568	Douglas-fir	*Pseudotsuga menziesii*	29	34	G		Likely to retain- reassess during construction
70569	bigleaf maple	*Acer macrophyllum*	13	32	P	Very poor structure	Remove
70570	bigleaf maple	*Acer macrophyllum*	19	34	P	Very poor structure	Remove
70571	bigleaf maple	*Acer macrophyllum*	22	32	M	Codominant stems	Likely to retain- reassess during construction
70572	Douglas-fir	*Pseudotsuga menziesii*	36	22	M	Multiple codominant stems	Retain
70573	Douglas-fir	*Pseudotsuga menziesii*	24	20	G		Retain
70574	Douglas-fir	*Pseudotsuga menziesii*	30	20	G		Retain
70575	Douglas-fir	*Pseudotsuga menziesii*	26	20	M	Relatively reduced vigor	Likely to retain- reassess during construction
70576	Douglas-fir	*Pseudotsuga menziesii*	22	11	P	Severe decline	Remove
70577	Douglas-fir	*Pseudotsuga menziesii*	26	18	G		Remove
70578	bigleaf maple	*Acer macrophyllum*	2x18	20	M	Basal decay, old root damage	Remove
70580	Douglas-fir	*Pseudotsuga menziesii*	2x30	22	G		Retain
70582	bigleaf maple	*Acer macrophyllum*	26	28	M	Moderate structure, one trunk decay	Retain
70583	Douglas-fir	*Pseudotsuga menziesii*	40	30	I		Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70584	Douglas-fir	*Pseudotsuga menziesii*	26	16	G		Retain
70585	Douglas-fir	*Pseudotsuga menziesii*	24	16	G		Retain
70586	Douglas-fir	*Pseudotsuga menziesii*	2x26	18	M	Codominant stems	Likely to retain- reassess during construction
70587	Douglas-fir	*Pseudotsuga menziesii*	40	28	G		Retain
70588	Douglas-fir	*Pseudotsuga menziesii*	24,30	38	M	Multiple codominant stems	Likely to retain- reassess during construction
70589	Douglas-fir	*Pseudotsuga menziesii*	34	20	G		Retain
70590	Douglas-fir	*Pseudotsuga menziesii*	30	20	G		Retain
70591	Douglas-fir	*Pseudotsuga menziesii*	30	18	G	Surrounded by blackberry	Retain
70592	Douglas-fir	*Pseudotsuga menziesii*	40	24	G	Codominant crown class with 70594	Remove
70593	Douglas-fir	*Pseudotsuga menziesii*	32	28	G	Codominant crown class with 70594	Remove
70594	Douglas-fir	*Pseudotsuga menziesii*	28	24	G	Codominant crown class with70592 & 70593	Remove
70595	Douglas-fir	*Pseudotsuga menziesii*	10	0	P	Dead	Remove
70596	Douglas-fir	*Pseudotsuga menziesii*	12	6	P	Suppressed	Remove
70597	Douglas-fir	*Pseudotsuga menziesii*	20	10	P	Phellinus pini infection	Remove
70598	Douglas-fir	*Pseudotsuga menziesii*	34	22	I		Remove
70599	Douglas-fir	*Pseudotsuga menziesii*	14	6	P	Suppressed	Remove
70600	Douglas-fir	*Pseudotsuga menziesii*	24	14	M		Remove
70601	Douglas-fir	*Pseudotsuga menziesii*	12	12	M	Intermediate crown class	Remove
70602	Douglas-fir	*Pseudotsuga menziesii*	28	16	G		Remove
70603	Douglas-fir	*Pseudotsuga menziesii*	60	35	P	history of lateral branch failure, *Phaeolus schweinitzii* mushrooms observed at base	Remove

No.	Common Name	Species Name	DBH*	C-Rad^	Cond#	Condition & Comments	Treatment
70604	Douglas-fir	*Pseudotsuga menziesii*	22	20	M	Poor structure, old broken top, multiple leaders	Remove
70605	Douglas-fir	*Pseudotsuga menziesii*	35	20	G	Old lower trunk wounds	Remove
70606	Douglas-fir	*Pseudotsuga menziesii*	28	18	G		Remove
80001	black hawthorn	*Crataegus douglasii*	22	0	P	Dead	Remove
80002	black hawthorn	*Crataegus douglasii*	2x10	10	M	Overgrown blackberry thicket	Remove
80003	black hawthorn	*Crataegus douglasii*	12	10	M	Overgrown blackberry thicket	Remove
80004	Douglas-fir	*Pseudotsuga menziesii*	36	20	G		Remove

*DBH: Diameter at Breast Height (measured 4.5-feet above ground level in inches); trees with multiple trunks splitting below DBH are measured separately

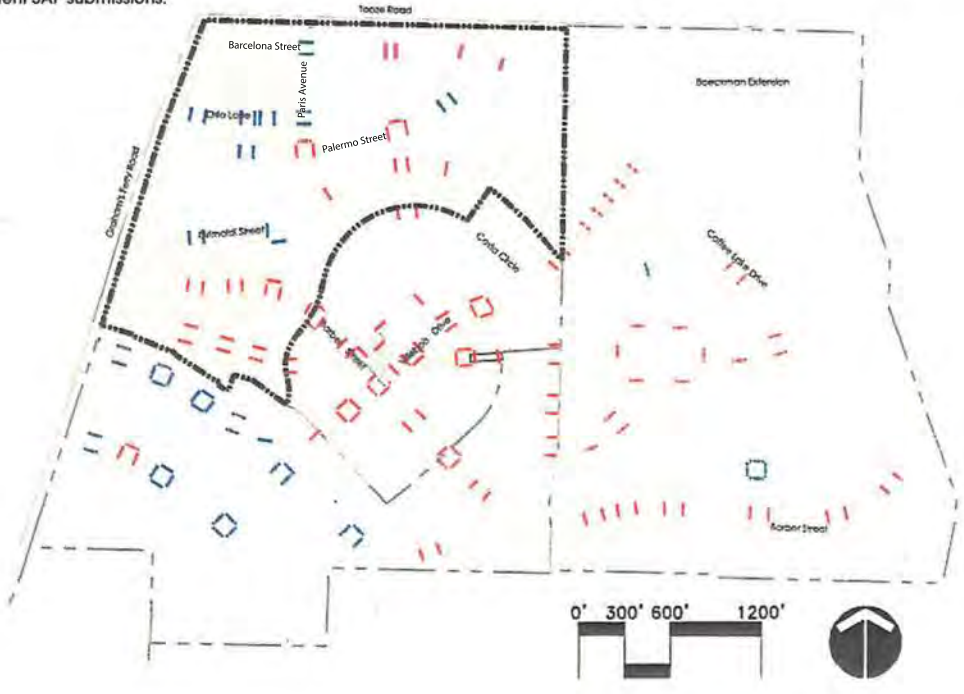
^C-Rad: Crown Radius, the distance in feet from the center of the tree to the edge of the dripline.

#Condition Classifications per the Villebois Community Elements Book: I-Important; G-Good; M-Moderate; P-Poor.

IIF) Community Elements Book Amendments (Maps Only)

NOTE: Curb Extension Plan is for illustrative purposes outside of the current SAP submission area. This plan will be updated as minor modifications are made in subsequent SAP submissions.

CURB EXTENSION CONCEPT PLAN



LEGEND

- TRAFFIC CALMING CURB EXTENSIONS
- PEDESTRIAN ACCOMMODATION CURB EXTENSIONS
- SAP North Boundary

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.

A conceptual master plan identifying placement of curb extensions within the Villebois Village is illustrated here. As shown in the plan, curb extensions are proposed at every intersection involving a collector street approach to facilitate pedestrian crossing of the collector street. Curb extensions are also proposed at (1) local street intersections in high pedestrian activity areas and (2) at local street intersections with approach lengths in excess of 1,000 feet without upstream traffic control (e.g. stop signs) or traffic calming measures (e.g. curb extensions, roundabouts).

STREET TREE MASTER PLAN DIAGRAM

NOTE: Street Tree Plan is for Illustrative purposes outside of the current SAP submission area. This plan will be updated as minor modifications are made in subsequent SAP submissions.

STREET TREE TRANSITIONS

In order to establish continuity throughout Villebois, one species of tree has been chosen as primary for each type of street and should be used the length of the street. Due to availability concerns, other trees have been chosen as substitutes, but only if the primary tree is unavailable in the numbers required along the streets. Primary trees have not been chosen for each of the neighborhood street trees. Trees should be chosen from the list provided for the length of each street (see following pages). Species shall match on opposite sides of the street and change only at intersections. A change in species due to lack of availability is permitted only at the following points:

Arterial Streets

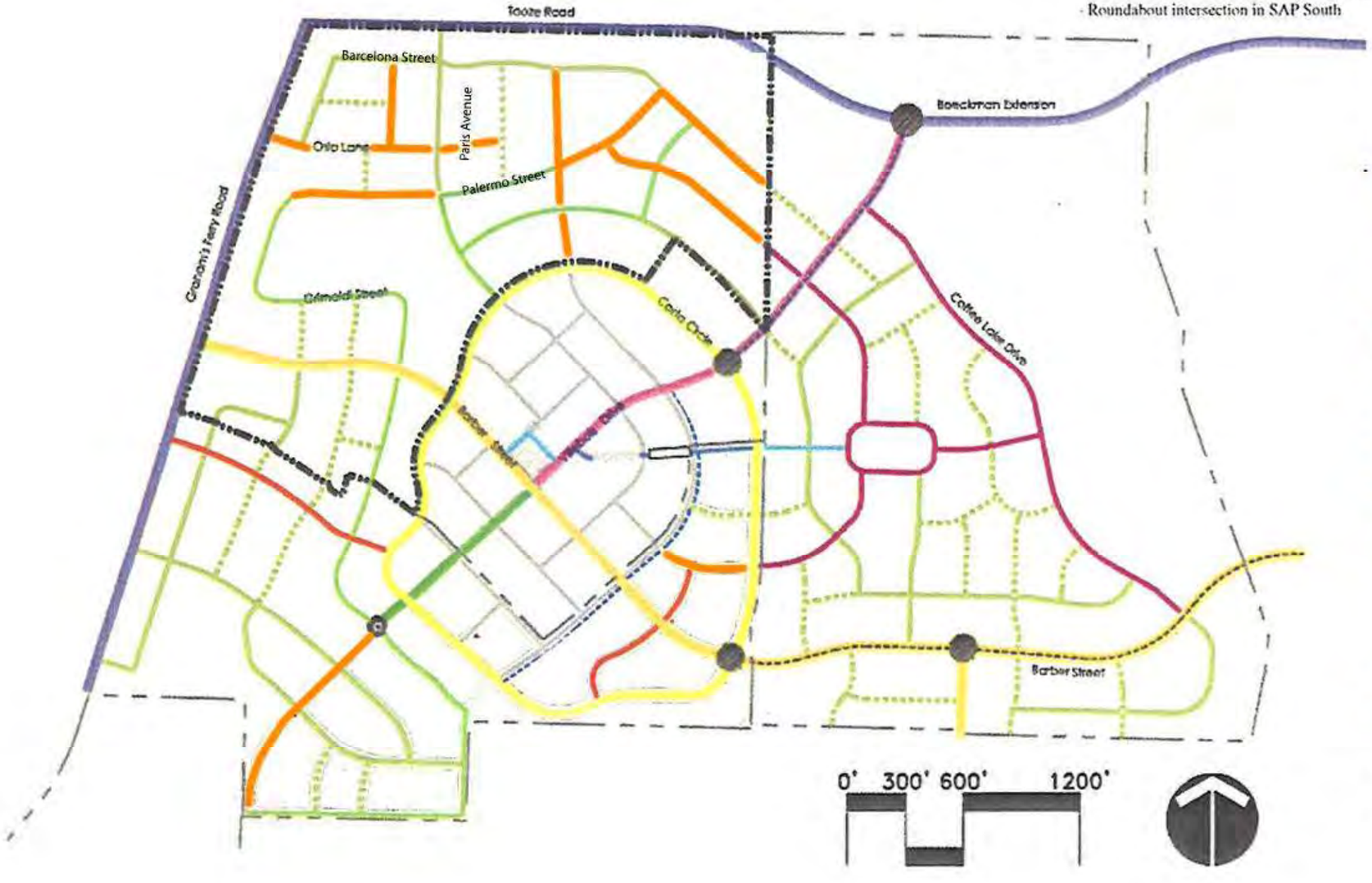
- Intersection of Tooze Road and Grahams Ferry Road
- Intersection of Boeckman Extension and Villebois Drive

Collector Streets

- Intersections of Barber Street and Loop Road

Greenway Streets

- Intersection of Coffee Lake Drive and Villebois Drive
- Roundabout intersection in SAP South



LEGEND

- A. Grahams Ferry, Tooze, Boeckman
  - 40' O.C. Spacing Inside, 2 1/2" Caliper
- B. Barber Street, Villebois Drive
  - 25' O.C. Spacing Inside, 2 1/2" Caliper
  - 35' O.C. Outside Costa Circle, 2 1/2" Caliper
- C. Loop Road
  - 25' O.C. Spacing, 2" Caliper
- D. Greenway Streets
  - 30' O.C. Spacing, 2" Caliper
- E. Streets with Existing Street Trees
  - Spacing Varies, 2" Caliper
- F. Village Center STreets
  - 25' O.C. Spacing, 2" Caliper
- G. Private Woonerf Street
  - Spacing varies, 2 1/2" Caliper
- H. Mt. Hood View
  - 25' O.C. Spacing, 2" Caliper
- I. Significant Residential Streets
  - 30' O.C. Spacing, 2" Caliper
- J. Primaray Residential Streets
  - 30' O.C. Spacing, 2" Caliper
- K. Secondary Residential Streets
  - 30' O.C. Spacing, 2" Caliper
- L. Accent Trees at Roundabouts
  - Spacing varies, 2" Caliper
  - Dependant on Vision Clearance
- M. Swales
  - Spacing and Caliper Varies according to street type
- N. Pedestrian Linkage
  - 30' O.C. Spacing, 2" Caliper
- O. Greenway Crossing - No Street Trees
  - Except Villebois Drive
- SAP North Boundary

NOTE: Mail Box Location Plan is for Illustrative purposes outside of the current SAP submission area. This plan will be updated as minor modifications are made in subsequent SAP submissions.

LIGHTING MASTER PLAN DIAGRAM

NOTE: Lighting Concept Plan is for Illustrative purposes outside of the current SAP submission area. This plan will be updated as minor modifications are made in subsequent SAP submissions.

LEGEND

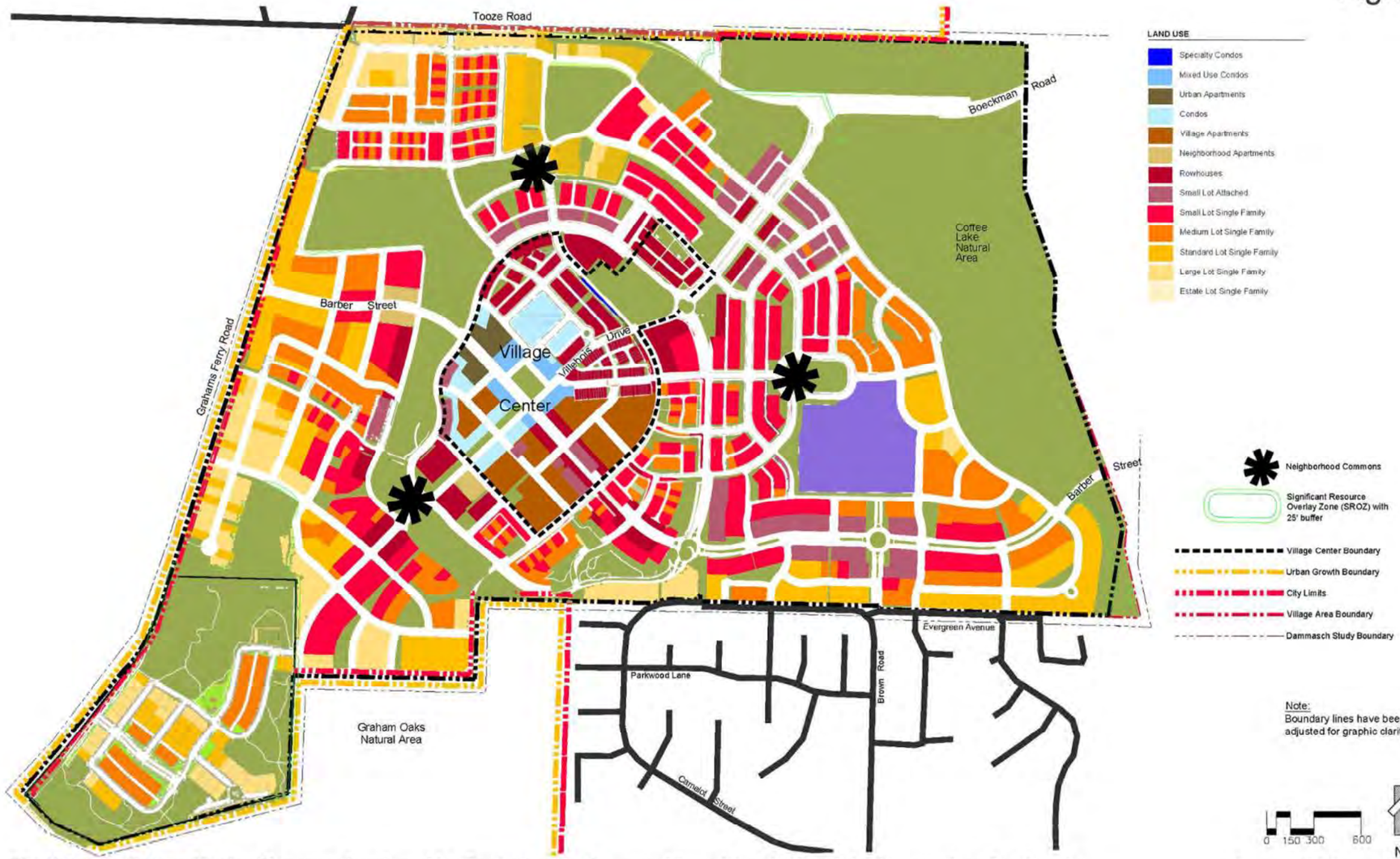
HADCO S8867C LIGHTS

- Single Hadco Light Fixture 120' O.C. 0.6 CP @ 150 watts
- Single Hadco Light Fixture 155' O.C. 0.4 CP @ 150 watts
- Cobra Hadco Light Fixture 140' O.C. 0.9 CP @ 200 watts
- Single Hadco Light Fixture 120' O.C. 0.6 CP @ 200 watts
- Single Hadco Light Fixture 75' O.C. 0.9 CP @ 150 watts
- Double Hadco Light Fixture 120' O.C. 0.6 CP @ 200 watts
- Single Hadco Light Fixture 65' O.C. 0.9 CP @ 150 watts
- Single Hadco Light Fixture 50' O.C. 1.2 CP @ 150 watts Double Hadco Light Fixture possible in Central Plaza area, per design
- Single Hadco Light Fixture 200 watts
- SAP North Boundary

Note:
1. Light fixtures are triangulated at described spacing.
2. CP = Candle Power; O.C. = On Center

IIG) Architectural Pattern Book Amendments (Maps Only)

Figure 1



Land Use Plan

JULY 26, 2013

The Villebois Village Master Plan was developed by Costa Pacific Communities with a distinguished team of professionals:

Iverson Architects (Design Team Leader), Alpha Engineering (Technical Team Leader), Fletcher Farr Ayotte (Land Planning / Village Center Design), Walker Macy (Land Planning / Landscape Architecture), Western Planning Associates, (Land Planning), Pacific Habitat Services (Environmental Consulting), SGW Creative (Advertising and Public Relations), Market Perspectives (Market Research), Kittelson & Associates (Traffic Engineering), Ramis Crew Corrigan and Bachrach (Land Use Attorney)

The Villebois Village Master Plan

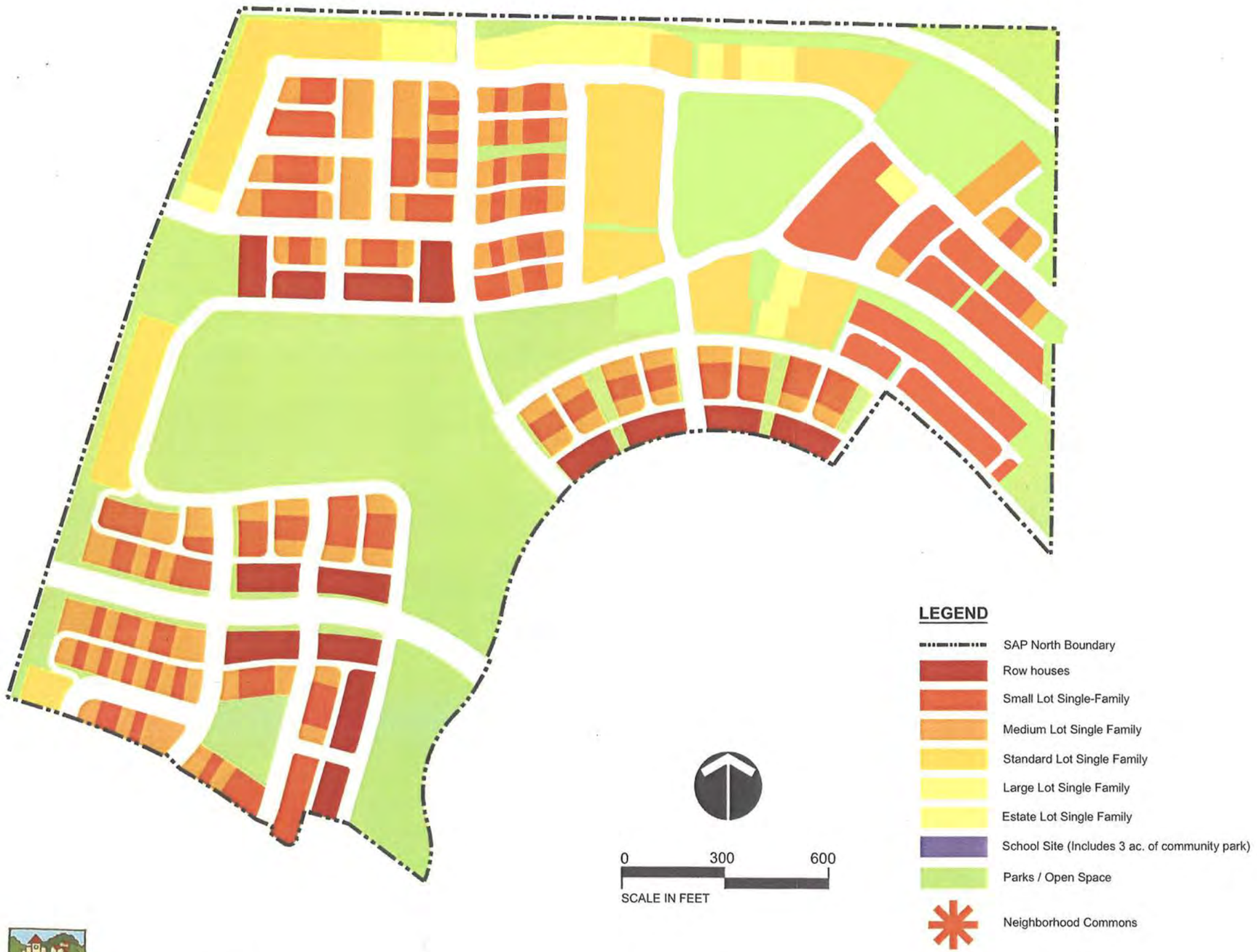
The Villebois Village Master Plan lays the foundation for an innovative mixed-use community. The Plan is based on three fundamental, guiding principles:

- *Connectivity* is connections between neighbors, within the village itself, and into other parts of the region and the world. *Connectivity* is accomplished with architectural designs that always put people first and provide a pedestrian scaled environment. Automobile access will be located to the rear of most buildings, and will not disrupt the hierarchal emphasis given to the pedestrian. The facades of all buildings will emphasize the social character of the street and sidewalk.

- *Diversity* means 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. *Diversity* is achieved by integrating a variety of housing, commercial options and architectural styles throughout the community. This assures that Villebois will be a vibrant, economically and socially diverse addition to the region.

- *Sustainability* refers to the thread of stewardship and viability - social, environmental, and economic - that is woven throughout every aspect of Villebois. It includes efficient design, the protection of natural resources and open space, rainwater management and energy conservation. *Sustainability* is addressed through the use of efficient land planning and energy and resource efficient building designs that shall respond to the environmental qualities of light, climate and topography.

Boundary of SAP North



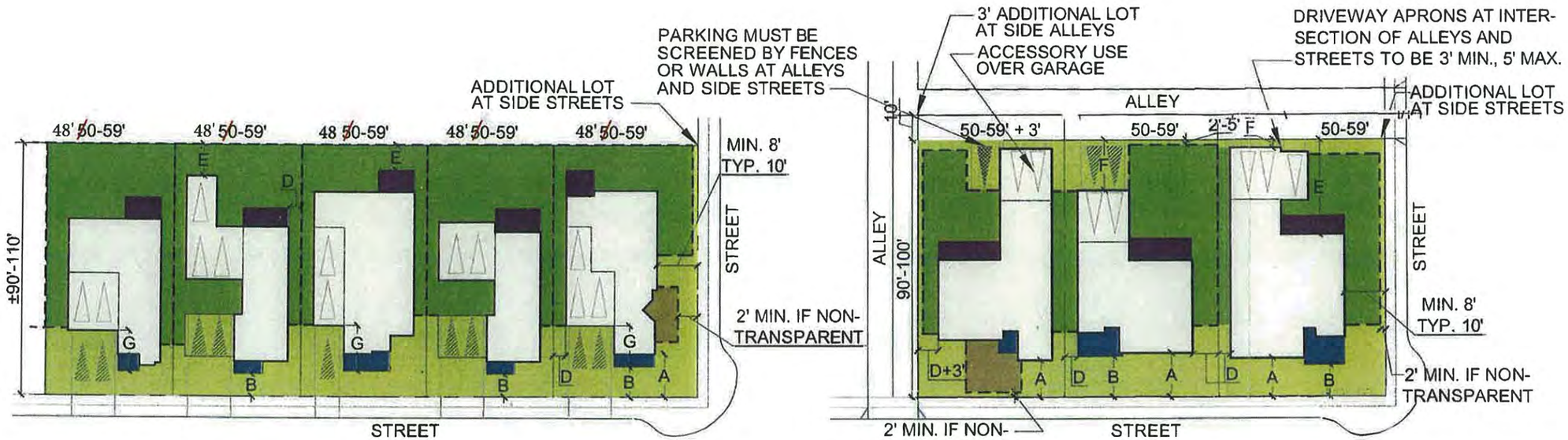
Lot Types and Sustainability in The Specific Area Plan North

In order to comply with the sustainability goals of the Villebois Village Master Plan, buildings within the Specific Area Plan North must meet or exceed the design standards required for third-party certification by Earth Advantage™, a sustainable building program created and administered by Portland General Electric. Earth Advantage™ is a comprehensive program that offers education, guidance, and project certification to homebuilders. To be certified under the program, homes must satisfy requirements in each of four categories: energy efficiency, healthier indoor air, environmental responsibility, and resource efficiency. Earth Advantage™ homes are designed to protect the environment, use less energy, and improve indoor air quality through the use of more earth-friendly materials, mechanical systems, and construction techniques.

By the use of environmentally sound building practices the environmental impact can be minimized, and consumer demand for healthy homes can be met. For further information on the Portland General Electric Earth Advantage™ program, see References, page E1.

The Specific Area Plan North plans include advanced engineering and planning documents that will coordinate the development of grading, drainage, streets, utilities, and related infrastructure throughout the Village Master Plan area. Each Specific Area Plan provides the detailed design criteria for the development of the Villebois Village Master Plan.

The *Standard Lot* types provide for detached residential buildings on lots ranging from about 4,500 to 6,500 square feet. Off-street parking may be located at the rear of the lot, off of an alley, in attached or detached garages, or it may also be located at the side of the building and accessed from a front or side driveway. The alley-loaded houses typically face the steet but they may also face onto a greenbelt or park with public access. Accessory buildings are allowed, but not required, and they may be detached or attached; they must be of the same exterior design as the primary dwelling unit on the property. Use easements to maximize the usable yard space for each house are allowed but not required.



STANDARD LOTS - FRONT LOADED

+/- 50'-59' x 90'-110'

48'

STANDARD LOTS - ALLEY LOADED

+/- 50'-59' x 90'-100' + 10'

LEGEND

WHERE SETBACKS ARE MEASURED TO:

- A FRONT YARD BUILDING SETBACK
- B SETBACK TO PORCHES, STOOPS, DECKS, CANOPIES, BALCONIES, BAY WINDOWS, CHIMNEYS, AWNINGS, AND ARCHITECTURAL PROJECTIONS
- C NOT USED
- D SIDEYARD BUILDING SETBACK
- E REAR YARD BUILDING SETBACK
- F ALLEY-LOADED GARAGE SETBACK
- G STREET-LOADED GARAGE SETBACK*

*NOTE: GARAGE OFFSET FROM FACADE IS 5' MIN., OFFSETS ARE ENCOURAGED TO VARY TO PROVIDE DIVERSITY IN STREET SCENE

PRIVATE OUTDOOR SPACE
- YARDS
- PATIOS

SEMI-PRIVATE OUTDOOR SPACE
- PORCHES, STOOPS
- COURTYARDS, TERRACES

SEMI-PUBLIC OUTDOOR SPACE
- YARDS, ETC.

AUTO PARKING
- GARAGE
- PARKING APRON
- AT ACCESSORY DWELLING WITH NO APRON PARKING

PRIVATE SPACE USE EASEMENT - OPTIONAL
- ACTIVE SIDE OF HOUSE WITH USE OF ADJACENT LOT SIDEYARD
- PASSIVE SIDE OF HOUSE WITH HIGH OR OBSCURE GLAZING ONLY, FOR PRIVACY OF ADJACENT YARD

Villebois

STANDARD DETACHED

LOT DIAGRAMS

IIH) Signage & Wayfinding Master Plan Amendments (Maps Only)

Villebois

LOCATIONS

COMMUNITY FENCING

Villebois

SAP NORTH LOCATIONS

COMMUNITY FENCING

III) Significant Resource Impact Report

SWCA
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Portland, Oregon 97205
Tel 503.224.0333 Fax 503.224.1851
www.swca.com

Villebois Chang Property SAP North Amendment
Significant Resource Impact Report

Date: June 14, 2018
To: Pam Verdadero, Polygon WLH LLC
Stacy Connery, Pacific Community Design
For: Kerry Rappold, City of Wilsonville Natural Resources Program Manager
From: C. Mirth Walker, PWS, Senior Wetland Scientist
Subject: Villebois Chang Property SAP North Amendment
Significant Resource Impact Report
Tax Map 3 1W 15AD Tax Lots 7300, 7400, 7500, and 7600, Clackamas County, Wilsonville, Oregon

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SWCA Environmental Consultants (SWCA) conducted a wetland delineation on the subject site, located at 11490 SW Tooze Road and 28201 SW 110th Avenue, in Wilsonville, Clackamas County, Oregon (Figure 1) in the spring of 2018. The approximately 22.32-acre project site includes Tax Lots 7300, 7400, 7500, and 7600 on Tax Map 3 1 15AB (Figures 2 and 3). The center of the project site is located at 45.315901° N, −122.792881° W. Two connected wetlands containing a roadside ditch and one isolated wetland were delineated on the site. The wetland delineation was submitted to the Oregon Department of State Lands (DSL) for review on May 31, 2018. The concurrence letter will be issued under DSL File No. WD 2018-0319 within 120 days of the submission date. There are no streams or locally significant upland forests on or near the site (Attachment A).

Polygon WLH LLC is proposing residential development on the project site under the City of Wilsonville's Villebois Specific Area Plan (SAP) North Amendment.

This memorandum has been prepared to address the City of Wilsonville's Development Code Section 4.139.00 Significant Resource Overlay Zone (SROZ) Ordinance (City of Wilsonville 2013), specifically the SROZ Map Verification and Significant Resource Impact Report (SRIR) requirements. Key portions of the ordinance language are provided in italics, followed by responses to the requirements.

Section 4.139.05 Significant Resource Overlay Zone Map Verification

The map verification requirements described in this Section shall be met at the time an applicant requests a building permit, grading permit, tree removal permit, land division approval, or other land use decision. Map verification shall not be used to dispute whether the mapped Significant Resource Overlay Zone boundary is a significant natural resource. Map refinements are subject to the requirements of Section 4.139.10(.01)(D).

(.01) In order to confirm the location of the Significant Resource Overlay Zone, map verification shall be required or allowed as follows:

A. Development that is proposed to be either in the Significant Resource Overlay Zone or less than 100 feet outside of the boundary of the Significant Resource Overlay Zone, as shown on the Significant Resource Overlay Zone Map.

B. A lot or parcel that:

1. Either contains the Significant Resource Overlay Zone, or any part of which is less than 100 feet outside the boundary of the Significant Resource Overlay Zone, as shown on the Significant Resource Overlay Zone Map; and

2. Is the subject of a land use application for a partition, subdivision, or any land use application that the approval of which would authorize new development on the subject lot or parcel.

The project meets all of the above requirements.

(.02) An application for Significant Resource Overlay Zone Map Verification may be submitted even if one is not required pursuant to Section 4.139.05(.01).

(.03) If a lot or parcel or parcel is subject to Section 4.139.05(.01), an application for Significant Resource Overlay Zone Map Verification shall be filed concurrently with the other land use applications referenced in Section 4.139.05(.01)(B)(2) unless a previously approved Significant Resource Overlay Zone Map Verification for the subject property remains valid.

(.04) An applicant for Significant Resource Overlay Zone Map Verification shall use one or more of the following methods to verify the Significant Resource Overlay Zone boundary:

A. The applicant may concur with the accuracy of the Significant Resource Overlay Zone Map of the subject property;

Not applicable. The applicant does not concur with the accuracy of the SROZ map for the subject property.

B. The applicant may demonstrate a mapping error was made in the creation of the Significant Resource Overlay Zone Map;

It appears that a mapping error may have occurred in the creation of the SROZ map.

C. The applicant may demonstrate that the subject property was developed lawfully prior to June 7, 2001.

Not applicable.

(.05) The Planning Director shall determine the location of any Significant Resource Overlay Zone on the subject property by considering information submitted by the applicant, information collected during any site visit that may be made to the subject property, information generated by Significant Resource Overlay Zone Map Verification that has occurred on adjacent properties, and any other relevant information that has been provided.

(.06) For applications filed pursuant to Section 4.139.05(.04)(A) and (C), a Significant Resource Overlay Zone Map Verification shall be consistent with the submittal requirements listed under Section 4.139.06(.01)(B-H).

(.07) For applications filed pursuant to Section 4.139.05(.04)(B), a Significant Resource Overlay Zone Map Verification shall be consistent with the submittal requirements listed under Section 4.139.06(.02)(D)(1). [Section 4.139.05 added by Ord. # 674 11/16/09]

Section 4.139.06 Significant Resource Impact Report (SRIR) and Review Criteria

A Significant Resource Impact Report (SRIR) is a report that delineates specific resource boundaries and analyzes the impacts of development within mapped significant resource areas based upon the requirements of this Section. An SRIR is only required for non-exempt development that is located within the Significant Resource Overlay Zone and/or its associated 25 foot Impact Area.

The Significant Resource Overlay Zone Map identifies areas that have been classified as significant natural resources. The preparation of the Significant Resource Overlay Zone Map did not include specific field observations of every individual property. These maps are designed to be specific enough to determine whether further environmental review of a development proposal is necessary. If any portion of the development or alteration of the land (except those exempted by this Section) is located within the Significant Resource Overlay Zone boundary or the identified Impact Area, then an SRIR is required before any development permit can be issued. Where it can be clearly determined by the Planning Director that development is only in the Impact Area and there is no impact to the Significant Resource, development may be permitted without SRIR review.

The Planning Director may consult with a professional with appropriate expertise to evaluate an applicant's SRIR prepared under this Section or may rely on appropriate staff expertise, in order to properly evaluate the report's conclusions.

(.01) Abbreviated SRIR Requirements. It is the intent of this subsection to provide a user-friendly process for the applicant. Only the materials necessary for the application review are required. At the discretion of the Planning Director, an abbreviated SRIR may be submitted for certain small-scale developments such as single family dwellings, additions to single family dwellings, minor additions and accessory structures…

Not applicable. A Standard SRIR is required.

(.02) Application Requirements for a Standard SRIR. The following requirements must be prepared and submitted as part of the SRIR evaluation.…:

A. A Site Development Permit Application must be submitted in compliance with the Planning and Land Development Ordinance.

A Site Development Permit Application is being submitted for this project in compliance with the Planning and Land Development Ordinance.

B. The SRIR shall be conducted and prepared by a natural resource professional knowledgeable and qualified to complete such a report.

The SRIR was prepared by C. Mirth Walker, Professional Wetland Scientist (PWS), a senior wetland scientist at SWCA. Ms. Walker has managed and conducted approximately 15 natural resource inventories and local wetland inventories in the Willamette Valley and beyond, starting with the City of Wilsonville's Local Wetland and Riparian Corridor Inventory in 1992. Ms. Walker is both knowledgeable and qualified to conduct natural resource and impact assessments. SWCA provides a wide range of environmental and cultural resource consulting services to both public- and private-sector clients.

C. The qualifications of the person or persons preparing each element of the analysis shall be included with the SRIR.

C. Mirth Walker, PWS (No. 415, 1995), is certified by the Society of Wetland Scientists Professional Certification Program (http://wetlandcert.org/) and is the senior wetland scientist in SWCA's Portland office. She was certified as a Certified Wetland Delineator by the U.S. Army Corps of Engineers (USACE) Seattle District in 1993 under a provisional program that was not extended, and she holds a B.A. from Reed College in Biology and Psychology with an emphasis in Animal Behavior. Ms. Walker has over 28 years of experience working in the natural environment, specifically in wetlands, in urban and rural settings. Ms. Walker is a project manager, trains wetland staff, and provides quality assurance/quality control review of all natural resource deliverables. Her primary areas of expertise include conducting wetland and other waters delineations and assessments, conducting natural resource inventories and assessments, preparing joint wetland fill permit applications, preparing wetland and stream restoration and mitigation plans, and coordinating agency approvals of local, state, and federal wetland permits. Ms. Walker understands wetland permitting and regulations, and she works collaboratively with clients, team members, and agency personnel to resolve issues and provide solutions that are attainable. Ms. Walker has experience conducting local wetlands inventories and natural resource inventories in the following cities: Adair Village (for the Lane Council of Governments [LCOG]), Ashland, Harrisburg (LCOG), Hillsboro (multiple projects), Lakeside, La Grande, Medford Urban Reserves, Mill City (LCOG), Monroe (LCOG), Scio (LCOG), Tigard, Tualatin, Stayton, and Wilsonville (while at Fishman Environmental Services, which was purchased by SWCA in 2004).

D. The SRIR shall include the following:

1. Physical Analysis. The analysis shall include, at a minimum:

a. Soil types;

The Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2018a) depicts six soil units within the project site (Figure 4). One soil unit is hydric (NRCS 2018b) and just barely touches the project site along its northeastern boundary, four soil units are non-hydric but may contain hydric inclusions, and one soil unit is non-hydric and has no hydric inclusions (Table 1).

Table 1. Soil Types

Map Unit Symbol	Map Unit Name	Hydric	Hydric Inclusion
1A,B	Aloha silt loam, 0%–3% and 3%–6% slopes	No	Huberly, Dayton
42	Humaquepts, ponded	Yes	Wapato, Cove
53A,B	Latourelle loam, 0%–3% and 3%–8% slopes	No	None
71B,C	Quatama loam, 3%–8% and 8%–15% slopes	No	Delena
87A	Willamette silt loam, gravelly substratum, 0%–3% slopes	No	Aquolls
91C	Woodburn silt loam, 8%–15% slopes	No	Dayton, Aquolls

Soils in wetland areas displayed the F3 Depleted Matrix hydric soil indicator, whereas soils in upland areas of the site generally lacked any hydric soil indicators or had an incomplete hydric profile (hydric only in the surface 10 inches and non-hydric below).

b. Geology;

The project site is within the Coffee Lake Creek – Willamette River (Hydrologic Unit Code 170900070402) watershed, and within the Willamette Valley Prairie Terraces Ecoregion 3c (Thorson et

al. 2003). The nearly level to undulating Prairie Terraces ecoregion includes all of the terraces of the Willamette River upstream of the Portland/Vancouver Basin). This ecoregion is drained by low-gradient, meandering streams and rivers. Its broad fluvial terraces once supported oak savanna and prairies that were maintained by burning; wetter areas supported Oregon ash and black cottonwood. Today, only relict native prairie remains. The poorly drained soils derived from glaciolacustrine deposits are extensively farmed for grass seed and small grains. Grasses tolerate poor drainage and poor rooting conditions better than other crops. In addition to agriculture, the Prairie Terraces also experience the bulk of urban expansion.

The Willamette Valley physiographic province is a broad structural depression between the Cascade and Coast Ranges that extends from the Columbia River, in the north, to Cottage Grove, Oregon, in the south. The Willamette Valley is represented by broad alluvial flats separated by low hills. The majority of the alluvium was deposited by the late Pleistocene Missoula Floods. These floods occurred when glacial Lake Missoula repeatedly breached its ice dam, sending catastrophic floodwaters across the Channeled Scablands and down the Columbia River valley to the Pacific Ocean between 19,000 and 13,000 years before present. At constrictions in the Columbia River valley along the flood route, the flow of the floodwaters was temporarily impeded, causing ponding behind the narrowed flow channels. One such constriction at Kalama Gap, northwest of Portland, caused water to backflood south into the Willamette Valley as far south as Eugene. The flood waters that ponded in the Willamette Valley reached an estimated maximum height of 400 feet above mean sea level (amsl) and swept through the gap in the Tualatin Mountains at Lake Oswego northwesterly into the Tualatin Valley. The project site is located at approximately 150 to 230 feet amsl and would have been affected by these flood waters. Other flood channels were probably created by the subsequent ebb and flow of floodwaters into and out of the Tualatin Valley to the east through the "Rock Creek gap" between the Tualatin Valley and the Willamette River.

The geology of the site is described by Gannett and Caldwell (1998), where the site is mapped as Tcr-Columbia River Basalt Group (Miocene age), with layered flows of dark gray to black, locally porphyritic basalt. The unit locally includes tuffaceous sedimentary interbeds, is commonly jointed, and locally deeply weathered.

The project site sits on the western shoulder of the Coffee Lake Creek (Seely Ditch) basin. The eastern portion of the project site slopes gently down to the east toward SW 110th Avenue. The northern portion of the project site slopes gently down to the north toward SW Tooze Road. Coffee Lake Creek and associated floodplain wetlands, including a wetland mitigation site for the Boeckman Road crossing of the Coffee Lake Creek wetlands, are located east of the project site. Coffee Lake Creek is a tributary of the Willamette River, which is located approximately 1.5 miles to the south.

c. Hydrology of the site;

Hydrology to the wetlands on the site is provided by precipitation, surface runoff, and groundwater discharge from adjacent slopes. The site is located west of an isolated wetland east of SW 110th Avenue (delineated under WD 2012-0322), and further to the east is Coffee Lake Creek and the large wetland complex that includes the mitigation site for the Boeckman-Tooze Road crossing of the Coffee Lake Creek wetlands and floodplain.

There are culverts present under the driveway along 110th Avenue and to the north under Tooze Road; no culvert is present under the driveway on the south side of Tooze Road. The culvert to the west of the Tooze Road driveway is directed northeast across Tooze Road to the north side, thereby eliminating any roadside ditch inflow to the site and the road right-of-way to the north of the site.

d. Outline of any existing features including, but not limited to, structures, decks, areas previously disturbed, and existing utility locations;

There are two residences within the project site, and the structures on the property were built prior to 1980. The western residence has two outbuildings and is approached by a driveway from the northwest corner of the project site off SW Tooze Road. The eastern residence has a large horse stable and is approached by a driveway from the eastern project site boundary off SW 110th Avenue (also known as Costa Circle East).

The northern portion of the project site is generally forested, with a grassy pasture in the northeast corner. The forest extends into the central southern portion of the project site, where understory vegetation has been removed to create lawn or horse pasture. The southeast corner of the project site is also a grass horse pasture. The southwestern corner and southernmost portion of the site contain some remnant pasture areas that have become overgrown with Himalayan blackberry (*Rubus armeniacus*). The grassy pasture areas have been cleared of woody vegetation and the central portion of the property has been cleared of woody understory species. Invasive vines, including English ivy (*Hedera helix*) and evergreen traveler's joy (*Clematis vitalba*) blanket portions of the understory and climb high into many of the trees in the northern portion of the project site. Himalayan blackberry dominates much of the southern portion of the project site. Pre-settlement vegetation was likely dominated by Douglas-fir (*Pseudotsuga menziesii*).

The site is serviced by local utilities (water, electricity, cable).

e. Location of any wetlands or water bodies on the site and the location of the stream centerline and top-of-bank.

Three wetlands (two are connected by a culvert) were delineated within the project site, totaling 0.15 acre (Figure 5). There are no streams within or near the project site.

Wetland A/Roadside Ditch (0.07 acre)

Wetland A/ditch is classified as a palustrine emergent (PEM) wetland using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) and classified as a Slope wetland using the *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites: Statewide Classification and Profiles* (Adamus 2001). The wetland is in the northeast corner of the project site partially within the horse pasture and just west of the county road right-of-way. The wetland contains a roadside ditch. Hydrology is provided by surface runoff and groundwater. Soils displayed the F3 Depleted Matrix hydric soil indicator. Hydrophytic vegetation was dominated by reed canary grass (*Phalaris arundinacea*). Water in Wetland A/ditch flows north through a culvert under SW Tooze Road to a manhole that directs the piped flow to the east, crosses under the road again to the south, and discharges to the wetland mitigation site located west of Coffee Lake Creek.

Wetland B/Roadside Ditch (0.01 acre)

Wetland B/ditch slopes from south to north and runs along the west side of SW 110th Avenue to a culvert under the eastern driveway where it joins Wetland A to the north. Soils were not sampled due to the gravels present, associated with road berm. Wetland B/ditch was dominated by reed canary grass.

Flow from both Wetlands A and B and the roadside ditch enters a 24-inch culvert north under Tooze Road, which connects to a manhole. The flow is then piped to the east and then to the south of the road, past a roundabout, and outfalls to the wetland on the south side of Boeckman/Tooze Road.

Wetland C (0.07 acre)

Wetland C is a palustrine scrub-shrub (PSS) and PEM/Slope wetland near the northwest corner of the site. The wetland formed south of SW Tooze Road from groundwater discharge and surface flow from the slope. A minor amount of surface flow was observed in the wetland that infiltrates to the subsurface near the eastern wetland boundary. Soils displayed the F3 Depleted Matrix hydric soil indicator. The plant community was dominated by reed canary grass and Sitka willow (*Salix sitchensis*). Wetland C is

contained entirely within the project site but is split between the on-site tax lot and the road right-of-way (0.03/0.04 acre respectively).

No non-wetland waters were delineated within the project site. The roadside ditch contained within Wetlands A and B was vegetated and delineated as a wetland. The wetland delineation was submitted to the DSL for review and concurrence.

The wetland/upland boundaries were defined by topography, a change in plant community, and the presence or absence of hydric soils and wetland hydrology.

f. Within the area proposed to be disturbed, the location, size and species of all trees that are more than six (6) inches DBH. Trees outside the area proposed to be disturbed may be individually shown or shown as drip line with an indication of species type or types;

A tree inventory has been prepared by Morgan Holen and Associates, LLC. The results of the tree survey are shown in the Tree Preservation Plan and a Tree Report is included that inventories the trees surveyed on the site. The grove of Douglas-fir trees on the site does not meet the city's requirements for a locally significant upland forest wildlife habitat resource and is not mapped as a protected resource under the city's SROZ (Attachment A).

g. A property survey together with topography shown by contour lines prepared at two-foot vertical intervals. Five-foot vertical intervals may be allowed for steep sloped areas. The survey shall be prepared by an Oregon Registered Land Surveyor or Civil Engineer.

Figure 5 shows the 2-foot-interval topographic contours; it was prepared by an Oregon registered land surveyor at Pacific Community Design.

h. The location of the SROZ and Impact Area boundaries;

The location of the city-mapped SROZ is shown on Figure 6. Wetlands A and B had previously been mapped as part of the Coffee Lake Creek flood plain/wetlands complex for the city's SROZ mapping. The author believes that these wetlands should not be grouped with the flood plain wetlands because they are located upslope out of the flood plain and are only connected via a long storm drainage pipe; their hydrology is not driven by the high groundwater table associated with the Coffee Lake Creek flood plain and they never receive overland flow from the larger wetland complex to the east. The SROZ mapping appears to have been an error based on the road severing the connection to the larger Coffee Lake Creek flood plain/wetlands complex.

Wetlands A and B are less than 0.5 acre, the minimum size required to be a Locally Significant Wetland (LSW) under City of Wilsonville and DSL guidelines, which incorporate the Oregon Freshwater Wetland Assessment Methodology (OFWAM) prepared by DSL (Roth et al. 1996). Therefore, we suggest that Wetlands A and B should be removed from the SROZ mapping entirely. Wetland C was not mapped previously and it is also less than 0.5 acre and would likewise not meet LSW criteria.

i. A minimum of three slope cross-section measurements transecting the site, equally spaced at no more than 100-foot increments. The measurements should be made perpendicular to the stream;

Not applicable. There is no stream on or near the site. Slopes perpendicular to wetlands on the site are less than 25%.

j. A map that delineates the Metro UGMFP Title 3 Water Quality Resource Area boundary (using Metro Title 3 field observed standards);

Metro defines the Water Quality Resource Area (WQRA) as the protected water feature (including streams and Title 3 wetlands) and the vegetated corridor (buffer). While the wetlands delineated on the

site are potentially jurisdictional wetlands under DSL, they do not meet the definition of Title 3 Wetlands. Title 3 Wetlands meet any one of the following criteria:

(A) The wetland is fed by surface flows, sheet flows or precipitation, and has evidence of flooding during the growing season, and has 60 percent or greater vegetated cover, and is over one-half acre in size; or

The wetland qualifies as having "intact water quality function" under OFWAM; or

(B) The wetland is in the Flood Management Area, and has evidence of flooding during the growing season, and is five acres or more in size, and has a restricted outlet or no outlet; or

The wetland qualifies as having "intact hydrologic control function" under the OFWAM; or

(C) The wetland or a portion of the wetland is within a horizontal distance of less than ¼ mile from a water body which meets the Department of Environmental Quality (DEQ) definition of "water quality limited" water body in Oregon Administrative Rule (OAR) Chapter 340, Division 41.

Coffee Lake Creek is located approximately 0.3 mile to the east. According to the DEQ website (DEQ 2018), there was insufficient information to determine if this water body is water quality limited. In any case, the wetlands on the project site do not meet any of the criteria for LSW or Metro Title 3 wetlands.

k. A map that delineates the Goal 5 safe harbor boundary (using the standards found within the Oregon Administrative Rule OAR 660-23(1996));

Not applicable. Goal 5 safe harbor only applies to significant resources.

l. The existing site significant resource conditions shall be determined and identified by a natural resource professional; and

The wetland delineation was conducted by SWCA in 2018. Resources on the site were determined to not meet local significance criteria.

m. Current photos of site conditions shall be provided to supplement the above information.

Photographs are included in Attachment B.

2. The analysis shall include development recommendations including grading procedures, soil erosion control measures, slope stabilization measures, and methods of mitigating hydrologic impacts. For projects that affect possible wetlands, a copy of the Local Wetland Inventory (LWI) map pertaining to the site shall be provided. Notice of the proposal shall be given to the Oregon Division of State Lands and the Army Corp of Engineers.

The project team will coordinate with and obtain any necessary permits from DSL and USACE.

Based on the finding that no significant resources exist on the site, there is no SROZ on the site, and the remaining sections of the SRIR code do not apply.

Section 4.139.10, Development Review Board (DRB) Process (.01) Exceptions:

D. Map Refinement Process. *The applicant may propose to amend the SROZ boundary through a Development Review Board quasi-judicial zone change where more detailed information is provided, such as a state approved wetland delineation. The criteria for amending the SROZ are as follows:*

1. Any map refinement must be evaluated by considering the riparian corridor types contained in this ordinance.

2. Other supporting documents to be considered in evaluating a proposal to refine a map include, but are not limited to:

a. Natural Resources Inventories (LWI/RCI);

b. The Economic, Social, Environmental and Energy (ESEE) Analysis;

c. Metro Functional Plans;

d. Wilsonville Comprehensive Plan;

e. State approved wetland delineations;

f. Detailed slope analysis

3. An SRIR must be prepared by the applicant in conformance with the provisions of this Section.

4. The Hearing Body (including City Council) may amend the Significant Resource Overlay Zone (in or out) upon making a determination that the land area in question is or is not a significant resource. The criteria for determining that land is significant shall be based on finding that the site area has at least one rating of "high" using the function criteria listed in the Natural Resource Function Rating Matrices.

This SRIR has addressed the applicable requirements of the city's code, and the refined absence of the SROZ is shown on Figure 5. Therefore, approval of a map refinement to remove the SROZ mapping from the site is requested.

Prepared By

C. Mirth Walker, PWS
Senior Wetland Scientist

Figures

Figure 1. Site location map.
Figure 2. Tax lot map (ORmap paper base).
Figure 3. Tax lot map (Metro RLIS digital base).
Figure 4. Soil map.
Figure 5. Existing conditions wetland delineation map (no SROZ present).
Figure 6. City of Wilsonville's mapped SROZ site plan.
Figure 7. Proposed site development plan.

Attachments

A. City of Wilsonville Natural Resource Inventory Maps
B. Representative Site Photographs

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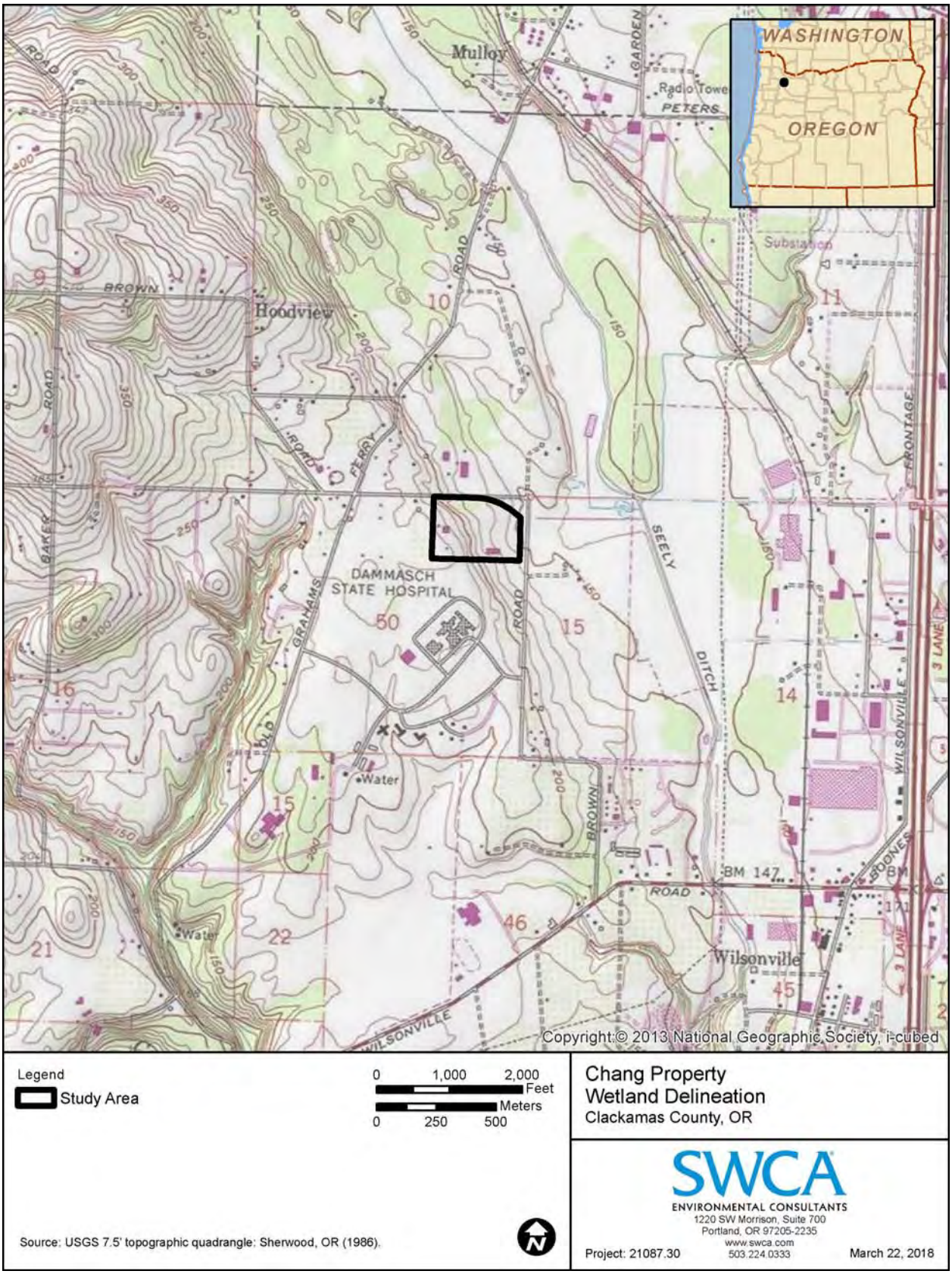


Figure 1. Site location map.

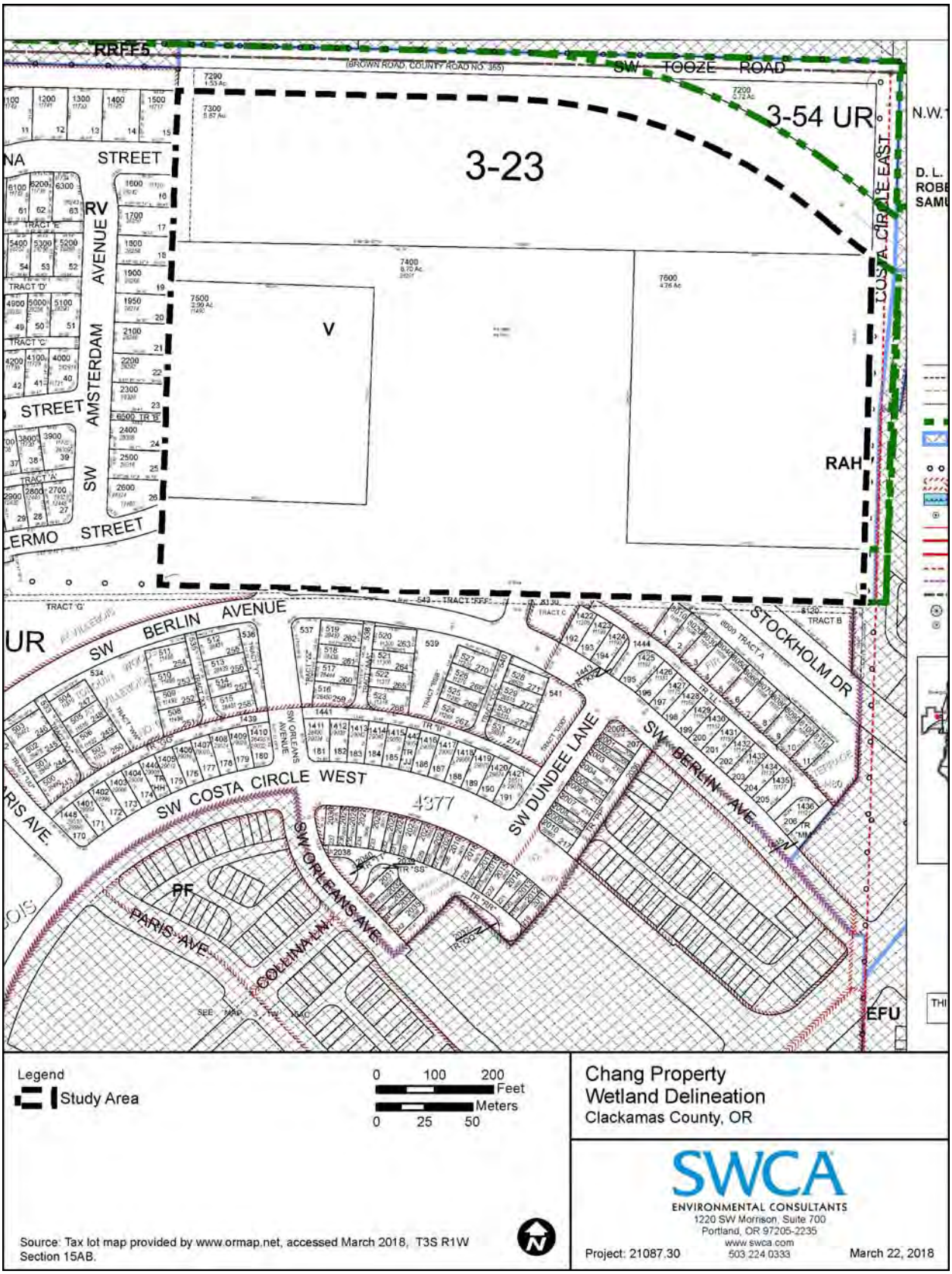


Figure 2. Tax lot map (ORmap paper base).

Figure 3. Tax Lot map (Metro RLIS aerial base).

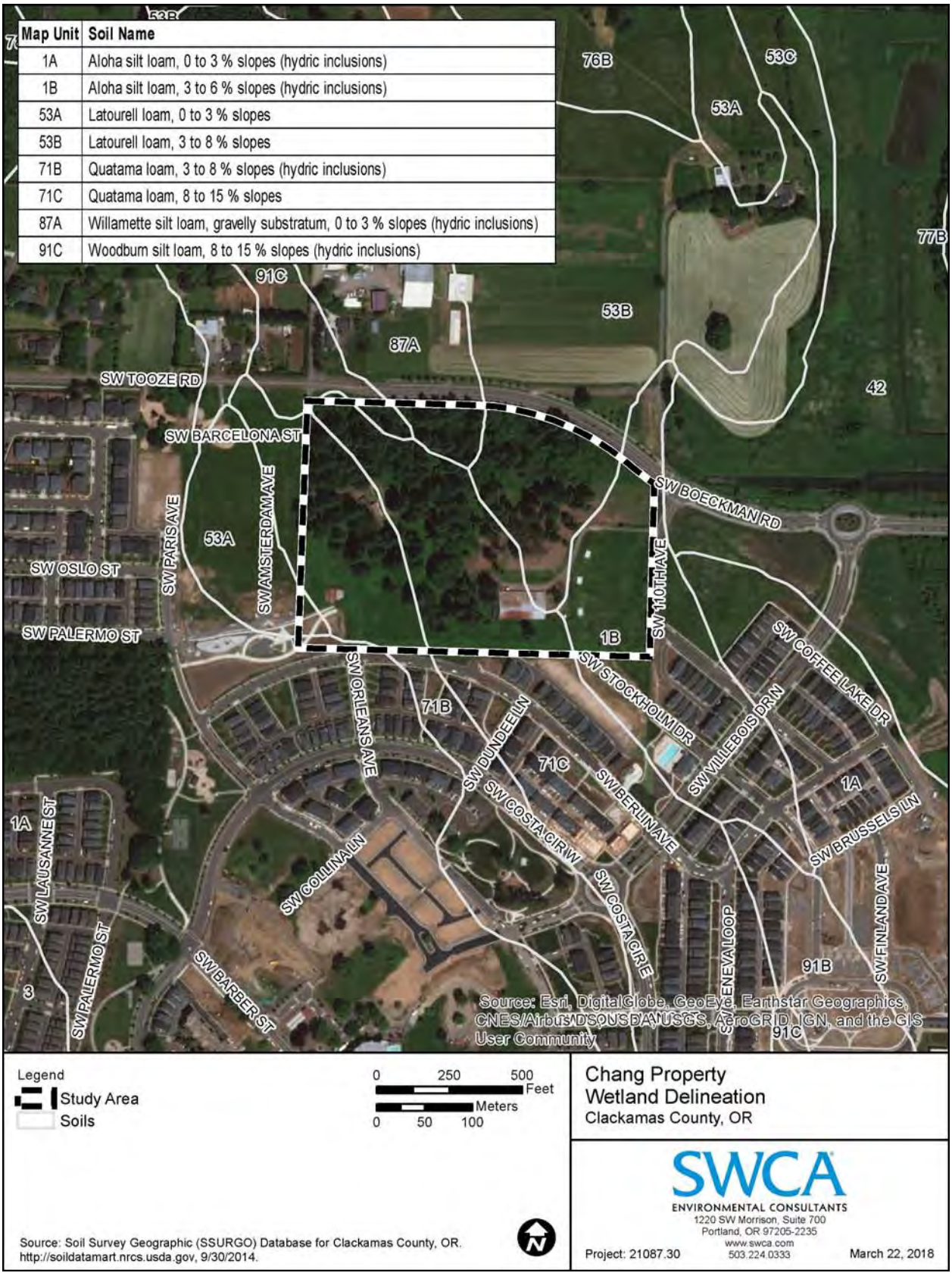


Figure 4. Soil map.

SW TOOZE RD

PLOT 5

PLOT 6

WETLAND C
TOTAL = 3,155 SF / 0.07 ACRES
(WITHIN TAX LOT 7300 = 1,269 SF / 0.03 ACRES)
(WITHIN ROW = 1,886 SF / 0.04 ACRES)
SURVEYED 3/19/18

EXISTING STORMWATER FACILITY

EXISTING DRIVEWAY

TAX MAP: 3S1W15AB
TAX LOT: 7300

EXISTING 24" PLASTIC CULVERT
CONNECTING TO EXISTING STORM SYSTEM

WETLAND A
3,132 SF / 0.07 ACRES
SURVEYED 3/19/18

PLOT 2

PLOT 3

PLOT 1

TAX MAP: 3S1W15AB
TAX LOT: 7400

EXISTING DRIVEWAY

EXISTING 15" CONCRETE CULVERT

WETLAND B
492 SF / 0.01 ACRES
SURVEYED 3/19/18

TAX MAP: 3S1W15AB
TAX LOT: 7500

PLOT 4

TAX MAP: 3S1W15AB
TAX LOT: 7600

SW 110TH AVE

EXISTING STORMWATER FACILITY

STUDY AREA BOUNDARY

EXISTING BUILDING, TYP.

WETLAND AND WATER BOUNDARIES AND SAMPLE PLOT LOCATIONS PROFESSIONALLY LAND SURVEYED BY PACIFIC COMMUNITY DESIGN. HORIZONTAL ACCURACY +/- 0.1 FOOT.

WETLAND AND WATER BOUNDARIES DELINEATED BY SWCA ENVIRONMENTAL CONSULTANTS - 3/19/18

WETLAND AREA = 0.15 ACRES

SCALE
0 50 100
1 INCH = 100 FEET

N

N:\proj\395-079\09 Drawings\03 Planning\Exhibits - Wetlands\395079 Wetland Delineation.dwg - SHEET: Layout1 May 03, 2018 - 8:24am jjk

Pacific Community Design
12564 SW Main Street
Tigard, OR 97223
[T] 503-941-9484

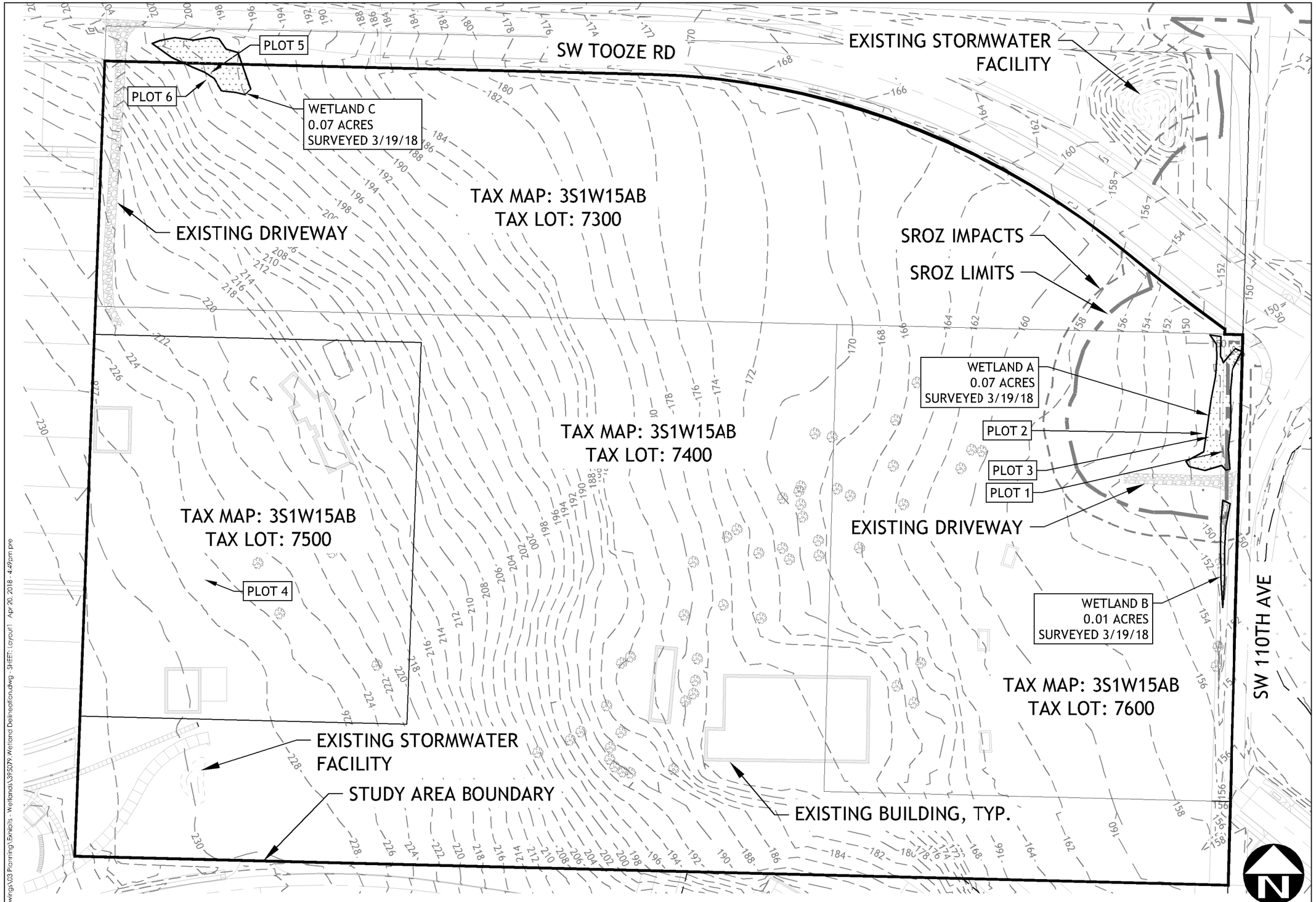
DATE: 5/2/2018

REVISIONS
NO. DATE DESCRIPTION

CHANG PROPERTY
WETLAND
DELINEATION

PROJECT NO.: 395-079
TYPE: PLANNING
REVIEWED BY: JJK

FIGURE 5



WETLAND AND WATER BOUNDARIES AND SAMPLE PLOT LOCATIONS PR0FESSIONALLY LAND SURVEYED BY PACIFIC COMMUNITY DESIGN. HORIZONTAL ACCURACY +/- 0.1 FOOT.

WETLAND AND WATER BOUNDARIES DELINEATED BY SWCA ENVIRONMENTAL CONSULTANTS - 3/19/18

WETLAND AREA = 0.15 ACRES

Pacific Community Design
12564 SW Main Street
Tigard, OR 97223
[T] 503-941-9484

DATE: 3/28/2018

REVISIONS

NO.	DATE	DESCRIPTION

CHANG PROPERTY
WETLAND
DELINEATION

WITH CITY'S MAPPED SROZ

FIGURE 6

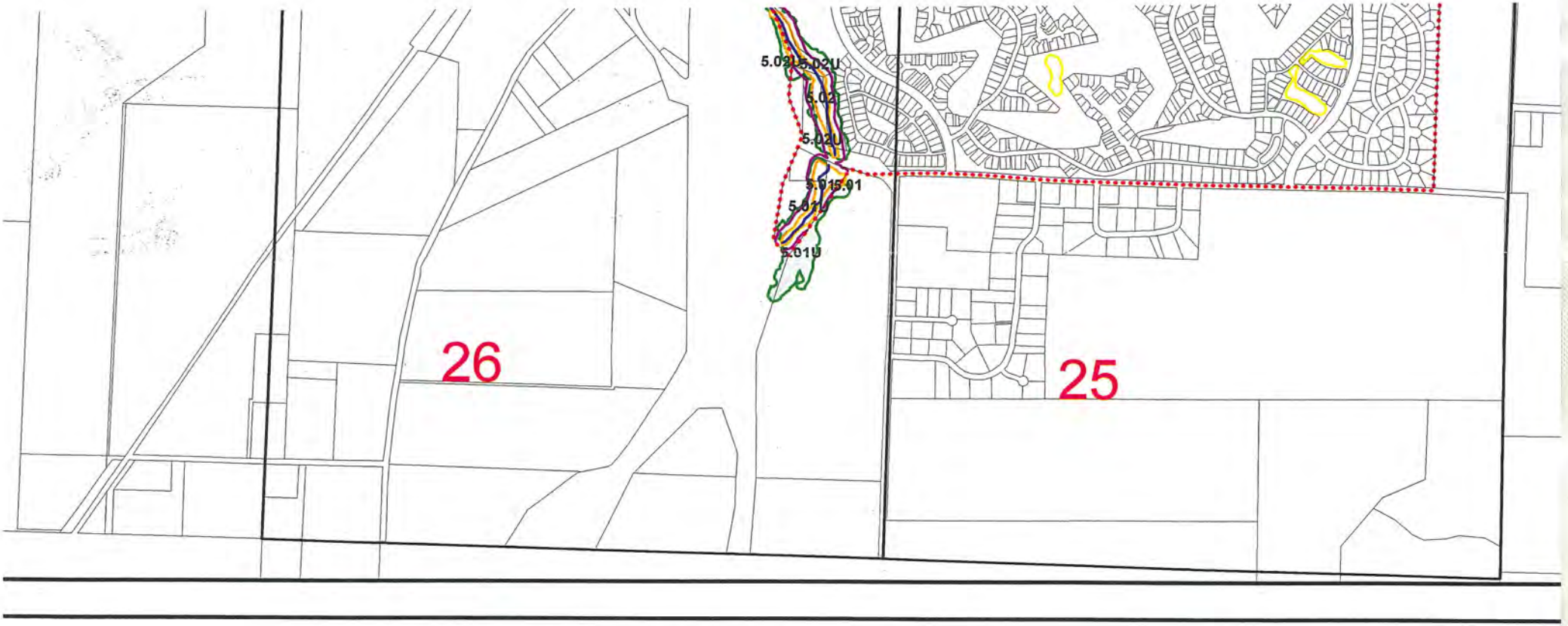
PROJECT NO.: 395-079
TYPE: PLANNING
REVIEWED BY: JJK

EX1

Figure 7. Proposed site development plan.

ATTACHMENT A

City of Wilsonville's Natural Resource Inventory Maps

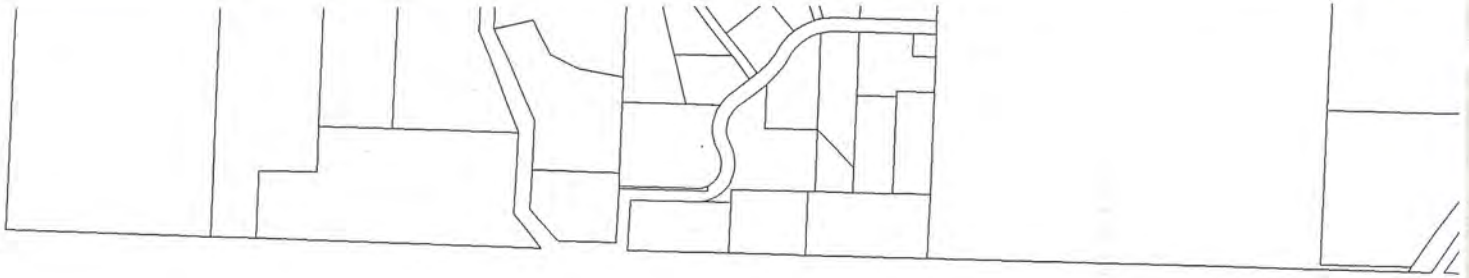


City of Wilsonville
Natural Resource Inventory
Index Map

0 Feet

Information shown o
purposes only and al
approximate. In all c
determines resource
unmapped resources
there may be mapped
on this map that may
verification.

City of WILSONVILLE in OREGON



Legend

- 13 — Sections
- Property Line
- Urban Reserves
- City Limits

Streams

- INTERMITTENT
- PERENNIAL
- Significant Wetlands
- Non-Significant Wetlands
- 50' Natural Resource Area Setback (75' for the Willamette)

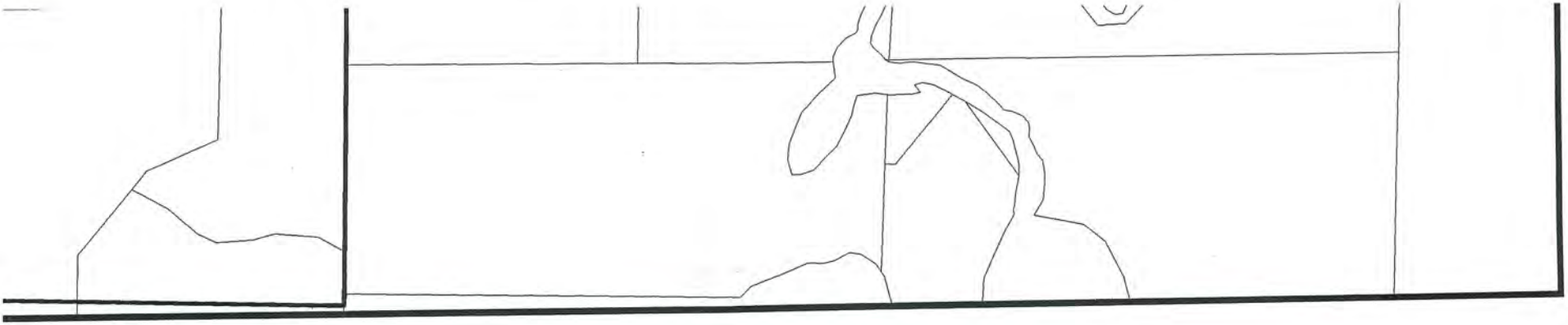
Wildlife Habitat Resource Area

- Non-Significant
- Significant

N

800 0 800 Feet

1:9600



Information shown on this map is for planning purposes only and all resource boundaries are approximate. In all cases actual field condition determines resource boundaries. There may be unmapped resources within the subject area and there may be mapped resources boundaries shown on this map that may be adjusted after field verification.

Fishman Environmental Services, LLC

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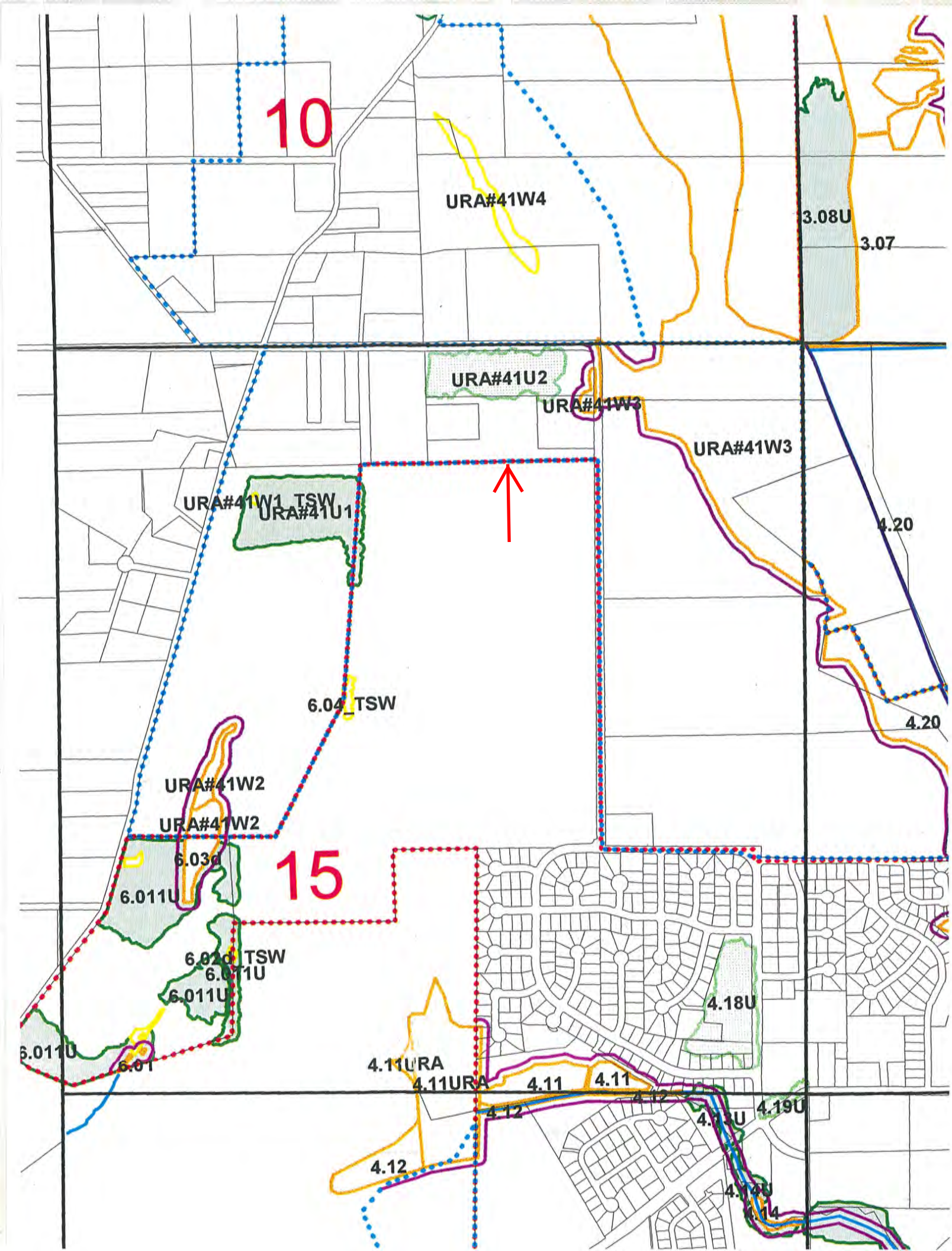
10
URA#41W4
3.08U
3.07
URA#41U2
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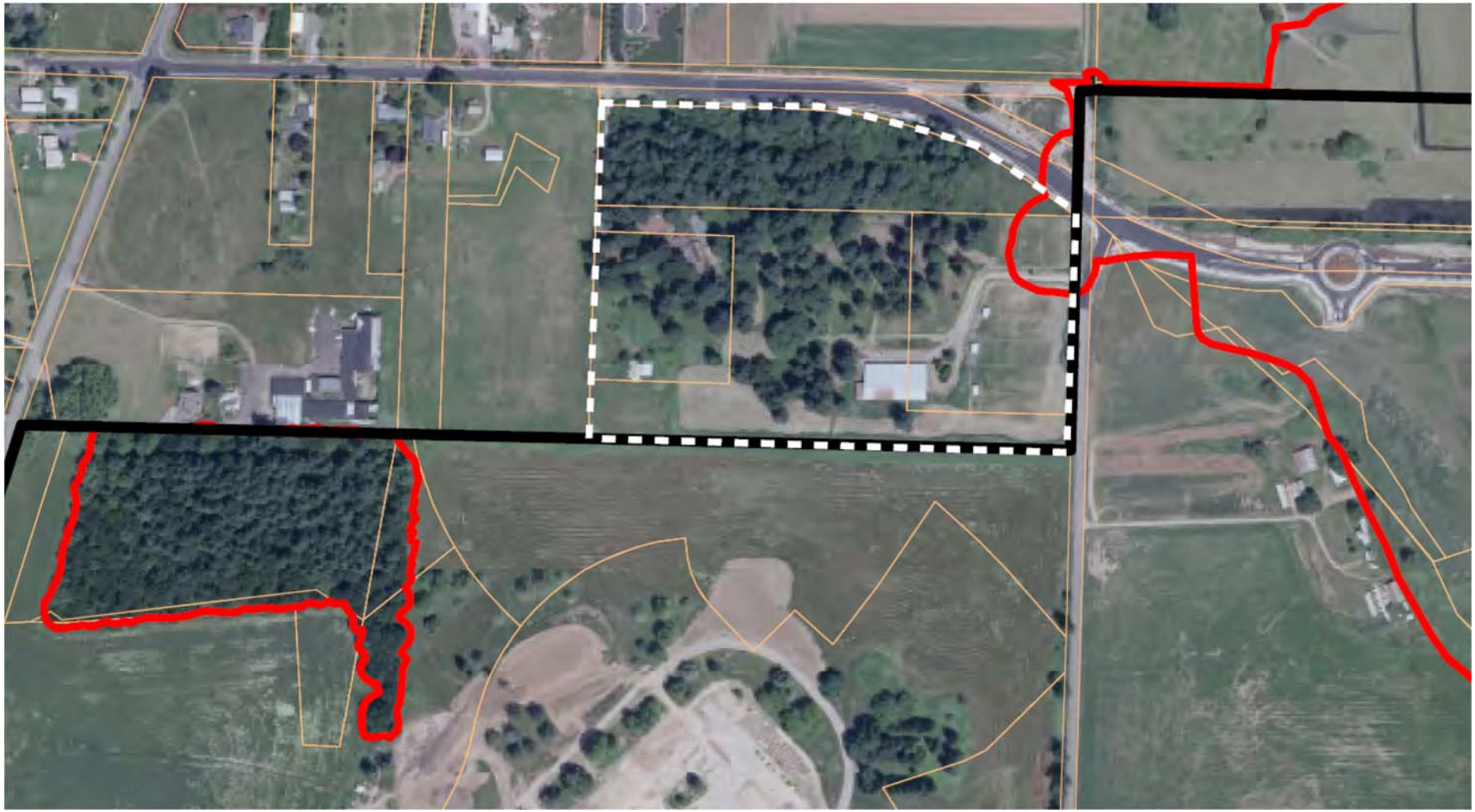
URA#41U1
4.20
6.04_TSW
4.20
URA#41W2
URA#41W2
6.03d
15
6.011U
6.02d_TSW
6.011U
6.011U
6.01
4.18U
4.11URA
4.11URA
4.11
4.11
4.12
4.19U
4.12
4.12
4.14



City of Wilsonville Significant Resource Overlay Zone 4/29/2009

ATTACHMENT B

Representative Site Photographs

Photopoint 1. Wetland Plot 1 (all photos taken March 15, 2018).

Photopoint 2. Wetland A looking south.

Photopoint 3. Upland Plot 2 looking west.

Photopoint 4. Wetland A Plot 3.

Photopoint 5. Wetland A with Plots 2 and 3 looking north.

Photopoint 6. Wetland B looking southwest.

Photopoint 7. Wetland B looking north.

Photopoint 8. Horse pasture looking west.

Photopoint 9. Horse pasture looking south. Horse stable on right.

Photopoint 10. English hawthorn and shiny-leaf geranium looking west.

Photopoint 11. Path between pastures looking north.

Photopoint 12. Douglas-fir upland looking north.

Photopoint 13. Douglas-fir upland looking southwest.

Photopoint 14. Wetland C looking southwest.

Photopoint 15. Wetland C Plot 5 looking northeast.

Photopoint 16. Upland Plot 6 looking southwest.

Photopoint 17. Wetland C looking west.

Photopoint 18. Upland Plot 4 looking northeast.

Photopoint 19. Outbuilding and blackberries.

Photopoint 20. Residence looking northwest.