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VIA ELECTRONIC & U.S. MAIL

April 18, 2016

Kristina Kulczycki
LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING (DRP)
320 West Temple Street
Los Angeles, California 90012
Em: kkulczycki@planning.lacounty.gov

RE: Canyon Crest Conservancy Comment Letter Regarding Project No. R2014 – 02411-(5), ROAK 201400035, and RMCP 201400014.

Dear Ms. Kulczycki,

On behalf of Canyon Crest Conservancy ("**Conservancy**" or "**CCC**"), my Office is providing comments to the County of Los Angeles ("**County**") regarding Project No. R2014 – 02411-(5), ROAK 201400035, and RMCP 201400014 ("**Project**"). These comments are intended to supplement comments already provided to the County on March 23, April 5, 2016, and April 11, 2016.

CCC is a California nonprofit public benefit corporation dedicated to 1) protecting open space, 2) ensuring that natural preservation areas are protected and enhanced 3) ensuring a high quality of life in the Canyon Crest area by remaining consistent with its natural character, and 4) carrying on other charitable and educational activities associated with this goal as allowed by law.

On April 5, 2016, the County conducted a public hearing on the Project as Agenda Item No. 10 ("**Item**"). At the Hearing, the County opted to continue the Item until April 19, 2016 at 9:00 a.m. for the Project's applicant, Steven Kuhn ("**Applicant**"), to submit a revised arborist report

Most recently, on April 11, 2016 CCC requested that the County require the Applicant to submit additional documents by April 19, 2016 and continue the hearing to give the public time to review the documentation and hear the Project on or about May 10, 2016.

As of April 18, 2016, the Applicant has yet to submit a revised arborist report. CCC requests that County continue tomorrow's hearing, set for April 19, 2016 at 9:00 a.m. to a later date and require the Applicant to submit a revised arborist report at least 3 weeks in advance of the hearing to allow the public adequate time to review the Applicant's materials.

Moreover, the County should request that the applicant erect story poles to demonstrate the impact that the Project will have on surrounding trees and neighborhood views and whether the Project will be able to comply with the conditions of the County Fire Department permit as well as Oak Tree Permit. The Applicant has previously indicated their willingness to install story poles on the Project

Site. Email from Stephen Kuhn to Kristina Kulczycki Re: FW: Independent review of Canyon Crest Drive Project (Mar. 22, 2016) 7 ("We had earlier considered staking story poles to portray the footprint of our home, but we have been trying to follow all rules scrupulously and were given pause by the language in the oak tree report . . . .").

Finally, the County should order the Applicant to prepare and submit an Oak Woodlands report to determine whether the Project will not have a significant impact on oak woodlands.

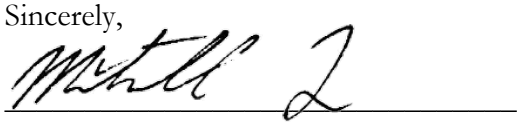
Comments from Rebecca Latta, an experienced professional arborist, addresses the Applicant's response to her March 16, 2016 letter and concludes that the Project still underestimates the Project's impact on individual oak trees and endangers the survival of the entirety of the oak woodland on the Project Site. Letter from Rebecca Latta to Kristina Kulczycki RE: Response to comments from SK to Independent Arborist Review for APN 5830-00-016 – Canyon Crest Road, Altadena (Apr. 16, 2016). Latta also points out a number of key pieces of information have been left out of the Project's arborist report, including documentation of impacts to particular trees as well as the width and depth of the notching for the Project. Finally, Ms. Latta recommends installation of story poles on the Project site under the supervision of a qualified arborist to quantify the Project's impact on oak tree canopy.

Moreover, the Applicant's application materials do not appear to accurately reflect the Project as it will occur on the Project Site. CCC members have erected balloons and various other demonstrative devices that show that the Project's drawings do not accurately reflect the height of the building's interaction with the surrounding oak tree canopy or its visual, aesthetic impact. *Compare* Applicant's Model to Demonstrative Installations.

Finally, the Project Site is an oak woodland covered by the County's Oak Woodland Conservation Plan. Latta notes that the Project Site easily meets the definition of an oak woodland under the purposes of the Oak Woodland Conservation Plan. Latta Letter at 2. An oak woodlands report is required under the County's Oak Woodlands Conservation Plan.

It is a pleasure working with you. Please feel free to contact my Office if you have any questions or concerns.

Sincerely,



Mitchell M. Tsai
Attorneys For Canyon Crest Conservancy

Attachments

Email from Stephen Kuhn to Kristina Kulczycki Re: FW: Independent review of Canyon Crest Drive Project (Mar. 22, 2016) (attached as Exhibit A);

Letter from Rebecca Latta to Kristina Kulczycki RE: Response to comments from SK to Independent Arborist Review for APN 5830-00-016 – Canyon Crest Road, Altadena (Apr. 16, 2016) (attached as Exhibit B);

Applicant's Model (attached as Exhibit C); and

Demonstrative Installations (attached as Exhibit D).

EXHIBIT A

Kristina Kulczycki

Subject: FW: FW: Independent review of Canyon Crest Drive Project
Attachments: R2014-02411_Baer_Wilson_response.pdf; R2014-02411_Bjornlie_response.pdf

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From: Stephen Kuhn [mailto:kuhn.s.r@gmail.com]
Sent: Tuesday, March 22, 2016 12:11 PM
To: Kristina Kulczycki
Subject: Re: FW: Independent review of Canyon Crest Drive Project

Kristina,

As requested, I am writing to clarify that the documents included in R2014-02411_responses.zip sent to you on 3/21/16 are intended to supersede and replace those sent in the zip file of the same name on 3/11/16, except where I note at the end of this email, for which the two attachments to this email are most current.

These documents were newly included in the 3/21 file, based on submittals received after 3/11:
R2014-02411_arborist_response.pdf
R2014-02411_Fabbro_response.pdf

This document was extended in the 3/21 file to address two additional submittals received after 3/11:
R2014-02411_Schoeman_response.pdf

These documents were extended to a minor extent in the 3/21 file to address information generated for R2014-02411_arborist_response.pdf:
R2014-02411_Lynch_response.pdf
R2014-02411_Hickman_response.pdf
R2014-02411_Randall_Kimble_response.pdf
R2014-02411_Desai_response.pdf

This document was unchanged:
_08_burden_of_proof.pdf

I also intend for the attached documents - R2014-02411_Baer_Wilson_response.pdf and R2014-02411_Bjornlie_response.pdf - to supersede and replace the documents of the same name included in the two zip files sent 3/11 and 3/21. It extends those letters to address submittals received after we had sent our responses on 3/21.

Regards,

Stephen

Kristina,

We want to thank Rebecca for her work and will consider some of her suggestions carefully with our arborist. We will attempt to address inline the questions and concerns that she has brought up. We believe that she has asked for some details that go beyond the scope of the burden of proof laid out in 22.56.2100.A. It is unfortunate she did not attempt to engage with us or our arborist to address her questions, as it might have avoided some misunderstanding.

We have tried to attribute professional opinion and objective evidence where possible. Our arborist is ISA-certified and was contacted from a list maintained by the county of recommended arborists with experience writing oak tree reports. We deferred to his judgment during design development in iterating on the footprint of the home.

We refer here to the supporting document available in its highest resolution here: https://dl.dropboxusercontent.com/u/1354273/R2014-02411_support_maxres.pdf?dl=0. We will refer to this below as support-[page number].

Re: Independent Arborist Review of Oak Tree Report for APN 5830 003 016 –Canyon Crest Road, Altadena.

Report e-mailed to Kristina at kkulcczycki@planning.lacounty.gov and John at johnthearborist@gmail.com

John Lynch is our future neighbor to the north at 3589 Canyon Crest Road, who along with his wife have parked their car and pickup truck on our lot in the unimproved protected zone of our oaks for the past 10 years, since purchasing their home in 2006.

Dear Kristina,

As requested by the neighbor, I have reviewed the oak tree report by Scott McAllaster of Land Design Consultants dated August 2, 2014. I also reviewed the letter from Jay Lopez dated December 3, 2014. I was surprised that the report did not include all the oak trees on the site and failed to mention that it crosses a stream with Riparian oak woodland habitat.

We disagree with the statement that not all oak trees on our site are addressed in the report. Every oak tree – whether on our lot or adjacent to it – with a protected zone encroached by our permeable driveway or the footprint of our home or the construction of our utility laterals is included in the report. At the request of our arborist, we consulted the county Forestry department Environmental Review Unit to confirm that this was the expected scope of any report for a single family residence, and that other trees as far as 200ft distant on private property (many of which were not granted access to be surveyed) were not expected to be included. The county Forester reviewed the oak tree report for our project and agreed with this scope. The oak tree report addressed this with the following statement: "There are additional oak trees within 200 feet of the proposed development, but beyond the property boundary. These trees could not be surveyed due to access restrictions by the adjacent property owners and are not proposed to be impacted by development."

The oak trees in the riparian environment below are also addressed with this statement in the oak tree report: "There are approximately eight (8) additional oak trees that are located on-site approximately 170 feet downslope from the proposed development. The elevation at which these trees are located is more than 80 feet below the elevation where the proposed building is located. These oaks will not be impacted by the proposed development and were therefore not included in the scope of this analysis."

The Assistant Chief Forester who reviewed our oak tree report states that, "The Oak Tree Report is

accurate and complete as to the location, size, condition and species of the Oak trees on the site."

Additionally, I think it is important to note that at some point in the recent past, the flat pad by the road was enlarged by dumping fill soil on the protected zones of at least 4-5 oak trees to a depth of at least one foot. Two trees are buried three feet deep where the natural slope drops. This fill soil can compromise the health of the trees.

It is stated that the pad was re-graded at some point in the recent past. John has been resident at 3589 Canyon Crest since 2006, and as Rebecca was commissioned by John, who would have had knowledge of this had it occurred while he lived there, any claimed grading would therefore have occurred more than 10 years ago. We will discuss with our arborist the risk trade for re-grading to what may have existed 10+ years ago, versus preserving the grade the trees may have acclimated to over this period. We call attention to the fact that these trees have continued to survive to receive mostly grades of A or B from our arborist 10+ years after this claimed re-grading may have occurred.

We note that assessment of this fact required some excavation in the protected zone of the oak trees. We and our arborist have tried to comply meticulously with the oak tree statutes, which may be interpreted to forbid this until an oak tree permit is granted.

Maintaining the health of our trees will be a priority for us during and after construction, and we intend to build on the initial recommendations of our arborist to address the needs of our trees. This may include re-grading after construction is complete, if our arborist recommends.

Quick Summary:

The property contains a significant ecological area and can be defined as an oak woodland. A Riparian woodland exists at the bottom of the canyon on the parcel. There are also important natural rock features impacted by the project.

The statement describes the property as containing a "significant ecological area". Since the term is not capitalized, the intent is ambiguous. We will note that a part of our property became part of a Conceptual Significant Ecological Area as defined under the LA County SEA Program on December 10, 2014 (http://planning.lacounty.gov/sea/proposed). The footprint of the home is outside this conceptual SEA, the boundary of which was drawn to avoid the footprints and adjacent yards of neighboring residences along the west of Canyon Crest (see the SEA overlay at http://rpgis.isd.lacounty.gov/GIS-NET3_Public/Viewer.html). Quoting from the DRP materials, "Conceptual SEAs will replace the current adopted SEAs in these three communities only as each community amends or updates its own community plan." Therefore, this remains a latent designation. In the initial study, our planner notes that "the project site is not located in a currently mapped Significant Ecological Area (Source: General Plan 1980 Special Management Areas Map)".

It is not clear to us what is meant by "important" natural rock features.

Our property contains two separate stands of oak woodland – one in the riparian environment of the canyon below and one at street level. Our home is accurately described in the initial study as sited at the "edge of a disturbed oak woodland community."

Species on the property include canyon live oak, bay laurel, big leaf maple, elderberry, alder, black walnut and several willow species. The adjacent lot has sycamore and scrub oak.

Fill soil laid down in the recent past should be removed on the flat pad by the oak trees. The actual size of the flat pad not covering tree roots may be much smaller than it is now. Even a small amount of fill soil can contribute to root death and tree decline.

We will carefully consider this recommendation with our arborist, who may come to the same conclusion in overseeing the manual excavation for our home.

The impacts of the project are much greater than represented in the arborist report prepared by Land Design Consultants. The report does not quantify impacts, only discusses distances from tree trunks. I estimate 3-4 trees or more may need to be removed to construct the proposed project.

In the absence of supporting details, it is not clear to us which 3-4 trees are referenced, or whether these are protected trees. As the oak tree statute protects only trees greater than 8" in diameter, we assume the statement refers to removal of 3-4 mature, protected trees. It is stated that impacts are not quantified, but our arborist described the manner and distance of encroachment of all trees. Aside from the single protected oak tree we are cutting, only two of the protected trees on our lot to remain will require any significant pruning, and only these same two trees exceed what our arborist describes as "the minimum industry recommendation for excavation on one side of a tree," being "five time the trunk diameter." We will refer to this ratio as the Encroachment Distance to Diameter (EDD) ratio.

Trees #8, #7 and #4 were described in our report as having retaining wall (which we'll note is really the sub-grade wall of our home) excavation within their protected zones, being "approximately 4 feet from the trunk of tree #4, 6 feet from the trunk of #7, and 1 foot into the protected zone of #8". Tree #8 complies with the industry recommendation, with an EDD ratio of more than 10. Tree #7 is 27.5" in diameter with excavation estimated to be 72" from the edge of the trunk. While this EDD ratio of 2.6 is lower than the recommended 5, the depth of excavation will be reduced and trail off to nearly nothing at the minimum encroachment distance. Tree #4 is sqrt(9.5^2 + 19^2)=21" in diameter with excavation estimated to be 48" from the edge of the trunk. While this EDD ratio of 2.3 is lower than the recommended 5, this encroachment occurs in only a quadrant of the protected zone.

Oak tree #1 has had two separate encroachments that have violated the minimum EDD ratio recommendation in the past ~20 years (support-26), and yet is assessed a grade of "A" for health and vigor in the oak tree report. In 1994, a previous owner of John's property filed for a permit for an overflow seepage pit (http://dpw.lacounty.gov/bsd/nas/5830/003/003/3589%20N%20CANYON%20CREST%20RD%20%20007508982.pdf). The as-built record for this seepage pit is shown on support-27. It shows that a 5' diameter and 35' deep seepage pit was drilled under their driveway near the street. The edge of this seepage pit – construction of which entailed more than three times the volume of excavation of any one of our piles – is no more than 6ft from the trunk of tree #1, per the as-built (support-27). Tree #1 is 33" in diameter, resulting in an EDD of 2.2, less than the EDD ratios we're proposing to adopt for trees #7 and #4, the only such trees to exceed the minimum industry recommendation.

Furthermore, a water meter and lateral were installed on our lot by a previous owner in 2005. The surveyed location of the edge of the water meter is 7ft from the trunk of tree #1, resulting in an EDD of 2.5. These seepage pit and water meter encroachments occurred on opposite sides of the tree, and both encroachments included the construction of laterals well within the protected zone of tree #1. Tree #1 is already encroached immediately to the N by John's own impermeable driveway and slab-on-grade home, and immediately to the E by the impermeable pavement of Canyon Crest itself. Tree #1 is portrayed in the image on page 20 of Rebecca's report. Given the extent of encroachment of tree #1 and its vigor in spite of this, there is some objective reason to believe that our trees may be more resilient than this report appears to state.

Our arborist catalogued the health and canopy extent of each of our trees. In the field, we will make decisions as to which branches must be cut and which may not. We will make every attempt to preserve as much oak tree canopy as we can.

Impacts to adjacent trees are not considered.

It is unclear to us which adjacent trees are being referred to here. All oak trees with any encroachment into their protected zones – whether on our lot or adjacent to it – are considered.

Here are my detailed findings from the review:

Missing from the Arborist report from Land Design Consultants:

1. Impact analysis for tree #10. The arborist report from LDC says that there will be no impact to tree #10, However, the trunk is within 15 feet of the foundation pilings and adjacent to a large boulder that may need to be removed.

The surveyed distance between the trunk of tree #10 and the edge of the NW pile of our home is 15.5ft. Our cantilevered deck does encroach into the protected zone of tree #10, though it does not physically overlap with its existing canopy at that elevation and therefore results in no physical encroachment of either the protected root zone or canopy of tree #10. To address this marginal encroachment of oak tree #10, we submitted to our planner in July of 2015 a revised burden of proof that states, "The proposed project construction will result in nine (9) encroachments and one (1) removal of the total 10 surveyed oak trees onsite."

2. Sewer line and water line construction impacts are not mentioned in the oak tree report. Additional impacts to tree #1, 2, 3, 4, 5, 6 and 8 may be significant.

Construction of laterals will adhere to oak tree mitigation measure #4, that "all work in the protected zone of the trees approved for encroachment must be done using hand implements only," and measure #10 that "any major roots (2" or greater in diameter) encountered shall be preserved to the extent possible". According to IPC section 305.6 and IRC section P2603.6 and P2603.6.1, water and sewer laterals may be buried at 12" below grade. The more conventional 18" specification for these laterals will still allow us to avoid any permanent damage to any oak tree roots, through careful, shallow excavation. Although the sewer lateral is required to drop deeper where it enters the road right of way, this point was chosen to be more than 15ft distant from any tree.

3. Any quantification of impacts from the retaining wall, fill soil (15 cu yards of cut and 15 cu yards of fill) and pile drilling activities.

The proximity of these permanent changes to grade – which are confined to the footprint of the home – is quantified wherever the impacts exceed the industry recommendation. The amount of grading – both cut and fill – is also quantified.

a. Minimum piling size of 24 inches is mentioned. I would think the maximum potential size would be more relevant. Do the holes have to be shored? How much bigger does that make the holes? Where will the spoils from the holes be placed?

The holes do not have to be shored, and if they were, shoring is thin corrugated steel that does not add significantly to the diameter of the excavation. Spoil from the holes will be removed from the site.

b. The flat pad is completely covered by oak tree canopy. How will a crane fit into the into the space and drill pilings without damaging the trees? Dump trucks will not have adequate vertical clearance; the canopy overhangs low over the pad.

On our website (https://bitly.com/1VnrSrM), we have a link to videos that show the limited access drill rigs that are used on hillside lots (and even inside homes) to drill piles. Dump trucks will not be used

on our site. As is conventional on any construction site, spoil can be removed with standard 5 or 10 yard dumpsters that are no more than a few feet high. The loads of these temporary dumpsters will be distributed with plywood in the protected zone of our oak trees, per oak tree report mitigation measure #6.

> c. Where will materials be stored where they are not within the protected zone of any oak trees?

The implication of this statement appears to be that it is not permitted to store materials within the protected zone of oak trees. While it is desirable and conditioned where possible to avoid parking in the protected zones of trees to minimize compaction, any such requirement would be inconsistent with the use of our lot to park John's 2-ton pickup truck in the unimproved protected zone of our oak trees for ~10 years. Our oak tree report mitigation measure #6 allows staging of materials in the protected zone of oak trees, provided the loads are distributed with plywood cribbing to reduce compaction. We believe with our arborist that with this measure in place, staging will be no more impactful to our trees than the point loads of the truck's tires.

Once our main level and garage is cast, we will have an additional ~1000sf of area to stage building materials off of the unimproved ground in the protected zones of our oak trees. It is after this point that most deliveries – framing lumber, sheathing, drywall, cladding, roofing, windows and doors, etc. - will be made.

> d. There is a drainage channel that appears to run under the proposed house. If the drainage is altered, how will that impact the oak trees?

The flow of the drainage channel will be re-routed gently by ~3-5ft around the SE corner of the house. This will have a small impact to native grade (in family with the claimed over-grading at the level of the pad), an impact confined to a single oak tree's protected zone (tree #5).

> e. The percentage of root zone and canopy impacts are not mentioned. The arborist specifies a distance to impacts, but does not discuss the relevance of the impact to tree health. Only that they might occur. How does the arborist determine whether the impacts are great enough to recommend removal of the protected trees?

The arborist presumably relies on their skill and experience and does not recommend removing trees that are expected to survive.

> f. The height of the structure is 31 feet, but the trees are much lower than 33 feet. How does the building fit into the slope under the trees? I believe that the applicant should be required to put up story poles to demonstrate the actual footprint of the structure and how it interfaces with the trees.

The height of our home with respect to grade and the height of overhanging canopy with respect to grade are variable. It is inaccurate to reduce this to a single figure of 31ft. It is true that at the NE corner (the maximum absolute elevation, which is 31ft above street grade) there will be no over-hanging canopy (though canopy will remain to the north and east that will continue to obscure this corner from neighbors and from much of the street). This would also have to be true were our home 5ft lower at this corner. A limb of tree #4 will need to be pruned to effect this. Some limbs and branches from tree #7 will also need to be pruned. The height of our home most impacts tree #7, as the tree that will see the greatest extent of canopy encroachment and pruning. At the middle vertex of our home along its north edge, the height at ridgeline with respect to the base of the trunk of tree #7 will be ~25ft, and at the NW corner, ~10ft. Parts of the canopy of tree #7, which extend to a height of 35ft above the grade at its trunk, will be able to overhang our home. Aside from tree #4 and tree #7,

only tree #5 has canopy that intersects the footprint of our home, and this only slightly, at the SE corner. It will be trimmed slightly, if at all.

We had earlier considered staking story poles to portray the footprint of our home, but we have been trying to follow all rules scrupulously and were given pause by the language in the oak tree report, prohibiting "any act causing or tending to cause injury to the root system". Some of our neighbors have put up an array of changing visual aids attempting to portray some dimensions of our home, and where they believed the vertices to be located. Some story poles must have been driven at least a couple feet into the ground in order to stand up.

We had also created wireframe renderings from several vantages that attempted to portray the massing of our home.

> g. There is no mention of the required 5 feet of clearance required by the fire department for the structure.

No citation is provided for this claim of 5 feet of clearance, as John provided no citation for the claim in his opposition letter that an "additional 10 feet of clearance around the structures" is required. In the applicable fuel modification guidelines (https://www.fire.lacounty.gov/wp-content/uploads/2014/02/Fuel-Modification-Plan-Guidelines-8-10-11.pdf), the following statement is made with respect to trees in zone A: "Trees should be limbed up to at least 6 feet above bare earth and a minimum of 3 times the height of underlying plants." There is no reference to a 5 feet setback for the limbs or canopy of trees in proximity to the home. And these are guidelines, that do not necessarily reflect the state of enforcement on the ground, for which other considerations apply.

We live at 4381 Canyon Crest, about a mile up the road from the site of our new home. The same fuel modification inspectors visit us presently as will visit us in our new home. We have a large Q. agrifolia just below heritage size 8ft from the W edge of our home, which overhangs the house. Every couple of years, an inspector will typically ask the canopy be trimmed back to a few feet of offset from the roof. The large limbs of another tree are permitted 12" from the N edge of our home, along the soffit. There are other fine examples of Q. agrifolia trees in Altadena that coexist in close proximity to the homes they shelter, and for which even soffits have been rebuilt to accommodate limbs (support-25). These homes are successfully inspected and insured, and ours will be as well, with its fire-rated assemblies.

We also note that 5ft width around the perimeter of the home for access by fire personnel on foot requires no pruning of canopy beyond that typical of fuel modification, as we describe above.

4. The report does not address any impacts to the heritage sized oak tree on adjacent property to the south and additional tree over protected size on their property. Although there are no heritage size trees around the building site, there are some within 200 feet of the project.

The referenced tree is ~60ft distant from the S edge of our home, well outside its protected zone. We clarified earlier the scope of our report and the approval of that scope by the Forestry department. It is unclear what is meant by "additional tree over protected size on their property." All protected trees with any impacts were analyzed in our report, and all trees on our lot were addressed.

5. There is no mention of the existing fill soil that is suffocating the roots of the trees near the flat pad area. Even 2 inches of fill soil can suffocate roots and cause root decay.

We have addressed this point earlier. On the one hand, it is noted that as much as 3ft of over-graded fill has existed for a period of ~10 years in the protected zone of trees that were graded A or B. On the other, it is claimed that 2 inches of fill can suffocate roots. Regardless of whether this may be true of some trees, ours appear to have demonstrated some tolerance. We will consider the

recommendations of our arborist during and after construction.

6. The site is located over a significant ecological area. There is a blue-line stream at the bottom of the canyon in the center of the property. This is not addressed in the oak tree report. How will the project prevent sediment and debris from going down the hill? There are multiple oaks and other trees directly below the building site that are not addressed in the oak tree report. They could be directly impacted by a change in hydrology or drainage.

We have earlier addressed the misconception that the footprint of our home is in any SEA, and that any portion of our lot is in a currently mapped SEA. The oak trees in the riparian environment of the canyon below are described in our report as not being impacted.

No support is provided for the claim that there are multiple oaks that are "directly" below the building site. Our arborist quantifies their proximity with this statement in the oak tree report: "There are approximately eight (8) additional oak trees that are located on-site approximately 170 feet downslope from the proposed development. The elevation at which these trees are located is more than 80 feet below the elevation where the proposed building is located. These oaks will not be impacted by the proposed development and were therefore not included in the scope of this analysis."

Sediment and debris generation is controlled by the DPW Erosion and Sediment Control Plan requirements, were excavation to occur in wet months. In the dry months, conducting excavation by hand will limit these impacts to less than significant. The hillside between the footprint of our home and the oaks in the canyon includes dense ground vegetation that would intercept whatever small quantity of dirt may escape our control measures.

Our home will do little to alter existing drainage patterns, having a footprint of only 1262sf. Existing sheet runoff from the footprint of our home intersects the open drainage swale before it intersects the protected zones of the oak trees in the canyon below. Our roof runoff will also be directed to this open drainage swale, preserving the existing drainage pattern.

Also the slope is full of large boulders that may require removal to construct the proposed pilings.

The single large boulder pictured on page 12 of the report, as well as that portrayed on page 13, have been surveyed and do not require removal. All piles are sited at locations free of rocks/cobbles that are visible at the surface. The depth of alluvial terrace containing these cobbles is anticipated to be 2-4ft, per the test pits of our geotechnical report.

7. The property would qualify as oak woodland based on the definition in the Oak Woodlands Conservation Management Plan Guide from LA County Planning dated March 18, 2014. I estimate the coverage of oak woodland on the property to be greater than 35%. There is also a diversity of oak species (3 species) on the property.

There is no supporting exhibit map to derive this figure of 35%. There are two stands of oak woodland on our property, and only the road-side stand is affected. Using the canopy outline created by our arborist in his exhibit map, the area of protected oak tree canopy in this stand on our lot is ~4171sf, which is ~9% of the area of our 44390sf lot. We portray this in support-34.

> a. If the site contains an oak woodland, then the staff biologist and Forester should make a determination about whether the project could significantly impact the oak woodland.

This process occurred as part of the initial study, which states: "The proposed development is sited at the edge of a disturbed oak woodland community, and would include the removal of one coast live oak (Quercus agrifolia) tree from the community for the construction of the proposed residence. The

applicant will plant two oak trees on the subject property. The proposed location of the two replacement trees, adjacent to riparian oak woodland, is identified on the landscaping plan. Compliance with the conditions of the oak tree permit, through the planting of replacement oaks on site in appropriate habitat areas will ensure that impacts to oak woodlands are less than significant."

Although our arborist does not believe it is likely, even if one or more trees were to succumb from impacts from construction, we are able to mitigate impacts to oak woodland by planting additional trees in a 2:1 ratio either adjacent to the stand of woodland at the street, or the riparian stand of woodland below. We hope to plant additional oak trees independent of any statute requirements, and in time to see our oak woodland expand and prosper in a favorable environment.

b. A plan should be developed with oak trees and woodland depicted and labeled. None exists at this time.

Our exhibit map depicts and labels all affected oak trees. All of these oak trees are acknowledged to be a part of a stand of degraded oak woodland.

8. How much notching is a slight notching for the driveway? The depth needs to be quantified.

We believe this is referring to the following statement in the oak tree report: "The placement of the new driveway will be placed over existing grade and may require a slight notching of the hillside for placement of the driveway". This notching is that of our home in order to place the garage at the level of the street. No excavation is required for placement of our driveway. The notching for our home is described in the architectural drawings submitted as part of this process.

9. If the driveway gets laid over the existing grade without removing soil, how will it not be several inches above grade? Vapor permeable driveways can still cause root damage and compaction unless carefully designed. What percentage of the root zones will be impacted by the driveway?

Our driveway is composed of a thin layer of gravel. In the same way that a thick layer of mulch that does not affect permeability is not treated as changing the grade (and noting that we are conditioned to provide four to six inches of mulch in the protected zone of our trees after construction per oak tree mitigation measure #11), this gravel is not treated as materially changing the grade either. Given this negligible impact to existing conditions, it was not considered necessary to further quantify it.

In my opinion, at least 3-4 trees will have to be removed to construct the project and several more will sustain significant impacts that could shorten their lifespans. The report lacks sufficient detail to determine the extent of certain project related impacts to the trees. More importantly, this property is part of the visual corridor of native oak trees that lead to the Meadows. The trees are part of the visual character that gives the neighborhood a semi-rural fee. I also believe oak woodland habitat in Southern California is rapidly disappearing due to drought and development and healthy trees should be preserved.

We have earlier addressed why we believe with our arborist that one – and not 3-4 – trees need to be removed. Removal of 3-4 trees would imply that removal is required not just of the only two trees (trees #4 and #7) that see any pruning and encroachment from notching of the hillside, but as many as 1 other tree, and that "several more" in addition will sustain significant impacts. If oak tree #5 is assumed to be this additional removed tree, and acknowledging that #6 must be cut, then "several more" can refer only to trees that are encroached only by our permeable driveway (trees #1, #2 and #3) or the construction of piles at the edges of their protected zones beyond the dripline of the canopy (trees #8, #9 and #10).

We hope we have been able to address Rebecca's questions and concerns. We live in the Meadows

neighborhood and love the oak trees in the area. We have tried our best to design a home that retains as many of our oaks as is possible. We look forward to planting new oaks on our property to preserve and expand the two stands of beautiful oak woodland. We also hope to dedicate a conservation easement to forever protect the riparian environment of the canyon and oak woodland far below our home, and have initiated a conversation with the Arroyos and Foothill Conservancy towards that end.

Regards,

Stephen and Vandana

Please let me know if you have any questions.

Sincerely,

Rebecca Latta

Consulting Arborist, Horticulturalist
626 272-8444 cell
rlattaconsulting@gmail.com
ISA Certified Arborist WE4264A
Certified Tree Risk Assessor #1217
Member, American Society of Consulting Arborists

EXHIBIT B

Rebecca Latta Arboricultural Consulting

359 North Westridge Avenue, Glendora, CA 91741 (626) 272-8444
rlattaconsulting@gmail.com **Certified Arborist #WE4264A**

April 16, 2016

Kristina Kulczycki
Senior Regional Planning Assistant
LA County Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Re: Response to comments from SK to Independent Arborist Review for APN 5830-003 016 - Canyon Crest Road, Altadena

Dear Kristina,

As requested by my client, I have reviewed the comments submitted by the applicant regarding the Independent Arborist Review I submitted before the hearing. I have responded to his comments below:

GENERAL COMMENTS:

During the hearing, the property owner stated that the arborist no longer works for Land Design Consultants and that he no longer working for them on this project. The hearing officer at the April 5, 2016 hearing specifically requested an arborist's opinion. The property owner is not an arborist, nor are they officially qualified to assess the impacts from his own project on the trees.

The property owner believes that the impact on trees beyond the one removal will be minimal. In my opinion, the report downplays impacts to protected oak trees.

1. The arborist report from Land Design Consultants discusses that there will be root impacts, but states "specific root impacts cannot be determined".

2. The report downplays the significance of the retaining wall within 4 feet of the trunk of trees #4 and #5 and fails to mention that anchor and large lateral roots critical for structural support may be located in the impact area. The edge of the retaining wall is not the edge of the encroachment because the soil may need to be 'laid back' in order to construct the wall on a slope and space will be required to insert the form for the concrete. Additionally, I usually estimate 5-feet of working room will be required next to the retaining wall needed for scaffolding and materials (working room).

3. From the site plan dated July 13, 2015, the project appears to underestimate canopy impacts. On the table provided on page 8 of the report in the comments, several trees have a note indicating there will be encroachment within the dripline, but no mention of the

amount of canopy or size of branches to be removed to construct the proposed structure. It is my opinion that when the total amount of root and canopy encroachments equals more than 50%, then the tree may sustain significant damage and requires removal. My rough calculations for trees with the most impacts are as follows:

- More than 50% of the canopy of Oak #4 will require pruning including large branches over 2 inches in diameter. The tree would be subject to more than 50% of its total area in root encroachments. Steps to be installed within 2 feet of the trunk will require excavation not mentioned in report. Combined with the root encroachment from the retaining wall, the compaction from the staging and activity for the pilings and the concrete apron, this tree has enough impacts that it may go into decline. In my opinion, the combination of canopy and aerial impacts could severely damage the tree. (50% root and 50% canopy)

- 25% of the canopy of Oak #5 will require pruning and removal of branches over 2 inches in diameter. The sewer line and retaining wall combined could damage more than 35% of the total root zone. In my opinion, the combination of canopy and aerial impacts could severely damage the tree. (25% root and 35% canopy)

- 45% of the canopy of Oak #7 will require pruning and removal of branches over 2 inches in diameter. The root encroachment is 55% including the access steps around the structure.

SPECIFIC RESPONSES TO COMMENTS

Burden of Proof:

1.b.i.c The grading plans lack adequate detail to assess oak impacts. The plans should show the exact limits of grading under the canopy of the oak trees.

His comments on my letter:

Paragraph 1:

The project proposes to change surface flow that might affect the oaks downslope. It is my understanding that the house will be built over the current drainage. Small changes in hydrology can impact oak trees if they are accustomed to the water source especially in a drought year.

It is my opinion that the downslope trees should have been mapped and discussed in more detail since the property is an oak woodland (greater than 10% canopy - using the oak woodland guidelines). I used Google Earth and rough property map from the County website and determined the number of oak trees. Then I added the sphere of influence and determined that the oaks covered approximately 35% of the whole property. That qualifies the property as an oak woodland per the definition in the oak woodland management plan. See page 5 of the LA County Oak Woodland Conservation Plan. The project information downplays and minimizes the significance of the impacts to the oak trees and to the woodland as a whole.

The County oak tree ordinance requires that trees within 200 feet of construction be addressed. The trees are 170 feet away from the construction, but due to the steepness of the slope may have be impacted. The downslope trees could be impacted specifically by erosion, changes in drainage/hydrology, and runaway construction materials.

The letter from the County of Los Angeles Fire Department Fire Prevention Division requires a minimum unobstructed width of 20 feet excusive of shoulders and an unobstructed vertical clearance (clear to the sky) and Fire Department vehicular access within 150 feet of the exterior walls of the first story of the building. This will require the applicant to remove additional canopy.

Paragraph 2:

Fill soil, even old fill soil, can be carefully removed a little at a time (over a period of years). The fill soil is currently suffocating roots and creating potential stress on the existing trees. The arborist from LDC did not physically verify if the trees had rooted into the fill. The extent of any new rooting into the fill can be determined with exploratory potholing into the fill. The following excerpt from Matheny and Clark Trees and Development: A Technical Guide to Preservation of Trees During Land Development is provided below to explain my conclusion.

"It can take a long time for the damage from fill soil to be evidenced in the tree canopy. Root rot starts slowly and then progresses to a point where the trees die or fail. The fill soil holds moisture around the trunk and alters normal gas exchange. Some trees develop adventitious roots in the fill soil that keep the tree green and alive. Over time, however, disease and decay may develop in the original root crown and buttress roots. The tree becomes structurally unstable and prone to failure."

Trees with root decay of this nature may fall over before the crowns die back. This is because some nutrients can get to the canopy, but weight of the foliage can no longer be supported by the weakened root system.

Summary:

I labeled the site a significant ecological area because I believe that it is a viable biological system regardless of the label used by LA County. The area is adjacent to a national forest, and is part of the proposed wildlife linkages in the 2014 Regional Habitat Linkages plan on the Regional Planning website. The fact that it was a part of a conceptual SEA indicates there are resources there. The home is proposed to be located in a grove of oak trees - an oak woodland - not on the edge of it.

Regarding the 4th paragraph:

The owner admits that significant pruning will be required but the impacts are not quantified in the report. The report says, for instance, that the structure will encroach 16-feet into the dripline of oak tree #7, a tree that already has issues and is rated 'C', but does not discuss the significance of the encroachment.

The arborist did not catalog impacts to the trees. He states only whether the trees would have an encroachment or not, and the distance. A thorough impact assessment will identify which branches need to be cut and their sizes. Large pruning cuts wound the trees and open them to insect and disease attacks. Pruning large amounts of canopy over 20% can cause the tree to go into decline because the leaves collect food from photosynthesis that help to keep the tree healthy. Removing too many leaves put the trees on a starvation diet.

Missing from the Arborist report from LDC:

2. On a steep slope, the roots can be found where the water and resources are located. A sewer lateral 12 inches deep can cause significant damage to lateral and anchor roots close to the trunk of the trees.

3. The amounts of cut and fill within the protected zone of the oak trees is NOT quantified. Sections would be required to understand the extent of impacts. For instance, the concrete apron might require the removal of a 20x20 area of soil to a depth of 12 inches deep within the root zone of tree #4.

c. Plywood does spread the load but it does not prevent compaction. The impacts from this project will be concentrated in a small area that impacts trees #1, 4, 5, 7, 8 . Lichter and Lindsey (Soil Compaction in the Journal of Arboriculture 20(4) July 1994) state that soil compaction is reduced but not eliminated with the use of surface treatments such as plywood. The plywood and mulch break down quickly under the weight of equipment. They go on to say that limiting equipment use under the canopies, avoiding work when the soil is wet and selecting lightweight equipment are all part of a multi-faceted approach to limiting soil compaction.

The proposed project would have sustained impacts in a small area completely covered with tree roots. This can be seen in the photographs from the site looking west from the road. These roots could be damaged and the soil significantly compacted from continuous activity to build the structure. These impacts would not show up in the trees for several years. Even though the applicant proposes to stage materials on the slab once it is constructed, the initial soil compaction can cause stunted roots, limit air and water exchange, destabilize root systems, and reduce drought tolerance. (Taken from a Guide to Preventing Soil Compaction During Construction, Alabama Cooperative Extension System, Publication ANR-1455). It should be noted that the ACES guide states that 3/4 inch plywood can be used for access under trees, but should not be used for repeated crossings. They suggest using plywood for light, irregular traffic areas.

f. It would be easier to see the actual canopy impacts if the applicant installed story poles. The poles can be installed through the tree canopies with minimal root and canopy impacts if the applicant has the work observed by a qualified arborist.

g. The fire department guidelines determine the clearance limits around the structure. In addition to that, they need to clear native vegetation further downslope because the property is on a steep

slope. Large limbs within 12 inches of a structure are problematic and often are pruned because they bang against structures in the wind or start to abrade the surfaces. It is not advisable to design a building so close to an existing tree.

7. The 35% oak woodland figure is derived from looking at the aerial map and determining that the amount of coverage of oaks with the sphere of influence, 10x the canopy area, which is approximately 35%. This information is on page 4 of the Oak Woodland Conservation Plan. The applicant only considered the trees at the top of the slope to achieve his 9% coverage. To only look at the oaks at the top of the slope ignores the rest of the trees on the site. The oak woodland guidelines are not written in that manner. The trees at the top of the hill are part of the same watershed as the trees on the lower slope. The property owner dismisses the proposition that the site contains an oak woodland and separates the trees he's impacting on the upper slope from the ones on the lower property. Using the County's guidelines, the tree canopy is roughly contiguous if you apply the 10x sphere of influence. In my opinion, looking at the County's guidelines, the property is an oak woodland and the two areas of oak trees should not be considered separately.

8. The width and depth of the notching is not discussed. There is not enough information to determine the amount of impact.

In my opinion, the applicant has not met the Burden of Proof as required in the LA County Oak Tree Ordinance Section 22.56.2100 because they are unable to prove that the construction will not endanger the health of the remaining trees on the subject property.

Please let me know if you have any questions.

Sincerely,

Rebecca Latta

Rebecca Latta
Consulting Arborist, Horticulturalist
ISA Certified Arborist WE4264A
Certified Tree Risk Assessor #1217
Member, American Society of Consulting Arborists

Report e-mailed to Kristina at kkulcczycki@planning.lacounty.gov and John at johnthearborist@gmail.com

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Arboricultural, Horticultural and Biological Consultant

Education

- UC Davis School of Agriculture and Science, 1979-1980
- Pasadena City College, Photography and Graphic Arts, 1980-1981
- UC Santa Barbara, Environmental Studies/Geography B.A., 1982-1984
- UCLA Extension, Landscape Architecture Program 1985-1987
- 170 CEU's, Arboriculture, Forestry, Fire Safety, Birds, Insect, Diseases, Pruning, Planting, Invasive Plant Management, Chaparral Ecology and Water Management 1989-present.

Registrations and Certifications

- Graduate, American Society of Consulting Arborists Academy (2008)
- Certified Tree Risk Assessor #1217 (PNW ISA Chapter 2011)
- Certified Arborist #4264A Western Chapter ISA (1998-present)
- Nesting Bird Monitoring Training (2011, 2012 Edison International)
- CDFG Plant Collection Permit No. 2081(a) 12-28-V

Work Experience

Owner, Rebecca Latta Consulting. Glendora, California: Arboricultural, horticultural and water management consulting for large estates, residential homes, development projects, cities and utilities.

Beverly Park Estate Client (2013 to present): Comprehensive landscape evaluation and guidance for estate with multiple landscape challenges including insects and disease, uneven watering, plant mortality and poor performance. Currently working with client to reduce water use and improve overall soil and plant health on-site.

Trust for Public Land Pocket Park Projects, Los Angeles County (June 2012 to present): Hired to train maintenance crews to prune trees and native shrubs in a pocket park in Maywood. Additional projects were added and now scope of work includes review of landscape, irrigation and grading plans for 4 new pocket parks, landscape plant stock inspection and tree preservation construction monitoring.

Thornton Gardens, San Marino (October 2013 to present): Arborist services to provide horticultural opinion, plan review, tree risk assessment, tree preservation, construction monitoring and other services as requested for 13-acre garden in San Marino in development for future addition to Huntington Gardens.

Arborist Services, City of La Canada (August 2010 to present): Arborist services to provide plan review, tree risk assessment, construction monitoring and other services as requested for Planning and Public Works. Projects included Woodleigh Reconstruction Project, Mayor's Discovery Park, Memorial Park Slope Reconstruction, Jessen Bridge Reconstruction, Lasheart Sidewalk Feasibility Study and on-call tree assessment and tree-related code enforcement projects.

Silver Lake Reservoir Tree Impact Assessment and Preservation Plan. LADWP (2011 to present): Arborist services to evaluate plans for proposed improvements and upgrades to supply lines at the reservoir. Reviewed nesting bird survey and provided arboricultural information to be inserted in biological report for the project. Reviewed current landscape and tree preservation specifications and provided recommendations for new language. Attended community meetings as requested.

Woolsey Canyon, City of Sherman Oaks (LA County) (2012): Arborist services to provide a physical survey of tree characteristics, determine health and assess construction impacts for an oak tree preservation report for a 60-acre site in a wooded canyon in the Sherman Oaks area. Oak tree report was approved along with the Biological Report in October 2013. (Partnered with Converse Consultants and Gonzales Biological Consulting).

Arborist, Noreas Incorporated. Irvine, California. (2014 to present): Arborist and biologist for an environmental engineering and science consulting firm providing biological survey, mitigation monitoring services to Edison International.

Senior Arborist, Forde Biological Consultants Inc. Camarillo, California. (2010-2013): Arborist and biologist for a small environmental consulting firm providing resource inventory and monitoring services. Responsible to manage and conduct oak tree surveys and develop reports to satisfy local tree preservation and coastal preservation requirements.

Adjunct Professor, Citrus Community College, Glendora, California. (2010): Public Works Program (Fall/Winter 2010): Taught Urban and Municipal Tree Care (PW 158) and Urban Forest Management Planning – Toolkit (PW 159).

Senior Arborist, SWCA Environmental Consultants, South Pasadena, California. (2007-2012): Arborist for environmental consulting company providing natural and cultural resource services. Responsible to promote, manage and provide technical expertise for arboricultural and horticultural projects.

Otay Mountain Tecate Cypress Study : Worked with Paul Zedler Phd., Biologist and Fire Ecologist and Michael Kline., specialist for Thorne's Hairstreak Butterfly to study the effects of fire on a population of Tecate Cypress on Otay Mountain, San Diego County, for the Bureau of Land Mangement. The study included an extensive bibliography of known resarch on the cypress and contained fire and population management strategies based on our research and field studies.

Arborist and Horticultural Specialist, Stone Canyon Water Quality Improvement Project, Los Angeles, California (2003-2011): Provided arboricultural, landscape and horticultural services in support of the Los Angeles Department of Water and Power's (LADWP's) Stone Canyon Water Quality Improvement Project. Developed habitat restoration plan for manufactured slopes created from tunnel spoils on the property. Created specifications for planting and irrigation. Monitored construction and invasive weed removal by the landscape contractor.

Santa Monica Urban Forest Master Plan, Santa Monica, California (2009-2012): Worked with a landscape architect (Artecho) to develop a 50-year long-range master plan for street and park

trees for the City of Santa Monica. Effort included research, tree succession planning, specifications for tree preservation and replacement policies.

Los Angeles County Oak Woodland Habitat Conservation Strategic Alliance, (2008-present). Provided list of oak dependent species for Oak Woodland Habitat Conservation Guidelines. Worked collectively with alliance of arborists, foresters and community leaders to develop recommendations revising the Los Angeles County General Plan to comply with the State Oak Woodland Preservation Act.

Consulting Arborist, City of Agoura Hills, Agoura Hills, California. (2002-2007): Responsible for review of plans and documents for compliance with City of Agoura Hills oak tree, environmental, and landscape ordinances; nursery stock inspections; and field inspections as required. Attended planning commission and community meetings associated with projects. Provided backup to city arborist during emergency windstorm events to assess hazardous trees and prioritize work. Performed oak tree surveys, mitigation monitoring and other arboricultural duties as requested. (Subconsultant to Seven Elk Ranch LLC.)

Urban Forest Supervisor, City of Pasadena, Pasadena**,** California**.** (1998–2002): Responsible for comprehensive management of 57,000 city street trees, tree preservation and planning programs, grant writing, administration and planting implementation. Researched and developed a draft native tree preservation ordinance. Revised contract specifications for tree planting, pruning and removal. Updated urban forestry management plan including revisions to the Master Street Tree Plan through city commissions with required CEQA environmental documentation.

Lower Arroyo Seco Wash Restoration - Reviewed and recommended modifications to the restoration plan proposed by Waste Management for mitigation of the Sunshine Canyon Landfill in the Arroyo Seco Wash in Pasadena, California.

Eaton Canyon Natural Area Restoration – Reviewed restoration plans and monitored for compliance with environmental documents during removal of non-native invasive species and planting of restoration species. Inspected nursery stock for health and species confirmation.

Landscape Conservation Specialist, City of Pasadena Water and Power Department, *Pasadena, California***.** (1990–1997): Designed and implemented landscape water and energy conservation programs for the Pasadena Water and Power Department. Programs included a strategic shade tree planting program (TREE – Trees as a Resource for Energy Efficiency) and irrigation water audits for large landscape areas. Performed feasibility study of reclaimed water use for Pasadena's largest landscape customers. Duties included partnering with the City Street Tree Division for neighborhood tree plantings and landscape water conservation workshops.

Presentations/Training

*Basic Tree and Shrub Pruning***.** Presented at Los Angeles County Arboretum, Saturday 3-hour Workshops with hands-on training. January 25, 2014.

*Tree Health from Nursery Sapling to Garden Specimen***.** Presented at Los Angeles County Arboretum Thursday Garden Talks. October 24, 2013.

What is a Tree Worth? Presented at Inland Urban Forest Council Annual Workshop – "Trees Make Dollars and Sense" at the Riverside Corona Resource Conservation District, Riverside, California. June 13, 2013.

*New Oak Threats Workshop: Workshop on the Care and Treatment of Common and New Threats to your Oaks***.** Huntington Library, Art Collections and Botanic Gardens, Friends Hall. January 12, 2013.

Urban Forest Master Planning. Presented at the Inland Urban Forest Council Annual Workshop – "Mature Tree Management" at the Riverside Corona Resource Conservation District. Riverside, California. October 30, 2012.

Consulting Arborist Toolbox. Presented at Inland Urban Forest Council Quarterly Seminar, Sims Tree Learning Center. June 14, 2012.

Tree Pruning and Care. Presented at Watershed Council Seminar 'Landscaping Lightly', Los Angeles County Arboretum, Ayres Hall, March 18, 2012. 250 attendees.

Ensuring Healthy Trees for the Urban Landscape. Presented at the Los Angeles and San Gabriel Rivers Watershed Council Seminar at Rancho Santa Ana Botanic Gardens, June 9, 2011

Tree Construction Preservation and Impact Assessment. Presented at the California Urban Forest Council Inland Chapter Workshop at the Riverside Corona Resource District Headquarters, June 16, 2011.

The Southern California Woodland Garden: Using Native Plant Communities to Design Sustainable Gardens. Presented at Theodore Payne Foundation, November 14, 2009.

'Oaks and Fire: Examination of the Effect of Fire on Oak Canyon'. Presented at Oak Canyon Park, Anaheim, California. Given jointly with Ty Garrison at A Day in the Canyon, Discovering Oaks Seminar, Western Chapter International Society of Arboriculture, September 18, 2009.

Oaks of Los Angeles County: Identification and Associated Species. Presented at the California Native Plant Society, San Gabriel Valley Chapter, September 24, 2009.

Programs

Trees as a Resource for Energy Efficiency (TREE) Program. The 5-year strategic shade tree planting program for municipal customers in Pasadena to reduce peak summer energy use from air conditioning. The program won the California Municipal Utilities (CUMA) Energy Innovator Conservation Award. (1993).

Protector of Water/Protector del Agua (in conjunction with MWD). Program to train workers for to maximize irrigation efficiency. (1996).

Landscape Irrigation Audit Program: 3-year pilot program to determine potential water savings from large landscape customers in the City of Pasadena. (1994-1997).

Dry Climate Garden Awards Program: 2-year program designed to reward homeowners who switched out turf for native or Mediterranean climate landscapes with efficient irrigation. (1995-1997).

Professional Affiliations

- California Native Plant Society, San Gabriel Valley Chapter, Field Trip Chairman, 2014
- Inland Urban Forest Council Board Member, 2008 – present
- Scholarship Committee Street Tree Seminar, 2011

- Landscape and Planning Representative Board Representative, California Urban Forest Council, 2009
- Member, International Society of Arboriculture Western Chapter (1998 – present)
- Member, American Society of Consulting Arborists (2008 – present)
- Member, Los Angeles County Oak Woodland Habitat Conservation Strategic Alliance
- Member, Street Tree Seminar (1998-2003), Sergeant at Arms 2001, Secretary 2002.

References provided upon request.

EXHIBIT C


PHOTO 1

EXHIBIT D

Ballon 32' above grade
Height of garage roof