Exhibit D

This page intentionally left blank.

FOREST MANAGEMENT PLAN

2825 CONGRESS ROAD RESIDENTIAL PROJECT

PEBBLE BEACH, CALIFORNIA

LSA

Revised January 2025

FOREST MANAGEMENT PLAN

2825 CONGRESS ROAD RESIDENTIAL PROJECT

PEBBLE BEACH, CALIFORNIA

Submitted to:

Lilly Lin
2090 Warm Springs Court, Suite 208
Fremont, California 94539

Prepared by:

LSA
157 Park Place
Pt. Richmond, California 94801
510.236.6810

Project No. 20241852

LSA

Revised January 2025

TABLE OF CONTENTS

APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

APN	Assessor's Parcel Number
BMP	best management practice
CCED	California Conservation Easement Database
CEQA	California Environmental Quality Act
County	County of Monterey
County Code	Monterey County Code of Ordinances
DBH	diameter at breast height
Plan	Forest Management Plan
PRC	Public Resources Code
project	2825 Congress Road Residential Project
sq ft	square foot/feet

INTRODUCTION

LSA developed this Forest Management Plan (Plan) for the proposed residential development at 2825 Congress Road (Project) in the Pebble Beach area of unincorporated Monterey County, California (Assessor's Parcel Number [APN] 007-103-009-000). The 0.38-acre parcel is proposed to be developed with a two-story, single-family residence with a two-car garage. The total proposed floor area is 4,312 square feet (sq ft), with a first floor area of 3,247 sq ft, a 438 sq ft garage, and 726 sq ft of attached porch and patio areas. The total hardscaped building footprint is 4,411 sq ft. Site development is subject to the jurisdiction of Monterey County Code of Ordinances (County Code) and the Greater Monterey Peninsula Area Plan. In addition, California Public Resources Code (PRC) Chapter 3, Section 4291, requires compliance with certain fuel reduction and vegetation management objectives within 100 feet of a dwelling. This Forest Management Plan is designed to comply with the requirements of the County of Monterey (County) for a site plan that documents the following elements:

1. Aerial map of the project site and surrounding area identifying locations of the subject tree(s) within that map.

2. List of all applicable policies, regulations, and findings.

3. Explanation of how the proposed tree removal relates to the forest and/or woodland of the project site as well as the surrounding area.

4. Identification of any oak woodland that meets requirement of PRC 21083.

5. Illustration of areas on the project site where replanting may occur and, if no replanting is possible, a location of where and how effective off-site replanting can be performed, or alternative approaches to mitigating the removal of coast live oak (*Quercus agrifolia*) and Monterey pine trees (*Pinus radiata*).

6. Identification of surrounding forest continuity, prevailing sun/wind exposure to trees, and how the proposed project would affect these conditions.

7. Identification of all trees greater than 6 inches in diameter on the site and identification of those proposed to be removed. This will also include those trees considered for pruning or other management actions pursuant to creating defensible space.

LSA has used information gathered during a site visit and the *Updated January 16, 2025, Tree Assessment and Forest Management Plan for the 2825* (Denise Duffy & Associates 2025; Arborist Report) prepared for the property, which includes items 1, 2, 5, and 7 above. The Forest Management Plan summarizes the information in the Arborist Report (Appendix A) and includes a discussion of the remaining items (3, 4, and 6 above) from the County's checklist.

SITE DESCRIPTION SUMMARY

LOCATION, ADJACENT PARCELS, AND ACCESS

The project site is a vacant parcel located in a suburban area near the southern city limit of Pebble Beach, California. The site and the environs are classified as Wildland Urban Interface (WUI) by the County of Monterey. The project site (APN 007-103-009-000) is 0.38 acre and is bordered by a 0.43-acre residential parcel (APN 007-103-008-000) to the southwest. Congress Road runs along the northwestern parcel boundary; it is a two-lane residential road. The parcel's frontage along Congress Road is approximately 100 feet. The northeastern boundary of the parcel consists of a 160-foot-long and 20-foot-wide paved and gated driveway (APN 007-103-015-000) that serves four parcels, including the subject parcel. To the southeast, a 0.43-acre vacant parcel abuts at the end of the driveway (APN 007-103-011-000). Beyond the two adjacent vacant parcels, there is a 0.9-acre vacant parcel to the east (APN 007-103-014-000), which appears largely unmanaged.

TOPOGRAPHY AND WIND

The project is located at an elevation of approximately 237 feet above mean sea level and is flat or gently sloping to the northwest. The climate of the site is mild, with average temperature highs ranging from 60 degrees Fahrenheit to 71 degrees Fahrenheit year-round. The windiest months are during spring (i.e., April through June) with wind speeds generally not exceeding 20 miles per hour and gusts rarely exceeding 40 miles per hour. The primary wind direction is northwesterly.

VEGETATION

The project is in an urban-forested residential area on an undeveloped parcel located within an ecotone of coast live oak woodland to Monterey pine forest. The predominant soil type is Baywood Sand. The tree canopy within the proposed project is a mixture of scattered Monterey pine and dense coast live oak trees in fair-to-poor health with an herbaceous understory dominated by California hedge nettle (*Stachys bullata*), poison oak (*Toxicodendron diversilobum*), and slender wild oat (*Avena barbata*). The predominant ground cover at the time of the site visit was grasses that had not been mowed and exceeded 12 inches in height. Trees on the parcel appeared to have been limbed to a height of at least 8 feet, and there was minimal shrub invasion.

APPLICABLE POLICIES, REGULATIONS, AND FINDINGS

According to the Arborist Report (Appendix A), the following regional and State codes and ordinances apply to the project.

COUNTY OF MONTEREY CODE OF ORDINANCES

Monterey County Code Section 16.60 (Preservation of Oaks and Other Protected Trees) requires a tree removal permit from the County to remove, cut down, or trim more than one-third of the green foliage of any protected tree within County limits. Removal of more than three protected trees on a lot in a 1-year period requires a Forest Management Plan and approval of a Use Permit by the County. In accordance with the County Code Section 16.60.030, protected trees within the Greater Monterey Peninsula Area Plan include the following:

- Oak trees in an area designated as Resource Conservation, Residential, Commercial, or Industrial (except Industrial, Mineral Extraction);
- Oak trees in an area designated as Agricultural or Industrial, Mineral Extraction, unless such removal meets the purpose and standards required in Monterey County Code Section 16.60.050;
- Oak trees for commercial harvesting purposes; and
- Landmark oak trees (i.e., oak trees which are 24 inches or more in diameter when measured 2 feet above the ground, or trees which are visually significant, historically significant, or exemplary of their species).

CALIFORNIA FISH AND GAME CODE

Section 3503 of the California Fish and Game Code makes it unlawful to take, possess, or destroy the nest or eggs of birds. Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds of prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal Migratory Bird Treaty Act. Section 3800 prohibits take of nongame birds.

OAK WOODLANDS CONSERVATION LAW, PUBLIC RESOURCES CODE SECTION 21083.4

PRC Section 21083.4 is applicable to all California Environmental Quality Act (CEQA) processes within a county's jurisdiction. Oak woodland is defined as:

> "a habitat with over 10 percent of the canopy cover comprised of native oak trees in the genus Quercus with a diameter at breast height (DBH) greater than 5 inches."[1]

[1] Oaks below the 5-inch diameter at breast height (DBH) size will remain under county ordinances or general plans.

The Code requires a Registered Professional Forester to perform all CEQA oak woodland characterizations and participate in developing site-specific mitigation measures, including site conditions descriptions and evaluation of impacts for Mitigated Negative Declarations and Environmental Impact Reports. Impacts also include the project's cumulative contribution to the overall loss of oak woodlands. PRC Section 21083.4 requires mitigation as one or more of the following four alternatives:

1) Conserve oak woodlands through the use of conservation easements—preferably in close proximity to the project site.

2) Plant an appropriate number of trees—including maintaining plantings for 7 years and replacing dead or diseased trees.

3) Contribute funds to the Oak Woodlands Conservation Fund as established under Subdivision (a) of Section 1363 of the California Fish and Game Code for the purchase of oak woodlands conservation easements.

4) Other mitigation measures developed by the County.

PRESENCE OF OAK WOODLANDS PURSUANT TO PUBLIC RESOURCES CODE SECTION 21083.4

The Arborist Report (Appendix A) reported 45 trees greater than 6 inches diameter at breast height (DBH) within the survey area (see Figure 1 in Appendix A). Trees observed and documented include 40 coast live oaks and 5 Monterey pines. The canopy consists of a mixture of scattered Monterey pine and dense coast live oak trees. LSA biologists verified this observation during site visits. Accordingly, the site qualifies as an oak woodland pursuant to PRC 21083.4, since at least 10 percent of the canopy cover is comprised of native oak trees in the required DBH class (i.e., greater than 5 inches).

TREE REMOVAL IMPACTS

According to the Arborist Report, 27 trees, including 22 coast live oaks and 5 Monterey pines, lie within the project's grading limits and would be removed to facilitate construction of the project. In addition, LSA's Fuel Management Plan recommends pruning/trimming trees near the proposed structure, so that no branches are closer than 10 feet to the roof, chimneys or other structural components of the dwelling (LSA 2025). Currently, there are 27 trees within Zones 1 (Lean, Clean, and Green Zone) and 2 (Fuel Reduction Zone), 9 of which would be removed (4 coast live oaks and 5 Monterey pines). If additional removals are determined necessary, the applicant shall immediately contact County Resource Management Agency Planning to determine whether additional permits or modifications of the project are required. It is recommended that trees that are not proposed for removal are protected prior to and during all construction-related activities in accordance with the recommended best management practices (BMPs) identified in the Arborist Report.

FOREST CONNECTIVITY AND CANOPY COVER

The project site is located at the southernmost edge of a large, densely forested area, portions of which are open to the public (i.e., the 80-acre Rip Van Winkle Open Space, owned by the City of Pacific Grove and the Del Monte Forest Conservancy). An additional 39 acres adjacent to the Rip Van Winkle Open Space are protected under conservation easements held by the County of Monterey but are not open to public access (California Conservation Easement Database [CCED] 2024). The overall canopy cover of the forested open space area is approximately 65.7 percent, which is similar to the project site (approximately 60.9 percent). Also, there are no large canopy breaks between the project site and adjacent forested parcel to the north and east which may disrupt the forest's ecological connectivity. Thus, canopy conditions of the project site are comparable to those of natural forests occurring in the area.

To the south and west of the project site, tree canopy cover of the adjacent residential areas south of David Avenue is approximately 38 percent. In this park-like setting, tree densities are driven by residential and aesthetic needs characteristic of suburban areas. Canopy gaps around homes, streets and public spaces are common and occur more frequently than in natural forest landscapes. However, the canopy cover in the surrounding residential parcels is sufficiently high to allow forest species to disperse across the residential parcels to other forest fragments further south (e.g., south of Morse Drive). Thus, removal of trees on the project parcels to densities that are more typical of residential parcels in the surrounding neighborhoods will not affect forest continuity and connectivity.

EDGE EFFECTS AND FOREST DISEASES

Removal of large Monterey Pines may increase the "edge effect" caused by creating large canopy gaps, which can predispose trees to disease. The Arborist Report references the canopy condition as a "mixture of scattered Monterey pine and dense coast live oak trees in fair to poor health" (Denise Duffy & Associates 2024; Appendix A). Signs of California oak worm (*Phryganidia californica*), pitch canker fungus (*Fusarium circinatum*), oak branch canker (*Diplodia* spp. *fungi*), foamy bark canker (*Geosmithia pallida*), oak ambrosia beetles (*Monarthrum* spp.), oak bark beetles (*Pseudopityophthorus pubipennis*), and *Phytophthora ramorum* (i.e., the causal agent of Sudden Oak

Death) were observed. Pitch canker is a fungal disease introduced in California. Monterey pine is the most widely affected host. Resistance to the disease is estimated at 5 percent to 15 percent. Until resistant strains of Monterey pine can be propagated from nursery stock, planting of Monterey pines may contribute the spread of pitch canker.

POTENTIAL WIND AND SUN EXPOSURE

Opening the canopy of the project parcel during construction of the residence will not increase the risk of windthrow or sun damage to remaining trees, as the existing mixed-species canopy is currently fairly open, with individual crowns of trees already exposed to moderate wind speeds. The rooting depth of the soil (i.e., Baywood sand) is approximately 60 inches. Soils are typically well draining, thereby allowing sufficient anchorage of the root system. Trees in poor condition may be affected by strong winds, especially under gusty conditions, when affected by disease, or when their root system has been compromised by waterlogged or compacted soils. Monterey Pines are occasionally susceptible to windthrow especially during heavy rain periods associated with severe winter storms. For example, a winter storm in early March 2023, caused over 100 mature Monterey pines to fall within a matter of days following a heavy rainstorm that saturated soils. Therefore, it is recommended to prune branches of trees that are affected by insect or fungal disease. Furthermore, it is essential to protect trees to be retained prior to and during construction. In general, this means that no heavy machinery, tracked or wheeled vehicles, or grading should access surface areas within the dripline of the protected tree. A list of BMPs has been attached to the Arborist Report (Denise Duffy & Associates 2024; Appendix A) and should be consulted.

RECOMMENDED TREE MITIGATION

The following mitigation recommendations are based on the Arborist Report (Appendix A) and the Fuel Management Plan (LSA 2025):

1. According to the County of Monterey Ordinance, Monterey pine trees should be replaced at a 1:1 ratio to mitigate impacts to this special-status species. Adult Monterey Pines have canopy diameters exceeding 20 feet. To maintain the appropriate spacing between trees in Defensible Space Zone 1 and 2, spacing between planted Monterey pine saplings and other trees must be at least 30 feet (LSA 2024). The current site does not appear to provide gaps of this magnitude. Therefore, it is unlikely that Monterey pine trees can be planted on-site following construction to achieve the replacement requirement and comply with defensible space restrictions pursuant to Public Resources Code (PRC) Section 4291.

2. Coast live oak removals are required per County of Monterey Ordinance to be mitigated by planting an equal number of trees, unless replacement at this ratio would overcrowd the forest. Considering the already dense canopy of the site and the requirements for horizontal spacing between tree crowns in Defensible Space Zones 1 and 2, it is recommended that the landscape plan be re-evaluated for the site for space requirements of additional oak trees. In addition, planting 8-foot live oak saplings within the 100-foot defensible space around the structure may introduce ladder fuels that can carry a fire into the canopy.

Thus, off-site mitigation is highly recommended to ensure that defensible space around the proposed buildings is not compromised. One potential way to mitigate for the loss of oak woodland species on the site is to contribute funds to the Oak Woodlands Conservation Fund as established under Subdivision (a) of Section 1363 of the California Fish and Game Code for the purchase of oak woodlands conservation easements. In addition, the Del Monte Forest Conservancy accepts an in-lieu mitigation fee to plant the required trees as part of their restoration work.

If, however, any Monterey pines or coast live oak will be replanted in compliance with Public Resources Code (PRC) Section 4291, only trees grown from locally collected seeds from trees uninfected with pitch canker or *Phytophthora ramorum* should be used. Special care should be taken to avoid contamination of seedlings with diseased materials. Trees propagated from non-native genetic stock should not be used in landscaping and forest restoration.

REFERENCES

California Conservation Easement Database (CCED). 2024. California Protected Areas Database (CPAD). Website: www.CALands.org (accessed August 3, 2024).

Denise Duffy & Associates. 2025. Update January 16, 2025, Tree Assessment and Forest Management Plan for the 2825 Congress Road Residential Project. Unpublished report submitted to Kuan Chang, Tectonic Builders Corp., 10118 Bandley Dr. #E, Cupertino, California 95014.

LSA Associates, Inc. (LSA). 2025. Fuel Management Plan. 2825 Congress Road Residential Project, Pebble Beach, California. Unpublished Report, 15 pp.

APPENDIX A

UPDATED JANUARY 16, 2025, TREE ASSESSMENT AND FOREST MANAGEMENT PLAN FOR THE 2825 CONGRESS ROAD RESIDENTIAL PROJECT
DENISE DUFFY & ASSOCIATES, INC.

Date: January 16, 2025

To: Kuan Chang, Tectonic Builders Corp.
10118 Bandley Dr. #E
Cupertino, California 95014

From: Patric Krabacher, ISA Certified Arborist 11759
Denise Duffy & Associates, Inc.

RE: Updated January 16, 2025, Tree Assessment and Forest Management Plan for the 2825 Congress Road Residential Project

Denise Duffy & Associates, Inc. (DD&A) is contracted by Tectonic Builders Corp. (TBC) to provide arboricultural consulting services for the 2825 Congress Road Project (project or proposed project), located in the Pebble Beach area of unincorporated Monterey County (County), California (Assessor Parcel Number [APN] 007-103-009).

Tree removal within the project site is subject to the jurisdiction of Monterey County Code of Ordinances (County Code) and the Greater Monterey Peninsula Area Plan. To determine potential project impacts to trees, DD&A conducted a tree inventory within the project site on February 29 and March 1, 2024. This Tree Assessment and Forest Management Plan (FMP) documents the results of the tree inventory and recommends measures to avoid, minimize, or mitigate potential adverse impacts of tree removal.

METHODS

Limitations

It is not the intent of this report to provide a monetary valuation of the trees or provide risk assessment for any tree on this parcel, as any tree can fail at any time. The inspection of these trees consisted solely of a visual inspection from the ground. While more thorough techniques are available for inspection and evaluation, they were neither requested nor considered necessary or appropriate at this time. No clinical diagnosis was performed on any pest or pathogen that may or may not be present within the site. In addition to an inspection of the property, DD&A relied on information provided by TBC (e.g., survey boundaries, property boundaries, project description) to prepare this report, and must reasonably rely on the accuracy of the information provided. Trees can be managed but not controlled. To live near trees, regardless of their condition, is to accept some degree of risk. The only way to eliminate all risks associated with trees is to eliminate all trees. DD&A shall not be responsible for another's means, methods, techniques, schedules, or procedures, or for contractor safety or any other related programs, or for another's failure to complete work in accordance with approved plans and specifications.

Regulatory Setting

County of Monterey Code of Ordinances

Monterey County Code Section 16.60 (Preservation of Oaks and Other Protected Trees) requires a tree removal permit from the County to remove, cut down, or trim more than one-third of the green foliage of any protected tree within County limits. Removal of more than three protected trees on a lot in a one-year period requires a FMP and approval of a Use Permit by the County. In accordance with the County Code Section 16.60.030, protected trees within the Greater Monterey Peninsula Area Plan include the following:

- Oak trees in an area designated as Resource Conservation, Residential, Commercial, or Industrial (except Industrial, Mineral Extraction);
- Oak trees in an area designated as Agricultural or Industrial, Mineral Extraction, unless such removal meets the purpose and standards required in Monterey County Code Section 16.60.050;
- Oak trees for commercial harvesting purposes; and
- Landmark oak trees (i.e., oak trees which are twenty-four [24] inches or more in diameter when measured two feet above the ground, or trees which are visually significant, historically significant, or exemplary of their species).

California Fish and Game Code

Section 3503 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds of prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal Migratory Bird Treaty Act. Section 3800 prohibits take of nongame birds.

California Public Resources Code

Chapter 3, Section 4291, requires compliance with certain fuel reduction and vegetation management objectives within 100 feet of a dwelling.

Survey Methods

DD&A ISA Certified Arborist Patric Krabacher conducted an inventory of all trees within the project in accordance with County Code Section 16.60.030 site on February 29 and March 1, 2024. Trees were inventoried in accordance with the with the following protocol:

- All trees 6" diameter at breast height (DBH) or greater were documented.
- DBH was recorded two feet above ground or, for multi-stemmed trees, at the most representable location.
- Multi-stemmed trees were recorded as one tree if the root crown (the point where the trunk meets natural grade) was contiguous. Multi-stemmed tree DBH was calculated by taking the square root of the squared sum of all stems measured ($\sqrt{[}$Stem 1 DHB^2+ Stem 2 DBH^2+ Stem 3 DBH^2...]). This equation returns the diameter at the base of the tree (Chojnacky, 1999).

- Tree dripline (tree protection zone or TPZ) was determined by six (6) times the DBH in young or semi mature trees, eight (8) times the DBH in mature trees, and twelve times the DBH in over mature trees in accordance with American National Standards Institute (ANSI) A300 Part 8 & Part 5 (ANSI, 2023).
- Critical root zone (CRZ) was determined by three (3) times the DBH in accordance with American National Standards Institute (ANSI) A300 Part 8 & Part 5 (ANSI, 2023).
- Species, size, hazard conditions, and photographs were recorded for each tree.

Tree health data gathered was based on the following definitions:

- *Good.* Tree is healthy and vigorous as indicated by color of foliage and density, has no apparent signs of insect, disease, structural defects or mechanical injury. Tree has good form and structure.
- *Fair*. Tree is in average condition and vigor for the area, but may show minor insect, disease, or physiological problems. Trees rated as Fair may be improved with correctional pruning.
- *Poor*. Tree is in a general state of decline and may show severe structural or mechanical defects which may lead to failure, and may have insect or disease damage, but is not dead.
- *Dead/Snags.* Dead standing trees.

Tree tolerance to construction was also gathered while reviewing the proposed project plans and how the proposed project would impact each individual tree. Tolerance levels were defined as the following:

- *High*. Trees with a high tolerance are likely to remain healthy throughout construction.
- *Medium*. Trees with a medium tolerance will require tree protection throughout construction to remain healthy during and post construction.
- *Low*. Trees with a low tolerance rating may require removal, trimming, and/or additional tree protection to remain healthy during and post construction.

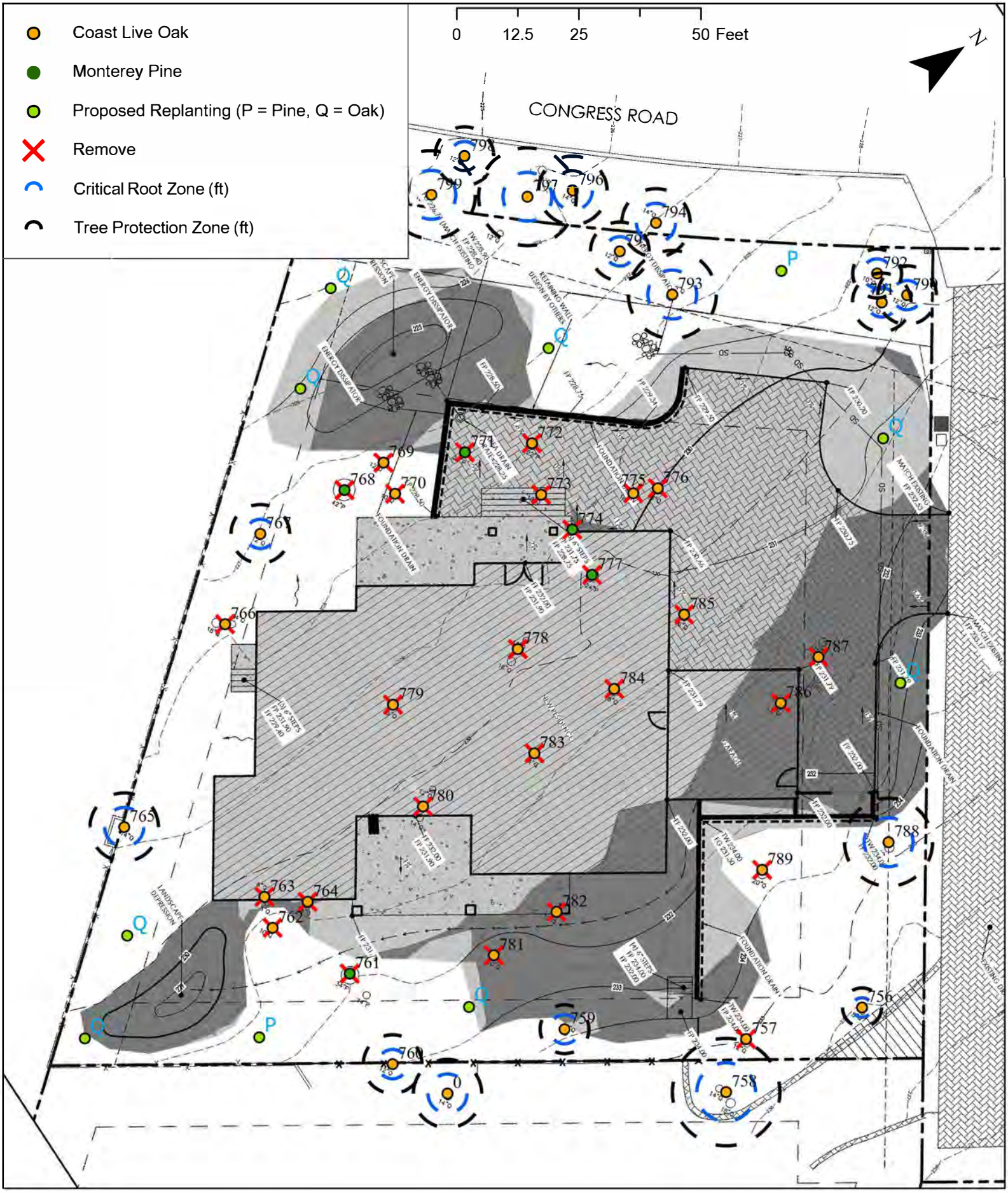
Results

DD&A inventoried 45 trees within the survey area (see **Figure 1** and **Attachment A**). Trees observed and documented include 40 coast live oaks (*Quercus agrifolia*) and five (5) Monterey pines (*Pinus radiata*).

Most trees within the survey are in fair or poor condition (**Attachment A**). Trees in fair condition are in average vigor for the area but are showing signs of California oakworm, pitch canker, oak branch canker, foamy bark canker, oak ambrosia beetles, oak bark beetles, and/or *Phytophthora* root and crown rot. No symptoms of sudden oak death were observed.

Site Conditions

The project is in an urban-forested residential area on an undeveloped parcel located within an ecotone of coast live oak woodland to Monterey pine forest. The tree canopy within the proposed project is a mixture of scattered Monterey pine and dense coast live oak trees in fair to poor health with a manicured understory that appears to have been recently mowed. The understory is dominated by California hedge nettle (*Stachys bullata*), poison oak (*Toxicodendron diversilobum*), and slender wild oat (*Avena barbata*).



2825 Congress Road Residential Project
Tree Management Plan

Date	Scale	Figure
1/16/2025	1 IN = 25 FT	1

Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Path: D:\GIS\GIS_Projects\2024-14 2821 2825 Congress Arborist\Arborist Services\Arborist Services.aprx

The project is located on soil classified by the Natural Resources Conservation Service as "Baywood sand" over 80 inches deep. Drainage is defined as "somewhat excessively drained" and permeability ranges from 5.95 to 19.98 in/hr. The available water capacity is low (about 4.8 inches). Roots can penetrate to a depth of over 60 inches.

DISCUSSION AND FOREST MANAGEMENT PLAN

27 trees, including 22 coast live oaks and five (5) Monterey pines, lie within the project's grading limits and would be removed to facilitate construction of the project and reduce fuels to comply with Public Resource Code (PRC) Chapter 3, Section 4291 **(Figure 1, Attachment B**). All other trees would be protected in place throughout construction. In accordance with Monterey County Code Section 16.60, a tree removal permit is required for removal of the 22 coast live oak trees. In addition, because the project would result in the removal of more than three (3) protected trees in one calendar year, an FMP is required prior to the removal of the protected oak trees; all requirements of an FMP are outlined in this report.

Monterey pine trees within the project site are not protected under County Code and may be removed without a permit. However, the project site lies within the native range of this species, which is listed as a California Rare Plant Rank (CRPR) 1b by the California Native Plant Society (CNPS). Therefore, Monterey pine individuals within the project site are considered special-status species and are typically provided management consideration under the California Environmental Quality Act (CEQA).

It is recommended that trees which are not proposed for removal are protected prior to and during all construction related activities in accordance with the recommended Best Management Practices (BMPs) identified in **Attachment C**. Tree removal must conform to any requirements identified in the tree removal permit. The following additional mitigation measures are recommended to satisfy the County's tree replacement requirements, to mitigate impacts to the special-status Monterey pine individuals, and to avoid or minimize potential impacts to birds protected under the California Fish and Game Code:

1. Tree removal shall be timed to avoid the breeding and nesting season for raptors and other protected avian species to the extent feasible. If tree removal must occur during the avian breeding and nesting season (approximately February 1 through September 15), a survey for nesting birds shall be conducted no more than 15 days prior to removal of trees. If nesting birds are identified during survey, an appropriate buffer shall be imposed by a qualified biologist which no work or disturbance will take place. A qualified biologist shall be on-site during work re-initiation in the vicinity of the nest offset to ensure that the buffer is adequate and that the nest is not stressed and/or abandoned. No work shall proceed in the vicinity of an active nest until such time as all young are fledged, or until after September 16, when young are assumed fledged.

2. If additional removals are determined necessary, the applicant shall immediately contact County RMA-Planning to determine whether additional permits or modifications of the project are required.

3. Monterey pine trees are typically replaced at a 1:1 ratio to mitigate impacts to this special-status species, however, the site is overcrowded, and this ratio cannot be implemented without causing fuel hazard (**Attachment B**). Therefore, two (2) Monterey pine trees shall be planted on-site following construction to achieve the replacement requirement. To ensure replacement of native genetic stock, replacement pines shall be sourced from a local nursery and shall have been

propagated from trees indigenous to Pebble Beach. Replacement plantings shall be 15 five-gallon Monterey pines (if 15-gallon pines are unavailable, smaller sizes may be substituted) in locations with the greatest openings to minimize competition and maximum sunlight. The spacing between trees shall be at least eight (8) feet. Watering for establishment within the first two (2) months shall be at least once (1) per week, then every two (2) weeks during the late spring, summer, and fall for two (2) years.

4. The County requires a 2:1 replacement ratio for removal of protected trees measuring 24" or larger DBH and a 1:1 ratio replacement ratio for removal of protected trees measuring less than 24" DBH, unless replacement at these ratios would overcrowd the forest. All 22 protected oak trees proposed for removal are less than 24" DBH. Therefore, 22 trees would need to be planted on-site following construction to achieve the County's 1:1 replacement requirement. However, the Project Arborist and Project Landscape Designer determined that a total of 10 trees can be planted on-site without overcrowding the forest (**Attachment B**). Considering the requirement in Measure 3 above to replace two (2) special-status Monterey pines on-site, only eight (8) coast live oaks shall be replaced on-site to avoid overcrowding the forest. Replacement plantings shall be 15 five-gallon coast live oaks sourced from a local nursery in locations with the greatest openings to minimize competition and maximum sunlight. (If 15-gallon oaks are unavailable, smaller sizes may be substituted.) The spacing between trees shall be at least eight (8) feet. Watering for establishment within the first two (2) months shall be at least once (1) per week, then every two (2) weeks during the late spring, summer, and fall for two (2) years.

5. Following construction and installation of replacement plantings, replacement plantings and trees whose CRZ was within the areas impacted by construction shall be monitored annually by a qualified arborist for a period of no less than five (5) years. If any noticeable decline in the health of any tree is observed, additional trees shall be planted onsite at a 1:1 ratio in a suitable location as determined by a qualified arborist or forester.

If you have any comments or questions about this report, please contact Patric Krabacher at pkrabacher@ddaplanning.com or (831) 373-4341 ext. 29.

REFERENCES

ANSI. 2023. American National Standard for Tree Care Operations Part 8 & Part 5.

David C. Chojnacky. 1999. Converting Tree Diameter Measured at Root Collar to Diameter at Beast Height.

ATTACHMENTS

Attachment A: Tree Table

Attachment B: Landscape Plan and Fuel Management Plan

Attachment C: Best Management Plan for Working Near Trees

ATTACHMENT A

Tree Table

Tag	Scientific Name	Common Name	Individual Stem DBH (in)		Total DBH (in)	Tree Protection Zone (ft)	Critical Root Zone (ft)	Health	Status	Landmark	Comment
799	*Quercus agrifolia*	Coast Live Oak	18		18	9	5	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
798	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
797	*Quercus agrifolia*	Coast Live Oak	16	12	20	10	5	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
796	*Quercus agrifolia*	Coast Live Oak	14		14	7	4	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
794	*Quercus agrifolia*	Coast Live Oak	14		14	7	4	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
795	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Protec in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
793	*Quercus agrifolia*	Coast Live Oak	18		18	9	5	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
792	*Quercus agrifolia*	Coast Live Oak	10		10	5	3	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
790	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
791	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
776	*Quercus agrifolia*	Coast Live Oak	16		16	8	4	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
775	*Quercus agrifolia*	Coast Live Oak	10		10	5	3	Poor	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
774	*Pinus radiata*	Monterey Pine	10		10	5	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
773	*Quercus agrifolia*	Coast Live Oak	10		10	5	3	Poor	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
772	*Quercus agrifolia*	Coast Live Oak	22		22	11	6	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
771	*Pinus radiata*	Monterey Pine	20		20	10	5	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
769	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
770	*Quercus agrifolia*	Coast Live Oak	10		10	5	3	Poor	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.

Tag	Scientific Name	Common Name	Individual Stem DBH (in)		Total DBH (in)	Tree Protection Zone (ft)	Critical Root Zone (ft)	Health	Status	Landmark	Comment
768	*Pinus radiata*	Monterey Pine	42		42	28	11	Fair	Remove	Yes	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
767	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
778	*Quercus agrifolia*	Coast Live Oak	16	12	20	10	5	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
766	*Quercus agrifolia*	Coast Live Oak	18	14	23	11	6	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
779	*Quercus agrifolia*	Coast Live Oak	16		16	8	4	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
780	*Quercus agrifolia*	Coast Live Oak	14	12	18	9	5	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
783	*Quercus agrifolia*	Coast Live Oak	14		14	7	4	Poor	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
782	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
781	*Quercus agrifolia*	Coast Live Oak	10		10	5	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
761	*Pinus radiata*	Monterey Pine	34	14	37	25	9	Fair	Remove	Yes	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
764	*Quercus agrifolia*	Coast Live Oak	14		14	7	4	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
763	*Quercus agrifolia*	Coast Live Oak	8	6	10	5	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
759	*Quercus agrifolia*	Coast Live Oak	10		10	5	3	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
No Tag (0)	*Quercus agrifolia*	Coast Live Oak	14		14	7	4	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
760	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction

Tag	*Scientific Name*	*Common Name*	*Individual Stem DBH (in)*		*Total DBH (in)*	*Tree Protection Zone (ft)*	*Critical Root Zone (ft)*	*Health*	*Status*	*Landmark*	*Comment*
758	*Quercus agrifolia*	Coast Live Oak	18	14	23	11	6	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
757	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
756	*Quercus agrifolia*	Coast Live Oak	8		8	4	2	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
789	*Quercus agrifolia*	Coast Live Oak	20		20	10	5	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
788	*Quercus agrifolia*	Coast Live Oak	18		18	9	5	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
787	*Quercus agrifolia*	Coast Live Oak	16	16	23	11	6	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
786	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
785	*Quercus agrifolia*	Coast Live Oak	16		16	8	4	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
777	*Pinus radiata*	Monterey Pine	24		24	12	6	Fair	Remove	Yes	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
784	*Quercus agrifolia*	Coast Live Oak	18		18	9	5	Poor	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Tree has a low likelihood for survival with this much impact, tree is recommended for removal.
765	*Quercus agrifolia*	Coast Live Oak	14		14	7	4	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
762	*Quercus agrifolia*	Coast Live Oak	10		10	5	3	Fair	Remove	No	Greater than 50% of the trees' critical root zone is proposed for removal. Grade changes will significantly impact the critical root zone of this tree, this tree is recommended for removal.

ATTACHMENT B

Landscape Plan/Fuel Management Plan

FUEL MANAGEMENT PLAN

2825 CONGRESS ROAD RESIDENTIAL PROJECT

PEBBLE BEACH, CALIFORNIA

LSA

Revised January 2025

DRAFT

FUEL MANAGEMENT PLAN

2825 CONGRESS ROAD RESIDENTIAL PROJECT

PEBBLE BEACH, CALIFORNIA

Submitted to:

Lilly Lin
2090 Warm Springs Court,
Suite 208
Fremont, California 94539

Prepared by:

LSA
157 Park Place
Pt. Richmond, California 94801
510.236.6810

Project No. 20241855

Revised January 2025

TABLE OF CONTENTS

APPENDICES

FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
APN	Assessor's Parcel Number
CAL FIRE	California Department of Forestry and Fire Protection
County	County of Monterey
County Code	Monterey County Code of Ordinances
mph	miles per hour
Plan	Forest Management Plan
PRC	Public Resources Code
project	2821 and 2825 Congress Road Residential Project
sq ft	square foot/feet
WUI	Wildland Urban Interface

INTRODUCTION

LSA developed this Fuel Management Plan (Plan) for the 2825 Congress Road property as part of the 2821 and 2825 Congress Road Project (project), located in the Pebble Beach area of unincorporated Monterey County, California (Assessor Parcel Number [APN] 007-103-009-000). Site development is subject to the jurisdiction of Monterey County Code of Ordinances (County Code) and the Greater Monterey Peninsula Area Plan. In addition, California Public Resources Code (PRC) Chapter 3, Section 4291, requires compliance with certain fuel reduction and vegetation management objectives within 100 feet of a dwelling. This Plan is designed to comply with the requirements of the County of Monterey (County) for a site plan that documents how vegetation around proposed structures and roadways will be maintained to reduce fire fuel loads. The Fuel Management Plan is developed in coordination with the site-specific Forest Management Plan for the project, the proposed Master Landscape Plan and the Arborist Report. Accordingly, the Fuel Management Plan includes the following elements:

- A description of the existing lot-specific fire hazards due to natural factors such as unique topography, prevailing winds, and existing vegetation conditions, as well as anthropogenic factors such as nearby roads or structures. This includes an illustration of the general extent of natural vegetation to be retained (e.g., grasslands, brush, trees) and photos or graphics that document fuel types present on the lot and current vegetation conditions.

- A description of the existing/approved infrastructure and uses on the subject lot, including structures, landscaping, driveways, roads, and Emergency Vehicle Access (driveway and/or roadway). This description also identifies proposed locations for high-risk features, such as woodpiles, propane tanks, decks, and outdoor lawn furniture.

- A map depicting the fuel management area on an aerial photo base map which details the locations of the lot-specific Fuel Management Zones, showing the locations of different vegetation treatments required in the plan. The following Fuel Management Zones are clearly identified:

    - “Ember Resistant Zone” (0 feet to 5 feet) focusing on intense fuel reduction around structures to protect against ember attacks.

    - “Green Zone” (0 feet to 30 feet) showing the area for maintaining vegetation (native and proposed) within 30 feet of all proposed structures/facilities.

    - “Fuel Reduction Zone” (greater than 30 feet) showing maintenance of vegetation up to 100 feet from all proposed structures, or to the property line, whichever is closer. This includes recommendations on maintaining adequate spacing of trees, pruning cycles, and other management activities to maintain low annual grasses at a maximum height of 4 inches, to maintain adequate horizontal and vertical space between shrubs and trees, and to clear combustible material from key areas.

- A list of lot-specific recommendations and prescriptions for implementing treatments, including sufficient information to provide clear instructions to contractors performing the fuel management work and vegetation disposal. This also includes illustrations of the species and diameter of trees within the project area, routine pruning prescriptions, and suggested timing of mowing, pruning and other vegetation management activities.

FIRE RISK ASSESSMENT

Maintenance of private property in accordance with State and local fire standards for defensible space and building materials is a requirement for every property owner in Pebble Beach. Residential Fire Safety Inspections are essential in enforcement of PRC Section 4291 and help educate residents on how to address wildfire risk in their community. New residential structures must comply with the California Fire Code, which establishes minimum standards for materials to ensure a reasonable level of exterior wildfire exposure protection for buildings in Wildland Urban Interface (WUI) Areas. This Fuel Management Plan is designed to fulfill the requirements of PRC Section 4291a.5:

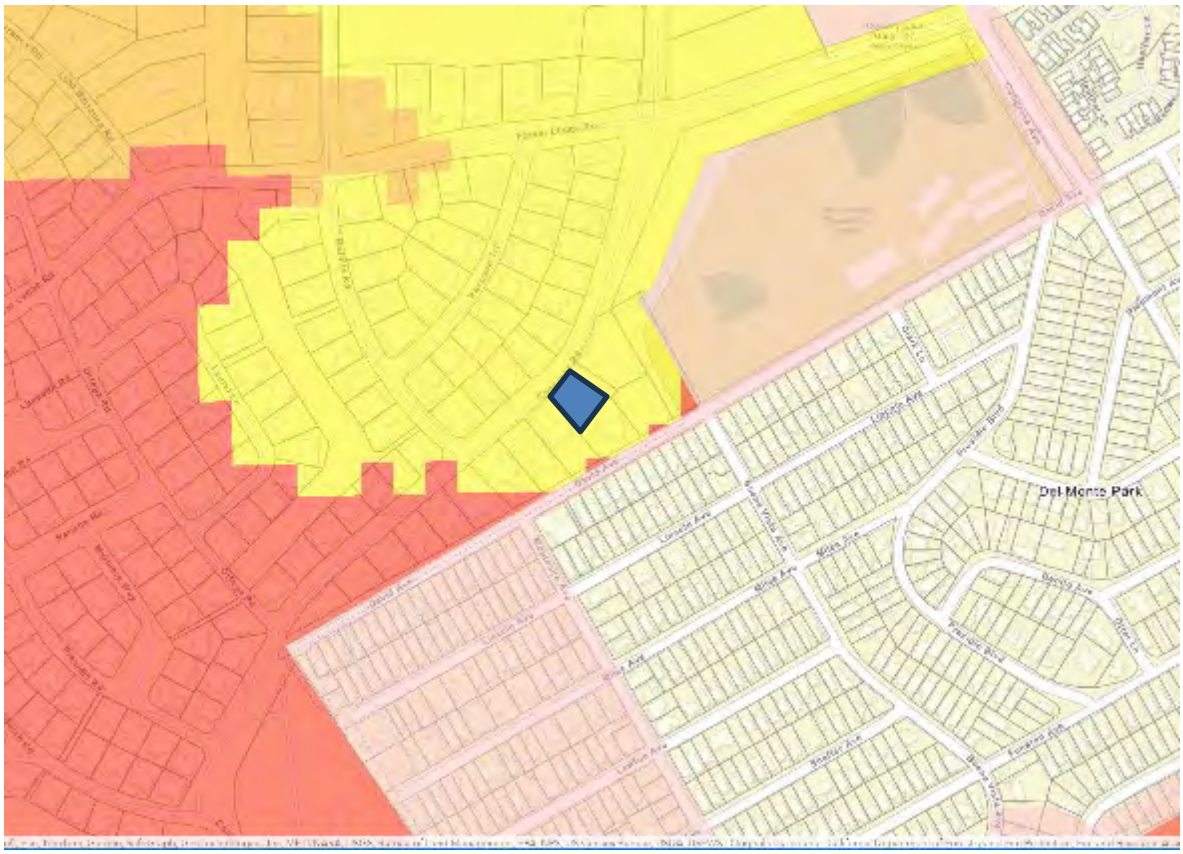
> "Before constructing a new building or structure or rebuilding a building or structure damaged by a fire in an area subject to this section, the construction or rebuilding of which requires a building permit, the owner shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code, and shall provide a copy of the certification, upon request, to the insurer providing course of construction insurance coverage for the building or structure. Upon completion of the construction or rebuilding, the owner shall obtain from the local building official, a copy of the final inspection report that demonstrates that the dwelling or structure was constructed in compliance with all applicable state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code, and shall provide a copy of the report, upon request, to the property insurance carrier that insures the dwelling or structure."

The implementation of PRC Section 4291, including vegetation management, landscaping, placement of outdoor furniture, woodpiles, and other highly flammable items (e.g., propane tanks) is the primary focus of this Plan.

LOCATION, ADJACENT PARCELS, AND EMERGENCY VEHICLE ACCESS

The project site is a vacant parcel located in a suburban area near the southern city limit of Pebble Beach. It is adjacent to two vacant parcels. The site and the environs are classified as WUI by the County of Monterey (see Figure 1). The project site (APN 007-103-009-000) is 0.38 acres and is bordered by a 0.43-acre residential parcel (APN 007-103-008-000) to the southwest. Congress Road runs along the northwestern parcel boundary; it is a two-lane residential road that is fully accessible

for emergency vehicles and common fire apparatus.[1] The parcel's frontage along Congress Road is approximately 100 feet. The northeastern boundary of the parcel consists of a 160-foot long and 20-foot wide paved and gated driveway (APN 007-103-015-000) that serves four parcels, including the subject parcel. To the southeast, a 0.43-acre vacant parcel abuts at the end of the driveway (APN 007-103-011-000). Beyond the two adjacent vacant parcels, there is a 0.9-acre vacant parcel to the east (APN 007-103-014-000), which appears largely unmanaged and constitutes a significant fire hazard due to fuel accumulation, dense vegetation, and substantial dead and down wood. Overall, Pebble Beach has a moderate risk of wildfire over the next 30 years. This is based on the level of risk the properties face rather than the proportion of properties with risk. The County has rated the fire severity risk for the subject parcel as Moderate (see Figure 1).



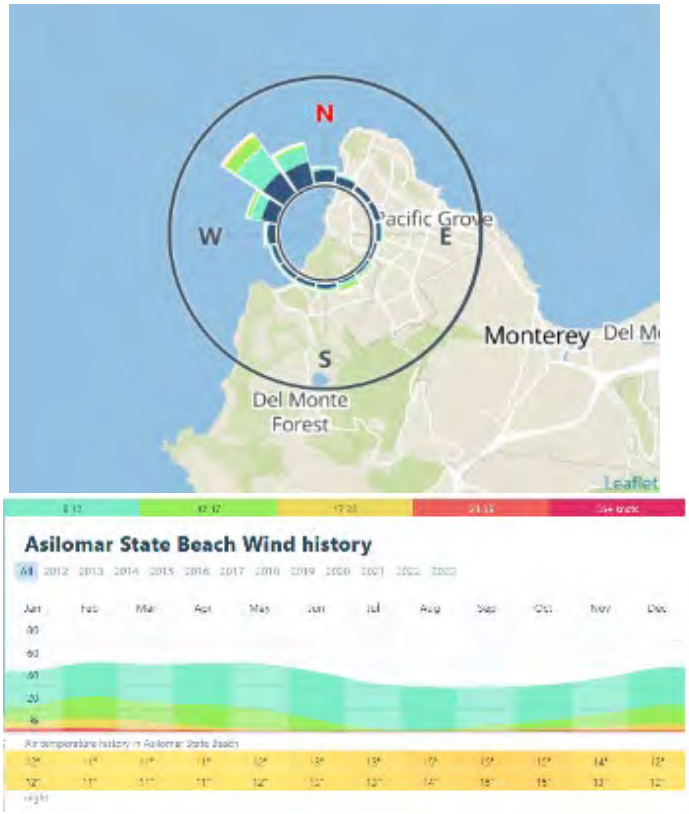
Source: County of Monterey (2024).

Figure 1: Wildland Urban Interface (WUI) zones and Fire Hazard Severity Zones for the subject parcel. The Fire Hazard Severity Zone is Moderate (yellow)

[1] The requirements for a fire road are: minimum 12-foot roadbed width; minimum 13.5 foot vertical clearance over entire width and length, including any turnouts or turnarounds; minimum 30-foot turn radius; no "islands" at intersections; drainage and erosion measures conforming to current engineering practices; Minimum 12-foot gate width, fully open; and locked gates shall have a Fire Department Knox padlock.

SOIL, TOPOGRAPHY, AND WIND

The project is located at an elevation of approximately 237 feet above mean sea level. The predominant soil classified by the Natural Resources Conservation Service is Baywood sand, a somewhat excessively drained soil with a rooting depth of approximately 60 inches. The topography is flat or gently sloping to the northwest. The climate of Pebble Beach is mild, with average temperature highs ranging from 60 degrees Fahrenheit to 71 degrees Fahrenheit year-round. The summer months can be accompanied by a morning fog, with the weather heating up when the marine layer burns off in the afternoon. The windiest months are during spring (i.e., April through June), with wind speeds generally blow 20 miles per hour (mph) and gusts rarely exceeding 40 mph. The primary wind direction is northwesterly (see Figure 2), posing a limited risk during a wildfire.[2] Steep canyons that can funnel winds (and fires) are absent in the project's vicinity, hence the overall risk of severe fire hazards is moderate.



Source: Windy Weather World, Inc. (2024).

Figure 2: Prevailing Winds at Asilomar State Beach (approximately 1 mile north of the project site). The columns indicate the frequency and direction of winds. Yellow bars represent wind speeds between 17 and 23 mph.

[2] Rare wind events with windspeeds exceeding 40 miles per hour can occur which may exacerbate fire risk. Wildfires can also create their own wind patterns due to the heat emanating from the fire itself, causing air to rise quickly and creating fire-induced winds. These winds sometimes help the fire spread more quickly and can arise even if the location of the fire was not particularly windy prior to ignition.

Vegetation

The project is in an urban-forested residential area on an undeveloped parcel located within an ecotone of coast live oak woodland to Monterey pine forest. The tree canopy within the proposed project is a mixture of scattered Monterey pine (*Pinus radiata*) and dense coast live oak (*Quercus agrifolia*) trees in fair to poor health with an herbaceous understory dominated by California hedge nettle (*Stachys bullata*), poison oak (*Toxicodendron diversilobum*), and slender wild oat (*Avena barbata*). The predominant ground cover at the time of the site visit was grasses that had not been mowed and exceeded 12 inches in height. Trees on the parcel appeared to have been limbed to a height of at least 8 feet, and there was minimal shrub invasion. Landscaping shrubs were present along the driveway and near the existing residence on the neighboring parcel. Overall, the vegetation condition of the site poses a moderate fire risk in its current condition. The risk of a canopy fire is low, as there are few ladder fuels present. Figure 3 shows the current vegetation conditions and fuel types present.

Figure 3: Vegetation conditions of the site.
Note the un-mowed grass and herbaceous ground cover (arrow) and the forest vegetation consisting of live oak and Monterey pine. Ladder fuels are absent. Green shrubs along the driveway are irrigated non-native ornamentals.

Infrastructure

Residential Structures

The site is proposed to be developed with a two-story single-family residence with a two-car garage. The total proposed floor area is 4,312 square feet (sq ft), with a first floor area of 3,247 sq ft, a 438 sq ft garage, and 726 sq ft of attached porch and patio areas. The total hardscaped building footprint is 4,411 sq ft. The site plan is shown in Figure 4.

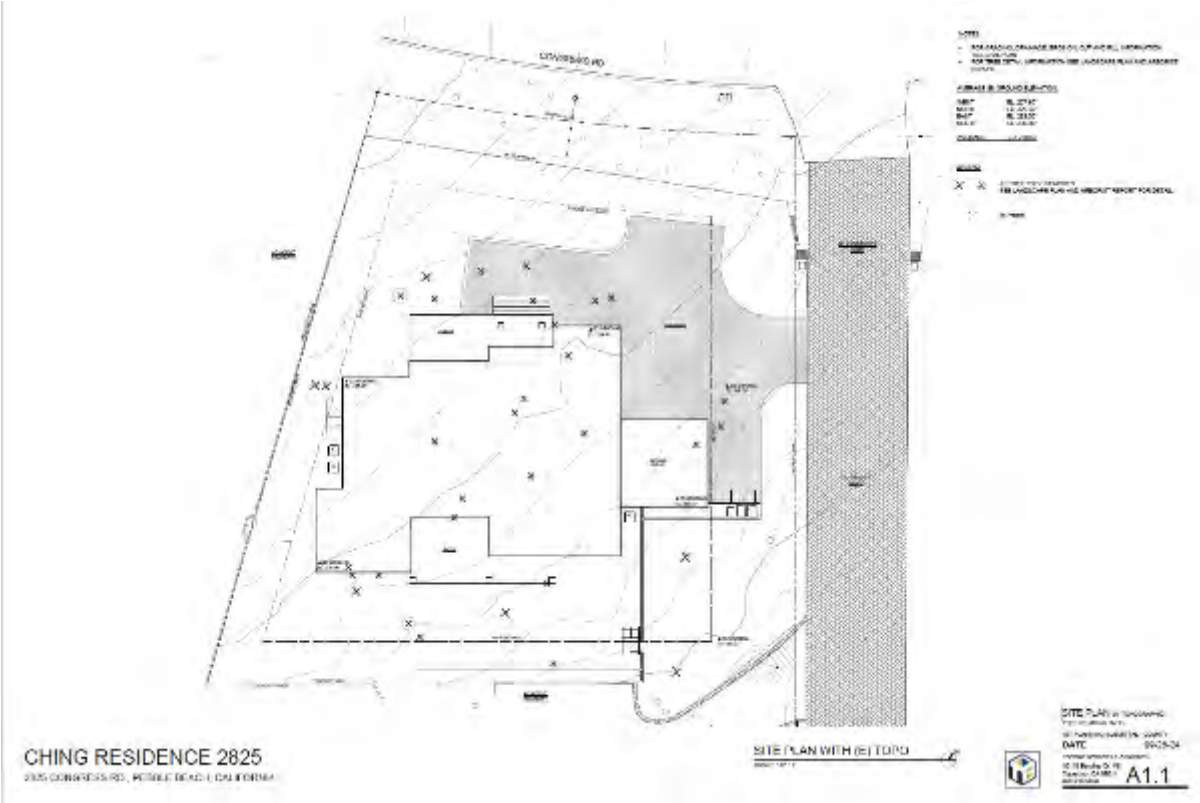


Figure 4: Site Plan

Fences

A wooden good-neighbor fence currently separates this vacant parcel from the parcel to the west (see Figure 5). Wooden fences can contribute to rapid progression of fire through the community and can lead a fire directly to the house, especially if plant debris, dead vegetation, or other flammable material has gathered at the bottom. Wood slat fences with gaps can trap burning embers and may cause the fence to catch fire. Vinyl fences, concrete walls, and wrought iron fences are durable and more fire-resistant than wooden fences. They also resist termites and other insects. However, the extreme heat created by a wildfire can cause vinyl fences to melt, potentially spreading the fire. All wooden fences should have a non-combustible gate, or structure, between the fence and the home to keep flames at least 10 feet away from the structure. A small gap at the bottom of the fence keeps fence boards from touching the soil, because direct contact can cause rot and decay, making the wood more flammable. It is important to maintain the fence line clear of dead plants, dry vegetation, branches, leaves, and combustible materials such as firewood.

Figure 5: Wooden fences are a fire risk, because they can trap embers and ignite during a wildfire event, leading the fire directly to the home.

Outdoor Furniture and Other High-Risk Items

Location of outdoor furniture is not identified in the project's Master Landscape Plan. However, the extensive porch and patio areas of the residence suggest that outdoor furniture (e.g., lawn chairs, outdoor tables, and seating) will be used. While not identified in the Master Landscape Plan, wood piles for storing firewood may be used. These and flammable materials (e.g., propane tanks) stored near the house can exacerbate the fire risk. Wooden decks can also capture embers from a nearby wildfire and can lead to ignition of the structure. Finally, mulching with wood chips can also increase the fire risk, because embers falling into a bed of woodchips can readily cause ignition. For recommendations regarding location of these high-risk items, see the Recommended Fuel Management Actions section below.

RECOMMENDED FUEL MANAGEMENT ACTIONS

FUEL MANAGEMENT

Vegetation is the primary threat to structures, by creating either direct flame contact, or radiant heat that ignites the structure. Embers landing in flammable vegetation (i.e., fuels) near the structure can ignite and produce direct flame contact to the home or outbuilding. In the context of fire safety, vegetation includes all live or dead plants, their debris (i.e., branches, leaves, needles, etc.), and the surface materials underneath the plant (e.g., mulch, wood chips, etc.). Flammability, fuel load (i.e., the amount of fuel), and the proximity to the house are the critical consideration when managing residential landscaping in fire-prone environments.

All plants can burn regardless of how flammable they are. Fire-safe landscaping requires maintenance (i.e., pruning, irrigation, and clean-up) of the property's surrounding to reduce the risk of structure ignition from burning landscaping plants. Low growing, open structured, less resinous, higher moisture content plants should be selected; native and drought tolerant species can often require less watering but still need to be maintained and irrigated to reduce the risk of structure ignitions from wildfire. The following recommendations address each of these factors in a zoned approach.

DEFENSIBLE SPACE

Fuel Management Zones are measured from edge of structures/fences or road edges. The Zoned approach for defensible space scales the intensity of wildfire fuel reduction based on the proximity to the structure. Defensible space is divided into zones (Figure 6) each with specific guidelines. The following zones are recognized in PRC Section 4291 and, therefore, are legally mandated. In each zone, the intensity of vegetation management increases as the distance to the home decreases. It is recommended to start at the house and work outward, up to 100 feet or to the property line.

- **Zone 0: Ember Resistant Zone.** Zone 0 extends 0 feet to 5 feet from the home, focusing on intense fuel reduction to protect against ember attacks. Zone 0 is key for wildfire defense and preventing fires from spreading to the dwelling

- **Zones 1: Lean, Clean, and Green.** Zone 1 extends 30 feet from buildings, structures, decks, etc. or to the property line, whichever is closer.

- **Zone 2: Fuel Reduction Zone.** Zone 2 extends from 30 feet to 100 feet out from buildings, structures, decks, etc. or to the property line, whichever is closer.

Figure 6: Fuel Management Zones and proposed tree removals.

Recommendations

Zone 0: Ember Resistant Zone

This is the ember resistant zone, which extends 5 feet from buildings, structures, stairs, decks, etc. A properly managed Zone 0 reduces the likelihood of structure ignition by reducing the potential for flame contact. Flames can be generated from embers that accumulate at the base of a wall and ignite vegetation, vegetative debris, or other combustible materials located close to the structure. Zone 0 is a critical component of structure defense and, when coupled with Zone 1 and Zone 2, is essential to defensible space. Management of the ember-resistant zone is now required by law (Assembly Bill [AB] 3074) beginning January 1, 2023.[3] This zone includes the area under and around all attached decks and requires the most stringent wildfire fuel reduction. The ember-resistant zone is designed to keep fire or embers from igniting materials that can spread the fire to the home. Backyards are considered Zone 0. The following provides maintenance guidance for this zone.

- Use hardscape like gravel, pavers, concrete, and other noncombustible mulch materials. No synthetic lawns, combustible bark, woodchips, or mulch. No lumber or round logs, railroad ties, or creosote-treated or pressure-treated wood.

- No combustible attached trellis, pergola, shade covering, planters, privacy wall, etc.; no combustible storage structures (e.g., woodsheds, potting bench, etc.); and replace combustible fencing, gates, and arbors attached to the home with noncombustible alternatives.

- The site plan for the project proposes two new 6-foot horizontal board wooden fences that are attached to the structure. Wooden fences should not be directly attached to the residence, and a 10-foot non-combustible section (e.g., metal gate) should be placed between the wooden section of the fence and the house.

- Potted plants should not exceed 2 feet in vegetation height and must be contained in non-combustible containers (no wooden planter boxes, wine barrels, etc.).

- Remove all dead and dying weeds, grass, plants, shrubs, trees, branches, and vegetative debris (i.e., leaves, needles, cones, bark, etc.).

- Check roofs, gutters, decks, porches, stairways, etc. for accumulated debris, leaf litter, and other flammable materials; clean regularly.

- Remove all branches within 10 feet of any chimney or stovepipe outlet.

- Limit plants in this area to low-growing, nonwoody, properly maintained plants.

[3] AB 3074 became law on January 1, 2021; however, before enforcement can occur, the State Fire Marshal needs to approve implementation requirements. Once implementation requirements are approved, they will become effective immediately for all new construction. They will go into effect for existing structures one year later. Estimated implementation for new construction is anticipated for 2025.

- Limit combustible items (e.g., outdoor furniture, planters, etc.) on top of decks.
- Trim and prune woody vegetation that extends into Zone 0. No trees should be planted if their canopy at maturity can be expected to extend closer than 5 feet to the structure's roof, balcony, decks, or exterior wall (10 feet from any chimney or stovepipe outlet).
- Consider relocating garbage and recycling containers, woodsheds, and BBQs (propane) outside this zone.

Zone 1: Lean, Clean, and Green Zone

Zone 1 is the second layer of a defensible fire perimeter around a residential structure in wildfire prone areas. It is designed to provide an additional level of protection for the building or structure, extending from 5 feet to 30 feet away from the structure and any attached balconies, patios, or outbuildings. The goal of fuel management in Zone 1 is to remove excess vegetation and to maintain the landscaping in a way that reduces ignition of the structure via heat transfer from burning vegetation. It also provides firefighters with space and access to protect the structure in case of a wildfire.

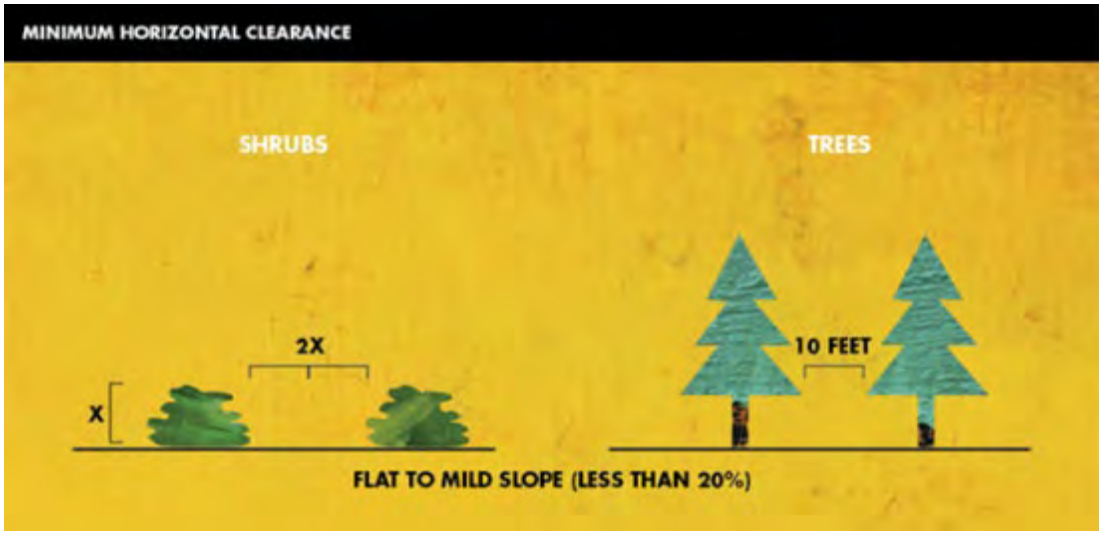
Fuel management in Zone 1 involves mowing, removing dead or dying plants, ladder fuels, pruning vegetation, and hauling away all materials. Remove branches that overlap with the roof or are closer than 10 feet from windows and chimneys. Dead vegetation removal includes fallen leaves, needles, twigs, bark, cones, and small branches. Cut and mow annual grass and herbaceous plants down to a height of 4 inches. Mow before 10:00 a.m. and never on a hot or windy day. String trimmers are a safer option (versus lawnmowers) for clearing vegetation. Avoid removing all vegetation to bare soil, as this may cause erosion.

Vertical Spacing. An important aspect of vegetation management in Zone 1 is vertical spacing of trees, shrubs, and grasses (see Figure 7). Large trees do not need to be cut and removed as long as they fulfill the horizontal spacing requirement (see below) and all of the plants beneath them are managed to remove vertical fuel ladders. Healthy trees should be pruned (i.e., limbed) at least 6 feet from the ground. Allow extra vertical space between shrubs and trees. Lack of vertical space can allow a fire to move from the ground to the brush to the treetops like a ladder. This leads to more intense fire closer to your home. To create vertical spacing and reduce fuel ladders created by shrubs under trees, tree branches should be limbed to a height of at least three times the height of the shrub.

Source: California Department of Forestry and Fire Protection (CAL FIRE).

Figure 7: Minimum Vertical Clearance

Horizontal spacing is the distance between trees and shrubs (see Figure 8) and is managed to reduce the likelihood of fire spreading from one plant to the next. It is recommended to create a horizontal space between shrubs equal to twice the height of the shrubs by removing trees and shrubs that are within this distance. Trees should be trimmed to maintain a gap of at least 10 feet from the next tree. Where canopies overlap, selective removal of smaller trees can maintain the desired horizontal spacing of trees.



Source: CAL FIRE (2024).

Figure 8: Minimum Horizontal Clearance

Other considerations:

- Place any woodpiles in Zone 2; establish a 10-foot clearance down to bare mineral soil around woodpiles.

- Wood mulch is acceptable in Zone 1 if there is a transition from Zone 1 to Zone 0 and if the vegetation in Zone 1 is grouped/clumped with the required horizontal distance.

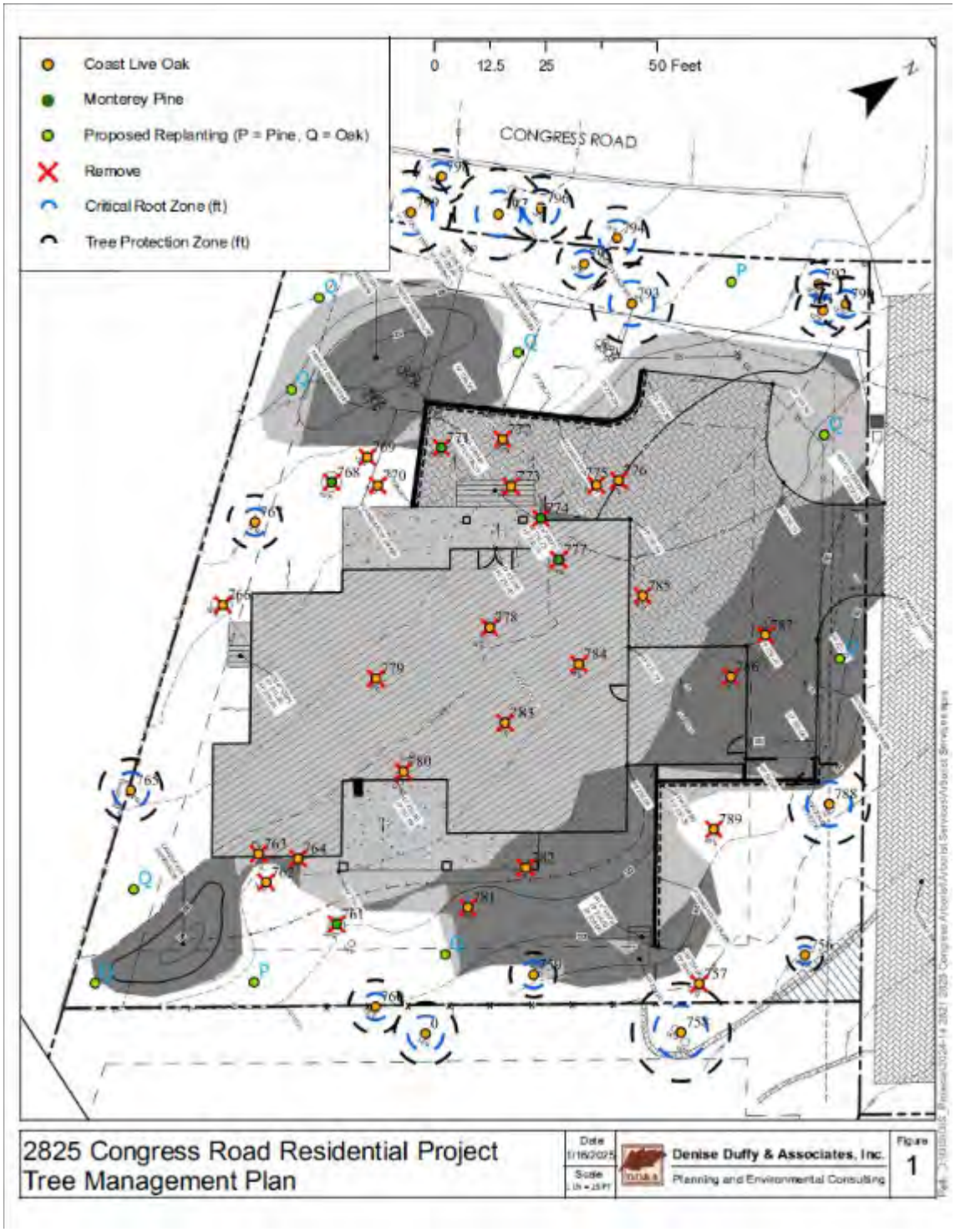
Zone 2: Fuel Reduction Zone

Fuel management in this zone aims at reducing the potential behavior of an oncoming fire to prevent rapid spread of wildfire from plant to plant and to reduce flame lengths. Zone 2 actions reduce the amount of fuels, especially dead vegetation (e.g., leaves, needles, twigs, bark, cones, and small branches). Grasses and herbaceous vegetation should be mowed to a height of 4 inches. Mowing should occur before 10:00 a.m. and never on a hot or windy day. String trimmers are preferred because they pose a low risk of sparking.

Spacing of trees and shrubs is similar to that of Zone 1, with a greater focus on vertical spacing (no ladder fuels). Horizontal space between trees should maintain a gap of at least 10 feet from the next tree. Where canopies overlap, selective removal of smaller trees can maintain the desired horizontal spacing of trees. Overlapping tree canopies should be avoided. Shrubs may be aggregated in clumps or islands that are well isolated from the surrounding shrubs. Spacing of shrubs and trees along fences should be managed according to the requirements of Zone 0 (i.e., 5-foot clearance to all structures).

PROPOSED TREE RETENTION, LANDSCAPING, AND MITIGATION

Based on the Arborist Report (Denise Duffy & Associates 2025), 27 trees, including 22 coast live oaks and 5 Monterey pines, lie within the project's grading limits and are proposed to be removed prior to construction of the project (Figure 8). Eighteen coast live oaks would be protected in place throughout construction. These trees are within Zones 1 and 2. The proposed landscaping plan (see Attachment A) identifies locations for 8 coast live oak and 2 Monterey Pines to be planted as mitigation for trees removed during construction.



Source: Denise Duffy & Associates (2025).

Figure 9: Tree Management Plan

REFERENCES

California Department of Forestry and Fire Protection (CAL FIRE). 2024. Defensible Space. Website: fire.ca.gov/dspace (accessed August 2024).

County of Monterey. 2024. Wildland Urban Interface (WUI) zones and Fire Hazard Severity Zones for the subject parcel. Website: https://montereycountyopendata-12017-01-13t232948815z-montereyco.opendata.arcgis.com/maps/cf32d5a95d29449c8f34b08dadd19ecb/explore?location=36.603638%2C-121.933271%2C16.00 (accessed August 2024).

Denise Duffy & Associates. 2025. Tree Assessment and Forest Management Plan for the 2825 Congress Road Residential Project. Unpublished report submitted to Kuan Chang, Tectonic Builders Corp., 10118 Bandley Dr. #E, Cupertino, California 95014.

Windy Weather World, Inc. 2024. Website: windy.app (accessed August 2024).

APPENDIX A

APPENDIX BMASTER LANDSCAPE, TREE, WILDFIRE PROTECTION AND HYDROZONE PLANS

PLANT LEGEND AND NOTES

Symbol	Species	Size	Water	WUCOLS
	Arctostaphylos Little Sur/ Manzanita @60" oc	1 gallon	low	.2
	Achillea millefolium/ Yarrow @ 48" oc	1 gallon	low	.2
	Juncus patens/ California Rush @ 36" oc	1 gallon	low	.2
A	Salvia Allen Chickering/ Sage	5 gallon	low	.2
B	Ribes sanguineum/ Red Currant	5 gallon	low	.3
T1	Quercus agrifolia/ Coast Live Oak	15 gallon	low	.2
T2	Pinus radiata/ Monterey Pine	15 gallon	low	.3

1) Preparation of soil to be on an individual plant basis to protect the roots of existing trees to remain.
2) Incorporate compost into soil backfill.
3) Provide all required tree protection measures per the project arborist report and as determined in the field. Protection measures shall be to the satisfaction of the project arborist and the planning department.
4) Verify placement of all plant material prior to planting. Adjust as needed based on proximity to existing trees and project construction.
5) All plant material to be sourced from local nurseries only. Resources Code (PRC) Section 4291, only trees grown from locally collected seeds from trees uninfected with pitch canker or Phytophthora ramorum should be used. Special care should be taken to avoid contamination of seedlings with diseased materials. Trees propagated from nonnative genetic stock should not be used in landscaping and forest restoration.
6) Spread 3" of wood chip (Prochip Brown Tone, or equal) mulch around the base of all new planting only not in open areas and not within the 5' fire defense zone around the foundation of the house.

Proposed new tree as mitigation from removal of protected trees:
From Denise Duffy & Associated, Inc./ Planning and Environmental Consulting - 1/16/25
(21) T1 - Quercus agrifolia/ Coast Live Oak require for mitigation - (8) proposed at 15 gallon
(2) T2 Pinus radiata/ Monterey Pine required for mitigation - (2) proposed at 15 gallon
See report for other mitigation measures.

Existing tree to remain (Q) for Quercus/ Oak, (P) for Pinus/ Pine

Existing tree to be removed

Existing off site tree to remain

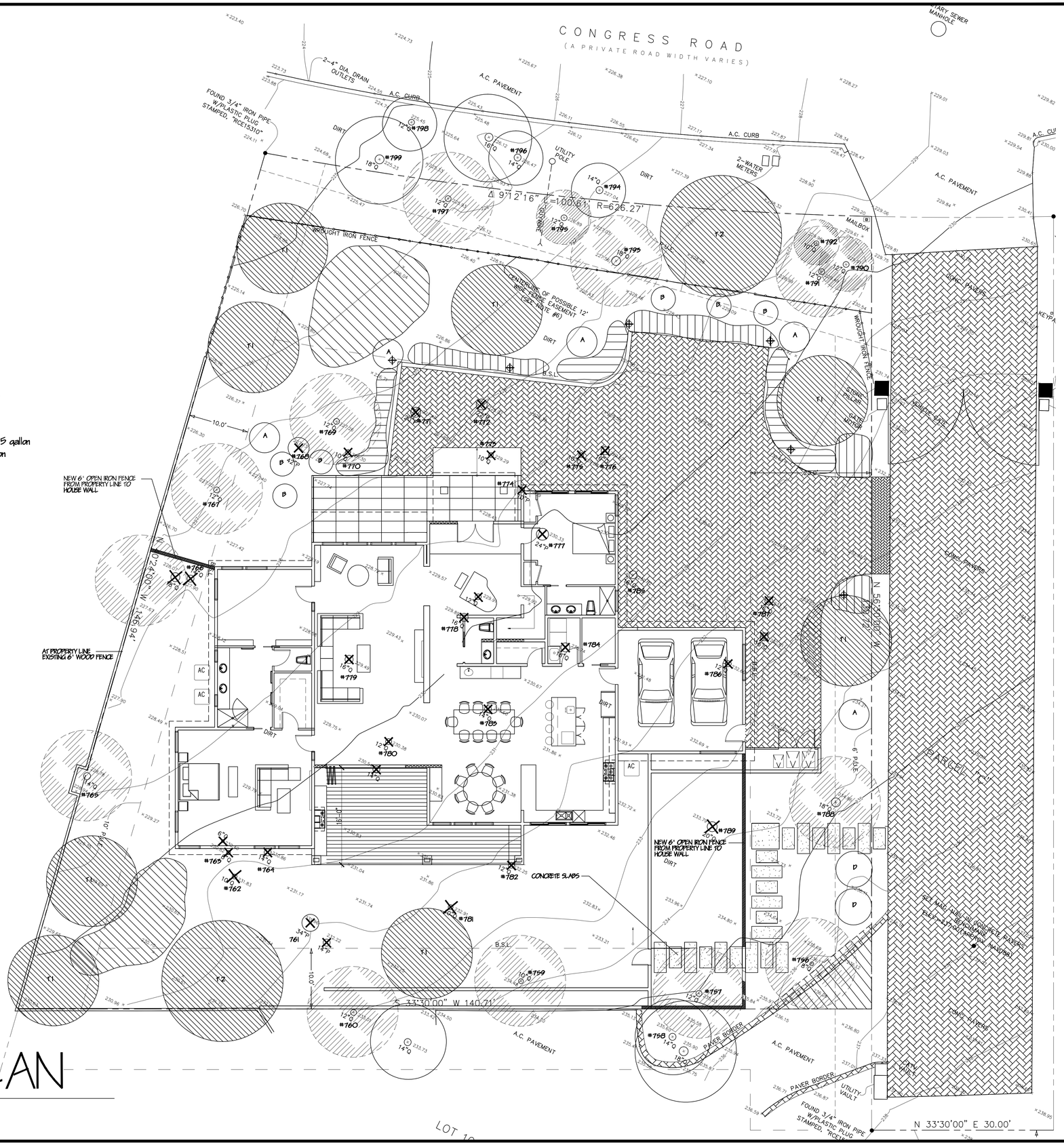
ARCTOSTAPHYLOS ACHILLEA JUNCUS SALVIA RIBES

QUERCUS PINUS

LIGHTING LEGEND

Low voltage black down lit path/ driveway light - FX or equal

1) Verify placement of all landscape lighting at front yard.
2) All lighting to be directed downwards.
3) Verify electrical and location of transformer.
4) All work to be done according to local and state electrical code.



PLANTING PLAN

W. Jeffrey Held
Landscape Architect
C-2235

1465 Winzer Place
Gilroy, Ca. 95020
tel 408 691-5207
email wjheidasla@gmail.com

REVISED 3/18/24
REVISED 5/11/24
REVISED 9/9/24
REVISED 9/20/24
REVISED 1/16/25

REGISTERED LANDSCAPE ARCHITECT
No. 2235
Signature
EXPIRATION DATE: 06/30/2025
STATE OF CALIFORNIA

CHING RESIDENCE

for:
LILLY CHING
2825 CONGRESS ROAD
PEBBLE BEACH, CA. 93953

PLANTING PLAN

date: 3/16/24
scale: NOTED
drawn by: WJH
job no. 202404
sheet L1
of shts

Proposed new tree as mitigation from removal of protected trees:
From Denise Duffy & Associated, Inc./ Planning and Environmental Consulting - 1/15/25
(21) T1 - Quercus agrifolia/ Coast Live Oak require for mitigation - (8) proposed at 15 gallon
(2) T2 Pinus radiata/ Monterey Pine required for mitigation - (2) proposed at 15 gallon
See report for other mitigation measures.

Existing tree to remain (Q) for Quercus/ Oak, (P) for Pinus/ Pine

Existing tree to be removed

Existing off site tree to remain

T1	Quercus agrifolia/ Coast Live Oak	15 gallon low	.2
T2	Pinus radiata/ Monterey Pine	15 gallon low	.3

QUERCUS

PINUS

TREE NOTES

Biological BMP(s)
Tree removal shall be timed to avoid the breeding and nesting season for raptors and other protected avian species to the extent feasible. If tree removal must occur during the avian breeding and nesting season (approximately February 1 through September 15), a survey for nesting birds shall be conducted no more than 15 days prior to removal of trees. If nesting birds are identified during survey, an appropriate buffer shall be imposed by a qualified biologist which no work or disturbance will take place. A qualified biologist shall be on-site during work re-initiation in the vicinity of the nest offset to ensure that the buffer is adequate and that the nest is not stressed and/ or abandoned. No work shall proceed in the vicinity of an active nest until such time as all young are fledged, or until after September 16, when young are assumed fledged.
Tree Protection and Best Management Practices (BMPs)
Prior to the commencement of project related activities, the following tree BMP's shall be implemented and approved by a qualified arborist or forester:

Trees located adjacent to the construction area shall be protected from damage by construction through the use of temporary fencing and wrapping of trunks with protective materials.

Fencing shall consist of chain link, supported snowdrift or plastic mesh, hay bales, or field fence. Fencing shall have cross bracing (typically 2x4 material) on both the top and lower edges of the fencing material to prevent sagging and provide lateral support. Fencing shall stand a minimum height of four feet above grade and be placed to the farthest extent possible from the base of the trees, protecting the trees drip line area (typically 10-12 feet away from the base of a tree).
In the cases where access or space is limited it is permissible to protect trees within the 10-12-foot distance after determination and approval are made by a qualified forester or arborist.

Soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, and/ or dumping of materials is not permitted adjacent to trees on the property, especially within fenced areas.
Fenced areas and the trunk protection materials shall remain in place during the entire construction period. Torn or damaged roots shall be cleanly cut to sound wood wherever possible to minimize decay entry points. Any roots found that must be cut should be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment. No tree seals shall be used as the seal material only promotes decay.

A mulch layer up to approximately 4 inches deep should be applied to the ground under protected trees following construction. Only 1 to 2 inches of mulch should be applied within 1 to 2 feet of the trunk, and under no circumstances should any soil or mulch be placed against the root crown (base) of trees. The best source of mulch would be from chipped material generated on-site.

Irrigation should be that of normal for exterior planting. Normal watering means that soil should be kept evenly moist and watered regularly, as conditions require. Most plants prefer one (1) inch of water a week during the growing season, but care needs to be taken not to over water. It is better to water once (1) a week and water deeply (over 24 inches), than to water frequently for a few minutes.

Tree Pruning
It is to be understood that the pruning of retained trees is expected for this site. Pruning shall conform to the following standards:
Clear the crown of diseased, crossing, weak, and dead wood to a general minimum size of 1-1/ 2 inch in diameter.

Remove stubs, cutting outside the wound wood tissue that has formed around the branch.

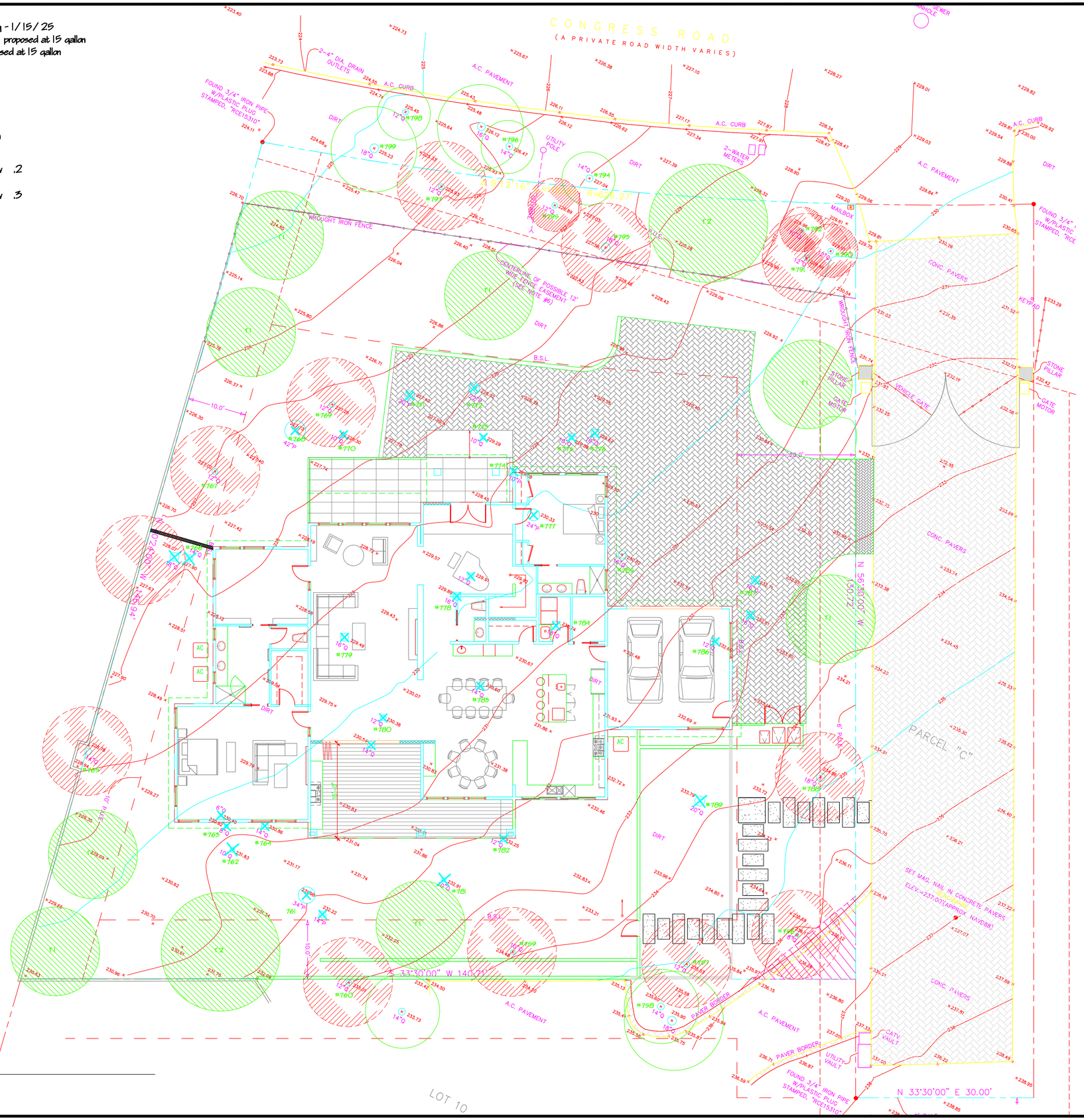
Interior branches shall not be stripped out.

Reduce end weight on heavy, horizontal branches by selectively removing small- diameter branches, no greater than three (3) inches, near the ends of the scaffolds. In some cases, larger diameters may be removed depending on the situation (where critical for safety).
Pruning cuts larger than four (4) inches in diameter, except for deadwood, shall be avoided, unless deemed crucial for safety (broken, cracked, crossing, rubbing, etc.). Pruning cuts that expose heartwood shall be avoided wherever possible.
Pruning shall not be performed during periods of flight of adult boring insects because fresh wounds attract pests (generally spring). Pruning shall be performed only when the danger of infestation has passed.

All pruning shall be performed by a qualified arborist or under the supervision of an ISA Certified Arborist or Tree Worker. Arborists are required to have a State of California Contractors License for Tree Service (C-61/ D49) and provide proof of worker's compensation and general liability insurance.

All pruning shall be following the Tree Pruning Guidelines (International Society of Arboriculture) and/ or the ANSI A300 Pruning Standard (American National Standard for Tree Care Operations) and adhere to the most recent edition of ANSI Z133.1.
No more than 20 percent of live foliage shall be removed within the trees.
Brush shall be chipped, and chips shall be spread underneath trees within the tree protection zone to a maximum depth of 6 inches, leaving the trunk clear of mulch.

Following construction, a qualified arborist should monitor trees adjacent to the area of the improvements and if any decline in health that is attributable to the construction is noted, additional trees should be planted on the site.



TREE PLAN

W. Jeffrey Held
Landscape Architect
C-2235

1465 Winzer Place
Gilroy, Ca. 95020
tel 408 691-5207
email wjheidasla@gmail.com

REVISED 9/ 20/ 24
REVISED 1/ 16/ 25

REGISTERED LANDSCAPE ARCHITECT
No. 2235
Signature
EXPIRATION DATE: 06/30/2025
STATE OF CALIFORNIA

CHING RESIDENCE

for:
LILLY CHING
2825 CONGRESS ROAD
PEBBLE BEACH, CA. 95953

TREE PLAN

date: 9/9/24
scale: NOTED
drawn by: WJH
job no. 202404
sheet L 2
of shts

Recommendations

Zone 0: Ember Resistant Zone

This is the ember resistant zone, which extends 5 feet from buildings, structures, stairs, decks, etc. A properly managed Zone 0 reduces the likelihood of structure ignition by reducing the potential for flame contact. Flames can be generated from embers that accumulate at the base of a wall and ignite vegetation, vegetative debris, or other combustible materials located close to the structure. Zone 0 is a critical component of structure defense and, when coupled with Zone 1 and Zone 2, is essential to defensible space. Management of the ember-resistant zone is now required by law (Assembly Bill [AB] 3074) beginning January 1, 2023.5 This zone includes the area under and around all attached decks and requires the most stringent wildfire fuel reduction. The ember-resistant zone is designed to keep fire or embers from igniting materials that can spread the fire to the home. Backyards are considered Zone 0. The following provides maintenance guidance for this zone.

* Use hardscape like gravel, pavers, concrete, and other noncombustible mulch materials. No synthetic lawns, combustible bark, woodchips, or mulch. No lumber or round logs, railroad ties, or creosote-treated or pressure-treated wood.
* No combustible attached trellis, pergola, shade covering, planters, privacy wall, etc.; no combustible storage structures (e.g., woodsheds, potting bench, etc.); and replace combustible fencing, gates, and arbors attached to the home with noncombustible alternatives.
* Wooden fences should not be directly attached to the residence, and a 10-foot non-combustible section (e.g., metal gate) should be placed between the wooden section of the fence and the house.
* Potted plants should not exceed 2 feet in vegetation height and must be contained in non-combustible containers (no wooden planter boxes, wine barrels, etc.).
* Remove all dead and dying weeds, grass, plants, shrubs, trees, branches, and vegetative debris (i.e., leaves, needles, cones, bark, etc.).
* Check roofs, gutters, decks, porches, stairways, etc. for accumulated debris, leaf litter, and other flammable materials; clean regularly.
* Remove all branches within 10 feet of any chimney or stovepipe outlet.
* Limit plants in this area to low-growing, nonwoody, properly maintained plants.
* Limit combustible items (e.g., outdoor furniture, planters, etc.) on top of decks.
* Trim and prune woody vegetation that extends into Zone 0. No trees should be planted if their canopy at maturity can be expected to extend closer than 5 feet to the structure(s) roof, balcony, decks, or exterior wall (10 feet from any chimney or stovepipe outlet).
* Consider relocating garbage and recycling containers, woodsheds, and BBQs (propane) outside this zone.

Zone 1: Lean, Clean, and Green Zone

Zone 1 is the second layer of a defensible perimeter around a residential structure in wildfire prone areas. It is designed to provide an additional level of protection for the building or structure, extending from 5 feet to 30 feet away from the structure and any attached balconies, patios, or outbuildings. The goal of fuel management in Zone 1 is to remove excess vegetation and to maintain the landscaping in a way that reduces ignition of the structure via heat transfer from burning vegetation. It also provides firefighters with space and access to protect the structure in case of a wildfire.

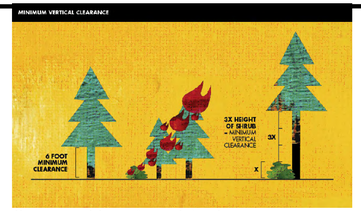
Fuel management in Zone 1 involves mowing, removing dead or dying plants, ladder fuels, pruning vegetation, and hauling away all materials. Remove branches that overlap with the roof or are closer than 10 feet from windows and chimneys. Dead vegetation removal includes fallen leaves, needles, twigs, bark, cones, and small branches. Cut and mow annual grass and herbaceous plants down to a height of 4 inches. Mow before 10:00 a.m. and never on a hot or windy day. String trimmers are a safer option (versus lawnmowers) for clearing vegetation. Avoid removing all vegetation to bare soil, as this may cause erosion.

Vertical Spacing. An important aspect of vegetation management in Zone 1 is vertical spacing of trees, shrubs, and grasses (see Figure 7). Large trees do not need to be cut and removed as long as they fulfill the horizontal spacing requirement (see below) and all of the plants beneath them are managed to remove vertical fuel ladders. Healthy trees should be pruned (i.e., limbed) at least 6 feet from the ground. Allow extra vertical space between shrubs and trees. Lack of vertical space can allow a fire to move from the ground to the brush to the treetops like a ladder. This leads to more intense fire closer to the home. To create vertical spacing and reduce fuel ladders created by shrubs under trees, tree branches should be limbed to a height of at least three times the height of the shrub.

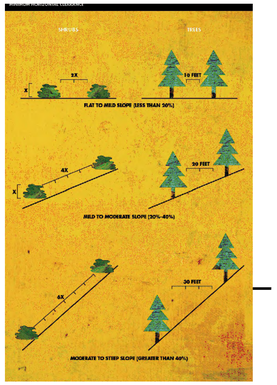
* Place any woodpiles in Zone 2; establish a 10-foot clearance down to bare mineral soil around woodpiles.
* Wood mulch is acceptable in Zone 1 if there is a transition from Zone 1 to Zone 0 and if the vegetation in Zone 1 is grouped/ dumped with the required horizontal distance.

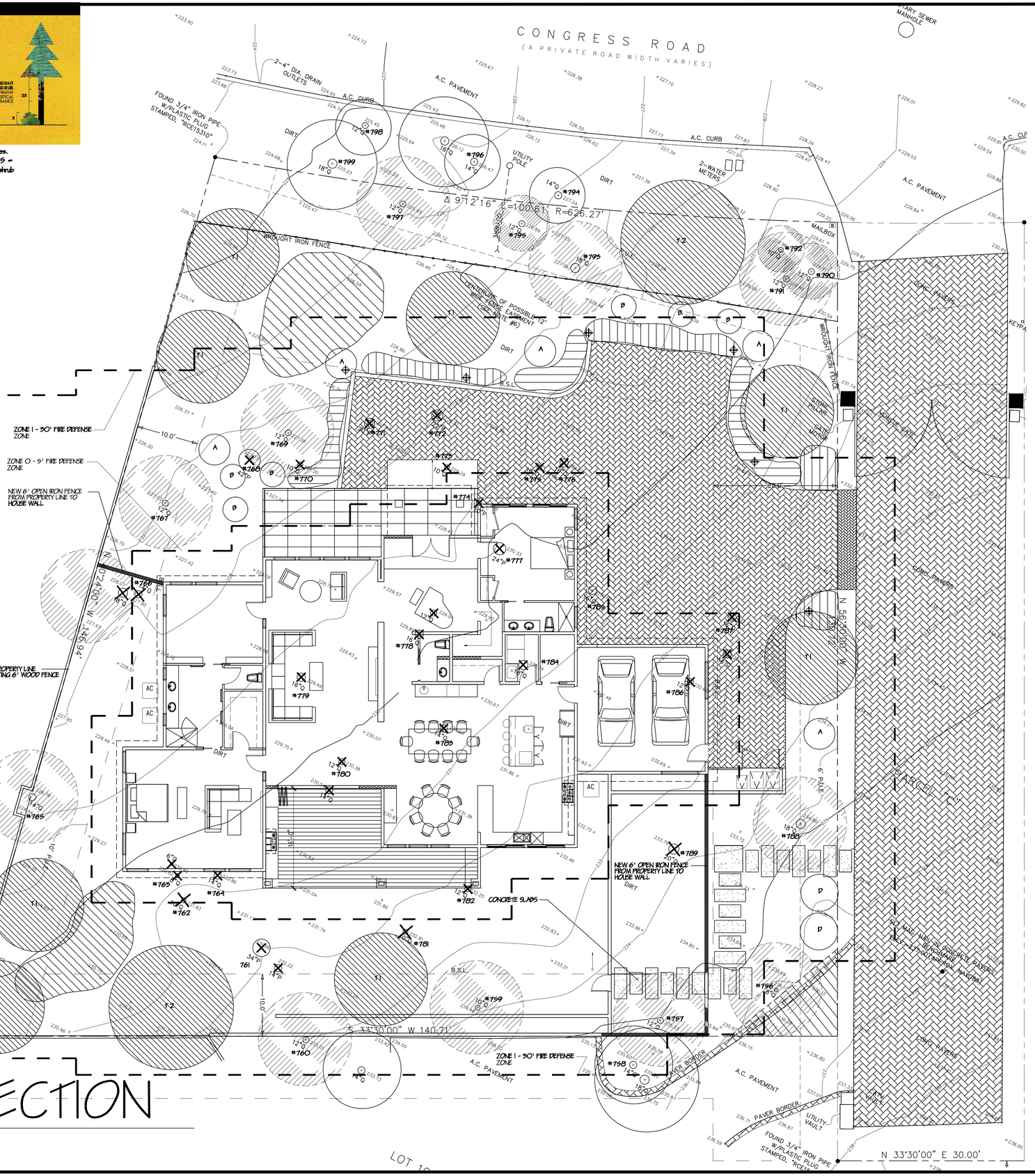
Zone 2: Fuel Reduction Zone

Fuel management in this zone aims at reducing the potential behavior of an oncoming fire to prevent rapid spread of wildfire from plant to plant and to reduce flame lengths. Zone 2 actions reduce the amount of fuels, especially dead vegetation (e.g., leaves, needles, twigs, bark, cones, and small branches). Grasses and herbaceous vegetation should be mowed to a height of 4 inches. Mowing should occur before 10:00 a.m. and never on a hot or windy day. String trimmers are preferred, because they pose a low risk of sparking. Spacing of trees and shrubs is similar to that of Zone 1, with a greater focus on vertical spacing (i.e., no ladder fuels). Horizontal space between trees should maintain a gap of at least 10 feet from the next tree. Where canopies overlap, selective removal of smaller trees can maintain the desired horizontal and vertical spacing of trees. Overlapping tree canopies should be avoided. Shrubs may be aggregated in clumps or islands that are well isolated from the surrounding shrubs and tree canopies. Spacing of shrubs and trees along fences should be managed according to the requirements of Zone 0 (i.e., 5-foot clearance to all structures).



Maintain a vertical clearance between shrubs and trees. Example: A five foot shrub is growing near a tree. 3x5 = 15 feet of clearance needed between the top of the shrub and the lowest tree branch.





WILDFIRE PROTECTION

W. Jeffrey Held
Landscape Architect
C-2235

1465 Winzer Place
Gilroy, Ca. 95020
tel 408 691-5207
email wjheidasla@gmail.com

REVISED 9/20/24
REVISED 1/16/25

REGISTERED LANDSCAPE ARCHITECT
No. 2235
Signature
EXPIRATION DATE: 06/30/2025
STATE OF CALIFORNIA

CHING RESIDENCE

for:
LILLY CHING
2825 CONGRESS ROAD
PEBBLE BEACH, CA. 93953

WILDFIRE PROTECTION

date: 9/9/24
scale: NOTED
drawn by: WJH
job no. 202404
sheet L3
of shts

California Water Efficient Landscape Worksheet

Reference Evapotranspiration (ET$_o$)		36	Project Type		Residential		0.55
Hydrozone # / Planting Description[a]	Plant Factor (PF)	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (Sq. Ft.)	ETAF x Area	Estimated Tota Water Use (ETWU)[d]
Regular Landscape Areas							
#1 low water	0.3	Drip	0.81	0.37	725	269	5963
#2 low water	0.2	Drip	0.81	0.25	310	77	1708
#3 low water	0.2	Drip	0.81	0.25	155	38	854
#4 low water	0.2	Drip	0.81	0.25	230	57	1268
#5 oak trees low wate	0.2	Drip	0.81	0.25	1160	286	6393
#6 pine trees med wat	0.5	Drip	0.81	0.62	290	179	3996
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			0.75	0.00		0	0
			Totals		2870	906	20212
Special Landscape Areas							
[redacted]			1			0	0
			1			0	0
			1			0	0
			1			0	0
			Totals	0	0	0	0
						ETWU Total	20212
					Maximum Allowed Water Allowance (MAWA)[e]		35232

ETAF Calculations

Regular Landscape Areas	
Total ETAF x Area	906
Total Area	2870
Average ETAF	0.32

All Landscape Areas	
Total ETAF x Area	906
Total Area	2870
Average ETAF	0.32

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

[a] Hydrozone # / Planting Description e.g.
1.) Front lawn
2.) Low water use planting
3.) Medium water use planting

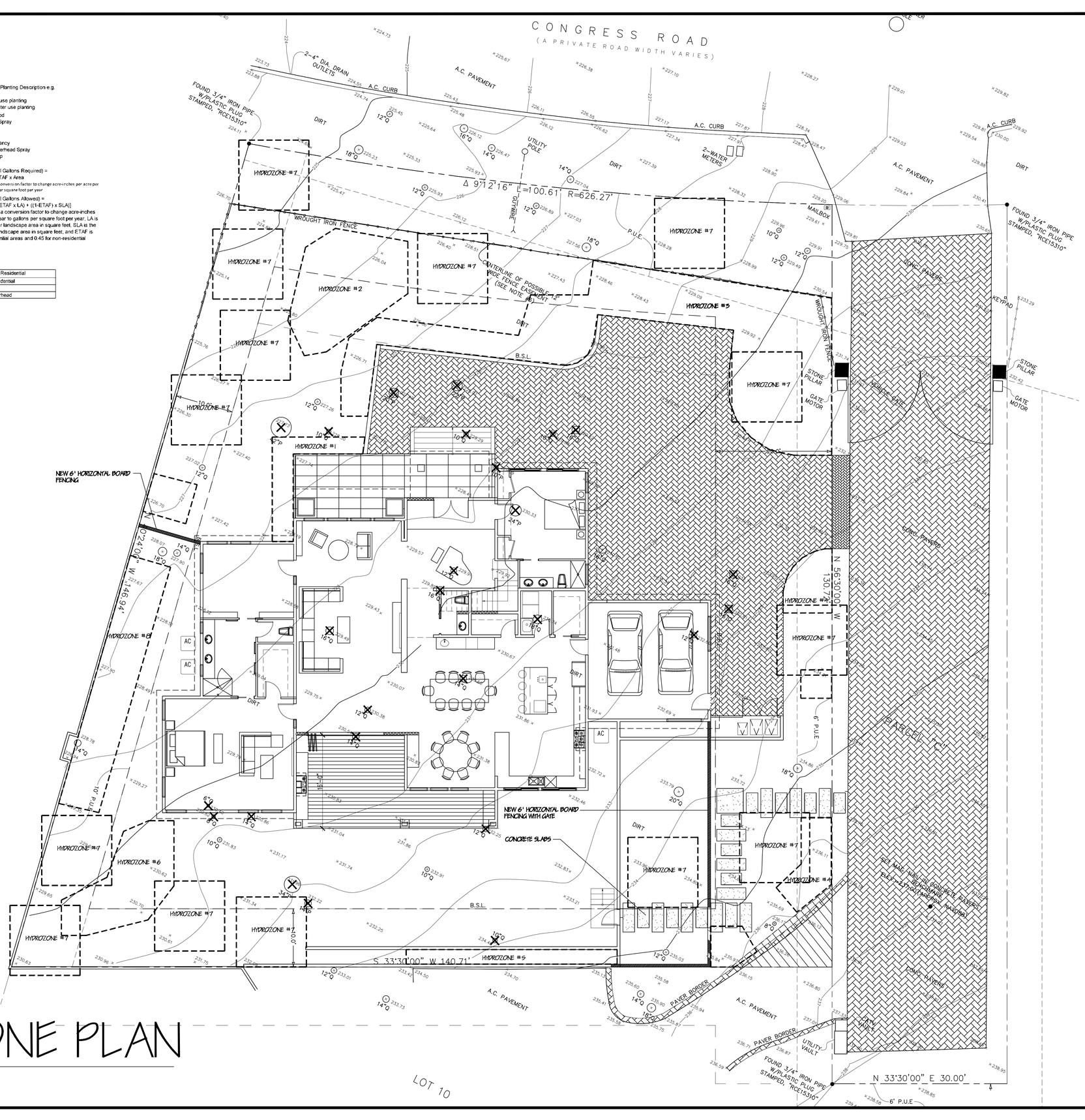
[b] Irrigation Method
1.) Overhead Spray
2.) Drip

[c] Irrigation Efficiency
1.) 0.75 for Overhead Spray
2.) 0.81 for Drip

[d] ETWU (Annual Gallons Required) =
Eto x 0.62 x ETAF x Area
Where 0.62 is a conversion factor to change acre-inches per acre per year to gallons per square foot per year

[e] MAWA (Annual Gallons Allowed) =
(Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
Where 0.62 is a conversion factor to change acre-inches per acre per year to gallons per square foot per year, LA is the total regular landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is 0.55 for residential areas and 0.45 for non-residential areas

0.45	Non-Residential
0.55	Residential
0.81	Drip
0.75	Overhead



HYDROZONE PLAN

1/8" = 1'-0"

W. Jeffrey Held
Landscape Architect
C-2235

1465 Winzer Place
Gilroy, Ca. 95020
tel 408 691-5207
email wjheldasla@gmail.com

REVISED 5/11/24
REVISED 9/20/24
REVISED 1/16/25

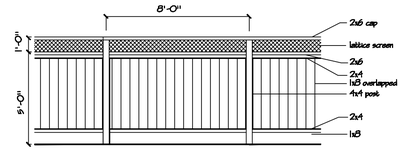
REGISTERED LANDSCAPE ARCHITECT
No. 2235
Signature
EXPIRATION DATE: 08/30/2025
STATE OF CALIFORNIA

CHING RESIDENCE

for:
LILLY CHING
2825 CONGRESS ROAD
PEBBLE BEACH, CA. 93953

HYDROZONE PLAN

date: 3/18/24
scale: NOTED
drawn by: WJH
job no. 202404
sheet L 4
of shts

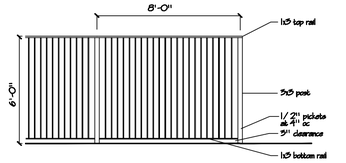


6' GOOD NEIGHBOR FENCE

1/4" = 1'-0"

PROPERTY LINE FENCE

(For new and replacement fencing)



6' IRON SECURITY FENCE

1/4" = 1'-0"

FENCING ADJACENT TO HOUSE

(For new fencing - black iron)

BELGARD CATALINA GRANA PAVER

(For driveway - in Scandia Gray color)

W. Jeffrey Held
Landscape Architect
C-2235

1465 Winzer Place
Gilroy, Ca. 95020
tel 408 691-5207
email wjheidasla@gmail.com

REVISED 5/11/24
REVISED 9/20/24
REVISED 1/16/25

REGISTERED LANDSCAPE ARCHITECT
No. 2235
Signature
EXPIRATION DATE: 06/30/2025
STATE OF CALIFORNIA

CHING
RESIDENCE

for:
LILLY CHING
2825 CONGRESS ROAD
PEBBLE BEACH, CA. 93953

DETAILS

date: 3/18/24
scale: NOTED
drawn by: WJH
job no. 202404
sheet L 5
of shts

ATTACHMENT C

Best Management Practices for Working Near Trees

Tree Protection and Best Management Practices (BMPs)

Prior to the commencement of project related activities, the following tree BMPs shall be implemented and approved by a qualified arborist or forester:

- Trees located adjacent to the construction area shall be protected from damage by construction through the use of temporary fencing and wrapping of trunks with protective materials.
- Fencing shall consist of chain link, supported snowdrift or plastic mesh, hay bales, or field fence. Fencing shall have cross bracing (typically 2x4 material) on both the top and lower edges of the fencing material to prevent sagging and provide lateral support. Fencing shall stand a minimum height of four feet above grade and be placed to the farthest extent possible from the base of the trees, protecting the trees drip line area (typically 10-12 feet away from the base of a tree).
- In the cases where access or space is limited it is permissible to protect trees within the 10-12-foot distance after determination and approval are made by a qualified forester or arborist.
- Soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, and/or dumping of materials is not permitted adjacent to trees on the property, especially within fenced areas.
- Fenced areas and the trunk protection materials shall remain in place during the entire construction period. Torn or damaged roots shall be cleanly cut to sound wood wherever possible to minimize decay entry points. Any roots found that must be cut should be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment. No tree seals shall be used as the seal material only promotes decay.
- A mulch layer up to approximately 4 inches deep should be applied to the ground under-protected trees following construction. Only 1 to 2 inches of mulch should be applied within 1 to 2 feet of the trunk, and under no circumstances should any soil or mulch be placed against the root crown (base) of trees. The best source of mulch would be from chipped material generated on-site.
- Irrigation should be that of normal for exterior planting. Normal watering means that soil should be kept evenly moist and watered regularly, as conditions require. Most plants prefer one (1) inch of water a week during the growing season, but care needs to be taken not to over water. It is better to water once (1) a week and water deeply (over 24 inches), than to water frequently for a few minutes.

Tree Pruning

It is to be understood that the pruning of retained trees is expected for this site. Pruning shall conform to the following standards:

- Clear the crown of diseased, crossing, weak, and dead wood to a general minimum size of 1-1/2 inch in diameter.
- Remove stubs, cutting outside the wound wood tissue that has formed around the branch.
- Interior branches shall not be stripped out.

- Reduce end weight on heavy, horizontal branches by selectively removing small- diameter branches, no greater than three (3) inches, near the ends of the scaffolds. In some cases, larger diameters may be removed depending on the situation (where critical for safety).
- Pruning cuts larger than four (4) inches in diameter, except for deadwood, shall be avoided, unless deemed crucial for safety (broken, cracked, crossing, rubbing, etc.). Pruning cuts that expose heartwood shall be avoided whenever possible.
- Pruning shall not be performed during periods of flight of adult boring insects because fresh wounds attract pests (generally spring). Pruning shall be performed only when the danger of infestation has passed.
- All pruning shall be performed by a qualified arborist or under the supervision of an ISA Certified Arborist or Tree Worker. Arborists are required to have a State of California Contractors License for Tree Service (C-61/D49) and provide proof of worker's compensation and general liability insurance.
- All pruning shall be following the Tree Pruning Guidelines (International Society of Arboriculture) and/or the ANSI A300 Pruning Standard (American National Standard for Tree Care Operations) and adhere to the most recent edition of ANSI Z133.1.
- No more than 20 percent of live foliage shall be removed within the trees.
- Brush shall be chipped, and chips shall be spread underneath trees within the tree protection zone to a maximum depth of 6 inches, leaving the trunk clear of mulch.

Following construction, a qualified arborist should monitor trees adjacent to the area of the improvements and if any decline in health that is attributable to the construction is noted, additional trees should be planted on the site.

Root Barriers

Severe pruning of tree roots may lead to a major decline or tree death. The best solution is to select trees that are less likely to become a problem or to plant further away from foundations, curbs, gutters, parking lots, sidewalks, and driveways to reduce tree growth or to allow them to grow in another direction. Place barriers in the soil to a depth of 18 to 24 inches (see landscape details) by trenching along the area to be protected at a distance of five (5) times the trunk diameter. In the cases where access or space is limited, it is permissible to reduce the distance after determination and approval are made by a qualified forester or arborist.