DISCOVERY BUILDERS INC.

4061 Port Chicago Highway Suite H
Concord, CA 94520
(925) 682-6419 Phone
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TRANSMITTAL

TO: City of Clayton
60 Heritage Trail
Clayton, CA 94517-1250

DATE: 12-13-2019

RECEIVED
DEC 13 2019
CITY OF CLAYTON
COMMUNITY DEVELOPMENT DEPT.

ATTENTION: David Woltering

RE: Oak Creek Canyon

WE ARE FORWARDING THE FOLLOWING:

QUANTITY	DATE	DESCRIPTION
3 sets		Arborist Report 10-10-2019
3 sets		24 x 36 Arborist Tree Protection Plan
3 sets		Applicant response letter to city staff comment letter dated 8-14-2019

DELIVERED VIA: Hand delivered by Kevin English

US MAIL

TRANSMITTED AS INDICATED BELOW:

FOR YOUR USE

COMMENTS:

TRAVERSO TREE SERVICE
WHEN IT HAS TO BE DONE RIGHT

RECEIVED
DEC 13 2019
CITY OF CLAYTON
COMMUNITY DEVELOPMENT DEPT.

October 10, 2019

West Coast Homebuilders, Inc.
4061 Port Chicago Hwy Suite H
Concord, CA 94520
Attn: Kevin English
925-682-6419 | kenglish@discoverybuilders.com

Re: Arborist Report for Oak Creek Canyon, Marsh Creek Road & Diablo Parkway, Clayton

Dear Kevin,

This arborist report addresses the proposed subdivison for the property at Marsh Creek Road & Diablo Parkway, APN 119-070-008. Per the City of Clayton's Tree Protection Ordinance Chapter 15.70, the scope of work includes:

- Tag, identify and measure trees with a single trunk or multiple trunks with a cumulative diameter of 6" or greater at 4.5' above grade, on or overhanging the property within 50' of proposed improvements.
- Note trees that are considered protected per city ordinance, defined as any tree of the following species: Ash (*Fraxinus dipetala*), Bay (*Umbellularia californica*), Box Elder (*Acer negundo*), Buckeye (*Aesculus californica*), Cherry (*Prunus emarginata, P. illicifolia, P. subcordata*), Cottonwood (*Populus fremontii*), Elderberry (*Sambucus mexicana*), Hop Tree (*Ptelea crenulata*), Madrone (*Arbutus menziesii*), Maple (*Acer macrophyllum*), Oak (*Quercus agrifolia, Q. chrysolepis, Q. douglasii, Q. kelloggii, Q. lobata, Q. wislizeni*), Sycamore (*Platanus racemosa*), Walnut (*Juglans hindsii)*
- Identify dripline locations and tree numbers on site plan.
- Assess individual tree health and structural condition.
- Assess proposed improvements for potential encroachment.
- Based on proposed encroachment, tree health, structure, and species susceptibility, make recommendations for preservation.

Project Summary

The property is an undeveloped hilly site at the outskirts of Clayton (Figure 1). Current vegetation is consistent with the native hillsides of our region, consisting of annual grasses, weeds, with scattered trees. Existing improvements include asphalt paving, curbs & gutters, and water lines from the Contra Costa County Water District (CCCWD) property to the street.

I included twenty-one (21) trees in my tree inventory. None are considered protected trees per city ordinance, though there are native oaks located in the CCCWD property and on the hillside far above the proposed subdivision. It is my opinion that nine (9) trees will need to be removed to accommodate the proposed project (Figure 2), seven (7) of which are notoriously weedy trees of heaven. The remaining twelve (12) trees can be retained given that the protection measures within this report are followed.

Figure 2. Two black locusts will need to be removed for a proposed path.

Assumptions & Limitations
This report is based on my site visit on 9/30/19, and vesting tentative map by Isakson & Associates, Inc. dated 9/5/19. It was assumed that the trees and proposed improvements were accurately surveyed. Off-site trees were not surveyed, so I approximately located them on the tree protection plan based on visual estimates of their locations.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.

Tree Inventory & Assessment Table
#s: Each tree was given a number from #41-61 (off-site trees were not physically tagged). Their locations are given in the tree protection plan.
DBH (Diameter at Breast Height): Trunk diameters in inches were calculated from the circumference measured at 4.5' above average grade.

Health & Structural Condition Rating
Dead: Dead or declining past chance of recovery.
Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.
Fair (F): Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.
Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.
Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Age
Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.
Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.
Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
ia)	6	P	P	8	8	8	10	OM	X	H	4 of 5 stems dead. Major decay in remaining stem; girdled by barbed wire. 6" west of existing asphalt. Proposed path up to trunk.	Remove.
	14, 17	G-F	F-P	10	0	15	15	M	X	H	Co-dominant trunks. Sided for power line clearance. Barbed wire girdling stem. Asphalt road right up to trunk; trunk flare buried. Decay between stems. Proposed path up top trunk.	Remove.
nia	20	G	G	4	4	4	4	Y	X	M	DBH estimated due to dense skirt of dead fronds. Trunk pushing against fence. 10' clear trunk. Proposed path 2' from trunk.	Provide 2' additional clearance from path; install temporary protection fencing.
	8.5, 12.5, 7, 6	F-P	F-P	15	18	18	15	M	X	H	Multiple stems at 2'. Barbed wire girdling smallest stem. Wire fence engulfed in lower trunk. 7' from proposed path. Notoriously weedy species.	Remove. Treat stumps with systemic herbicide.
	4, 4	F	F	15	15	0	0	Y		L-M	Co-dominant stems at 1'. Stunted growth. Notoriously weedy species. 5' from proposed path.	
	6, 5, 6	F	F	10	15	10	10	M	X	H	Co-dominant stems at 3' with included bark. Barbed wire starting to embed into trunk. Notoriously weedy species. In proposed path.	
	5, 6.5	F	P	0	20	0	0	Y	X	H	Recent large branch failure at attachment point. Notoriously weedy species. 2' from proposed path.	
	3.5, 4.5	F	F-P	18S				Y	X	H	Co-dominant trunks. All canopy to S. Notoriously weedy species. In proposed path.	
	15.5	F	VP	20	20	20	20	M	X	M-H	Co-dominant stems at 3.5' with severe included bark; again at 5' with serious included bark. Notoriously weedy species. 5' from proposed path.	
	10.5, 10	F	F-P	15	0	18	10	M	X	H	Co-dominant stems at 1.5'; one with large failure of secondary co-dominant stem. Notoriously weedy species. In proposed path.	

	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
	2.5, 4, 2	F	F	0	6	8	6	Y		L	Off-site, no tag, DBH estimated; not surveyed. Foliage half brown half chewed. Phototropic lean. Clear of construction.	None.
	6, 3	G-F	F	0	8	10	10	Y		L	Off-site, no tag, DBH estimated; not surveyed. Trunk cankers. Clear of construction.	None.
	8	G-F	G-F	6	8	10	8	Y		L	Off-site, no tag, DBH estimated; not surveyed. Clear of construction.	None.
	6.5, 4, 3.5	G-F	F	6	6	10	12	M		L	Off-site, no tag, DBH estimated; not surveyed. Co-dominant stems at 1'. Moderate chewing damage of leaves. Clear of construction.	None.
	14, 17	G	G	10	12	18	20	M		L	Off-site, no tag, DBH estimated; not surveyed. Co-dominant stems at 3'. Trunk with minor lean down slope, partially corrected. Clear of construction.	None.
	11	F	F	0	6	10	10	M		L	Off-site, no tag, DBH estimated; not surveyed. Decent structure in lower trunk; co-dominant stems at 8'. Clear of construction.	None.
	19	F-P	F	20	8	20	18	M		L	Off-site, no tag, DBH estimated; not surveyed. More elongated scaffolds to S. Slightly sparse canopy. Clear of construction.	None.
	15, 8	F	F	20	15	20	8	M		L	Off-site, no tag, DBH estimated; not surveyed. Elongated / large diameter scaffolds; decent single trunk. Small woody roots visible outside fence area. Clear of construction.	None.
s)	28	G	F-P	25	25	10	20	M		L	Off-site, no tag, DBH estimated; not surveyed. Multiple co-dominant stems at 8' twisted with included bark. Minor branch failures. Clear of construction.	None.
e a)	30	G-F	G-F	15	15	18	15	M	X	L-M	Off-site, no tag, DBH estimated; not surveyed. Several 4" roots visible along fence line. Pitch flow may be due to birds/larger insects. 23' N of proposed V ditch.	Install temporary protection fencing.

	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
	11, 7, 22	G	F	18	18	18	18	M	X	M	Off-site, no tag, DBH estimated; not surveyed. Multiple trunks. 15' from proposed end of J-ditch.	Cleanly prune roots ≥ 2" diameter if encountered.

ment Summary
hat will need to be removed: 41, 42, 44-49, 50 (9 trees)
o be saved that will be subjected to dripline encroachment: 43, 60, 61 (3 trees)
o be saved that will not be encroached: 51-59 (9 trees)

homes have a minor impact on existing trees, since they are located in open areas. Construction encroachment s from the proposed paths along the south and east property lines. Two black locusts (#41 & 42, Figure 2) along the ne will need to be removed. Neither tree is in excellent condition; one is nearly dead and the other has relatively poor r canopies also conflict with adjacent power lines, and clearance pruning has resulted in lopsided canopies.

tree removals consist of seven trees of heaven. The species is highly undesirable in both urban and natural habitats wing characteristics: can grow anywhere, especially disturbed areas; grows quickly with weak branches and wood; dant quantities of seeds; vigorously re-sprouts from the entire root system if the top is damaged. Ideally, the stumps ted with systemic herbicide immediately after the trees are removed. Systemic herbicides will be absorbed into the ll help kill roots and mitigate re-sprouting. Unfortunately, treatment is perhaps 60%-70% effective at best and may e applications.

he CCCWD property may be affected by the construction of the proposed J & V ditches. I suspect the Monterey pine e significantly affected, but it's likely that large roots ≥ 2" diameter will be encountered near the Italian stone pine roots are encountered, they should be cleanly pruned with a handsaw or sawzall.

#43, Figure 3) at the southeast corner of the property will be subject to moderate encroachment from the proposed ffer from trees in that they readily regenerate roots at the base of their trunks, so they tolerate disturbance closer than recommend moving the path a few feet further away to reduce encroachment.

Recommendations (to be printed on site plans)

Pre-construction

- Adjust proposed path design to provide 2' additional clearance from tree #43.
- Remove trees #41, 42 & 44-50. Treat stumps with systemic herbicide immediately after removal.
- Prior to construction or grading, contractor shall install fencing to construct a temporary Tree Protection Zone (TPZ) around trees #43 & 60 as indicated on the tree protection plan.
- TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist (PA).

Figure 3. Proposed path should be adjusted further from the palm tree (#43) to reduce encroachment.

Foundation, Grading, and Construction Phase

- If roots ≥ 2" diameter are encountered by tree #61 during construction of the proposed J-ditch, roots shall be cleanly pruned with a handsaw or sawzall.
- Pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices.
- Should TPZ encroachment be necessary, the contractor shall contact the project arborist (PA) for consultation and recommendations.
- Contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.
- Should any damage to the trees occur, the contractor shall promptly notify the PA to appropriately mitigate the damage.

Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

Please see attached tree protection plan.

Sincerely,

VESTING TENTATIVE MAP

"OAK CREEK CANYON"

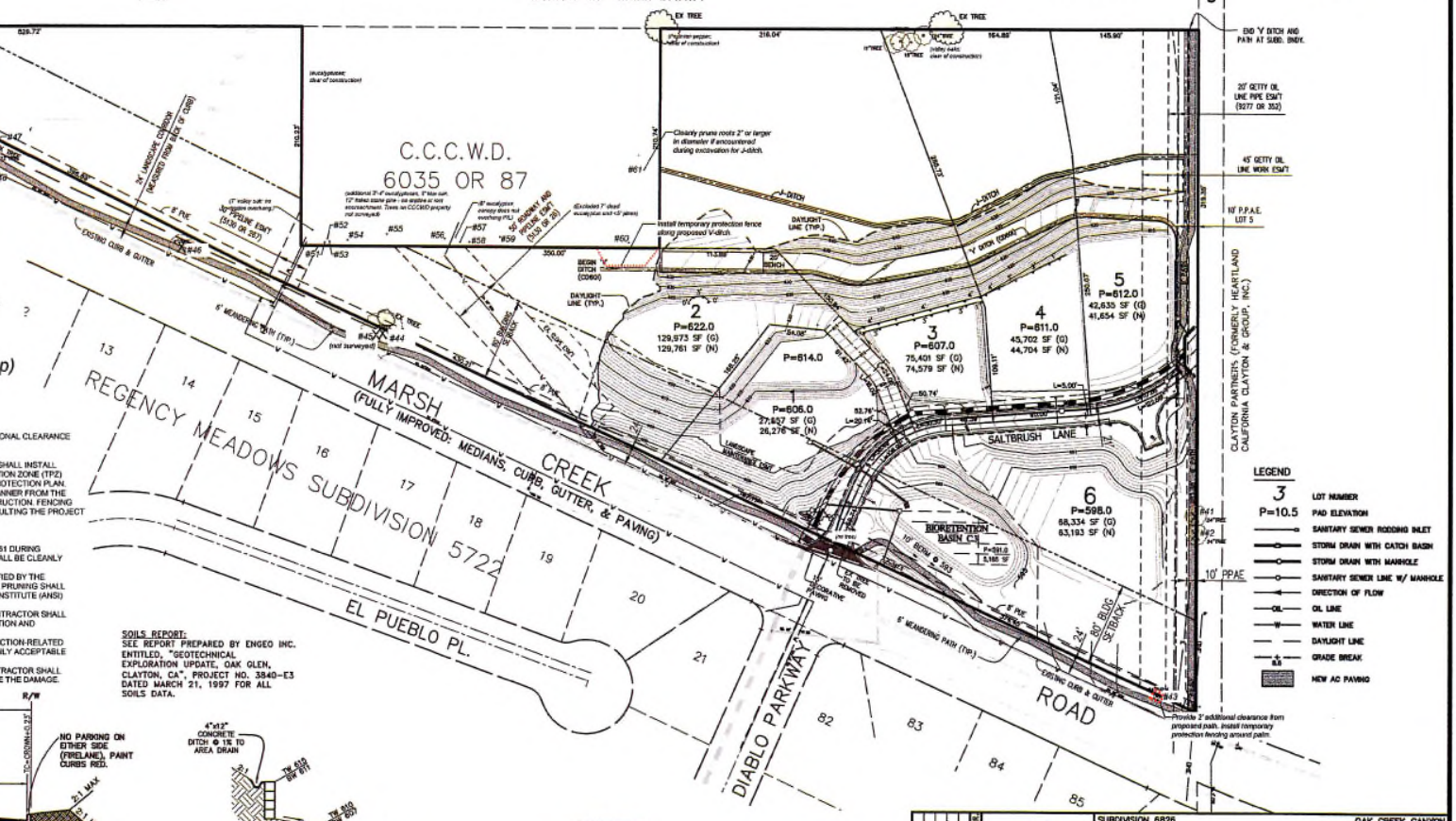
SUBDIVISION 6826

CITY OF CLAYTON
COUNTY OF CONTRA COSTA
STATE OF CALIFORNIA

1"=50'

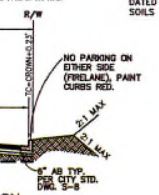
CLAYTON
-370-052

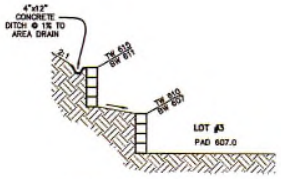
CITY OF CLAYTON
118-370-052



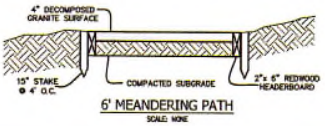
VICINITY MAP
NO SCALE

SOILS REPORT:
SEE REPORT PREPARED BY ENGEO INC. ENTITLED, "GEOTECHNICAL EXPLORATION UPDATE, OAK GLEN, CLAYTON, CA", PROJECT NO. 3840-E3 DATED MARCH 21, 1997 FOR ALL SOILS DATA.





TIERED WALL SECTION
LOT #3



6' MEANDERING PATH
SCALE: NONE

SUBDIVISION 6826		OAK CREEK CANYON
VESTING TENTATIVE MAP		
CLAYTON	CONTRA COSTA COUNTY	CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER DAVID O. ISAKSON NO. 21764 CIVIL STATE OF CALIFORNIA

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civil engineering & land surveying
2 Mirange Court, Clayton, CA. 94517 Phone:(925) 876-0889

DATE: 09-05-19	DESIGNED BY: DOI	DRAWN BY: RLB	CHECKED BY: DOI	JOB NO.: 200514	SHEET 1 OF 1

200514 - OAK CREEK CANYON (SUBD. 6826) TENTATIVE MAP - 09-05-2019