Exhibit D

This page intentionally left blank.

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 2821 Congress Road Residential Project

Denise Duffy & Associates, Inc. (DD&A) is contracted by Tectonic Builders Corp. (TBC) to provide arboricultural consulting services for the 2821 Congress Road Project (project or proposed project), located in the Pebble Beach area of unincorporated Monterey County (County), California (Assessor Parcel Number [APN] 007-103-011).

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.
- 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

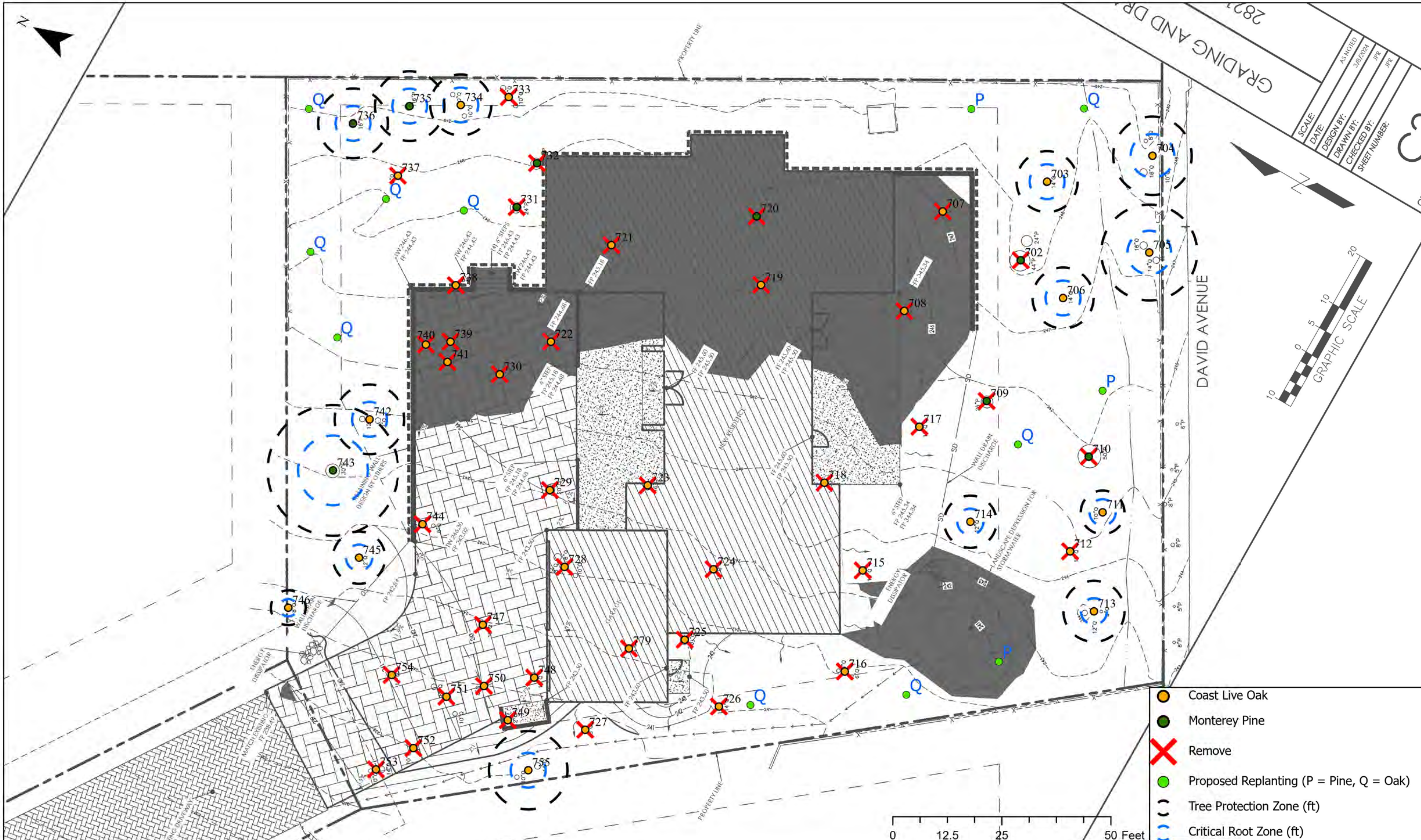
DD&A inventoried 55 trees within the survey area (see **Figure 1** and **Attachment A**). Trees observed and documented include 46 coast live oaks (*Quercus agrifolia*) and nine (9) Monterey pines (*Pinus radiata*).

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*).

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.



2821 Congress Road Residential Project Tree Management Plan

Date 1/16/2025

Scale 1 IN = 20 FT

Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure 1

DISCUSSION AND FOREST MANAGEMENT PLAN

40 trees, including 34 coast live oaks and six (6) 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 34 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, three (3) Monterey pines 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-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 34 protected oak trees proposed for removal are less than 24" DBH. Therefore, 34 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 9 trees can be planted on-site without overcrowding the forest and thereby creating a fire fuel hazard (**Attachment C**). Considering the requirement in Measure 3 above to replace three (3) special-status Monterey pines on-site, only six (6) coast live oaks shall be replaced on-site to avoid overcrowding the forest. Replacement plantings shall be 15-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 lie 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 Practices for Working Near Trees

ATTACHMENT A

Tree Table

This page intentionally left blank

Tag#	Scientific Name	Common Name	Individual Stem DBH (in)		Total DBH (in)	Tree Protection Zone (ft)	Critical Root Zone (ft)	Health	Status	Landmark	Reason for Removal Recommendation
753	*Quercus agrifolia*	Coast Live Oak	14	10	17	9	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
752	*Quercus agrifolia*	Coast Live Oak	10	10	10	5	3	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
751	*Quercus agrifolia*	Coast Live Oak	12	10	16	8	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
749	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
750	*Quercus agrifolia*	Coast Live Oak	8		8	4	2	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
747	*Quercus agrifolia*	Coast Live Oak	16		16	8	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
755	*Quercus agrifolia*	Coast Live Oak	14	10	17	9	4	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
745	*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
746	*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
743	*Pinus radiata*	Monterey Pine	30		30	15	8	Fair	Protect in Place	Yes	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
742	*Quercus agrifolia*	Coast Live Oak	12	12	17	8	4	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
744	*Quercus agrifolia*	Coast Live Oak	12	8	14	7	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
730	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
741	*Quercus agrifolia*	Coast Live Oak	8		8	4	2	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
739	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
740	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
722	*Quercus agrifolia*	Coast Live Oak	12		12	6	3	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
738	*Quercus agrifolia*	Coast Live Oak	16		16	8	4	Fair	Remove	No	The tree is located within the proposed landscape improvements area and proposed residence, all the trees critical root zone is proposed to be impacted. Tree recommended for removal.
731	*Pinus radiata*	Monterey Pine	24		24	12	6	Fair	Remove	Yes	The tree is located within the proposed landscape improvements area and proposed residence, all the trees critical root zone is proposed to be impacted. Tree recommended for removal.
732	*Pinus radiata*	Monterey Pine	24		24	12	6	Fair	Remove	Yes	The tree is located within the proposed landscape improvements area and proposed residence, all the trees critical root zone is proposed to be impacted. Tree recommended for removal.
733	*Quercus agrifolia*	Coast Live Oak	12	10	16	8	4	Poor	Remove	No	Tree is in poor declining health and is recommended for removal to reduce fuels per Fuel Management Plan and remain in compliance with PRC Section 4291
734	*Quercus agrifolia*	Coast Live Oak	10		14	7	4	Poor	Protect in Place	No	The tree is located within the proposed residence development. This tree is recommended for removal.
735	*Pinus radiata*	Monterey Pine	16		16	8	4	Fair	Protect in Place	No	The tree is located directly adjacent to the proposed landscape improvements. Arborist shall be required while excavating near tree to avoid impacting roots greater than 2 inches.
737	*Quercus agrifolia*	Coast Live Oak	6		6	3	2	Poor	Remove	No	Tree is in poor declining health and is recommended for removal to reduce fuels per Fuel Management Plan and remain in compliance with PRC Section 4291

Tag#	*Scientific Name*	*Common Name*	*Individual Stem DBH (in)*			*Total DBH (in)*	*Tree Protection Zone (ft)*	*Critical Root Zone (ft)*	*Health*	*Status*	*Landmark*	*Reason for Removal Recommendation*
736	*Pinus radiata*	Monterey Pine	16			16	8	4	Fair	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
721	*Quercus agrifolia*	Coast Live Oak	10			10	5	3	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
719	*Quercus agrifolia*	Coast Live Oak	16			16	8	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
720	*Pinus radiata*	Monterey Pine	16			16	8	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
707	*Quercus agrifolia*	Coast Live Oak	12			12	6	3	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
702	*Pinus radiata*	Monterey Pine	44	24		50	33	13	Fair	Remove	Yes	Greater than 50% of the trees' critical root zone is proposed for removal. Tree is over mature and has a low construction tolerance, this tree is recommended for removal.
703	*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
706	*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
705	*Quercus agrifolia*	Coast Live Oak	16	14		21	11	5	Fair	Protect in Place	Yes	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
704	*Quercus agrifolia*	Coast Live Oak	16	10	8	19	9	5	Fair	Protect in Place	Yes	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
710	*Pinus radiata*	Monterey Pine	50			50	50	13	Poor	Remove	Yes	Greater than 50% of the trees' critical root zone is proposed for removal. Tree is over mature and has a low construction tolerance, this tree is recommended for removal.
712	*Quercus agrifolia*	Coast Live Oak	10			10	5	3	Poor	Remove	No	Tree is in poor declining health and is recommended for removal to reduce fuels per Fuel Management Plan and remain in compliance with PRC Section 4291
711	*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
713	*Quercus agrifolia*	Coast Live Oak	12	6		13	7	3	Poor	Protect in Place	No	Tree shall be protected in place and BMPs shall be implemented throughout all phases of construction
714	*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
717	*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.
709	*Pinus radiata*	Monterey Pine	26			26	17	7	Fair	Remove	Yes	Greater than 50% of the trees' critical root zone is proposed for removal. Tree is over mature and has a low construction tolerance, this tree is recommended for removal.
715	*Quercus agrifolia*	Coast Live Oak	10			10	5	3	Fair	Remove	No	The tree is located within the proposed landscape improvements area and proposed residence, all the trees critical root zone is proposed to be impacted. Tree recommended for removal.
716	*Quercus agrifolia*	Coast Live Oak	8	6		10	5	3	Fair	Remove	No	The tree is located within the proposed landscape improvements area and proposed residence, all the trees critical root zone is proposed to be impacted. Tree recommended for removal.
718	*Quercus agrifolia*	Coast Live Oak	10			10	5	3	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
726	*Quercus agrifolia*	Coast Live Oak	14			14	7	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
725	*Quercus agrifolia*	Coast Live Oak	18			18	9	5	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
724	*Quercus agrifolia*	Coast Live Oak	12			12	6	3	Fair	Remove	No	The tree is located within the proposed residence development. This 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	Reason for Removal Recommendation
779	*Quercus agrifolia*	Coast Live Oak	8			8	4	2	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
723	*Quercus agrifolia*	Coast Live Oak	16			16	8	4	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
728	*Quercus agrifolia*	Coast Live Oak	16	10	8	19	9	5	Fair	Remove	Yes	The tree is located within the proposed residence development. This tree is recommended for removal.
729	*Quercus agrifolia*	Coast Live Oak	20			20	10	5	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
748	*Quercus agrifolia*	Coast Live Oak	12			12	6	3	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
727	*Quercus agrifolia*	Coast Live Oak	8			8	4	2	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
708	*Quercus agrifolia*	Coast Live Oak	12			12	6	3	Poor	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.
754	*Quercus agrifolia*	Coast Live Oak	10			10	5	3	Fair	Remove	No	The tree is located within the proposed residence development. This tree is recommended for removal.

This page intentionally left blank

ATTACHMENT B

Landscape Plans/Fuel Management Plan

FUEL MANAGEMENT PLAN

2821 CONGRESS ROAD RESIDENTIAL PROJECT

PEBBLE BEACH, CALIFORNIA

LSA

Revised January 2025

FUEL MANAGEMENT PLAN

2821 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

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 proposed residential development at 2821 Congress Road (Project) in the Pebble Beach area of unincorporated Monterey County, California (Assessor Parcel Number [APN] 007-103-011-000). 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 identified:

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

    - "Lean, Clean, and 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:

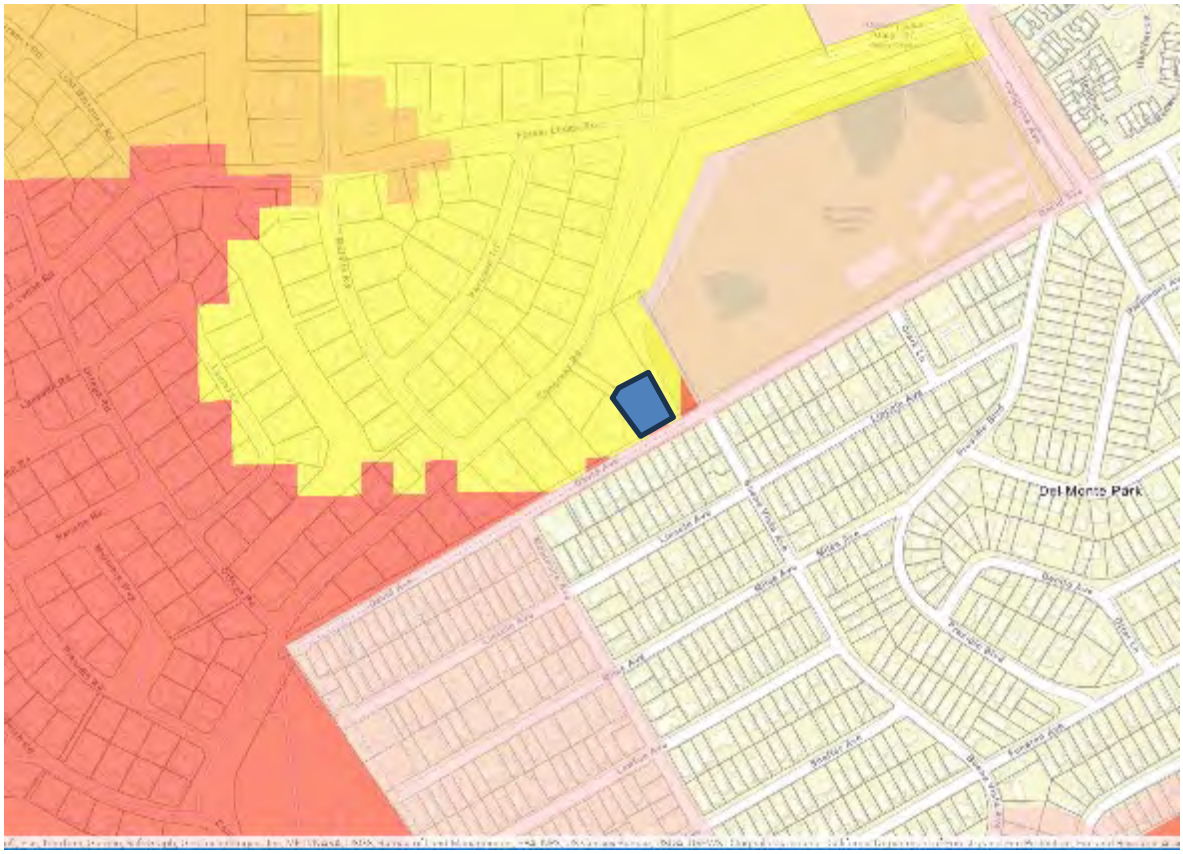
> "Before constructing a new building or structure or rebuilding a building or structure damaged by a fire in an area subject to this section, the construction or rebuilding of which requires a building permit, the owner shall obtain a certification from the local building official that the dwelling 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 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 007-103-011-000) is 0.45 acre and is bordered by a 0.43-acre residential parcel (APN 007-103-010-000) to the southwest. David Avenue runs along the southern 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 David Avenue is approximately 110 feet. However, the parcel is accessed via a shared, gated driveway from Congress Road, 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 east, 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. The northern boundary is formed by a 0.65-acre vacant parcel (APN 007-103-012-000) that is also served by the common driveway from Congress Road. 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).



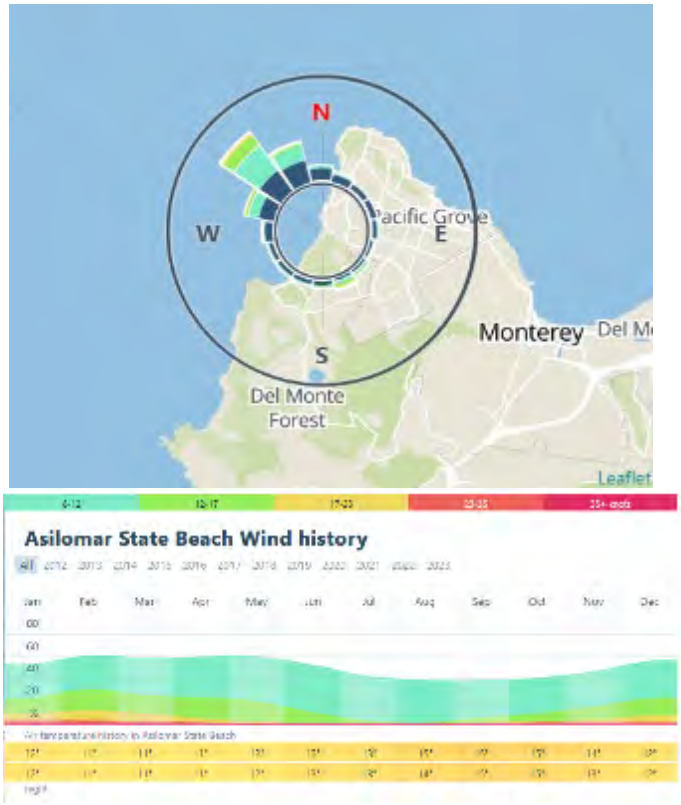
Source: County of Monterey (2024).

Figure 1: Wildland Urban Interface (WUI) zones and Fire Hazard Severity Zones for the subject parcel. The Fire Hazard 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 around 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 leaf litter with interspersed clumps and patches of 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. 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 largely absent.

The project site is adjacent to an unmanaged parcel to the east. This adjacent site poses a high fire risk due to dense understory, abundant woody debris and dry vegetation, and prevalent ladder fuels.

Infrastructure

Residential Structures

The site is proposed to be developed with a two-story, single-family residence with a three-car garage. The total proposed floor area is 6,726 square feet (sq ft), with a first floor area of 3,420 sq ft, a 682 sq ft garage, 628 sq ft of attached porch and a 553 sq ft patio areas. The total hardscaped footprint is 7,941 sq ft. The site plan is shown in Figure 4.

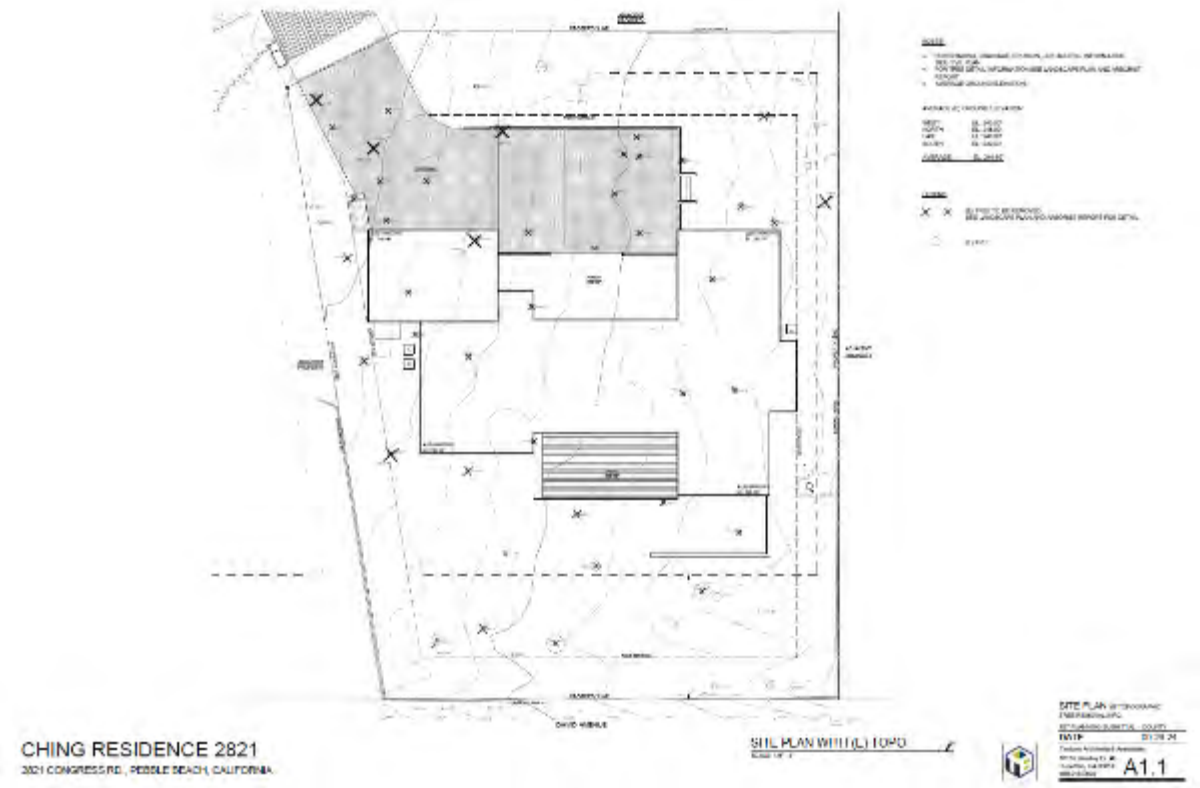


Figure 4: Site Plan

Fences

The parcel is surrounded by a wooden good-neighbor fence on three sides (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. The existing fences have dense vegetation growing on both sides of the fence. 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 plants, dry vegetation, branches, leaves, and combustible materials such as firewood.

Figure 5: Wood fence on property line.

Outdoor Furniture and Other High-Risk Items

Location of outdoor furniture is not identified in the project's 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 ignite. 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

Defensible space is divided into zones measured from the edge of structures/fences or road edges (Figure 6), each with specific guidelines. The zoned approach for defensible space scales the intensity of wildfire fuel reduction based on the proximity to the structure. In each zone, the intensity of vegetation management increases as the distance to the home decreases. The following zones are recognized in PRC Section 4291 and, therefore, are legally mandated.

- **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.

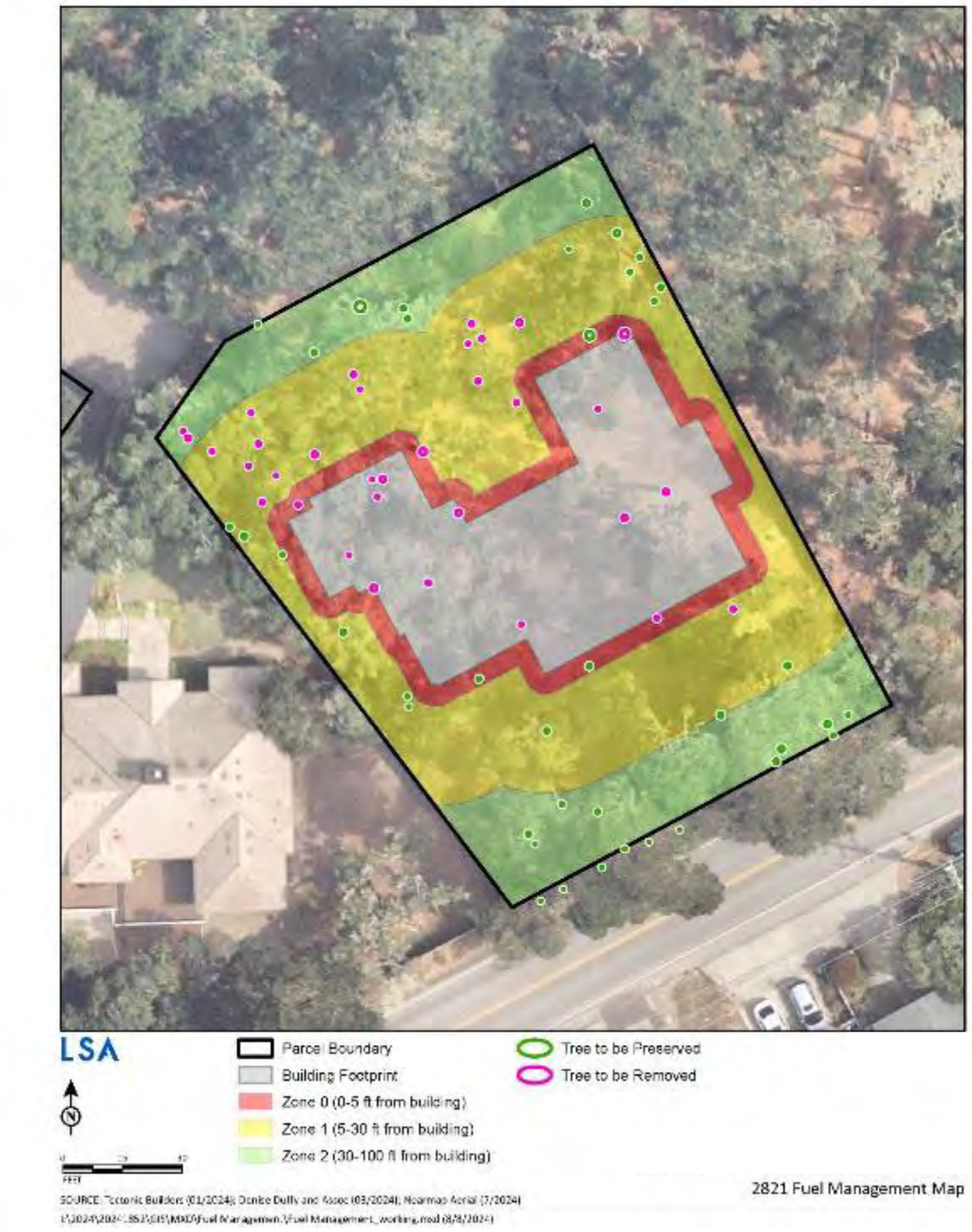


Figure 6: Fuel Management Zones and proposed tree removals

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 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.

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

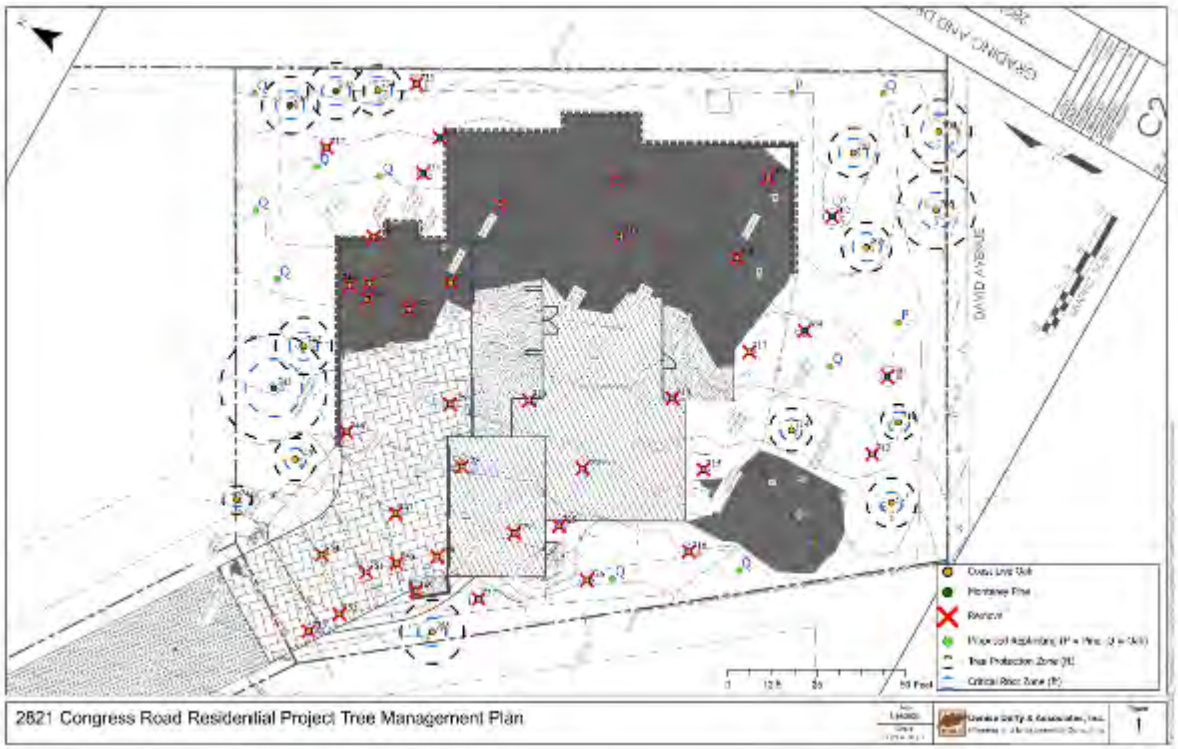
Fuel management in this zone aims at reducing the potential behavior of an oncoming fire to prevent rapid spread of wildfire from plant to plant and to reduce flame lengths. Zone 2 actions reduce the amount of fuels, especially dead vegetation (e.g., leaves, needles, twigs, bark, cones, and small branches). 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 (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).

PROPOSED TREE RETENTION, LANDSCAPING, AND MITIGATION

Based on the Arborist Report (Denise Duffy & Associates 2025), 40 trees, including 34 coast live oaks and 6 Monterey pines, lie within the project's grading limits and are proposed to be removed to facilitate construction of the project (Figure 9). Twelve existing coast live oak trees and 3 Monterey pines would be protected in place throughout construction.

The proposed Master Landscape Plan (Attachment A) identifies locations for an additional 9 coast live oaks and 3 Monterey pines to be planted as mitigation for trees removed during construction. The size of these mitigation trees is 15 gallons, or an approximate height of 8 feet, placing them into the "ladder fuel" category. All of these mitigation trees are within the Zone 1 (Lean, Clean, and Green Zone) or Zone 2 (Fuel Reduction Zone) and are well spaced.



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. 2024. Tree Assessment and Forest Management Plan for the 2821 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

MASTER LANDSCAPE, TREE, WILDFIRE PROTECTION AND HYDROZONE PLANS

This page intentionally left blank

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 sanguinsum/ Red Currant	5 gallon	low	.3
T1	Quercus agrifolia/ Coast Live Oak	15 gallon	low	.2
T2	Pinus radiata/ Monterey Pine	15 gallon	med	.5

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 seedings 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
(34) T1 - Quercus agrifolia/ Coast Live Oak require for mitigation - (9) proposed at 15 gallon
(3) T2 Pinus radiata/ Monterey Pine required for mitigation - (3) 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

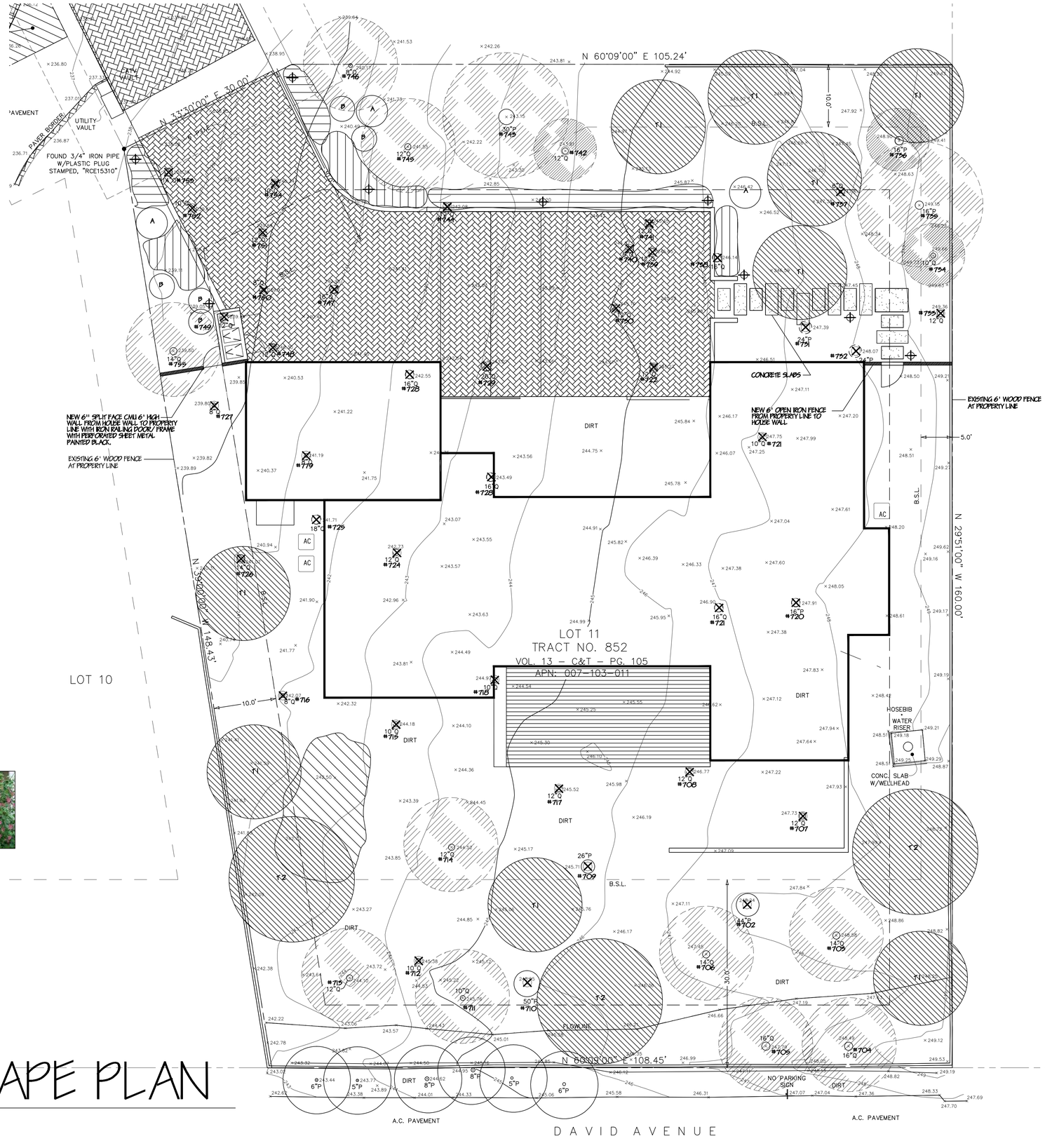
LIGHTING LEGEND

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.

ARCTOSTAPHYLOS ACHILLEA JUNCUS SALVIA RIBES

QUERCUS PINUS



MASTER LANDSCAPE 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 3/18/24
REVISED 5/11/24
REVISED 9/9/24
REVISED 9/20/24
REVISED 11/15/24
REVISED 1/16/25

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

CHING RESIDENCE

for:
LILLY CHING
2821 CONGRESS ROAD
PEBBLE BEACH, CA. 93953

PLANTING PLAN

date: 3/16/24
scale: NOTED
drawn by: W.JH
job no. 202404
sheet L 1
of shts

Proposed new tree as mitigation from removal of protected trees:
From Denise Duffy & Associated, Inc./ Planning and Environmental Consulting - 1/16/25
(34) T1 - Quercus agrifolia/ Coast Live Oak require for mitigation - (9) proposed at 15 gallon
(3) T2 Pinus radiata/ Monterey Pine required for mitigation - (3) 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 med .5

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 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.

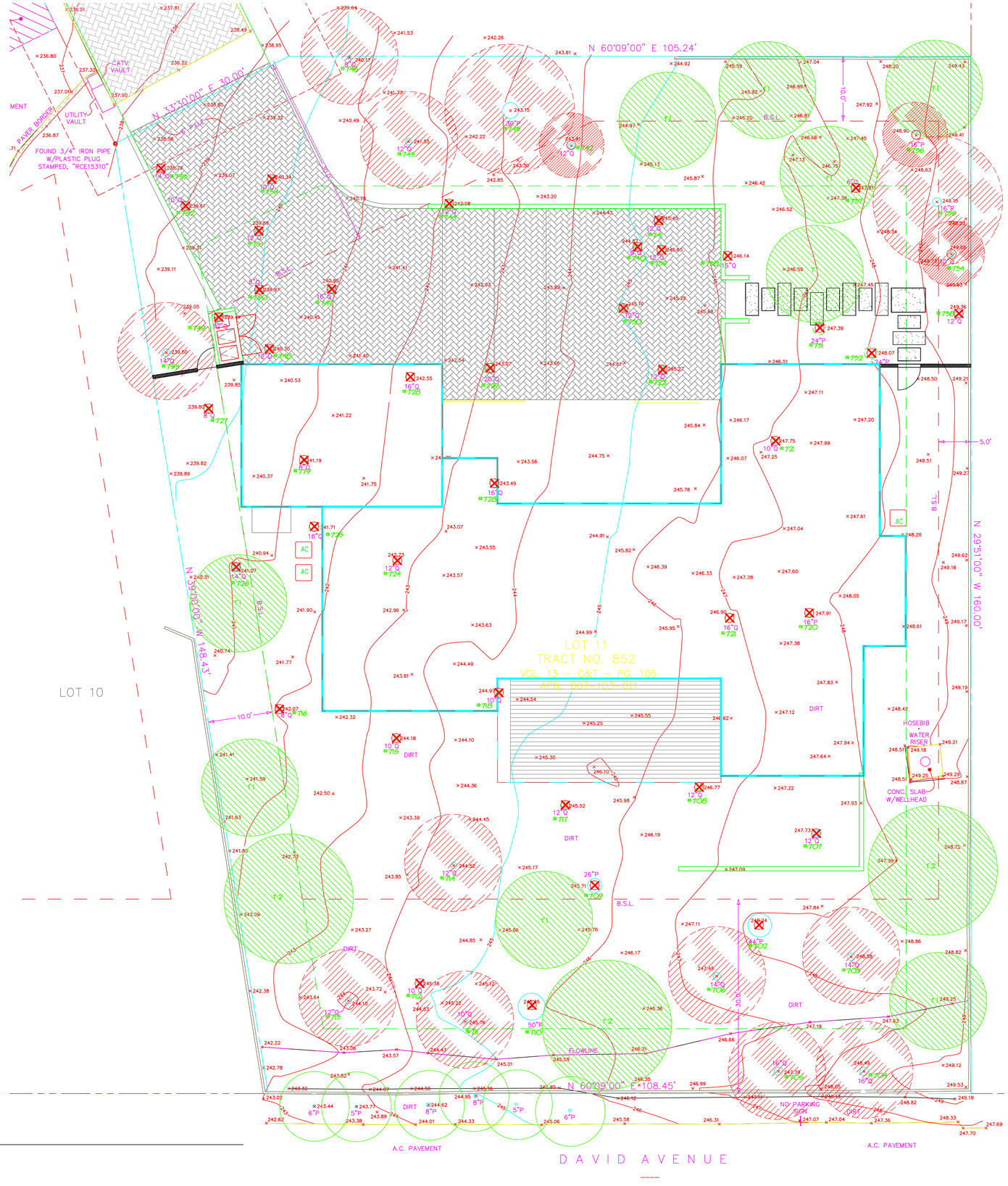
Interior branches shall not be stripped out.

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.



TREE PLAN

1/8" = 1'-0"

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 11/ 15/ 24
REVISED 1/ 16/ 25

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

CHING RESIDENCE

for:
LILLY CHING
2821 CONGRESS ROAD
PEBBLE BEACH, CA. 93953

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, 2025.3 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.
* 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.

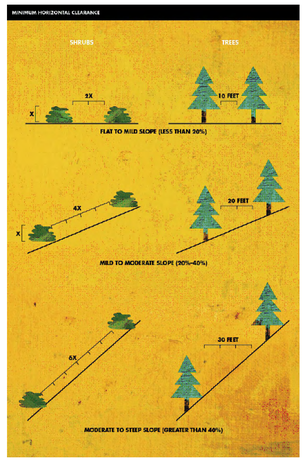
Fuel management in Zone 1 involves mowing, removing dead or dying plants, ladder fuels, pruning vegetation, and hauling away all materials. Remove branches that overlap with the roof or are closer than 10 feet from windows and chimneys. Dead vegetation removal includes fallen leaves, needles, twigs, 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.

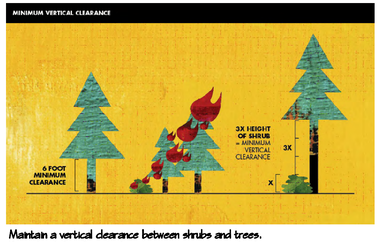
Vertical Spacing. An important aspect of vegetation management in Zone 1 is vertical spacing of trees, shrubs, and grasses (see Figure 7). Large trees do not need to be cut and removed as long as they fulfill the horizontal spacing requirement (see below) and all of the plants beneath them are managed 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/ clumped with the required horizontal distance.

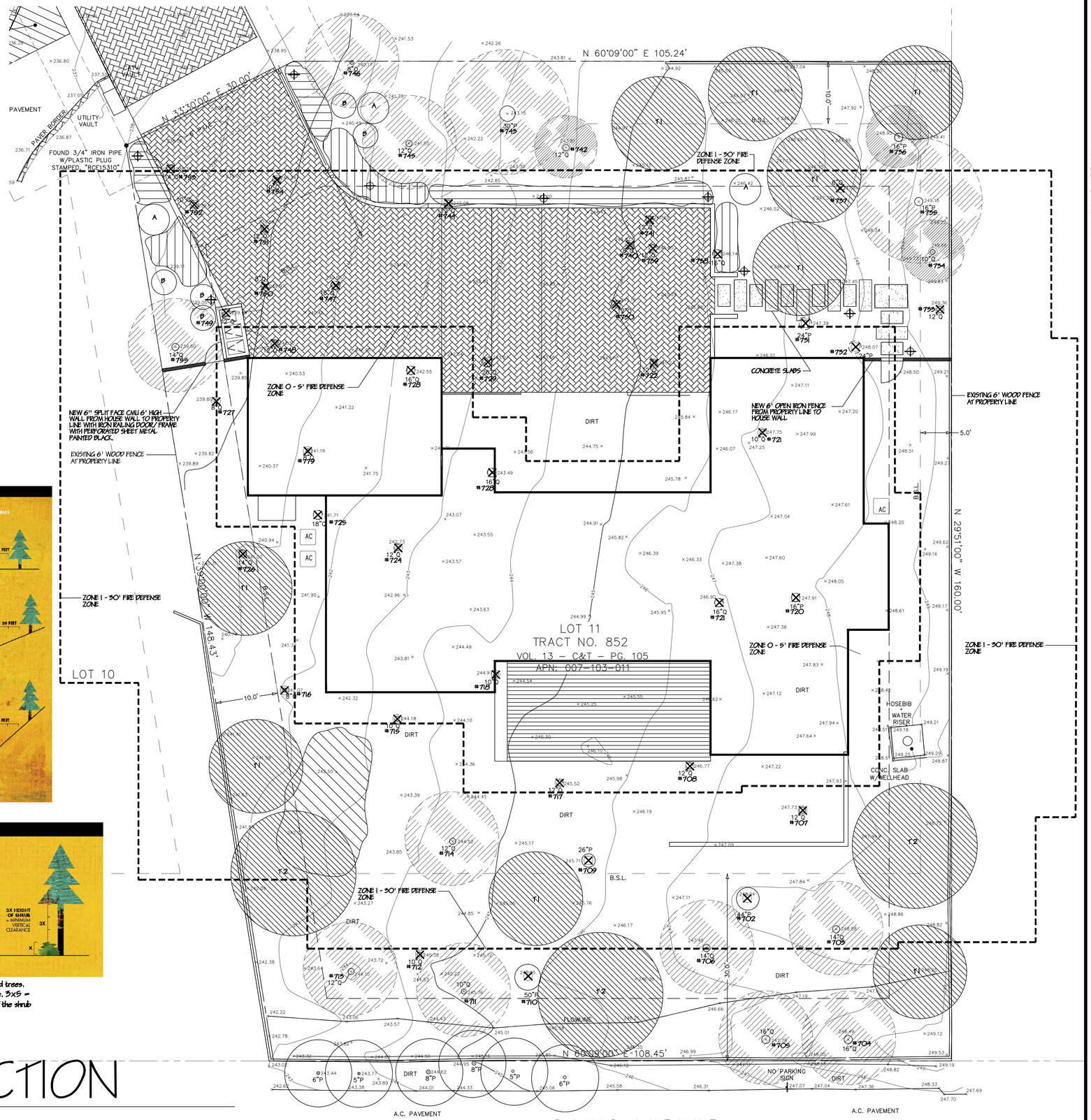
Zone 2: Fuel Reduction Zone

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 (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

1/8" = 1'-0"

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 11/15/24
REVISED 1/16/25

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

CHING RESIDENCE

for:
LILLY CHING
2821 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 Total Water Use (ETWU)[d]
Regular Landscape Areas							
#1 low water	0.2	Drip	0.81	0.25	575	142	3189
#2 low water	0.2	Drip	0.81	0.25	195	48	1075
#3 low water	0.2	Drip	0.81	0.25	210	52	1157
#4 low water	0.3	Drip	0.81	0.37	225	83	1860
#5 oak tree low water	0.2	Drip	0.81	0.25	1305	322	7192
#6 pine tree med wate	0.5	Drip	0.81	0.62	435	269	5993
				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
				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	2945	916	20446
Special Landscape Areas							
	[redacted]		1			0	0
			1			0	0
			1			0	0
			1			0	0
				Totals	0	0	0
						ETWU Total	20446
						Maximum Allowed Water Allowance (MAWA)[e]	36153

ETAF Calculations

Regular Landscape Areas	
Total ETAF x Area	916
Total Area	2945
Average ETAF	0.31

All Landscape Areas	
Total ETAF x Area	916
Total Area	2945
Average ETAF	0.31

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

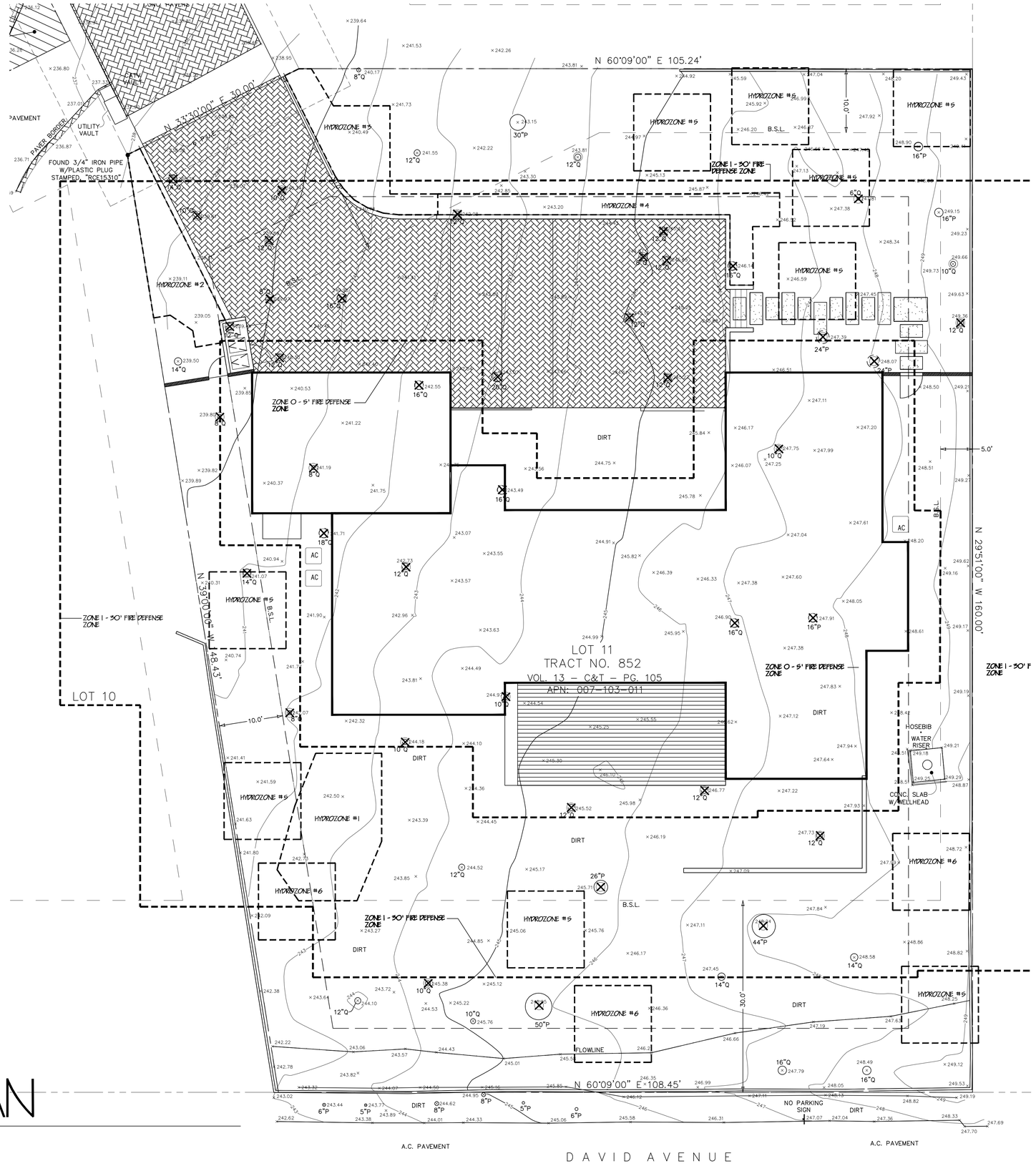
[b] Irrigation Method
1.) Overhead Spray
2.) Drip

[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 11/15/24
REVISED 1/16/25

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

CHING RESIDENCE

for:
LILLY CHING
2821 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

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.

This page intentionally left blank