

# Memo

**To:** The Atherton Planning Commission  
**From:** Sally D Bentz-Dalton, Town Arborist  
**CC:** Sean Manalo, Associate Planner  
**Date:** 9/17/24  
**Re:** Tree Protection Zone (TPZ) Exception 251 Selby Lane

I have reviewed the application at 251 Selby Lane. and offer the following observations and recommendation for your review:

The applicant is applying for Planning Commission TPZ exceptions for the following tree:

Tree #16

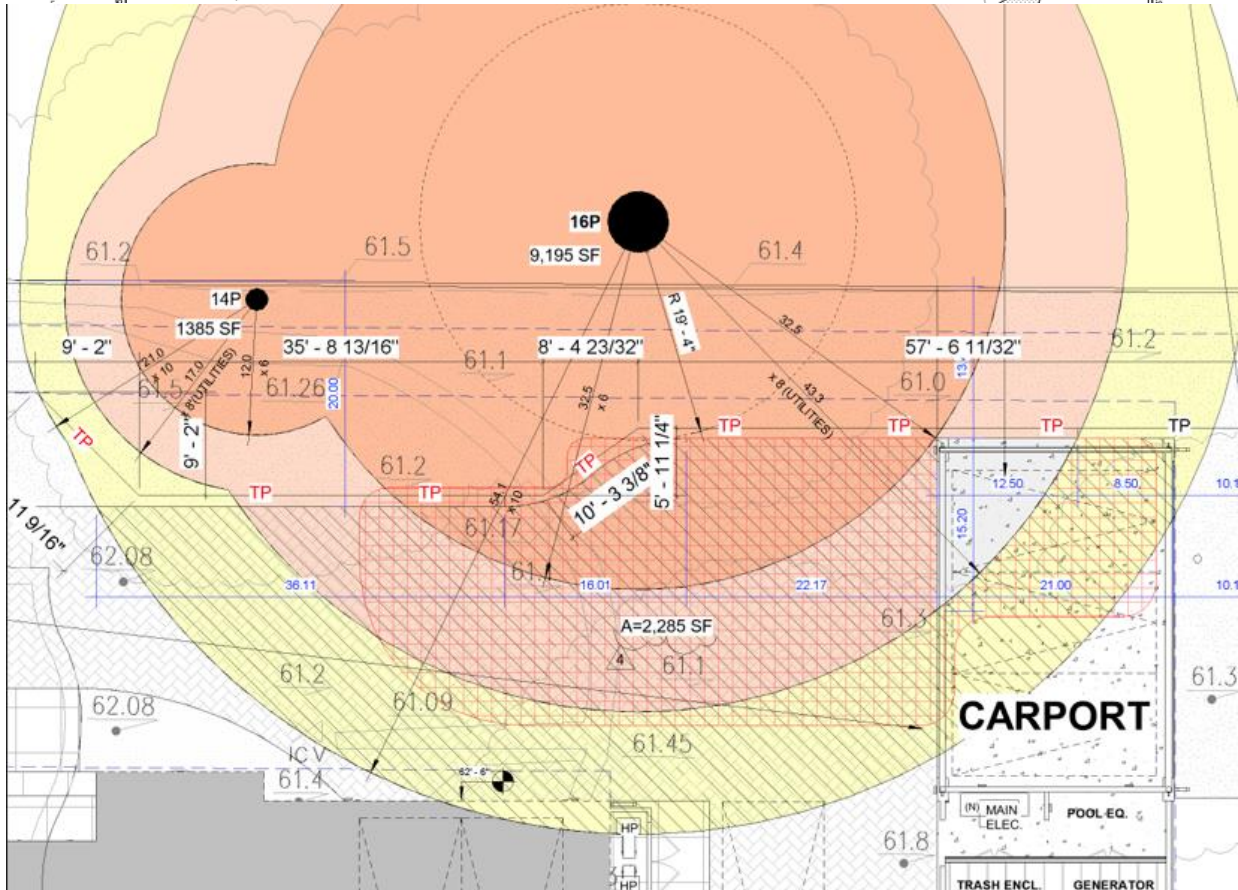
On July 18th, 2024, an Arborist report and inventory was conducted for the tree by Kielty Arborist Services LLC.

**16\*P Redwood 65est 80 100/30 Good vigor, good form.**  
**(Sequoia sempervirens)**  
**10x diameter=54.1'**  
**8x diameter=43.3'**  
**6x diameter=32.5'**  
**Appraised value= \$36,800**

The applicant is proposing a new driveway location and carport which requires 2 TPZ exception requests for a neighbor's redwood tree.

On July 29<sup>th</sup>, 2024, exploratory trenching along the proposed driveway and the carport by Kielty Arborist Services. They found one large root, 3.8" in diameter. The arborist states that the root can remain because it falls under the 6" excavation for the geogrid. The combined percentage of root zone impacts including the driveway work is 26.5%. Impacts are expected to be minor.

Mr. Kielty states that moving the carport further away from the TPZ simply isn't possible without causing significant issues elsewhere. We also considered relocating the carport to the area currently designated for the service enclosure. However, this would actually increase the encroachment into the TPZ. PG&E requires that the electrical meter and utility lines be installed in that specific location, which would necessitate extensive trenching and root disturbance within the TPZ. By keeping the carport in its proposed location, we avoid additional digging and disruption, which helps to protect the tree's root system

[illegible]

### **Request #1- Tree #16 – Driveway – 3.5x TPZ-**

Tree #16 is a large redwood on the neighbor's property. Per Town policy TPZ zones are required for neighbor's trees 15' from the property line. There was an existing driveway however this driveway location is a new driveway. Per code a new driveway location is required to be 8x away. The applicant is proposing a driveway 3.5x or 19' away from the redwood tree.

Per the private arborist, Mr. Kielty the driveway design will be required to be root-friendly and be one with minimal disturbance into grade to reduce the need to cut roots as much as possible when closer than 8x the tree diameters. The driveway is recommended to be constructed using Biaxial Geogrid (Tensar BX-1100) as an underlayment to be placed on top of the parent soil. Minor rough surface grading not to exceed more than 6" would be acceptable to get a level surface. Biaxial Geogrid (Tensar BX-1100 or equivalent) is then recommended to be placed on the soil with only hand-tampered compaction preparation used. The geogrid material is to be used as a subgrade layer below aggregate (rock/gravel) and will need to be pinned down to the soil. It is a stiff synthetic permeable material consisting of sets of tensile ribs pre-tensioned in two directions to allow the pinning down of surrounding soil, stone, or other material. Geogrid is often used over soft soils or tree root zones and improves filtration, reduces base thickness needed, compaction of underlying parent soil (85%) and incidents of tire ruts and soil migration. By using Tensar BX-1100 Biaxial Geogrid compaction can be minimized to relieve the roots from strain caused by passing cars. With Tensar BX-1100 geogrid, compaction can be limited to 85% and is more than adequate for future root growth. Any edging needed is recommended to be supported above ground by individual stakes. This way the driveway can be constructed as close to on top of grade as possible while retaining as many roots as possible. Impacts to the trees would be minor if constructed in this manner. One month before construction is to start the neighboring Redwood trees along the driveway entrance are recommended to be irrigated from the proposed driveway side of the property using 300 gallons of clean water as mitigation for the minor impacts. The remaining trees all have large, landscaped areas between the trees and the driveway where minor supplemental irrigation can be prescribed as a mitigation measure for the expected minor impacts. Oak trees #10 and #11 are recommended to be irrigated at the proposed driveway edge every other week for one year using 40 gallons of water at a time per tree. Deep water fertilizing with Nutriroot is also recommended. This will act as mitigation for the minor impacts. After one year irrigation near the oaks is recommended to be suspended. Redwood tree #16 is recommended to be irrigated every other week during the dry season with 40 gallons of clean water within the landscaped area. This type of irrigation is recommended to continue throughout the lifespan of the Redwood tree.

By constructing the driveway using Biaxial geogrid as described, the percentage of root impacts is expected to be much lower as most of the tree roots can be retained within the proposed driveway.

### **Request #2- Tree #16 – Carport – 6x TPZ-**

Tree #16 is a large redwood on the neighbor's property. Per Town policy TPZ zones are required for neighbor's trees 15' from the property line. The applicant is requesting a 6x TPZ, 32.5' away for the carport. There wasn't a structure there previously and the old pool house was 48' away.

The arborist states that the total amount of roots affected would be 24.9%.

Redwood tree #16. Redwood trees and Coast Live Oak trees have a good tolerance to construction impacts as seen in the Matheny and Clark Relative

Per Mr. Kielty the proposed carport near neighboring redwood tree #16 is located at 6x the diameter of the tree. The entire proposed foundation when within 10x the diameter of the tree is recommended/required to be excavated by hand in combination with hand tools such as an air knife, rotary hammer with clay spade

attachment, or shovels, while under the direct supervision of the Project Arborist. All roots encountered within the foundation area measuring 1.5" in diameter or larger are recommended to be retained for the Project Arborist to inspect before being cleanly cut. Once inspected and documented, the roots will need to be cleanly cut using a hand saw or loppers. Cut root ends on the tree side are recommended to be painted with a tree pruning sealer/grafting compound then covered by 3 layers of wetted-down burlap to help avoid root desiccation. The contractor shall wet down the burlap daily while exposed. The area between the tree and the foundation (tree protection zone) is recommended to be irrigated every other week during the dry season until the top foot of the soil is saturated. This will act as a mitigation measure for the minor impacts. This work will be required to be documented by the town of Atherton with a letter sent to the city arborist. Redwood trees have a good tolerance to construction impacts as seen in the Matheny and Clark Relative Tolerance of Selected Species.

### **Analysis:**

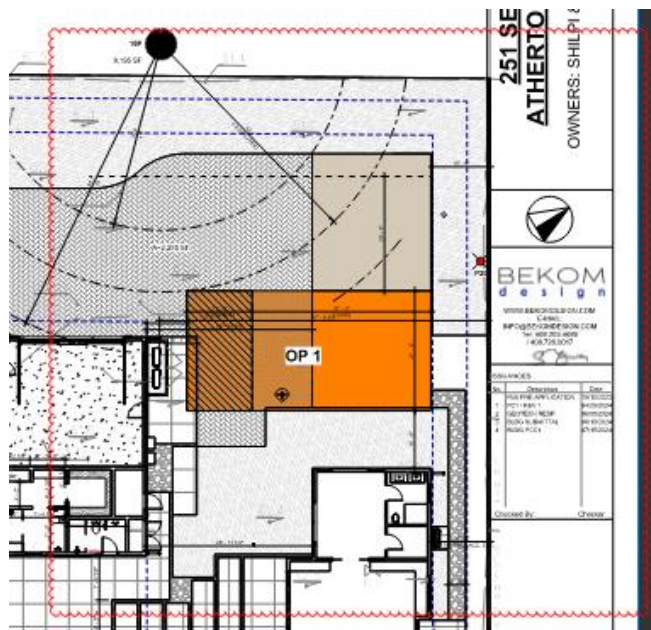
This is a 1.26-acre lot. In addition to the carport, they are building a 1,196 square feet ADU, a underground garage, a pool and sports court. This is also a neighbor tree that the Council wanted to be protected by the requirement of protecting trees within 15' of the property line.

A carport is required to be 10x away with a staff exception down to 8x. The applicant is asking for 6x. This is the critical root zone and in this area per the top map no structures in this area. Per Matheny and Clark this tree would have a TPZ of 8x. The carport is yet another area that will impact this side of the redwood tree that didn't have an impact previously.

I asked the applicant to show alternative locations for the carport:

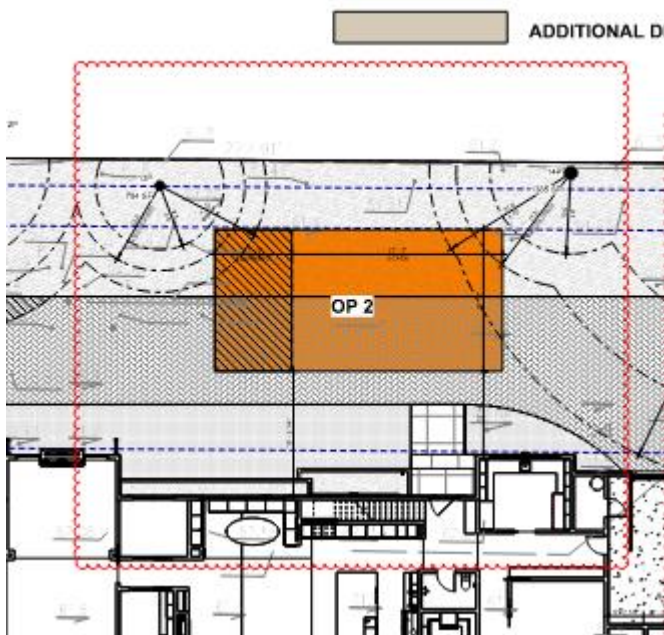
Per the applicant: The property's front setback for accessory structure is 90', which reduces the significantly the available space to place the Carport closer to the entrance.

Option 1: Allows the structure to be outside the x8 area, however, it is not possible to keep the 8' distance from the main house. Also, the driveway will have to be extended, encroaching even more into the TPZ for T16. Please note that the minimum car backing driveway area shall be at least 20'.

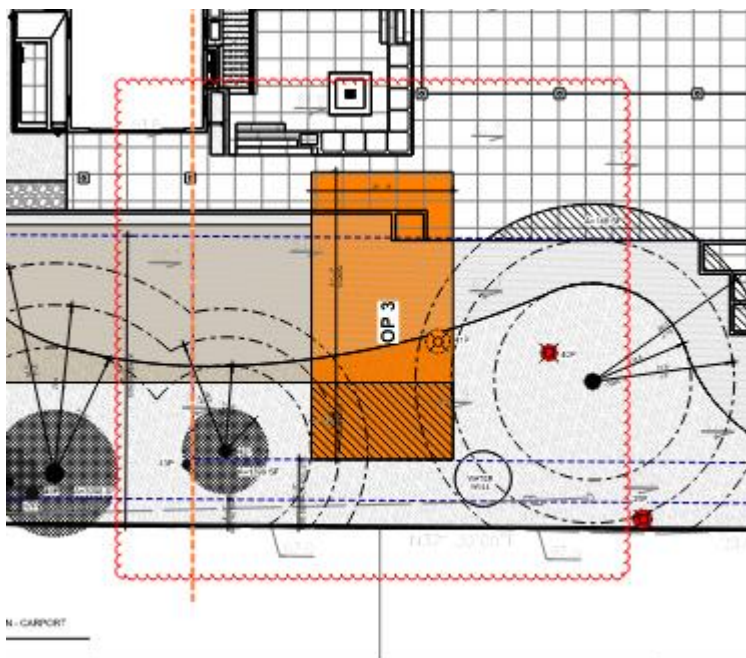




Option2: this location does not allow the access to the main house garage. Furthermore, it encroaches in both T13 and T14; and it does not give enough space for 'car backing' (only 18').



Option 3: Requires an extensive additional driveway area, which encroaches into the TPZs of T42, T45, T47, and T52; and the carport structure encroaches into the TPZ of T39 and T42. We found that the proposed location is one that best complements the Site Plan accessibility, keeps the best compliance with the Town's zoning rules and disturbs the least any other TPZs in the property.



The Planning Commission must meet one or more of the below findings to approve:

5. The Planning Commission may approve or reject such applications as submitted in Section 2.2 B 3 or Section 2. B 4, based on the following criteria:

- a. The criteria as listed in 2.2.B.2.
- b. The probability of failure which is a function of heritage tree and site conditions such as, but not limited to, structural defects, presence of disease, species history, age or remaining life span, and varying weather conditions.
- c. The probability of a public safety hazard, personal injury or significant property damage as a function of proximity to existing structures and objects of value and interference with utility services
- d. The number, species, size and location of existing trees in the area and the effect of the requested EXCEPTION upon shade, noise buffers, protection from wind damage, air pollution, historic value, scenic beauty, health, safety and general welfare of the area and town as a whole.
- e. The necessity to allow reasonable use or other enjoyment of the property when there is no demonstrated feasible alternative to the EXCEPTION while meeting other adopted goals and policies of the general plan to the greatest extent feasible.

In conclusion:

I can recommend the below two requests based on neighbor's approval, that the 1 root can be protected and not removed, and no other significant roots were found, that the driveway uses Biaxial Geogrid and Mr. Kielty's recommendations are followed, because there were no other alternative locations with no impacts to heritage trees and less than 26.5% of roots will be affected.

**I can recommend the below 2 requests with the below requirements:**

**Request #1-Tree #16 – Driveway – 3.5x TPZ-**

**Request #2 - Tree #16 – Carport – 6x TPZ**

The following are requirements:

- Letter from neighbor
- 3.8" diameter root is protected and not removed
- Required to be installed and **shown on G&D plans** - Biaxial Geogrid (Tensar BX-1100) as an underlayment to be placed on top of the parent soil. Minor rough surface grading not to exceed more than 6". Biaxial Geogrid (Tensar BX-1100 or equivalent) to be placed on the soil with only hand-tamped compaction preparation used. The geogrid material is to be used as a subgrade layer below aggregate (rock/gravel) and will need to be pinned down to the soil. It is a stiff synthetic permeable material consisting of sets of tensile ribs pre-tensioned in two directions to allow the pinning down of surrounding soil, stone, or other material. Edging needed is recommended to be supported above ground by individual stakes.
- **Show on quarterly report** - One month before construction is to start the neighboring Redwood trees along the driveway to be irrigated from the proposed driveway side of the property using 300 gallons of clean water as mitigation for the minor impacts. The remaining trees all have large, landscaped areas between the trees and the driveway where minor supplemental irrigation should be installed. Oak trees #10 and #11 should be irrigated at the proposed driveway edge every other week for one year using 40 gallons of water at a time per tree. Deep water fertilizing with Nutriroot is required. After one year irrigation near the oaks is recommended to be suspended. Redwood tree #16 is to be irrigated every other week during the dry season with 40 gallons of clean water within the

landscaped area. This type of irrigation is recommended to continue throughout the lifespan of the Redwood tree.

- **Show on G&D and quarterly report** - The entire proposed foundation when within 10x the diameter of the tree is required to be excavated by hand in combination with hand tools such as an air knife, rotary hammer with clay spade attachment, or shovels, while under the direct supervision of the Project Arborist. All roots encountered within the foundation area measuring 1.5" in diameter or larger are recommended to be retained for the Project Arborist to inspect before being cleanly cut. Once inspected and documented, the roots will need to be cleanly cut using a hand saw or loppers. Cut root ends on the tree side are recommended to be painted with a tree pruning sealer/grafting compound then covered by 3 layers of wetted-down burlap to help avoid root desiccation. The contractor shall wet down the burlap daily while exposed. The area between the tree and the foundation (tree protection zone) to be irrigated every other week during the dry season until the top foot of the soil is saturated. This will act as a mitigation measure for the minor impacts. This work will be required to be documented by the town of Atherton with a letter sent to the city arborist.
- All excavation is to be done by hand under the Project Arborist supervision when within 10x the tree's diameter.
- Sufficient tree protection installed.

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

Sincerely,

Sally Bentz

Town Arborist- Certified Arborist WE#9238AM