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Tree Resource Assessment
15360 Plaza Serena
Prunedale, CA

Prepared for:

Dennis and Janece Barwick

Prepared by:

Frank Ono
Urban Forester
Member Society of American Foresters #48004
ISA Certified Arborist #536
1213 Miles Avenue
Pacific Grove, CA 93950

September 5, 2017

Owner:

Dennis and Janece Barwick
1050 Kentfield
Salinas, CA 93901

Designer:

Maloka Design
Gisela Moreno

Forester and Arborist:

Frank Ono, Member SAF #48004, ISA Certified Arborist #536
F.O. Consulting
1213 Miles Ave
Pacific Grove, CA 93950

SUMMARY

Development is proposed for this site requiring removal of five existing Oak trees, one previously non-permitted removed Oak tree, and eight non-native Eucalyptus globulus on this site. The trees are within the proposed building footprint. They will need to be removed, additionally excavation will be performed near a few Eucalyptus trees (will be retained) along the proposed driveway. The project proposes to cover approximately 4,063 square feet of a 108,057.38 square foot parcel. Building will consist of a main house and garage and a detached recreation room. The site is disturbed, with a mixture of non-native trees on the property growing on it as well as existing native trees. The trees on this lot range in condition from poor to fair or better both structurally and in health. A tree assessment/arborist report has been prepared that identifies and addresses the affects that the project will have to the existing tree resources on site as well as a list of recommendations regarding trees on the project.

INTRODUCTION

This tree assessment/arborist report is prepared for Dennis and Janece Barwick, the owners of the property located at 15360 Plaza Serena, Salinas CA by Frank Ono, Urban Forester and Certified Arborist (member Society of American Foresters #48004 and International Society of Arboriculture Certified Arborist #536) due to the proposed construction. The North Monterey County Land Use Plan and Monterey County Zoning Ordinance Title 20 identify native Coast live oak trees as a species requiring protection and special consideration for management.

ASSIGNMENT/SCOPE OF PROJECT

To ensure protection of the tree resources on site, the property owners Dennis and Janece Barwick, have requested an assessment of the trees in proximity to proposed development areas. The findings of the report are to be documented in an arborist report to work in conjunction with other conditions for approval of the building permit application. To accomplish this assignment, the following tasks have been completed;

- Evaluate health, structure and preservation suitability for each tree within or adjacent (15 feet or less) to proposed development of trees greater than or equal to six diameter inches at 24 inches above grade.
- Review proposed building site plans as provided by Maloka Designs (Gisela Moreno).
- Make recommendations for alternative methods and preconstruction treatments to facilitate tree retention.
- Create preservation specifications, as it relates to a Tree Location/Preservation Map.
- Determine the quantity of trees affected by construction that meet “Landmark” criteria as defined by the County of Monterey, Title 20 Monterey County Zoning Ordinance; as well as mitigation requirements for those to be affected.
- Document findings in the form of a report as required by the County of Monterey Planning Department.

LIMITATIONS

This assignment is limited to the review of building footprint location plans submitted to me dated September, 2017 by Maloka Designs, to assess affects from potential construction to trees within or adjacent to construction activities. The assessment has been made of these plans specifically. Only minor grading and erosion details are discussed in this report as it relates to tree health. It is not the intent of this report to be a monetary valuation of the trees or provide risk assessment for any tree on this parcel, as any tree can fail at any time. No clinical diagnosis was performed on any pest or pathogen that may or may not be present. F.O. Consulting shall not be responsible for another's means, methods, techniques, schedules, sequence or procedures, or for contractor safety or any other related programs; or for another's failure to complete the work in accordance with the plans and specifications. A tree hazard assessment may be necessary to evaluate trees outside the immediate building areas, as this was not part of the development assessment. In addition to an inspection of the property, F.O. Consulting relied on information provided in the preparation of this report (such as, surveys, property boundaries, and property ownership) and must reasonably rely on the accuracy of the information provided. F.O. Consulting shall not be responsible for another's means, methods, techniques, schedules, sequence or' procedures, or for contractor safety or any other related programs; or for another's failure to complete the work in accordance with the plans and specifications.

PURPOSE AND GOAL

This Tree Assessment/Arborist report is prepared for this parcel due to proposed construction activities located at 15360 Plaza Serena, Salinas CA. The purpose of the assessment is to determine what trees will be affected by the proposed construction project because Oak trees are considered protected trees as defined by the County of Monterey, Title 20 Monterey County Zoning Ordinance.

The goal of this report is to protect and maintain the North Monterey County Area forested resources through the adherence of development standards, which allow the protection, and maintenance of its forest resources. Furthermore it is the intended goal of this report to aid in planning to offset any potential effects of proposed development on the property while encouraging forest stability and sustainability, perpetuating the forested character of the property and the immediate vicinity.

SITE DESCRIPTION

- 1) Assessor's Parcel Number: 129-096-034-000.
- 2) Location: 15360 Plaza Serena, Salinas, CA 95012.
- 3) Parcel size: 2.5 acres.
- 4) Existing Land Use: The parcel is zoned for residential use, LDR/2.5 (CZ).
- 5) Slope: The parcel ranges from mild to steep sloped. Slopes range from 5% to over 20% with the average slope in the proposed construction around 10%.
- 6) Soils: The parcel is located on soils classified by the Monterey County Soils report as Arnold Loamy Sand soils. The Arnold series consists of somewhat excessively drained soils that formed on hills and uplands in old marine sand dunes or in materials weathered from soft sandstone. The vegetation consists of grasses, forbs, oaks, chamise, manzanita, and eucalyptus. Permeability is rapid, and the available water capacity is 3 to 5 inches. Roots penetrate to a depth of more than 60 inches. Arnold soils are used for range, wildlife habitat, and watershed.
- 7) Vegetation: The vegetation on site is composed primarily of a native Oak and related understory plants such as poison oak, blackberry and coffee berry.
- 8) Forest Condition and Health: The stand of trees and health are evaluated with the use of the residual trees combined with surrounding adjacent trees as a complete stand. The site is undeveloped and surrounding forest canopy is fragmented. It is a disturbed Oak woodland with very few large oaks and predominately covered with Eucalyptus globulus comprising 80% canopy closure. Many of the Eucalyptus are stump sprouts from previous tree removals and are in poor structural condition due to stem formed from basal sprouts that are weakly attached to a decaying stump. No major pests were observed such as Western Oak Bark Beetle (*Pseudopityophthorus pubipennis*) and Phytophthora Root and Crown rot (*Phytophthora cinnamomi*).

BACKGROUND

I have been requested to conduct a Tree Resource Assessment focusing on the incorporation of the preliminary location of his site improvements coupled with consideration for the general goals of site improvement desired of the landowner. Proposed improvements assessed included preserving trees to the greatest extent feasible, maintaining the view shed and general aesthetic quality of the area while complying with Monterey County Codes.

Several meetings were conducted with Gisela Moreno (Maloka Designs) to assess the problems with the site and suitability of a design to build a single family home. Mrs. Moreno informed there is has been one non-permitted oak tree to be included in this report. The study of remaining individual trees determined treatments necessary to complete the project and meet the goals of the landowner. Trees within and immediately adjacent proposed development area were located, measured, inspected, flagged and recorded. The assessment of each tree concluded with an opinion of whether the tree should be removed, or preserved, based on the extent and effect of construction activity to the short and long-term health of the tree. All meetings and field review were focused on the area immediately surrounding the proposed development.

OBSERVATIONS/DISCUSSION

The following list includes observations made while on site, and summarizes details discussed during this stage of the planning process:

- The site is an undeveloped but disturbed site; for the most part it is heavily forested with tree spacing ranging between 5 and 15 feet apart except where development is proposed. There is a pre-existing graded path in the lower middle portion of the property where the driveway is to be placed, this path also enters the property to where the proposed building will be constructed and avoids the scenic easement located in the center of the property.
- Cut and fill grading will be necessary to accomplish the driveway but should not have severe side effects as long as soil is not stock piled with grades changed to where the soils are kept in place directly against the base of the trees.
- There are numerous Eucalyptus located on the property which have been historically removed; many trees are emerging sprouts from cut stumps. The driveway and building area will need to remove several of these Eucalyptus stumps and sprouts.
- The proposed leach fields will require removal of three small oaks.
 - #325- 6" oak in fair condition
 - #326- 10" oak in fair condition
 - #327 – 10" oak in fair condition
- Two Oaks are located near and within the building footprint which are to be removed.
 - #328 is a small but mature 6" diameter Oak in fair condition.
 - #329 is a 9" diameter oak in fair condition and is within building footprint which must be removed.
- One stump is found where a 24" diameter Oak tree (#333) was removed without a permit, which will be added to the tree removal count. The tree stump is located within the building foot print. The tree, judging by its stump measurement, is classified as a landmark oak. The oak has larger remaining trees which are between it and the adjacent property to the east and the public roadway. It would not have been visually significant or have historical value or more than 1000 years old. The removal would have been recommended with this site plan due to the configuration of the lot, which has a scenic easement that makes designing a house difficult on this property.

CONCLUSION/PROJECT ASSESSMENT

This proposal to build an addition to a single-family residence and garage, detached recreation room, and install the driveway and septic leach fields is planned to maintain the existing Oak forested environment, allowing the forest to continue to exist and regenerate over time. Tree removal is necessary due to their location to planned construction. Tree removal consists of trees which are not visually or historically significant, not exemplary of their species, nor more than 1000 years old. Tree removal consists of the following:

- Six Eucalyptus (#158 - #165) these are non-landmark size in fair to poor condition, many of these are poorly attached stump re-sprouts from previous eucalyptus removals or previous fires)
- Six Oaks - #333 is a previously removed oak (now stump) and #325-#329, these trees are in fair condition but are located within the building foot print or septic areas.

The configuration of the site has a scenic easement located within a major portion of the south east portion of the lot, constraining the building area. Tree removal is necessary to build on this lot with garage and septic areas. Because of the scenic easement constraints, I cannot see alternatives to development, such as re-siting, relocation, or reduction in development area, where tree removal can be avoided. The remainder of the property outside the building footprint contains tree cover, which will remain undisturbed. Remaining Oak and Eucalyptus trees are expected to survive when properly protected and monitored. No watercourses are near the planned construction. Proposed tree removal will not significantly affect air movement or noise levels. Trees to be removed are on edges of existing stands of trees and will not disrupt forest continuity or have a negative effect to prevailing sun/wind exposure to trees.

Short Term Affects

Site disturbance will occur during building construction. Short term site affects are confined to the construction envelope and immediate surroundings, the six trees being removed will have minor effects on the overall forest canopy and comprise less than 2% of total tree population. The pruning of the majority of the tree crowns should be well under 30% of total individual tree crown densities and should have very negligible effects on the trees growth.

Long Term Affects

No significant long term affects to the forest ecosystem are anticipated, the construction and tree impacts are constrained to the building envelope and proposed road prism. The project as proposed is not likely to significantly reduce the availability of wildlife habitat over the long term. Whenever construction activities take place near trees, there is the potential for those trees to experience decline in the long term as well. The greatest attempt has been made to identify for removal those trees likely to experience decline.

RECOMMENDATIONS

Pre-Construction Meeting

Prior to the start of construction a meeting and training session must be conducted in order to be communicate and instruct personnel about tree retention and protection. The pre-construction meeting will include required tree protection and exclusionary fencing installed prior to grading, excavation and construction procedures. Meeting attendees will be all involved parties including site clearance personnel, construction managers, heavy equipment operators, subcontractors, and tree service operators; a certified professional such as a Monterey County qualified forester or County qualified arborist will conduct training. A list of pre-construction attendees and the materials discussed will be maintained to be provided to the county. Meeting attendees must agree to abide to tree protection and instructions as indicated during the meeting.

Replanting of Trees

The County of Monterey through the North Monterey County Land Use plan has tree replacement conditions as part of a tree removal permit when sufficient space exists to replant that does not create an overcrowded vegetated situation. The County requires a 2:1 replacement for removed trees which measure 24” or larger in diameter at breast height and/or a 1:1 ratio replacement for trees measuring less than 24” in diameter. It is therefore recommended replanting be with eight (8) five gallon or larger Coast live Oak trees in locations near or adjacent the removed trees. In addition, the County also requires independent monitoring of replanted trees to insure replanting is successful (the term of monitoring is at County discretion, typically one –three years dependent on the type of permit).

Tree Protection will be implemented as follows:

- Trees located adjacent to construction areas shall be protected from damage by construction equipment by the use of temporary fencing and through wrapping of trunks with protective materials to protect the trees Critical Root Zones (CRZ), which is a distance of approximately 8-10 feet from the base of the tree.
- Fencing shall consist of chain link, snowdrift, plastic mesh, hay bales, or field fence.
- Fencing must not be to be attached to the tree. It shall be free standing or self-supporting so as not to damage trees, shall be rigidly supported and shall stand a minimum of height of four feet above grade extending to the trees dripline or CRZ (the CRZ is determined in the field as eight (8’) or more feet from the base of the tree unless a lesser distance is approved in the field by an arborist).
- Soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, and/or dumping of materials should not be allowed adjacent to trees on the property especially within fenced areas.
- Fenced areas and the trunk protection materials must remain in place during the entire construction period.

During grading and excavation activities:

- All trenching, grading or any other digging or soil removal that is expected to encounter tree roots will be monitored by a qualified arborist or forester to ensure against drilling or cutting into or through major roots.
- The project arborist should be on site during excavation activities to direct any minor field adjustments that may be needed.

- Trenching for the retaining wall and driveway located adjacent to any tree should be done by hand where practical and any roots greater than 2-inches in diameter should be bridged or pruned appropriately.
- Any roots that must be cut should be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment.
- Any roots damaged during grading or excavation should be exposed to sound tissue and cut cleanly with a saw.

If at any time potentially significant roots are encountered:

- The arborist/forester will be authorized to halt excavation until appropriate mitigation measures are formulated and implemented.
- If significant roots are identified that must be removed, a determination will be made if it will destabilize or negatively affects the target trees negatively. The property owner will be notified immediately and a determination made by the project arborist as required by law for treatment of the area that will not risk death decline or instability of the tree consistent with the implementation of appropriate construction design approaches to minimize affects, such as hand digging, bridging or tunneling under roots, etc..

Tree Pruning

It is to be understood that the pruning of retained trees is expected for this site, especially along and near building construction areas. Pruning will include trees with deadwood, minor structural defects, or disease that must be compensated. Pruning is also to improve vehicle or potential pedestrian clearance. Following construction, a qualified arborist should monitor trees adjacent to the improvements area and if any decline in health that is attributable to the construction is noted, it will be treated as appropriately recommended by a certified arborist or qualified forester and if necessary replacement tree will be re-planted on the site.

Best Management Practices to Observe (BMP)

The following best management practices must be adhered to:

- A) Tree service Contractors will verify animal or bird nesting prior to tree work. If nesting activity of migratory birds are found, work must stop and a wildlife biologist consulted before commencing work (the typical bird nesting season ranges from February 22 to August 1).
- B) Do not deposit any fill around trees, which may compact soils and alter water and air relationships. Avoid depositing fill, parking equipment, or staging construction materials near existing trees. Covering and compacting soil around trees can alter water and air relationships with the roots. Fill placed within the drip line may encourage the development of oak rot fungus (*Armillaria mellea*). As necessary, trees may be protected by boards, fencing or other materials to delineate protection zones.
- C) Pruning shall be conducted so as not to unnecessarily injure the tree. General- Principals of pruning include placing cuts immediately beyond the branch collar, making clean cuts by scoring the underside of the branch first, and for live oak, avoiding the period from February through May.
- D) Native live trees are not adapted to summer watering and may develop crown or root rot as a result. Do not regularly irrigate within the drip line of oaks. Native, locally adapted, drought resistant species are the most compatible with this goal.

- E) Root cutting should occur outside of the springtime. Late June and July would likely be the best. Pruning of the live crown should not occur February through May.
- F) Tree material greater than 3 inches in diameter remaining on site more than one month that is not cut and split into firewood must be covered with thick clear plastic that is dug in securely around the pile to discourage infestation and dispersion of bark beetles.
- G) A mulch layer up to approximately 4 inches deep should be applied to the ground under selected trees following construction. Only 1 to 2 inches of mulch should be applied within 1 to 2 feet of the trunk, and under no circumstances should any soil or mulch be placed against the root crown (base) of trees. The best source of mulch would be from chipped material generated on site.
- H) If trees along near the development are visibly declining in vigor, a Professional Forester or Certified Arborist should be contacted to inspect the site to recommend a course of action.

Report Prepared By:



Frank Ono, SAF Forester #48004 and ISA Certified Arborist #536

September 5, 2017

Date

TREE CHART

The following trees were assessed surrounding the project and are indicated on an attached site map. Tree removal is indicated for trees near or within the proposed building area. Tree condition/vigor correlates with canopy position within the stand and is measured by leaf and crown area. Tree rated Dominant and co-dominant are trees that generally have larger crowns capable of supporting more leaves, and have a generally healthy and appealing growth form. Dominant trees are trees with wide crowns above the level of the forest canopy that receive sunlight from above as well as the sides. Co-dominant trees are large crowned trees at the general level of the forest canopy that receive sunlight from above and partly from the sides. Crowns are somewhat smaller than dominant but healthy and vigorous. Trees rated intermediate and particularly suppressed trees have smaller crowns and are therefore less vigorous. Intermediate trees have much of the canopy below the general level of the forest or are pinched at the sides. They will receive sunlight from above but very little to none from the sides. Suppressed trees are trees that are overtopped by large trees and receive no direct sun from above or from the sides.

ID#	Diameter	Species	Structure	Health	Remove	Comments
325	6	Oak	Fair	Fair	X	Leach Field
326	10	Oak	Fair	Fair	X	Leach Field
327	10	Oak	Fair	Fair	X	Leach Field
328	6	Oak	Fair	Fair	X	Building footprint
329	9	Oak	Fair	Fair	X	Building footprint
158	20,7	Eucalyptus	Poor	Fair	X	Building footprint
159	11,11,4,4,4	Eucalyptus	Poor	Fair	X	Building footprint
160	7,5	Eucalyptus	Poor	Fair	X	Building footprint
161	15,10	Eucalyptus	Poor	Poor	X	Building footprint
162	13	Eucalyptus	Fair	Fair	X	Building footprint
163	17	Eucalyptus	Fair	Fair	X	Building footprint
164	10	Eucalyptus	Fair	Fair	X	Building footprint
165	8,6,6,4	Eucalyptus	Poor	Fair	X	Building footprint

PHOTOGRAPHS

Stump #333



Site with stump spouted Eucalyptus and smaller understory oaks (#'s 158-165)



Tree #326 and #325



Tree #326



Tree #328

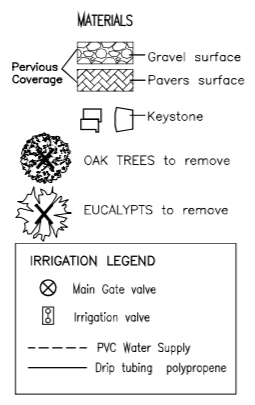
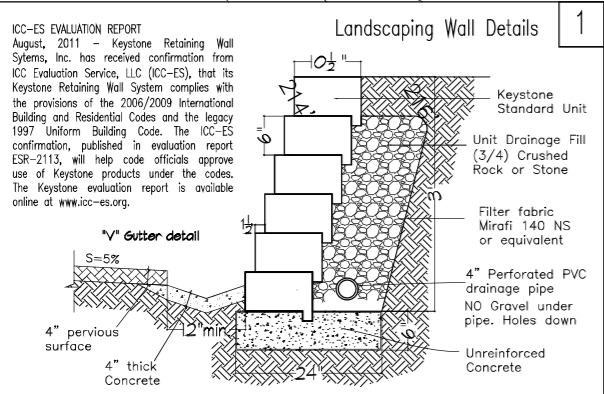
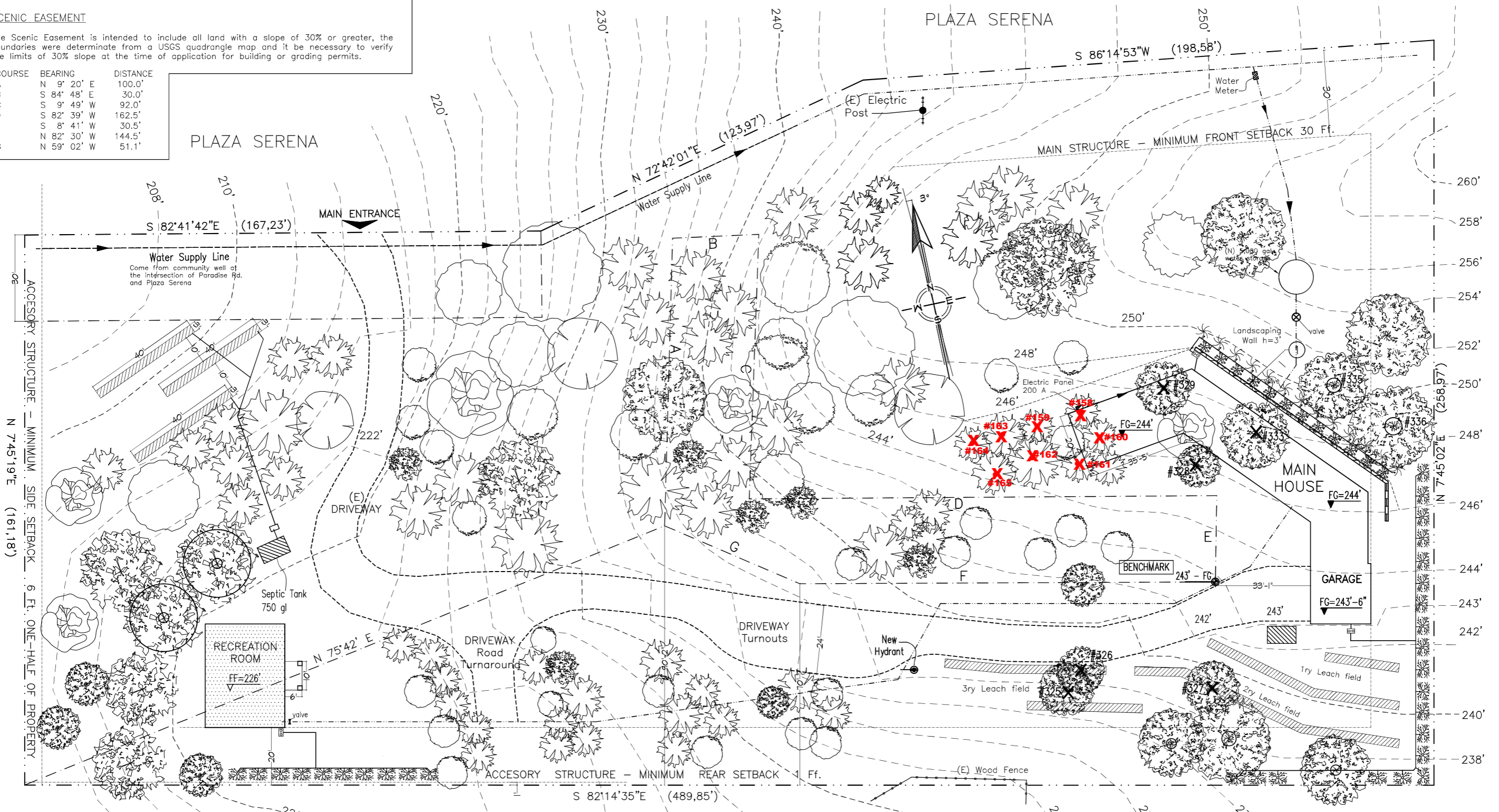


#329

SCENIC EASEMENT

The Scenic Easement is intended to include all land with a slope of 30% or greater, the boundaries were determinate from a USGS quadrangle map and it be necessary to verify the limits of 30% slope at the time of application for building or grading permits.

COURSE	BEARING	DISTANCE
A	N 9° 20' E	100.0'
B	S 84° 48' E	30.0'
C	S 9° 49' W	92.0'
D	S 82° 39' W	162.5'
E	S 8° 41' W	30.5'
F	N 82° 30' W	144.5'
G	N 59° 02' W	51.1'



MULCHES
(Rate per 1,000 sq.ft.)

Material: Crushed or Smooth stone.
Rate: 10 cubic yds (10-12 tons).
Depth of application: 3 inches.
Remarks: Use 1/2" to 3" ø washed stone. Best for small areas, not suitable for slopes. Not generally used with vegetation.

IRRIGATION TIMING SCHEDULE

Cycles per week	Minutes per cycle
SPRING 2	7
SUMMER 2	10
FALL 2	6

WINTER Water only during extended dry periods
NOTE: Each plant must have a drip nozzle

Landscaping plants NOTE: Install mulches on the garden areas. Grass is NOT acceptable.

Scientific Name	Common Name	SIZE	Characteristics
<i>Ceanothus griseus horizontalis</i>	Carmel Creeper, Wild Lilac	1 gallon	Slow growing evergreen shrub to 1.5-3 feet tall and wide. Flowers bloom in clusters of light blue. California native, extremely drought tolerant, requires little to no water once established. Best used as a groundcover. Fire-resistant for defensible space. Growth Rate: Slow. Exposure: Full sun. Water Needs: Low (Water-wise). Season: Year-Round Flower. Color: Blue. Drought Tolerant, Fire Resistant, Evergreen Flowering.
<i>Eschscholzia californica</i>	California Poppy.	1 gallon	Feathery, highly-dissected, blue-green leaves clasp the 1-2 ft. stems of this popular, perennial wildflower. Showy, 1-3 in. wide, four-petaled flowers are open only on sunny days. The flowers are solitary and long-stalked and vary in color from orange to yellow. Each of the satiny petals has a deep-orange spot at its base. California poppy is often used in wildflower mixes. It is easy to grow, drought tolerant, and reseeds so readily that it can become weedy. In natural conditions, it blooms most heavily from March to May. This bloom period can be extended with supplemental water.
<i>Prunus ilicifolia</i>	Holly Leaf Cherry	2 gallons	Is an evergreen shrub to tree, average 14 ft. high and has clusters of white flowers in spikes in March that cover the entire plant, and in the fall is very showy, covered with large red cherries. Native to the California coast ranges from Mexico north to above San Francisco Bay. Full sun exposure, low water requirements after established, and needs good drainage. Birds love the fruit. When young, this species is killed at 20°F., but after the first year will survive 0°F. or lower. Excellent foundation plant and/or privacy hedge. The fruits are edible.

LANDSCAPING Plan

SCALE 1" = 16'

Project: **BARWICK RESIDENCE**
15380 PLAZA SERENA, Salinas CA. 93907
APN # 129-096-034-000

Owner: Dennis & Janice Barwick - Ph:(831) 901-6517

Sept 1 2017