

## URBAN FORESTRY ASSOCIATES, INC.

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### ARBORIST REPORT

*For*

*Douglas Fir Tree #1 Rincon Ridge Park 2016*

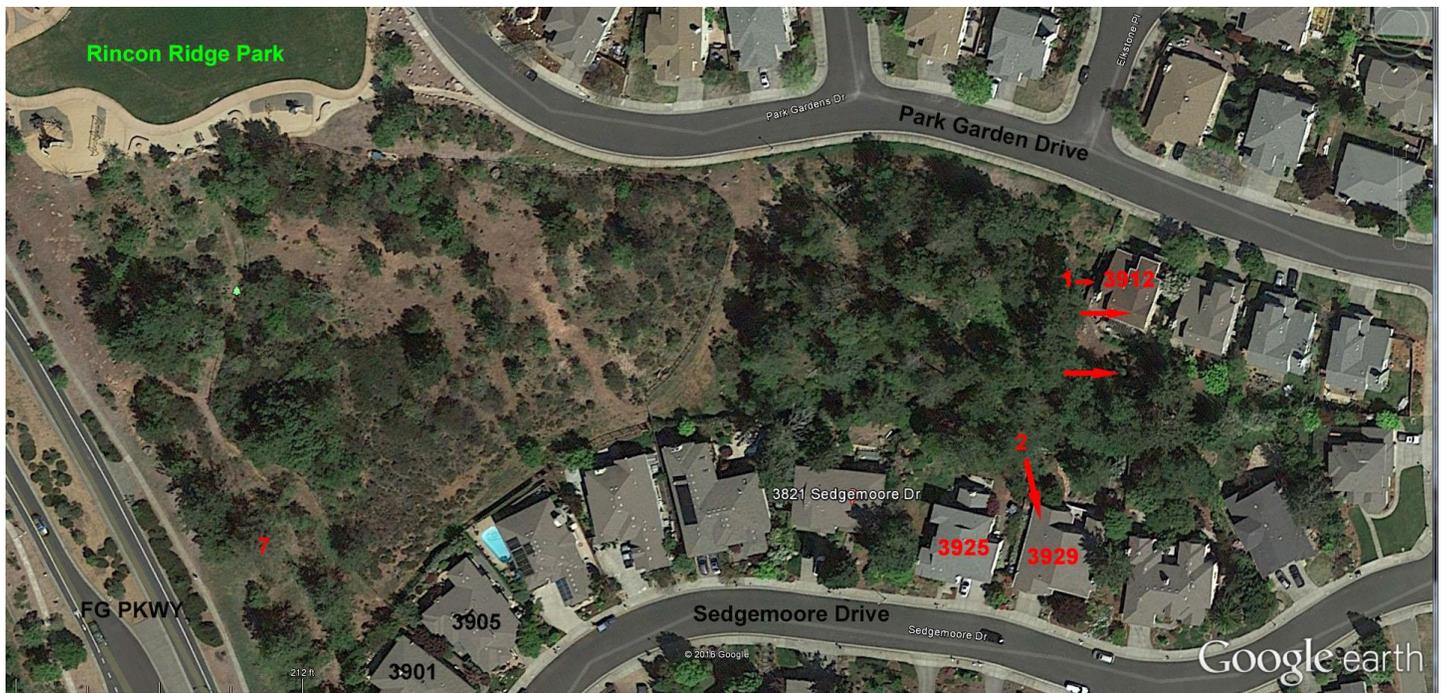
#### PURPOSE

Urban Forestry Associates (UFA) was hired to inspect Douglas fir trees located in the Rincon Ridge Park adjacent to 3912 Park Garden Drive and 3925 & 3929 Sedgemoore Drive (See Aerial Map below).

#### SCOPE OF WORK AND LIMITATIONS

Urban Forestry Associates has no personal or monetary interest in the outcome of this investigation. All observations regarding trees in this report were made by UFA, independently, based on our education and experience. All determinations of health condition, structural condition, or hazard potential of a tree or trees at issue are based on our best professional judgment. The health and hazard assessments in this report are limited by the visual nature of the assessment. Defects may be obscured by soil, brush, vines, aerial foliage, branches, multiple trunks or other trees. Even structurally sound, healthy trees are wind thrown during severe storms. Consequently, a conclusion that a tree does not require corrective surgery or removal is not a guarantee of no risk, hazard, or sound health.

#### LOCATION



The site is extremely rocky with shallow, poor soils. It was previously a chaparral stand as evidenced by the dead root crowns of Manzanita scattered throughout the fir stand and the adjacent chaparral containing Manzanita, Chamise and other extremely drought hardy plants to the west. The Douglas fir likely invaded the site prior to the 1964 Hanly Fire then dominated the site with post fire reproduction. The shallow discontinuous xeric soil mantle provides a poor anchorage for tall trees that exert strong lever force on the root anchorage.

**OBSERVATIONS**

Species Douglas Fir (*Pseudotsuga menziesii*)  
Size 26.0" DBH<sup>1</sup> Height = 72.5'  
Location Along the east fence line / common property line between the Park and 3912 Park Garden Dr.  
Condition This tree is the lowest fir on the slope along the property line. It is adjacent to the fireplace chimney the east base of the tree is 6 feet from a 3 foot deep cut for the 3912 Park Garden Drive house pad. The prevailing winds and the storm winds out of the Gulf of Alaska come out of the west northwest. In response to wind loads conifer trees produce and rely on "compression roots" on the lee side of the tree for stability. Major compression roots had to have been cut in the excavation of the house pad and installation of the retaining wall. Probing of the roots on the windward side of the tree discovered soil voids under the lateral (roots See Photo Figure 1).  
Conclusion Given the location of the tree near a home, the poor root environment, the root disturbance during construction and evidence that the root plate has been lifting under wind loads (voids), I concluded that this tree has an unacceptable risk of failure onto a target of great value.

**RECOM'D Remove – This tree is an unacceptable risk to people and property.**



Photo Figure 1 – Tree #1 targets the adjacent home and has been destabilized by species characteristics, the site soil conditions and the home construction impacts. Soil voids associated with lateral roots were found.

<sup>1</sup> DBH is Diameter at Breast Height, measured 4.5' above grade on the upslope side of a tree.

## APPENDIX

Douglas Fir, *Pseudotsuga menziesii*, grows to enormous size (110 to 250 ft.) and has a very rapid growth rate (2 to 3 feet per year). "It is definitely not a tree for small gardens." (1995, Maino and Howard, UC Berkeley Press). It grows to more than 120 feet tall in Marin County and is "not suited for a small residential landscape". Allow room for the spread of the tree, as this tree looks terrible with lower limbs removed." (Gilman, Trees for Urban and Suburban Landscapes).

Douglas fir will not tolerate dry soils for long periods; yet, it needs good drainage as it is highly susceptible to windthrow, root suffocation and root rot. Root rot can be a serious problem in irrigated clay soils. It is susceptible to loss of lower limbs as the tree matures and limb breakage in heavy winds or rain. Scale and bark beetles often attack Douglas fir, especially when it is under stress.

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Excerpt from Gilman, E.F. 1997. Trees for Urban and Suburban Landscape. Delamar Publishers. Albany, NY.

### **Douglas-fir (*Pseudotsuga menziesii*)**

**Height:** 40 to 60 feet

**Width:** 25 to 30 feet

**Fruit:** oval; 3 to 4"; dry; brown; no significant litter; showy

**Growth Rate:** moderate; long-lived

**Habit:** pyramidal; dense; symmetrical; fine texture

**Light Requirements:** full sun

**Soil Tolerances:** loam to sand; alkaline to acidic; salt-sensitive; drought-sensitive; good drainage is essential

**Pest Problems:** susceptible

**Pruning Requirements:** needs little pruning to develop strong structure

**Limb Breakage:** susceptible when branches are weighted down with snow



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Ray Moritz, Urban Forester SAF Cert #241  
ISA Qualified Tree Risk Assessor