



Comment Response Memo – Consulting Arborist

for
PROPOSED SINGLE FAMILY RESIDENCE
at
14329 MULBERRY DR. Los Gatos, CA

Submitted to:
Planning & Zoning Department,
Town of Los Gatos

Submitted by:
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1545 Theresa Ave. Campbell CA 95008

Updated June 13, 2022

June 13th 2022

Planning and Zoning

Town of Los Gatos

Re: Proposed Single Family Residence at 14329 Mulberry Drive Los Gatos, CA 95032

Dear Sirs,

Thanks for reviewing the application for the proposed Single-Family home and providing your comments I hope the responses that you will find under each of those comments will be meeting your requirements and you will approve the project to move to the next stage expeditiously.

Thanks.

Response to CONSULTING ARBORIST COMMENTS

RECOMMENDATIONS:

1. Project Arborist (“PA”):

Initial Signoff

It is suggested that a third party ASCA registered consulting arborist or ISA Certified Arborist with good experience with tree protection during construction be retained by the applicant, to provide pre-project verification that tree protection and maintenance measures outlined in this section of the arborist report are adhered to. Periodic (e.g. monthly) inspections and summary reporting, if required as a project condition of approval, are suggested in order to verify contractor compliance with tree protection throughout the site plan project. This person will be referred to as the project arborist (“PA”). The PA should monitor soil moisture within the root protection zones of trees being retained, using a Lincoln soil moisture probe/meter or equivalent. If required, inspection reports shall be sent to Mr. Ryan Safty, Associate Planner, at rsafty@losgatosca.gov.

Sample wordage for a condition of approval regarding monitoring of tree protection and tree condition:

“The required protective fencing shall remain in place until final landscaping and inspection of the project. Project arborist approval must be obtained and documented in a monthly site activity report sent to the Town. A mandatory Monthly Tree Activity Report shall be sent at least once monthly to the Town planner associated with this project (rsafty@losgatosca.gov) beginning with the initial tree protection verification approval letter”

2. Project Team Pre-Project Clarifications or Changes Requested:

2a. TREES AT EAST END (#41, 42, 43, and #44):

2ai. STANDARD CODE DRIVEWAY (12 FEET WIDTH):

If Fire requires use of the full 12 foot width driveway, then utilize Geoweb or triaxial geogrid materials to construct either a load-bearing cellular confinement system or a load bearing triaxial geogrid underlayment placed over existing soil grade elevation for the baserock base section. This baserock base section will “float” directly over existing soil grade, thereby eliminating subbase work such as scarification or recompaction, allowing for the preservation of the laterally-extended woody root systems of trees #41, 42, 43, 44. This may require use of a product with the highest level of load-bearing capability/rating available from eitFher a Geoweb product manufacturer or a triaxial geogrid manufacturer, such as products rated for highway base section construction use.

Fire Department has mandated the use of full 12 feet for the driveway, and hence the modified width will not be feasible. Geoweb or Triaxial geogrid material will be explored for building the driveway at the time of construction. Alternate methods would be discussed with planning department, if the above methods are found to be unfeasible.

2a.ii. MODIFIED-WIDTH DRIVEWAY (E.G. 9 to 10 FEET WIDTH):

If Fire approves the AMMR and does not need to use the proposed new driveway for fire response vehicle travel, then the following general specifications will apply:

2a.ii.a. Utilize a Geoweb or triaxial geogrid product rated for residential or commercial load-bearing driveway base section construction use.

2a.ii.b. Build up the base section of the driveway over grade such that it is “floating” over existing soil grade elevation for the proposed new driveway areas within 20 linear feet of trees #41, 42, 43, 44.

2a.ii.c. Do not perform any subbase scarification or recompaction within 20 linear feet of the above noted tree specimens. Build up the base section of the driveway over existing grade using Geoweb or triaxial geogrid product(s) to eliminate subbase prep requirements.

2a.ii.d. All materials shall be offset from the trunk edges of the above noted tree specimens by minimum 2 to 3 linear feet. Use vertical edge restraints installed completely over grade with no trenching or digging. Use steel pins to hold the edge restraints in place at 2 to 3 feet offset from the trunk edges of the above noted trees to avoid damaging lateral woody roots.

2a.ii.e. REFER TO RECOMMENDATION #2D BELOW IN THIS REPORT FOR ADDITIONAL DETAILS.

2b. UTILITIES:

For all utilities proposed to be installed as “new” trench alignments at this site, keep all new trench walls:

- 8 to 10 feet offset from the trunk edges of #45 and #46.
- Offset as far as possible from the trunk edge of #47 (e.g. tightlined against the foundation footing of the proposed new residence).
- 15 to 20 feet offset from #52.

Acknowledged. Existing water and drainage lines are within 8 feet from the trunk edges of #45 and #46. Will keep the new trench walls as far away as possible from the trunk edges of #45 and #46.

2c. IRRIGATION:

For the new irrigation plan, it is suggested that Town Staff have the applicant prepare a plan sheet to include actual alignments of all trenched-in irrigation pipes proposed for this project, with all irrigation pipe trenching pushed out to greater than or equal to 15 feet offset radius from the trunk edges of trees #45, 46, 47, 52 being retained.

For all irrigation water delivery lines less than 15 feet distance from these four trees being retained, the applicant shall use only flexible tubing (e.g. “emitter line” or “brown line” type UV-resistant tubing) that can be set over-grade (and hidden under a 2 inch thick layer of wood chip mulch).

Acknowledged.

2d. DRIVEWAY DESIGN AND MATERIALS:

The CTA suggests that the current proposed driveway design showing a 12 inch total depth of cut below grade be modified to the following generalized specifications, **within 25 linear feet of trees #45 and #46:**

2d.i. Maintain the existing specification on applicant sheet C1 that no subbase scarification or subbase recompaction be performed (i.e. leave subbase soil in a natural state “as-is”).

2d.ii. Reduce the proposed baserock base section to 3 or 4 inches thickness instead of currently proposed 6 inches (to be determined by and signed off by the project engineer), through use of one of the following two systems:

2diia: Lay down a **triaxial geogrid** of highest rating, such as a geogrid designed for stabilization of a highway road base course, directly over bare, nonrecompacted soil, and pin the grid in place using steel pins. Place 4 inches thickness $\frac{3}{4}$ " diameter angular gravel aggregate directly onto the geogrid (use of certain geogrids allows for a thinning of the base course by 50%). Build up the paverstone driveway over this geogrid/baserock layer.

2diib. Place a 3 or 4 inch tall "**cellular confinement system**" such as a Geoweb, Geoblock, or similar named system, directly onto the soil, **without any subbase preparation (i.e. Do not perform any scarification or recompaction).**

- Fill the cells with class II baserock or other approved aggregate mix.
- Build up over the cellular confinement system using additional materials and finish paverstones.
- If possible, crown up the driveway elevation such that total depth of cut for driveway baserock base section installation is 3 or 4 inches maximum cut depth below existing soil grade elevations, within 25 feet of trees #45 and #46.

2e. DRIVEWAY FINISH ELEVATION IN RELATION TO EXISTING SOIL GRADE:

Verify with applicant the total cut depths required for driveway baserock base section installation within 25 feet of neighbor trees #45 and #46. Per recommendation #2e above, the CTA suggests restricting total cut depth to 3 or 4 inches below existing soil grade for these two areas of the site. Toward this end, the applicant should utilize either a triaxial geogrid system or a cellular confinement system to thin the baserock base section down to 3 or 4 inches to reduce finish elevation and reduce depth of cut requirements. If the paverstones can be crowned a few inches above existing soil grade elevations in the tree #45 and #46 areas, then the driveway installation may be able to be restricted to the CTA's suggested 3 to 4 inch total cut depth below existing soil grade, optimizing the preservation of horizontally-growing woody roots connected to these two tree specimens.

Acknowledged.

2f. OAK #47:

Owner shall verify that this tree is to be retained and protected in place, even though a 40 to 50% canopy loss is expected due to pruning required to clear the proposed new residence airspace, and severe root loss will occur in the south portion of the tree's root system at a distance of approximately 6.5 feet south of trunk edge (i.e within the Critical Root Zone of 11 feet offset radius). Ideally, Town Staff should collect a mitigation fee for this tree up front, regardless of whether the tree is actually planned to be removed.

Tree #47 will be removed, due to less chances of survival of the tree after pruning.

3. Security Bond:

It is suggested that Town Staff condition this project on receiving security bond monetary funds from the applicant in the amount of approximately **\$20,000**, as a hedge against potential decline or death of one or more of the survey trees to remaining on-site or off-site in close proximity to the proposed site plan project. Staff may choose to reduce this fee to a lesser amount. See table 1.0(a) for individual tree appraised values, and the attached appraisal worksheet showing partially-transparent calculations used to determine the appraised values of the survey trees.

4. Chain Link Fencing Type I and/or Type II Root Protection Zone (RPZ):

Prior to commencing site demolition, erect chain link fencing panels set on moveable concrete block footings. Wire the fence panels to iron layout stakes pounded 24 inches into the ground at the ends of each fence panel to keep the fence route stabilized and in its correct position. Do not wire the fence panels to the trunks of the trees.

Alternatively, use two-inch diameter iron tube posts driven 24 inches into the ground, at a spacing 8 feet on-center (O.C.), and hang chain link steel fencing on those posts. Both the chain link panel fence method and the "tube post with hung steel chain link fencing material" fence method of tree protection are acceptable.

Pre-construction fence: Per the red dashed lines on the tree map mark-up in the CTA's arborist report.

Protection shall be at the farthest possible offset distances from trees #46 and 52.

(It is expected that trees #41, 42, 43, and #44 will be removed due to root loss on the entire south side of each tree).

This fencing must be erected prior to any heavy machinery traffic or construction material arrival on site.

The protective fencing must not be temporarily moved during construction. No materials, tools, excavated soil, liquids, substances, etc. are to be placed or dumped, even temporarily, inside the root protection zone or "RPZ".

No storage, staging, work, or other activities will be allowed inside the RPZ except with PA monitoring.

Chain link fencing will be erected at the time of construction to protect the trees as per the recommendation

5. Signage:

The RPZ fencing shall have one sign affixed with UV-stabilized zip ties to the chain link at eye level for every 25 linear feet of fencing, minimum 8”X11” size each, plastic laminated, with wordage that includes the Town Code section that refers to tree fence protection requirements (wordage can be adjusted):

Tree Protection Fences will have signage as recommended

6. Water Spray:

Spray off foliage of all trees **within 20 feet of construction** activity using a very high power garden hose or a pressure washer system set on low pressure to wash both the upper and lower surfaces of foliage. This helps keep the gas portals (stomata) unclogged for better gas exchange which is crucial for normal tree function.

Spray should be applied approximately **once-monthly**, or when ambient airborne dust concentration is unusually high.

7. TREE MAINTENANCE / REQUIRED:

7.1. Retain an ISA certified arborist to perform or directly supervise pruning per the following specifications and per all of the most current ANSI-A300 pruning standards:

7.1.1 TREE #45 PRUNING:

Tree #45 shall be pruned to remove approximately two (2) limbs extending westward at 7 feet elevation and 13 feet elevation, to clear the legally required motorway airspace of 14 feet elevation. Prune back to attachment points at the mainstem (approximately 6 inches and 5 inches diameter each).

Acknowledged.

7.1.1 TREE #46 PRUNING:

Tree #46 shall be pruned to remove approximately eight (8) limbs measuring 2 inches to 3 inches diameter each that extend southwestward over the project airspace, in order to clear the legally-required 14 foot vertical airspace for motorways. Prune each limb back to the point of attachment with the mainstem.

Acknowledged.

7.1.1 TREE #47 PRUNING:

Tree #47 shall be pruned to remove all wood extending southward that conflicts with the proposed new residence airspace, to at least 26 feet vertical elevation above grade, which is the finish roof elevation. Mainstems, limbs, and branches shall be pruned back to their points of origin (forks or attachment points). Provide additional clearance of approximately 5 feet horizontal to allow for erection of five-foot wide steel scaffolding necessary to allow for all exterior finishing work along the north side of the residence (painting, window installs, roof, gutter, etc.).

Provide additional vertical clearance above finish roof elevations to allow for roofing contractor activities.

WARNING: The tree’s root system may or may not become destabilized due to root loss caused by new foundation footing excavation at approximately 6.5 feet south of the trunk edge, within the tree’s critical root zone offset area.

Tree #47 will be removed.

8. Mitigation:

8.1 Trees #41, 42, 43, and #44 may need to be considered “removals” by Town Staff in order to account for expected severe root loss during driveway base section cuts that are most likely not mitigable to the less than significant level. The mitigation required would be installation of nine (9) 24” box size plantings on site, or an in-lieu fee payment of nine (9) X \$250 per tree not installed on site, which is **\$2,250**.

8.2 Given that valley oak #47 is expected to die prematurely or suffer severe decline in terms of canopy vigor and root plate stability as a direct result of the impacts noted above in section 1.0(b)1, the CTA suggests that Town Staff consider the tree to be a “removal”, and condition the project approval upon installation of ten (10) 24” box size trees or payment of an in-lieu fee of 10 X \$250 per tree not installed on site, which is **\$2,500, irrespective of whether the tree is actually removed from the site.**

8.3 Tree #51 is to be removed per the applicant's plan sheets. Per the Town replacement standard table 3-1, the applicant will be required to install three (3) mitigation plantings on site, or pay an in-lieu fee of **\$750** as mitigation for this removal.

Acknowledged. In-lieu fee shall be paid as per town staff assessment after implementing all the measures.

9. New Plantings / Tree Installation Specs:

Ideally, **two (2) high flow type adjustable bubblers each emitting 1.0 to 2 gallons per minute (2GPM), depending on percolation rate of planting pit**, are set directly over the rootball of each single tree planting, and each tree is installed with two (2) wooden planting stakes (not the shipping stake), with a set of figure-8 Cinch Ties™. The diagram below illustrates correct form for a 24" box size tree planting pit and berm construction, per arboriculture Best Management Practices. The CTA marked up the original open-source diagram from Urban Tree Foundation (2014) to add the correct location for the ½" diameter flood bubblers and flex tubes set directly over the rootball.

Make sure to completely remove the shipping stake that is initially tied tightly against the trunk of each tree by the grower/nursery. This stake is only for transport, and cannot be left tied against the trunk. It must be completely removed from the trunk area in order to avoid causing damage to the tree trunk as it grows in girth. The tree stakes are cut to just above the elevation of the Cinch-Ties to avoid abrasion between the stakes and the limbs and trunk during wind movement.

A watering berm consisting of site soil is formed around the edge of the rootball to force irrigation water to pool up directly over the rootball. The berm

should be approximately 4 to 6 inches in height, and 8 to 12 inches in width, set directly over the rootball edge (see spec diagram below).

The spec image at right shows the rootball being set at 25% above surrounding finish grade elevation of the soil. This is for "poorly drained" soil situations where flooding of the planting pit may occur. Given that a large percentage of the south bay and peninsula planting sites contain clay based construction pad type soil that is very slow draining, this "poorly drained soil" specification should actually be considered the norm for most planting sites encountered in the Bay Area. At a very minimum, the rootball should be two to three inches raised above surrounding grade to encourage proper drainage away from the top of ball.

Acknowledged.