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June 3, 2019

Jeff Pantier
Hatton Godat Pantier
3910 Martin Way E, Suite B
Olympia, WA 98506

Re: Updated Level V Soil & Vegetation Plan for The Village at Cain Road
(corner of Cain Road and 22nd Ave. SE) Olympia, Washington

Dear Mr. Pantier:

The following should furnish you with the information required for a Level V Soil & Vegetation Plan for the City of Olympia, WA.

1. SCOPE OF PROJECT

The project involves a development of single family homes on currently forested property. The native vegetation of mixed Bigleaf Maple, Red Alder, Redcedar and scattered Douglas-fir is planned for removal except on portions of storm water/Tree Tract "A" and Tree Tract "B". Additional trees are being saved along the east line of the proposed project. All trees on the site would be considered mature and in a healthy condition.

2. SOIL CONDITIONS

The basic soil is Yelm fine sandy loam. The slope of the property is "Level". The soil is deep and moderately well drained. There is a good effective rooting depth for trees within tree tracts and those planned in required landscaping. First year watering is normally required for newly planted trees and shrubs. All areas within the development have good soils for tree growth.

3. TREE DENSITY CALUATIONS

A. Buildable area = 5.01 acres – (minus) .80 acres for public roads = 4.21 acres of net buildable area.

B. Required minimum tree density to be retained is:

4.21 Acres x 30 Tree Units Per Acre = 126.3 or 127 Tree Units

C. The required tree units will be totally met by those trees retained in storm water/Tree Tract A, Tree Tract B and trees protected along the east property line. See Exhibit I for species and size being retained. Total retention is 231 Tree Units, which is approximately 81% over the required minimum. The trees in Tree Tract B best protects the park trees to the south. The large trees

in Tract A have grownup as a group and will be adequately protected. If the large Douglas-fir cannot be saved because of required sidewalk construction next to Tract A, it would decrease the total tree units to 218.9 (still 72% over the minimum required to be saved).

4. TREE PROTECTION MEASURES

4.1 Placing Materials near Trees

No person may conduct any activity within the protected area of any tree designated to remain including but not limited to parking equipment, placing solvents, storing building material and soil deposits, dumping concrete washout and locating burn holes

4.2 Attachments to Trees

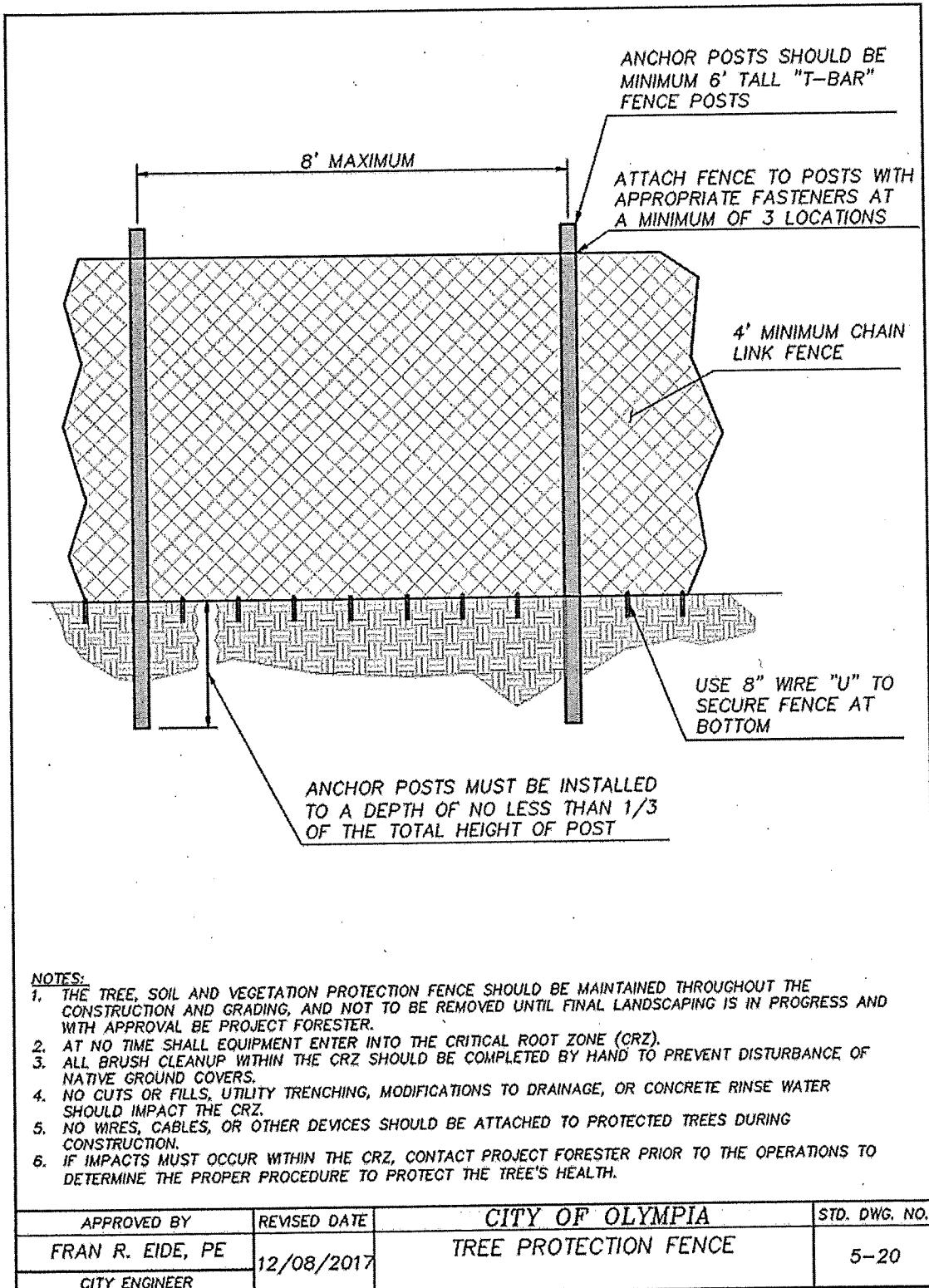
During construction no person shall attach any object to any tree designated for protection

4.3 Protective Barrier

Before development, land clearing, filling or any land alteration for which a Tree Removal Permit is required, the applicant:

- Shall erect and maintain readily visible protective tree fencing along the outer edge and completely surrounding the protected area of all protected trees or groups of trees. Fences shall be constructed of chain link and at least four feet high, unless other type of fencing is authorized by the Urban Forester
- Shall maintain the protective barriers in place until the Urban Forester authorizes their removal, or a final Certificate of Occupancy is issued, whichever occurs first
- Shall ensure that any landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with light machinery or hand labor

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4.4 Grade

1. To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The Urban Forester may require that utilities be tunneled under the roots of trees to be retained if the Urban forester determines that trenching would significantly reduce the chances of the trees survival. There are no locations where tunneling will occur.
2. Trees and other vegetation to be retained shall be protected from erosion and sedimentation.

5. OFF SITE TREES

Only off-site trees that could be affected by this project are those along the south property line and will be protected the same as illustrated in above part 4. Trees within the park to the south are located on the site plan and are all considered healthy except the dead red alder. The dead alder should be felled during clearing operations for this development.

6. TREE PLANTING

No additional trees are required to be planted to meet minimum density retained. Normal landscaping will be addressed by the landscaper contracted by the developer.

7. STORMWATER DISPERSION

Description of SVPA's proposed in the storm water area will be addressed by Hatton Godat Pantier, the engineering firm for this project. Storm water work will not have any affect on trees within Tracts "A" and "B".

8. RECOMMENDED SEQUENCE OF TREE REMOVAL

- A. All trees retained to be ribboned with "Do Not Cut" ribbon.
- B. Remove black top driveway next to tree retention area in Tract A.
- C. "BEFORE" stump removal and land clearing begin, install tree protection fences under the supervision of Project Forester.
- D. Once tree protection fences are installed, the Project Forester is to email the Urban City Forester that all tree protection fences are in place.
- E. During land clearing operations, the Project Forester will email periodic reports to Urban Forester on progress and status of the tree fence inspections.

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9. COMPLIANCE

To comply with the Level 5 Soil and Vegetation Plan, a Professional Forester or Certified Arborist is **required** to oversee the tree protection measures. Once the tree protection fences are installed the City Urban Forester must be notified BEFORE land clearing can begin. Project Forester and their contact information needs to be shown on the site plan.

If you have any questions regarding the trees on this project, please let us know.

Sincerely,



Michael D. Jackson, CF, ACF
Forest Resource Manager

Enclosure: Exhibit I – Tree Units of Trees Retained
 Exhibit 2 – Map showing Tree Protection Fence location

MDJ: dkd

Professional Forestry Services, Inc.
City of Olympia Tree Tract Unit Worksheet

FOR: THE VILLAGE AT CAIN ROAD
Date: JUNE 3, 2019

DBH	SPECIES						Total Trees	Tree Unit Multiplier	Total Tree Units
	T-A DF	T-A RC	MA	TREE TRAC	B RA	OTHER RA-RC			
1-6"								1.0	
7-12"			5		2	7	1.5	10.5	
13"		1				1	1.8	1.8	
14"		1				1	2.0	2.0	
15"					1	1	2.4	2.4	
16"		1	1	1		3	2.8	8.4	
17"							3.1		
18"							3.5		
19"				1	2	3	3.9	11.7	
20"							4.4		
21"			1	1	2	4	4.8	19.2	
22"			1	1	2	4	5.3	21.2	
23"							5.8		
24"							6.3		
25"						1	6.8	6.8	
26"			1	1		2	7.4	14.8	
27"							8.0		
28"							8.6		
29"	1					1	9.2	9.2	
30"							9.8		
31"							10.5		
32"		1	1	1		2	11.2	22.4	
33"						1	11.9	11.9	
34"	1					1	12.6	12.6	
35"			1		1	2	13.4	26.8	
36"			1			1	14.0	14.0	
37"							14.9		
38"			1			1	15.7	15.7	
39"							16.6		
40"							17.4		
41"	1					1	20.1	20.1	
42"									
43"									
	2	1	4	13	5	12	≠ 37		231.5

DF = Douglas-Fir RC = Redcedar MA = BIGLEAF MAPLE RA = Red Alder