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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

January 17, 2022

Curran Residence
9 Wild Boar Run
Carmel, CA. 93923
APN: 239-102-010-000

Subject: 9 Wild Boar Run Pre-construction Tree Impact Assessment

An arborist-conducted tree evaluation and pre-construction tree impact assessment was recently performed for the undeveloped lot located at 9 Wild Boar Run (Lot E7, APN: 239-102-010) on the *Santa Lucia Preserve* in Carmel. More specifically, this assessment involved performing a ground level visual 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, and provide recommendations for retaining, protecting and removing trees based on tree health, condition, location and construction related impacts. This assessment will assist in identifying tree characteristics and conditions, determine which trees are candidates for removal, and provide tree protection guidelines and replacement recommendations to assist in sustaining and supporting woodland health and character.

The location of trees proposed for removal, as well as trees to be retained and protected are identified in the *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 1-13*). Findings and recommendations are provided herein.

I. PROPERTY DESCRIPTION & CHARACTERISTICS

This undeveloped lot located at 9 Wild Boar Run (Lot E7) is a total of 13.3 acres in size with the Homeland being 2.4 acres. The Homeland area is a previously disturbed and relatively flat to moderately sloped site consisting of oak woodland habitat and grassland clearings that is dominated by mature coast live oak (*Quercus agrifolia*) trees (refer to attached photos, *Figures*

1-13). Understory vegetation in the Homeland is dominated by non-native annual grasses, native poison oak (*Toxicodendron diversilobum*) and exotic invasive broadleaf weeds, among other native and introduced naturalized species. Dense understory vegetation is not occurring in most of the Homeland area due to past mowing activities, but is occurring in the surrounding Openlands, which is overgrown with a variety of native (e.g., poison oak and coffee berry, among other species) and exotic (e.g., French broom, thistles, poison hemlock and annual grasses) understory grasses, forbs, herbaceous annuals & perennials, and woody perennial scrub type vegetation. Similar to the Homeland, coast live oak is the dominant tree specie inhabiting the surrounding Openlands, along with densely vegetated coastal scrub type habitat that is also occurring in most of the nearby Openland areas.

In regards to proposed property development, construction activities do not appear to be occurring on slopes greater than 30% grade. A majority of the proposed building and construction footprint is located in previously disturbed and impacted oak woodland clearings or smaller gaps in the woodland canopy that is dominated by understory non-native annual grasses (refer to *Figures 1, 2, 4, 7, 8 & 9*). The primary vegetation type that will be removed and disturbed during grading operations are non-native annual grasses, exotic broadleaf plants and common native flora, such as poison oak. Additionally, 3 coast live oak trees that are located within or directly adjacent to the building footprint are proposed for removal prior to construction activities beginning (refer to tree removal section of report).

The crown class of trees on the lot ranges from intermediate to co-dominant, with a majority of oak trees having a co-dominant crown class. Mature and overly mature or senescing oak trees are the most common age class of trees located on this woodland parcel. Younger and immature trees are also occurring in various areas of the lot. It should be noted, that the property owner has expressed interest in saving and relocating some healthy young seedlings or saplings that are located in Homeland areas that could be affected by construction acuties. In regards to woodland health, harmful biotic disorders (e.g., pathogens, disease and/or insect pests) appear to be absent in levels that are detrimental to the health and viability of trees and woodland habitat.

In the Homeland area tree density and canopy cover ranges from low to high. As previously noted, most of the proposed building footprint and homesite is occurring in natural woodland clearings or gaps in the woodland canopy with few or well spaced trees and low to moderate canopy cover, including the proposed turn around hammerhead for the gravel driveway (refer to *Figures 1, 2, 4, 7, 8 & 9*). The proposed driveway hammerhead, autocourt and detached garage locations primarily consist of younger and smaller coast live oak trees (e.g., smaller stem diameter, stature and more compact growth forms), which are more tolerant of impacts associated with grading and construction activities. Consequently, given the proper implementation of tree protection and preservation BMP's (best management practices) impacts to trees from driveway improvements is expected to be insignificant and not detrimental to the health and welfare of nearby oak trees.

As previously indicated, the recently mowed woodland understory vegetation and clearings in the Homeland primarily consists of relatively low growing non-native annual grasses, exotic broadleaf weeds and some native plant species. Native perennial grasses, forbs and shrub species are occurring in the mowed and non-mowed Homeland areas and have a notable presence in some areas of the Homeland.

As stated earlier in the report, coast live oak (*Quercus agrifolia*) is the dominant tree species occurring on the lot. Common native plant species observed in the woodland understory or along woodland edges include poison oak (*Toxicodendron diversilobum*), coffeeberry (*Frangula californica*), toyon (*Heteromeles arbutifolia*), coyote brush (*Baccharis pilularis*), Pacific blackberry (*Rubus ursinus*), California honeysuckle (*Lonicera hispidula*), gooseberry (*Ribes californicum*), hedge nettle/wood mint (*Stachys bullata*), yerba buena (*Clinopodium douglasii*) and a few species of native perennial grasses, among others. Habitat degrading non-native annual grasses (e.g., wild oat grass, ripgut brome and Italian ryegrass) and invasive broadleaf weeds (e.g., Italian thistle, milk thistle, bull thistle and French broom) are also common and widespread in the Homeland and surrounding Openland areas. Italian thistle (*Carduus pycnocephalus*) and French broom (*Genista monspessulana*) appear to be the most abundant and pervasive exotic invasive plant species occurring on the subject lot. Non-native invasive weeds are problematic in that they degrade habitat, decrease native plant diversity and increase combustible fuel loads, and should be reduced, removed and managed to improve habitat and mitigate wildland fire hazards.

Lot E7 appears to have sufficient natural recruitment and regeneration of oak trees; however, additional planting is advised to assist in sustaining the health and character of this oak woodland environment and will be required to comply with *Monterey County Resource Management Agency (RMA)-Planning Department* tree removal permit conditions. At the time of the property visit and assessment, special status plant and animal species, sensitive habitat, and actively nesting birds that have protection status were not observed in or around the Homeland site. In regards to nesting birds, an additional nesting bird 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.

In regards to tree removal, a total of three (3) coast live oak trees (referred to in the report as *Tree#s 61, 62 & 63* and identified in the field by *tag#s 161, 162 & 163*) are proposed for removal in preparation for home construction activities (refer to attached photos, *Figures 10-13*, the corresponding *Exhibit A: Tree Location Map*, and the *Exhibit B: Tree Impact Assessment Spreadsheet*). The remaining oaks on the property will be retained and protected with the necessary tree preservation measures for the duration of the property development project (refer to tree protection measures provided in this report).

II. METHODOLOGY

For this report, a ground level visual assessment was recently conducted for several coast live oak (*Quercus agrifolia*) trees located within or in close proximity to the proposed building footprint. 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 Resource Management Agency (RMA)-Planning Department* tree removal permit requirements, native specie trees 6 inches DBH (diameter at breast height) or larger at 48 inches above grade are required to be recorded for removal and will need to be replaced if tree removal is approved. 6 to 23 inch DBH trees are replaced at a 3:1 replacement ratio and 24 inch DBH or larger trees (i.e., landmark status trees) are replaced at a 5:1 ratio.

Trees proposed for removal or that have the potential of being impacted by construction activities were documented and recorded during a pre-construction tree assessment (refer to the *Exhibit B: Tree Impact Assessment Spreadsheet*). During the Lot E7 tree assessment 46 oak trees were recorded and assigned numbered metal tags (*tag#s 150-195*) that were affixed to the trees. These trees are referred to and identified as *Tree#s 50-95* in the report, as well as in the *Exhibit A: Tree Location Map* and *Exhibit B: Tree Impact Assessment Spreadsheet*. Three (3) of these oaks are proposed for removal (i.e., *Tree#s 61, 62 & 63* and identified in the field by *tag#s 161, 162 & 163*) in preparation for home construction operations. The remaining 43 oaks are not expected to be significantly affected by property development activities and will be retained and protected during project operations.

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 traffic; and the impacts that tree management and/or removal activities may have on natural resources, habitat and nearby healthy trees.

In regards to exhibits and attachments included in this report, *Exhibit A* is a property map and project site plan that shows the location of trees on the property in relation to proposed structures and other property features, and the *Exhibit B: Tree Impact Assessment Spreadsheet* identifies proposed tree removals as well as trees that have the potential of being affected by property development activities. Photographs depicting property features and trees addressed in this document are located at the end of the report (refer to attached photos, *Figures 1-13*).

III. TREES PROPOSED FOR REMOVAL & CONSTRUCTION IMPACTS

Forty-six (46) coast live oak (*Quercus agrifolia*) trees were documented, recorded (i.e., assigned metal tag#s 150-195, but referred to in the report and *Exhibits A* [site map] & *B* [spreadsheet] as *Tree#s 50-95*) and evaluated as part of a pre-construction tree impact assessment. Three (3) of these oaks are proposed for removal (i.e., *Tree#s 61, 62 & 63* and identified in field by *tag#s 161,*

162 & 163 [refer to *Figures 10-13*]) due to their location within or directly adjacent to the construction footprint, and the remaining 43 will be retained and protected (refer to the *Exhibit A: Tree Location Map* and *Exhibit B: Tree Impact Assessment Spreadsheet*). Additionally, it should be noted there are numerous additional coast live oak trees occurring in the surrounding Homeland areas that are located a significant distance away from the proposed construction footprint and will be protected during property development activities. Consequently, these surrounding Homeland trees will not be affected by project operations.

Per the construction design plans and as previously noted, a majority of the 46 oaks evaluated for this report will not likely to be significantly impacted or adversely affected by proposed property development operations due to limited or partial root zone disturbance and/or construction activities occurring outside of the most critical portion of the primary root zone area of most of the retained trees. The exception being the 3 oaks that are proposed for removal in preparation for home construction activities (identified as *Tree#s 61, 62 & 63*; refer to attached photos, *Figures 10-13*). It should be noted that 19 oaks that will be retained and protected (identified as *Tree#s 54-60, 64-70, 72, 77 & 89-91*) have the potential of being impacted and affected by property development activities due to their proximity to proposed grading and construction activities; however these impacts are generally expected to be low to moderate and are not likely to be detrimental to the health and viability of the subject trees. In regards to the 24 remaining tagged and recorded oaks that will be retained and protected, these trees are further away from planned property development activities and given the proper implementation of tree protection and preservation BMP's construction related impacts and disturbance is expected to be negligible and not harmful to tree health.

These 46 oaks that were documented and recorded range from being in poor to good overall health and condition, with a majority of these mature and aging oaks being in fair physiological health and structural condition. Crown class is primarily co-dominant. As previously noted, 3 of the 46 six inch DBH or larger oaks are proposed for removal in preparation for property development activities due to their location within or directly adjacent to the proposed construction footprint. Trees located too close to or directly adjacent to construction and grading operations are often recommended for removal due to significant and unavoidable root system impacts that will compromise the health and structural integrity of trees.

The 3 trees proposed for removal are as follows (refer to attached photos, *Figures 10-13* and the corresponding *Exhibit A: Tree Location Map* and *Exhibit B: Tree Impact Assessment Spreadsheet*):

- 1) *Tree#61* is a 16 inch DBH coast live oak that is located directly adjacent to the proposed garage (refer to *Figures 10 & 11*). This semi-mature tree is currently in overall fair health and condition, but has a notable co-dominant stem with included bark in the lower to mid stem section that may compromise structural integrity as the tree ages and gets heavier in the canopy. If tree removal is approved plant three (3) replacement oak trees to support and sustain woodland health and character and to satisfy County tree removal permit requirements.

- 2) *Tree#62* is a 13 inch DBH coast live oak that is located within the proposed construction footprint for the garage (refer to *Figures 10 & 11*). This semi-mature tree is currently in overall fair physiological health and structural condition. If tree removal is approved plant three (3) replacement oak trees to support and sustain woodland health and character and to satisfy County tree removal permit requirements.
- 3) *Tree#63* is a 12 inch DBH coast live oak that is located within the proposed construction footprint for the gravel driveway (refer to *Figures 12 & 13*). This semi-mature tree is currently in overall fair health and condition, but has a notable lean and poor canopy balance and symmetry due to more dominant nearby oaks. If tree removal is approved plant three (3) replacement oak trees to support and sustain woodland health and character and to satisfy County tree removal permit requirements.

As previously indicated and per the project design plans, grading activities associated with property development operations are going to be occurring outside of the critical root zone area of a majority of the oak trees located around the proposed construction site, which should have minimal and insignificant impacts to the health and welfare of nearby trees. It should be noted the driveway will have a permeable gravel surface, which will assist in minimizing impacts to nearby oak trees. As stated earlier, the retained trees that have the greatest potential of being affected by construction related activities due to their proximity to grading operations are the 19 oaks identified as *Tree#s 54-60, 64-70, 72, 77 & 89-91* (refer to *Exhibit A: Tree Location Map* and the *Exhibit B: Tree Impact Assessment Spreadsheet*); however, overall concerns related to root system impacts are relatively insignificant since only partial encroachment and limited disturbance within the canopy dripline of most of these trees is anticipated.

Grading and construction related disturbance will be avoided within a radius that is a minimum of three times (3X) the diameter (DBH) of the subject trees, 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 and structural integrity of trees. Trees with a DBH of approximately 12 inches should have a minimum protective radius of 4 feet, but preferably a greater area within the CRZ should be protected with limited soil disturbance. It should be noted that 3X the trunk diameter 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. Consequently, significant root system impacts or root loss will be avoided and is not anticipated to occur in levels that is detrimental to the health and welfare of retained trees.

It should be noted that coast live oaks can be fairly tolerant of low to moderate levels of root pruning and root loss; however they are generally less tolerant to increases (i.e., introduction of fill material) or decreases (i.e., cut slopes) in natural grade. Obviously, where possible, root loss and root system impacts should be avoided and minimized to the greatest extent possible and this important consideration should be factored in when developing a construction design plan. Per the site assessment and analysis of the current development design plan, it appears that retained

trees in the vicinity of home and driveway construction activities will likely tolerate construction impacts with minimal or insignificant adverse affects and are suitable for being retained, protected and preserved. As previously stated, the driveway will have a permeable gravel surface, which will assist in minimizing impacts to nearby oak trees.

During project operations the trees on the lot will be routinely monitored and adequately protected, and in the event that large primary roots are encountered the project arborist will be notified and consulted to assist in providing guidance and recommendations to minimize impacts to protected trees. 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, 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 anticipated to be necessary.

Landscaping activities associated with property development will be designed and implemented in manner that will avoid or minimize impacts to nearby oaks. For example, landscaping should be avoided or limited within the critical root zone area (i.e., canopy dripline) of oak trees, with minimal soil disturbance, irrigation, planting and introduction of soil or other landscaping materials.

The ecological impacts of proposed tree removal will be insignificant and will be mitigated by planting a minimum of nine (9) 1 to 15-gallon oak replacement trees on the subject parcel (planting larger container size oaks is also permitted). Also, per *Monterey County RMA-Planning Department* tree preservation ordinances and resource protection best management practices (BMP's), the remaining trees on the property will be retained and protected from construction activities for the duration of the property development 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 minimizing impacts to trees and woodland habitat.

Additionally, several oak trees that are located in relatively close proximity to the proposed project site will be pruned to maintain and preserve tree health, improve aesthetics, provide adequate clearance around structures, reduce combustible fuel loads (i.e., ladder fuels) and improve defensible space for wildland fire protection. Pruning operations should occur during the proper time of year (preferably fall through early winter) and will utilize proper pruning best management practices (BMP's) to minimize impacts to retained trees.

IV. RECOMMENDATIONS

A. Tree Removal & Replacement:

For the reasons provided in this report, permission is being requested to remove a total of three (3) coast live oak trees (identified as *Tree#s 61, 62 & 63*) in preparation for proposed property

development activities (refer to attached photos, *Figures 10-13*, and the corresponding *Exhibit A: Tree Location Map* and *Exhibit B: Tree Impact Assessment Spreadsheet*). These 3 trees are located within or directly adjacent to the construction footprint and therefore should be removed.

As previously stated, per *Monterey County RMA-Planning Department* tree preservation ordinances and resource protection BMP's, the remaining trees on the lot will be retained and protected from construction activities for the duration of the property development project (refer to tree protection BMP's provided in this report). Tree and resource protection measures will assist in protecting trees and minimizing harmful impacts to trees, habitat and other ecological resources.

As noted in the previous section, several oak trees located in the Homeland that are in relatively close proximity to the proposed project site will be pruned to maintain and preserve tree health, improve aesthetics, provide adequate clearance around proposed structures, reduce combustible fuel loads (i.e., ladder fuels) and improve defensible space for wildland fire protection. Pruning operations should occur during the proper time of year (preferably fall through early winter) and will utilize proper pruning BMP's to minimize impacts to trees.

Tree removal and/or pruning 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 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.

When tree removal operations commence, removal should be performed by licensed and insured tree workers trained in accordance with ANSI Z133.1 safety regulations, as required by OSHA. If necessary, tree protection measures should be installed to nearby trees that could potentially be damaged during removal operations. Additionally, if substantial soil disturbance occurs at the removal site it may be necessary to install erosion and sedimentation control measures to effectively stabilize exposed soil surfaces and contain sediment runoff. Furthermore, BMP's involved with tree removal, disposal, and the cleaning and sterilization of tools and equipment should be implemented to minimize the chance of biotic disorders (that may be present) spreading to other areas.

In regards to tree replacement, a minimum of nine (9) 1 to 15-gallon oak seedlings or saplings (container size depends on availability and quality of nursery stock and planting larger sized oaks [e.g., boxed oaks] is also an option) of good physiological and structural health shall be planted on the subject lot to replace the 3 removed oaks and to help sustain the long-term health, viability and character of this oak woodland environment. Replacement trees should be acquired from a local native plant nursery that has healthy specimens that are free from physiological and structural disorders. Furthermore, replacement trees should be planted during the appropriate

time of year using proper tree planting techniques and best management practices, and should be planted in suitable locations that will support healthy establishment and maturation. Successful completion of this compliance action shall be achieved when the 9 replacement plantings survive a one-year monitoring period.

It should be noted there are naturally occurring oak seedlings and saplings located in the Homeland. Where possible, these seedlings or saplings should be protected from construction activities or, alternatively, saved and transplanted to a safe and suitable area on the lot and cared for until they are properly established.

B. Construction Tree Protection Measures:

Per *Monterey County RMA-Planning Department* requirements and resource preservation BMP's, the following tree and resource protection measures shall be implemented for this home development project located at 9 Wild Boar Run (Lot E7). 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 resources. The location of tree protection measures will be determined on-site by the project arborist and project 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 high visibility exclusionary fencing that clearly defines the work area, limits unnecessary disturbance to surrounding areas, and protects the critical root zone (i.e., area defined by the outermost portion of the canopy dripline, 360 degrees around the tree) of individual trees and tree groupings. Perform necessary repairs, modifications and maintenance on a as needed basis.
- 2) 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 necessary maintenance and improvements to ensure that erosion & sedimentation control measures are functioning effectively. It should be noted, that erosion problems and sediment deposition around trees can adversely affect tree health and stability.
- 3) Where grading and construction activities are occurring within 3 feet of trees install trunk and stem protection measures (e.g., 2x4 lumber forming protective barrier around circumference of lower stem of tree). Tree protection measures should be securely installed to trees with rope and high visibility exclusionary fencing. If it is necessary to perform any pruning use proper tree pruning practices to minimize stress and maximize wound healing.
- 4) If it is necessary to temporarily store construction materials or equipment within the canopy dripline of nearby oak trees (which will be avoided and should not be necessary), apply 2 to 5

inches of clean and properly sourced woodchip mulch to limit soil disturbance and prevent soil compaction within the critical root zone area.

5) 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 avoid grading or significant soil disturbance within a radius that is a minimum three times (3X) the diameter (DBH) of a subject tree, which is the most sensitive portion of a tree's critical root zone (CRZ) area. Trees with a DBH of approximately 12 inches should have a minimum protective radius of 4 feet, but preferably a greater area within the CRZ should be protected with limited soil disturbance. It should be noted that 3X the trunk diameter is the minimum CRZ area that must be protected and, where possible, ideally root zone disturbance should be avoided within the entire canopy dripline (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 grade 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; however, no such activities are planned or anticipated for this project. 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, it may be necessary to perform supplemental irrigating (i.e., regular deep watering 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.

6) As previously stated, coast live oaks can be fairly tolerant of low to moderate levels of root pruning and root loss; however, they are generally less tolerant to increases (i.e., introduction of fill material) or decreases (i.e., cut slopes) in natural grade. Obviously, where possible, root loss and root system impacts should be avoided and minimized to the greatest extent possible and this important consideration should be factored in when developing a construction design plan. Per the site assessment and analysis of the current development design plan, it appears that retained trees in the vicinity of home and driveway construction activities will likely tolerate construction impacts with minimal or insignificant adverse affects and are suitable for being retained, protected and preserved.

7) Avoid storing construction tools, materials and equipment within the critical root zone (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 critical root zone areas. As previously

noted, if it is unavoidable and necessary to temporarily store or stockpile materials and equipment within the dripline of trees, apply 2 to 5 inches of clean and properly sourced woodchip mulch to prevent significant soil compaction and root zone disturbance.

8) Where possible, avoid altering the natural grade within the critical root zone of trees to reduce the likelihood of causing stress, decline or mortality. Lowering natural grade can result in significant root 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.

9) 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. 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 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). Additionally, it creates 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 pruning involving the removal of 30% or more living canopy material requires a County permit. Additional pruning BMP's and guidelines are available upon request.

10) 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 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 can be detrimental to tree health and potentially hazardous to 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 improve property protection and defensible space around structures.

11) 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. Additionally, 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.

V. **CONCLUSION**

In conclusion, for the reasons provided in this report a total of 3 coast live oak trees (identified as *Tree#s 61, 62 & 63*) located on the property at 9 Wild Boar Run (Lot E7) on the *Santa Lucia Preserve* are proposed for removal in preparation for planned home construction activities. Additionally, tree and resource protection measures shall be installed prior to construction activities commencing and properly monitored and maintained for the duration of the project. Given the proper implementation of tree and resource protection measures provided in this report, construction related impacts are expected to be minimal and insignificant to tree health.

Additionally, in the interest of complying with *Monterey County RMA-Planning Department* tree removal permit conditions and preserving and sustaining the health and character of oak woodland habitat, a minimum of 9 replacement oak trees shall be planted on the subject lot and survive a one-year monitoring period.

Best regards,

Rob Thompson
ISA Certified Arborist # WE-7468A
Resource Ecologist

Date

Thompson Wildland Management (TWM)
57 Via Del Rey
Monterey, CA. 93940
Office (831) 372-3796; Cell (831) 277-1419
Email: thompsonwrm@gmail.com; Website: www.wildlandmanagement.com

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THIS REPORT IS BASED ON A LIMITED VISUAL INSPECTION FOR OBVIOUS DEFECTS AND OF TREE CONDITION FROM GROUND LEVEL. IT IS NOT A COMPLETE HEALTH AND HAZARD EVALUATION, AS SOME HEALTH AND HAZARD CONDITIONS ARE NOT VISIBLE AND CANNOT BE CONFIRMED BY SUCH LIMITED INSPECTION. A COMPREHENSIVE HEALTH AND HAZARD ASSESSMENT WOULD INCLUDE OTHER INVESTIGATION MEASURES INCLUDING, BUT NOT LIMITED TO, CORE SAMPLES, TISSUE ANALYSIS, ROOT COLLAR EXCAVATION, SOIL ANALYSIS, AND VISUAL INSPECTION OF THE ENTIRE TREE VIA CLIMBING. ESTIMATES FOR THIS WORK ARE AVAILABLE UPON REQUEST.

BE ADVISED THAT HEALTHY TREES AND/OR LIMBS MAY FAIL UNDER CERTAIN CONDITIONS, AND THAT THE RECOMMENDATIONS IN THIS REPORT ARE BASED ON GENERAL STANDARDS OF TREE CARE. THIS REPORT IS MADE WITH THE UNDERSTANDING THAT NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ARE MADE THAT ANY TREES REFERRED TO IN THE REPORT OR LOCATED ON OR ADJACENT TO THE SUBJECT PROPERTY ARE GUARANTEED TO BE SOUND OR SAFE.

ALTHOUGH OPINIONS MAY BE OFFERED REGARDING THE RESULTS OF THE SUBJECT MATTER, TWM CANNOT GUARANTEE ANY PARTICULAR RESULT. CLIENT ACKNOWLEDGES THAT TWM HAS MADE NO PROMISE ABOUT THE OUTCOME AND THAT ANY OPINION OFFERED IN THE FUTURE WILL NOT CONSTITUTE A GUARANTEE.



Figure 1. View of lot from Wild Boar Run. Proposed homesite is located in rear part of Homeland.



Figure 2. Portion of proposed homesite in annual grass dominated clearing.



Figure 3. Two prominent landmark status trees (*Tree#89* is right of center in background & *Tree#90* is left of center in foreground) will be retained and protected during planned construction operations, and impacts are expected to be minimal and insignificant.



Figure 4. Proposed building location in oak woodland clearing. Surrounding trees will be retained and protected, and impacts are expected to be minimal and insignificant.



Figure 5. Proposed building site within portion of canopy dripline of a few oak trees is not expected adversely affect tree health.



Figure 6. Another view of proposed building site occurring within canopy dripline of a few oaks.



Figure 7. Another view of proposed building site located in smaller gap in woodland canopy.



Figure 8. Proposed driveway turn around area.



Figure 9. Oak grouping seen in previous photo is right of center. Driveway passing through gap in oak canopy is expected to have minimal impacts.



Figure 10. Proposed garage location. *Tree#s 61 & 62* proposed for removal are at right edge of photo in foreground.



Figure 11. Coast live oaks identified as *Tree#61* (center of photo) and *Tree#62* (left of center) are planned for removal due to proposed garage location.



Figure 12. Oak identified as *Tree#63* (right edge of photo) is proposed for removal due to driveway location. *Tree#s 61 & 62* are in center background.



Figure 13. Oaks identified as *Tree#63* (left of center) is planned for removal due to location within driveway. *Tree#64* (right of center in foreground) will be retained and protected.

Exhibit B: 9 Wild Boar Run Tree Impact Assessment Spreadsheet

Date: Updated January 12, 2022

Prepared by Rob Thompson, ISA Certified Arborist

Note: Below are 46 oak trees (identified below as *Tree#s 50-95*) that have the potential of being affected by proposed property development activities. Per the current project design plans and proper implementation of tree protection measures, construction related impacts are expected to be insignificant and minimal.

Note: 3 oak trees proposed for removal due to construction impacts are highlighted in red.

Note: 19 oak trees that have the greatest potential of being impacted by construction activities are highlighted in green, although impacts are not expected to be significant or detrimental to tree health.

Minimum Critical Root Zone area (distance from trunk in feet [3x the DBH]) with no construction impacts is provided for these trees.

Note: The *Critical Root Zone* (CRZ) area normally extends beyond the canopy dripline, especially in naturally growing trees. The **minimum** CRZ area that must be protected is the distance from the trunk in feet that is 3X the DBH (diameter at breast height) of the tree or a minimum 4 foot protection zone (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 dripline of trees.

Tree #	Tree Specie	DBH (inches)	Crown Class	Balance & Symmetry	Physiological Condition	Structural Condition	Construction Impacts	Minimum Critical Root Zone (measured from trunk in feet)	Comments & Observations
50	Coast Live Oak	50	Codominant	Good	Good	Good	Low	13 feet	Minimal or no construction impacts anticipated.
51	Coast Live Oak	30	Codominant	Fair	Poor	Fair	Low	8 feet	Minimal or no construction impacts anticipated.
52	Coast Live Oak	41	Codominant	Fair	Good	Fair	Low	10 feet	Minimal or no construction impacts anticipated.
53	Coast Live Oak	46	Codominant	Poor	Fair	Fair	Low-Medium	12 feet	Minimal construction impacts anticipated.
54	Coast Live Oak	53	Codominant	Fair	Good	Fair	Medium	14 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
55	Coast Live Oak	22	Codominant	Fair	Good	Fair	Medium	6 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
56	Coast Live Oak	18	Codominant	Poor	Fair	Poor	Medium-High	5 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
57	Coast Live Oak	16	Codominant	Fair	Fair	Fair	Medium	5 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
58	Coast Live Oak	14	Codominant	Fair	Fair	Fair	Medium	5 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
59	Coast Live Oak	18	Codominant	Fair	Fair	Fair	Medium	5 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
60	Coast Live Oak	15	Codominant	Poor	Fair	Poor	Medium	5 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
61	Coast Live Oak	16	Codominant	Fair	Fair	Fair	Remove	Remove tree	Tree proposed for removal due to construction impacts. 3:1 replacement ratio.
62	Coast Live Oak	13	Codominant	Fair	Fair	Fair	Remove	Remove tree	Tree proposed for removal due to construction impacts. 3:1 replacement ratio.
63	Coast Live Oak	12	Codominant	Poor	Fair	Fair	Remove	Remove tree	Tree proposed for removal due to construction impacts. 3:1 replacement ratio.
64	Coast Live Oak	19	Codominant	Poor	Fair	Poor	Medium-High	5 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
65	Coast Live Oak	28	Codominant	Poor	Fair	Poor	Medium-High	7 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
66	Coast Live Oak	48	Codominant	Fair	Good	Fair	Medium	12 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
67	Coast Live Oak	36	Codominant	Poor	Fair	Poor	Medium	9 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
68	Coast Live Oak	22	Codominant	Poor	Fair	Poor	Medium	6 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
69	Coast Live Oak	31	Codominant	Poor	Fair	Poor	Medium	8 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
70	Coast Live Oak	35	Codominant	Poor	Fair	Poor	Medium-High	9 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
71	Coast Live Oak	36	Codominant	Fair	Good	Fair	Low-Medium	9 feet	Minimal construction impacts anticipated.
72	Coast Live Oak	48	Codominant	Poor	Good	Poor	Medium	12 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
73	Coast Live Oak	21	Codominant	Poor	Fair	Poor	Low-Medium	6 feet	Minimal construction impacts anticipated.
74	Coast Live Oak	19	Codominant	Poor	Fair	Poor	Low-Medium	5 feet	Minimal or no construction impacts anticipated.
75	Coast Live Oak	38	Codominant	Poor	Fair	Poor	Low-Medium	10 feet	Minimal or no construction impacts anticipated.
76	Coast Live Oak	25	Codominant	Poor	Fair	Poor	Low-Medium	6 feet	Minimal construction impacts anticipated.
77	Coast Live Oak	24	Codominant	Poor	Good	Fair	Medium	6 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
78	Coast Live Oak	26	Codominant	Fair	Fair	Fair	Low-Medium	6 feet	Minimal construction impacts anticipated.
79	Coast Live Oak	28	Codominant	Fair	Good	Good	Low	7 feet	Minimal or no construction impacts anticipated.
80	Coast Live Oak	27	Codominant	Poor	Fair	Poor	Low	7 feet	Minimal or no construction impacts anticipated.
81	Coast Live Oak	32	Codominant	Fair	Fair	Fair	Low	8 feet	Minimal construction impacts anticipated.
82	Coast Live Oak	12	Codominant	Good	Good	Good	Low	4 feet	Minimal construction impacts anticipated.
83	Coast Live Oak	39	Codominant	Fair	Fair	Fair	Low-Medium	10 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
84	Coast Live Oak	37	Codominant	Poor	Fair	Poor	Low-Medium	9 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
85	Coast Live Oak	74	Codominant	Poor	Fair	Poor	Low	18 feet	Minimal or no construction impacts anticipated.
86	Coast Live Oak	33	Codominant	Poor	Good	Fair	Low	9 feet	Minimal or no construction impacts anticipated.
87	Coast Live Oak	38	Codominant	Fair	Good	Fair	Low	10 feet	Minimal or no construction impacts anticipated.
88	Coast Live Oak	26	Codominant	Fair	Fair	Fair	Low-Medium	6 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
89	Coast Live Oak	38	Codominant	Fair	Good	Fair	Medium-High	10 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
90	Coast Live Oak	51	Codominant	Poor	Fair	Fair	Medium-High	13 feet	Potentially impacted by construction activities, but significant impacts are unlikely.
91	Coast Live Oak	66	Codominant	Poor	Fair	Fair	Medium-High	17 feet	Construction impacts from pool, but not likely detrimental to tree health.
92	Coast Live Oak	26	Codominant	Fair	Fair	Fair	Low	6 feet	Minimal or no construction impacts anticipated.
93	Coast Live Oak	24	Codominant	Poor	Fair	Poor	Low	6 feet	Minimal or no construction impacts anticipated.
94	Coast Live Oak	38	Codominant	Poor	Fair	Fair	Low	10 feet	Minimal or no construction impacts anticipated.
95	Coast Live Oak	46	Codominant	Fair	Fair	Fair	Low	12 feet	Minimal or no construction impacts anticipated.

Total of 46 oak trees assessed & recorded

Total of 3 Coast Live Oak trees proposed for removal

Tree replacement: Plant 9 oak trees (3:1 replacement ratio)

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