

CITY OF KIRKLAND
123 FIFTH AVENUE
KIRKLAND, WA 98033-6189
425.587.3225



Mitigated Determination of Nonsignificance

CASE #: SEP12-00567

DATE ISSUED: May 6, 2013

DESCRIPTION OF PROPOSAL: Proposal to subdivide one parcel of 6.38 acres into 35 lots and a planned unit development in a RSX 7.2 zone. Access to the property will be from an extension of 128th Ave NE from NE 75th ST to NE 80th ST.

APPLICANT: Mike Smith

PROJECT LOCATION: 7707 128TH AVE NE

LEAD AGENCY IS THE CITY OF KIRKLAND

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21.030 (2) (c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

This determination is issued under 197-11-340 (2); the lead agency will not act on this proposal for 14 days from the date above. Comments must be submitted by 5:00 p.m. on May 20, 2013

Responsible Official:

Eric Shields, Director
Department of Planning and Community Development
425-587-3225

5-6-2013
Date

Address:

City of Kirkland
123 Fifth Avenue
Kirkland, WA 98033-6189

You may appeal this determination to the Planning Department at Kirkland City Hall, 123 Fifth Avenue, Kirkland, WA 98033 no later than 5:00 p.m., May 20, 2013 by WRITTEN NOTICE OF APPEAL.

You should be prepared to make specific factual objections. Contact the Planning Department at 425-587-3225 to read or ask about the procedures for SEPA appeals.

Please reference case # SEP12-00567

Publish in the Seattle Times (date):

May 7, 2013

Owner: Toll Bros, Inc

MITIGATING MEASURES INCORPORATED INTO THE PROPOSAL:

1. Install a sidewalk on the east side of the 128th Avenue NE rather than the west side between NE 80th Street and NE 75th Street.
2. Installation of the RRFB at the intersection of NE 80th Street /128th Avenue NE.
3. Install a STOP sign on 128th Avenue NE at NE 75th Street.
4. Install a STOP sign on the south leg of the existing intersection of NE 75th Street/128th Avenue NE.
5. Complete the two small missing sections of sidewalks at the intersection of NE 80th Street/128th Avenue NE with the installation of the RRFB at the NE 80th ST crosswalk.

cc: Case # SUB12-00560

Distributed By:

Date:

5/6/13

Distribute this form with a copy of the checklist to the following:

Attn: Environmental Reviewer
Muckleshoot Indian Tribe Fisheries Division
39015 172nd Avenue SE
Auburn, WA 98092

Director of Support Services Center
Lake Washington School District No. 414
PO Box 97039
Redmond, WA 98073-9739

David B. Johnson and Lillian Cruz
Livengood, Fitzgerald and Alskog PLLC
PO Box 908
Kirkland WA 98083-0908

Owner: Toll Bros, Inc

WASHINGTON FORESTRY CONSULTANTS, INC.

FORESTRY AND VEGETATION MANAGEMENT SPECIALISTS



W F C I

360/943-1723
FAX 360/943-4128

1919 Yelm Hwy SE, Suite C
Olympia, WA 98501

- Final Tree Protection Plan-

CAMWEST C&G PARTNERS

7707 128th Avenue NE
Kirkland, Washington

Prepared for: CamWest Development Inc.

Prepared by: Washington Forestry Consultants, Inc.

Date: January 17, 2013

The project proponent is planning to construct a new 35 lot subdivision on 6.38 acres at 7707 128th Avenue NE in Kirkland, WA. The proponent has retained WFCI to:

- Evaluate all trees on the site pursuant to the requirements of Chapter 95.30 of the Kirkland Tree Management and Required Landscaping.
- Make recommendations for retention of suitable trees in open space or tree tract areas, along with required protection and cultural measures.
- Complete the required minimum stocking and tree replacement calculations.

Observations

Methodology

WFCI has evaluated all trees 6 inches diameter at breast height (DBH) and larger and assessed their potential to be incorporated into the new project. The tree evaluation phase used methodology developed by Matheny and Clark (1998)¹.

In all cases, the overall appearance of the tree was considered relative to its ability to add value to the site and the scale of the tree and its proximity to other developments is considered.

¹ Matheny, Nelda and James R. Clark. *Trees and Development: A Technical Guide to Preservation of Trees During Land Development*. International Society of Arboriculture, Champaign, IL 1998

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The potential for incorporation into the project design is evaluated, as well as potential site plan modifications that may allow the tree(s) to be protected in the development.

Trees that are preserved in a development must be carefully selected to make sure that they can survive construction impacts, adapt to a new environment and perform well in the landscape. Healthy, vigorous trees are better able to tolerate impacts such as root injury, changes in soils moisture regimes, and soil compaction than are low vigor trees.

Structural characteristics are also important in assessing suitability. Trees with significant decay and other structural defects that cannot be treated are likely to fail. Such trees should not be preserved in areas where damage to people or property could occur.

Trees that have developed in a forest stand are adapted to the close, dense conditions found in such stands. When surrounding trees are removed during clearing and grading, the remaining trees are exposed to extremes in wind, temperature, solar radiation that causes sunscald, and other influences. Young, vigorous trees with well-developed crowns are best able to adapt to these changing site conditions.

Site History

Most of the subject parcel was cleared previously and one building and 5 radio antenna's were constructed. The existing trees are a mix of remnants for the native stand, and native and ornamental tree species that have naturally seeded into the perimeter of the site.

The tree stocking is irregular with tightly clustered trees and open areas. The largest numbers of trees are along the south parcel boundary. The majority of the site is a maintained grass field.

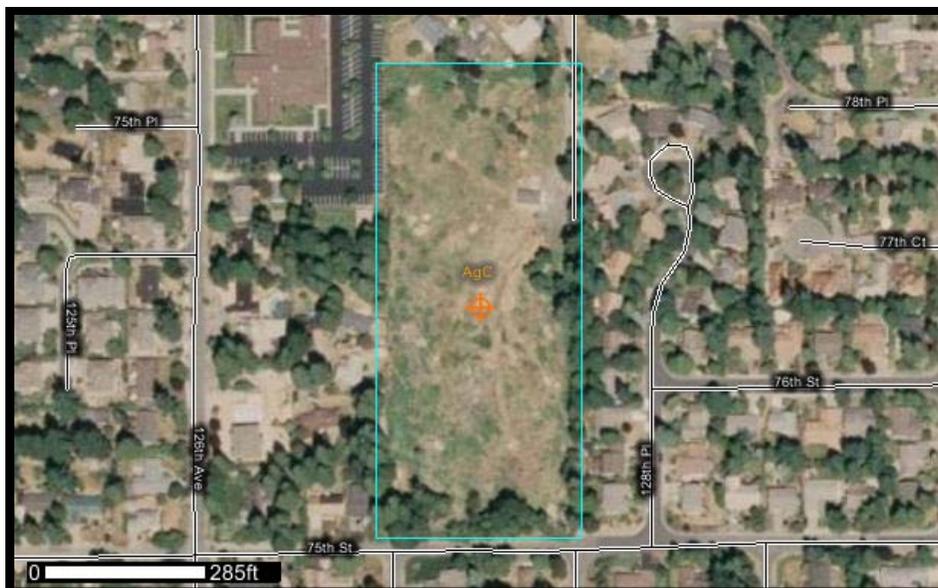
The site is bordered by single family homes or city streets on all sides. Access is via a gravel road from NE 80th Street.

Soil Depth and Productivity

According to the King County Soil Survey the only soil type on the site is the Alderwood gravelly sandy loam, a moderately deep, moderately well drained soil found on glacial till plains. It is formed in ablation till overlying basal till. A weakly cemented hardpan is at a depth of 20 to 40 inches. Permeability is moderately rapid above the hardpan and very slow in the pan. Available water capacity is low.

A perched seasonal high water table is at a depth of 18-36 inches from November to March. The effective rooting depth for trees is 20-40 inches. The potential for windthrow of trees is *moderate* under normal conditions. New trees require irrigation for establishment.

In areas where grading brings the hardpan nearer to the surface, the hardpan must be fractured under new trees to provide soil volume for root development and to improve drainage around the tree.



AgC- Alderwood gravelly sandy loam

Existing Tree Conditions

There is only one forest and one non-forest cover type for the purposes of description.

Type I – The tree stocking is patchy or the trees occur as isolated individuals or small clusters. The dominant tree species on the site is western redcedar (*Thuja plicata*). Other species on or immediately adjacent to the site include Douglas-fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), bigleaf maple (*Acer macrophyllum*), Scouler's willow (*Salix scouleriana*), bitter cherry (*Prunus emarginata*), apple (*Malus spp.*), cottonwood (*Populus trichocarpa*), flowering plum (*Prunus cerasifera* 'Thundercloud'), Japanese maple (*Acer palmatum*), Pacific madrone (*Arbutus menziesii*), Pacific dogwood (*Cornus nuttallii*), red alder (*Alnus rubra*), Scotch pine (*Pinus sylvestris*) and western hemlock (*Tsuga heterophylla*).

The tree diameters range from 2 to 42 inches diameter at breast height (DBH). There are 122 trees on the subject parcel. In addition, we evaluated 15 off-site trees with canopies that overhang the subject parcel as required by the code. A complete tree list is provided in Appendix IV.

The condition of the trees ranges from good to dead. The tree issues included dead tops, trees that were in decline, trees with decay in the lower stem, or codominant stems. In general, trees are rated to be in 'fair' and above condition have the potential to be retained when only their physical condition is considered. Trees rated poor or very poor are not suitable for retention due to poor health or defects that would make them hazardous to new targets in the subdivision.

The understory shrub cover in the vicinity of the trees includes grasses, blackberry, and broadleaf weed species. Only a small amount of salal, western hazelnut, and

Oregongrape, the normal native understory shrub associates for the Alderwood soil type, were found.

Off-Site Impacts

The potential is low that tree removal on this site will impact the 15 trees that border the project, or any other trees on surrounding properties.

Discussion

Potential for Tree Retention

Just over 60% of the trees on the site (75 out of 122) have the potential to be saved and be long-term trees when only tree health is considered. The current site plan will require removal of 52 of the healthy trees because they are within the footprints of the improvements, or would be severely impacted by grade changes. Forty-seven trees would be removed because they are structurally defective or in poor health. Twenty-three trees are proposed to be retained. These 23 trees are in 2 tree tracts in the south end of the project and on the backs of four lots. Table 1 provides a summary of the proposed tree retention and removal by tree condition class.

Table 1. List of on Site Trees by Condition.

Tree Condition Class	Total # of Trees	# of Trees to be Saved	# of Trees to Remove
Good	31	11	20
Fair	44	12	32
Poor	33	0	33
Very Poor	13	0	13
Dead	1	0	1
Sum	122	23	99

The tree tract A on the south end of the project has eight save trees. Tract G has ten save trees. The remaining five trees are located on the backs of lots 1, 2 and 3. All other defective or unhealthy trees in the tree tracts should be selectively removed during the logging phase of the project.

Minimum Density Calculations

The City of Kirkland's *Tree Management and Required Landscaping* (Chapter 95) requires that 30 units per acre of existing trees be retained in the buildable area of the site. The buildable area excludes public rights-of-ways. If suitable trees are not retained in tree protection areas, then trees must be planted to achieve the minimum density requirement.

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The following is a summary of the estimated tree density planned for retention:

Total acreage	6.38 acres
Right-of-ways	<u>0.95 acres</u>
Buildable Area	<u>5.43 acres</u>
Minimum Density Required: (30 units/acre x 5.43 acres)	162.9 Tree Units
Planned Tree Retention:	
Backs of Lots	29.0 Tree Units
Tree Retention Areas	<u>77.0 Tree Units</u>
Total Tree Units-To be Saved	106.0 Tree Units
Shortfall of Tree Retention	56.9 Tree Units

Planned tree retention falls short of the minimum density requirement by 56.9 tree units. At least 57 trees (6+ ft. tall conifers or 2 inch plus deciduous trees) must be planted to meet the minimum density requirement.

Recommendations

Tree Protection Measures

The locations of the tree tracts are illustrated in Appendix III. Trees to be saved must be protected during construction by temporary chain-link fencing (Appendix V), located at the edge of the critical root zone (CRZ). The individual CRZ are a radius 5 ft. outside the dripline of the tree, unless otherwise delineated by WFCI. Highly visible signs spaced no further than 15 feet along the entirety of the tree fence. Said sign must be approved by the Planning Official and shall state at a minimum "Tree Protection Area, Entrance Prohibited" and provide the City phone number for code enforcement to report violations.

No irrigation lines, trenches, or other utilities should be installed within the CRZ. Cuts or fills should impact no more than 20% of a tree's root system. If topsoil is added to the root zone of a protected tree, the depth should not exceed 2 inches of a sandy loam or loamy fine sand topsoil and should not cover more than 20% of the root system.

If roots are encountered outside the CRZ during construction, they should be cut cleanly with a saw and covered immediately with moist soil. Noxious vegetation within the critical root zone should be removed by hand. If a proposed save tree must be impacting by grading or fills, then the tree should be re-evaluated by WFCI to determine if the tree can be saved with mitigating measures, or if the tree should be removed.

Pruning and Thinning

All trees to be saved should have their crowns raised to provide a minimum of 8 feet of ground clearance over sidewalks and landscape areas, 15 feet over parking lots or streets,

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and at least 10 feet of building clearance. This pruning should be done according to the ANSI A300 standards for pruning, and be completed by an International Society of Arboriculture Certified Arborist[®], or be supervised by a Certified Arborist[®].

Tree Planting

In addition to street trees and other required landscaping, 57 trees need to be planted to meet the minimum stocking requirement of the tree protection ordinance.

It is recommended that the trees be a mixture of conifer and deciduous trees and be planted in gaps in the tree tract and on lots. The following is a summary of the recommended tree replacement planting:

Table 2. Recommended trees for replacement.

Species	Location	Size	# Trees	Installed Cost
Western redcedar	Tree Tract	6-7'	17	\$3,000
Douglas-fir	Tree Tract	6-7'	8	1,400
Western redcedar	Lot Backs	6-7'	19	2,450
Deciduous Trees*	Lot Backs	2" Caliper	13	3,705
			57	\$11,570

* Common names of recommended species: David's maple, Japanese Stewartia, spire cherry, Kousa dogwood, paperbark maple, Redmond linden, ivory silk Japanese tree lilac, red Cascade Mt. ash, and *Rustica rubra saucer magnolia*;

The tree replacement plan recommends the use of western redcedar, a durable tree that is attractive, low maintenance, and resistant to many insect and disease problems. This species also has weathered our ice and snow storms well. It is well-adapted to the Alderwood soil type.

In the tree tract, 25 conifers are recommended to be planted on 12 ft. centers among the existing trees. The balance of the tree planting should be done as 1-2 trees per lot using conifers and small-scale deciduous trees. I have made some recommendations for deciduous tree species in the Table 1 footnotes.

This tree planting plan should be illustrated on the landscape plan. All trees should be planted according to the City of Kirkland and industry standards. On this site, if the hardpan is near the surface, then it should be fractured under all planted trees to facilitate drainage in improved root zone. The hardpan is compacted glacial till and could be pulverized and mixed with the overburden and organics and reused onsite.

The projected installed cost of the 57 replacement trees is \$11,570.

Conclusions - Timeline for Activity

1. Consider retention of 18 trees in two tree tracts and 5 trees on the back of three lots.

2. Heavily flag and stake the north perimeter of the tree tract areas.
3. Contact WFCI to attend the pre-construction conference to discuss tree protection issues. WFCI can then inspect the planned locations of the tree protection fences and adjust the location if necessary. We will clearly mark all poor quality trees and edge trees that need to be removed from the tree tract areas at this time.
4. Complete all necessary pruning of save trees prior to installation of the tree protection fences. Contact WFCI to meet with the pruning contractor if necessary.
5. Complete logging of buildable area and selective tree removal of poor quality trees from the tree tract.
6. Install the tree protection fences around the tree tract as shown on the final tree protection plan.
7. Complete clearing, and grading.
8. Maintain all tree protection fences throughout construction.
9. If any unplanned construction activity will impact a 'save' tree, contact WFCI prior to the impact. WFCI can assess the proposed impact and recommend cultural care, mitigation, or removal.
10. Conduct an annual tree evaluation to determine short-and long-term effects of site changes on protected trees. Provide additional cultural care as needed.

Response to City's Concerns

4 a. *Indicate ALL existing significant trees on the property AND off-site trees on the adjacent properties if the branches extend over the property line (some may be missing?)(As shown in Appendix II amp show the unhealthy trees on and off site.) It will be easier for the inspector at grading phase. It's OK to fade of ghost in site trees intended to be removed. Use a different symbol if you wish to indicate a tree is in poor condition, but they must be shown.*

WFCI Response: This item will be done by Blueline Group to correct the grading plan.

b. *Indicate the tree protection fence locations (called the Limit of Disturbance, or LOD) for trees to be saved off-site trees. It's preferred to fence trees as a group and it will be more effective.*

WFCI Response: Tree protection fences for off-site trees were added to the site plan in Appendix III. Most trees off site were single trees but trees were grouped together where applicable.

c. *Review the grading near the east property line property line. The applicant's arborist must add special instructions to protect the off-site trees if the east rockery wall shown to be built within the LOD of the trees.*

WFCI Response: The grading along the eastern property line will be cut between 2 and 4 feet around off-site trees. When the grade is cut in for the rockery WFCI should be present on site to provide instructions for root pruning of trees if any are

encountered. See the 'Tree Protection Measures' section on page 5 for further clarification.

d. Review the proposed retention of #105. It's currently shaded by adjacent large cedars and is not likely to tolerate being 'released' when all the surrounding trees are removed.

WFCI Response: Tree #105 was identified as a thirteen inch western red cedar in good condition. Western red cedar is a shade tolerant species that grows in the understory of our native forest stands. Because it is shade tolerant tree and a climax forest species, it will respond to release from the other trees and grow normally. After release the tree will thrive in the newly open growing space. This tree will develop into a quality, long term landscape tree.

e. Review and expand the LOD around the southeast group of conifers #70-77. Otherwise the applicant's arborist needs to provide instructions and be on site to monitor root pruning.

WFCI Response: The grading in the vicinity of trees #70-77 appears to be a 0 to 2 foot fill. Trees tolerate soil fill better than a cut. That being said, the fill should be limited to less than 20% of the area of the critical root zone of the trees. Fill of less than 2-3 inches in depth is not considered to be harmful to a healthy tree.

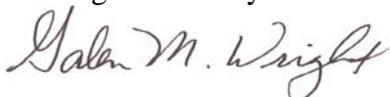
Summary

There are a total of 122 trees within the project site. Sixty percent (75) are healthy trees that could be long-term trees if protected. Due to extensive grading required for the project, 23 trees are proposed to be saved in two tree tracts and on the backs of three lots.

The tree protection ordinance requires that a minimum of 162.9 tree units be retained or planted on site. This proposed plan retains 106 tree units in 23 trees. This falls short of the minimum density requirement by 56.9 tree units. A total of 57 trees are proposed to be planted in the tree tract areas and on lots to meet the minimum density requirements of the ordinance. The projected cost of this tree replacement plan is \$11,570.

Respectfully submitted,

Washington Forestry Consultants, Inc.



Galen M. Wright, ACF, ASCA
Board Certified Master Arborist No. PN-0129
Certified Forester No. 44

attachment: appendices

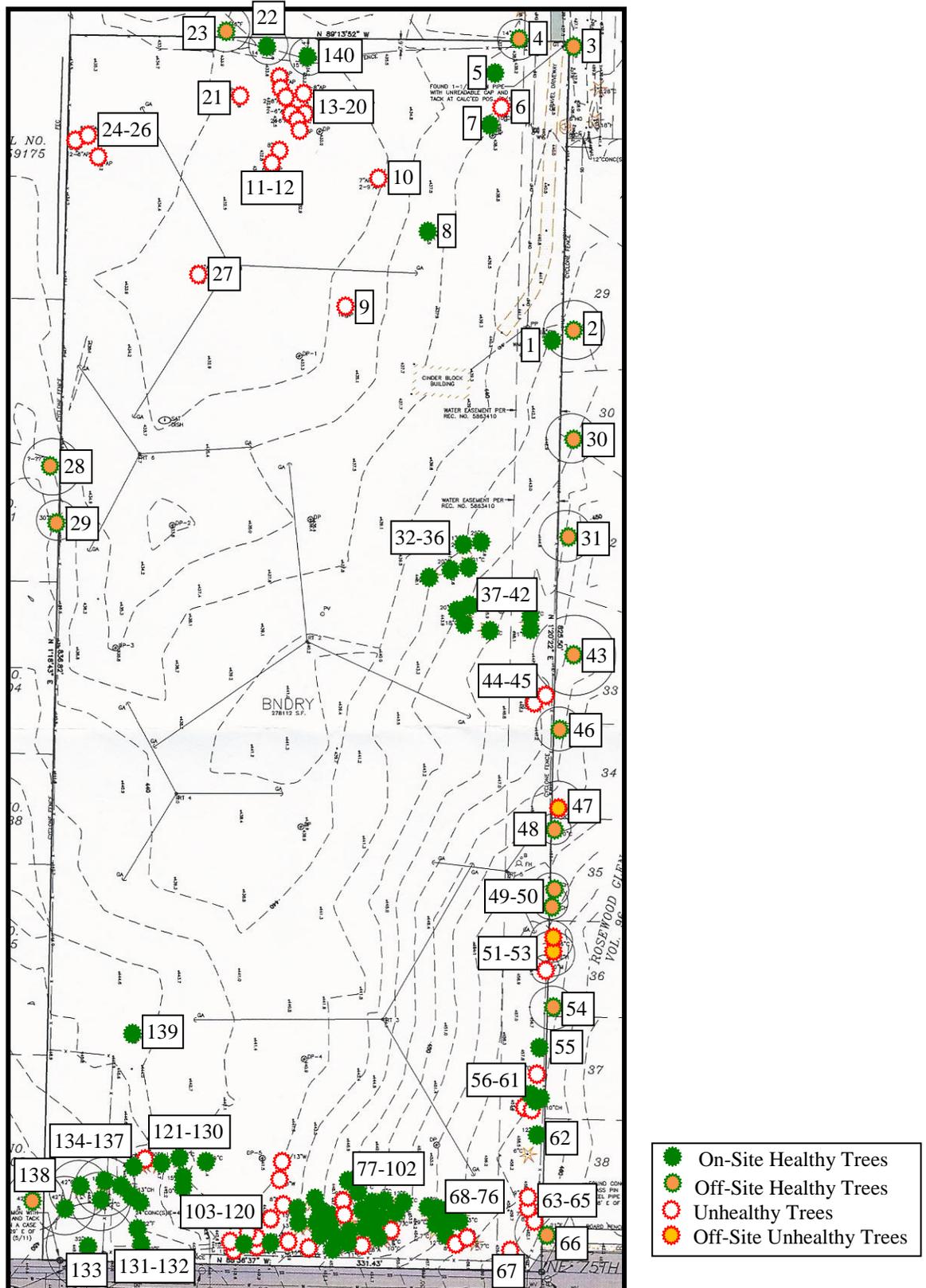
APPENDIX I

CamWest C&G Partners Site – Existing Conditions Aerial Photo (King iMap - 2007)



— Project & Type Boundary

APPENDIX II Map of Trees by Condition (Healthy and Unhealthy)



APPENDIX III Proposed Site Plan With Proposed Tree Retention Areas



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APPENDIX IV List of Trees on Site

Tree #	Species	DBH (in.)	Condition	Tree Potential to Save*	Project Plan to Save/Remove	Tree Units for Save Trees	Minimum Root Protection Zone if Saved (ft.)	Notes
1	Cottonwood	20	Fair	No	Remove (H)**		15	some root damage from mowing - poor species
2	Western Red Cedar	24	Fair	--	Save	--	12	off site, no tag
3	Cottonwood	18	Fair	--	Save	--	10	off site, no tag
4	Japanese Maple	10	Fair	--	Save	--	6	off site, no tag
5	Douglas-fir	24	Good	Yes	Remove (F)***		15	
6	Cherry	8	Very Poor	No	Remove (H)			
7	Cherry	6-8	Fair	Yes	Remove (F)		6	5 stems
8	Western Hemlock	14	Fair	Yes	Remove (F)		8	multi-top
9	Apple	6	Very Poor	No	Remove (H)			
10	Apple	6-7	Poor	No	Remove (H)			3 stems
11	Apple	4-6	Poor	No	Remove (H)			5 stems
12	Apple	3-5	Poor	No	Remove (H)			5 stems
13	Apple	6	Poor	No	Remove (H)			
14	Apple	6	Poor	No	Remove (H)			
15	Apple	6	Poor	No	Remove (H)			
16	Apple	6,7	Poor	No	Remove (H)			
17	Apple	3-5	Poor	No	Remove (H)			
18	Apple	8	Poor	No	Remove (H)			
19	Apple	6	Poor	No	Remove (H)			
20	Apple	3-6	Poor	No	Remove (H)			
21	Apple	5,7	Poor	No	Remove (H)			
22	Flowering Plum	5-7	Fair	Yes	Remove (F)		6	behind fence, no tag
23	Grand Fir	26	Fair	Yes	Save		18	off site, no tag
24	Apple	4-5	Poor	No	Remove (H)			5 stems
25	Apple	4-6	Poor	No	Remove (H)			
26	Apple	6	Poor	No	Remove (H)			
27	Apple	2-6	Poor	No	Remove (H)			
28	Cherry	12,14	Fair	--	Save	--	10	off site, no tag
29	Western Red Cedar	28	Fair	--	Save	--	15	off site, no tag
30	Western Red Cedar	20,22	Fair	--	Save	--	12	off site, no tag

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Tree #	Species	DBH (in.)	Condition	Tree Potential to Save*	Project Plan to Save/Remove	Tree Units for Save Trees	Minimum Root Protection Zone if Saved (ft.)	Notes
31	Douglas-fir	24	Good	--	Save	--	15	off site, no tag
32	Western Red Cedar	21	Good	Yes	Remove (F)		12	
33	Western Red Cedar	9,10	Fair	Yes	Remove (F)		6	
34	Western Red Cedar	6,14	Fair	Yes	Remove (F)		8	
35	Western Red Cedar	15	Good	Yes	Remove (F)		9	
36	Western Red Cedar	14	Fair	Yes	Remove (F)		8	
37	Western Red Cedar	20	Good	Yes	Remove (F)		12	
38	Western Red Cedar	18	Good	Yes	Remove (F)		10	
39	Western Red Cedar	20	Good	Yes	Remove (F)		12	
40	Western Red Cedar	13	Fair	Yes	Remove (F)		8	
41	Western Red Cedar	6	Fair	Yes	Remove (F)		5	
42	Douglas-fir	18	Good	Yes	Remove (F)		10	
43	Western Hemlock	16	Fair	--	Save	--	8	off site, no tag
44	Western Hemlock	32	Very Poor	No	Remove (H)			hollow at base
45	Western Red Cedar	35	Poor	No	Remove (H)			decay in base
46	Western Red Cedar	6	Fair	--	Save	--	5	off site, no tag
47	Western Hemlock	11	Poor	--	Save	--	6	off site, no tag
48	Western Red Cedar	8	Fair	--	Save	--	5	off site, no tag
49	Cherry	4,6	Fair	--	Save	--	5	off site, no tag
50	Cherry	8	Fair	--	Save	--	4	off site, no tag
51	Western Red Cedar	18	Poor	--	Save	--	10	off site, no tag, multi-top
52	Western Hemlock	16	Poor	--	Save	--	9	off site, no tag, multi-top
53	Bigleaf Maple	7	Poor	No	Remove (H)			offsite, growing into fence
54	Scotch Pine	12	Fair	--	Save	--	8	off site, no tag
55	Pacific Dogwood	6	Fair	Yes	Save	1	5	
56	Cherry	4,6	Poor	No	Remove (H)			
57	Western Red Cedar	8	Fair	Yes	Save	1	5	

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Tree #	Species	DBH (in.)	Condition	Tree Potential to Save*	Project Plan to Save/Remove	Tree Units for Save Trees	Minimum Root Protection Zone if Saved (ft.)	Notes
58	Western Red Cedar	7	Fair	Yes	Save	1	5	
59	Cherry	9	Fair	Yes	Save	1	6	
60	Madrone	16	Poor	No	Remove (H)			in decline
61	Cherry	8	Poor	No	Remove (H)			
62	Red Alder	7	Fair	Yes	Save	1	5	remove ivy
63	Red Alder	8	Very Poor	No	Remove (H)			dead top
64	Red Alder	6	Very Poor	No	Remove (H)			dead top
65	Red Alder	6	Very Poor	No	Remove (H)			dead top
66	Douglas-fir	18	Good	--	Save	--	10	off site, no tag
67	Red Alder	9	Poor	No	Remove (H)			in decline, broken top
68	Red Alder	9	Poor	No	Remove (H)			in decline
69	Western Hemlock	6	Poor	No	Remove (H)			
70	Western Red Cedar	9	Good	Yes	Save	1	5	
71	Western Red Cedar	24	Good	Yes	Save	8	15	
72	Western Red Cedar	10	Good	Yes	Save	1	6	
73	Western Red Cedar	10	Good	Yes	Save	1	6	
74	Western Red Cedar	19	Good	Yes	Save	5	12	
75	Western Red Cedar	8	Fair	Yes	Save	1	5	
76	Western Red Cedar	18	Fair	Yes	Save	5	10	
77	Western Red Cedar	12	Fair	Yes	Save	2	8	
78	Cottonwood	27	Fair	Yes	Remove (F)			
79	Western Red Cedar	9	Fair	Yes	Remove (F)		6	
80	Western Red Cedar	6	Fair	Yes	Remove (F)			
81	Cottonwood	6	Very Poor	No	Remove (H)			
82	Western Red Cedar	6	Fair	Yes	Remove (F)		4	
83	Western Red Cedar	8	Fair	Yes	Remove (F)		5	
84	Western Red Cedar	10	Fair	Yes	Remove (F)		6	
85	Western Red Cedar	7	Fair	Yes	Remove (F)		5	
86	Western Red Cedar	10	Good	Yes	Remove (F)		7	

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Tree #	Species	DBH (in.)	Condition	Tree Potential to Save*	Project Plan to Save/Remove	Tree Units for Save Trees	Minimum Root Protection Zone if Saved (ft.)	Notes
87	Scouler's Willow	6	Very Poor	No	Remove (H)			
88	Western Red Cedar	10	Fair	Yes	Remove (F)		7	
89	Western Red Cedar	10	Fair	Yes	Remove (F)		7	
90	Western Red Cedar	7	Fair	Yes	Remove (F)		5	
91	Western Red Cedar	6	Fair	Yes	Remove (F)		4	
92	Western Red Cedar	8	Fair	Yes	Remove (F)		5	
93	Red Alder	7	Fair	Yes	Remove (F)		5	
94	Douglas-fir	24	Good	Yes	Remove (F)		15	
95	Western Red Cedar	6	Fair	Yes	Remove (F)		4	
96	Western Red Cedar	7	Fair	Yes	Remove (F)		5	
97	Cherry	7	Very Poor	No	Remove (H)			
98	Scouler's Willow	6	Poor	No	Remove (H)			
99	Western Red Cedar	8	Good	Yes	Remove (F)		5	
100	Western Red Cedar	10	Good	Yes	Remove (F)		7	
101	Western Red Cedar	14	Good	Yes	Remove (F)		10	
102	Western Red Cedar	10	Good	Yes	Remove (F)		7	
103	Western Red Cedar	9	Good	Yes	Remove (F)		6	
104	Western Red Cedar	10	Good	Yes	Remove (F)		7	
105	Western Red Cedar	13	Good	Yes	Save	2	10	
106	Western Red Cedar	18	Good	Yes	Remove (F)		10	
107	Western Red Cedar	12	Fair	Yes	Remove (F)		8	
108	Scouler's Willow	18	Very Poor	No	Remove (H)			severe decay in stem
109	Cherry	14	Very Poor	No	Remove (H)			decay in base
110	Red Alder	11	Fair	Yes	Remove (F)			
111	Cherry	6	Poor	No	Remove (H)			deformed stem
112	Scouler's Willow	6	Poor	No	Remove (H)			
113	Scouler's Willow	9	Poor	No	Remove (H)			decay

CamWest C&G Partners- Final Tree Protection Plan

Tree #	Species	DBH (in.)	Condition	Tree Potential to Save*	Project Plan to Save/Remove	Tree Units for Save Trees	Minimum Root Protection Zone if Saved (ft.)	Notes
114	Scouler's Willow	16	Very Poor	No	Remove (H)			severe decay
115	Red Alder	9	Poor	No	Remove (H)			dead top
116	Red Alder	6	Poor	No	Remove (H)			poor form
117	Red Alder	7	Dead	No	Remove (H)			dead
118	Red Alder	6	Fair	Yes	Remove (F)		5	
119	Red Alder	8	Poor	No	Remove (H)			poor form
120	Red Alder	12	Very Poor	No	Remove (H)			dead top
121	Western Red Cedar	18	Good	Yes	Remove (F)		12	
122	Red Alder	16	Fair	Yes	Remove (F)		10	
123	Cherry	9	Fair	Yes	Remove (F)		6	
124	Western Red Cedar	18	Fair	Yes	Remove (F)		10	
125	Western Red Cedar	32	Good	Yes	Save	12	18	
126	Western Hemlock	30	Poor	No	Remove (H)			hollow at base
127	Western Red Cedar	28	Fair	Yes	Save	10	15	
128	Cherry	14	Fair	Yes	Save	3	8	
129	Cherry	11,13	Fair	Yes	Save	3	8	
130	Western Red Cedar	6	Good	Yes	Save	1	4	
131	Douglas-fir	22	Good	Yes	Remove (F)		12	
132	Douglas-fir	34	Good	Yes	Remove (F)		18	
133	Bigleaf Maple	26	Fair	--	Remove (F)		15	
134	Western Red Cedar	36	Good	--	Save	14	20	
135	Western Hemlock	13	Fair	--	Save	2	8	
136	Western Red Cedar	42	Good	--	Save	17	25	
137	Western Red Cedar	34	Good	--	Save	13	20	
138	Western Red Cedar	40	Good	--	Save	--	22	Off-site, no tag
139	Western Red Cedar	13	Good	Yes	Remove (F)		9	
140	Flowering Plum	8,9	Fair	--	Remove (F)		6	
	Sum					106		

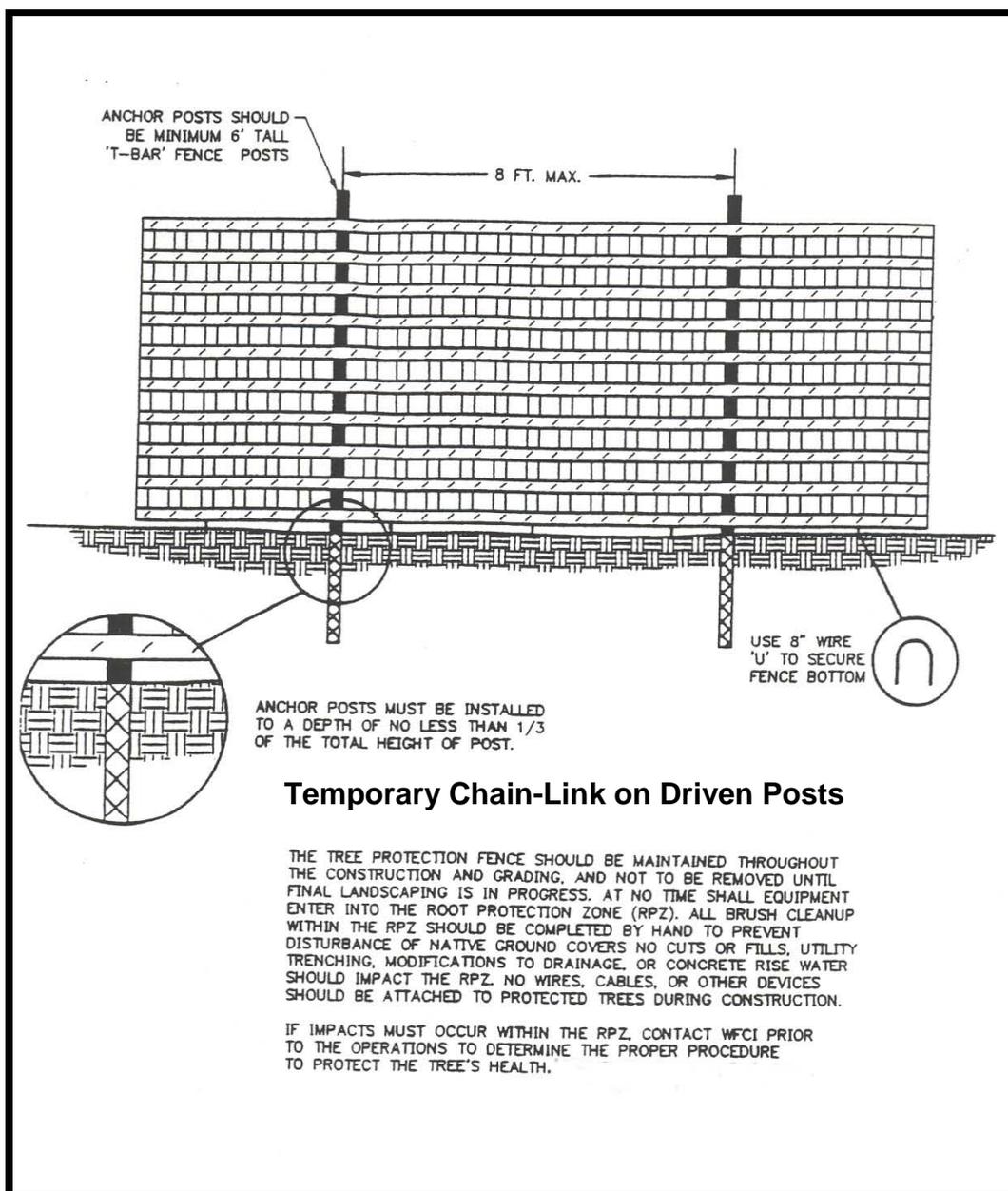
*Based only on physical condition

**Remove (H) = Remove tree for health issues;

***Remove (F) = Remove tree for grading/footprint issues;

APPENDIX V

Tree Protection Fence Detail



APPENDIX VI

Assumptions and Limiting Conditions

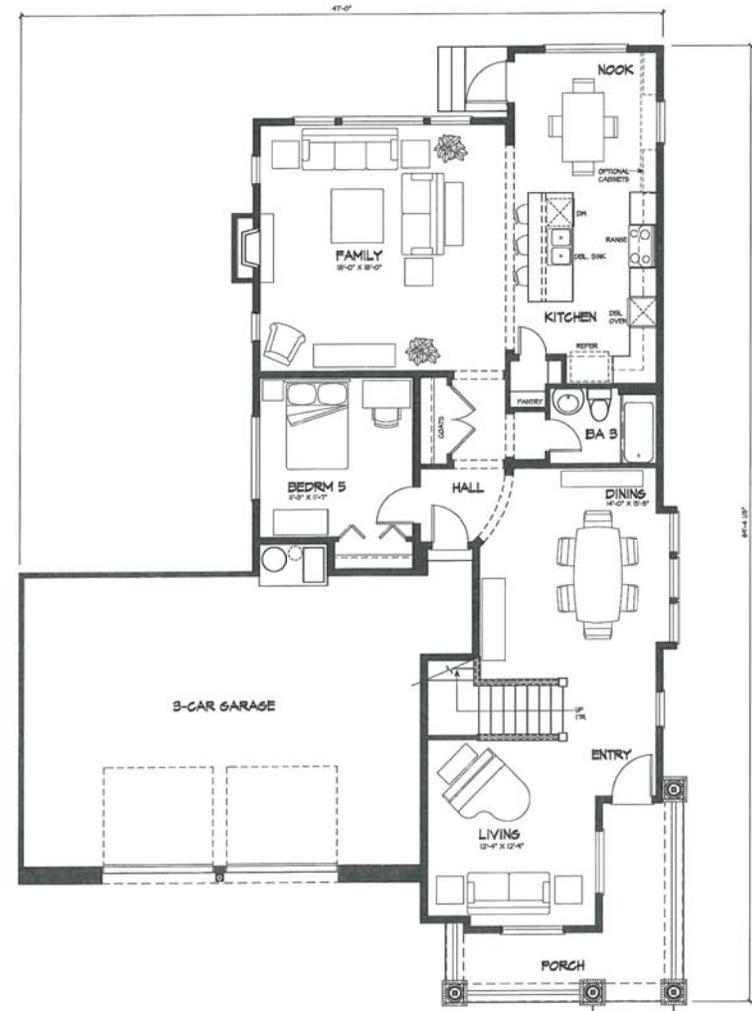
- 1) Any legal description provided to the Washington Forestry Consultants, Inc. is assumed to be correct. Any titles and ownership's to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
- 2) It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations, unless otherwise stated.
- 3) Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, Washington Forestry Consultants, Inc. can neither guarantee nor be responsible for the accuracy of information.
- 4) Washington Forestry Consultants, Inc. shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
- 5) Loss or alteration of any part of this report invalidated the entire report.
- 6) Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of Washington Forestry Consultants, Inc..
- 7) Neither all or any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of Washington Forestry Consultants, Inc. -- particularly as to value conclusions, identity of Washington Forestry Consultants, Inc., or any reference to any professional society or to any initialed designation conferred upon Washington Forestry Consultants, Inc. as stated in its qualifications.
- 8) This report and any values expressed herein represent the opinion of Washington Forestry Consultants, Inc., and the fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding in to reported.
- 9) Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
- 10) Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree or other plant or property in question may not arise in the future.

Note: Even healthy trees can fail under normal or storm conditions. The only way to eliminate all risk is to remove all trees within reach of all targets. Annual monitoring by an ISA Certified Arborist or Certified Forester will reduce the potential of tree failures. It is impossible to predict with certainty that a tree will stand or fail, or the timing of the failure. It is considered an 'Act of God' when a tree fails, unless it is directly felled or pushed over by man's actions.

Note: Additional house plans are available for viewing in the official PCD File.



NOT TO SCALE



ALTERNATE FIRST FLOOR PLAN "B" (ELEV. "A" SIMILAR)
 EXTENDED 2-CAR GARAGE & BEDRM 5 OPTION

1431 SQ.FT.
 TOTAL: 2771 SQ.FT.

SCALE: 1/4" = 1'-0"



SEQUOIA 1246-0 EXPANDED GARAGE OPT.



C and G Property Lot Coverage Calculations
4/24/2013

Lot #	Lot Area	Max Lot Coverage at 50%	House plan no.	Coverage of house only (SF)	Driveway Area from ACAD	Patio and Walk at 250 SF/Lot	Total Impervious Coverage	% Cover.
1	5,016	2,508	1157-8	1,665	529	250	2,444	0.487
2	5,225	2,613	1158-5	1,771	587	250	2,608	0.499
3	5,016	2,508	1157-8	1,665	529	250	2,444	0.487
4	5,225	2,613	1158-5	1,771	588	250	2,609	0.499
5	5,225	2,613	1157-8	1,665	529	250	2,444	0.468
6	5,225	2,613	1158-5	1,771	587	250	2,608	0.499
7	4,807	2,403	1246-0	2,048	511	250	2,809	0.584
8	5,016	2,508	1248-0	2,150	638	250	3,038	0.606
9	5,016	2,508	1248-0	2,150	638	250	3,038	0.606
10	4,807	2,403	1246-0	2,048	511	250	2,809	0.584
11	4,807	2,403	1246-0	2,048	507	250	2,805	0.584
12	5,016	2,508	1248-0	2,150	638	250	3,038	0.606
13	5,032	2,516	1248-0	2,150	673	250	3,073	0.611
14	4,678	2,339	1246-0	2,048	581	250	2,879	0.615
15	5,349	2,674	1361-0	1,796	570	250	2,616	0.489
16	5,068	2,534	1246-0	2,048	513	250	2,811	0.555
17	5,138	2,569	1246-0	2,048	513	250	2,811	0.547
18	5,563	2,781	1248-0	2,150	1,494	250	3,894	0.700
19	6,299	3,149	1203-0	1,774	513	250	2,537	0.403
20	7,050	3,525	1252-0	2,386	521	250	3,157	0.448
21	5,198	2,599	1252-0	2,386	521	250	3,157	0.607
22	5,198	2,599	1326-0	1,698	550	250	2,498	0.481
23	5,170	2,585	1248-0	2,150	620	250	3,020	0.584
24	5,856	2,928	1160-1	1,827	630	250	2,707	0.462
25	5,620	2,810	1249-0	1,813	718	250	2,781	0.495
26	5,389	2,695	1140-4	1,663	513	250	2,426	0.450
27	5,199	2,599	1252-0	2,386	516	250	3,152	0.606
28	5,198	2,599	1156-2A	1,893	516	250	2,659	0.512
29	5,468	2,734	1361-0	1,796	570	250	2,616	0.478
30	5,335	2,668	1246-0	2,048	513	250	2,811	0.527
31	5,234	2,617	1246-0	2,048	513	250	2,811	0.537
32	5,813	2,907	1248-0	2,150	1,260	250	3,660	0.630
33	7,863	3,931	1165-2	1,893	608	250	2,751	0.350
34	6,748	3,374	1370-0	2,397	731	250	3,378	0.501
35	6,343	3,171	1246-0(3)	2,254	535	250	3,039	0.479
Total	190,209						99,938	0.525
Average Lot Area	5,435							

Impervious Surface Coverage Lots only 52.5%

Tract Area (SF)				Impervious Area (SF)	
Open Space in BOLD				Column2	Column3
Tract ID	Designation	All Tracts	Open Space Only		
Tract A	O.S./Tree ret	3,054	3,054	0	
Tract B	O.S./LID	4,229	4,229	0	
Tract C	Park/Storm	27,480	27,480	3,000	(estimate)
Tract D	Access/Utility	2,976	0	3,122	
Tract E	Access/Utility	3,113	0	2,990	
Tract F	Access/Utility	3,110	0	2,032	
Tract G	O.S./Tree ret	5,613	5,613	0	
	Total Tract	49,575	40,376	11,144	

Total Area in Tract C and Lots (SF)	230,585	Impervious Coverage for Open Space Tracts and Lots Combined	44.6%
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C and G Property FAR calculations
4/24/2013

Lot #	Lot Area	Max FAR at .50	House plan no.	First Floor	Garage (incl.)	2nd Floor	Basement Counting Toward FAR	Kirkland FAR Credit	Kirkland FAR SF Total	FAR - Prop. Homes
1	5,016	2,508	1157-8	1,511	0	1,455	108	-100	2,974	0.593
2	5,225	2,613	1158-5	1,523	0	1,370	197	-100	2,990	0.572
3	5,016	2,508	1157-8	1,511	0	1,455	108	-100	2,974	0.593
4	5,225	2,613	1158-5	1,523	0	1,370	197	-100	2,990	0.572
5	5,225	2,613	1157-8	1,511	0	1,455	108	-100	2,974	0.569
6	5,225	2,613	1158-5	1,523	0	1,370	197	-100	2,990	0.572
7	4,807	2,403	1246-0	1,194	0	1,553	n/a	-100	2,647	0.551
8	5,016	2,508	1248-0	1,313	0	1,843	n/a	-100	3,056	0.609
9	5,016	2,508	1248-0	1,313	0	1,843	n/a	-100	3,056	0.609
10	4,807	2,403	1246-0	1,194	0	1,553	n/a	-100	2,647	0.551
11	4,807	2,403	1246-0	1,194	0	1,553	n/a	-100	2,647	0.551
12	5,016	2,508	1248-0	1,313	0	1,843	n/a	-100	3,056	0.609
13	5,032	2,516	1248-0	1,313	0	1,843	n/a	-100	3,056	0.607
14	4,678	2,339	1246-0	1,194	0	1,553	n/a	-100	2,647	0.566
15	5,349	2,674	1361-0	1,219	0	1,752	n/a	-100	2,871	0.537
16	5,068	2,534	1246-0	1,194	0	1,553	n/a	-100	2,647	0.522
17	5,138	2,569	1246-0	1,194	0	1,553	n/a	-100	2,647	0.515
18	5,563	2,781	1248-0	1,313	0	1,843	n/a	-100	3,056	0.549
19	6,299	3,149	1203-0	1,140	0	1,423	n/a	-100	2,463	0.391
20	7,050	3,525	1252-0	1,563	0	1,732	n/a	-100	3,195	0.453
21	5,198	2,599	1252-0	1,563	0	1,732	n/a	-100	3,195	0.615
22	5,198	2,599	1326-0	1,175	0	1,538	n/a	-100	2,613	0.503
23	5,170	2,585	1248-0	1,313	0	1,843	n/a	-100	3,056	0.591
24	5,856	2,928	1160-1	1,136	0	1,440	n/a	-100	2,476	0.423
25	5,620	2,810	1249-0	1,080	0	1,549	n/a	-100	2,529	0.450
26	5,389	2,695	1140-4	1,111	0	1,364	n/a	-100	2,375	0.441
27	5,199	2,599	1252-0	1,563	0	1,732	n/a	-100	3,195	0.615
28	5,198	2,599	1156-2A	1,222	0	1,602	n/a	-100	2,724	0.524
29	5,468	2,734	1361-0	1,219	0	1,752	n/a	-100	2,871	0.525
30	5,335	2,668	1246-0	1,194	0	1,553	n/a	-100	2,647	0.496
31	5,234	2,617	1246-0	1,194	0	1,553	n/a	-100	2,647	0.506
32	5,813	2,907	1248-0	1,313	0	1,843	n/a	-100	3,056	0.526
33	7,863	3,931	1165-2	1,499	0	1,648	n/a	-100	3,047	0.388
34	6,748	3,374	1370-0	1,681	0	2,171	n/a	-100	3,752	0.556
35	6,343	3,171	1246-0(3)	1,350	0	1,553	n/a	-100	2,803	0.442
190,209				46,366		56,788	915	-3500	100,569	0.529

Total**Area in**

Lots 190,209

House Floor Areas and total project FAR excluding open space set asides
100,569 SF 52.9%

Open Space Tract Area (SF)

Tract A	3,054
Tract B	4,229
Tract C	27,480
Tract G	5,613
Total	40,376

Total Area in Lots and Open Space Tracts	230,585	43.6%
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LANDSCAPED GREENBELT EASEMENT

Parcel Data File: _____

Grantor: _____, owner of the hereinafter described real property, hereby grants to

Grantee: The City of Kirkland, a municipal corporation.

The undersigned grantors covenant to the City of Kirkland that they are all of the fee owners of the real property described in Exhibit B and hereby grant and convey a landscaped greenbelt easement over and across the portion of said real property as described in Exhibit A.

Landscaping within the area of this easement shall be installed and maintained in accordance with the plan approved by the City of Kirkland in connection with File/Permit No. _____ at the grantor's expense.

Except for ordinary landscape maintenance, no tree trimming, tree topping, tree cutting or tree removal, nor shrub or brush-cutting, or removal, nor construction, clearing or alteration activities shall occur within the easement area without prior written approval from the City of Kirkland. Application for such written approval to be made to the Kirkland Department of Planning and Community Development who may require inspection of the premises before issuance of the written approval and following completion of the activities. Any person conducting or authorizing such activity in violation of this paragraph or the terms of any written approval issued pursuant hereto, shall be subject to the enforcement provisions of Chapter 170, Ordinance 3719, the Kirkland Zoning Code. In such event, the Kirkland Department of Planning and Community Development may also require within the immediate vicinity of any damaged or fallen vegetation, restoration of the affected area by planting shrubs of comparable size and/or trees of three inches or more in diameter measured one foot above grade. The Department also may require that the damaged or fallen vegetation be removed.

Each undersigned grantor further agrees to maintain all vegetation within the landscaped greenbelt easement.

Each of the undersigned owners agree to defend, pay, and save harmless the City of Kirkland, its officers, agents, and employees from any and all claims of every nature whatsoever, real or imaginary, including costs, expenses and attorney's fees incurred in the investigation and defense of said claims, which may be made against the City, its officers, agents, or employees for any damage to property or injury to any person arising out of the maintenance of said landscaped greenbelt easement over said owner's property or the actions of the undersigned owners in carrying out the responsibilities under this agreement, excepting therefrom only such claims as may arise solely out of the gross negligence of the City of Kirkland, its officers, agents, or employees.

This easement is given to satisfy a condition of the development permit approved by the City of Kirkland under Kirkland File/Permit No. _____, for construction of _____, upon the real property described in Exhibit B.

This easement shall be binding upon the parties hereto, their successors and assigns, and shall run with the land. This Easement shall, at the expense of the undersigned grantors, be recorded by the City of Kirkland with the King County Department of Elections and Records.

Exhibit A - Easement Description:

Exhibit B - Legal Description of Grantor's Property:

DATED this ____ day of _____, _____.

(Sign in blue ink)

(Individuals Only)

OWNER(S) OF REAL PROPERTY (INCLUDING SPOUSE)

(Individuals Only)

STATE OF WASHINGTON)
) SS.
County of King)

On this ____ day of _____, _____, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, _____ personally _____ appeared

_____ and _____ to me known to be the individual(s) described herein and who executed the Public Ingress and Egress Easement _____ and _____ acknowledged _____ that _____ signed the same as _____ free and voluntary act and deed, for the uses and purposes therein mentioned.

WITNESS my hand and official seal hereto affixed the day and year first above written.

Notary's Signature

Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____

(Partnerships Only)

OWNER(S) OF REAL PROPERTY

(Name of Partnership or Joint Venture)

By General Partner

By General Partner

By General Partner

(Partnerships Only)

STATE OF WASHINGTON)
County of King) SS.

On this _____ day of _____, _____, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____ and _____ to me, known to be general partners of _____, the partnership that executed the Public Ingress and Egress Easement and acknowledged the said instrument to be the free and voluntary act and deed of each personally and of said partnership, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument.

WITNESS my hand and official seal hereto affixed the day and year first above written.

Notary's Signature

Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____

(Corporations Only)

OWNER(S) OF REAL PROPERTY

(Name of Corporation)

By President

By Secretary

(Corporations Only)

STATE OF WASHINGTON)
County of King)) SS.

On this _____ day of _____, _____, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____ and _____ to me, known to be the President and Secretary, respectively, of _____, the corporation that executed the Public Ingress and Egress Easement and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal hereto affixed the day and year first above written.

Notary's Signature

Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____

The foregoing Agreement is accepted by the City of Kirkland this _____ day of _____, _____.

CITY OF KIRKLAND

BY: _____