

Kiely Arborist Services LLC

Certified Arborist WE#0476A

P.O. Box 6187

San Mateo, CA 94403

650- 515- 9783

May 11, 2018

PKM, Inc.
Attn: Brian Brinkman
PO Box 868
Pacifica, CA 94044

Site: Empty lot on Olympian Way, Pacifica, CA

Dear Mr. Brinkman,

As requested on Wednesday, May 2, 2018, I visited the above site for the purpose of inspecting and commenting on a large Monterey pine tree. A new home is in the process of being designed for this site and your concern as to the future health and safety of the trees has prompted this visit.

Method:

The inspection was made from the ground; the tree was not climbed for this inspection. The tree in question was located on a topography map provided by you. The tree was then measured for diameter at 24 inches above ground level. The tree was given a condition rating for form and vitality. The tree's condition rating is based on 50 percent vitality and 50 percent form, using the following scale.

1	-	29	Very Poor
30	-	49	Poor
50	-	69	Fair
70	-	89	Good
90	-	100	Excellent

The height of the tree was measured using a Nikon Forestry 550 Hypsometer. The spread was paced off. Comments and recommendations for future maintenance are provided.

Olympian Way 5/11/18

(2)

Survey:

Tree#	Species	DBH	CON	HT/SP	Comments
1	Monterey pine (<i>Pinus radiata</i>)	36.2	65	55/35	Good vigor, fair form, crown raised in past, top heavy, site is heavily slopped, neighboring pine trees infected with pine pitch canker.

Diameter=36.2"

Circumference=113.6"



Site observations:

The site has been recently cleared of shrubery for the preparation of future construction. The lot is vacant and no evidence of a previous structure on site was found. The only tree found on site is a large Monterey pine tree. The lot has a nice view of the ocean that is partially being blocked by the large pine tree. The tree has had its crown raised in the past, likely for neighboring views.

Showing Monterey pine tree in question

Discussion of species:

Monterey pine trees throughout the entire Bay Area have been suffering from the prolonged period of drought. The drought makes this species highly vulnerable to bark beetle attack and well as pine pitch canker disease. If bark beetles are present, the tree will likely die at a very fast pace. Pine pitch canker is a fungal disease that affects many pine species, especially when under drought stress. The fungal disease is caused by the fungus *Fusarium circinatum*. Monterey pine trees are the most widely affected host of this fungal disease when compared to other pine species. The fungus causes infections that can encircle or girdle branches, exposed roots, and the trunks of pine trees. The tips of girdled branches wilt as a result of obstructed water flow, causing needles to turn yellow and then brown. The needles eventually fall off, leaving bare branch ends. Multiple branch infections can cause extensive dieback in the crown of the trees and may lead to tree mortality. This species has a short life expectancy of 50-150 years. The species has a medium weak branch strength rating as seen in such apps as "SelecTree", made by Cal Poly. This often is the reason people remove this species when close to a home or a proposed home. Also, this species is intolerant of construction impacts and often can reduce the buildable area by a large percentage, as Monterey pines do not take well to root cutting.

Summary:

The Monterey pine tree in question is in fair condition. This tree showed no signs of pine pitch canker disease, but all of the Monterey pine trees on the neighboring properties are showing symptoms of die back related to the fungal disease, indicating the fungal pathogen is in the area. This tree is recommended to be removed for a variety of reasons

Reasons for removal

- The trees crown has been raised up to 25 feet in the past. Because the tree's crown has been raised, the tree is now top heavy. This make for an elevated risk of limb/top failure as the tree is now subjected to wind throw because the load is not evenly distributed throughout the tree.
- Any proposed construction within 30 feet(calculated root zone) of this tree has the potential to have a high impact on the tree's health and stability. Because the site is heavily slopped grading is likely to take place in some areas to create areas that are leveled-out. No grading would be allowed within 30 feet of this tree as this would have a high impact on the tree's health. Raising grades causes roots to die as they oxygen levels where roots are located would be significantly reduced. Lowering the grade would mean roots would need to be cut. Because of this tree's location, it has severely reduced the buildable area on this lot.
- This species has a short life expectancy of 50-150 years when grown in its native range. When outside of its native range its life expectancy is even shorter. Any impacts to this tree would likely reduce its life expectancy even further. Monterey pine trees do not take well to root cutting and have a poor tolerance to construction impacts as stated in Best Management Practices, "Managing Trees During Construction".
- It is necessary to remove this tree in order to let the property owner build a new home on his lot without the threat of a limb failure in close proximity to the proposed structure. Any excavation or grading within 30 feet of the tree would have an impact on the trees health. When this species starts to decline it usually is quickly infected with pine pitch canker and bark beetles.
- With this tree removed the neighboring properties property values will likely increase as their view will be even better.

The information included in this report is believed to be true and based on sound arboricultural principles and practices.

Sincerely,
Kevin R. Kielty

Certified Arborist WE#0476A



David P. Beckham

Certified Arborist WE#10724A