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**164 Willow Avenue, Fairfax, CA  
Vegetation Fuels Management Plan  
&  
Tree Protection Plan**

prepared for

**G-Design, LLC  
1215 Lincoln Ave, Ste A  
San Rafael, CA 94901**

by

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## **PURPOSE**

This Vegetation Fuels Management Plan has been developed in order to comply with the Ross Valley Fire Department Fire Protection Standard 220. The Tree Protection Plan has been developed to comply with Section 8.36.080 of the Fairfax Municipal Code.

These plans will include an inventory of existing woody perennials (trees) with a diameter > 4 inches as measured 4.5 feet above grade (dbh), their general condition, a scaled site plan locating and numbering each woody perennial, a delineated defensible space on the site plan, a general description of woody, herbaceous plants and grasses currently existing, a fuels hazard assessment matrix, a defensible space maintenance plan and a plan to protect trees during and post construction.

## **VEGETATION FUELS MANAGEMENT PLAN (VMP)**

A VMP is developed by documenting the existing conditions, including topography, emergency vehicle access, exposure, the current species plant palette, and tree canopy spacing. These factors determine the size of defensible space that will be developed and maintained in order to minimize the risk of wild land fires. Based upon these factors a reasonable defensible space can be created through selective tree removals and long-term vegetation maintenance strategies. In addition, the VMP will recommend crown thinning for trees on the adjacent property to the south in order to maximize the defensible space for this new residential structure.

### **Existing Conditions**

The property is located on the north slope within the Town of Fairfax off Sir Francis Drake Blvd. Access is from a steep Town maintained paved road 20 feet in width. The subject property is located on a north to south shoulder ridge that rises from Sir Francis Drake Blvd, slopes up from the road and has an average grade exceeding 35 degrees. The lot faces west/northwest. Prevailing summer winds from the west to northwest are partially mitigated by elevated ridgelines in the north and west.

The native vegetation type of the overall canyon hillside is primarily a live oak and mixed hardwood forest comprised of species such as Coast Live Oak – *Quercus agrifolia*, California Bay Laurel, *Unbellularia californica*, Black Oak – *Quercus kelloggii*, Pacific madrone – *Arbutus menziesii*, and Toyon – *Heteromeles arbutifolia*. The subject property however, has a relatively limited plant palette comprised of Coast Live Oak and Pacific Madrone. In addition, one large and highly pyrophytic invasive Blue Gum

Eucalyptus is growing at the top of the property (see site plan with tree inventory tagging for specific tree locations).

The subject property has a relatively scrubby understory, with sparse annual grasses just now sprouting, minimal Poison Oak – *Toxicodendron diversilobum*, and a moderate infestation of the pyrophytic species, Scotch broom – *Cytisus scoparius*. The subject property has a moderate amount of ground fuel in the form of dropped limbs and dead vegetation; the Oaks form a semi-broken contiguous canopy within the upper half of the lot. The lower half of the lot is dominated by one large senescent Live Oak that extends over the proposed new building's footprint.

### **Defensible Space**

Utilizing the aforementioned topographic and vegetative conditions, the VMP Hazard Assessment Matrix determined a score of 14 (see Appendix A). This correlates to a defensible space of 30' x 30' x 30' x 50'. However, given the significant slope of the subject property >30% the recommended clearance is 50' x 50' x 50' x 100'. The majority of the recommended horizontal and downslope defensible space exceeds the property boundaries.

As previously mentioned, the property is up slope from the paved roadway. The current site plan calls for the new residence to be in set back from the roadway and coupled with the width of the roadway will provide an effective downslope defensible area of approximately 35 feet. Vegetation across from the subject property is not dense in the area immediately adjacent to the roadway, and with the defensible space requirements in place for those properties the effective defensible downslope space should be more than effective.

The horizontal defensible space requirements also extend beyond the property lines of the subject property. The northern (up canyon) property does not have any vegetation because the residence and paved driveway comprise all of the defensible space, however the southern (down canyon) property does have several trees which I would recommend have their crowns reduced in order to create space between their crowns and reduce the potential for a crown fire. The species palette for the down canyon property is comprised of Live Oaks and Douglas Firs *Pseudotsuga menziesii*.

## **Defensible Space Treatment Recommendations**

There are 14 Live Oaks currently within the Defensible Space Zone within 164 Willow Ave. Seven of those trees are within or immediately adjacent to the new structure's foot print or supporting foundation and must be removed. Three of the remaining trees are recommended for removal because of poor structure, SOD, or lack of vigor. The balance of the trees (4) crowns' are all growing up slope of the structure and once pruned will provide at least 20 feet of clearance from the structure. This pruning will also provide at least 10 feet of clearance between the tree crowns. Appendix B provides specific recommendations for each of these trees.

Since the Defensible Space is relatively free of understory brush or grasses, either a landscape plan should be developed and constructed, or the area should be mulched to minimize annual grass growth and pyrophytic woody perennial growth. In general, the area should be kept clear of any pyrophytic species as listed in Appendix C.

## **Fire Apparatus Clear Zone (FACZ)**

As previously stated, Willow Rd. is approximately 20 feet in width. The building is set back an additional 15 feet with a paved driveway. The combined paved driveway and road area should provide an adequate FACZ. Currently, vegetation growing on both sides of the roadway provides more than 15 feet of vertical clearance.

## **Landscaping and Maintenance**

With the exception of the Live Oaks, the defensible space has been recently stripped of most vegetation. The area can be mulched or planted with fire resistant species and I have included a list of appropriate species compiled by the University of California Cooperative Extension (See Appendix C). I would recommend that the project landscape architect limit their plant palette to these species. If required, I can provide assistance when developing a plant palette for any new landscaping in this area that meets the guidelines set forth in the Ross Valley Fire Department Fire Protection Standard 220.

The balance of the property beyond the defensible space can be improved relative to fire safety and forest management. All trees with a dbh >4" have been tagged, given a general condition description, and a recommended course of maintenance up to and including removal (See Appendix B). These recommendations take into account best practices for wild land forest management and the new use for the property, namely residential. All pruning should be conducted under the supervision of a Certified Arborist utilizing ANSI A300 Pruning Standards.

- Besides the specific tree recommendations the following general specifications should also be undertaken initially and on an annual basis:
- Thin out overly dense stands to provide crown separation. The ideal is to provide 10 feet of clearance between tree crowns. This is an ideal, and may not always be practical.
- Remove or substantially thin undergrowth. Currently, only a minor infestation of Scotch Broom was observed and should be immediately removed. Seeds of this species remain active in the soil for over 7 years and therefore constant removal will be required as they continue to germinate. Advantageous invasive species such as Scotch Broom, Silver Acacia, Himalayan Blackberry, Vinca, English Ivy or other aggressive species will continue try to colonize the area. These and other undesirable species should be removed before they become a nuisance and fire hazard.
- Cut and maintain annual grasses to within 4 inches of grade during the dry season. A good rule of thumb is May through October.
- As practical, raise tree crowns to a minimum of 8.0 feet above grade, in some cases this may not be practical given low growing large scaffold oak structures.
- When thinning out undergrowth remove pyrophytic species and only plant fire resistant plants.
- As needed, prior to the start of the dry season (usually May), remove dead and diseased trees or branches and foliage.
- Remove any species listed as pyrophytic in Appendix C.
- Clean up downed and dead debris. Chip materials up to 6" and remove larger material.
- Currently 1 tree listed in Appendix B is infected with Sudden Oak Death (SOD) and this tree should be removed utilizing the best practices listed in the UC website:

<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74151.html#MANAGEMENT>

- Best practices for Oak Forest management can be found in the following website:

[http://www.californiaoaks.org/html/oak\\_tree\\_care.html](http://www.californiaoaks.org/html/oak_tree_care.html)

## **TREE PROTECTION PLAN (TPP)**

A TPP is utilized prior to and during construction in order to protect trees from the impacts of construction. Generally, a Tree Protection Zone (TPZ) is created around trees that prohibit or at least limit construction activities within the tree's sensitive rooting area. The TPZ is delineated utilizing construction fencing at least 4 feet in height and stoutly fastened to the ground in order to be maintained for the duration of the construction.

The size of the TPZ is calculated by the species of tree and its ability to withstand construction impacts, the tree's dbh, and the type of construction activity. Obviously, the most impactful type of construction are excavations around the tree's root system or general disturbance/compaction to the soil in the tree's root zone.

The tree in question (Coast Live Oak) are relatively intolerant of root disturbance and the TPZ should be equal to 1 linear foot for every 1 inch of trunk dbh. So for example, a tree with a 6 inch dbh would have a TPZ of 6 feet in all directions or roughly a 12 foot diameter TPZ. In cases, where construction must take place within a TPZ, specific practices are specified to minimize impacts.

Appendix B will list the size of the TPZ for the tree that is impacted by construction. Fortunately, only Tree #6 will need a constructed TPZ. However, I am recommending that construction fencing be erected from the north property line to the south property line between Tree #6 and Tree #7 in order to limit access by construction crews into the up slope forest areas and eliminate the use of the area for materials/equipment storage.

A TPP should also include pre and post construction tasks in order to ensure the viability and vitality of the trees. The following practices should be employed in sequence for Tree #6:

1. Tree #6 should have all deadwood removed and a horizontal crown reduction of approximately 10%
2. Once the TPZ is defined, install 6 inches of organic mulch to the area, keeping the mulch 6 inches from the tree trunk
3. Install the perimeter construction fencing. The fencing should be installed to a height of 4 feet, secured with 1 inch metal posts or equivalent, driven at least 18 inches into the ground, and immediately reestablished if the condition of the fence becomes deteriorated or unstable.
4. If construction needs to be conducted within the TPZ consult the project Arborist for instructions prior to commencing.
5. Install construction fencing cross slope between the northern and southern property lines, as practical between trees #6 and #7
6. Prohibit any construction activities east of the construction fencing installed in Specification #7
7. Once all construction is completed, the fencing may be removed.
8. Remove any damaged or dead branches on Tree #6 utilizing ANSI A300 Pruning Standards
9. Landscape Improvements to the areas immediately adjacent to the TPZ for Tree #6 should strive to not change soil moisture within their respective TPZ. Oak trees do not like to have supplemental irrigation once established.

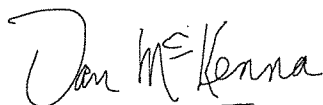
The area not affected by construction is dominated by Coast Live Oaks of varying age, size and health. As part of sound forestry, I would recommend the removal of dead, diseased and structurally compromised trees to improve the overall health and vitality of this property. In addition, Pacific Madrones with severe leans are also growing in this area of the property and they should also be removed. Finally, a large Blue Gum Eucalyptus is growing on the southern property line close to the top of the property. This invasive and highly pyrophytic species should be removed for safety related to use of the property and to improve solar access for the more desirable oaks.

Implementing the recommendations beyond the impact of construction and Defensible Space should be done for two reasons:

- The first is related to the increased use of the property by the new residents. Removing hazardous or diseased trees will lessen the potential for injury due to failing limbs.
- The second issue concerns improved forest health through increased light, and air distribution. Through careful and selective thinning the remaining trees should benefit.

**It should be noted that recommendations for trees not listed in the defensible space are not necessitated by the construction of the proposed residence and the recommendations are made to improve the vitality of the native forest landscape and increase fire safety for this and adjoining properties. I want to clearly state, these recommendations beyond the Defensible Zone are not related to construction and Fairfax approval for tree removals should be independent from construction approval.**

Respectfully submitted,



Dan McKenna,  
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### Appendix A Hazard Assessment Matrix

Hazard Points	1	2	3	4	5	6	7	8	Points
Aspect	NE, E	NW, N	SE, W	S	SW				<b>2</b>
Slope		0-10		11-20		21-30		31+	<b>8</b>
Fuel 0-30	Specimen Garden	<b>Hardwood</b>	Grass	Mostly	Mostly	Pyrophoric	Conifer	Conifer	<b>2</b>
				Grass	Brush	Hardwoods		w/brush	
						Chaparral		under	
								story	
Fuel 31-100	Grass, Mostly	<b>Mostly Brush</b>		Pyrophoric	Conifer with brush				<b>2</b>
	Grass			Hardwoods	under story				
				Chaparral					

**Total Points**

**14**



**Appendix B**

**Tree Inventory  
 Condition Summary, TPZ & Recommendations**

<b>Tree #</b>	<b>Species- dbh</b>	<b>Within Defensible Space</b>	<b>Condition</b>	<b>Recommendations/TPZ</b>
1	Quercus agrifolia 8"	Yes	Young tree, good vigor, upright structure, impacted by retaining wall footing	Remove
2	Quercus agrifolia 2"	Yes	2" dbh, good vigor, within bldg. footprint	Remove
3	Quercus agrifolia 5"	Yes	Poor Vigor, within bldg. footprint	Remove
4	Quercus agrifolia 12"	Yes	Fair vigor, suppressed by #5, within bldg. footprint	Remove
5	Quercus agrifolia 30"	Yes	Poor Vigor, Structure compromised, within bldg. footprint	Remove
6	Quercus agrifolia 20"	Yes	Good vigor	Deadwood, Reduce horizontal crown spread by 10%, 20' TPZ prior to construction
7	Quercus agrifolia 9"	Yes	Sod Infected	Remove
8	Quercus agrifolia 8"	No	Poor Vigor, compromised structure, Increased crown separation for Tree #10	Remove
9	Quercus agrifolia 8"	No	Poor Vigor, Increased crown separation for Tree #10	Remove

Tree #	Species	Within Defensible Space	Condition	Recommendations/TPZ
10	Quercus agrifolia 18"	Yes	Good vigor	Deadwood, 10% horizontal crown reduction
11	Quercus agrifolia 10"	Yes	Poor Vigor, Increased crown separation for Tree #10	Remove
12	Quercus agrifolia 8"	No	Poor Vigor, Increased crown separation for Tree #10	Remove
13	Quercus agrifolia 15"	No	Good Vigor	Deadwood
14	Quercus agrifolia 10"	No	Poor Vigor, Increased crown separation for Tree #13	Remove
15	Quercus agrifolia 12"	No	Good Vigor	Deadwood
16	Quercus agrifolia 10"	No	Good Vigor	Deadwood
17	Quercus agrifolia 14"	No	Poor Vigor	Remove
18	Quercus agrifolia 14"	No	Good Vigor	Remove scaffold branch on east side suppressing #19
19	Quercus agrifolia 40"	No	Good Vigor	Deadwood, Remove low scaffold branches on East side
20	Eucalyptus globulus 54"	No	Good Vigor, broken, scaffold branches, poor attachments	Remove invasive pyrophytic species
21	Quercus agrifolia 8"		Good Vigor	Deadwood, remove lower branches to 6'

Tree #	Species	Within Defensible Space	Condition	Recommendations/TPZ
22	Quercus agrifolia 38"	Yes	Good Vigor, significant decay in large scaffold branches, long laterals scaffold branches within target zone of new residence, root system within construction zone and soil disturbance will impact tree health (see attached photos)	Remove
23	Quercus agrifolia 6"	Yes	Good Vigor	Deadwood
24	Quercus agrifolia 12"	No	Good Vigor	Deadwood
25	Quercus agrifolia 11"	No	Poor Vigor	Remove to increase canopy spread for #26
26	Quercus agrifolia 9"	No	Good Vigor	Deadwood
27	Quercus agrifolia 12"	No	Poor Vigor	Remove to increase canopy spread for #26
28	Quercus agrifolia 48"	No	Good Vigor	Deadwood, Remove 1 lower scaffold branch on the east side to improve crown separation
29	Arbutus menziesii 8"	No	Poor Vigor	Remove
30	Arbutus menziesii 7"	No	Good Vigor, 45 degree lean	Remove to improve crown separation for Tree #28

Tree #	Species	Within Defensible Space	Condition	Recommendations/TPZ
31	Arbutus menziesii 6"	No	Fair Vigor, severe 70 degree lean	Remove
32	Arbutus menziesii 6"	No	Fair Vigor, severe 80 degree lean	Remove
33	Arbutus menziesii 7"	No	Fair Vigor, severe 80 degree lean	Remove
34	Quercus agrifolia 16"	No	Good Vigor	Deadwood
35	Quercus agrifolia 36"	No	Poor vigor, decay in trunk	Remove to improve crown separation for Tree #28
36	Quercus agrifolia 12"	No	Good to fair vigor	Remove to improve crown separation for Tree #24
37	Quercus agrifolia 8"	Yes	Good Vigor	Deadwood, 10% crown thinning
38	Quercus agrifolia 18"	Yes	Good Vigor, 45 degree lean towards street, within construction zone, root zone will be impacted	Remove

Appendix C

UC Cooperative Extension

Pyrophytic vs Fire Resistant Plant Lists

PYROPHYTIC SPECIES: High Fire Hazard Native Shrubs			
Latin name	Common Name	Latin name	Common Name
<i>Adenostoma fasciculatum</i>	Chamise, Greasewood	<i>Erigonum fasciculatum</i>	California Buckwheat
<i>Arctostaphylos spp.</i>	Manzanitas (some twiggy) <sup>b</sup>	<i>Pickeringia montana</i>	Chaparral Pea
<i>Artemisia californica</i>	Sagebrush (California)	<i>Quercus spp.</i>	Scrub Oak (brushy oaks) <sup>b</sup>
<i>Baccharis spp.</i>	Coyote Brush <sup>ab</sup>	<i>Salvia mellifera</i>	Black Sage
<i>Castanopsis chrysophylla</i>	Chinquapin, Giant	<i>Vaccinium</i>	Huckleberry <sup>b</sup>
High Fire Hazard Native Trees:			
<i>Cupressus sargentii</i>	Sargent Cypress	<i>Pinus radiata</i>	Monterey Pine <sup>b</sup>
<i>Lithocarpus densiflora</i>	Tan Oak, Tanbark Oak	<i>Pseudotsuga menziesii</i>	Douglas Fir <sup>b</sup>
<i>Pinus coulteri</i>	Coulter Pine	<i>Umbellularia californica</i>	California Bay <sup>b</sup>
<i>Pinus attenuata</i>	Knobcone Pine		
High Fire Hazard Ecological Weeds:			
<i>Acacia spp.</i>	Acacia species <sup>b</sup>	<i>Eucalyptus spp.</i>	Eucalyptus <sup>b</sup>
<i>Cortaderia jubata</i>	Jubata Grass <sup>b</sup>	<i>Pennisetum</i>	Fountain Grass
<i>C. Selloana</i>	Pampas Grass <sup>b</sup>	<i>Spartium junceum</i>	Spanish Broomb
<i>Cytisus scoparius</i>	Scotch Broom <sup>b</sup>	<i>Ulex europea</i>	Gorse <sup>b</sup>
<i>Cytisus monspessulanus</i>	French Broom <sup>b</sup>		
Fire Hazardous Introduced (Exotic) Plants:			
<i>Abies spp.</i>	Firs	<i>Picea spp.</i>	Spruces
<i>Bambusa spp.</i>	Bamboo <sup>b</sup>	<i>Pinus spp.</i>	Pines
<i>Cedrus spp.</i>	Cedars	<i>Rosmarinus officinalis</i>	Rosemary
<i>Chamaecyparis spp.</i>	False Cypress	<i>Spartium junceum</i>	Spanish Broom
<i>Juniperus spp.</i>	Junipers	<i>Taxus spp.</i>	Yew
<i>Larix spp.</i>	Larch	<i>Thuja spp.</i>	Arborvitae
<i>Lonicera japonica</i>	Japanese Honeysuckle	<i>Tsuga spp.</i>	Hemlock
Palms	Palm (if dry fronds)	<i>Ulex europea</i>	Gorse
<i>Pennisetum spp.</i>	Fountain Grass		

<sup>a</sup> Good for erosion control; <sup>b</sup> Invasive Species

Succulents (These are among the most fire-resistant plants.)			
Latin name	Common name	Latin name	Common name
<i>Aeonium spp.</i>	Aeonium	<i>D. pulverulenta</i>	Dudleya
<i>Agave spp.</i>	Agave	<i>Lampranthus spp.</i>	Bush Ice Plant
<i>Aloe spp.</i>	Aloe	<i>Echeveria spp.</i>	Hen and Chicks
<i>Carpobrotus spp.</i>	Ice Plant <sup>b</sup>	<i>Malephora crocea</i>	Croceum Ice Plant <sup>b</sup>
<i>Cotyledon spp.</i>		<i>Malephora luteola</i>	Yellow Trailing Ice Plant <sup>b</sup>
<i>Crassula spp.</i>	Crassula <sup>b</sup>	<i>Portulacaria afra</i> "Variegata"	Elephant's Food
<i>Delosperma "Alba"</i>	White Trailing Iceplant	<i>Sedum confusum</i>	Stonecrop
<i>Drosanthemum floribunda</i>	Rosea Ice Plant <sup>b</sup>	<i>Sedum rubrotinctum</i>	Brown Bean (Pork and Beans)
<i>D. hispidium</i>	Rosea Ice Plant <sup>b</sup>	<i>Senecio serpens</i>	
<i>Dudleya farinosa</i>	Dudleya or Cliff Lettuce		
Groundcovers:			
<i>Achillea tomentosa</i>	Woolly Yarrow	<i>Festuca rubra</i>	Creeping Red Fescue <sup>b</sup>
<i>Ajuga reptans</i>	Carpet Bugle	<i>Fragaria californica</i>	Wood Strawberry
<i>Armeria maritima</i>	Common Thrift	<i>Fragaria chiloensis</i>	Beach Strawberry
<i>Arctotheca calendula</i>	Silver Spreader	<i>Gazania rigens leucolaena</i>	Trailing Gazania
<i>Cerastium tomentosum</i>	Snow-in-Summer	<i>Iberis sempervirens</i>	Evergreen Candytuft
<i>Coprosma kirkii</i>	Creeping Coprosma	<i>Liriope gigantea</i>	Giant Turf Lily
<i>Duchesnea indica</i>	Mock Strawberry	<i>Myoporum parvifolium</i>	Myoporum
<i>Eounymus Fortunei coloratus</i>	Winter Creeper	<i>Osteospermum fruticosum</i>	Trailing African Daisy

<sup>a</sup> Good for erosion control; <sup>b</sup> Invasive Species

Groundcovers (Continued):			
Latin name	Common name	Latin name	Common name
<i>Pelargonium peltatum</i>	Ivy Geranium	<i>Santolina virens</i>	Green Lavender Cotton
<i>Phyla nodiflora</i>	Lippia Repens	<i>Thymus praecox arcticus</i>	Creeping Thyme
<i>Potentilla tabernaemontanii</i>	Spring Cinquefoil	<i>Trifolium fragiferum</i>	O'Connor's Legume
<i>Pyracantha "Santa Cruz"</i>	Firethorn	<i>Verbena peruviana</i>	Perennial Verbena
<i>Santolina chamaecyparissus</i>	Lavender Cotton	<i>Vinca spp.</i>	Periwinkle <sup>a</sup>
Perennials:			
<i>Achillea spp.</i>	Yarrow	<i>Iris spp.</i>	Iris
<i>Agapanthus spp.</i>	Lily-of-the-Nile	<i>Kniphofia uvaria</i>	Red Hot Poker (Torch Lily) <sup>a</sup>
<i>Bergenia spp.</i>	Bergenia	<i>Lantana montevidensis</i>	Lantana
<i>Centaurea cineraria</i>	Dusty Miller	<i>Lavandula spp.</i>	Lavender
<i>Centranthus ruber</i>	Red Valerian (Jupiter's beard)	<i>Limonium perzil</i>	Sea Lavender
<i>Coreopsis spp.</i>	Coreopsis	<i>Mimulus spp.</i>	Monkey Flower
<i>Dietes bicolor</i>	African Iris	<i>Oenothera berlandieri</i>	Mexican Evening Primrose
<i>Dietes vegeta</i>	Fortnight Lily	<i>Penstemon spp.</i>	Beard Tongue
<i>Erigeron karvinskianus</i>	Fleabane (Mexican Daisy)	<i>Sisyrinchium spp.</i>	Blue-Eyed Grasses <sup>a</sup>
<i>Erysimum linifolium</i>	Wallflower	<i>Stachys byzantina</i>	Lamb's Ears
<i>Geranium spp.</i>	Geranium	<i>Strelitzia reginae</i>	Bird of Paradise
<i>Helichrysum petiolatum</i>	Curry Plant	<i>Tulbaghia violacea</i>	Society Garlic
<i>Hemerocallis hybrids</i>	Daylily	<i>Zantedeschia aethiopica</i>	Common Calla <sup>b</sup>
<i>Hesperaloe parviflora</i>	Red Yucca	<i>Zauschneria californica</i>	California Fuchsia
<i>Heuchera maxima</i>	Island Alum Root		
Vines:			
<i>Rosa Banksiae</i>	Lady Banks' Rose	<i>Trachelospermum jasminoides</i>	Star Jasmine
<i>Solanum jasminoides</i>	Potato Vine	<i>Wisteria spp.</i>	Wisteria
<i>Tecomaria capensis</i>	Cape Honeysuckle		

<sup>a</sup> Good for erosion control; <sup>b</sup> Invasive Species

Moderate Fire Retarding Plants:			
Latin name	Common name	Latin name	Common name
<i>Ajuga crispa</i>	Giant Ajuga	<i>Hypericum calycinum</i>	St. Johnswort <sup>b</sup>
<i>Aloe aristata</i>	Dwarf Aloe	<i>Phyla nodiflora</i>	Lippia
<i>Aloe brevifolia</i>	Shortleaf Aloe	<i>Myoporum parvifolium</i>	Myoporum
<i>Atriplex semibaccata</i>	Australian Saltbush	<i>Osteospermum fruticosum</i>	African Daisy
<i>Cerastium tomentosum</i>	Snow-in-Summer	<i>Teucrium chamaedrys</i>	Prostrate Germander
<i>Coprosma kirkii</i>	Creeping Coprosma	<i>Trifolium fragiferum</i> var <i>O'Connor's</i>	Legume (Strawberry clover)
<i>Gazania rigens leucolaena</i>	Trailing Gazania		
Low Fuel Volume Native Plants:			
<i>Arctostaphylos hookeri</i>	Monterey Carpet (Manzanita) <sup>a</sup>	<i>Ceanothus maritimus</i>	Maritime Ceanothus
<i>Arctostaphylos uva-ursi</i>	Bearberry <sup>a</sup>	<i>Cistus crispus</i>	Rockrose
<i>Ceanothus gloriosus</i>	Point Reyes Ceanothus <sup>a</sup>	<i>Cistus salvifolius</i>	Sageleaf Rockrose
<i>Ceanothus griseus</i> 'Anchor Bay'		<i>Digitalis</i> spp.	Foxglove
<i>Ceanothus griseus</i> horizontalis	Carmel Creeper <sup>a</sup>	<i>Grindelia stricta venulosa</i>	Coastal Wild Gum
<i>Ceanothus griseus</i> 'Emily Brown'		<i>Salvia sonomensis</i>	Creeping Sage <sup>a</sup>
<i>Ceanothus griseus</i> 'Ray Hartman'		<i>Symphoricarpos mollis</i>	Creeping Snowberry
Low Fuel Volume Native Perennials:			
<i>Achillea millefolium</i>	Yarrow	<i>Eriogonum</i> spp.	Wild Buckwheat
<i>Aquilegia formosa</i>	Western Columbine	<i>Eriophyllum confertiflorum</i>	Golden Yarrow
<i>Asarum caudatum</i>	Wild Ginger	<i>Eriophyllum stachaedifolium</i> var. <i>artemisaeifolium</i>	Lizardtail
<i>Aster chilensis</i>	Wild Aster	<i>Erysimum capitatum</i>	Foothill Wallflower
<i>Brodiaea laxa</i>	Grass Nut	<i>Erysimum concinnum</i>	Fragrant Wallflower
<i>Dicentra formosa</i>	Western Bleeding Heart	<i>Eschscholzia</i> spp.	California Poppy
<i>Epipactis gigantea</i>	Stream Orchid	<i>Grindelia stricta</i>	Coastal Wild Gum
<i>Erigeron glaucus</i>	Beach Aster	<i>Heuchera micrantha</i>	Coral Bells

<sup>a</sup> Good for erosion control; <sup>b</sup> Invasive Species



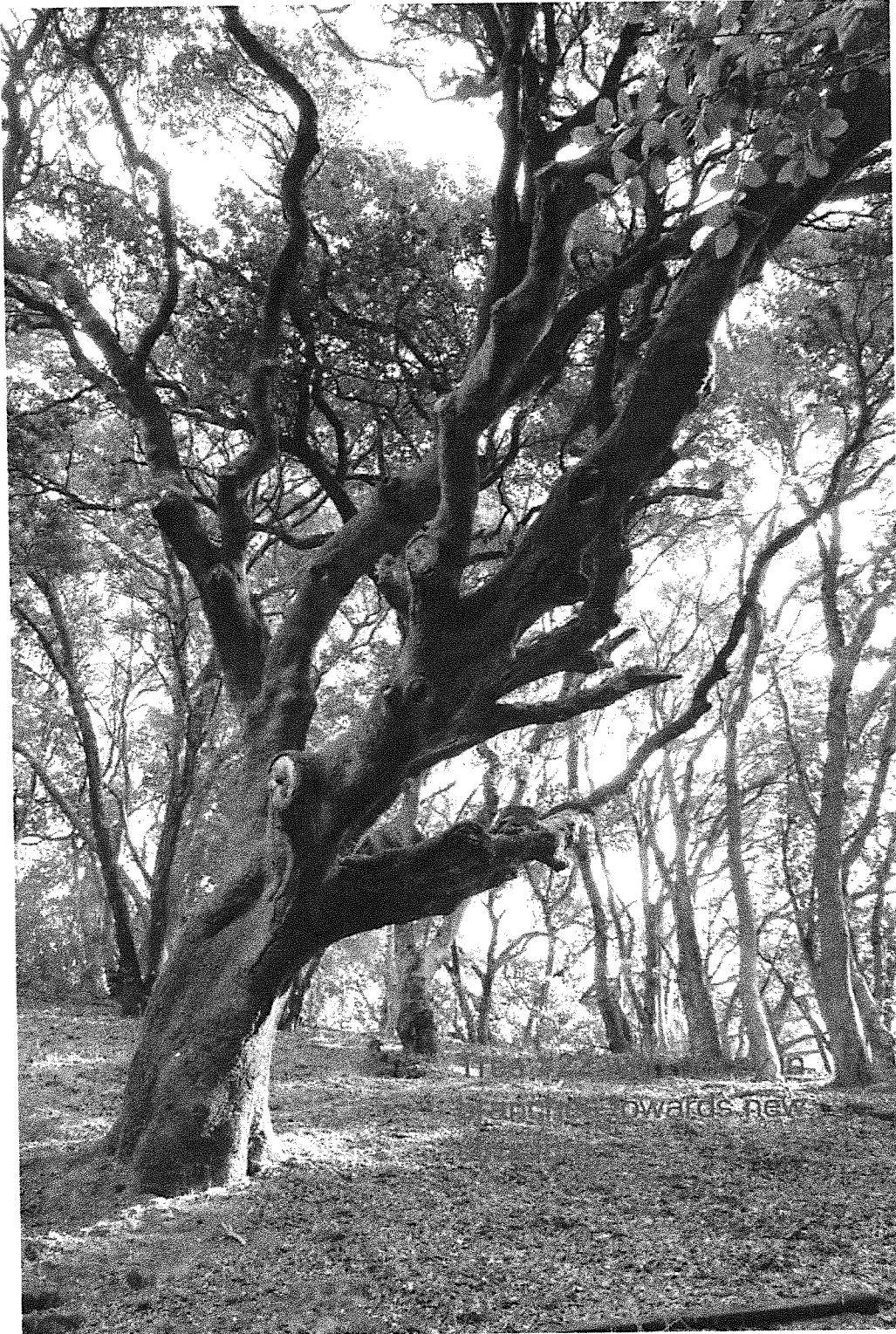
Shrubs:			
Latin name	Common name	Latin name	Common name
<i>Brugmansia spp.</i>	Angel's Trumpet	<i>Mahonia repens</i>	Creeping Mahonia
<i>Buddleia spp.</i>	Butterfly Bush	<i>Nerium oleander</i>	Oleander
<i>Carpantaria californica</i>	Bush Anemone	<i>Nolina spp.</i>	Nolina (related to Yucca)
<i>Coleonema caka</i> "Diosma"	Brush of Heaven	<i>Pittosporum crassifolium</i>	Dwarf Karo
<i>Convolvulus cneorum</i>	Bush Morning Glory	<i>Pittosporum tobira</i>	Mock Orange
<i>Cotoneaster congestus</i>	Likiano <sup>a</sup>	<i>Prunus lyonii</i>	Catalina Cherry
<i>Cotoneaster horizontalis</i>	Rock Cotoneaster <sup>ab</sup>	<i>Punica granatum</i>	Pomegranate
<i>Cotoneaster microphyllus</i>	Rockspray Cotoneaster <sup>a</sup>	<i>Rhaptolepis spp.</i>	India Hawthorn
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster <sup>ab</sup>	<i>Rhamnus alaternus</i>	Italian Buckthorn
<i>Echium spp.</i>	Echium or Priderot	<i>Rhododendron (Azalea) spp.</i>	Rhododendrons and Azaleas
<i>Escallonia spp.</i>	Escallonia	<i>Rhus integrifolia</i>	Lemonade Berry
<i>Lavatera assurgentiflora</i>	Malva Rose (Tree Mallow)	<i>Simmondsia chinensis</i>	Jojoba
<i>Ligustrum japonicum</i>	Japanease Privet	<i>Trachelospermum jasminoides</i>	Star Jasmine
<i>Ligustrum lucidum</i>	Glossy Privet	<i>Yucca spp.</i>	Yucca
<i>Ligustrum texanum</i>	Texas Privet		
Trees:			
<i>Acer spp.</i>	Maple	<i>Macadamia hybrids</i>	Macadamia Nut
<i>Arbutus unedo</i>	Strawberry Tree	<i>Metrosideros excelsus</i>	New Zealand Christmas Tree
<i>Ceratonia siliqua</i>	Carob	<i>Myoporum spp.</i>	Myoporum
<i>Cercis occidentalis</i>	Western Redbud	<i>Pistacia chinensis</i>	Chinese Pistache
<i>Cercocarpus betuloides</i>	Mountain Ironwood	<i>Pittosporum spp.</i>	Mock Orange
<i>Citrus spp.</i>	Citrus	<i>Quercus spp.</i>	Oak <sup>a</sup>
<i>Fagus spp.</i>	Beech	<i>Rhus lancea</i>	African Sumac
<i>Feijoa sellowiana</i>	Pineapple Guava	<i>Robinia pseudoacacia</i>	Locust, Black
<i>Fraxinus spp.</i>	Ash	<i>Schinus molle</i>	California Pepper Tree <sup>a</sup>
<i>Gleditsia triacanthos</i>	Honey Locust	<i>Schinus terebinthifolius</i>	Brazilian Pepper <sup>a</sup>

<sup>a</sup> Good for erosion control; <sup>b</sup> Invasive Species

Low Fuel Volume Native Perennials (Continued):			
Latin name	Common name	Latin name	Common name
<i>Iris douglasiana</i>	Douglas Iris	<i>Pteridium aquilinum</i>	Bracken Fern <sup>b</sup>
<i>Iris longipetala</i>	Long-petaled Iris	<i>Ranunculus californica</i>	Buttercup
<i>Iris macrosiphon</i>	Ground Iris	<i>Romneya coulteri</i>	Matilija Poppy
<i>Lonicera hispidula</i>	Pink Honeysuckle	<i>Satureja douglasii</i>	Yerba Buena
<i>Lupinus spp.</i>	Lupine <sup>a</sup>	<i>Sidalcea malvaeflora</i>	Checkerbloom
<i>Mimulus spp.</i>	Monkey Flower	<i>Sisyrinchium bellum</i>	Blue-eyed Grass <sup>a</sup>
<i>Monardella vellosa</i>	Coyote Mint	<i>Sisyrinchium californicum</i>	Yellow-eyed Grass
<i>Penstemon spp.</i>	Beard Tongue	<i>Solanum xanti</i>	Purple Nightshade
<i>Polystichum munitum</i>	Sword Fern	<i>Zigadenus fremontii</i>	Star Lily
NATIVE WILDLAND PLANTS — Valued Native Watershed Species			
Trees:			
<i>Acer macrophyllum</i>	Big Leaf Maple	<i>Fraxinus oregona</i>	Oregon Ash
<i>Aesculus californica</i>	Buckeye	<i>Juglans hindsii</i>	California Black Walnut
<i>Alnus rhombifolia</i>	White Alder <sup>a</sup>	<i>Platanus racemosa</i>	Western Sycamore
<i>A. rubra</i>	Red Alder	<i>Populus fremontii</i>	Fremont's Poplar
<i>Cercocarpus betuloides</i>	Mtn. Mahogany	<i>Quercus spp.</i>	Oaks <sup>a</sup>
<i>Cornus nuttalli</i>	Pacific Dogwood	<i>Salix spp.</i>	Willow
<i>Corylus cornuta</i>	Hazel	<i>Sequoia sempervirens</i>	Coast Redwood
Shrubs:			
<i>Ceanothus (some) spp.</i>	(Some) Wild Lilac <sup>a</sup>	<i>Penstemon corymbosus</i>	Thymeleaf Penstemon, Redwood Penstemon
<i>Dendromecon rigida</i>	Bush Poppy	<i>Penstemon breviflorus</i>	Bush Beardstongue, Gaping Penstemon
<i>Eriodictyon californicum</i>	Yerba Santa	<i>Solanum umbelliferum</i>	Nightshade, Blue Witch
<i>Galtheria spp.</i>	Salal	<i>Rhamnus spp.</i>	Buckthorn
<i>Garrya spp.</i>	Silk Tassel <sup>a</sup>	<i>Rhus spp.</i>	Sumac
<i>Heteromeles arbutifolia</i>	Toyon, Christmas Berry <sup>a</sup>	<i>Ribes sanguineum</i>	Red Flowered Currant
<i>Mimulus aurantiacus</i>	Sticky Monkey Flower		

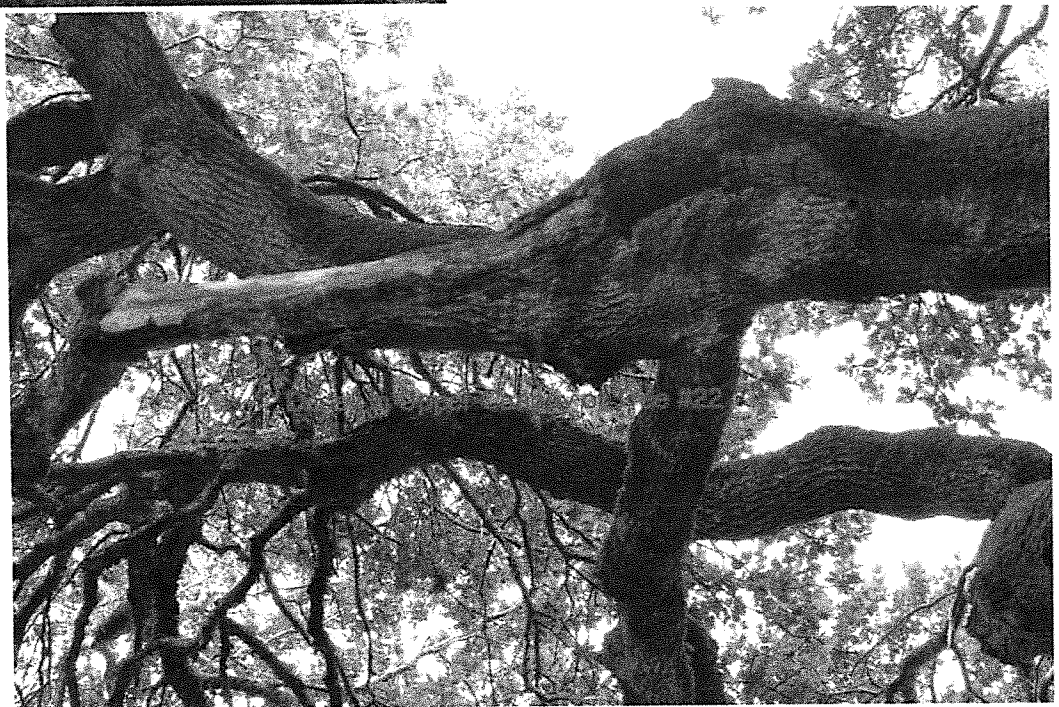
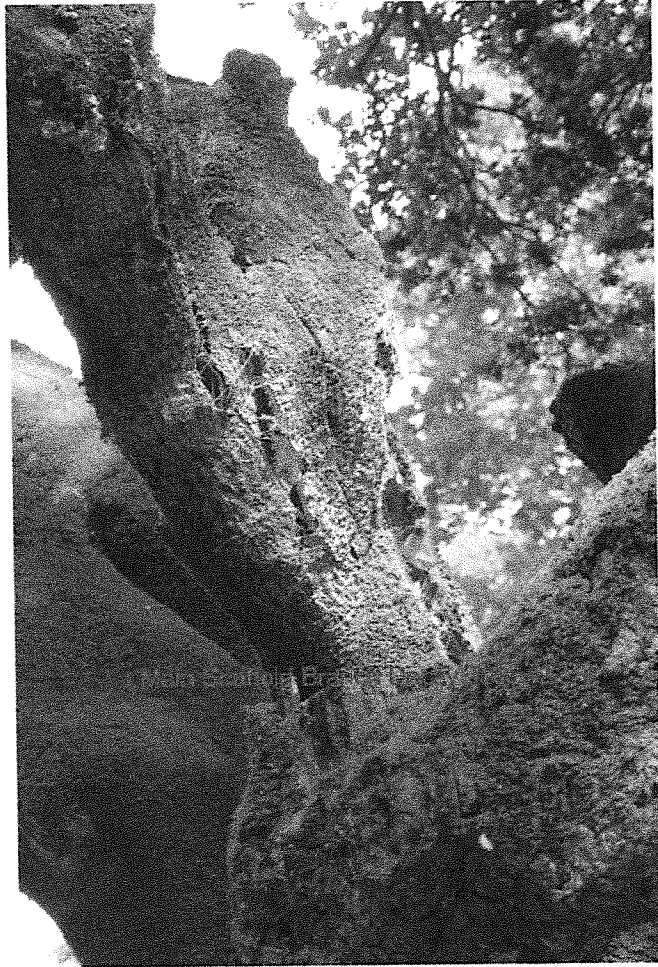
<sup>a</sup> Good for erosion control; <sup>b</sup> Invasive Species

**Photographs of Tree #22**











January 8, 2015

TOWN OF FAIRFAX

JAN 08 2015

RECEIVED

To: Fairfax Planning Commission

From: Elizabeth and Victor Harris,  
160 Willow Avenue  
Fairfax, CA. 94930

### **Objections to Proposed House at 164 Willow Avenue**

As the homeowners since 1981 of 160 Willow Avenue, we have strong concerns about the proposed 1,192 square foot house at 164 Willow Ave. -- the lot directly upslope from our home.

The applicant is requesting discretionary permits and variances simply because the proposed house is too large for the steep, slender 40-foot-wide lot on which it is to be built.

Accordingly, the proposed house needs to be modified significantly for the reasons stated below.

### **Request for a Hill Area Residential Development Permit and Excavation Permit**

In the Fairfax Planning Department's own words in its report, "The project site is substandard in size and width based on the slope, the proposed house will require the excavation of over 100 cubic yards of material and the site is located in a landslide hazard zone."

A logical question to start with: Why is the proposed house not scaled to a size that the parcel -- created in 1907 with no doubt a summer cabin in mind -- can actually accommodate safely?

### **Request for a Wall Height Variance**

The applicant proposes 11-foot-tall driveway retaining walls that are nearly twice the 6-foot limit set by the town code. And even 11 feet is the bare "**minimum** height necessary to construct a driveway with a grade and grade breaks that can be negotiated by a standard vehicle without bottoming out," according to the planning report. That alone raises questions about how safe these walls actually are.

Though Linda Neal in the Planning Department advised that the retaining walls would not stand above the hill, the report nonetheless points out that "these tall walls will have a visual impact on the street scape [sic] of Willow Avenue" and that "some type" of mitigation measures are required, without any specifics being stated.

**EXHIBIT # 6**

If you actually view the site and the markers, it is obvious that the huge retaining walls result in an eyesore to anyone living near or passing by.

Again, is this site being overbuilt?

#### **Request for Side Setback Variance**

The applicant is required to have a combined 20 foot side setback according to town code. The report indicates that the proposed house is 10 feet from upslope property line and 8 feet from our property line.

The real picture is even worse, because the markers and story poles that have gone up place the proposed house within 4 to 4-1/2 feet of our property line, not eight feet. Also, the proposed house falls within approximately 15 feet of two of our large oak trees whose roots can spread seven times the width of their crown, thus destabilizing them and possibly causing them to fall on our home.

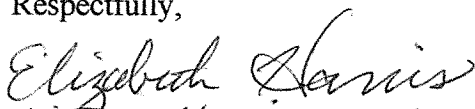
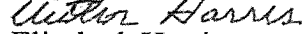
The planning report implies that since variances were given for 120 and 176 Willow Avenue, variances should be granted for 164 Willow as well. A variance is an **exception** and should not set a precedent. And to be candid, anyone who views the home at 176 Willow Avenue would have to concede that it is oversized relative to the lot and that it does change the character of the immediate Willow Avenue neighborhood, which consists of residences that are spaced out from one another, with landscaping that typically includes large trees and shrubs.

Given these facts, our request for a 10 foot side setback from our property is completely reasonable.

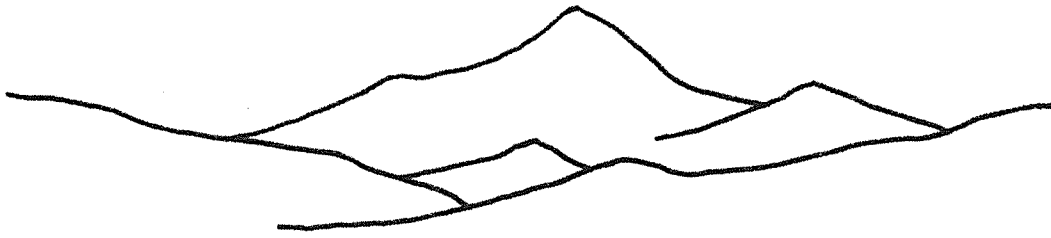
As Fairfax residents for more than 33 years, we respectfully maintain that you do your part in maintaining the town's charming, rustic quality and not grant permits and variances that conflict with town codes and therefore erode the character of the town. Fairfax does not need more houses crammed into too-small lots, and we should not be the direct victims of it.

For the forgoing reasons, among others, the Fairfax Planning Commission should not approve these permits and variances.

Respectfully,

  
  
Elizabeth Harris  
Victor Harris





## FAIRFAX OPEN SPACE COMMITTEE

Mimi Newton - Chair  
Susan Adams                      Jack Judkins- Co Chair  
Michael Ardito                  Nancy Morita  
Ted Bright                        Nancy Rogers  
Ray Burgarella                  Beatrix Berry (*ex officio member*)  
Jacob Feickert                    Hannah Salaverry (*ex officio member*)  
Ruth Horn

### REPORT ON PROPOSED DEVELOPMENT OF 164 WILLOW AVE., FAIRFAX, CA

TO:                      FAIRFAX PLANNING AND BUILDING SERVICES AND THE FAIRFAX PLANNING COMMISSION

FROM:                  THE FAIRFAX OPEN SPACE COMMITTEE'S SUBCOMMITTEE ON THE 164 WILLOW AVE. DEVELOPMENT PROPOSAL

DATE:                  JANUARY 9, 2015

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This *ad hoc* subcommittee of the Fairfax Open Space Committee (FOSC) was developed on an expedited basis and this report includes input from FOSC members Mimi Newton, Jacob Feickert, Susan Adams, Jack Judkins and Nancy Morita (the *Ad Hoc* Subcommittee). We appreciate the Planning Commission and Town Staff's agreement to postpone consideration of the development proposal for 164 Willow Ave. from December's Planning Commission Meeting to allow the members of FOSC to review the proposal and provide these comments to the Commission in accordance with the Fairfax General Plan's Open Space Element Programs OS-1.4.1.1 and 1.4.1.2.

#### Background

The reason FOSC requested the opportunity to review the development proposal for 164 Willow Ave. is because this property was identified in the Open Space Inventory that was developed and became a part of the Open Space Element of the General Plan. This inventory consists of underdeveloped and undeveloped land parcels in the Fairfax Planning Area that have intrinsic open space value. The list of open space properties on the inventory is at Appendix OS-1 of the General Plan.

Open Space Element Policy OS-1.4.1 states that any proposed development of a parcel in the inventory shall be reviewed by FOSC. To implement that Policy, Program OS-1.4.1.1 directs the Planning and Building Services Department to inform applicants proposing development of parcels in the inventory that their application will be reviewed by FOSC. Planning and Building Services is also directed to encourage the applicant to contact FOSC before submitting their application. Finally, this program directs FOSC to make a good faith attempt to meet with the applicant to discuss their application.

In addition, Open Space Element Program OS-1.4.1.2 directs FOSC to review each application for development of parcels in the inventory, and provide a written evaluation to the appropriate Planning and Building Services department before the end of the Planning Department's 30-day response window for development applications.

Although the Town Manager did write letters to many of the property owners whose land is listed on the Open Space Inventory in the summer of 2013, not every parcel was accurately identified and not every landowner was notified. It does not appear that any notice of the Open Space Element's requirements for parcels on the Open Space Inventory was provided to the owner of 164 Willow Ave. FOSC will be working with Planning and Building Services to identify any other Inventory parcel owners who still need to be provided notice of these Open Space Programs over the next few months. In the meantime, the *Ad Hoc* Subcommittee has endeavored to provide the review of the proposed development of 164 Willow Ave. that was envisioned by the General Plan without causing undue delay to the planning process. Unfortunately, we were unable to connect with the landowner or schedule a meeting to meet with them prior to the submittal of this Report.

### Basis for this Report

Our review of the proposed development was based on: the December 18, 2014 Staff Report from the Fairfax Department of Planning and Building Services to the Planning Commission; the Vegetative Fuels Management Plan and Tree Protection Plan dated February 26, 2014 and the attached April 1, 2014 approval by the Ross Valley Fire Department; the Geotechnical Investigation Report dated March 2, 2014; input from residents in the neighborhood; and on-site visits by members of the FOSC.

### Evaluation of 164 Willow Ave. Development Proposal on Open Space

FOSC initially recommended this property for listing on the Open Space Inventory for a number of reasons, including: (1) its heritage and other oak trees; (2) its madrone trees; (3) its connectivity to Hawthorne Canyon Open Space; and (4) the abundance of wildlife observed on the parcel and its utility as a wildlife corridor.

The parcel is described in the arborist's report as grassland, chaparral, and oak/bay/madrone/toyon trees and understory. This description fails to reference the fact that the trees on the property are particularly beautiful. We note that the large coast live oak [identified as Tree #22] provides a majestic canopy that contributes significantly to the visual enjoyment of the area not only by people living immediately adjacent to the property but throughout the neighborhood. Wildlife observed or detected on and around the property include deer, foxes, at least two types of owls, including Great Horned owls, and woodpeckers. A May 2008 assessment of bird species on the nearby 98-acre Wall Property could provide helpful information about some of the additional bird species in the area:

<http://fairfaxopenspace.com/sites/default/files/Wall%20Property%20Bird%20List%20-%20May%202008%20-5-08%20Wall%20Property%20Bird%20List.pdf>

We see no mention that the landowner engaged the services of a qualified biologist or botanist to determine if any special status species are present. We question whether the "Categorical Exemption from CEQA" is appropriate unless special status species have been demonstrated to not be on site.

We had some difficulty in reconciling the Staff Report with the Arborist's report in term of the number of oak trees to be removed under the proposal. The Arborist's report lists (of the large trees, 12" or more in diameter) 8 coast live oaks, (*quercus agrifolia*) to be removed, including Tree #22, which contributes significantly to the canopy. The dimensions, which include a 38" diameter oak, a 36" diameter oak, a 30" diameter oak, and an 18" diameter oak, are for the tree's diameter at breast height, so these are pretty big trees and not all of them appear to be accounted for in the Staff Report.

In addition, the Staff Report mentions "100 cubic yards of material" to be excavated in a landslide hazard zone. But, on Sheet C-1, the grading plan states that there will be "350 cubic yards of excavation to be removed from the site" as referenced in the Oct. 27, 2014 letter from Ray Wrysinski, Town Engineer, to Linda Neal, Principal Planner. As the difference between 100 and 350 cubic yards is significant, we request some clarification on that point.

We appreciate the landowner's plans to safeguard the native vegetation uphill of the proposed new building footprint and the fact that the plan proposes leaving the dominant and some co-dominant trees at the top of the property. This will lessen the visual impact of development on the community and for those enjoying the adjacent preserve. It will also help to suppress the exotic broom in the area.

The Staff Report indicates that a significant portion of the parcel will remain undeveloped (preserves natural vegetation, slope and thereby minimizes runoff and erosion). No landscaping plan was submitted, apparently based on the expectation that no development will occur on that portion of the parcel where the home's footprint will not be. However, there are no assurances that the undeveloped area will remain so permanently, and thus, there is no way to assure that the proposed project will not "violate" the terms of the permit and design review approval in the future.

As a result, we recommend that Town Staff and the Planning Commission consider exploring possible means for assuring that the purposes of the Hill Area Residential Permit and design review approval are met in perpetuity. While FOSC does not have a specific recommendation for how to effectuate such a requirement, a special permit condition, for example, could be enforced by the Town. A deed restriction as a condition would be another alternative and it would be recorded. Either way, the condition or restriction would need to delineate what is prohibited and what is allowed, such as no additional structures being built on the uphill side of the property. Additional requirements should be considered that might address, for example, play structures, fencing or retaining walls, removal of native and non-native vegetation, and diseased or damaged trees posing a threat to property or persons. For example, we would also like to ensure that any fencing of the property produces an un-obtrusive fence line, something that blends with the surroundings from a distance.

Again, this *Ad Hoc* Subcommittee of FOSC appreciates the opportunity to comment on this proposed development plan. One or more of us plan to be in attendance at the January 2015 Planning Commission meeting to answer any questions you may have about this Report.