Exhibit D

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THOMPSON
WILDLAND MANAGEMENT
Environmental Management & Conservation Services
International Society of Arboriculture Certified Arborist # WE-7468A
Department of Pesticide Regulation Qualified Applicator Lic. #QL50949 B
Environmental & Arborist Assessments, Protection, Restoration, Monitoring & Reporting
Wildland Fire Property Protection, Fuel Reduction & Vegetation Management
Invasive Weed Control, and Habitat Restoration & Management
Soil Erosion & Sedimentation Control
Resource Ecologist

March 31, 2025

Cowell Residence
62 Chamisal Pass (Lot 138)
Carmel, CA. 93923
APN: 239-041-009-000

Subject: 62 Chamisal Pass (Lot 138) Pre-construction Tree Impact Assessment

An arborist-conducted tree evaluation and pre-construction tree impact assessment was recently performed for the undeveloped parcel located at 62 Chamisal Pass (Lot 138, APN: 239-041-009) on the *Santa Lucia Preserve* in Carmel. This pre-construction assessment involved performing a ground level inspection of trees located on the subject property to assess general physiological health and structural condition; determine suitability for incorporating specific trees into the developed landscape based on tree health, condition, location and construction related impacts; provide recommendations for protecting trees and resources from property development activities to comply with *Santa Lucia Preserve* DRB requirements and *Monterey County Housing & Community Development Department-Planning Services* (HCD) permit conditions; and to assist in preserving tree health and sustaining and supporting oak savanna and woodland habitat. In preparation for this project, two mature non-landmark status (i.e., less than 24 inch DBH) coast live oak (*Quercus agrifolia*) trees are proposed for removal prior to home construction activities beginning due to their location within or directly adjacent to the the building footprint for the main house. The several nearby remaining trees on the lot will be retained and protected for the duration of the property development project.

Per the tree assessment and a review of the design plans for this single family home development project, the following points summarize the findings and recommendations of this arborist-conducted pre-construction evaluation:

1) Twenty-three (23) 6 inch DBH or larger native specie trees (i.e., 21 coast live oaks [*Quercus agrifolia*], 1 valley oak [*Quercus lobata*] and 1 Pacific madrone [*Arbutus menziesii*] assigned tag numbers 01-23 and identified in this report as *Tree#s 1-23* [refer to attached photos, *Figures 1-20*, the attached *Exhibit A: Tree Location Map* and the corresponding *Exhibit B: Tree Impact*

Assessment Spreadsheet]) were recorded and evaluated in preparation for the proposed property development project. These mostly mature and senescing oaks range from poor to good health and condition, with most of these trees being in fair physiological health and poor to fair structural condition. The oaks that are in poor structural condition is primarily due to decay features, natural leans, poor canopy balance & symmetry, and co-dominant stem attachments with decay features, all of which are common structural deficiencies and characteristics of aging oak trees.

2) In preparation for property development activities 2 mature non-landmark status coast live oaks are proposed for removal due to their location within or directly adjacent to the construction footprint for the main house. The 20 inch DBH (diameter at breast height) coast live oak identified as *Tree#18* is in fair health and condition and is planned for removal due to its location within the building footprint for the main house (refer to *Figures 11, 12 & 17*). The 15 inch DBH coast live oak identified as *Tree#19* is in fair physiological health, but poor structural condition due to poor canopy balance and symmetry, and is also planned for removal due to it being located directly adjacent to the proposed construction footprint for the house (refer to *Figures 12 & 18*). Consequently, to comply with *Monterey County HCD* tree removal permit requirements, six 5 to 15-gallon replacement oak seedlings or saplings will need to be planted in the Homeland and survive a 5-year monitoring period to satisfy County permit conditions. The several remaining trees in the vicinity of proposed construction activities that are located both in the Homeland and the bordering Openlands (10 of the recorded trees [*Tree#s 1-10*] are located in the adjacent Openlands), which includes the 21 retained trees (i.e., 20 oaks and 1 Pacific madrone) that were documented and evaluated due to their closer proximity to construction activities, will be retained and protected for the duration of the project and are not expected to be significantly impacted by proposed construction activities given the proper installation, maintenance and monitoring of tree protection measures. Prior to construction activities beginning tree and resource protection measures (e.g., welded wire or chain link fencing installed to protect the canopy dripline and critical root zone [CRZ] of trees, as well as the necessary erosion & sedimentation control measures [e.g., perimeter silt fencing]) shall be properly positioned and installed. All retained trees shall be protected and monitored for the duration of the project, and tree and resource protection measures shall be properly maintained and, if necessary, improved and upgraded to ensure they are effectively protecting trees and woodland habitat.

3) Construction related impacts to the 21 retained and protected trees (i.e., 19 coast live oaks, 1 valley oak and 1 Pacific madrone) that were recorded and evaluated for this pre-construction tree impact assessment are generally expected to be insignificant, with most of these trees experiencing low or minor impacts (and in a few cases potentially moderate impacts) that is not expected to be harmful or detrimental to tree health. A few of these trees (i.e., 4 oaks) that are located in closer proximity to proposed grading and construction activities (identified as *Tree#s 9, 12, 17 & 20* [refer to *Figures 2, 3, 4, 8, 9-11, 12 & 18*]) have the potential of experiencing more significant construction related impacts, but none of these impacts are expected to result in a level of stress or decline that would adversely affect or compromise the health, viability and

well-being of these 4 trees; especially if the grading and construction activities and the tree protection and root preservation BMP's (best management practices) provided in this report are properly executed. Construction related impacts to oaks where some minor to moderate canopy dripline encroachment will be occurring is expected to have minimal and insignificant impacts to tree health.

4) If grading or excavating is necessary within the *Recommended Root Protection Zone Area* that is provided in the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet* (this is the minimum CRZ area that should be protected) the project arborist should be notified and consulted to assist in taking measures to minimize impacts to critical roots that may be encountered. The CRZ area typically extends beyond the canopy dripline, especially in naturally growing trees. The minimum CRZ area where impacts should be avoided is the radius from the trunk in feet that is 5X the DBH of a tree or the inner half of a tree's canopy dripline, whichever provides a greater protective radius from the trunk. This is the minimum root zone area that should be protected; however, where possible, the area with no or minimal construction related disturbance should extend to the canopy dripline or beyond.

5) Prior to construction activities beginning, it will be necessary to perform targeted and selective pruning of oaks located in the project site area in order to provide adequate clearance around proposed structures, reduce limb and canopy weight, remove dead and unhealthy limbs, improve canopy balance and symmetry, and limb up trees to reduce ladder fuels and mitigate wildland fire hazard concerns.

In regards to Exhibits included in this report, the location of the 23 trees recorded and evaluated during a recent pre-construction tree impact assessment are identified on the attached *Exhibit A: Tree Location Map* and project plans, and trees assessed and recorded during the field assessment are identified in the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet*. Photographs depicting property features and trees addressed in this document are located at the end of the report (refer to attached photos, *Figures 1-20*). Findings and recommendations are provided herein.

I. PROPERTY & PROJECT DESCRIPTION & SITE CHARACTERISTICS

This undeveloped parcel located at 62 Chamisal Pass (Lot 138) is a total of 38.62 acres in size with the Homeland being 2.1 acres. This lot is located in mixed oak savanna and woodland vegetation community and is in a region that is generally characterized by cool and wet winters and warm and dry summers. It should be noted there is a pond located in the Openlands of this lot, but it is a safe distance from the Homeland (upland of the project site) and will not be impacted by property development activities.

The *Santa Lucia Preserve* is a 20,000 acre *wildland-urban interface* (WUI) community that supports a diverse variety and mosaic of vegetation communities and habitat types, including

mixed oak woodlands, savannas, grasslands, coastal scrub, chaparral, coast redwood groves, riparian woodlands and wetlands.

Proposed development in the Homeland will include a paved driveway and auto court, a main house and a detached structure (i.e., a barn/garage; refer to the project site plans). Most of the proposed building and construction footprint in this oak savanna and woodland lot is located in a natural and sizable grassland clearing and woodland canopy edge area with moderate slopes and low to moderate tree density and canopy cover (refer to attached photos, *Figures 1-20*). Grassland clearing and woodland understory vegetation is primarily composed of previously mowed non-native annual grasses. Consequently, the primary vegetation type that will be impacted and removed during property development operations are exotic annual grasses, invasive broadleaf weeds and native understory scrub type vegetation, such as poison oak (*Toxicodendron diversilobum*), among other native plant species.

Where possible, the canopy dripline and critical root zone (CRZ) areas of oaks located near the proposed project site will be avoided and preserved with minimal grading and disturbance occurring within these more sensitive root zone areas. However, per the design plans, it will be necessary to perform some minor to moderate and, in a few cases, slightly more intrusive grading and disturbance in the mid to outer canopy dripline and CRZ area of a few trees (i.e., the 4 oaks identified as *Tree#s 9, 12, 17 & 20*; refer to *Figures 2, 3, 4, 8, 9-11, 12 & 18*), but this will only be impacting a fairly insignificant portion of the CRZ and is not expected to be significantly harmful or degrading to the health of these trees. Given the proper implementation of grading activities (i.e., care will be taken to avoid and minimize significant damage [i.e., cutting, shredding and tearing] to primary lateral roots) and the tree protection and root preservation BMP's provided in this report, the retained and protected oaks that are located in the vicinity of proposed construction activities are not expected to be adversely affected by project operations and will likely tolerate grading and construction activities with minimal to moderate impacts.

It should be noted that 10 of the 23 trees documented and recorded for this report (i.e., 9 oaks and 1 madrone identified as *Tree#s 1-10*; refer to *Figures 2, 5 & 6*) are located in the adjacent Openlands just outside of Homeland boundary. These trees may experience low or minor to moderate impacts (particularly *Tree#s 5, 6, 9 & 10* that are a little closer to grading) from construction activities (i.e., the driveway, auto court, barn and stable), but as with all of the other retained trees that will be potentially impacted, these impacts are expected to be insignificant and not harmful to tree health.

The Homeland is a previously disturbed (e.g., past mowing and cattle grazing activities) and mostly moderately sloped site consisting of oak savanna and mixed woodland habitat that is dominated by generally well-spaced mature and senescing coast live oaks (*Quercus agrifolia*), one valley oak (*Quercus lobata*) and a few Pacific madrone (*Arbutus menziesii*) trees, as well as a sizable and natural grassland clearing that is primarily composed of non-native annual grasses, which is characteristic of oak savanna vegetation communities occurring in this area of the Preserve (refer to attached photos, *Figures 4-7*). Overall tree density and canopy cover in the

Homeland is expectedly low in the sizable grassland clearing where a majority of the homesite and other construction operations will be occurring, and is moderate in the more densely wooded areas surrounding the grassland clearing where little development will be taking place, except for along some outer CRZ and canopy edge areas where impacts and disturbance will be minor to moderate. While larger and aging oaks with broad spanning canopies are occurring in the Homeland, there are also several smaller and less significant younger oaks inhabiting the Homeland and surrounding Openlands. In addition to the above mentioned tree species, other trees occurring on the subject parcel and in surrounding woodland areas include black oak (*Quercus kelloggii*), California bay laurel (*Umbellularia californica*), California buckeye (*Aesculus californica*) and Bigleaf maple (*Acer macrophyllum*).

As previously stated, low growing vegetation inhabiting the grassland clearings and under the well-spaced oaks in the Homeland primarily consist of previously mowed exotic annual grasses, non-native invasive broadleaf weeds, some native annual broadleaf forbs and herbaceous perennials, and a few areas where native perennial grasses are present. Common native understory broadleaf plants (i.e., non-grasses) occurring in the Homeland and in the adjacent Openlands include poison oak (*Toxicodendron diversilobum*), Pacific blackberry (*Rubus ursinus*), coyote brush (*Baccharis pilularis*), sticky monkey flower (*Mimulus aurantiacus*), deer weed (*Acmispon glaber*), toyon (*Heteromeles arbutifolia*), coffeeberry (*Frangula californica*), buckbrush (*Ceanothus cuneatus*), wood mint (*Blephilia ciliata*), miner's lettuce (*Claytonia perfoliata*), pacific sanicle (*Sanicula crassicaulis*), common yarrow (*Achillea millefolium*), California honeysuckle (*Lonicera hispidula*), American vetch (*Vicia americana*) and yerba buena (*Clinopodium douglasii*), among other native species. Common non-native invasive broadleaf plants observed include Italian thistle (*Carduus pycnocephatus*), milk thistle (*Silybum marianum*), bull thistle (*Cirsium vulgare*), poison hemlock (*Conium maculatum*) and French broom (*Genista monspessulana*).

In the surrounding Openlands, habitat primarily consist of denser vegetated and steeper sloped mixed oak woodlands. Compared to the Homeland, understory vegetation density in the Openlands is significantly higher due to the absence of mowing and other vegetation management practices that are conducted more frequently in the Homeland. Per a *Fuel Management Plan* that will be prepared, fuel reduction and vegetation management operations will be permitted to be performed into the surrounding Openlands. As with the Homeland, tree species in the Openlands is dominated by coast live oaks, with valley oak, Pacific madrone and the other previously mentioned native tree species occurring to a lesser extent. Where possible, desirable native plants, such as perennial bunch grasses and young oak seedlings and saplings, should be retained and protected during construction operations, or relocated to other suitable areas in the Homeland.

As previously noted, non-native annual grasses and invasive broadleaf weeds (e.g., ripgut brome, wild oat grass, Italian rye, Italian thistle, milk thistle, bull thistle, poison hemlock and French broom, among others) are common and widespread in the oak savanna Homeland and surrounding more densely wooded Openlands. These noxious weeds should be controlled and

managed to improve habitat and to reduce wildland fire hazards. Non-native invasive plants are problematic in that they degrade habitat, compete with and displace desirable native flora, decrease native plant diversity and increase combustible fuel loads.

The growth habit and form of the oaks on the property is decurrent (i.e., generally rounded with some oaks having broad spanning canopies). Crown classes range from suppressed to dominant, with most of the oaks having a co-dominant crown class. Mature and overly-mature and senescing oaks are the most common age class of trees located on this oak savanna and woodland lot; however, younger trees are also occurring on the property. Where possible, young and immature seedlings and saplings should be preserved and protected from property development and fuel management activities (e.g., lot mowing) to assist in supporting and sustaining the health, viability and character of woodland habitat.

In regards to tree and woodland health, harmful biotic disorders (e.g., pathogens, disease and/or insect pests) appear to be absent in levels that are harmful or detrimental to the health and viability of trees and habitat.

Per the project design plans, it does not appear that grading activities will be occurring on slopes greater than 30% grade. The primary vegetation types that will be removed and disturbed during grading and construction operations will be non-native annual grasses and invasive broadleaf weeds; however, some native flora (e.g., poison oak, sticky monkey flower and some native grasses, among others) that is located within or adjacent to the proposed construction footprint will be removed during initial clearing and grading activities.

Based on the construction plans, proposed property development activities will primarily be occurring outside of or in the outer edge portions of the canopy dripline and CRZ of the trees assessed and documented for this report. However, per the plans, it appears that it will be necessary to perform some grading in closer proximity to a few oaks located near proposed construction activities (i.e., within the outer half portion of the canopy dripline and CRZ). These 4 oaks identified as *Tree#s 9, 12, 17 & 20* (refer to *Figures 2, 3, 4, 8, 9-11, 12 & 18*, the attached *Exhibit A: Tree Location Map* and project plans, and the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet*) are located closer to the construction footprint and have the potential of experiencing moderate to moderately significant impacts (i.e., slightly more than moderate, but not high impacts) due to nearby grading and construction activities. However, these 4 oaks are expected to tolerate impacts with minimal to moderate adverse affects, especially if grading and excavating activities are conducted with care (i.e., avoid cutting or damaging significant roots that are 2 inch diameter or larger) and the tree protection and preservation BMP's provided in this report are properly implemented, maintained and monitored for the duration of the project.

The remaining oaks located in the vicinity of project operations are also not expected to experience significant impacts that would adversely affect tree health. As shown in the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet*, the recent pre-construction assessment has determined that construction related impacts will likely be low to moderate for a

vast majority of the oaks evaluated, the exception being the 2 oaks proposed for removal (identified as *Tree#s 18 & 19*).

At the time of the property visit and assessment, special status plant and animal species, sensitive habitat and/or actively nesting birds that have protection status were not observed within or adjacent to the proposed project site area. Given the proper installation and maintenance of resource protection BMP's (e.g., tree protection fencing and erosion and sedimentation control measures), construction related impacts are not expected to be significantly harmful or degrading to habitat and ecological processes.

In regards to nesting birds, an additional assessment should be conducted if any tree work (e.g., removal and/or pruning operations) occurs during the nesting season, which in Monterey County may begin as early as February and continue through August. As previously stated, tree impacts associated with this project is overall expected to be minimal and insignificant, and retained oaks will be protected and preserved for the duration of the project. It should also be noted there are numerous additional trees in the surrounding Homeland and Openlands that will not be impacted by property development activities.

II. METHODOLOGY

For this report, a ground level visual assessment was recently conducted for native specie trees located in proximity to the proposed construction site. In regards to inspecting trees, no aerial (climbing) inspections, woody tissue testing and/or root excavations were performed or requested as part of this evaluation.

Per *Monterey County HCD* permit requirements, native specie trees that are 6 inch DBH (diameter at breast height) or larger at 48 inches above grade that will be or have the potential of being impacted by project operations are required to be recorded and evaluated during a pre-construction tree assessment (refer to the attached *Exhibit A: Tree Location Map* and the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet*). For the Lot 138 assessment, 23 trees were documented, recorded and assigned numbered metal *tag#s 01-23*. These trees are referred to and identified as *Tree#s 1-23* in the report and in the corresponding *Exhibits A & B*. Two of these oak trees identified as *Tree#s 18 & 19* are proposed for removal in preparation for this project, which will require the planting of 6 replacement oak trees.

Recommendations are based on the overall general health, vigor and condition of trees and habitat; the impact that property development activities may have on trees and natural resources; the hazard level trees present to proposed occupied structures and/or areas with human activity; and the impacts that tree management and/or removal activities may have on natural resources, habitat and nearby healthy trees.

In regards to exhibits for this report, *Exhibit A* is a property map and project site plan that shows the location of tagged and recorded trees, as well as the general location of tree protection

fencing (i.e., chain link or welded wire fencing) in relation to proposed structures and construction activities. The corresponding *Exhibit B: Tree Impact Assessment Spreadsheet* identifies trees located in the project area that will be or have the potential of being impacted by construction activities. The *Exhibit B* spreadsheet provides general tree information and characteristics, such as assigned tag numbers, species, diameter (DBH), general physiological health and structural condition (i.e., Dead, Poor, Fair or Good), construction impacts (i.e., Low, Moderate, High or Removal) and the recommended root protection zone. Photographs depicting property features, characteristics and trees addressed in this document are located at the end of the report (refer to attached photos, *Figures 1-20*).

III. RECOMMENDATIONS

A. Tree Removal, Impacts, Replacement & Management:

During a recent property tree assessment twenty-three (23) six inch DBH or larger native specie trees (i.e., 21 coast live oaks, 1 valley oak and 1 Pacific madrone) were documented and recorded as part of a pre-construction tree impact evaluation. These 23 trees were assigned *tag#s 01-23* in the field and are referred to in the report as *Tree#s 1-23* (refer to attached photos, *Figures 1-20*, the attached *Exhibit A: Tree Location Map* and the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet*).

Based on the project design plans and as previously stated, two coast live oak trees identified as *Tree#s 18 & 19* are planned for removal in preparation for home construction activities. The mature 20 inch DBH coast live oak identified as *Tree#18* is presently in fair physiological health and structural condition and is proposed for removal due to its location within the building footprint for the main house (refer to *Figures 11, 12 & 17*). The 15 inch DBH coast live oak identified as *Tree#19* is in fair physiological health, but poor structural condition due to poor canopy balance and symmetry, and is also planned for removal due to it being located directly adjacent to the proposed construction footprint for the home (refer to *Figures 12 & 18*). Per *Monterey County HCD* tree removal permit requirements, 6 replacement coast live oak seedlings or saplings of good health and condition (5 to 15 gallon container size is advised) will need to be planted in suitable locations in the Homeland and survive a 5-year monitoring period to comply with County permit conditions.

The remaining 21 trees that were documented and recorded (all oaks except for 1 madrone) will be retained and protected for the duration of the project. These mature and senescing trees range from poor to good health and condition, with most being in fair physiological health and poor to fair structural condition. The oaks that are in poor and declining structural condition is primarily due to decay features, natural leans, poor canopy balance & symmetry, and co-dominant stem attachments with decay features, all of which are common structural deficiencies and characteristics of aging oak trees.

It should be noted, there are numerous additional oaks and other native specie trees occurring in the surrounding Homeland and Openlands that are a safe distance away from proposed property development activities and will not be impacted by project operations. These nearby areas in the Homeland and Openlands that will be protected and preserved are providing healthy and good quality woodland habitat.

Per the project plans, these 21 retained and protected trees are located in the vicinity of proposed construction activities, particularly *Tree#s 9, 12, 17 & 20*, which are located in closer proximity to planned grading operations where there will potentially be moderate to moderately significant construction related impacts and disturbance to the canopy dripline and CRZ areas. Potential construction related impacts to these 21 retained trees is generally expected to be minor to moderate with significant or harmful impacts not anticipated, which also applies to the 4 trees mentioned above (i.e., *Tree#s 9, 12, 17 & 20*) that are located in closer proximity to construction activities (refer to the attached *Exhibit A: Tree Location Map* and project site plans, and the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet*). These retained and protected trees are expected to tolerate and withstand the affects of construction activities with minimal to moderate impacts, especially if grading and excavation operations are performed with care and tree protection and root preservation BMP's are properly implemented (refer to tree protection recommendations provided in this report). If these trees are effectively cared for, managed and protected during construction operations it is very likely that they will continue to be viable, healthy and of ecological value and benefit to the property for years and decades to come following the completion of property development activities.

Barring some unexpected event not related to property development activities (e.g., severe drought, fire or disease that affects trees), the trees reviewed and evaluated for this report (the exception being the 2 oaks that are proposed for removal [identified as *Tree#s 18 & 19*]) are expected to remain healthy and viable during and following construction operations (most of these trees are currently in fair physiological health), and are expected to continue to be of benefit to property and habitat for years and decades to come. However, some relatively insignificant changes and fluctuations in tree health may occur due to natural and/or development related factors, which is not expected to be detrimental to tree health and may be mitigated by performing various treatments, such as providing deep supplemental watering during periods of drought or significant tree stress. If deep watering or other treatments are necessary, they should be performed under the guidance and direction of the project arborist.

As discussed earlier in the report, the location of the paved driveway, auto court, main house and a detached structure (i.e., a barn/garage) has been positioned and designed in a manner to avoid and minimize impacts to surrounding trees, and per the design plans and a recent assessment of the nearby trees (i.e., *Tree#s 1-23*) it does not appear that proposed construction activities will have a significant or adverse impact to tree heath given the proper installation, maintenance and monitoring of tree protection measures (i.e., welded wire construction fencing). As previously stated, the most significant tree related impact will be the removal of 2 coast live oaks identified as *Tree#s 18 & 19* due to their locations within and directly adjacent to the building footprint for

the main house site. Additionally, there is a greater potential for impacts to the 4 mature and aging oaks previously discussed in this report (identified as *Tree#s 9, 12, 17 & 20*) due to their fairly close proximity to planned grading and construction activities, but these impacts are not expected to be significantly harmful to tree health.

Per the project plans there are also a few walking paths proposed for areas within the canopy dripline of retained and protected trees. The disturbance involved with the construction of these narrow gravel or DG footpaths will involve a small footprint and these paths will be constructed with hand tools at natural grade, so impacts to roots and trees is not expected to occur.

The ecological impacts of proposed home construction operations on Lot 138 will be fairly insignificant, with only minor to moderate impacts to oak savanna and woodland habitat, due to limited tree removal (i.e., 2 non-landmark oaks proposed for removal), the planting of 6 replacement oak trees in appropriate and suitable locations in the Homeland (it should be noted that the property owner may decide to plant additional young oaks as a part of this project), and the proper and effective installation and maintenance of tree and resource protection measures.

As noted earlier in the report, tree density and canopy cover in this moderately sloped Homeland is generally low to moderate, depending on the area of the Homeland (refer to *Figures 1-20*). Most of the proposed building and construction footprint is located in a sizable grassland clearing and canopy edge area, which will assist in avoiding and minimizing impacts and disturbance to the CRZ of nearby oaks. Given the proper implementation of tree and resource preservation BMP's, impacts to trees from property development activities is not expected to be harmful or degrading to the health, viability, character and value of trees and woodland habitat.

Grading and construction related disturbance should be avoided within a radius that is a minimum of five times (5X) the diameter (DBH) or the inner half of the canopy dripline of the subject trees (whichever is greater), which is the most sensitive portion of a tree's critical root zone (CRZ) area. The CRZ is generally defined as the area within the canopy dripline (i.e., the outer most portion of the canopy dripline 360 degrees around the tree) that contains the most sensitive and important roots for supporting and sustaining the health, viability and structural integrity of trees. **It should be noted that 5X the trunk diameter or the inner half of the canopy dripline (whichever is greater) is the minimum CRZ area that must be protected and, where possible, root zone disturbance should be avoided within the entire canopy dripline and even expanded to the area beyond the canopy dripline.** Significant root system impacts and root loss will be avoided and minimized and is not expected to occur at levels that is detrimental to the health and welfare of retained and protected trees. In order to assist in protecting and minimizing impacts to the CRZ of trees, a more durable chain link or welded wire tree protection fencing shall be installed along the outer portion of the canopy dripline (i.e., the CRZ area or beyond), or for trees located closer to the construction footprint this fencing should be installed as far away from the trunk as possible (i.e., 5X the trunk diameter or the inner half of the canopy dripline, whichever is greater) to protect as much of the CRZ as is feasible, while still providing a safe and adequate space for construction activities to proceed. The final location of

tree protection fencing should be determined on-site by the project arborist working in collaboration with the general contractor and/or design team. The area around trees that is protected with exclusionary fencing during grading and construction operations is commonly referred to as the *Tree Protection Zone* (TPZ) and ideally the CRZ and canopy dripline should be within the fenced TPZ.

Generally speaking, most oak trees should not be closer than a 15 to 20 foot distance from new structures or preferably a greater distance, and larger and more significant landmark status trees should have a minimum protective radius of 25 feet (or preferably more), not only for preserving and protecting primary roots, but also in the interest of reducing combustible fuel loads near structures and decreasing wildland fire hazard concerns. That being said, this is not always possible on woodland lots or on smaller and more confined properties with limited areas to build, where it may be necessary to construct structures closer to trees than ideally desired. However, this lot appears to have adequate room and space for proposed home construction activities, so it should not be necessary to be any closer to trees than the distances mentioned above, and preferably a greater distance from trees. Additionally, as noted earlier, trees located in fairly close proximity to structures will need to be properly pruned in order to provide a safe and adequate clearance around buildings.

Healthy oaks, particularly younger to mature age class coast live oaks that are not overly mature, stressed and/or declining, can be fairly tolerant of low to moderate levels of root system impacts. However, they are generally less tolerant to significant increases in grade (i.e., the introduction of fill material around the trunk and root crown) or decreases in natural grade (i.e., cut slopes or trenching resulting in potential root loss) within the CRZ area. Where possible, avoid altering the natural grade within the CRZ of trees to reduce the likelihood of causing stress, decline or mortality. Lowering natural grade can result in significant root loss and damage, and raising the grade (i.e., introducing fill material, particularly around the lower trunk and root crown) can lead to trunk and root decay disorders that are detrimental to the health and structural integrity of trees. Root loss and root system impacts should be avoided and minimized to the greatest extent possible, and this important factor should be considered when developing a construction design plan. It should be noted that root system impacts does not always result in an immediate or significant decline in tree health, but instead often occurs slowly and gradually over a period of several years. Per the site assessment and analysis of the project plans, it appears that retained and protected oaks located in the vicinity of project operations will likely tolerate grading and construction activities with minimal to moderate impacts given proper grading, tree protection and monitoring, and are suitable for being retained and protected. The impacts to habitat and ecological resources from this project are expected to be minimal and insignificant, and oaks located around the project site are expected to remain healthy and viable for years and decades to come following the completion home construction operations.

During project operations the trees on the lot will be monitored and effectively protected, and in the event large primary roots are encountered the project arborist should be notified and consulted to assist in providing guidance and recommendations that will serve to minimize

impacts to protected trees. Particular attention should be given to regularly monitoring and inspecting the oaks identified as *Tree#s 9, 12, 17 & 20* due to their relatively close proximity to proposed construction operations. If trees exhibit any signs or symptoms of stress and decline due to possible construction related impacts or any other factors (e.g., biotic and/or abiotic disorders), specific treatments can be performed (e.g., supplemental deep watering, radial or vertical mulching, and/or growth regulator treatments, among others) to assist in mitigating adverse impacts and to aid in the recovery of impacted trees, but none of these treatments are expected to be necessary.

As previously stated, per *Monterey County HCD* tree preservation ordinances and resource protection BMP's, the retained trees on the lot will be effectively protected from property development activities for the duration of the project (refer to tree protection BMP's provided in this report). Tree and resource protection measures will assist in preserving and protecting ecological resources and preventing and minimizing impacts to trees and woodland habitat. Tree protection measures shall be properly monitored, maintained and, if necessary, improved to ensure they are functioning properly and are effectively protecting trees.

The retained and protected oaks are a very important aesthetic and conservation value to the property and the necessary measures and BMP's shall be taken to avoid and minimize impacts to the subject trees. Where possible, keep grading activities and significant soil disturbance to a minimum within the canopy dripline and CRZ of nearby oaks. Based on the DBH of the trees and experience of where the most critical and significant roots are likely to occur within the CRZ area, grading activities and soil disturbance should ideally be avoided within the *Recommended Root Protection Zones* that is provided in the *Exhibit B* spreadsheet. If it is necessary to grade any closer than the distances provided in the *Exhibit B* spreadsheet, or if significant roots 2 inch diameter or greater are encountered or are anticipated to be encountered, the project arborist should be notified and consulted.

Landscaping activities associated with property development will be designed and implemented in manner that will avoid and minimize impacts to nearby trees. For example, landscaping should be avoided or limited within the CRZ (i.e., canopy dripline) of trees, with minimal soil disturbance, grading, irrigation, planting and introduction of soil or other landscaping materials. Landscaping plants should be drought tolerant, non-invasive and lower combustibility vegetation that is appropriate to this oak savanna and mixed woodland environment.

Natural recruitment and regeneration of young oak seedlings and saplings is occurring on the subject lot, but overall appears to be deficient in the Homeland. Consequently, at some point additional oak planting is advised to assist in supporting and sustaining the health and character of woodland habitat, as well as to comply with *Monterey County HCD* tree removal permit conditions, which requires 6 replacement oak plantings. Mitigation plantings should be acquired from a local nursery that has a good selection of healthy specimens that are free from harmful pathogens, insect pests and/or significant structural disorders. Tree planting operations should ideally occur during the appropriate time of year (preferably fall or winter) using proper tree

planting techniques and best management practices, and should be planted in suitable locations that will support healthy establishment and maturation. The plantings should be provided the necessary irrigation, mulching and protection (e.g., underground gopher baskets and above ground welded wire fencing secured with T-posts around the plantings to protect from wildlife) until they are successfully established. Properly planting and maintaining younger trees will assist in preserving and sustaining the long-term health, viability and character of this oak savanna and woodland environment.

Where possible, healthy young oak seedlings and saplings occurring in the Homeland should be preserved and protected from property development activities, as well as from fuel reduction and vegetation management operations; or, alternatively, saved and relocated to a safe and suitable area on the lot and cared for until they are properly established. If a decision is made to plant additional oak trees in the Homeland outside of the County mitigation requirement, the seedlings should ideally be sourced from the lot or started from acorns collected at the property or from the surrounding areas. Alternatively, young seedlings or saplings consisting of coast live oak, valley oak, black oak and Pacific madrone, as well as other native species occurring in the area, can be acquired from a local native plant nursery.

As noted earlier, several oaks in the Homeland that are located in relatively close proximity to the proposed project site will need to be properly pruned prior to the beginning of construction activities in order to preserve and maintain tree health; provide adequate clearance around the proposed home, driveway and other structures; improve canopy balance and symmetry; reduce limb and canopy weight; and to decrease combustible fuel loads (i.e., ladder fuels) and mitigate wildland fire hazard concerns. Pruning operations are not expected to be harmful to tree health and should occur during the proper time of year (preferably fall through early winter) using proper pruning BMP's to minimize impacts to trees.

Tree work, such as pruning or removal operations, should be avoided during the bird nesting season, which in Monterey County may begin as early as February and continue through August. If tree work is necessary during this time period a nesting assessment is advised to determine if any nesting birds or raptors are present. A recent tree assessment and site inspection determined that actively nesting birds are presently not occurring within or directly adjacent to the property development site; however depending on when construction activities begin (i.e., February-August) it may be necessary to perform an additional assessment.

B. <u>Construction Tree Protection & Preservation Measures:</u>

Per *Monterey County Housing & Community Development Department-Planning Services* requirements and resource preservation BMP's, the following tree and resource protection measures shall be implemented for this home development project located at 62 Chamisal Pass (Lot 138). Not all of these tree protection measures may be necessary or applicable to this specific project, but may come in useful at some point during property development operations and should be provided in case they are needed. The proper implementation of tree and resource

preservation BMP's and regular construction site monitoring will assist in protecting and preserving the health and welfare of trees, habitat and surrounding ecological resources. The location of tree protection measures will be determined on-site by the project arborist working with the general contractor and/or design team, and tree and resource preservation measures will be regularly inspected and properly maintained for the duration of the project to ensure they are functioning effectively:

1) Prior to commencing with grading and construction activities install durable and easily visible exclusionary fencing (i.e., chain link or welded wire fencing) that clearly defines the work area, limits unnecessary disturbance to surrounding areas, and protects the critical root zone (CRZ) of individual trees and/or tree groupings. Generally speaking, the CRZ area is defined by the outermost portion of the canopy dripline 360 degrees around the tree. Ideally, the entire canopy dripline and CRZ area should be protected with exclusionary fencing, or alternatively, but less desirable in terms of tree preservation, installing exclusionary fencing to a radial distance from the trunk that protects at least half of the interior canopy dripline and CRZ area is often an acceptable alternative, particularly on smaller or more densely wooded lots. As noted earlier in the report, another method for determining the most sensitive area of the CRZ is by identifying a protective radius that is a minimum of five times (5X) the diameter (DBH) of a subject tree, which often works out to be approximately the inner half or more of a tree's canopy dripline. If grading is occurring within the *Recommended Root Protection Zone Area* provided in the *Exhibit B: Tree Impact Assessment Spreadsheet* the project arborist should be notified and consulted.

2) For effectively protecting the canopy dripline and CRZ of trees use a more durable chain link or welded wire fencing to protect the most valuable and important trees located in the vicinity of proposed construction activities (refer to the *Exhibit A: Tree Location Map* and project plans that shows the location of tree protection fencing). In less sensitive areas a heavier duty orange exclusionary fencing (e.g., *Resinet Heavy Duty Square Mesh Access Control Barrier Fence*) anchored in with steel T-posts should be sufficient. **Where possible, tree protection fencing will be installed along the outer portion of the canopy dripline (i.e., the CRZ area) or beyond the canopy dripline of trees located within and/or adjacent to the project site to avoid and minimize impacting critical roots.** The area that is protected by tree protection fencing is identified as the *Tree Protection Zone* (TPZ), which ideally should include the entire canopy dripline and CRZ area. Perform regular monitoring and inspections of tree protection measures, as well as any necessary repairs, maintenance and improvements to tree protection measures on a as needed basis for the duration of the project.

3) Install appropriate sedimentation control measures (e.g., silt fence) along downslope perimeter of construction site and, if necessary, apply soil stabilization and source control measures (e.g., rice straw mulch, erosion control blankets, all-weather surfaces) to exposed soil surfaces to prevent erosion problems and sediment runoff during rain events. Perform routine monitoring, as well as the necessary maintenance, modifications and improvements on a as needed basis to ensure that erosion & sedimentation control and resource protection measures are functioning effectively. It should be noted that erosion problems and sediment deposition around trees can

adversely affect tree health and stability.

4) If it's necessary to perform grading activities within the canopy dripline and critical root zone (CRZ) area of trees the following practices should be implemented: 1) Try to maintain natural grade as much as possible; 2) Where feasible use permeable surface materials at final grade; and 3) Avoid cut (i.e., lowering grade) and fill (i.e., raising grade with fill material) operations (particularly lowering grade) within the CRZ that could result in significant root loss or damage to large primary roots that are important to supporting and sustaining tree health and structural stability.

5) Notify the project arborist if grading and construction activities is required within the *Recommended Root Protection Zone* area that is provided in the *Exhibit B* spreadsheet. If this is necessary, the arborist should be present during grading and excavation activities to assist in minimizing impacts to large primary roots that will likely be encountered. Additionally, prior to construction activities occurring within 5 feet of trees, which is not anticipated for this project, install trunk and stem protection measures (e.g., 2x4 lumber forming protective barrier around circumference of trunk and lower stem of tree) that will need to be secured to the trees with rope and high visibility exclusionary fencing. If it is necessary to perform any pruning use proper tree pruning practices to minimize impacts and maximize wound healing.

6) If it is necessary to temporarily store construction materials or equipment within the canopy dripline (i.e., CRZ) of nearby trees, which ideally should be avoided, apply 2 to 4 inches of clean and properly sourced woodchip mulch to limit soil disturbance and prevent soil compaction within the critical root zone area. In some cases a deeper and more protective mulch layer may be necessary.

7) Where possible, avoid damaging or cutting roots located within the critical root zone (i.e., canopy dripline) of trees, especially roots that are 2 inches diameter or larger, and to the extent possible avoid grading or significant soil disturbance within a radius that is a minimum five times (5X) the diameter (DBH) of the subject trees, which is the most sensitive portion of a tree's critical root zone (CRZ) area. It should be noted that, where possible, root zone disturbance should ideally be avoided within the entire CRZ and canopy dripline area (i.e., the outer most portion of the canopy dripline 360 degrees around the tree) and even expanded to the area beyond the canopy dripline and primary root zone. Construction footings should be designed and excavation activities performed in a manner to minimize impacts to primary roots, or alternative foundation designs (e.g., pier and beam) that are less impactful to critical root systems should be considered. If significant roots are encountered efforts should be made to carefully excavate (e.g., tunnel or dig) under or around primary lateral roots. Grading or trenching operations that may occur within the critical root zone of retained trees should be performed under the guidance and monitoring of the project arborist.

8) Tree roots severed or significantly damaged during grading and excavating operations should be cleanly cut and promptly covered with moist burlap fabric or equivalent until roots are

permanently covered with backfill material or until the exposed grading cut and soil profile is permanently stabilized and protected. If burlap covered cut roots are exposed to the outside environment for an extended period of time a project attendant shall be assigned the task of regularly wetting burlap covered roots to prevent root desiccation. Additionally, in the absence of rain during the wet season it may be necessary to perform supplemental watering (i.e., regular deep irrigating throughout the remaining portions of the critical root zone) to construction impacted trees. Frequency, quantity and duration of supplemental watering should be determined by the project arborist or a qualified landscape professional or tree care professional with similar experience.

9) Healthy oaks, particular younger trees, can be fairly tolerant of low to moderate levels of root system impacts. However, they are generally less tolerant to increases in grade (i.e., introduction of fill material around the root crown and trunk) or decreases in natural grade (i.e., cut slopes). Where possible, avoid altering the natural grade (particularly lowering grade) within the CRZ to reduce the likelihood of causing root loss and tree stress, decline and/or mortality. Lowering natural grade can result in significant root loss or damage and raising the grade (i.e., introducing fill material, particularly around the lower trunk and root crown) can lead to trunk and root decay disorders that are detrimental to the health and structural integrity of trees. Where possible, root loss and root system impacts should be avoided and minimized to the greatest extent possible, and this important factor should be considered when developing a construction design plan. It should be noted that root loss or root system impacts does not always result in an immediate or significant decline in tree health, but instead often occurs slowly and gradually over a period of severals years or decades. Per the site assessment and analysis of the project plans, it appears that trees in the vicinity of proposed construction operations will likely tolerate grading activities with minimal to moderate impacts and are suitable for being retained, protected and preserved.

10) Avoid storing construction tools, materials and equipment within the CRZ (i.e., canopy dripline) of trees, and do not wash out or dispose of excess materials (e.g., paint, plaster, concrete, or other potentially harmful substances) within CRZ areas. As previously noted, if it is unavoidable and necessary to temporarily store or stockpile materials and equipment within the CRZ of trees, apply 2 to 4 inches of clean and properly sourced woodchip mulch (or in some cases a thicker mulch layer may be necessary) to prevent soil compaction and root zone disturbance.

11) If tree pruning is necessary it is important to utilize proper pruning BMP's that will assist in minimizing harmful impacts to trees. In most cases, tree pruning should ideally be performed during the fall through early winter months when the trees are at a lower level of physiological activity and nesting birds are unlikely to be present, the exception being deadwood removal or minor pruning, which can occur during any time of year. A general principle to follow is that it is important to make proper pruning cuts, keeping them as small as possible while removing as few living branches as necessary to achieve the objective. Large pruning wounds often do not completely heal over with wound wood callus tissue, which creates a permanently exposed entry point for decay, disease and/or insect pests. Excessive pruning can stress, injure and harm trees

by depleting energy reserves and reducing food making processes (i.e., photosynthesis), which can compromise a trees ability to perform essential physiological functions and to recover and replenish essential reserves during periods of stress (e.g. root disturbance and drought conditions). As noted above, excessive pruning can create an abundance of exposed wounds providing entry points for potentially harmful biotic disorders (e.g., disease, decay and/or insect pests) that can adversely affect the health and structural integrity of trees. It should be noted that significant pruning involving the removal of 30% or more of living canopy material or the removal of healthy sizable limbs requires a County permit. Additional pruning BMP's and guidelines are available upon request.

12) The primary objective of pruning operations should be as follows: To remove dead and unhealthy limbs and branches (i.e., deadwood removal); improve canopy balance and symmetry and to maintain natural form; thin out overly dense and heavy portions of the canopy; and, if necessary, perform targeted and selective weight reduction pruning of the canopy and large limbs (i.e., end weight reduction pruning) to assist in preventing significant structural failures that could be detrimental to tree health and potentially hazardous to property and areas with human activity. As suggested in the previous sentence, perform necessary pruning to reduce and mitigate hazard concerns to occupied structures and areas with human activity; and perform necessary pruning to reduce wildland fire hazards and combustible fuel loads, and to improve property protection and defensible space around structures.

13) A pre-construction meeting should be arranged with the project arborist, general contractor and/or others involved with the project to ensure that tree and resource protection measures are properly located, positioned and installed. Additionally, perform regular construction site inspections for the duration of the project to monitor the condition of tree and resource protection measures, and to determine if any repairs, adjustments or modifications are necessary. Trees impacted by site development should be periodically monitored and assessed during and following the project to determine if any tree care and management actions are necessary, and to make certain trees do not present a hazard to property and/or nearby structures.

C. Tree Repair & Replacement:

Per tree care and preservation BMP's, if any trees are damaged during construction operations they should be promptly repaired and/or treated per arborist specifications. Remedial or mitigation treatments may vary and will depend largely on the damage or injury sustained, as well as the condition of a specific tree at the time of injury. As previously noted, trees impacted by project operations should be periodically monitored and assessed by the project arborist during and following the project to determine if any tree care and management actions are necessary that will assist in preserving and improving tree health and preventing tree hazards.

IV. SUMMARY & CONCLUSION

In conclusion, a total of 23 native specie trees that are 6 inch DBH or larger (identified as *Tree#s 1-23* [i.e., 21 coast live oaks, 1 valley oak and 1 Pacific madrone]) were recorded and evaluated on the property located at 62 Chamisal Pass (Lot 138) on the *Santa Lucia Preserve* in preparation for proposed property development activities (refer to attached photos, *Figures 1-20*, the attached *Exhibit A: Tree Location Map* and project site plans, and the corresponding *Exhibit B: Tree Impact Assessment Spreadsheet*). These mature and aging trees range from poor to good health and condition, with most of the oaks being in fair physiological health and poor to fair structural condition. The oaks that are in poor and declining structural condition is primarily due to decay features, natural leans, poor canopy balance & symmetry, and co-dominant stem attachments with decay features, all of which are common structural deficiencies and characteristics of aging oak trees.

Per the project design plans and a recent pre-construction tree impact assessment, it has been determined that 2 mature coast live oak trees are proposed for removal. The 20 inch DBH coast live oak identified as *Tree#18* is in fair health and condition and is proposed for removal due to its location within the building footprint for the main house. The second oak is a 15 inch DBH coast live oak identified as *Tree#19* that is in fair physiological health, but has poor canopy balance and symmetry (i.e., structure) and is proposed for removal due to it being directly adjacent to the home construction site. As a result of this tree removal, *Monterey County HCD* tree removal permit conditions will require the planting of 6 coast live oak replacement trees (i.e., 5 to 15 gallon container size is advised) in the Homeland that will need to survive a 5 year monitoring period to satisfy County mitigation requirements. The remaining 21 trees (i.e., 20 oaks and 1 madrone) that are located in the vicinity of proposed property development activities will be retained and protected from construction activities for the duration of the project and are not expected to experience significant construction related impacts that would adversely affect tree health.

Prior to construction activities beginning, tree and resource protection measures shall be properly installed, such as welded wire or chain link tree protection fencing and perimeter silt fence sedimentation control measures. The location of tree protection measures will be determined on-site by the project arborist working with the general contractor and/or project design team. Tree and resource preservation measures will be monitored and maintained for the duration of the project and, if necessary, modified and improved to ensure they are functioning properly and effectively protecting trees and ecological resources. Given the proper implementation of grading activities, as well as the tree and resource protection BMP's provided in this report, retained and protected trees and woodland habitat are not expected to be significantly impacted or harmed by construction operations.

Per the project plans, the trees that have a greatest potential of being impacted due to their closer proximity to grading and construction activities are the 4 mature and aging oaks identified as *Tree#s 9, 12, 17 & 20* (refer to *Figures 2, 3, 4, 8, 9-11, 12 & 18*). Grading activities have the

potential of resulting in moderate to moderately significant impacts (i.e., slightly more than moderate, but not high impacts) and disturbance to the canopy dripline and CRZ of these trees; however, as previously noted, these 4 oaks are not expected to be adversely affected by project operations given proper grading and monitoring activities, as well as the effective implementation of tree protection and preservation BMP's.

Additionally, a few simple walking paths are proposed for areas within the canopy dripline of retained and protected trees. The disturbance involved with the construction of these narrow gravel or DG footpaths will involve a small footprint and these paths will be constructed with hand tools at natural grade, so impacts to roots and trees is not expected to occur.

The location of the paved driveway, auto court, main house and a detached structure (i.e., a barn/ garage) has been positioned and designed in a manner to avoid and minimize impacts to surrounding trees, and per the design plans and a recent assessment of the nearby trees (i.e., *Tree#s 1-23*) it does not appear that proposed construction activities will have a significant impact to tree heath, except for the removal of 2 oaks. The removal of the 2 mature coast live oaks identified as *Tree#s 18 & 19* is due to their location within or directly adjacent to the building footprint for the main house site.

The ecological impacts of proposed home construction operations on Lot 138 will be fairly insignificant, with only minor to moderate impacts to oak savanna and woodland habitat due to limited tree removal (i.e., 2 non-landmark oaks proposed for removal), the planting of 6 replacement oak trees in appropriate and suitable locations in the Homeland (it should be noted that the property owner may decide to plant additional young oaks as a part of this project), and the proper and effective installation and maintenance of tree and resource protection measures.

Where possible, keep significant soil disturbance (i.e., grading and landscaping activities) to a minimum within the canopy dripline and critical root zone (CRZ) of the subject oaks. The area around trees that is protected with exclusionary fencing during grading and construction operations is commonly referred to as the *Tree Protection Zone* (TPZ), and ideally the CRZ should be well within the fenced TPZ. The CRZ area typically extends beyond the canopy dripline, especially in naturally growing trees. The <u>minimum</u> CRZ area where impacts should be avoided is the radius from the trunk in feet that is 5X the DBH of a tree or the inner half of a tree's canopy dripline, whichever provides a greater protective radius from the trunk. This is the minimum root zone area that should be protected; however, where possible, the area with no or minimal construction related disturbance should extend to the canopy dripline (i.e., the outer most portion of the canopy edge furthest away from the trunk, 360 degrees around the tree) or beyond. However, given design and spacial considerations at the site, some encroachment and development within the canopy dripline of oaks should be acceptable if certain precautions, measures and practices are properly implemented and adhered to, such as regular monitoring by the project arborist and other BMP's provided in the construction tree protection measures section of this report.

Based on the DBH and overall size of the oaks reviewed for this assessment, as well as experience of where the most critical and significant roots are likely to occur within the CRZ, grading and construction related disturbance should be avoided within the radius from the trunk that is provided in the *Recommended Root Protection Zone* column of the *Exhibit B: Tree Impact Assessment Spreadsheet*. Generally speaking, most oak trees should be no closer than a 15 to 20 foot distance from proposed structures or preferably a greater distance, and larger and more significant landmark trees should have a protective radius of approximately 25 feet or more with minimal disturbance. A minimum 15 to 20 foot distance from structures for most oaks is not only advised for minimizing impacts to critical roots and canopy, but this distance is also necessary for reducing combustible fuel loads near structures and abating wildland fire hazard concerns. For this project, there are generally insignificant and minor to moderate concerns regarding construction activities or structures being too close to retained and protected trees.

Construction related impacts to oaks where some minor to moderate canopy dripline encroachment will be occurring is expected to have minimal and insignificant impacts to tree health. Barring some unexpected event not related to property development activities (e.g., severe drought, fire or disease that affects trees), the trees reviewed and evaluated for this report (the exception being the 2 oaks that are proposed for removal [identified as *Tree#s 18 & 19*]) are expected to remain healthy and viable during and following construction operations (most of these trees are currently in fair physiological health), and are expected to continue to be of benefit to property and habitat for years and decades to come. However, some relatively insignificant changes and fluctuations in tree health may occur due to natural and/or development related factors, which is not expected to be detrimental to tree health and may be mitigated by performing various treatments, such as providing deep supplemental watering during periods of drought or significant tree stress. If deep watering or other treatments are necessary, perform under the guidance of the project arborist.

At this time, a project site plan identifying the location of other infrastructure and related grading activities that has the potential of impacting the root systems of nearby trees, such as underground drainage systems, utilities, septic systems, dispersion trenches, landscaping details, additional cut and fill operations, and/or any other significant altering of natural grade and drainage patterns that may be necessary, has not yet been reviewed by the project arborist. It should be noted that some of this development and infrastructure may not be proposed or needed for this project. If and when these plans and details become available, the project arborist should review and evaluate to ensure that impacts will be minimal and insignificant, and not harmful to tree health.

Where possible, within the canopy dripline and CRZ of nearby oaks, soil disturbance and grading should be avoided and kept to a minimum, which includes landscaping, hardscaping and any other activities that alter soil conditions, natural grade and drainage patterns that could adversely affect tree health. The oaks on the lot are a very important aesthetic and conservation value to the property and the BMP measures provided in this report will be properly

implemented to avoid and minimize impacts to the subject trees. The project arborist should be notified and consulted prior to any grading activities occurring within the canopy dripline of the trees, and shall be present at the site if it is necessary to grade any closer than the distances provided in the *Recommended Root Protection Zone* column of the *Exhibit B* spreadsheet, or if large diameter roots (i.e., 2 inch diameter or larger) are encountered or are expected to be encountered. In the CRZ areas where significant roots are likely to be uncovered, careful and judicious grading and excavating via hand digging, air spading and/or light mechanized equipment is advised to assist in preventing severe damage (i.e., tearing and shredding) to primary lateral roots that often occurs during more traditional and conventional grading operations using heavy mechanized equipment.

Additionally, some minor to moderate pruning of nearby oaks will be necessary in preparation for this project in order to achieve the following objectives: Provide adequate clearance for construction activities; reduce limb and canopy weight; remove dead and unhealthy canopy material; improve canopy balance and symmetry; and to reduce ladder fuels and mitigate wildland fire hazard concerns. This pruning is not expected to be harmful to tree health, particularly if proper pruning cuts are made and pruning occurs in the fall or early winter season to assist in minimizing impacts to trees.

Per the construction design plans, the 21 retained and protected trees (i.e., 20 oaks and 1 Pacific madrone) evaluated for this pre-construction assessment that are located in the vicinity of proposed construction activities are overall expected to tolerate project related impacts with minimal to moderate impacts. Significant impacts, stress or the decline of trees related to grading and construction activities is not expected or anticipated. To reduce the likelihood of trees being harmed and negatively impacted the oaks should be regularly monitored and inspected for the duration of the project. Additionally, it is advised that construction impacted trees be periodically inspected and evaluated during the project and following the completion of construction activities due to potential tree disorders and declining health and condition that may occur slowly and gradually over a period of several years following the completion of construction operations.

Per *Santa Lucia Preserve DRB* requirements and *Monterey County* permit conditions, tree and resource protection measures shall be properly installed prior to construction activities commencing and adequately monitored and maintained for the duration of the project to ensure they are functioning properly and are effectively protecting trees and habitat. The proper installation, maintenance and, if necessary, improvements and upgrades to tree and resource protection BMP's provided in this report will assist in preventing and minimizing impacts to trees and oak savanna and woodland habitat, as well as to comply with the project's conditions of approval.

Lastly, in the interest of complying with *Monterey County HCD* tree removal permit conditions for the removal of 2 coast live oaks (*Quercus agrifolia*), as well as preserving and sustaining the health and character of oak savanna and woodland habitat, six (6) 5 to 15 gallon container size

coast live oak replacement seedlings or saplings shall be planted in suitable and appropriate locations on the Lot 138 Homeland and survive a 5 year monitoring period.

Best regards,

Rob Thompson *March 31, 2025*
ISA Certified Arborist # WE-7468A Date
Resource Ecologist

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Exhibit A: Tree Location Map. The location of the 23 trees recorded and evaluated in preparation for this project are identified as Tree#s 1-23 on this site map. Tree#s 18 & 19 are proposed for removal. The red lines identify the approximate location of welded wire tree protection fencing.

Figure 1. Entrance to oak savanna and woodland lot.

Figure 2. Another view of entrance to Homeland. The large oak identified as Tree#9 (right of center) is located in the Openlands and will be retained and protected.

Figure 3. The oaks identified as Tree#s 10-16 are visible along edge of oak woodland and will be retained and protected. Auto court area will be right of center in clearing.

Figure 4. Auto court will be center foreground, barn to the right and home in the background. Tree#s 15-17 are visible to the left.

Figure 5. Area to the right where oaks identified as Tree#s 1-8 are located (all in the Openlands) will be retained and protected.

Figure 6. Another view of woodland area to the right where Tree#s 6-8 are located. Oaks are in Openlands and will be retained and protected.

Figure 7. Proposed barn and auto court area looking towards entrance. Surrounding oaks will be protected with minimal impacts.

Figure 8. Another view of woodland edge area where coast live oaks identified as Tree#s 11-15 are located. Auto court is planned for this area and trees will be retained and protected with minimal and insignificant impacts.

Figure 9. Oaks ID'd as Tree#s 14-17 are visible in photo. These significant oaks will be retained & protected with minimal impacts.

Figure 10. Large and significant coast live oak identified as Tree#16 is in center background and valley oak (Tree#17) is in foreground. These oaks will be retained and protected.

Figure 11. From to left to right Tree#s 17, 16 & 18. Oak to the right (Tree#18) is proposed for removal due location in building footprint.

Figure 12. From left to right Tree#s 18-21. Two coast live oaks ID'd as Tree#s 18 & 19 (yellow arrows) are proposed for removal due to construction impacts.

Figure 13. A closer view of Tree#s 11 & 12 in foreground. Tree#s 10, 13 & 14 are visible from left to right in background. Oaks will be retained and protected and will not be significantly impacted by construction activities.

Figure 14. Oaks identified as Tree#s 14-17 (left foreground to right background) will be retained and protected, and are not expected to be significantly impacted by construction activities.

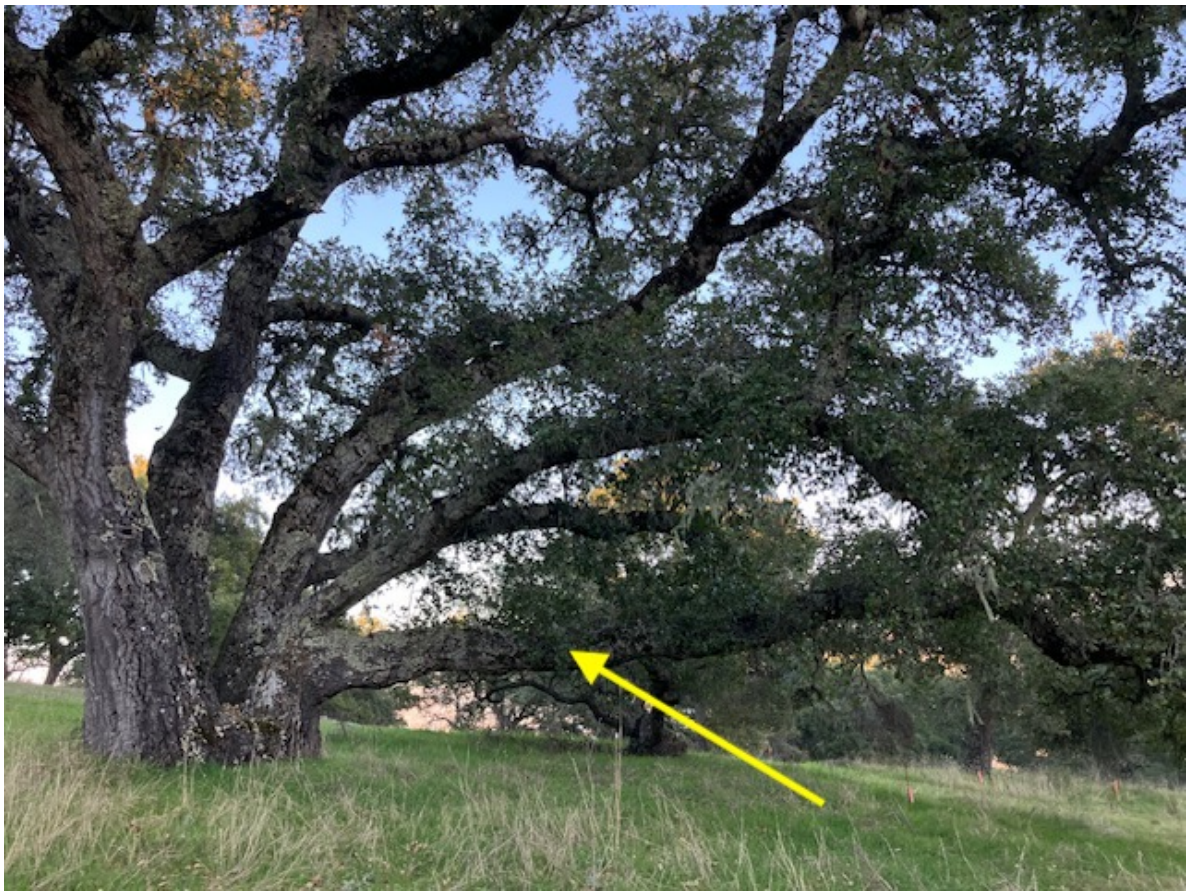

Figure 15. The significant coast live oak identified as Tree#16 is the largest tree on the lot. Weight reduction pruning should be performed, such as the large lower horizontal limb identified by yellow arrow, to reduce the likelihood of structural failure.

Figure 16. Another view of Tree#16 (center foreground) and surrounding oaks that will be retained and protected. Impacts to Tree#16 and other nearby oaks are expected to be insignificant.

Figure 17. Coast live oak identified as Tree#18 is proposed for removal due to its location within home construction footprint.

Figure 18. Oaks identified as Tree#s 19 & 20. Tree#19 to the right is proposed for removal due to location adjacent to construction footprint. Tree#20 will be retained and protected.

Figure 19. Coast live oak identified as Tree#21 will be retained and protected and not significantly impacted by project operations.

Figure 20. Oak to the right is Tree#22 and oak to the left is Tree#23. Both will be retained and protected with minimal impacts.

Exhibit B: 62 Chamisal Pass (Lot 138) Tree Impact Assessment Spreadsheet

Date: February 3, 2025

Prepared by Rob Thompson, ISA Certified Arborist, WE-7468A

Note: Below are 23 native specie trees that were recorded and evaluated in preparation for proposed property development activities. Two of these trees (i.e., 2 oaks) are proposed for removal. Per the current project plans and the proper implementation of tree protection measures, construction related impacts to retained and protected trees are expected to be minimal, insignificant and not harmful to tree health.

Note: The *Critical Root Zone* (CRZ) area can extend beyond the canopy dripline, especially in naturally growing trees. The **minimum** CRZ area that should be protected is the distance from the trunk in feet that is 5X the DBH (diameter at breast height) or the inner half radius of the canopy dripline (whichever is greater), **but this is a minimum** and ideally should be extended further away from the tree. **Where possible avoid disturbing or impacting area within canopy dripline** or even area immediately beyond the canopy dripline. The ***Recommended Root Protection Zone Area*** provided in the column below is a **minimum** and should be greater if possible. If disturbance is planned within this zone the project arborist should be notified and consulted.

Tree Tag #s	Tree Specie	DBH (inches)	Crown Class	Balance & Symmetry	Physiological Condition	Structural Condition	Construction Impacts	Recommended Root Protection Zone Area approximate radius measured from trunk in fee	Comments & Observations
1	Coast Live Oak	16	Intermediate	Poor	Fair	Poor	Low-Moderate	10 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health. Located in Openlands
2	Coast Live Oak	14	Intermediate	Poor	Fair	Poor	Low	10 feet	Minimal or no construction impacts are anticipated. Located in Openlands.
3	Coast Live Oak	43	Intermediate	Poor	Fair	Poor	Low-Moderate	20 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health. Located in Openlands
4	Coast Live Oak	15	Codominant	Fair	Fair	Fair	Low-Moderate	10 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health. Located in Openlands
5	Coast Live Oak	20	Codominant	Poor	Fair	Fair	Low-Moderate	10-15 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health. Located in Openlands
6	Coast Live Oak	17	Suppressed	Poor	Poor	Poor	Low	10 feet	Minimal or no construction impacts are anticipated. Located in Openlands.
7	Coast Live Oak	20	Codominant	Poor-Fair	Fair	Fair	Low	10-15 feet	Minimal or no construction impacts are anticipated. Located in Openlands.
8	Pacific Madrone	10	Intermediate	Poor	Good	Poor	Low	10 feet	Minimal or no construction impacts are anticipated. Located in Openlands.
9	Coast Live Oak	58	Codominant	Poor	Fair	Poor-Fair	Low-Moderate	25 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health. Located in Openlands
10	Coast Live Oak	46	Codominant	Poor	Fair	Poor-Fair	Low	20 feet	Minimal or no construction impacts are anticipated. Located in Openlands.
11	Coast Live Oak	23	Codominant	Fair	Fair	Fair	Low-Moderate	10-15 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health.
12	Coast Live Oak	24	Codominant	Poor	Fair	Poor	Low-Moderate	10-15 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health.
13	Coast Live Oak	15	Codominant	Poor	Fair	Fair	Low	10 feet	Minimal or no construction impacts are anticipated.
14	Coast Live Oak	71	Codominant	Fair	Fair	Fair	Low	30 feet	Minimal or no construction impacts are anticipated.
15	Coast Live Oak	39	Codominant	Fair	Fair	Fair	Low	15-20 feet	Minimal or no construction impacts are anticipated.
16	Coast Live Oak	96	Dominant	Fair	Fair	Fair	Low-Moderate	40 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health.
17	Valley Oak	29	Codominant	Poor	Fair	Poor-Fair	Low-Moderate	15 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health.
18	Coast Live Oak	20	Codominant	Fair	Fair	Fair	Remove	10-15 feet	Oak proposed for removal due to location within construction footprint.
19	Coast Live Oak	15	Codominant	Poor	Fair	Poor	Remove	10 feet	Oak proposed for removal due to location directly adjacent to construction footprint.
20	Coast Live Oak	19	Codominant	Fair	Fair	Fair	Low-Moderate	10 feet	Minor to moderate construction impacts may occur, but impacts are expected to be insignificant and not harmful to tree health.
21	Coast Live Oak	22	Codominant	Fair	Fair	Fair	Low	10-15 feet	Minimal or no construction impacts are anticipated.
22	Coast Live Oak	39	Codominant	Poor	Fair	Poor	Low	15-20 feet	Minimal or no construction impacts are anticipated.
23	Coast Live Oak	23	Codominant	Poor	Fair	Poor	Low	10-15 feet	Minimal or no construction impacts are anticipated.

A total of 23 oak trees were evaluated & recorded and 2 oaks are proposed for removal.

As mitigation for the 2 oaks proposed for removal, 6 Coast Live Oak replacement trees will need to be planted.

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