

Exhibit B

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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

September 14, 2020

Spanos Residence
 3347 17 Mile Drive
 Pebble Beach, CA. 93953
 APN: 008-351-008-000

Subject: 3347 17 Mile Drive pre-construction tree impact assessment

Per *Monterey County RMA-Planning Department* permit requirements, an arborist evaluation of trees located on the property at 3347 17 Mile Drive in Pebble Beach (APN: 008-351-008) was recently conducted to assess tree health, construction impacts, and to provide tree removal, preservation and replacement recommendations associated with the proposed property development project. 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.

The location of trees proposed for removal, as well as trees to be retained are identified in the *Exhibit A, Tree Location Map* and project plans. Photos of this woodland parcel are located at the end of the report (refer to *Figures 1-6*). Findings and recommendations are provided herein.

I. SITE CHARACTERISTICS & DESCRIPTION

3347 17 Mile Drive is located in a mixed woodland residential community in Pebble Beach (refer to attached photos, *Figures 1-6*) with sizable natural open space (i.e., areas of *Del Monte Forest*) occurring within a half mile of the subject property. Soils on this sloped lot appear to be stable and sufficient for supporting property development and site restoration and mitigation operations (e.g., landscaping and tree planting). Wind direction is predominantly out of the southwest.

This forest and woodland dominated environment of *Del Monte Forest* is significantly influenced by seasonally temperate coastal environmental conditions. Native tree species occurring in this area of *Del Monte Forest* primarily consist of upper canopy Monterey Pine (*Pinus radiata*) and mid to lower canopy Coast Live Oak (*Quercus agrifolia*). On this particular property, as with the other nearby lots, lower growing Coast Live Oak is the most dominant and abundant species (refer to *Figures 1-6*), with upper canopy Monterey Pine occurring to a lesser extent. Monterey Cypress (*Cupressus macrocarpa*) is not occurring on this lot or neighboring properties. Portions of the proposed home construction site are located in a natural clearing of this oak dominated woodland.

This woodland parcel is characterized by a fairly dense population of mature to senescing, but relatively small in stature Coast Live Oak trees ranging from 15 to 30 feet in height. As is typical and characteristic of oak trees, several of the oaks on the property are multi-trunk or multi-stem specimens, and most of the oaks have rounded canopies and relatively compact growth habits. Crown class ranges from suppressed to dominant, with a co-dominant canopy class being the most common. Oak canopy cover is moderately dense with several gaps occurring in the woodland canopy.

Generally speaking, a majority of the oaks on the property appear to be in fair health and condition, while most of the larger upper canopy pines on the property appear to be in poor health and declining condition. Biotic and/or abiotic disorders presently appear to be absent in levels that are detrimental to sustaining the health, viability and character of this mixed woodland community. Proposed tree removal is due to the subject trees being located within or directly adjacent to the proposed construction footprint. Trees located directly adjacent to proposed construction and grading activities should often be removed due to significant and unavoidable root system impacts that will compromise the health and structural integrity of trees.

Woodland understory vegetation is primarily composed of native perennial shrubs (e.g., Coffeeberry, Coyote Brush, Sticky Monkey Flower and Poison Oak) and other smaller growing indigenous flora (e.g., Wood Mint and Bracken Fern, amongst others), as well as several non-native and invasive plant species that are degrading to habitat (e.g., species of exotic annual and perennial grasses, and broadleaf invasive weeds, such as Acacia, French Broom, Milk Thistle and Ice Plant).

It should be noted that some natural recruitment and regeneration of Coast Live Oak and Monterey Pine is occurring on the subject property, however additional planting will be necessary to comply with County conditions of approval and to further assist in sustaining the health and character of this woodland environment. Special status plant and animal species, sensitive habitat, and actively nesting birds that have protection status were not observed on the property during the site assessment (refer to biological report prepared by Mr. Pat Regan); however an additional nesting bird assessment may be necessary if tree removal operations occur 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 twenty eight (28) native Coast Live Oak and seven (7) Monterey Pine (totaling 35 trees) that are 6 inch DBH (diameter at breast height) or larger are proposed for removal due to construction related impacts and concerns. These trees are identified as tree#s 1-35 on the corresponding *Exhibit A: Tree Location Map*. A majority of the 28 oak trees are in fair health and condition, but require removal due to their location within or directly adjacent to the proposed construction footprint.

II. METHODOLOGY

For this report, a ground level visual assessment of this woodland property was recently conducted. 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 RMA-Planning Department* permit conditions, native specie trees proposed for removal that are 6 inch DBH (diameter at breast height, which is measured at 48 inches above grade) or larger are required to be recorded for removal and will require replacement plantings (1:1 replacement ratio for 6-23 inch DBH and 2:1 replacement ratio for 24 inch DBH or larger).

Recommendations are based on the overall general health, vigor and condition of subject trees and habitat; the impact that site 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 sensitive natural resources, wildlife habitat and nearby healthy trees.

In regards to attachments included in this report, *Exhibit A* is a map and project plans for the property that shows the location of trees in relation to proposed structures and other property features. *Exhibit A* identifies the location of trees proposed for removal, as well as trees that will be retained. Photos of this woodland property are located at the end of the report (refer to *Figures 1-6*).

III. TREES PROPOSED FOR REMOVAL & ECOLOGICAL IMPACTS

Per the project design plans, a total of 35 trees (28 Coast Live Oak and 7 Monterey Pine trees) that are larger than 6 inch DBH are proposed for removal in preparation for planned home construction operations. Despite the best efforts of the project design team and property owner to avoid impacts to trees, it is necessary for the 35 subject trees to be removed (and replaced at the appropriate ratio [refer to recommendations section]) in preparation for property development operations.

These 35 trees are identified on the property with pink flagging tape and have been assigned numbers 1-35 (refer to the *Exhibit A: Tree Location Map*). All of these trees (exception being

one unhealthy and declining pine tree [identified as tree#30 on *Exhibit A*] located in close proximity to the building envelope that should be removed prior to construction due to hazard concerns) will likely require removal due to their location within or directly adjacent to the proposed construction footprint (refer to *Figures 1-3*). Trees located directly adjacent to construction and grading operations frequently require removal due to significant and unavoidable root system impacts that will compromise the health and structural integrity of trees.

The 35 trees proposed for removal, as well as several additional trees on the subject parcel that will be retained, are primarily mature to senescing trees. Tree health on the property ranges from deceased to good health, with a majority of the trees generally being in fair physiological health and structural condition.

As previously noted, tree removal is due to the subject trees being located within or directly adjacent to the proposed construction footprint, exception being the one previously mentioned large and rapidly declining pine tree (tree#30) located in close proximity to the construction footprint that should be removed due to hazard concerns.

It should also be noted that tree#s 31-35 on the *Exhibit A: Tree Location Map* are currently proposed for removal due to their proximity to planned construction and grading activities. However, during construction activities an effort will be made by the building contractor, project design team and project arborist to carefully excavate around large primary lateral roots that will likely be encountered with the hope of retaining some of these 5 trees without inflicting significant and irreversible harm that would be detrimental to the health and structural integrity of these trees. That said, an option to remove these 5 trees should be available in the project permit in the event that impacts to critical roots is deemed too significant and extensive to safely retain the trees.

Some of the trees on the property have notable structural deficiencies and disorders, such as prominent cankers, decay, bows, crooks, leans and structurally problematic co-dominant attachments in the trunks and/or stems, which can increase the probability of structural failure and physiological decline. Trees with physiological and/or structural disorders should be periodically monitored and inspected to determine what, if any, tree care actions or best management practices (e.g., hazard and weight reduction pruning, tree removal) should be performed to preserve tree health and minimize hazard concerns.

Forest pathogens and biotic and/or abiotic disorders appear to be absent in levels that are detrimental to the health and viability of woodland habitat on the subject property. However, there are biotic and abiotic disorders that affect trees and habitat in *Del Monte Forest*, but currently not a level that is detrimental to the viability and character of this woodland and forest environment.

The ecological impacts of proposed tree removal operations will be mitigated by appropriate tree replacement planting on the subject property, as well as the installation of tree and resource

protection measures that will be maintained for the duration of the property development project. These measures will be explained in more detail in the “Recommendations” section of this report.

It should be noted that groups of trees and individual trees vary in their suitability for retention and preservation on a development site. Species tolerance, along with health and condition will assist in determining the type or level of impact a tree or group of trees can tolerate with minimal adverse affect. Overly mature (senescing), stressed and/or declining trees are generally more vulnerable to the accumulative affects of environmental stressors, site disturbance and abiotic and biotic disorders that can have irreversible and detrimental affects on physiological processes and health, as well as structural integrity. Specimens that are structurally unsound may pose a hazard and threat to life and property; and unhealthy, low vigor trees or species that are intolerant or sensitive to site alterations and disturbance may not survive the impacts of development activities. Trees that meet these criteria, such as some of the trees identified in this report, are a liability rather than an asset and should be removed.

IV. RECOMMENDATIONS

A. Tree Removal & Replacement:

For the reasons provided in this report, permission is being requested to remove 35 trees (28 Coast Live Oak and 7 Monterey Pine) that are located within or in close proximity to the proposed construction footprint on the subject parcel (refer to *Exhibit A, Tree Location Map*).

Additionally, several other oak trees that are located in relatively close proximity to proposed construction activities will be pruned to improve aesthetics and provide adequate clearance around structures. Pruning operations will occur during the proper time of year (i.e., fall through early winter) and will utilize proper pruning best management practices (BMP's) to minimize impacts to retained trees. Furthermore, per permit conditions, tree preservation measures will be installed to protect trees from property development activities.

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 development activities (refer to tree protection BMP's provided in this report). Tree and resource protection measures will assist in preserving and sustaining ecological resources and minimizing harmful impacts to trees and woodland habitat.

In regards to tree replacement, a total of 35 replacement plantings (i.e., 28 one to five-gallon native Coast Live Oak and 7 one to five-gallon native Monterey Pine seedlings/saplings [container size depends on availability and quality of nursery stock]) shall be planted in appropriate and suitable locations on the subject property to mitigate tree removal impacts associated with construction activities, as well as to comply with *Monterey County RMA-Planning Department* tree removal permit conditions. Proper execution of this tree replacement

action will mitigate tree removal impacts and will assist in preserving and sustaining the health and character of woodland habitat. Successful completion of this Monterey County tree removal permit condition shall be achieved when the replacement plantings survive a one-year monitoring period.

The 35 replacement trees should be acquired from a local native plant nursery that has a good selection of specimens that are free from harmful pathogens, insect pests and/or structural disorders. The planting of young seedlings and/or saplings should ideally be performed during the appropriate time of year (i.e., fall through winter wet season following sufficient rainfall) using proper tree planting techniques and best management practices, and should be planted in suitable locations that will support healthy establishment and maturation (refer to *Figures 4-6*). Young plantings should be properly cared for (e.g., mulched, caged, weeded and provided sufficient irrigation) and protected until successfully established and, as previously stated, shall survive a one-year monitoring period.

In the event there are young seedlings and/or saplings located within the building footprint that can be relocated and transplanted to a safe and non-developed area on the property, these seedlings and/or saplings should be transplanted during the wet season following sufficient rainfall and should be properly cared for until successfully established.

Prior to any tree removal or disturbance that is performed during the bird nesting season, which in Monterey County may begin as early as February and continue through early August, a nesting assessment is advised to determine if any nesting birds are present. A recent tree and site inspection determined there are currently no actively nesting birds occurring within or directly adjacent to the proposed project site (refer to biological report prepared by Mr. Pat Regan); 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, best management practices (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.

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 the property development project. Proper execution of tree and resource protection 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 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) Where possible avoid damaging or severing roots located within the critical root zone (i.e., canopy dripline) of trees, especially roots that are 2 inches diameter or larger. Construction footings should be designed and excavation cuts performed in a manner to minimize impacts to primary roots. If significant roots are encountered efforts should be made to carefully excavate (e.g., tunnel or dig) under or around primary lateral roots. 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. 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.

5) 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. If it is unavoidable and necessary to temporarily store or stockpile materials and equipment within the

dripline of trees, apply 3-5 inches of clean and properly sourced woodchip mulch to prevent significant soil compaction and root zone disturbance.

6) 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.

7) 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. Excessive pruning stresses trees by depleting energy reserves and reducing food making processes (i.e., photosynthesis), which compromises a trees ability 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.

8) Regularly perform 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 BMP's and tree preservation ordinances, any trees damaged during construction operations 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 specific trees 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/or preventing tree hazards. Prescribed treatments will be determined on a case by case basis.

V. CONCLUSION

In conclusion, the 35 trees addressed in this report that are located on the property at 3347 17 Mile Drive are being requested for removal in preparation for property development activities. Tree removal is necessary due to these trees being located within or directly adjacent to the building footprint, exception being one unhealthy and declining pine tree located in close proximity to the construction footprint that should be removed due to hazard concerns. Additionally, the necessary tree and resource protection measures shall be installed prior to construction activities commencing and properly maintained for the duration of the project.

Lastly, in the interest of complying with *Monterey County RMA-Planning Department* permit conditions and supporting woodland habitat and ecological stewardship, the tree mitigation and replacement recommendations provided in this report (i.e., planting 28 one to five-gallon native Coast Live Oak and 7 one to five-gallon Monterey Pine seedlings or saplings) shall be properly implemented and monitored, which will assist in supporting and sustaining forest habitat and character. Successful completion of this Monterey County tree removal permit condition shall be achieved when the 35 replacement plantings survive a one-year monitoring period.

Thank you and please let me know if you have any questions or need additional information.

Best regards,



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

9-14-20
Date

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Figure 1. Proposed construction site is located in a natural clearing of this oak dominated woodland.



Figure 2. Another view of proposed construction site in oak dominated woodland. Several coffeeberry shrubs are occurring in woodland understory.



Figure 3. Another view of home construction site.



Figure 4. Example of clearing where replacement planting oaks and pines can be planted.



Figure 5. Another woodland clearing where replacement plantings can be planted.



Figure 6. This upper section of driveway will be removed and this area restored. Several replacement plantings can be planted in this clearing, but non-native invasive Ice Plant will need to be removed, controlled and managed.

THIS REPORT HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF CLIENT. THOMPSON WILDLAND MANAGEMENT (TWM) ACCEPTS NO RESPONSIBILITY FOR ITS USE BY OTHER INDIVIDUALS OR PARTIES.

CLIENT ACKNOWLEDGES THAT THIS REPORT, AND ANY OPINIONS, ADVICE OR RECOMMENDATIONS EXPRESSED OR GIVEN, ARE BASED ON THE INFORMATION SUPPLIED BY CLIENT AND ON THE DATA, INSPECTIONS, MEASUREMENTS AND ANALYSIS IMPLEMENTED AND OBTAINED BY TWM.

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.

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April 3, 2023

Spanos Residence
3347 17 Mile Drive
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APN: 008-351-008-000

Subject: 3347 17 Mile Drive pre-construction tree impact assessment

Per the request of the property owner, an arborist-conducted pre-construction evaluation of trees located on the property at 3347 17 Mile Drive in Pebble Beach (APN: 008-351-008) was recently performed to assess tree health and construction related impacts, as well as to provide tree removal, protection and replacement recommendations associated with the proposed property development project. 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 to provide recommendations for retaining, protecting and removing trees based on tree health, condition, location and construction related impacts.

The location of trees proposed for removal, as well as the trees to be retained and protect are identified on the corresponding *Exhibit A: Tree Location Map* and project plans. Photos of this woodland parcel are located at the end of the report (refer to *Figures 1-8*). Findings and recommendations are provided herein.

I. SITE CHARACTERISTICS & DESCRIPTION

3347 17 Mile Drive is located in a mixed woodland residential community in Pebble Beach (refer to attached photos, *Figures 1-8*) with sizable natural open space (i.e., areas of *Del Monte Forest*) occurring within a half mile of the subject property. Soils on this sloped lot appear to be stable and sufficient for supporting property development and site restoration and mitigation operations (e.g., landscaping and tree planting). Wind direction is predominantly out of the southwest.

This forest and woodland dominated environment of *Del Monte Forest* is significantly influenced by seasonally temperate coastal environmental conditions. Native tree species occurring in this area of *Del Monte Forest* primarily consist of upper canopy Monterey Pine (*Pinus radiata*) and mid to lower canopy Coast Live Oak (*Quercus agrifolia*). On this particular property, as with the other nearby lots, mid canopy Coast Live Oak is the most dominant and common specie (refer to *Figures 1-8*), with upper canopy Monterey Pine occurring to a lesser extent. Monterey Cypress (*Cupressus macrocarpa*) is not occurring on this particular lot or neighboring properties, but is common in the area. Portions of the proposed home construction site are located in a natural clearing of this oak dominated woodland.

This woodland parcel is characterized by a fairly dense population of mature to senescing, but relatively small in stature Coast Live Oak trees ranging from 15 to 30 feet in height. As is typical and characteristic of oak trees, several of the oaks on the property are multi-trunk or multi-stem specimens, and most of the oaks have rounded canopies and relatively compact growth habits. Crown class ranges from suppressed to dominant, with a co-dominant canopy class being the most common. Tree density and canopy cover is moderately dense with several small gaps and clearings occurring in the woodland canopy.

Generally speaking, a majority of the oaks on the property appear to be in fair health and condition, while most of the larger upper canopy pines on the property appear to be in poor health and declining condition. Biotic and/or abiotic disorders presently appear to be absent in levels that are detrimental to sustaining the health, viability and character of this mixed woodland community. Proposed tree removal is due to the subject trees being located within or directly adjacent to the proposed construction footprint. Trees located directly adjacent to proposed construction and grading activities should often be removed due to significant and unavoidable root system impacts that will compromise the health and structural integrity of trees.

Woodland understory vegetation is primarily composed of native perennial shrubs (e.g., Coffeeberry, Coyote Brush, Sticky Monkey Flower and Poison Oak) and other smaller growing indigenous flora (e.g., Wood Mint and Bracken Fern, amongst others), as well as several non-native and invasive plant species that are degrading to habitat (e.g., species of exotic annual and perennial grasses, and broadleaf invasive weeds, such as Acacia, French Broom, Milk Thistle and Ice Plant).

It should be noted that some natural recruitment and regeneration of Coast Live Oak and Monterey Pine is occurring on the subject property, however additional planting will be necessary to comply with County conditions of approval and to further assist in sustaining the health and character of this woodland environment. Special status plant and animal species, sensitive habitat, and actively nesting birds that have protection status were not observed on the property during the site assessment (refer to biological report); however an additional nesting bird assessment may be necessary if tree removal operations occur 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 25 native specie trees (i.e., 20 Coast Live Oak and 5 Monterey Pine) that are 6 inch DBH (diameter at breast height) or larger are proposed for removal due to construction related impacts and concerns. These trees are identified as Tree#s 1-25 on the property, as well as on the corresponding *Exhibit A: Tree Location Map*. A majority of the 25 trees are in fair health and condition, but require removal due to their location within or adjacent to the proposed construction footprint.

II. METHODOLOGY

For this report, a ground level visual assessment of this woodland property was recently conducted. 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 RMA-Planning Department* permit conditions, native specie trees proposed for removal that are 6 inch DBH (diameter at breast height, which is measured at 48 inches above grade) or larger are required to be recorded for removal and will require replacement plantings (1:1 replacement ratio for 6-23 inch DBH and 2:1 replacement ratio for 24 inch DBH or larger).

Recommendations are based on the overall general health, vigor and condition of subject trees and habitat; the impact that site 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 sensitive natural resources, wildlife habitat and nearby healthy trees.

In regards to exhibits included in this report, *Exhibit A* is a map and project plans for the property that shows the location of trees in relation to proposed structures and other property features. *Exhibit A* identifies the location of trees proposed for removal, as well as trees that will be retained. Photos of this woodland property are located at the end of the report (refer to *Figures 1-8*).

III. TREES PROPOSED FOR REMOVAL & ECOLOGICAL IMPACTS

Per the project design plans, a total of 25 larger than 6 inch DBH trees (i.e., 20 Coast Live Oak and 5 Monterey Pine trees) are proposed for removal in preparation for planned home construction operations. These trees require removal due to construction related impacts and are identified as Tree#s 1-25 on the property, as well as on the corresponding *Exhibit A: Tree Location Map*. Despite the best efforts of the project design team and property owner to avoid impacts to trees, it is necessary for the 25 subject trees to be removed (and replaced at the appropriate ratio [refer to recommendations section]) in preparation for property development operations.

These 25 trees are identified on the property with orange flagging tape and have been assigned tag numbers 1-25 (refer to the corresponding *Exhibit A: Tree Location Map*). All of these trees (exception being one unhealthy and declining pine tree [identified as Tree#17 in *Exhibit A*] located in close proximity to the building envelope that should be removed due to construction impacts and hazard concerns) will require removal due to their location within or directly adjacent to the proposed construction footprint (refer to *Figures 1-6*). Trees located directly adjacent to construction and grading operations frequently require removal due to significant and unavoidable root system impacts that will compromise the health and structural integrity of trees.

The 25 trees proposed for removal, as well as several additional trees on the subject parcel that will be retained and protected, are primarily mature to senescing trees (20 Coast Live Oak and 5 Monterey Pine trees). Tree health on the property ranges from dead to good health, with a majority of the trees generally being in fair physiological health and structural condition.

As previously noted, tree removal is due to the subject trees being located within or directly adjacent to the proposed construction footprint, exception being the one previously mentioned large and rapidly declining pine tree (Tree#17) located in close proximity to the construction footprint that should be removed due to hazard concerns.

Some of the trees on the property have notable structural deficiencies and disorders, such as prominent cankers, decay, bows, crooks, leans and structurally problematic co-dominant attachments in the trunks and/or stems, which can increase the probability of structural failure and physiological decline. Trees with physiological and/or structural disorders should be periodically monitored and inspected to determine what, if any, tree care actions or best management practices (e.g., hazard and weight reduction pruning, tree removal) should be performed to preserve tree health and minimize hazard concerns.

Forest pathogens and biotic and/or abiotic disorders appear to be absent in levels that are detrimental to the health and viability of woodland habitat on the subject property. However, there are biotic and abiotic disorders that affect trees and habitat in *Del Monte Forest*, but currently not a level that is detrimental to the viability and character of this woodland and forest environment.

The ecological impacts of proposed tree removal operations will be mitigated by appropriate tree replacement planting on the subject property, as well as the installation of tree and resource protection measures that will be maintained for the duration of the property development project. These tree replacement and protection measures will be explained in more detail in the “Recommendations” section of this report.

It should be noted that groups of trees and individual trees vary in their suitability for retention and preservation on a development site. Species tolerance, along with health and condition will assist in determining the type or level of impact a tree or group of trees can tolerate with minimal adverse affect. Overly mature (senescing), stressed and/or declining trees are generally more

vulnerable to the accumulative affects of environmental stressors, site disturbance and abiotic and biotic disorders that can have irreversible and detrimental affects on physiological processes and health, as well as structural integrity. Specimens that are structurally unsound may pose a hazard and threat to life and property; and unhealthy, low vigor trees or species that are intolerant or sensitive to site alterations and disturbance may not survive the impacts of development activities. Trees that meet these criteria, such as some of the trees identified in this report, are a liability rather than an asset and should be removed.

IV. RECOMMENDATIONS

A. Tree Removal & Replacement:

For the reasons provided in this report, permission is being requested to remove 25 trees (20 Coast Live Oak and 5 Monterey Pine) that are located within or in close proximity to the proposed construction footprint on the subject parcel (refer to *Exhibit A, Tree Location Map*).

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 development activities (refer to tree protection BMP's provided in this report). Tree and resource protection measures will assist in preserving and sustaining ecological resources and minimizing harmful impacts to trees and woodland habitat.

Additionally, several other oak trees that are located in relatively close proximity to proposed construction activities will be pruned to improve aesthetics and provide adequate clearance around structures. Pruning operations will occur during the proper time of year (i.e., fall through early winter) and will utilize proper pruning best management practices (BMP's) to minimize impacts to retained trees. Furthermore, per permit conditions, tree preservation measures will be installed to protect trees from property development activities.

In regards to tree replacement, a total of 29 replacement plantings (i.e., 23 one to five-gallon native Coast Live Oak and 6 one to five-gallon native Monterey Pine seedlings/saplings [container size depends on availability and quality of nursery stock]) shall be planted in appropriate and suitable locations on the subject property to mitigate tree removal impacts associated with construction activities, as well as to comply with *Monterey County RMA-Planning Department* tree removal permit conditions. Proper execution of this tree replacement action will mitigate tree removal impacts and will assist in preserving and sustaining the health and character of woodland habitat. Successful completion of this Monterey County tree removal permit condition shall be achieved when the 29 replacement plantings survive a one-year monitoring period.

The replacement trees should be acquired from a local native plant nursery that has a good selection of specimens that are free from harmful pathogens, insect pests and/or structural disorders. The planting of seedlings and/or saplings should ideally be performed during the

appropriate time of year (i.e., fall through winter wet season following sufficient rainfall) using proper tree planting techniques and best management practices, and should be planted in suitable locations that will support healthy establishment and maturation (refer to attached photos, *Figures 7 & 8*). Young plantings should be properly cared for (e.g., mulched, caged, weeded and provided sufficient irrigation) and protected until successfully established and, as previously stated, shall survive a one-year monitoring period.

In the event there are young seedlings and/or saplings located within the building footprint that can be relocated and transplanted to a safe and non-developed area on the property, these seedlings and/or saplings should be transplanted during the wet season following sufficient rainfall and should be properly cared for until successfully established.

Prior to any tree removal or disturbance that is performed during the bird nesting season, which in Monterey County may begin as early as February and continue through early August, a nesting assessment is advised to determine if any nesting birds are present. A recent tree and site inspection determined there are currently no actively nesting birds occurring within or directly adjacent to the proposed project site (refer to biological report); 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, best management practices (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.

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 the property development project. Proper execution of tree and resource protection 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 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) Where possible avoid damaging or severing roots located within the critical root zone (i.e., canopy dripline) of trees, especially roots that are 2 inches diameter or larger. Construction footings should be designed and excavation cuts performed in a manner to minimize impacts to primary roots. If significant roots are encountered efforts should be made to carefully excavate (e.g., tunnel or dig) under or around primary lateral roots. 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. 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.

5) 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. If it is unavoidable and necessary to temporarily store or stockpile materials and equipment within the dripline of trees, apply 3-5 inches of clean and properly sourced woodchip mulch to prevent significant soil compaction and root zone disturbance.

6) 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.

7) 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. Excessive pruning stresses trees by depleting energy reserves and reducing food making processes (i.e., photosynthesis), which compromises a trees ability 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.

8) Regularly perform 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 BMP's and tree preservation ordinances, any trees damaged during construction operations 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 specific trees 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/or preventing tree hazards. Prescribed treatments will be determined on a case by case basis.

V. CONCLUSION

In conclusion, the 25 trees addressed in this report that are located on the property at 3347 17 Mile Drive are proposed for removal in preparation for property development activities. Tree removal is necessary due to these trees being located within or directly adjacent to the building footprint, the exception being one unhealthy and declining pine tree located in close proximity to grading activities that should be removed due construction impacts and hazard concerns (identified on the *Exhibit A: Tree Location Map* as Tree#17). Additionally, the necessary tree and resource protection measures shall be installed prior to construction activities commencing and properly maintained for the duration of the project.

Lastly, in the interest of complying with *Monterey County RMA-Planning Department* tree removal permit conditions and preserving and sustaining the health and character of mixed woodland habitat, 29 replacement trees (i.e., 23 one to five-gallon native Coast Live Oak and 6 one to five-gallon Monterey Pine seedlings or saplings) are recommended to be properly planted and maintained in suitable locations on the subject property. Successful completion of this Monterey County tree removal permit condition shall be achieved when the replacement plantings survive a one-year monitoring period.

Best regards,

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April 3, 2023
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Figure 1. Combination of oaks and pines in foreground and background (marked with orange flagging tape) in proposed driveway parking area that are planned for removal due to construction impacts.



Figure 2. Another view of several trees proposed for removal due to construction impacts. Pine in center of photo is a dead snag.



Figure 3. Several additional small to medium size oaks that will need to be removed due to location within proposed construction footprint.



Figure 4. Small pine and several small to medium sized oaks proposed for removal due to construction impacts.



Figure 5. Additional trees in proposed pool deck area are planned for removal due to construction impacts. 17 Mile Drive is in background.



Figure 6. A few more trees in proposed pool area that are planned for removal.



Figure 7. Example of clearing where replacement planting oaks and pines can be planted.



Figure 8. Another woodland clearing where replacement trees can be planted.

Exhibit A: Tree Location Map

