TOWN OF ROSS

Agenda Item No. 17.

Staff Report

Date: July 14, 2016

To: Mayor Hoertkorn and Council Members

From: Heidi Scoble, Planning Manager

Subject: Karkabi Residence, 24 Redwood Drive, File No. 2016-015

Recommendation

Town Council approval of Resolution 1961 approving a Design Review, a Nonconformity Permit, and a Tree Removal Permit to allow for the remodel and addition to an existing single family residence at 24 Redwood Drive.

Property Information:

Owner:	Naaim Karkabi
Design Professional:	Jeff Kroot
Location:	24 Redwood Drive
A.P. Number:	073-271-07
Zoning:	R-1:B-10 (Single Family Residence, 10,000 sq. ft. min. lot size)
General Plan:	Medium Low Density (3-6 units/acre)
Flood Zone:	Zone AE (Inside 1-percent annual chance floodplain)

PROJECT DATA			
	Zoning Requirements	Existing	Proposed
Lot Area	10,000 square feet	13,600 square feet	No change
Floor Area (FAR)	20%	1,862 sq. ft. (13.7%)	2,711 sq. ft. (19.9%)
Lot Coverage	20%	1,285 sq. ft. (9.5%)	1,822 sq. ft. (13.4%)
Impervious Surface	-	1,285 sq. ft. (9.5%)	1,676 sq. ft. (12.3%)
Height	30 Feet	25.5 Feet	29.166 Feet
Front Setback Brookwood Lane)	25 Feet	20 feet	15 feet

Left Side Setback (Redwood Drive)	15	40	No Change
Right Side Setback	15 feet	23 Feet	19.44 feet
Rear Setback	40 Feet	99 Feet	63 Feet

Project Description

The applicant is requesting Design Review, a Nonconformity Permit, and a Tree Removal Permit to allow for a two-story remodel and an 849 square foot floor area addition to the existing residence, including the construction of a new attached one car garage. The project would add approximately 359 square feet of new floor area to the first floor for a total of 1,586 square feet. The applicant is also proposing to add 492 square feet of new floor area to the second floor for a total of 1,127 square feet. The total floor area for the project would be 2,711 square feet or have a 19.9% floor area ratio.

The scope of the project would also include raising the height of the single family residence by approximately 3.66 feet in order to address the FEMA base flood elevation building requirements. The proposed height of the residence would be 29.166 feet.

The project would maintain a similar architectural style of the existing residence and would include a dark brown composition shingle roof material, natural stained cedar shingles, and a dark green paint color for the fascia and trim. Other site improvements would include landscape and hardscape improvements, in addition to the removal of two protected Coast Live Oak trees.

- **Design Review is required pursuant to Ross Municipal Code (RMC) Section 18.41.020** because the proposed improvements would result in more than 200 square feet of new floor area to the existing residence.

- **A Non-Conformity Permit is required pursuant to Ross Municipal Code (RMC) Section 18.52.030** to allow for the structural alteration to a nonconforming residence relative to setbacks related to the main residence.

- **A Tree Removal Permit is required pursuant to Ross Municipal Code (RMC) Section 12-24.080** to allow for the removal of significant tree (12" in diameter or greater) on improved land.

Background and Discussion

The project site is comprised of lot 8 of the Cole Tract that was recorded with the County of Marin in 1899. The project site is relatively flat with a 2.35% slope average. Access to the site is via Redwood Avenue and Brookwood Lane. A single family residence was constructed on the site circa 1906. Other than a Residential Building Reports prepared in 2015, the Town has limited history regarding the project site. The Residential Building report identifies that any nonconformities are unknown.

Advisory Design Group Review
The Advisory Design Review (ADR) Group have previously reviewed the project on March 22, 2016 and May 22, 2015.

At the March 22, 2016 meeting, the ADR Group reviewed a Design Review application for the remodel and an approximately 840 square foot addition to the existing residence, including the new construction of a 300 square foot attached one-car attached garage. The project was proposed to maintain a similar architectural style, similar materials, and earth tone colors. The ADR Group concluded its review by suggesting a more symmetrical design and consideration of a detached one-car garage in order to address design and neighborhood concerns relative to light, air, view and privacy impacts.

At the May 24, 2016 meeting, the ADR Group reviewed a redesigned 849 square foot two story addition similar to the project being considered by the Town Council. The project was redesigned to provide more symmetry in design as previously requested by the ADR Group. The applicant considered a detached one-car garage, however, due to the 25-foot front yard setback constraint along Brookwood Lane, a Variance from the setback would have been required for a new detached structure. Therefore, as the existing residence has a nonconforming setback, the applicant opted to redesign the project with an attached one-car garage that requires a Nonconformity Permit, and not a Variance.

The ADR Group recommended the following:

- Consider single pane woods windows to be in keeping with the original architecture of the building
- The deck on the south elevation should be redesigned to appear as a porch. A foundation should be wrapped around the base of the "deck"
- Double hung windows shall be placed on the South and North Elevation
- The peak of the roof should be brought down to reduce the roof line
- The architect should consider using short hopper windows to break up the building wall
- Submit a landscape plan

At both ADR Group meetings, members from the public spoke both in favor and against the project. The project opponents stated concern regarding to adverse impacts to the existing redwood trees that are in close vicinity to the project site, as well as concerns from the adjacent neighbor at 20 Redwood Drive regarding to adverse impacts on her existing redwood tree, as well as adverse impacts to the light, air, privacy, and views

Key Issues
R-1:B-10 Zoning District Compliance
The existing residence is found to be in compliance with the R-1:B-10 general development standards (e.g., height, floor area, lot coverage, and side/rear setbacks) with the exception of the legal non-conforming front yard setback. The resultant project would also be in compliance with

all of the R-1:B-10 general development standards with the exception of front yard setback. However, as provided by the zoning ordinance, the applicant is able to request a Nonconformity Permit to allow the project to be constructed within the existing legal nonconforming front yard setback (see the below discussion on the proposed Nonconformity Permit).

Project Impacts on Heritage Redwood Tree

The project site is located approximately 6 feet away from a coastal redwood tree that as a circumference at breast height of 25 feet and a diameter at breast height of 96 inches. The canopy height of the tree, as measured by the Town Arborist (with a Nikon Forestry 550 laser rangefinder) is approximately 140 feet. Pursuant to Section 12.24.020 of the Ross Municipal Code, the Town's regulations define the subject redwood tree as "protected" by definition and a "significant tree.

Pursuant to Section 12.24.020(6) of the Ross Municipal Code certain development related activities may be restricted or prohibited in order to protect the tree. The regulations also provide a non-intrusion zone measurement guideline table to identify setbacks from trees during construction. When applying the trunk diameter of the Coastal Redwood tree, based on the size of the tree, the minimum non-intrusion zone for a 48 inch or greater diameter tree is 32 feet from the trunk, however the precise non-intrusion zone is to be determined by the project arborist and reflect the individual site conditions.

An arborist report was prepared by Dr. Kent Julin on July 5, 2016 for the project (see attachment number 4). The report addresses the non-intrusion zone issue associated with the redwood tree located at 20 Redwood Drive, as well as providing tree protection measures, such as using helical piers and grade beams to minimize grading and impacts on roots, in addition to many tree protection measures to minimize disturbance of the subject redwood tree's root system.

Based on the findings and recommendations of the arborist report, the attached geotechnical report prepared by Dennis Furby stating that the helical piers and grade beams are feasible, and conditions of approval (8 through 13) that would require review and monitoring of the site during construction by the project arborist, staff suggests the project is feasible and would be consistent with the Town's tree protection regulations.

Architectural Design

The overall purpose of Design Review is to provide excellence in design consistent with the same quality of the existing development, to preserve and enhance the historical "small town," low-density character and identity that is unique to the Town of Ross, to discourage the development of individual buildings which dominate the townscape or attract attention through color, mass or inappropriate architectural expression, and to upgrade the appearance, quality and condition of existing improvements in conjunction with new development or remodeling of a site. Accordingly, pursuant to Section 18.41.100 of the Ross Municipal Code, a series of Design Review criteria and standards have been developed to guide development.

In reviewing the project, the following design review criteria and standards are most relevant to the project:

1. New structures and additions should avoid monumental or excessively large size out of character with their setting or with other dwellings in the neighborhood. Buildings should be compatible with others in the neighborhood and not attract attention to themselves. When nonconforming floor area is proposed to be retained with site redevelopment, the Council may consider the volume and mass of the replacement floor area and limit the volume and mass where necessary to meet the intent of these standards.

2. To avoid monotony or an impression of bulk, large expanses of any one material on a single plane should be avoided, and large single-plane retaining walls should be avoided. Vertical and horizontal elements should be used to add architectural variety and to break up building plans. The development of dwellings or dwelling groups should not create excessive mass, bulk or repetition of design features.

3. Buildings should use materials and colors that minimize visual impacts, blend with the existing land forms and vegetative cover, are compatible with structures in the neighborhood and do not attract attention to the structures. Colors and materials should be compatible with those in the surrounding area. High-quality building materials should be used.

4. Natural materials such as wood and stone are preferred, and manufactured materials such as concrete, stucco or metal should be used in moderation to avoid visual conflicts with the natural setting of the structure.

5. Soft and muted colors in the earthtone and woodtone range are preferred and generally should predominate.

6. Landscaping should include appropriate plantings to soften or screen the appearance of structures as seen from off-site locations and to screen architectural and mechanical elements such as foundations, retaining walls, condensers and transformers.

In response to the ADR Groups comments, the applicant has added double hung windows to the north and south building elevations, enhanced the aesthetics of the new deck as shown on the south elevation, modified the roof plan, and provided a landscape plan. Counter to the ADR Groups direction, the applicant has opted not to utilize single pane windows in order to meet the Title 24 building code requirements. Specifically, the project would be designed to be compatible with the existing mass, scale, and development pattern of the neighborhood, would be designed to be compatible with the existing architectural vernacular of the existing residence, and would utilize high quality building materials and earth tone colors to minimize visual impacts. The project would also be sufficiently distanced from adjacent properties consistent with the R-1:B-10 setback regulations. Additionally, the project would neither obstruct any views of hills and ridgelines from public streets or parks, nor further exacerbate any shading on adjacent properties beyond the existing shading from trees. Furthermore, due to landscaping constraints of the site

relative to heritage redwood tree roots associated with the redwood tree located at 20 Redwood Drive, the applicant is proposing to plant vines along the common fence. The purpose of the vines would be to provide a natural screening between the properties. Therefore, consistent with the ADR Groups direction to support the project, with the exception of using single pane windows, staff concurs that the project meets the purpose of Design Review and suggests the requisite findings to approve the project can be achieved.

Nonconformity Permit

Pursuant to Section 18.54.030(c), a nonconforming structure in a residential zoning district may be enlarged, extended reconstructed or structurally altered with a nonconformity permit approved under Section 18.52.040, except that a floor area ratio variance shall be required to increase the square feet of nonconforming floor area.

The existing residence was constructed prior to the Town's zoning regulations and is partially located within the requisite 25-foot front setback along Brookwood Lane. A front yard setback is defined pursuant to Section 18.12.140 of the Ross Municipal Code as "a yard extending across the full width of the lot measured between the street line (or the lot line connected to a street by legal access) and the nearest point of the main building or porch. The front yard of a corner lot is the yard adjacent to the shorter street frontage."

As supported by the Findings in Exhibit "A" of the attached Resolution 1961, staff suggest the project can be supported. Furthermore, although Brookwood Lane is technically considered to be a front yard setback, the Brookwood Lane frontage acts more like a side yard setback as the address and visual prominence of the exiting residence is from Redwood Drive. The applicant has designed the project with a 15-foot setback as required for side yard setbacks in the R-1:B-10 zoning districts.

Public Comment

Public Notices were mailed to property owners within 300 feet of the project site. The property owner at 20 Redwood Drive, Margaret Francis, has submitted a letter to the Town Council dated July 5, 2016 (see attachment 7).

Fiscal, resource and timeline impacts

If approved, the project would be subject to one-time fees for a building permit, and associated impact fees, which are based the reasonable expected cost of providing the associated services and facilities related to the development. The improved project site may be reassessed at a higher value by the Marin County Assessor, leading to an increase in the Town's property tax revenues. Lastly, there would be no operating or funding impacts associated with the project as the project applicant would be required to pay the necessary fees for Town staff's review of future building permit plan check and inspection fees.

Alternative actions

1. Continue the project for modifications; or
2. Make findings to deny the application.

Environmental review (if applicable)

The project is categorically exempt from the requirement for the preparation of environmental documents under the California Environmental Quality Act (CEQA) under CEQA Guideline Section 15301 –*additions to existing structures*, because it involves an addition to an existing single family residence, including a detached accessory structure with no potential for impacts as proposed. No exception set forth in Section 15301.2 of the CEQA Guidelines applies to the project including, but not limited to, Subsection (a), which relates to impacts on environmental resources; (b), which relates to cumulative impacts; Subsection (c), which relates to unusual circumstances; or Subsection (f), which relates to historical resources.

Attachments

1. Resolution
2. Project History
3. ADR Group Minutes from March 22, 2016 and May 24, 2016
4. Arborist Report prepared by Dr. Kent Julin dated July 5, 2016 for 24 Redwood Drive
5. Geotechnical Report prepared by Dennis Furby date-stamped June 22, 2016
6. Project plans
7. Letter from Margaret Francis dated July 5, 2016
8. Arborist Report prepared by Urban Forestry Associates, Inc., for Margaret Francis, dated May 18, 2016 for the redwood tree located at 20 Redwood Drive.

ATTACHMENT 1

TOWN OF ROSS

RESOLUTION NO. 1961
A RESOLUTION OF THE TOWN OF ROSS APPROVING A DESIGN REVEW, A NONCONFORMITY PERMIT, AND A TREE REMOVAL PERMIT TO ALLOW THE REMODEL AND ADDITION TO AN EXISTING SINGLE FAMILY RESIDENCE AT 24 REDWOOD DRIVE, APN 073-271-07

WHEREAS, property owners Naaim Karkabi, have submitted an application for Design Review, a Nonconformity Permit, and a Tree Removal Permit to allow the remodel and an 849 square foot floor area addition to the existing residence, which includes a 3.66-foot-tall height increase, a new one car garage, and the removal of two protected coast live oak trees at 24 Redwood Drive (the "project"); and

WHEREAS, the project was determined to be categorically exempt from further environmental review pursuant to the California Environmental Quality Act (CEQA) Guideline Section 15301 – *additions to existing structures*, because it involves an addition to an existing single family residence no potential for impacts as proposed. No exception set forth in Section 15301.2 of the CEQA Guidelines applies to the project including, but not limited to, Subsection (a), which relates to impacts on environmental resources; (b), which relates to cumulative impacts; Subsection (c), which relates to unusual circumstances; or Subsection (f), which relates to historical resources; and

WHEREAS, on July 14, 2016, the Town Council held a duly noticed public hearing to consider the proposed project; and

WHEREAS, the Town Council has carefully reviewed and considered the staff reports, correspondence, and other information contained in the project file, and has received public comment; and

NOW, THEREFORE, BE IT RESOLVED the Town Council of the Town of Ross hereby incorporates the recitals above; makes the findings set forth in Exhibit "A" approving a Design Review, a Nonconformity Permit, and a Tree Removal Permit for the project described herein, subject to the Conditions of Approval attached as Exhibit "B" at 24 Redwood Drive.

The foregoing resolution was duly and regularly adopted by the Ross Town Council at its regular meeting held on the 14th day of July 2016, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____

Kathleen Hoertkorn, Mayor

ATTEST:

_____

Linda Lopez, Town Clerk

EXHIBIT "A"
FIDNINGS TO APPROVE
24 REDWOOD DRIVE
APN 073-271-07

A. Findings

I. In accordance with Ross Municipal Code Section 18.41.070, Design Review is approved based on the following findings:

a) The project is consistent with the purpose of the Design Review chapter as outlined in Ross Municipal Code Section 18.41.010:

The project would meet the purpose of the Design Review chapter through its high quality design and materials. The project is designed with a similar architectural style and materials of the existing residence. The project would not impact the "small town" character of the Town because the project would be consistent with the development patterns within the neighborhood relative to mass and scale and would be constructed with high quality materials and earth tone colors. Additionally, the project would not impact any unique environmental resources due to the location of the project site relative to any sensitive wildlife habitat, species, and/or creeks. Lastly, the project would be required to address drainage and stormwater prior to issuance of any building permit to allow for the construction of the project.

b) The project is in substantial compliance with the design criteria of Ross Municipal Code Section 18.41.100.

The project would be consistent with the design review criteria and standards relative to architectural design, materials, colors, and landscaping. Lastly, the project would address health and safety through the issuance of a building permit to ensure compliance with the building, public works, and fire code regulations.

c) The project is consistent with the Ross General Plan and zoning ordinance.

The scope of the project would be consistent with the allowed structures and uses that may be permitted within the Medium Low Density land use designation of the General Plan and the single family residence chapter of the zoning ordinance.

II. In accordance with Ross Municipal Code Section 18.52.040, a Nonconformity Permit is approved based on the following findings:

a) The nonconforming structure was in existence at the time the ordinance that now prohibits the structure was passed. The structure must have been lawful when constructed.

The project site is comprised of lot 8 of the Cole Tract that was recorded with the County of Marin in 1899. The project site is relatively flat with a 2.35% slope average. Access to the site is via Redwood Avenue and Brookwood Lane. The existing single family residence was constructed on

the site circa 1906 prior to the Town being incorporated and has an existing legal nonconforming setback along Brookwood Lane.

b) The town council can make the findings required to approve any required demolition permit for the structure.

The scope of the project would not include the demolition of the existing residence. Existing structural building walls may be altered to accommodate the addition, however, the extent of the building wall alterations would not trigger a Demolition Permit pursuant to Section 18.50.020 of the Ross Municipal Code.

c) The project substantially conforms to relevant design review criteria and standards in Section 18.41.100.

See Design Review Findings above.

d) Total floor area does not exceed the greater of: a) the total floor area of the existing conforming and/or legal nonconforming structure(s); or b) the maximum floor area permitted for the lot under current zoning regulations.

The project would not exceed the maximum floor area permitted for the R-1:B-10 zoning district.

e) Granting the permit will not be detrimental to the public health, safety or welfare, or materially injurious to properties or improvements in the vicinity.

The project would allow for an overall improvement to the building exterior and improvement to the functionality of the building interior. The project would also be required to comply with the Town's Building Code and Fire Code requirements, therefore ensuring the health, safety, and general welfare of the residence residing or working in the neighborhood.

f) The project will comply with the Flood Damage Prevention regulations in Chapter 15.36.

The project site is designed to comply with the base flood elevation requirements of FEMA as shown on the project plans date-stamped June 30, 2016.

g) The fire chief has confirmed that the site has adequate access and water supply for firefighting purposes, or that the project includes alternate measures approved by the fire chief.

The project has been reviewed by the Ross Valley Fire Department (RVFD). The RVFD has provided stated that the project can be approved subject to the installation of fire sprinklers, smoke detectors, and carbon monoxide detectors.

h) The applicant has agreed in writing to the indemnification provision in Section 18.40.180.

Indemnification requirements have been included as conditions of approval

i) The site has adequate parking.

The project would provide the required two on-site parking spaces, of which at least one parking space would be covered consistent with the R1:B-10 zoning regulations.

III. In accordance with Ross Municipal Code Section 12.24.080, a Tree Removal permit is approved based on the following findings:

1. The alteration or removal is necessary to allow the economic enjoyment of the property, such as construction of improvements because some of the trees are located over the most feasible development area;
2. The alteration or removal would not adversely impact the subject property or neighboring properties because a large number of trees will remain;
3. Tree removal would not result in significant erosion or the diversion of increased flows of surface water because engineered fill would be placed where stumps are removed;

EXHIBIT "B"
CONDITIONS OF APPROVAL
24 REDWOOD DRIVE
APN 073-271-07

1. This approval authorizes Design Review, a Nonconformity Permit, and a Tree Removal Permit to allow the remodel and an 849 square foot floor area addition to the existing residence, which includes a 3.66 foot tall height increase, a new one car garage, and the removal of two protected coast live oak trees. The project would maintain a similar architectural style of the existing residence and would include a dark brown composition shingle roof material, natural stained cedar shingles, and a dark green paint color for the fascia and trim.

2. The building permit shall substantially conform to the plans entitled, "Addition/Remodel for Naaim Karkabi" consisting of 11 sheets prepared by Jeff Kroot Architect & Associates.

3. Prior to issuance of a building permit, the following conditions of approval shall be reproduced on the cover sheet of the plans submitted for a building permit. The property owner shall certify on the building permit plans that they have read and agree to the following conditions.

4. Except as otherwise provided in these conditions, the project shall comply with the plans submitted for Town Council approval. Plans submitted for the building permit shall reflect any modifications required by the Town Council and these conditions.

5. No changes from the approved plans, before or after project final, including changes to the materials and material colors, shall be permitted without prior Town approval. Red-lined plans showing any proposed changes shall be submitted to the Town for review and approval prior to any change. The applicant is advised that changes made to the design during construction may delay the completion of the project and will not extend the permitted construction period.

6. Prior to Building Permit Issuance, the applicant shall submit proposed exterior lighting fixtures if any new lighting will be installed as a result of the project. All lighting shall be shielded (no bare bulb light fixtures or down lights that may be visible from down-slope sites). Exterior lighting of landscaping by any means shall not be permitted if it creates glare, hazard or annoyance for adjacent property owners. Lighting expressly designed to light exterior walls or fences that is visible from adjacent properties or public right-of-ways is prohibited. No up lighting is permitted. Interior and exterior lighting fixtures shall be selected to enable maximum "cut-off" appropriate for the light source so as to strictly control the direction and pattern of light and eliminate spill light to neighboring properties or a glowing night time character.

7. The arbor-style entry element as depicted on Sheet L1.0 of the approved plans is approved in the front yard provided the it is located over a walkway or pathway, does not encroach into the Redwood Drive public right-of-way, and does not exceed nine feet in height, five feet in width, and three feet in depth as allowed by Section 18.40.080(3) of the Ross Municipal Code.

8. Prior to issuance of any building or grading permit, the applicant shall submit written evidence that the project arborist has reviewed the final construction-level drawings, including grading, drainage and utility plans (they should note the dates of the plans reviewed). All tree protection conditions recommended by the project arborist shall be included on those plans and are specific to all construction operations to ensure compliance with the conditions.

9. Prior to issuance of a building permit or grading permit, the Town Arborist shall peer review the project landscape plan and tree protection measures to ensure no adverse impacts on any root systems related to existing trees both on the site and within the project vicinity. The landscape plan and/or tree protection plan shall be modified to address concerns raised by the Town Arborist.

10. Prior to issuance of any building permit or grading permit, tree protection fencing should be installed prior to permit issuance to minimize damage to root systems of preserved trees. Spatial distance from tree trunks of protected trees shall be measured in all directions based on the Town of Ross' tree regulations pursuant to Chapter 12.24 of the Ross Municipal Code. Tree Protection fencing shall designate the Non Intrusion Zones and will be constructed of at least 4-foot high plastic and attached to metal stakes no less than 12 inches into ground and at 6-foot centers. Signs shall be posted to identify the tree protection fencing.

11. Prior to issuance of any building permit or grading permit, the project Arborist shall inspect the site to determine if tree protection fencing has been properly installed. The project arborist shall notify the Town of Ross when protection fencing inspection is completed.

12. The project arborist shall be on-site during any project grading associated with the installation of the foundation or any excavation to occur within any designated "Non Intrusion Zone". The project arborist shall submit daily written reports in the form of an arborist check sheet. The arborist inspection check sheets should include the date and time of the inspection, the status of compliance with the tree protection measures, any necessary adjustments to the tree protection plan, and any damages or adverse impacts to trees (on-site and the Redwood tree located at 20 Redwood Drive). Any damages to trees remaining must be reported the same day they occur and steps to correct the damage must be submitted to the Town of Ross and performed.

13. To insure that all tree protection measures comply with the Town of Ross Tree Ordinance and the Landscape Architect Tree Protection Notes on the plans date-stamped received June 30,

2016 are accurate, the project arborist shall conduct monthly site inspections and submit in the form of an arborist check sheet. The monthly arborist inspection check sheets should include the date and time of the inspection, the status of compliance with the tree protection measures, any necessary adjustments to the tree protection plan, and any damages or adverse impacts to trees (on-site and the Redwood tree located at 20 Redwood Drive). Any damages to trees remaining must be reported the same day they occur and steps to correct the damage must be submitted to the Town of Ross and performed without delay to prevent further health effects.

14. The Town reserves the right to require additional landscape screening prior to project final. Landscaping shall be installed in substantial conformance with the approved landscape plan prior to project final. The Town staff reserves the right to require modifications to the landscape to protect mature trees and to comply with MMWD water conserving landscape requirements or fire code clearance requirements. The Town Council reserves the right to require additional landscape screening for up to three (3) years from project final.

15. The project shall comply with the following conditions of the Town of Ross Building Department and Public Works Department:

    a. Any person engaging in business within the Town of Ross must first obtain a business license from the Town and pay the business license fee. Applicant shall provide the names of the owner, architects, engineers and any other people providing project services within the Town, including names, addresses, e-mail, and phone numbers. All such people shall file for a business license. A final list shall be submitted to the Town prior to project final.

    b. A registered Architect or Engineer's stamp and signature must be placed on all plan pages.

    c. The building department may require the applicant to submit a deposit prior to building permit issuance to cover the anticipated cost for any Town consultants, such as the town hydrologist, review of the project. Any additional costs incurred by the Town, including costs to inspect or review the project, shall be paid as incurred and prior to project final.

    d. The applicant shall submit an erosion control plan with the building permit application for review by the building official/director of public works. The Plan shall include signed statement by the soils engineer that erosion control is in accordance with Marin County Stormwater Pollution Prevention Program (MCSTOPP) standards. The erosion control plan shall demonstrate protection of disturbed soil from rain and surface runoff and demonstrate sediment controls as a "back-up" system (ie temporary seedin nd mulching or straw matting).

    e. No grading shall be permitted during the rainy season between October 15 and April 15 unless permitted in writing by the Building Official/Director of Public Works. Grading is considered to be any movement of earthen materials necessary for the completion of the project. This includes, but is not limited to cutting, filling, excavation for foundations, and

the drilling of pier holes. It does not include the boring or test excavations necessary for a soils engineering investigation. All temporary and permanent erosion control measures shall be in place prior to October 1.

f. The drainage design shall comply with the Town's stormwater ordinance (Ross Municipal Code Chapter 15.54). A drainage plan and hydrologic/hydraulic analysis shall be submitted with the building permit application for review and approval by the building official/public works director, who may consult with the town hydrologist at the applicants' expense (a deposit may be required). The plan shall be designed, at a minimum, to produce no net increase in peak runoff from the site compared to pre-project conditions (no net increase standard). As far as practically feasible, the plan shall be designed to produce a net decrease in peak runoff from the site compared to pre-project conditions. Applicants are encouraged to submit a drainage plan designed to produce peak runoff from the site that is the same or less than estimated natural, predevelopment conditions which existed at the site prior to installation of impermeable surfaces and other landscape changes (natural predevelopment rate standard). Construction of the drainage system shall be supervised, inspected and accepted by a professional engineer and certified as-built drawings of the constructed facilities and a letter of certification shall be provided to the Town building department prior to project final.

g. An encroachment permit is required from the Department of Public Works prior to any work within a public right-of-way.

h. The plans submitted for a building permit shall include a detailed construction and traffic management plan for review and approval of the building official, in consultation with the town planner and police chief. The plan shall include as a minimum: tree protection, management of worker vehicle parking, location of portable toilets, areas for material storage, traffic control, method of hauling and haul routes, size of vehicles, and washout areas.

i. The applicant shall submit a schedule that outlines the scheduling of the site development to the building official. The schedule should clearly show completion of all site grading activities prior to the winter storm season and include implementation of an erosion control plan. The construction schedule shall detail how the project will be completed within the construction completion date provided for in the construction completion chapter of the Ross Municipal Code (Chapter 15.50).

j. A Final construction management plan shall be submitted in time to be incorporated into the job.

k. A preconstruction meeting with the property owner, project contractor, project architect, project arborist, representatives of the Town Planning, Building/Public Works and Ross Valley Fire Department and the Town building inspector is required prior to issuance of

the building permit to review conditions of approval for the project and the construction management plan.

l. A copy of the building permit shall be posted at the site and emergency contact information shall be up to date at all times.

m. The Building Official and other Town staff shall have the right to enter the property at all times during construction to review or inspect construction, progress, compliance with the approved plans and applicable codes.

n. Inspections shall not be provided unless the Town-approved building permit plans are available on site.

o. Working Hours are limited to Monday to Friday 8:00 a.m. to 5:00 p.m. Construction is not permitted at any time on Saturday and Sunday or the following holidays: New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day. If the holiday falls on a Sunday, the following Monday shall be considered the holiday. If the holiday falls on a Saturday, the Friday immediately preceding shall be considered the holiday. Exceptions: 1.) Work done solely in the interior of a building or structure which does not create any noise which is audible from the exterior; or 2.) Work actually physically performed solely by the owner of the property, on Saturday between the hours of 10:00 a.m. and 4:00 p.m. and not at any time on Sundays or the holidays listed above. (RMC Sec. 9.20.035 and 9.20.060).

p. Failure to comply in any respect with the conditions or approved plans constitutes grounds for Town staff to immediately stop work related to the noncompliance until the matter is resolved. (Ross Municipal Code Section 18.39.100). The violations may be subject to additional penalties as provided in the Ross Municipal Code and State law. If a stop work order is issued, the Town may retain an independent site monitor at the expense of the property owner prior to allowing any further grading and/or construction activities at the site.

q. Materials shall not be stored in the public right-of-way. The project owners and contractors shall be responsible for maintaining all roadways and right-of-ways free of their construction-related debris. All construction debris, including dirt and mud, shall be cleaned and cleared immediately. All loads carried to and from the site shall be securely covered, and the public right-of-way must be kept free of dirt and debris at all times. Dust control using reclaimed water shall be required as necessary on the site or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at site. Cover stockpiles of debris, soil, sand or other materials that can be blown by the wind.

r. Applicants shall comply with all requirements of all utilities including, the Marin Municipal Water District, Ross Valley Sanitary District, and PG&E prior to project final. Letters

confirming compliance shall be submitted to the building department prior to project final.

s. All electric, communication and television service laterals shall be placed underground unless otherwise approved by the director of public works pursuant to Ross Municipal Code Section 15.25.120.

t. The project shall comply with building permit submittal requirements as determined by the Building Department and identify such in the plans submitted for building permit.

u. The applicant shall work with the Public Works Department to repair any road damage caused by construction. Applicant is advised that, absent a clear video evidence to the contrary, road damage must be repaired to the satisfaction of the Town prior to project final. Damage assessment shall be at the sole discretion of the Town, and neighborhood input will be considered in making that assessment.

v. Final inspection and written approval of the applicable work by Town Building, Planning and Fire Department staff shall mark the date of construction completion.

w. The Public Works Department may require submittal of a grading security in the form of a Certificate of Deposit (CD) or cash to cover grading, drainage, and erosion control. Contact the Department of Public Works for details.

x. The applicant shall submit an erosion control plan with the building permit application for review by the building official/director of public works. The plan shall include a signed statement by the soils engineer that erosion control is in accordance with Marin County Stormwater Pollution Prevention Program (MCSTOPPP) standards. The erosion control plan shall demonstrate protection of disturbed soil from rain and surface runoff and demonstrate sediments controls as a "back-up" system. (Temporary seeding and mulching or straw matting are effective controls).

y. The Soils Engineer shall provide a letter to the Department of Public Works certifying that all grading and drainage has been constructed according to plans filed with the grading permit and his/her recommendations. Any changes in the approved grading and drainage plans shall be certified by the Soils Engineer and approved by the Department of Public Works. No modifications to the approved plans shall be made without approval of the Soils Engineer and the Department of Public Works.

   i. The existing vegetation shall not be disturbed until landscaping is installed or erosion control measures, such as straw matting, hydroseeding, etc, are implemented.

   ii. All construction materials, debris and equipment shall be stored on site. If that is not physically possible, an encroachment permit shall be obtained from the Department

of Public Works prior to placing any construction materials, debris, debris boxes or unlicensed equipment in the right-of-way.

iii. The applicant shall provide a hard copy and a CD of an as-built set of drawings, and a certification from all the design professionals to the building department certifying that all construction was in accordance with the as-built plans and his/her recommendations.

16. The applicants and/or owners shall defend, indemnify, and hold the Town harmless along with the Town Council and Town boards, commissions, agents, officers, employees, and consultants from any claim, action, or proceeding ("action") against the Town, its boards, commissions, agents, officers, employees, and consultants attacking or seeking to set aside, declare void, or annul the approval(s) of the project or alleging any other liability or damages based upon, caused by, or related to the approval of the project. The Town shall promptly notify the applicants and/or owners of any action. The Town, in its sole discretion, may tender the defense of the action to the applicants and/or owners or the Town may defend the action with its attorneys with all attorneys fees and litigation costs incurred by the Town in either case paid for by the applicant and/or owners.

POLSKY PERLSTEIN ARCHITECTS

469 B Magnolia Avenue
Larkspur, CA 94939
Phone 415 927 1156
Fax 415 927 0847
www.polskyarchitects.com

July 7, 2016

Sal Lucido
Building Official
Town of Ross
P.O. Box 320
Ross, CA 94957

Dear Mr. Lucido,

On behalf of Mr. Greenberg, we would like to appeal the penalty assessed on Mr. Greenberg's property at 27 Upper Road. The final sign off of the construction permit was delayed for reasons beyond Mr. Greenberg's or his representatives' control. We want to point out that in fact, the CONSTRUCTION was completed within 10 ½ months of the start of construction---well before the 18 month period allowed for the construction of this project. The only reason for the late sign off from the building department was the untimely and ultimately inapplicable requests for information from the Ross Valley Fire Department.

The following is a timeline for the construction of the Greenberg Amnesty project:

After much deliberation from 2012 to the end of 2013 the planning approval was granted and the building permit was ready for pick-up on December 12, 2013. The contractor, Mr. Steve Selover of SASCO took out his Town license and picked up the building permit on February 18, 2014. Construction started shortly thereafter.

The first inspection was called on February 24, 2014 and passed on February 27, 2014. The second inspection passed on March 19,2014. Building inspections passed on March 21, April 4, April 23 and June 13, June 25, July 9, 2014. The Fire Department asked for a roll down fire door on the March 20th then reversed their decision on July 14 realizing it would be unsafe and asked for swinging fire doors instead. It took almost 5 months to get the fire doors because they had to be custom made to meet the Fire Department's requirements. These doors were installed and the penultimate final inspection was approved on December 3, 2014.

To be clear, all building items were approved and signed off on December 3, 2014. At this time the only remaining item for final sign off and approval was the Fire Department sign off. On December 4, 2014 the town manager Mr. Braulik noted that there was no requirement for the town planner to sign off on the work. On February 10, 2015 Mr. Selover again called Simone, the building inspector, and the town manager asking for a final inspection but could still not get the Fire Department to sign off on the permit.

From December 3, 2014 to the final sign off from the Fire Department on June 1, 2016 NO construction work was performed on the site except for an approximate ½ day of insulation and weatherstripping as requested by the Fire Department. The almost 2 ½ year delay was caused by Fire Department requests for more information. Throughout this process Mr. Selover kept Mr. Braulik informed notifying him of further requests for information from the Fire Department. Mr. Selover kept detailed notes and logs and can demonstrate the nature of the process to finally gain the Fire Department sign off. We will produce documents to show the requests for information and the responses to these requests.

The following quickly summarizes the information requests from the Fire Department:

1. The contractor received disparate requests for information from the Fire Department throughout the project. Instead of receiving one comprehensive list of additional information, he would be asked for

bits and pieces of additional items throughout the process. There would be long delays, sometimes as much as four or five months between requests for information and adequate responses to questions from the contractor.

2. The Fire Department asked for full documentation of the existing CEMCO fire suppression system-- wet stamped sign offs from AAA, the company that had supplied and installed the fire suppression system. They also requested complete drawings of the suppression and alarm systems. The company that installed the system no longer installs this system so Mr. Selover hired another company to fully document this process. Ultimately the Fire Department agreed that the massive amount of documentation that was gathered at great expenses- both time and money-- was not necessary for their sign off. Again Mr. Braulik was informed of the stop and start nature of the requests.

3. The Fire Department also delayed their sign off noting that their radio system would not work throughout the underground building. After much investigation and expense, Mr. Selover found out that a supplemental radio system would be complicated and extremely expensive. After a long delay he noted to the Fire Department that this requirement seemed more applicable to a commercial or institutional buildings. Upon further review the Fire Department agreed that they should not have required this radio upgrade for a residential facility and that this would no longer be mandatory or delay the final sign off.

Again, all these Fire Department requests for information were given piece meal with long delays between requests for information Ultimately none of the documentation requested was applicable or used for the final sign off. The request for this information caused an almost 2 ½ year delay.

For construction projects of this size, applicants and contractors are allotted 18 months to complete their projects. The Town wants construction finished in a timely manner. Clearly the intent of this ordinance is to minimize the impact of construction on neighbors. It is our strong contention that in this case the intent of the ordinance was met. The construction was entirely interior work with no noise impacts to the neighbors. Ultimately all the construction work was performed and signed off within 10 ½ months from the start of construction. In fact the contractor essentially performed NO construction work for almost 2 ½ years from the final building department sign off in early December, 2014 to the final sign off from the Fire Department in late May, 2016. All the delays were for reasons beyond Mr. Greenberg's or his contractor's and representatives' control.

We are therefore appealing this penalty and feel that no penalty should be assessed.

Yours truly,

Jared Polsky
Polsky Perlstein Architects
CA License 14125

ATTACHMENT 2

Town of Ross
Building Department
Post Office Box 320, Ross, CA 94957
Telephone **(415) 453-1453 ext. 106** Fax **(415) 460-9761**
www.townofross.org

Report No. 1992-15

REPORT OF RESIDENTIAL BUILDING RECORD

Ross Municipal Code Chapter 15.32

Report valid for six months from the date of inspection

Assessor's Parcel Number:	**073-271-07**
Street Address:	**24 Redwood Dr.**
Present Owner:	**Catherine Ghirarduzze**
Realtor:	**Front Porch Realty Group**
Telephone:	**415-250-9040, Janelle**
Report sent to:	**call for pick up**
Inspection date:	**10-27-15**
Expiration date:	**04-27-16**

The Town recommends that sellers provide this report to anyone interested in purchasing the property. This report shall be delivered by the owner to the buyer or transferee of the property prior to the consummation of the sale or exchange. The buyer or transferee shall complete and return the receipt back to the Town (R.M.C. §15.32.050).

Contact the appropriate department for re-inspection after any mandatory corrections are made:
Planning Department (415) 453-1453, Extension 121
Building Department (415) 453-1453, Extension 170
Public Works Department (415) 453-1453, Option 4
Ross Valley Fire Department (415)258-4686

If corrections are required, any corrections must be made in the time periods specified in this report. **Except in the case of emergency, no permits will be issued until all mandatory corrections are made**. Permits may be required for corrections. If the current or future property owner(s) fail to make any corrections required in this report, additional enforcement options may be used to gain compliance. These options include, but are not limited to, administrative fines, civil penalties, nuisance abatement, criminal prosecution or civil litigation. If corrections are not made, no future permits will be issued (except in the case of emergency) until all listed corrections have been completed. The Town makes no recommendation as to whom, seller or buyer, makes the required corrections.

The preparation and delivery of this report shall not impose any liability upon the Town for any errors or omissions contained in the report, nor shall the town bear any liability not otherwise imposed by law (R.M.C. §15.32.090). No statement contained in this report shall authorize the use or occupancy of any building contrary to the provisions of any law or ordinance. This report does not constitute a full disclosure of all material facts affecting the property or the desirability of its sale. The scope of the report and inspection is necessarily limited and code deficiencies may exist which are not identified during the inspection.

Inspection Date: October 27, 2015

ADDRESS: 24 Redwood, Ross, APN 073-271-07

Zoning Information, Ross Municipal Code Title 18

Any available Town Council minute history for the site is attached. Planning files are available for review at the Planning Department.

There are a number of issues that may arise during a discretionary planning review process that the Town will not identify in this report. ***For example****, a structure may be considered* ***"historic"****, or a site may contain sensitive archaeological resources, protected wildlife or habitat, or be considered a hillside lot subject to more restrictive development regulations. The Town does not independently verify the accuracy of any lot size, lot coverage, setback or floor area information that may be provided with this report.*

All non-permitted structures cannot be included in existing floor area ratio unless the property owner can demonstrate they were built legally or prior to Town permit requirements.

Zoning District:	R-1:B-10
Existing Use(s):	Single Family Residential
On Site Parking Required:	2 spaces (1 covered)
Existing on site parking:	3+ uncovered 0 covered
	☐
Accessory Structures/Use:	None
Nonconformities noted:	Parking, other nonconformities unconfirmed
Comments on present use:	Single family residence

Informational Items:

The building is close to the side yard setback area adjacent to Brookwood Lane but encroachment is unconfirmed.

Notice of Town Code Violations - Corrections Required by Planning Department:

None.

Flood Hazard Information, Ross Municipal Code Chapter 15.36

The Town of Ross regulates construction and development in the floodplain to ensure that buildings will be protected from flood damage. Any development in flood hazard areas or the floodway will have to follow the Town Flood Damage Prevention regulations (R.M.C. Chapter 15.36). Flood insurance from the National Flood Insurance Program (NFIP) is available for any property in the Town of Ross. More information on flood insurance is attached. The Town of Ross has copies of elevation certificates for some properties in the floodplain. Questions regarding this report and the Town's floodplain management program are welcome by calling (415) 453-1453 ext. 121.

The property located at **24 Redwood Dr** has been located on the Town's Flood Insurance Rate Map (FIRM). The following information is provided:

Community ID or NFIP number: **060179**
The property is located on panel number**: 0458**, Suffix: **E**
The date of the FIRM index: **March 17, 2014**
The property is located in FIRM zone: **AE**
Is the property located in a Floodway? ☒ NO ☐ YES
Is the property located in a dam inundation area? ☒ NO ☐ YES

The main building on the property:

☒ **IS located in a Special Flood Hazard Area.** The base flood elevation at the property ☐ is _____, NAVD ☒ has not been determined. Federal law requires that a flood zone determination be done as a condition of a federally backed grant or loan to determine if the structure is in an SFHA and if so, to require flood insurance. This letter is not to be considered a flood zone determination. It is up to the lender to determine whether flood insurance is required for a property.

☐ **IS NOT located in a Special Flood Hazard Area**. However, the property may still be subject to local drainage problems or other unmapped flood hazard. Flood insurance from the National Flood Insurance Program (NFIP) is available at non-floodplain rates. A flood insurance policy can still be required by a lender.

☐ A decision about the building's exact location cannot be made on the FIRM. A copy of the FIRM is attached for your information.

NOTE: This information is based on the Flood Insurance Rate Map for the Town. This letter does not imply that the referenced property will or will not be free from flooding or damage. A property not in a Special Flood Hazard Area may be damaged by a flood greater than that predicted on the FIRM or from a local drainage problem not shown on the map.

Flood insurance from the NFIP is available for any property in this Town. The Town maintains copies of FEMA Elevation Certificates. Questions about this document or about the Town's floodplain management program are welcome at this office by calling (415) 453-1453 or emailing esemonian@townofross.org. To find a local insurance agent that writes flood insurance in your area visit www.floodsmart.gov.

Attachments (if available or applicable):

☒ About the Mandatory Purchase of Flood Insurance
☐ Elevation Certificate(s) for property
☐ Historic Flood Information
☐ Floodway Information

TOWN OF ROSS

About the Mandatory Purchase of Flood Insurance

The NFIP: The National Flood Insurance Program (NFIP) is a federal program enabling property owners in participating communities to purchase flood insurance on eligible buildings and contents, whether they are in or out of a floodplain. This community participates in the NFIP, making federally backed flood insurance available to its property owners.

The NFIP insures most walled and roofed buildings that are principally above ground on a permanent foundation, including mobile homes, and buildings in the course of construction. Property owners can purchase building and contents coverage from any local property and casualty insurance agent. To find a local insurance agent that writes flood insurance in your area visit www.floodsmart.gov.

Mandatory Purchase Requirement: Pursuant to the Flood Disaster Protection Act of 1973 and the National Flood Insurance Reform Act of 1994, the purchase of flood insurance is mandatory for all federal or federally related financial assistance for the acquisition and/or construction of buildings in Special Flood Hazard Areas (SFHAs). An SFHA is defined as any A (including AE) or V flood zone on a Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM).

The mandatory purchase requirement also applies to secured loans from such financial institutions as commercial lenders, savings and loan associations, savings banks, and credit unions that are regulated, supervised, or insured by federal agencies, such as the Federal Reserve, the Federal Deposit Insurance Corporation, the Comptroller of Currency, the Farm Credit Administration, the Office of Thrift Supervision, and the National Credit Union Administration. It further applies to all loans purchased by Fannie Mae or Freddie Mac in the secondary mortgage market.

Federal financial assistance programs affected by the laws include loans and grants from agencies such as the Department of Veterans Affairs, Farmers Home Administration, Federal Housing Administration, Small Business Administration, and FEMA disaster assistance.

How it Works: When making, increasing, renewing, or extending any type of federally backed loan, lenders are required to conduct a flood zone determination using the most current FEMA FIRM to determine if any part of the building is located in an SFHA. If the building is in an SFHA, the federal agency or lender is required by law to provide written notification to the borrower that flood insurance is mandatory as a condition of the loan. Even though a portion of real property on which a building is located may lie within an SFHA, the purchase and notification requirements do not apply unless the building itself, or some part of the building, is in the SFHA. However, lenders, on their own initiative, may require the purchase of flood insurance even if a building is located outside an SFHA. Up to 25% of all NFIP flood losses arise from outside SFHAs (B, C, and X Zones).

Under federal regulations, the required coverage must equal the amount of the loan (excluding appraised value of the land) or the maximum amount of insurance available from the NFIP, whichever is less. The maximum amount of coverage available for a single-family residence is $250,000 and for non-residential (commercial) buildings is $500,000. Federal agencies and regulators, including government-sponsored enterprises, such as Freddie Mac and Fannie Mae, may have stricter requirements.

Building Department Inspection Information

See building department file for construction, electrical, plumbing, mechanical permits issued for the site.

☐ The following building, mechanical, plumbing or electrical permits have been issued for work not yet completed on the premises:

The following corrections must be made within six (6) months of the date of this report. Please contact the Building Department at (415) 453-1453 ext. 170 to schedule a re-inspection. There is no fee for re-inspection.

Correction Required	Permit Required	Informational		
			Electrical	
☐	☐	☐	**1.**	All Edison based fuses must be fitted with type "S" fuses. Maximum 15 Amp for size 14 wire and 20 Amp for size 12 wire.
☐	☐	☐	**2.**	All exposed Romex wiring must be protected from physical contact below eight feet in height in
☐	☐	☐	**3.**	All electrical outlet and junction boxes and switches to be covered in
☐	☐	☐	**4.**	All splices must be within junction boxes in
☐	☐	☐	**5.**	All thee prong outlets that are not grounded to be grounded or original two prong installed in
☐	☐	☐	**6.**	Ground outlets in
☐	☐	☐	**7.**	Install exterior main disconnect switch for electric service
☐	☐	☐	**8.**	Install Ground-Fault Circuit Interrupter (GFCI) outlets in
☐	☐	☐	**9.**	Label all panels and breakers.
☐	☐	☐	**10.**	Pool/Spa equipment to be grounded.
			Furnace	
☐	☐	☐	**11.**	Gas supply pipe to be stainless steel, flexible connector
☐	☐	☐	**12.**	Provide a disconnect switch
☐	☐	☐	**13.**	Repair bad joints or loose connection in flue pipe
			General	
☒	☒	☐	**14.**	All stairways, interior and exterior, with more than three risers shall be provided with handrail at main floor stairs to second floor.
☒	☐	☐	**15.**	Chimney to be swept
☐	☐	☐	**16.**	Door from garage to dwelling must be solid core and self-closing

Correction Required	Permit Required	Informational		
☐	☐	☐	**17.**	Guardrails shall be at least 42 inches high with openings sized so that 4" diameter sphere cannot pass through at
☒	☒	☐	**18.**	Install carbon monoxide (CO) device(s) in a manner consistent with building standards applicable to new construction
☒	☒	☐	**19.**	Install smoke alarms: ☒ in each sleeping room ☒ outside each separate sleeping area in the immediate vicinity of the bedrooms ☒ on each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics
☐	☐	☐	**20.**	Post minimum 4 inch address numbers, contrasting color to background, plainly visible from street or road fronting property for each unit
☐	☐	☐	**21.**	Provide safety barriers to code in pool area
☐	☐	☐	**22.**	Provide sparks arrester at top of chimney(s), screening to be half-inch maximum square openings
☐	☐	☐	**23.**	Repair holes in Gypsum board and tape in
☐	☐	☐	**24.**	Repair and fill in joints in firebricks in fireplace
☐	☐	☐	**25.**	The required firewall of five eighth gypsum board type x fire taped must be installed on
☐	☐	☐	**26.**	Dishwasher, air gap on drain system required
				Water Heater
☐	☐	☐	**27.**	Flue to be brought up to code
☐	☐	☐	**28.**	Gas supply pipe to be stainless steel flexible connector
☐	☐	☐	**29.**	Overflow pipe from pressure relief valve to be metallic same size as valve to extend to the outside or within six inches of the floor
☐	☐	☐	**30.**	Provide a pressure relief valve to the hot side of the water heater piping or to the appropriate manufacturer's connection
☐	☐	☐	**31.**	Strap to resist earthquake motion
				Unpermitted or Non-compliant Items
☐	☐	☐	**32.**	

33. – 40. Additional Requirements and Corrections and Additional Informational Items

33. All Exterior hosebids need air gap preventers.

34. Utility room gas line needs cap on ball valve.

35. Utility room opening in walls and ceiling must be fire taped.

36. Water heater vent going through ceiling needs a metal flashing around pipe or fire tap around pipe going through the ceiling.

Thomas J Thuyn — 10/30/15

BUILDING INSPECTOR — DATE

ADDRESS: #24 Redwood Dr 10/27/2015

Public Works Department Inspection Information

Does the property front on a Town maintained roadway? ☒ Yes ☐ No ☐ Unknown

The following corrections must be made within sixty (60) days of the date of this report. Please contact the Public Works Streets Superintendent at (415) 453-1453, x163 to schedule a re-inspection.

Correction Required	Permit Required	Informational		
				Urban Runoff Pollution Prevention R.M.C. Chapter 12.28 and Stormwater Management R.M.C. Chapter 15.54
☐	☐	☐	**40.**	Pool equipment flushing system shall not be directly connected to storm drain system or waterway.
☐	☐	☐	**41.**	Roof runoff and/or area drains directly connected to the Town storm drain system. Does not comply with current Town code. No down spouts shall be connected directly to the Town storm drain system or enter directly into any water course or creek without first going through a treatment area (such as flowing over a landscaped area, lawn or French drain, or other area that cleans, filters, slows the speed and amount of water leaving a property), or to an approved alternate location based on approved geotechnical and engineering designs. (R.M.C. Section 15.54.010(a))
☐	☐	☐	**42.**	Runoff from pool hardscape shall not flow directly to storm drain system or waterway.
☐	☐	☐	**43.**	The existing drainage system shall be cleaned, repaired or replaced as necessary.
☐	☐	☐	**44.**	Vegetation obstructing creek flow.
☐	☐	☐	**45.**	Video inspection of on-site culverts required. Contact public works for details and requirements.
				Sidewalk, Etc., Repair and Construction R.M.C. Chapter 12.20
☐	☐	☐	**46.**	All cracked, broken or uplifted sidewalk fronting the property shall be repaired.
☐	☐	☐	**47.**	All cracked, broken or uplifted sidewalk fronting the property shall be replaced. A -foot wide sidewalk shall be required.
☐	☐	☐	**48.**	Collapsed, broken or damaged driveway culvert or driveway in a state of disrepair which causes a traffic hazard to exist or impedes the proper flow of roadside drainage. Culvert and/or driveway shall be repaired/replaced.
☐	☐	☐	**49.**	Curb and gutter shall be repaired/replaced.
☐	☐	☐	**50.**	Driveway culvert impedes the proper flow of roadside drainage because of its size, shape or elevation and shall be replaced.
☐	☐	☐	**51.**	Sidewalk is not ADA compliant.

Correction Required
Permit Required
Informational

Weeds, Trees and Vegetation R.M.C. Chapter 12.12

☐ ☐ ☐ **52.** Flowers, shrubs and other growth (except trees) in the sidewalk area exceed height limit under.

☒ ☐ ☐ **53.** Maintain the right-of-way from the property line to the edge of the pavement.

☐ ☐ ☐ **54.** Remove Dutch Elm Disease infected trees. A tree removal permit required.

☐ ☐ ☐ **55.** Remove Sudden Oak Death infected trees. A tree removal permit is required.

☒ ☐ ☐ **56.** Trim branches of trees and vegetation that extend lower than seven feet above the surface of the sidewalk area or lower than thirteen feet six inches above the street used for vehicular traffic, whether planted in the sidewalk area or upon private property.

☒ ☐ ☐ **57.** Trim trees, hedges, plants, shrubs or vegetation, obstructing or impairing the free full public use of the sidewalk area or street.

Encroachments

☒ ☐ ☐ **58.** A Revocable Encroachment Permit is required from the Public Works Department for all work within the right-of-way.

Noted encroachments in accepted right-of-way:

- ☒ Unknown
- ☐ Landscaping
- ☐ Fence or wall
- ☐ Driveway
- ☐ Other:

Public Works Informational Items

☒ Property owner required to maintain the section of right-of-way from the property line to the edge of the road pavement. Maintenance shall include removal of leaves and weeds. All landscaping shall be approved by the Town Manager or their designee. Maintenance of all landscaping shall be the responsibility of the property owners. (R.M.C. §12.12.015)

☐ Any person owning real property in the town shall repair any defective sidewalk, curb, park or parking strip lying in front of or along the side of the property. (R.M.C. §12.20.010)

☒ Owner of property shall, at all times, keep all creeks, channels or watercourses or portions thereof which flow upon, over, or across, the property free and clear of obstructions. (R.M.C. §13.16.010-13.16.020)

☐ Other:

☐ See attached XXX

Robert Macaw 10/29/2015

#24 Redwood Dr. Resale Report 10/27/2015

Please see attached picture to clarify the following corrections necessary.

1. There is a watercourse at the back yard of the property. Homeowners are responsible to maintain all waterways running over and under their property. This femoral creek can carry large volumes of water during rain events. Please keep the channel clean and free of debris that can clog the culvert that runs under Brookwood Dr. Please check the culvert entrance before; during and after rain events to be sure that debris is not obstructing the natural flow of water passing into the culvert.

2. There is a pile of cut up wood near the top of the creek bank this must be removed.

3. The trees and brush hanging out over the roadway on Brookwood Ave must be cut back a minimum of 4' behind the paved roadway and 13'3" above the road surface. The drainage ditch along the side of the road must be cleaned of debris, ivy and blockages removed.

4. The Oak tree on the Corner of Brookwood is too low over the roadway and it appears that trucks have been hitting it. The tree must be trimmed up so that there is 13'6" of clearance above the roadway surface.

5. The Oak tree on Redwood Dr must be trimmed up to 13'6" above the roadway surface.

2.

3.

#1.

4.

5.

Ross Valley Fire Department

777 San Anselmo Avenue, San Anselmo, CA 94960

Mark Mills
FIRE CHIEF

Property Address: 24 REDWOOD, ROSS

Date of Inspection: 10-27-15

Applicant Name: _____

Fee paid: Int.: _____ Date: _____

Contact Phone Number: _____

Occupancy Number: _____

Email address: _____

Fax Number: _____

RESALE INSPECTION FORM

Each seller must disclose that the property is required to meet the flammable vegetation clearance requirements of PRC 4291and Ca Gov Code 51189. Section 4291 of the Public Resources Code, State of California, and Section 104.3 of the California Fire Code, authorizes the department to inspect properties for the purposes of ascertaining compliance with State and local Forest and Fire Laws.

Property located within the Wildland-Urban Interface Zone ☐ Y ☒ N

General: Persons owning, leasing, controlling, operating or maintaining buildings or structures in, upon or adjoining hazardous fire areas, and persons owning, leasing or controlling land adjacent to such buildings, shall at all times do all of the following:

CFC Section 4907.2 Fire Hazard Reduction

___ Maintain a 30 foot firebreak around and adjacent to the building or structures by removing and clearing away all flammable vegetation or other combustible growth.

___ Maintain a 100 foot firebreak around and adjacent to the building or structure by removing all brush, flammable vegetation, or combustible growth.

___ Remove portions of trees which extend within 10 feet of the outlet of a chimney, or overhanging roofs or decks.

___ Maintain vegetation adjacent to or overhanging a building free of deadwood.

___ Maintain the roof of a structure free of leaves, needles or other dead vegetative growth.

___ Minimum 4 inch address numbers shall be placed in such a position as to be plainly visible and legible from the street or road fronting the property. Said numbers shall contrast with their background.

CFC Section 4907.3 Fire Hazard Reduction from Roadways

X Clear flammable or other combustible growth within 10 feet of road or driveway.

___ CBC Section 2802.1 Chimneys used with fireplaces or heating appliances in which solid or liquid fuel is used shall be maintained with an approved spark arrester.

CFC Section 4907.4 Notice to Abate. The Fire Chief is hereby authorized to require the abatement of any nuisance condition described in Section 4907.2 and 4907.3. Should the abatement of the nuisance not be accomplished by the owner of the affected property within the period set forth, the Fire Chief is authorized to perform such abatement without further notice to the property owner, the cost of such abatement will be assessed as a lien against the property.

Notes:

VEGETATION ALONG ROADWAY SHALL BE CUT BACK 10 FEET AND LIMBED UP A MINIMUM 13' FEET 6 INCHES.

PLEASE SEEK APPROVAL FROM THE TOWN OF ROSS PRIOR TO REMOVAL OF VEGETATION ALONG ROADWAY.

IT APPEARS THAT AN INFECTED TREE IS PRESENT TOWARDS THE REAR OF THE PROPERTY. PLEASE SEEK ADVISE FROM AN ARBORIST. IF TREE CAN BE SAVED OR OTHER OPTIONS.

WARNING: Section 51185 of Government Code Title 5 states violations are infractions: first offense, $100 - $500; second offense within 5 years, $250 - $500; third offense within five years, misdemeanor (not less than $500).

Any required corrections must be made within 30 days. Contact the Ross Valley Fire Department at 258-4686 to schedule a re-inspection. There is no fee for the 1st re-inspection. However, should uncorrected items be found at the scheduled 2nd visit, a fee of $50.00 will be charged for each additional re-inspection.

Compliance Verified Date: _____ Int.: _____

Inspector Name: ROB BASTIANON

Inspector Signature: _____

ATTACHMENT 3

MINUTES
Meeting of the
Ross Advisory Design Review Group
EXCERPT

Tuesday, March 22, 2016

2. Karkabi Residence (Application No. 2016-15) – 24 Redwood Avenue

Planning Manager Scoble provided a summary of the project. Project architect Jeff Kroot and property owner Naaim Karkabi provided a presentation to the ADR.

Margaret Francis, 20 Redwood Avenue expressed concerns regarding the design negatively impacting the light, air, view, and privacy relative of the project to her residence. Ms. Francis also expressed concern regarding impacts of the project on the creek as well as any adverse impacts to the adjacent redwood trees.

Barbara Call, 8 Redwood Avenue expressed concern regarding the project's impacts on the surrounding redwood trees.

Richard Tahlheimer, 30 Redwood Avenue suggested moving the addition to the back of the lot.

Laura London, Sue Dale, and Judy ? also commented on the project.

The ADR suggested that the project should be designed to make the addition more symmetrical with the existing architectural design of the residence. The ADR also suggested that the applicant consider breaking up the massing of the addition and consider a detached one car garage to address the concerns of the neighbors.

MINUTES
Meeting of the
Ross Advisory Design Review Group
EXCERPT

Tuesday, May 24, 2016

2. Karkabi Residence (Application No. 2016-15) – 24 Redwood Avenue

Planning Manager Scoble provided a summary of the project. Project architect Jeff Kroot and property owner Naaim Karkabi provided a presentation to the ADR.

Margaret Francis, 20 Redwood Avenue again expressed concerns regarding the "blank wall" that faces her property and that the design negatively impacting the light, air, view, and privacy relative of the project to her residence.

Barbara Call, 8 Redwood Avenue expressed concern regarding the project's impacts on the surrounding redwood trees.

The ADR recommended the following:

- Consider single pane woods windows to be in keeping with the original architecture of the building
- The deck on the south elevation should be redesigned to appear as a porch. A foundation should be wrapped around the base of the "deck"
- Double hung windows shall be placed on the South and North Elevation
- The peak of the roof should be brought down to reduce the roof line
- The architect should consider using short hopper windows to break up the building wall
- Submit a landscape plan

ATTACHMENT 4

ARBORIST REPORT

Tree Protection Plan
24 Redwood Drive
Ross, California
(APN: 073-271-07)

Prepared for:
Naaim Karkabi
karkabi3@gmail.com

Prepared by:
Dr. Kent Julin
ISA Certified Arborist
California Professional Forester
ARBORSCIENCE

July 5, 2016

P.O. Box 111 • Woodacre, CA 94973-0111
Office: 415.419.5197 • Field: 415.419.6960 • PayPal: kent.julin@gmail.com
Web: http://arborscientist.com

ASSIGNMENT

Naaim Karkabi hired **ARBORSCIENCE** to prepare a tree protection plan in relation to his proposed home remodeling project. I conducted my inspections of the trees on April 1, 2016 and June 9, 2016. In addition, I reviewed the Geotechnical Feasibility Evaluation (June 20, 2016) by consulting geotechnical engineer Dennis Furby, the Peer Arborist Review (June 29, 2016) by consulting arborist Ed Gerka, the Arborist Report for 20 Redwood Drive (May 18, 2016) by Urban Forestry Associates, and landscaping project plans (July 5, 2016) by Roth LaMotte Landscape Architecture.

SCOPE OF WORK AND LIMITATIONS

Information regarding property boundaries, land and tree ownership was obtained from Marin County Assessor Parcel records. I have neither personal nor monetary interest in the outcome of this matter. All determinations reflected in this report are objective and to the best of my ability. I made observations and conclusions regarding the subject trees and site conditions, independently, based on my education, experience, and inspection of the site. Unless expressed otherwise, information contained in this report covers only those items examined and reflects the condition of those items at the time of inspection. My inspection was limited to visual examination of accessible tree components from the ground without trunk dissection, coring, or root crown excavation. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in question may not arise in the future.

SITE DESCRIPTION AND CONTEXT

The home at 24 Redwood Drive in Ross (APN: 073-271-07) was constructed in 1906 then remodeled in 1936 on a level 0.31-acre corner lot. Landscaping consists of mature trees, shrubs, and perennial flowers.

SUBJECT TREE DESCRIPTIONS

Thirty-four (34) trees grow at 24 Redwood Drive (Table 1, Arborist Map). They include both native and introduced trees that range in diameter from 5" to 55" in diameter at breast height. In addition, there is a large coast redwood growing at 20 Redwood Drive that is addressed in this tree protection plan. The subject coast redwood (Tree 35) is an established tree that I estimate is about 120 years old, having probably been planted soon after the home at 20 Redwood Drive was constructed. This tree has a well-tapered trunk measuring 96" in diameter at breast height, supporting a balanced crown of healthy, dense foliage, and standing 140' tall. Overall tree health is excellent and hazard is low; large branches typically fail on large redwoods during strong winter storms.

PROPOSED PROJECT AND ATTENDANT IMPACTS

Proposed remodeling work at 24 Redwood Drive includes lifting the existing structure, replacing the perimeter foundation, adding stone steps with stone landing and a decomposed granite pathway on the north side of the house, and adding a gravel driveway with two parking spaces. This work is expected to cause minor soil compaction and root loss. Impacts associated with this work will not significantly affect tree health.

The greatest potential impact to the coast redwood at 20 Redwood Drive would be related to excavation for the new foundation. To minimize root impacts within the 32-foot non-intrusion zone near the tree Heilcal piers and grade beams will be used. I estimate that less than 5% of the coast redwood's root system will be affected by the proposed project. Redwoods are highly tolerant to construction impacts. The Urban Forestry Associates' report (page 1) states "redwoods can tolerate the loss of major portions (30 to 50%) of the root system through...mechanical removal and suffer no significant threat to the over-all health of the tree." Planned landscaping near the redwood tree will be 1-gallon planted vines; planting hole excavation and irrigation will not affect the health of the redwood tree.

Four trees are planned for removal to enhance sunlight to the property including Trees 22, 27, 28, and 29. All of these trees are non-native trees in relatively poor health.

TREE PROTECTION MEASURES

All measures noted herein comply with the Town of Ross Municipal Code Section 12.24 Maintenance of Trees. Development of the project infrastructure, including roads, utilities, drainage facilities will alter the natural terrain and affect existing trees growing close to the construction areas. All applicable project design and construction requirements related to the protection of trees shall be implemented in accordance with International Society of Arboriculture guidelines. Impacts will primarily occur as a result of the site grading requirements. The following guidelines are intended to minimize grading impacts and maximize tree health.

TREE PROTECTION ZONES.

There are two primary types of tree protection zones (TPZs): 1) 'Non-Intrusion Zone', which shall be a designated area that is properly fenced off from construction activities, and 2) 'Tree Preservation Zone', which is a specified area where the soil and tree(s) are armored to prevent damage to the root zone soils, roots, and aerial structure of the tree. All construction activity (grading, filling, paving, landscaping) will respect the TPZs around trees to be protected. The TPZs will be a distance of one-foot radial distance from the trunk for each one-inch of trunk diameter. Exceptions to this standard may occur depending upon the age and condition of individual trees.

CONSTRUCTION OBSERVATION AND SUPERVISION

1. All arboricultural and related soil work will be performed under the supervision of an International Society of Arboriculture (ISA) Certified Arborist, or City designated representative.
2. Before the start of any clearing, excavation, construction, or other work on the site, or the issuance of a building or demolition permit, every Protected tree shall be securely fenced-off at the non-intrusion zone, or other limit as may be delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.
3. All specified arboricultural work should be completed prior to site grading (root pruning, canopy pruning, fencing, etc.)
4. The contractor is required to meet with the Project Arborist or Town-designated representative to review all the tree protection requirements.
5. If the proposed development, including any site work, will encroach upon the TPZ, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.

TREE PROTECTION FENCING (For Non-Intrusion Zones)

1. Fencing will be at a minimum of four feet in height (orange polypropylene) and clearly marked to prevent inadvertent encroachment by heavy machinery will be installed either at the edge of the TPZ, crown drip line (whichever is further from the trunk), or at the edge of the construction zone if the construction zone protrudes into the TPZ. The Project Arborist, or Town-designated representative, will approve location of fencing. All fencing should be in place prior to any site grading. Exact location of the fencing to be determined by Project Arborist, Owner, Landscape Architect, and Contractor to maintain maximum TPZ while allowing access to the jobsite. For this project, it is impossible to fence all of the TPZ and as such, mulch and plywood will be employed for root zone protection.
2. Contractor will maintain the protection fencing and prohibit all access to fenced areas by construction personnel or equipment until all site work is completed.
3. All structures including construction trailers, equipment storage areas and any other construction traffic are prohibited within fenced areas. Burning or debris piles are prohibited within fenced areas. Oil, gas, paint, cement, chemicals, or other substances that may be harmful to trees shall not be stored or dumped within the fenced areas.
4. If temporary access within a fenced area is determined to be necessary, then a 6-inch layer of bark mulch should be placed in all areas requiring access. This requirement for mulching should apply to all areas within the fenced area and subject to access. If equipment access is required, then the mulch should be overlaid with a material of sufficient thickness to adequately distribute bearing load. 3/4" Plywood is sufficient for foot traffic.
5. Construction materials will not be stored within the non-intrusion zone of a Significant and/or Protected tree. On-site parking shall be kept outside non-intrusion zones.
6. Fences may not be moved without written permission of the Project Arborist or Town-designated representative.

DEMOLITION/ SITE CLEARING

1. The Project Arborist will review any tree removal work within 50 feet of a TPZ. Trees requiring removal should be felled away from protected trees. Roots of trees to be removed may require pruning with approved root cutting equipment prior to felling if intermingled with roots of retained trees.
2. Excavation equipment should operate from outside the TPZ. Brush and wood chips generated from tree and brush removal should be placed in the TPZ to a maximum depth of six inches. Where equipment access is necessary within the TPZ, the equipment should operate on a prepared pad with steel plates over 6" of mulch to prevent soil compaction and root disturbance.
3. All required pruning should conform to the pruning section of these guidelines.
4. All brush removal should be performed with hand equipment when within a TPZ.

SITE GRADING/ TRENCHING ROOT PRUNING / CONSTRUCTION PRACTICES

1. Keep site grading within designated construction zones. Grading cuts, pier holes or trenching within the TPZ of a retained tree trunk requires special trenching procedures. Trenches, pier holes and other site excavations should be dug manually or with the use of a root cutting machine, rock cutter, or other approved root-pruning equipment. A root-pruning trench should be placed one foot inside the edge of the grading cut or trench edge. The depth of the trench should equal the depth of the grading cut to a maximum depth of 40 inches.
2. A trench may be mechanically dug toward a tree until the edge of the TPZ is reached. From the edge of the TPZ, the special trenching procedures should apply, such as air spade use.
3. Underground trenching shall avoid the major support and absorbing tree roots of Protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required.
4. Underground utilities, drain, and irrigation lines should be routed outside the TPZs. When lines must cross the TPZ, the lines should be bored or tunneled through the area at a depth approved by the Project Arborist. In these instances, a single shared utility conduit should be used to reduce impacts to trees. Where tunneling is impractical, use of an air-spade by a certified operator is required.
5. Any roots one inch in diameter or larger requiring removal should be cut cleanly in sound tissue. The roots and surrounding soil should be moistened and covered with a thick mulch (4") to prevent desiccation. No pruning seals or paints should be used on wounds. Cut and exposed roots should be protected from drying. A water absorbent material (i.e. burlap) should be secured at the top of the trench and should be draped over the exposed roots. This material should be kept moistened and soil should be replaced as soon as practicable.
6. Porous pavements are recommended for use within the TPZ. Construction of the pavement sub-base should avoid grading cuts where possible. Where grading cuts are necessary within the TPZ, special trenching procedures shall apply.

7. Concrete or asphalt paving shall not be placed over the root zones of Protected trees, unless otherwise permitted by the project arborist.
8. Compaction of the soil within the non-intrusion zone of Protected trees shall be avoided. Use of bridging/protective materials such as layered mulch, trench plates, plywood or rubber mats is encouraged within non-intrusion zones.
9. Any excavation, cutting, or filling of the existing ground surface within the non-intrusion zone shall be minimized and subject to such conditions as the project arborist may impose.

PRUNING AND CABLNG

1. Any tree pruning, cabling, or other similar activity which may be proposed as part of site construction will be included on Planting Plan notes and be reviewed by a qualified arborist or Town representative.
2. Pruning methods shall conform to the ANSI A300-1995 Pruning Standard Practices and be performed by an ISA Certified Arborist or Certified Tree Worker. Cabling or other support systems shall conform to the ANSI A300 (part 3)-2000 Standard Practices.

TRUNK AND LIMB PROTECTION

1. Extent and method of trunk and branch protection to be reviewed and approved by Project Arborist.
2. Fully protect potentially impacted circumference of tree (min. 48" above base of trunk) with coir log(s) wrapped around trunk. Place 2x4 slats with 6" max. space between and min. 3 slats per trunk. Nail slats to coir log, ensuring that nails do not contact tree. Wrap plastic orange polypropylene fencing around trunk with 12" min. overlap. Secure with wire ties, Slats to be placed so as not to rest on exposed roots. Top of slats to be match top of coir log.
3. For limb protection, use one wrap of coir log, or three wraps of polypropylene fencing, around length of limb intended for protection.

CERTIFICATION

I certify that tree protection measures described herein will protect the systemic health and structural stability of the subject trees.

Sincerely,

ARBORSCIENCE

Dr. Kent R. Julin
ISA Certified Arborist #WE-8733A
ISA Tree Risk Assessor Qualified
California Registered Professional Forester #2648

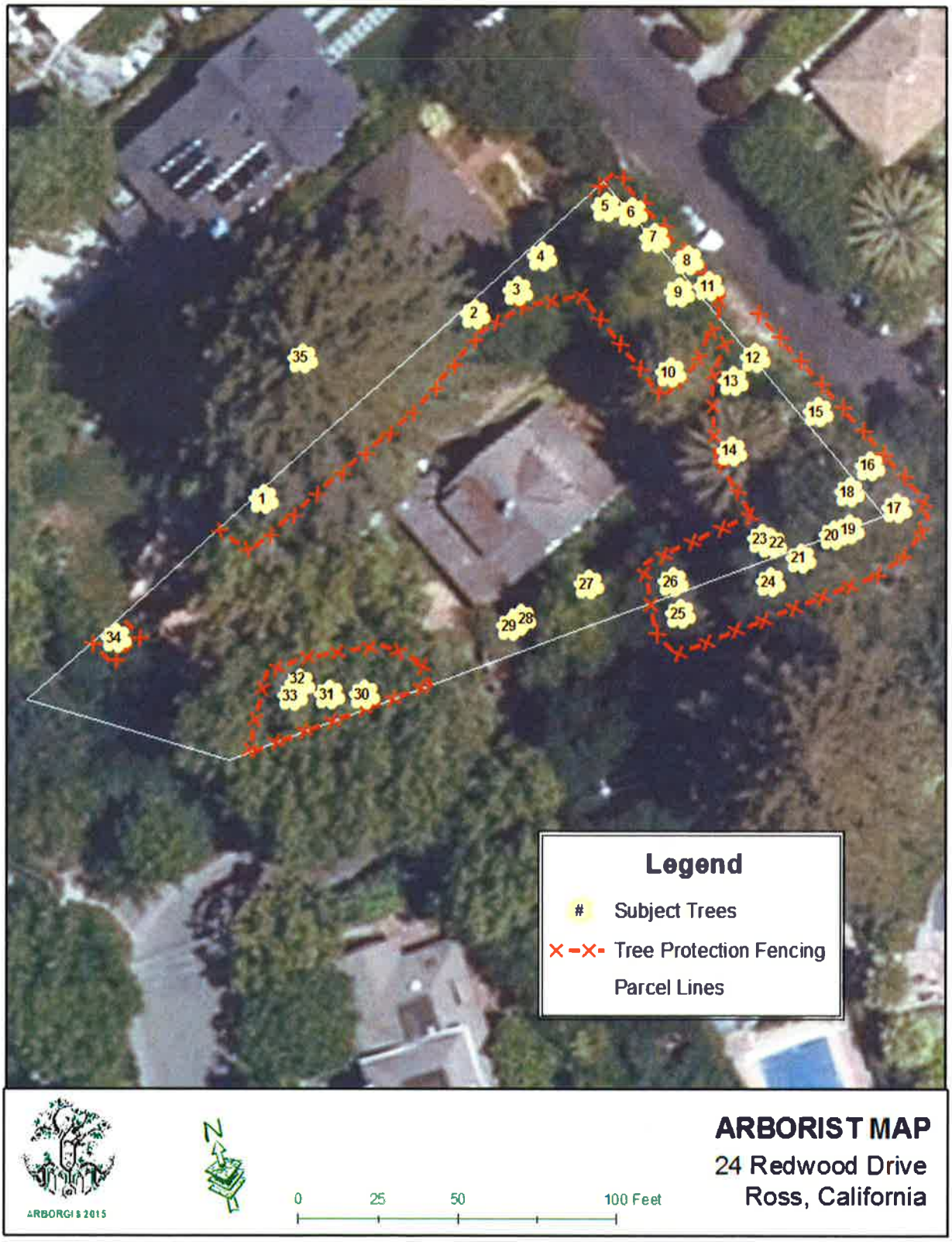

Legend
Subject Trees
Tree Protection Fencing
Parcel Lines
ARBORIST MAP
24 Redwood Drive
Ross, California
0 25 50 100 Feet
ARBORGIS 2015

Table 1. Subject trees at 24 Redwood Drive, Ross. Tree locations are plotted on the Arborist Map.

Tree #	Botanical Name	Common Name	DBH	Action - notes
1	*Umbellularia californica*	California Bay	36"	PROTECT
2	*Juglans nigra*	Black Walnut	3",6"	PROTECT
3	*Ulmus pumila*	Siberian Elm	8"	PROTECT
4	*Pinus radiata*	Monterey Pine	14"	PROTECT
5	*Calocedrus decurrens*	Incense Cedar	36"	PROTECT
6	*Ulmus pumila*	Siberian Elm	2",4",4"	PROTECT
7	*Ulmus pumila*	Siberian Elm	7"	PROTECT
8	*Ulmus pumila*	Siberian Elm	6",7"	PROTECT
9	*Ulmus pumila*	Siberian Elm	5",6"	PROTECT
10	*Picea abies*	Norway Spruce	24"	PROTECT
11	*Ulmus pumila*	Siberian Elm	3",5"	PROTECT
12	*Umbellularia californica*	California Bay	5",6"7"	PROTECT
13	*Ulmus pumila*	Siberian Elm	5"	PROTECT
14	*Phoenix canariensis*	Canary Island Date Palm	32"	PROTECT
15	*Quercus agrifolia*	Coast Live Oak	11"	PROTECT**
16	*Quercus agrifolia*	Coast Live Oak	11"	PROTECT**
17	*Quercus agrifolia*	Coast Live Oak	16"	PROTECT**
18	*Pinus radiata*	Monterey Pine	46"	PROTECT*
19	*Phoenix canariensis*	Canary Island Date Palm	Cluster	PROTECT
20	*Phoenix canariensis*	Canary Island Date Palm	Cluster	PROTECT
21	*Phoenix canariensis*	Canary Island Date Palm	Cluster	PROTECT
22	***Fraxinus americana***	**American Ash**	**4",7"**	**REMOVE**
23	*Quercus agrifolia*	Coast Live Oak	10",10"	PROTECT**
24	*Quercus agrifolia*	Coast Live Oak	6"	PROTECT**
25	*Phoenix canariensis*	Canary Island Date Palm	42"	PROTECT
26	*Quercus agrifolia*	Coast Live Oak	12"	PROTECT**
27	***Ulmus pumila***	**Siberian Elm**	**10"**	**REMOVE**
28	***Crataegus laevigata***	**English Hawthorne**	**5"**	**REMOVE**
29	***Crataegus laevigata***	**English Hawthorne**	**5"**	**REMOVE**
30	*Umbellularia californica*	California Bay	8",14",60"	PROTECT*
31	*Umbellularia californica*	California Bay	23"	PROTECT
32	*Umbellularia californica*	California Bay	48",55"	PROTECT
33	*Umbellularia californica*	California Bay	24"	PROTECT
34	*Phoenix canariensis*	Canary Island Date Palm	20"	PROTECT
35	*Sequoia sempervirens*	Coast Redwood	96"	PROTECT
*Prune & clear hazards.				
**Irrigation shall not occur within root zone, unless deemed appropriate by project arborist.				

ATTACHMENT 5

DENNIS H. FURBY, PE
CONSULTING GEOTECHNICAL ENGINEER

June 20, 2016
Job No. 1225-1

Naaim Karkabi
PO Box 308
San Anselmo, CA 94979

Subject: Geotechnical Feasibility Evaluation
Proposed Residential Renovations & Addition
24 Redwood Drive, Ross, CA
(APN 073-271-07)

Dear Mr. Karkabi:

Introduction

This letter summarizes my geotechnical engineering evaluations of your property at 24 Redwood Drive, Ross, CA regarding the feasibility of the proposed renovations and additions. I am providing services for this project in accordance with my Professional Services Agreement dated June 15, 2016. To date, these services have included the following:

- Evaluation of the site conditions based on observations conducted on June 10, 2016, research of available geologic data, and my previous experience with other projects in the site vicinity;
- Consultation with Jeff Kroot and Paul Pieri, the project Architect and Structural Engineer, respectively; and
- Preparation of this letter for the Planning submittal and Hearing.

Following the planning approval, I will be providing the required soil engineering design criteria for foundations and drainage guidelines, and reviewing the completed plans for conformance with the intent of my recommendations. The results of these additional evaluations and review will then be presented in a formal letter for the Permit submittal. I will also be providing intermittent observations during construction to check that the exposed soil conditions are as anticipated, and that the work if performed in accordance with the intent of my recommendations and the approved plans. The results of these construction-related services will be documented in a short letter upon satisfactory completion of the work.

Site & Project Description

The site at 24 Redwood Drive is within the Ross Valley alluvial plain which consists of interbedded gravels, sands, silts and clays. Due to the close proximity of the site to Ross Creek, which lies approximately 200 to 300 feet to the northeast, the natural groundwater occurs within 6 to 10 below grade, with seasonal variations due to rain water infiltration during and shortly following periods of extended rainfall. While the alluvial soils can be soft and moderately compressible, I anticipate that the soils underlying the existing residence have been consolidated under the existing foundation loads such that the underlying soils are now medium stiff silt & clay and medium dense sand & gravel. Vegetation consists of sparse grass and small shrubs surrounding the residence, but a very large redwood tree on the adjacent property lies approximately 25 to 30 feet north of the residence.

30 Via Holon, #18
Greenbrae, CA 94904

The existing residence is a two-story wood-frame building sited near the center of the triangular-shaped property at the northwest corner of the intersection of Redwood Drive and Brookwood Road; vehicle access to the property is off of Brookwood. The structure is supported above grade on a post & pier foundation, while the upper level is only partially developed beneath the high-pitched roof. The proposed renovations include temporarily supporting the existing residence above grade on timber cribbing to permit construction of a new foundation, and to raise the finished floor for the lower level to above the flood elevation. The new addition will be two stories along the west side and the northwest corner of the house to extend the upper level and provide an enclosed attached garage. The completed renovations will have wood floors supported above grade on a new foundation, but the garage will have a concrete slab-on-grade.

Conclusions and Discussion

From a geotechnical engineering standpoint, it is feasible to support the relatively light loads of the renovated residence and addition on reinforced concrete spread footings. The primary geotechnical concerns are the moderate compressibility of the underlying alluvial soils and the anticipated roots of the near-by redwood tree. Therefore, the spread footing designs should utilize lower-than-normal bearing pressures in the weaker near-surface soils, and be interconnected with reinforced concrete gradebeams to resist any potential differential settlement between the existing and the new foundation loads. Further, where large tree roots are encountered in new footing excavations, small diameter drilled helical piers can be easily installed to provide deeper foundation support for the footings and/or gradebeams to bridge over the tree roots and prevent damage to the tree.

Helical piers are a proprietary system of Chance Corporation, and consist of bolted steel shafts of various lengths that are drilled into the ground using a hydraulically-operated drive head, and with a lead shaft fitted with various diameter steel flights. The shafts are drilled into the ground until the desired depth and/or load capacity is achieved as indicated by either a pressure gauge on the hydraulic line or shear pins fitted into the drive head. Varying load capacities can be achieved by increasing both the number and diameters of the flights on individual piers. The completed pier is then attached to the new concrete footing or gradebeam using a steel bracket that is encased in the concrete.

Depending on the actual soil conditions encountered during footing excavations, it may also be necessary to install additional helical piers to resist differential movement, particularly at the foundation connections between the existing and new structure. Again, this can be determined during construction based on my observations of the actual soil conditions, with the results being documented in the summary report following completion.

In addition to providing adequate foundation support, it will be necessary to install surface drainage improvements to reduce the risk of surface water infiltration adjacent to or near foundation bearing soils. These improvements can consist of providing proper roof gutters and downspouts, along with area drains, and having the discharge be into gravel-filled sumps located at the back of the site well away from the structure. These are standard procedures that have been successfully implemented on other near-by sites.

Following planning approvals, I will provide specific soil design criteria for the new foundations (both spread footings and helical piers) along with drainage guidelines. These additional evaluations and specific recommendations, along with my review of the completed plans, will be presented in a formal letter to be submitted for the Permit application.

30 Via Holon, #18
Greenbrae, CA 94904

June 20, 2016

I trust this provides the information required at this time. Should you or others have further questions regarding the soil engineering aspects of this project, please call me.

Yours very truly,

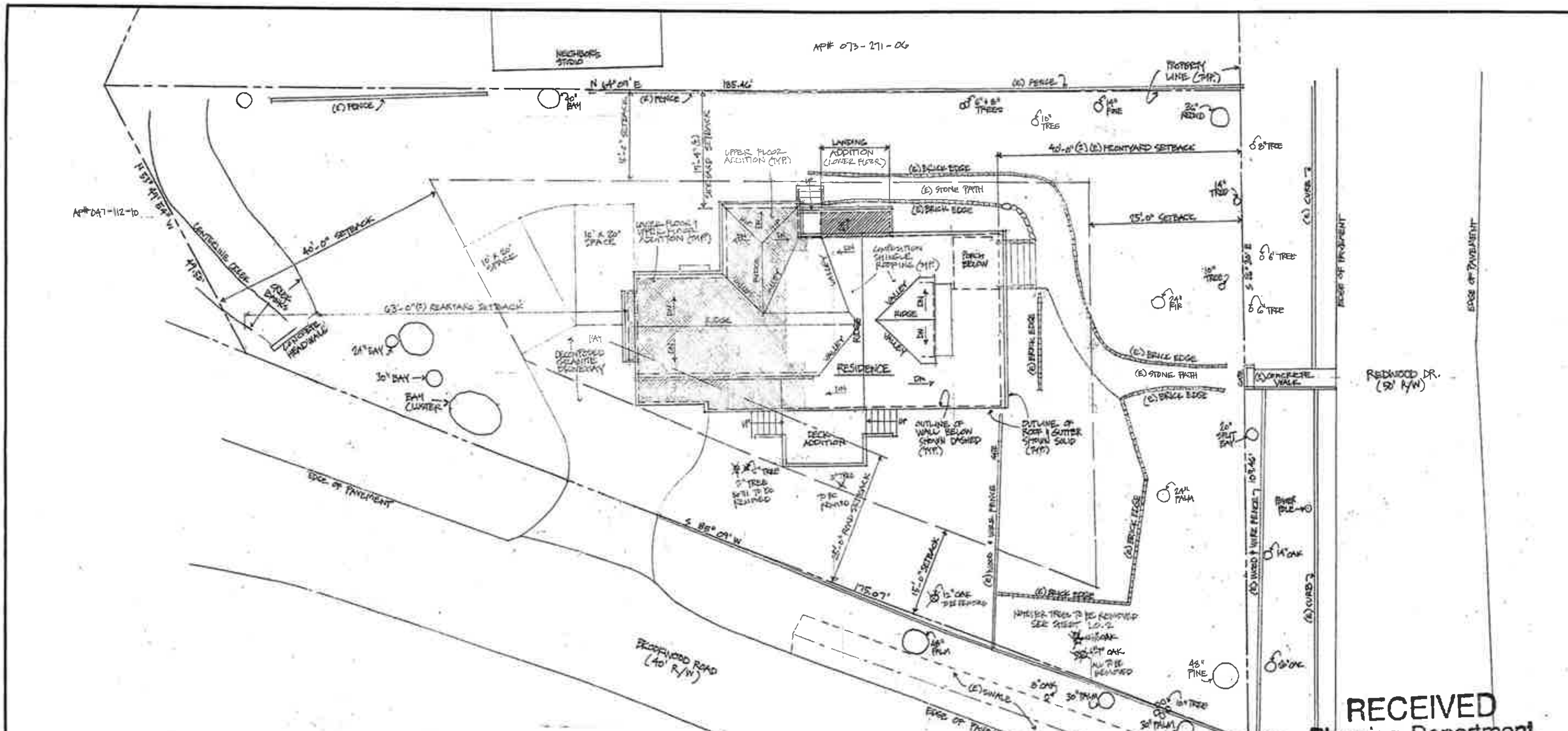
D. H. FURBY, PE
ENGINEERING CONSULTANT

Dennis H. Furby
Geotechnical Engineer-326
(Expires 12/31/17)

DHF/dhf

1 copy submitted (Karkabi2401@gmail.com)
cc: Jeff Kroot, Architect (jkarch2@comcast.net)
BHW Engineers, Inc. Attn: Paul Pieri (bhwengineers@sbcglobal.net)
(additional copies may be printed as required for the Planning submittal)

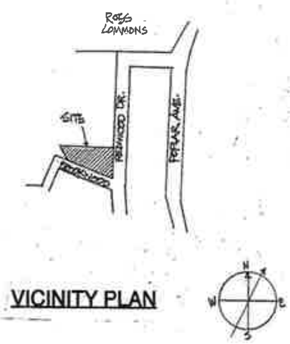
ATTACHMENT 6



SITE INFORMATION:

APN:	073-271-07
ZONING:	R-1:B-10
LOT AREA:	13,600 SF
EXISTING FLOOR AREAS:	
(E) LOWER FLOOR	1,227 SF
(E) UPPER FLOOR	635 SF
(E)TOTAL FLOOR	1,862 SF
NEW FLOOR AREAS:	
(N) LOWER FLOOR	105 SF
(N) UPPER FLOOR	492 SF
(N) TOTAL FLOOR	595 SF
TOTAL FLOOR AREA:	2,457 SF
OTHER AREAS:	
(E) ENTRY PORCH	58 SF
(N) DECK	160 SF
(N) GARAGE	254 SF
TOTAL RESIDENCE & GARAGE AREA	2,711 SF
(MAXIMUM AREA ALLOWED	2,720 SF)
LOT COVERAGE:	
(E) LOT COVERAGE	9.5 %
(N) LOT COVERAGE	13.4 %
FLOOR AREA RATIO:	
(E) FLOOR AREA RATIO:	13.7 %
(N) FLOOR AREA RATIO:	19.9 %

SITE PLAN
1/8" = 1' - 0"



VICINITY PLAN

RECEIVED
Planning Department
JUN 30 2016
Town of Ross

SHEET INDEX:

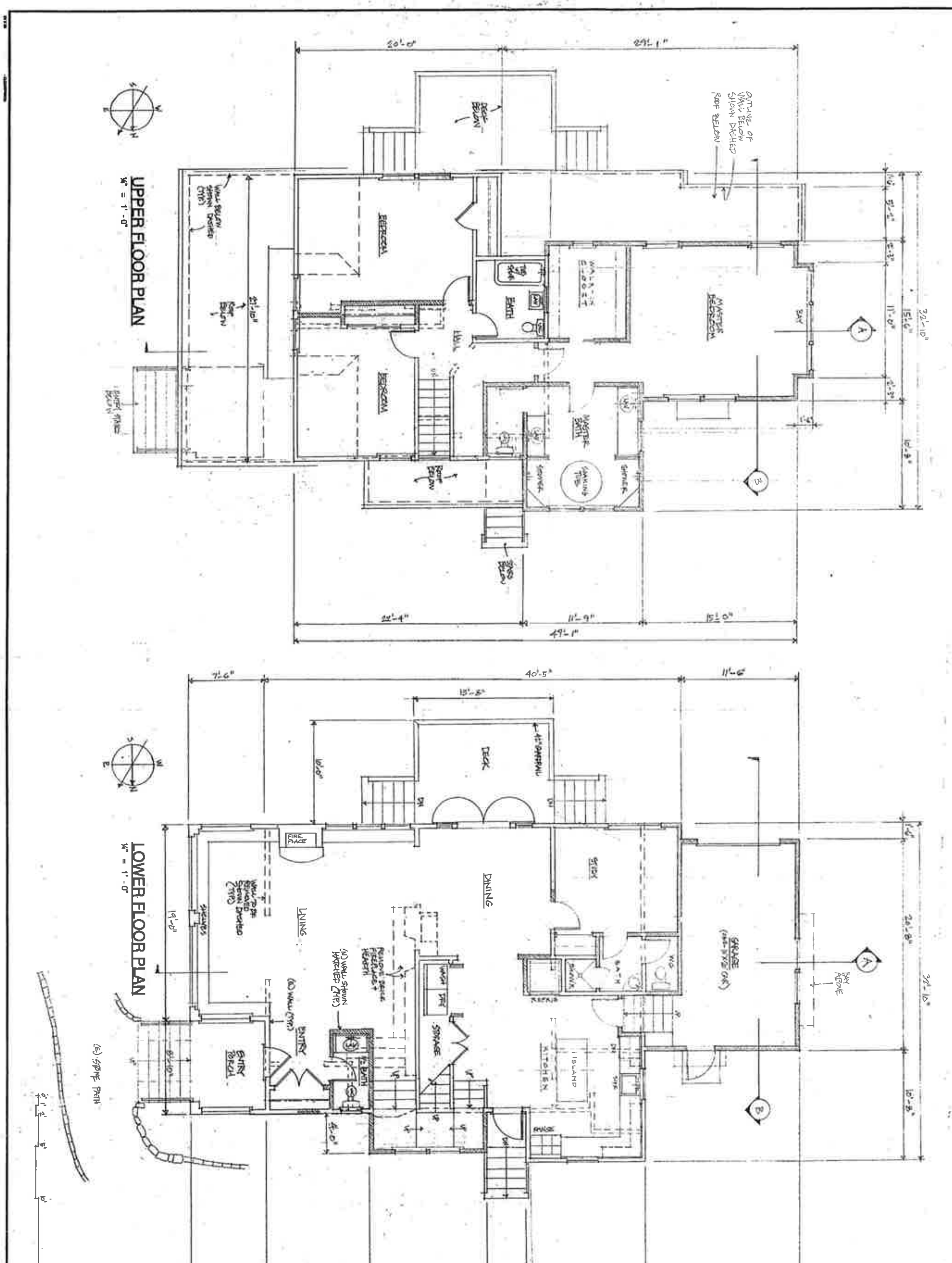
REVISIONS | BY

JEFF KROOT ARCHITECT & ASSOCIATES
P.O. BOX 246 · SAN ANSELMO, CALIFORNIA 94979

SITE PLAN
SITE INFORMATION

ADDITION / REMODEL FOR:
NAAIM KARKABI
24 REDWOOD DRIVE, ROSS, CA APN 073-271-07

Date MARCH, 2016
Scale 1/8"=1'-0"
Drawn JDK
Job KARKABI III
Sheet 1
Of 11 Sheets



ADDITION / REMODEL FOR:

NAAIM KARKABI

24 REDWOOD DRIVE, ROSS, CA APN 073-271-07

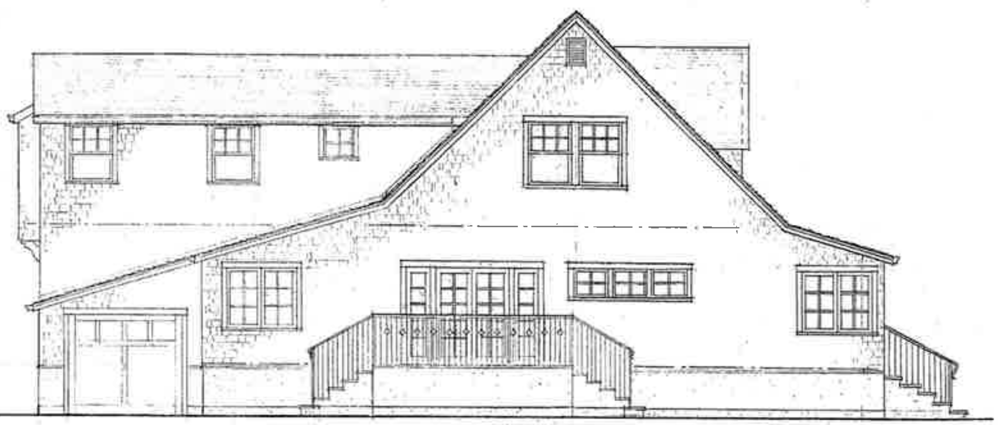
FLOOR PLANS

JEFF KROOT ARCHITECT & ASSOCIATES

P.O. BOX 246 · SAN ANSELMO, CALIFORNIA 94979 · 415/456-5531

Date MARCH, 2016
Scale 1/4" = 1'-0"
Drawn JPK
Job KARKABI III
Sheet 2 of 11

REVISIONS BY



SOUTH ELEVATION
¼" = 1' - 0"

EAST ELEVATION
¼" = 1' - 0"

NORTH ELEVATION
¼" = 1' - 0"

WEST ELEVATION
¼" = 1' - 0"

REVISIONS	BY
PLANNING 3/8/16	LH
SCOPE III 5/2/16	JK
REV. III FOR DRB 6/16	JK

JEFF KROOT ARCHITECT & ASSOCIATES
P.O. BOX 246 • SAN ANSELMO, CALIFORNIA 94979 • 415/456-5531

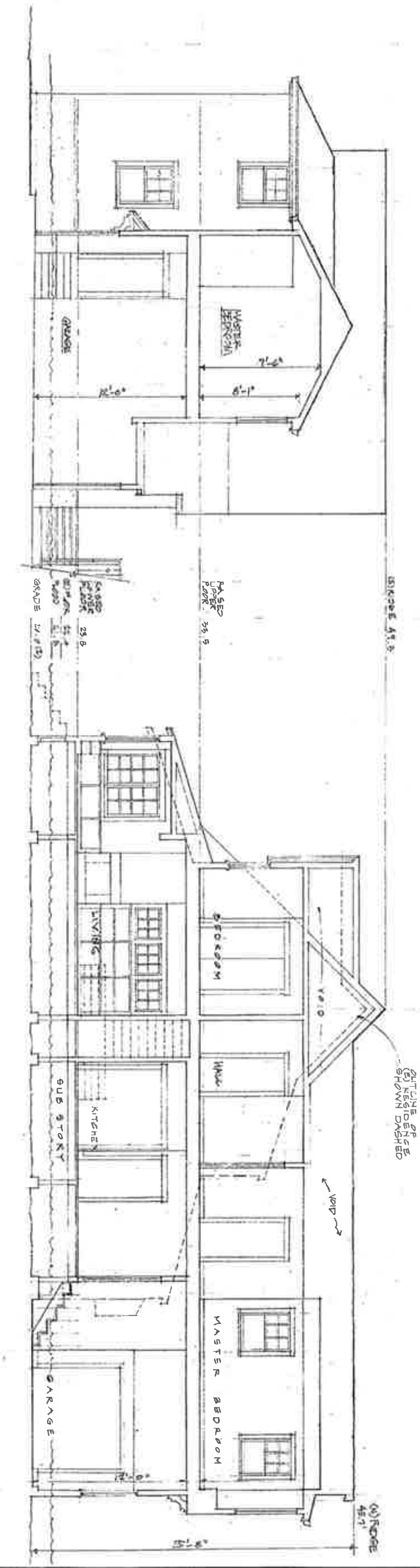
EXTERIOR ELEVATIONS

ADDITION / REMODEL FOR:
NAAIM KARKABI
24 REDWOOD DRIVE, ROSS, CA APN 073-271-07

Date MARCH, 2016
Scale 1/4" = 1'-0"
Drawn JDK
Job KARKABI III
Sheet 3
Of 11 Sheets

SECTION B
1/4" = 1'-0"

SECTION A
1/4" = 1'-0"



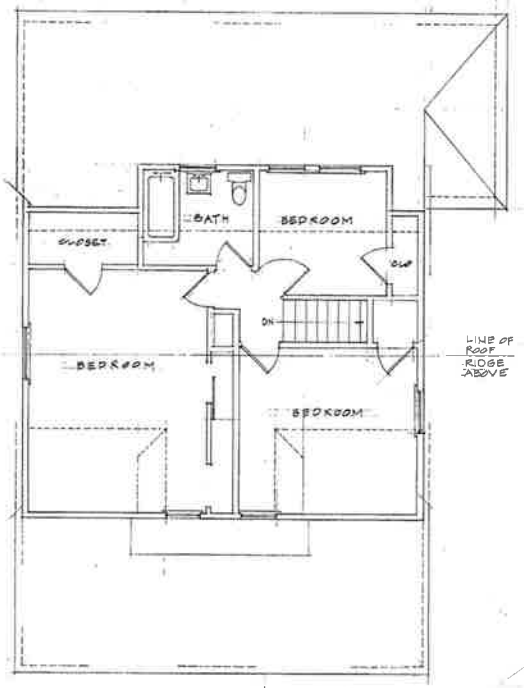
ADDITION / REMODEL FOR:
NAAIM KARKABI
24 REDWOOD DRIVE, ROSS, CA APN 073-271-07

SECTIONS

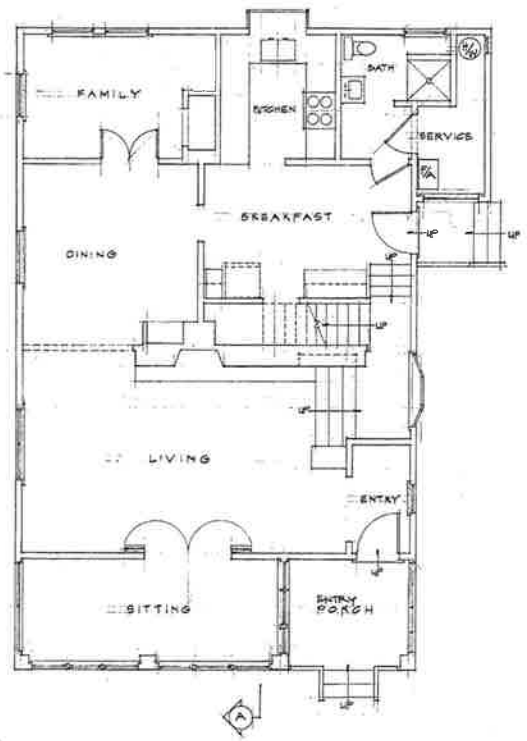
JEFF KROOT ARCHITECT & ASSOCIATES
P.O. BOX 245 - SAN ANSELMO, CALIFORNIA 94979 - 415/456-5531

Date MAR 2016
Scale AS NOTED
Drawn LH JPK
Job KARKABI
Sheet 4
Of 11 Sheets

REVISIONS | BY



UPPER FLOOR PLAN
¼" = 1' - 0"



LOWER FLOOR PLAN
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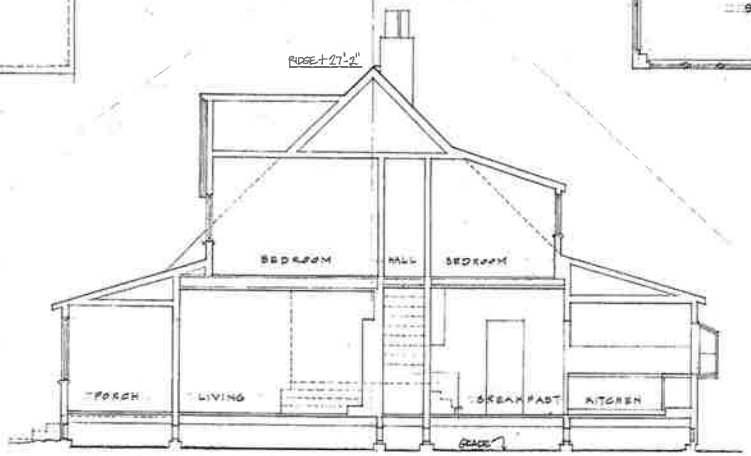
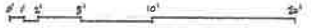


SECTION A
¼" = 1' 0"



REVISIONS	BY
SCHEME III 5/4/16	JK

JEFF KROOT ARCHITECT & ASSOCIATES
P.O. BOX 246 - SAN ANSELMO, CALIFORNIA 94979 - 415/454-5531

FLOOR PLANS
SECTION

AS BUILT DRAWINGS FOR:
NAAIM KARKABI
24 REDWOOD DRIVE, ROSS, CA AP No 073-271-07

Date JAN 2016
Scale AS NOTED
Drawn L.H.
Job KARKABI
Sheet 3
Of 11 Sheets

NORTH ELEVATION
1/4" = 1'-0"

WEST ELEVATION
1/4" = 1'-0"

SOUTH ELEVATION
1/4" = 1'-0"

EAST ELEVATION
1/4" = 1'-0"

0' 1' 5' 5' 10' 20'

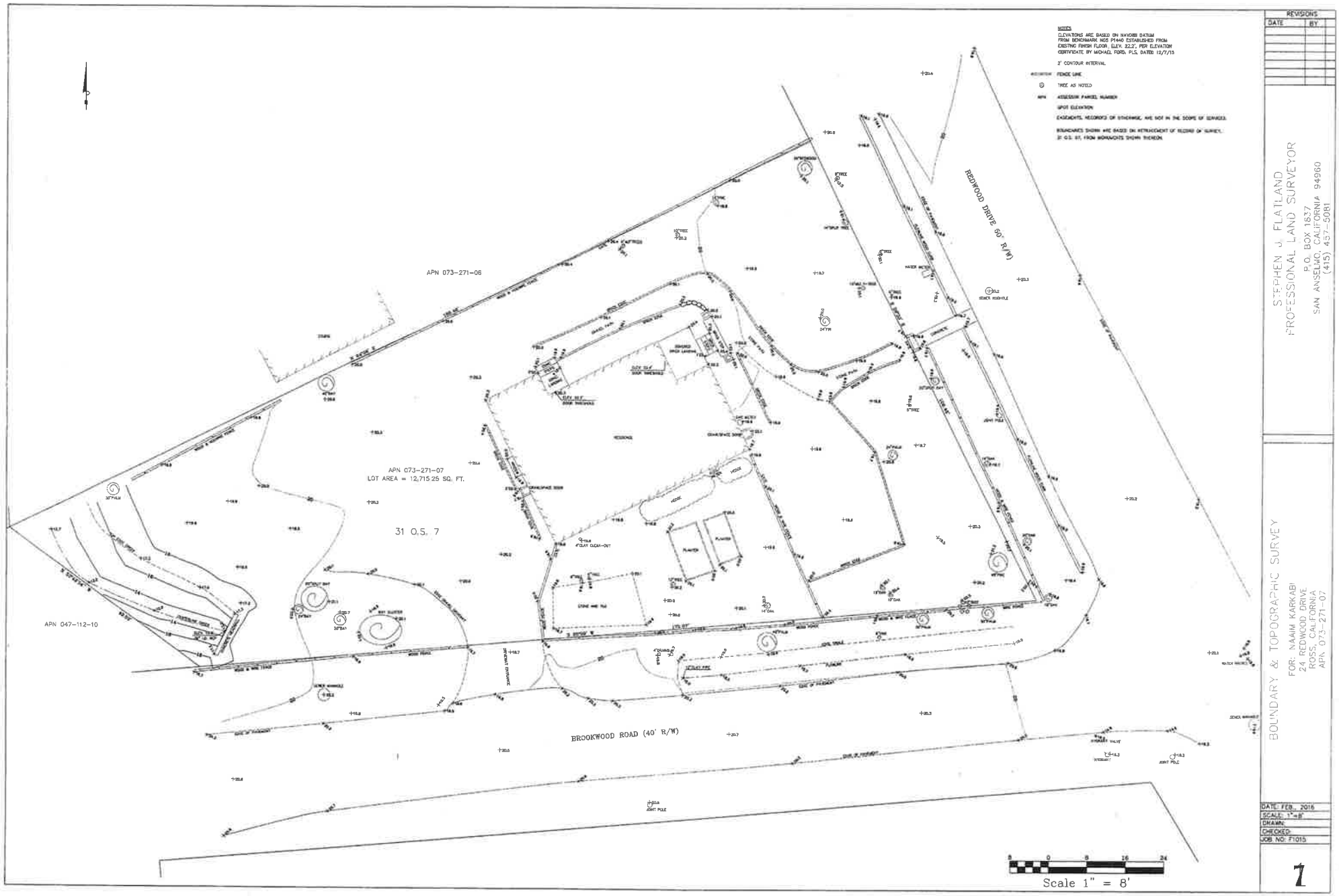
REVISIONS	BY
SHEET NO. 3/4/16	JK

JEFF KROOT ARCHITECT
& ASSOCIATES
P.O. BOX 246 • SAN ANSELMO, CALIFORNIA 94979 • 415/456-5531

EXTERIOR ELEVATIONS

AS BUILT DRAWINGS FOR:
NAAIM KARKABI
24 REDWOOD DRIVE, ROSS, CA AP No.: 073-271-07

Date JAN 2016
Scale AS NOTED
Drawn LH
Job KARKABI
Sheet 6
Of 11 Sheets



REVISIONS

DATE	BY

STEPHEN J. FLATLAND
PROFESSIONAL LAND SURVEYOR
P.O. BOX 1637
SAN ANSELMO, CALIFORNIA 94960
(415) 457-5081

BOUNDARY & TOPOGRAPHIC SURVEY

FOR: NAAIM KARKABI
24 REDWOOD DRIVE
ROSS, CALIFORNIA
APN. 073-271-07

DATE: FEB., 2016
SCALE: 1"=8'
DRAWN:
CHECKED:
JOB NO: F1015

1

OWNER:
NAAIM KARKABI
412 RED HILL AVENUE #24,
SAN ANSELMO, CA

PLAN PREPARER:
ROTH LAMOTTE LANDSCAPE ARCHITECTURE
56 MANOR ROAD FAIRFAX, CA
TEL: 415-451-8211

APPLICABLE CODES:
- CALIFORNIA RESIDENTIAL CODE 2013
- CALIFORNIA ENERGY CODE 2013
- CALIFORNIA ELECTRICAL CODE 2010
- CALIFORNIA PLUMBING CODE 2013
- CALIFORNIA MECHANICAL CODE 2013
- CALIFORNIA FIRE CODE 2013

VICINITY MAP

ABBREVIATIONS

AB	AGGREGRATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
AGG	AGGREGATE
AL	ALUMINUM
APPROX	APPROXIMATE
BC	BOTTOM OF CURB
B.O.	BOTTOM OF
BS	BOTTOM OF STEP
BW	BOTTOM OF WALL (FINISH GRADE)
CDR	CEDAR
CIP	CAST-IN-PLACE
CJ	COLD JOINT
CL	CENTERLINE
CTR	CENTER
CO	CLEANOUT
CONC	CONCRETE
CY	CUBIC YARDS
DI	DROP INLET
DS	DOWNSPOUT
(E)	EXISTING
EG	EXISTING GRADE
EJ	EXPANSION JOINT
EQ.	EQUIPMENT
FO	FACE OF
FFE	FINISH FLOOR ELEVATION
FS	FINISH SURFACE
FG	FINISH GRADE
FL	FLOW LINE
FTG	FOOTING
HDG	HOT DIP GALVANIZED
HT	HEIGHT
GB	GRADE BREAK
HB	HOSE BIB
HP	HIGH POINT
LD	LANDSCAPE DRAIN
LOG	LIMIT OF GRADING
LOW	LIMIT OF WORK
LP	LOW POINT
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NIC	NOT IN CONTRACT
N/A	NOT APPLICABLE
NOM	NOMINAL
OH	OVERHEAD
OC	ON CENTER
PA	PLANTED AREA
PTDF	PRESSURE TREATED DOUGLAS FIR
R	RADIUS
REQ'D	REQUIRED
RDWD	REDWOOD
ROW	RIGHT-OF-WAY
SIM	SIMILAR
SJ	SCORE JOINT
SS	STAINLESS STEEL
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
S.S.D.	SEE STRUCTURAL DRAWINGS
TC	TOP OF CURB
TS	TOP OF STEP
TW	TOP OF WALL
TO	TOP OF
TYP.	TYPICAL
TW	TOP OF WALL
U.O.N.	UNLESS OTHERWISE NOTED
V.I.F.	VERIFY IN FIELD
WM	WATER METER

SHEET INDEX

SHEET	TITLE OF SHEET
L0.0	COVER & SHEET NOTES
L0.1	VEGETATION MANAGEMENT PLAN
L0.2	TREE PROTECTION PLAN
L1.0	LANDSCAPE CONCEPT PLAN
-	ARBORIST REPORT UNDER SEPARATE COVER

NOT FOR CONSTRUCTION

Roth LaMotte Landscape Architecture
CONSULTANT

KARKABI RESIDENCE
24 REDWOOD DR.
ROSS, CA
APN: 073-271-07

COVER SHEET

Date 7/5/16
File name Ross House Plan.vwx

NO.	DATE	ISSUE NOTES

NO.	DATE	REV. NOTES

DATE: 7/5/16
SCALE: AS SHOWN
DESIGNED BY: SL
DRAWN BY: SL/LR
CHECKED BY: SL

L0.0

FIRE HAZARD ASSESSMENT AND TREATMENT GUIDELINES

FIRE HAZARD EVALUATION		HAZARD POINTS
ASPECT	SOUTHEAST	3
SLOPE (%)	0-10%	2
VEGETATION / FUEL TYPE 0-30' FROM STRUCTURE	SPECIMEN GARDEN	1
VEGETATION / FUEL TYPE 31-100' FROM STRUCTURE	GRASS, MOSTLY GRASS	1
TOTAL RVFD VMP HAZARD POINTS		7
RECOMMENDED DEFENSIBLE SPACE CLEAR ZONE PER RVFD VMP STANDARDS.		30' X 30' X 30' FEET

VEGETATION MANAGEMENT PLAN - EXISTING FUEL TYPE NOTES:

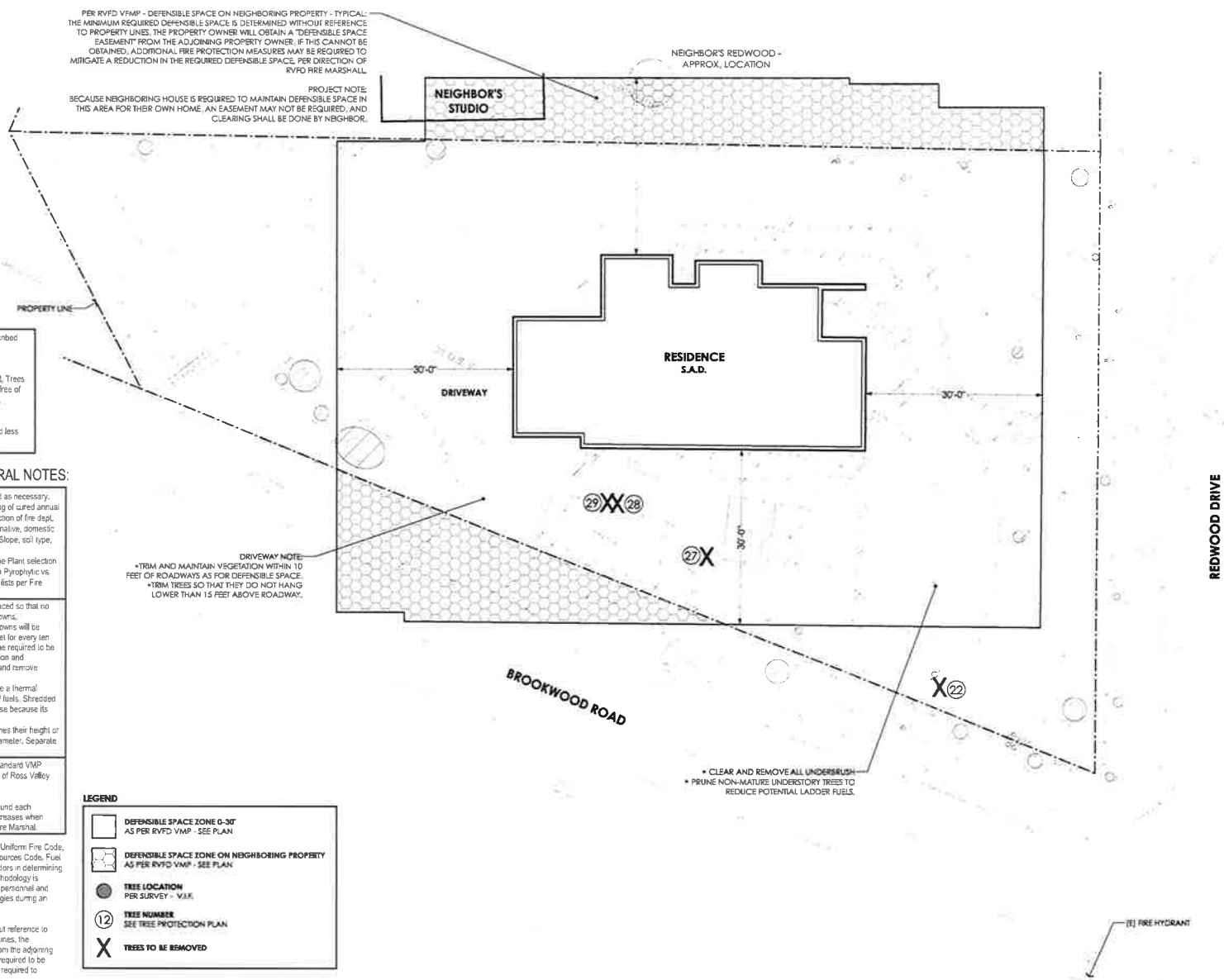
FUEL TYPES ON PROPERTY:	These fuels types exist on the property. They are described by RVFD VMP as: SPECIMEN GARDEN A well-maintained ornamental garden, usually irrigated. Trees and shrubs are well spaced or clustered, thinned and free of deadwood. No pyrophytic plants within 10 ft. of house. MOSTLY GRASS (MODEL 2) Brush and tree reproduction occupy more than 1/3 and less than 2/3 of the area.

VEGETATION MANAGEMENT PLAN GENERAL NOTES:

PLANT LIST AND SELECTION WITHIN THE ZONE:	A. The entire defensible space zone shall be managed as necessary. Annual grasses are not allowed within the zone. Cutting of cured annual grasses to 4" or less to be done by June 1st or at direction of fire dept. B. Plant selections to be fire resistant, non-pyrophytic native, domestic or combination thereof that best suits the project site. Slope, soil type, drought resistance have been considered. C. Plant species, if used to be selected from FireScape Plant selection list from University of California Cooperative Extension Pyrophytic vs. Fire Resistant Plants brochure or other approved plant lists per Fire Marshal.
PLANT SPACING AND CROWN SEPARATION	A. Regardless of plant selection, shrubs should be spaced so that no continuity exists between the ground fuels and tree crowns. B. Trees to be planted such that when mature, their crowns will be separated by at least 10 feet. Add an additional five feet for every ten (10%) percent increases in slope. Existing trees may be required to be thinned and/or removed depending on their configuration and disturbance from structure(s). Limb up existing trees and remove ladder fuels within 10' of the ground. C. Chipped planting wood mulch is assumed to provide a thermal barrier, which will help prevent moisture loss in ground fuels. Shredded bark, referred to as "monkey hair", is prohibited from use because its high flammability and fire spread characteristics. D. Separate individual shrub crowns by at least two times their height or clump shrubs into islands no greater than 16 feet in diameter. Separate islands by no less than two times the canopy height.
SLOPE INFLUENCE ON MINIMUM DEFENSIBLE SPACE CLEARANCES	Separation distances between trees and shrubs per standard VMP practices may increase due to steep slopes at request of Ross Valley Fire Marshal. Upslope, cross slope, and down slope clearances, around each structure may be increased as percentage of slope increases when compared to level terrain, if required by Ross Valley Fire Marshal.

NOTE: This Standard has been developed pursuant to Appendix II A of the Uniform Fire Code, adopted by local Ordinance, and Section 4290 and 4291 of the Public Resources Code. Fuel modification distances, type of vegetation and topographic features are factors in determining adequate green belts and fire fuel modification around structures. This methodology is implemented for the primary purpose of providing time for fire suppression personnel and equipment to respond and establish effective operational tactics and strategies during an ensuing wildland fire.

This standard will determine the minimum required defensible space without reference to property lines. If the minimum required defensible space crosses property lines, the property owner will be required to obtain a "defensible space easement" from the adjoining property owner. If this cannot be obtained, the proposed structure may be required to be resited. For existing structures, additional fire protection measures may be required to mitigate a reduction in the required defensible space.



LEGEND

- DEFENSIBLE SPACE ZONE 0-30' AS PER RVFD VMP - SEE PLAN
- DEFENSIBLE SPACE ZONE ON NEIGHBORING PROPERTY AS PER RVFD VMP - SEE PLAN
- TREE LOCATION PER SURVEY - V.I.F.
- (12) TREE NUMBER SEE TREE PROTECTION PLAN
- X TREES TO BE REMOVED

FOR PLANTING NOTES SEE SHEET L1.0

1 / L0.1 TREE PROTECTION PLAN
1/8" = 1' - 0"

NOT FOR CONSTRUCTION

SCALE OF FEET

Ruth LaMotte | Landscape Architecture
CONSULTANT

KARKABI RESIDENCE
24 REDWOOD DR.
ROSS, CA
APN: 073-271-07

VEGETATION MANAGEMENT PLAN
Date: 7/5/16
File name: Ross House Plan.vwx

NO.	DATE	ISSUE NOTES

NO.	DATE	REV. NOTES

DATE: 7/5/16
SCALE: AS SHOWN
DESIGNED BY: SL
DRAWN BY: SL/LR
CHECKED BY: SL

L0.1

TREE PROTECTION NOTES

TREE PROTECTION MEASURES

All measures noted herein comply with the Town of Ross Municipal Code Section 12.24 Maintenance of Trees. Development of the project infrastructure, including roads, utilities, drainage facilities, etc. will alter the natural terrain and affect existing trees growing close to the construction areas. All applicable project design and construction requirements related to the protection of trees shall be implemented in accordance with International Society of Arboriculture guidelines. Impacts will primarily occur as a result of the site grading requirements. The following guidelines are intended to minimize grading impacts and maximize tree survivability.

TREE PROTECTION ZONES - (TPZ's)

There are two primary tree protection zones: 1) "Non-Intrusion Zone", which shall be a designated area that is properly fenced off from construction activities, and 2) "Tree Preservation Zone", which is a specified area where the soil and tree(s) are armored to prevent damage to the root zone soils, roots, and aerial structure of the tree. All construction activity (grading, filling, paving, landscaping) will respect the Tree Protection Zones (TPZ) around trees to be protected. The TPZ's will be a distance of one-foot radial distance from the trunk for each one-inch of trunk diameter. Exceptions to this standard may occur depending upon the age and condition of individual trees.

CONSTRUCTION OBSERVATION AND SUPERVISION

1. All arboricultural and related soil work should be performed under the observation of an International Society of Arboriculture (ISA) Certified Arborist, or City designated representative.
2. Beforethestartofanyclearing,excavation,construction,orotherworkonthe site, or the issuance of a building or demolition permit, every Protected tree shall be securely fenced-off at the non-intrusion zone, or other limit as may be delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.
3. All specified arboricultural work should be completed prior to site grading (root pruning, canopy pruning, fencing, etc.)
4. The contractor is required to meet with the Project Arborist or City designated representative to review all the tree protection requirements.
5. If the proposed development, including any site work, will encroach upon the TPZ, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.

TREE PROTECTION FENCING (for Non-intrusion Zones)

1. Fencing at a minimum of four feet in height (orange polypropylene) and clearly marked to prevent inadvertent encroachment by heavy machinery should be installed either at the edge of the Tree Protection Zone (TPZ), crown drip line (whichever is further from the trunk), or at the edge of the construction zone if the construction zone protrudes into the TPZ. The Project Arborist, or County designated representative, should approve location of fencing. All fencing should be in place prior to any site grading. Exact location of T.P. fencing to be determined by Project Arborist, Owner, Landscape Architect, and Contractor to maintain maximum TPZ while allowing access to the jobsite. For this project, it is impossible to fence all of the TPZ and as such, mulch and plywood will be employed for root zone protection. (See #4 below for requirements)
2. Contractor will maintain the protection fencing and prohibit all access to fenced areas by construction personnel or equipment until all site work is completed.
3. All structures including construction trailers, equipment storage areas and any other construction traffic are prohibited within fenced areas. Burning or debris piles are prohibited within fenced areas. Oil, gas, paint, cement, chemicals, or other substances that may be harmful to trees shall not be stored or dumped within the fenced areas.
4. If temporary access within a fenced area is determined to be necessary, then a six-inch layer of bark mulch should be placed in all areas requiring access. This requirement for mulching should apply to all areas within the fenced area and subject to access. If equipment access is required, then the mulch should be overlaid with a material of sufficient thickness to adequately distribute bearing load. 3/4" Plywood is sufficient for foot traffic.
5. Constructionmaterialswillnotbestoredwithinthenon-intrusionzoneofa Significant and/or Protected tree. On-site parking shall be kept outside non- intrusion zones.
6. Fences may not be moved without written permission of the Project Arborist or Town designated representative.

DEMOLITION/ SITE CLEARING

1. The Project Arborist will review any tree removal work within 50 feet of a TPZ. Trees requiring removal should be felled away from protected trees. Roots of trees to be removed may require pruning with approved root cutting equipment prior to felling if intermingled with roots of retained trees.
2. Excavation equipment should operate from outside the TPZ. Brush and wood chips generated from tree and brush removal should be placed in the TPZ to a maximum depth of six inches. Where equipment access is necessary within the TPZ, the equipment should operate on a prepared pad with steel plates over 6" of mulch to prevent soil compaction and root disturbance.
3. All required pruning should conform to the pruning section of these guidelines.
4. All brush removal should be performed with hand equipment when within a TPZ.

SITE GRADING/ TRENCHING AND ROOT PRUNING

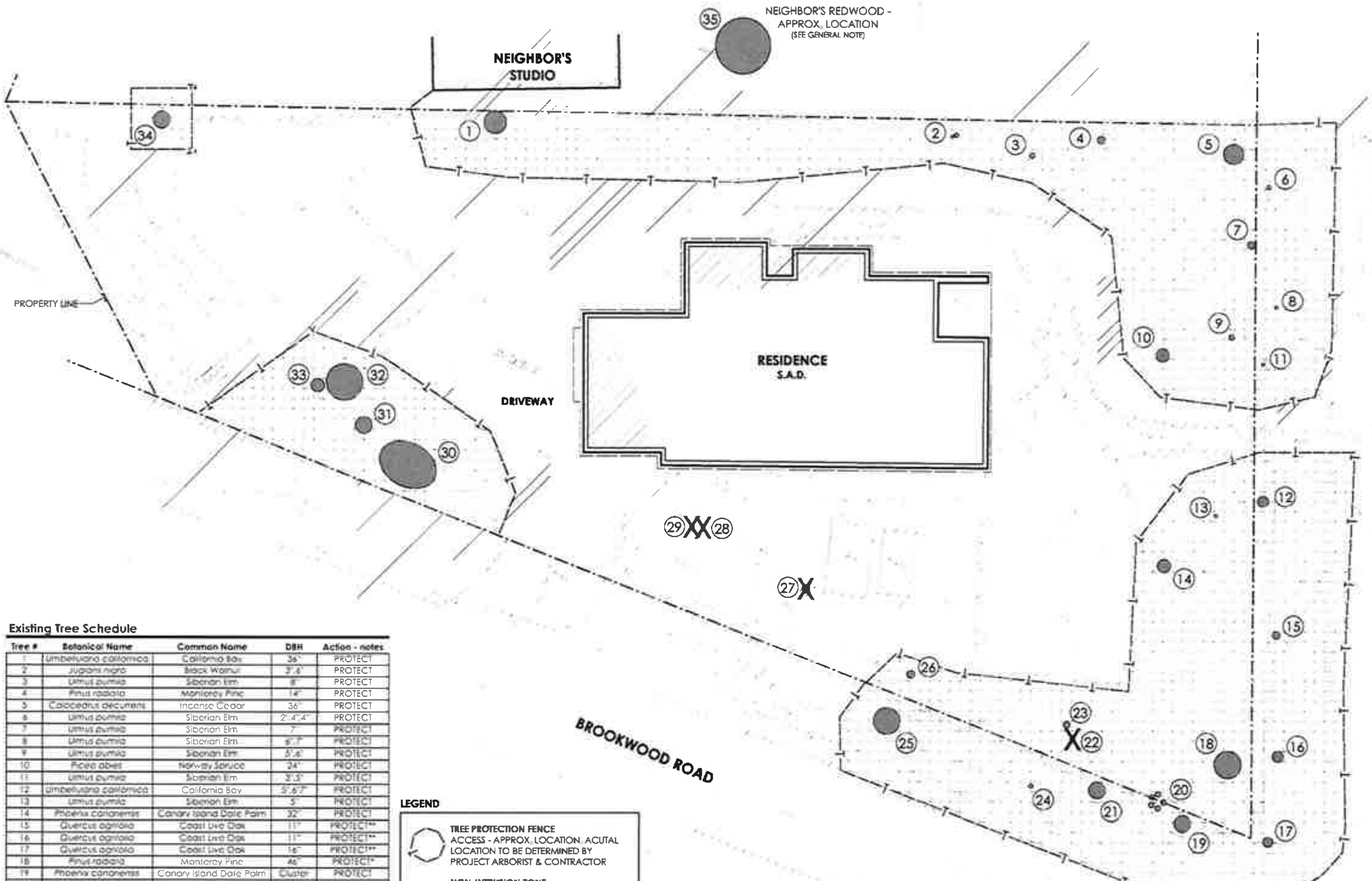
1. Keep site grading within designated construction zones. Grading cuts, pier holes or trenching within the TPZ of a retained tree trunk requires special trenching procedures. Trenches, pier holes and other site excavations should be dug manually or with the use of a root cutting machine, rock cutter, or other approved root pruning equipment. A root-pruning trench should be placed one foot inside the edge of the grading cut or trench edge. The depth of the trench should equal the depth of the grading cut to a maximum depth of 40 inches.
2. A trench may be mechanically dug toward a tree until the edge of the TPZ is reached. From the edge of the TPZ, the special trenching procedures should apply.
3. Underground trenching shall avoid the major support and absorbing tree roots of Protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required.
4. Underground utilities, drain, and irrigation lines should be routed outside the TPZ. When lines must cross the TPZ, the lines should be bored or tunneled through the area at a depth approved by the Project Arborist. In these instances, a single shared utility conduit should be used to reduce impacts to trees. Where tunneling is impractical, use of an air-spade by a certified operator is required.
5. Any roots one inch in diameter or larger requiring removal should be cut cleanly in sound tissue. The roots and surrounding soil should be moistened and covered with a thick mulch (4") to prevent desiccation. No pruning seals or paints should be used on wounds. Cut and exposed roots should be protected from drying. A water absorbent material (i.e. burlap) should be secured at the top of the trench and should be draped over the exposed roots. This material should be kept moistened and soil should be replaced as soon as practicable.
6. Porous pavements are recommended for use within the TPZ. Construction of the pavement sub-base should avoid grading cuts where possible. where grading cuts are necessary within the TPZ, special trenching procedures shall apply.
7. Concrete or asphalt paving shall not be placed over the root zones of Protected trees, unless otherwise permitted by the project arborist.
8. Compaction of the soil within the non-intrusion zone of Protected trees shall be avoided. Use of bridging/protective materials such as layered mulch, trench plates, plywood or rubber mats is encouraged within non-intrusion zones.
9. Any excavation, cutting, or filling of the existing ground surface within the non-intrusion zone shall be minimized and subject to such conditions as the project arborist may impose.

PRUNING AND CABLNG

1. Any tree pruning, cabling, or other similar activity which may be proposed as part of site construction will be included on Planting Plan notes and be reviewed by a qualified arborist or Town representative.
2. Pruning methods shall conform to the ANSI A 300-1995 Pruning Standard Practices and be performed by an ISA Certified Arborist or Certified Tree Worker. Cabling or other support systems shall conform to the ANSI A 300 (part 3)-2000 Standard Practices.

TRUNK AND LIMB PROTECTION

1. Extent and method of trunk and branch protection to be reviewed and approved by Project Arborist.
2. Fully protect potentially impacted circumference of tree (min. 48" above base of trunk) with coir log(s) wrapped around trunk. Place 2x4 slats with 6" max. space between and min. 3 slats per trunk. Nail slats to coir log, ensuring that nails do not contact tree. Wrap plastic orange polypropylene fencing around trunk with 12" min. overlap. Secure with wire ties. Slats to be placed so as not to rest on exposed roots. Top of slats to be match top of coir log.
3. For limb protection, use one wrap of coir log or three wraps of polypropylene fencing around length of limb intended for protection.



Existing Tree Schedule

Tree #	Botanical Name	Common Name	DBH	Action - notes
1	Umbellularia californica	California Bay	36"	PROTECT
2	Juglans nigra	Black Walnut	3",6"	PROTECT
3	Ulmus pumila	Siberian Elm	8"	PROTECT
4	Pinus radiata	Monterey Pine	14"	PROTECT
5	Calocedrus decurrens	Incense Cedar	36"	PROTECT
6	Ulmus pumila	Siberian Elm	2",4",4"	PROTECT
7	Ulmus pumila	Siberian Elm	7"	PROTECT
8	Ulmus pumila	Siberian Elm	6",7"	PROTECT
9	Ulmus pumila	Siberian Elm	5",6"	PROTECT
10	Picea abies	Norway Spruce	24"	PROTECT
11	Ulmus pumila	Siberian Elm	2",5"	PROTECT
12	Umbellularia californica	California Bay	5",6",7"	PROTECT
13	Ulmus pumila	Siberian Elm	5"	PROTECT
14	Phoenix canariensis	Canary Island Date Palm	32"	PROTECT
15	Quercus agrifolia	Coast Live Oak	11"	PROTECT**
16	Quercus agrifolia	Coast Live Oak	11"	PROTECT**
17	Quercus agrifolia	Coast Live Oak	16"	PROTECT**
18	Pinus radiata	Monterey Pine	46"	PROTECT*
19	Phoenix canariensis	Canary Island Date Palm	Cluster	PROTECT
20	Phoenix canariensis	Canary Island Date Palm	Cluster	PROTECT
21	Phoenix canariensis	Canary Island Date Palm	Cluster	PROTECT
22	**Fraxinus americana**	**American Ash**	**4",7"**	**REMOVE**
23	Quercus agrifolia	Coast Live Oak	10",10"	PROTECT**
24	Quercus agrifolia	Coast Live Oak	6"	PROTECT**
25	Phoenix canariensis	Canary Island Date Palm	42"	PROTECT
26	Quercus agrifolia	Coast Live Oak	12"	PROTECT**
27	**Ulmus pumila**	**Siberian Elm**	**10"**	**REMOVE**
28	**Crataegus laevigata**	**English Hawthorne**	**5"**	**REMOVE**
29	**Crataegus laevigata**	**English Hawthorne**	**5"**	**REMOVE**
30	Umbellularia californica	California Bay	8",14",50"	PROTECT*
31	Umbellularia californica	California Bay	23"	PROTECT
32	Umbellularia californica	California Bay	48",55"	PROTECT
33	Umbellularia californica	California Bay	24"	PROTECT
34	Phoenix canariensis	Canary Island Date Palm	20"	PROTECT
35	Sequoia sempervirens	Coast Redwood	96"	PROTECT

*Prune & clear hazards

**Irrigation shall not occur within root zone, unless deemed appropriate by project arborist.

LEGEND

TREE PROTECTION FENCE — ACCESS - APPROX. LOCATION. ACUTAL LOCATION TO BE DETERMINED BY PROJECT ARBORIST & CONTRACTOR

NON-INTRUSION ZONE — SEE TOWN OF ROSS MUNICIPAL CODE. CHAPTER 12.24 & TREE PROTECTION NOTES FOR DEFINITION

TREE PROTECTION ZONE — SEE TREE PROTECTION NOTES FOR DEFINITION

TREE LOCATION — PER SURVEY - V.I.F.

(30) TREE NUMBER — SEE EXISTING TREE SCHEDULE

X TREES TO BE REMOVED — SEE EXISTING TREE SCHEDULE

GENERAL NOTE

FOR TREE PROTECTION NOTES PLEASE REFER TO THE ARBORIST REPORT BY DR. KENT JULIN, ARBORSCIENCE. DATED 7/5/16 - UNDER SEPARATE COVER.

NOT FOR CONSTRUCTION

1 / L0.2 TREE PROTECTION PLAN
1/8" = 1' - 0"

SCALE OF FEET

Roth LaMotte Landscape Architecture

CONSULTANT

KARKABI RESIDENCE
24 REDWOOD DR.
ROSS, CA
APN: 073-271-07

TREE PROTECTION PLAN

Date 7/5/16
File name Ross House Plan.vwx

NO.	DATE	ISSUE NOTES

NO.	DATE	REV. NOTES

DATE: 7/5/16
SCALE: AS SHOWN
DESIGNED BY: SL
DRAWN BY: SL/LR
CHECKED BY: SL

L0.2

PLANTING NOTES

1. EXCAVATE ALL PLANTING AREAS TO EXPOSE SUB-SOIL.

2. SCARIFY NATIVE SOIL / SUBSOIL FOR UNIFORM ROOT ZONE TO ANTICIPATED DEPTHS FOR ROOT BOX DEPTHS, KEEPING IN MINE ROOT ZONE PROTECTION FOR EXISTING TREES.

3. IMPORT FILL FOR ENTIRE PLANTING AREA WITH LOCAL BLEND OF ORGANIC COMPOSTED GREENWASTE MATERIAL AND OTHER SPECIFIED ORGANIC AMENDMENTS AND FERTILIZERS, PER RATES DETERMINED BY APPROVED SOIL TESTING LABORATORY FROM SITE SOIL SAMPLES.

4. COORDINATE WITH LANDSCAPE ARCHITECT FOR FINAL SELECTION, APPROVAL AND PURCHASING OF ALL PLANT MATERIAL.

5. LANDSCAPE ARCHITECT TO VERIFY PLANT LOCATIONS AS STAKED IN FIELD BY LANDSCAPE CONTRACTOR PRIOR TO DIGGING OF PLANTING HOLES.

6. DIG PLANTING HOLES 2 TIMES WIDER THAN DIAMETER OF CONTAINER. BACKFILL PLANTING HOLE WITH AMENDED SOIL MIXTURE AS RECOMMENDED BY SOIL TESTING ANALYSIS. TEST ALL PLANTING PITS FOR DRAINAGE.

7. PRIOR TO PLANTING ALL SPECIFIED PLANTS, TEST DRAIN ALL PLANTING AREAS AS FOLLOWS:
  a. PLANT OR TREE PITS: FILL WITH 12 INCHES OF WATER. WATER SHALL DRAIN COMPLETELY IN 48 HOURS.
  b. PLANT BEDS: IRRIGATE UNTIL SOIL IS SATURATED. SATURATED CONDITION SHALL NOT REMAIN AFTER 24 HOURS.

8. DO NOT BURY THE CROWN OF THE PLANTS. THE SOIL LEVEL OF THE CONTAINER SHOULD BE MIN. 1" HIGHER THAN EXISTING GRADE FOLLOWING PLANTING. DO NOT BURY CROWN OF PLANT WITH BACKFILL MATERIAL.

9. MULCH TO BE FIBROUS SHREDDED OR CHIPPED BARK. SAMPLE TO BE APPROVED BY LANDSCAPE ARCHITECT. APPLY TO ALL PLANTED AREAS FOLLOWING PLANTING TO A MINIMUM DEPTH OF 3". DO NOT PLACE MULCH AGAINST THE CROWN OR BASE OF PLANT. LEAVE A 4" GAP BETWEEN BASE OF PLANT AND MULCH.

10. PLANTING IS SCHEMATIC. FINAL PLANT PLACEMENT AND LAYOUT TO BE DONE IN THE FIELD WITH LANDSCAPE ARCHITECT.

11. STAKE ALL TREES PER THE FOLLOWING GUIDELINES:
  a. (3) STAKES PER TREE WITH 2 ON THE WINDWARD SIDE OF THE TREE
  b. PLACE STAKES AS LOW AS POSSIBLE BUT NO HIGHER THAN 2/3 THE HEIGHT OF THE TREE.
  c. MATERIALS USED TO TIE THE TREE TO THE STAKE SHOULD BE FLEXIBLE AND ALLOW FOR MOVEMENT ALL THE WAY DOWN TO THE GROUND.
  d. REMOVE ALL STAKING MATERIAL AFTER ROOTS HAVE ESTABLISHED. THIS SHOULD BE NO LONGER THAN ONE GROWING SEASON.

12. INCORPORATE COMPOST OR NATURAL FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 8" AT A MINIMUM RATE OF 6 CUBIC YARDS PER 1,000 SQUARE FEET OR PER SPECIFIC AMENDMENT RECOMMENDATIONS FROM A SOILS LABORATORY REPORT.

KARKABI RESIDENCE PLANT LIST

SYMBOL	Botanical name	Common Name	Size	WUCOLS	Comments
	Large Trees				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Small/Flowering Trees				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Large Shrubs				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Medium Shrubs				
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Low Shrubs, Perennials, & Ferns				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Groundcovers & Vines				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Specimen Grasses [illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Grasses				
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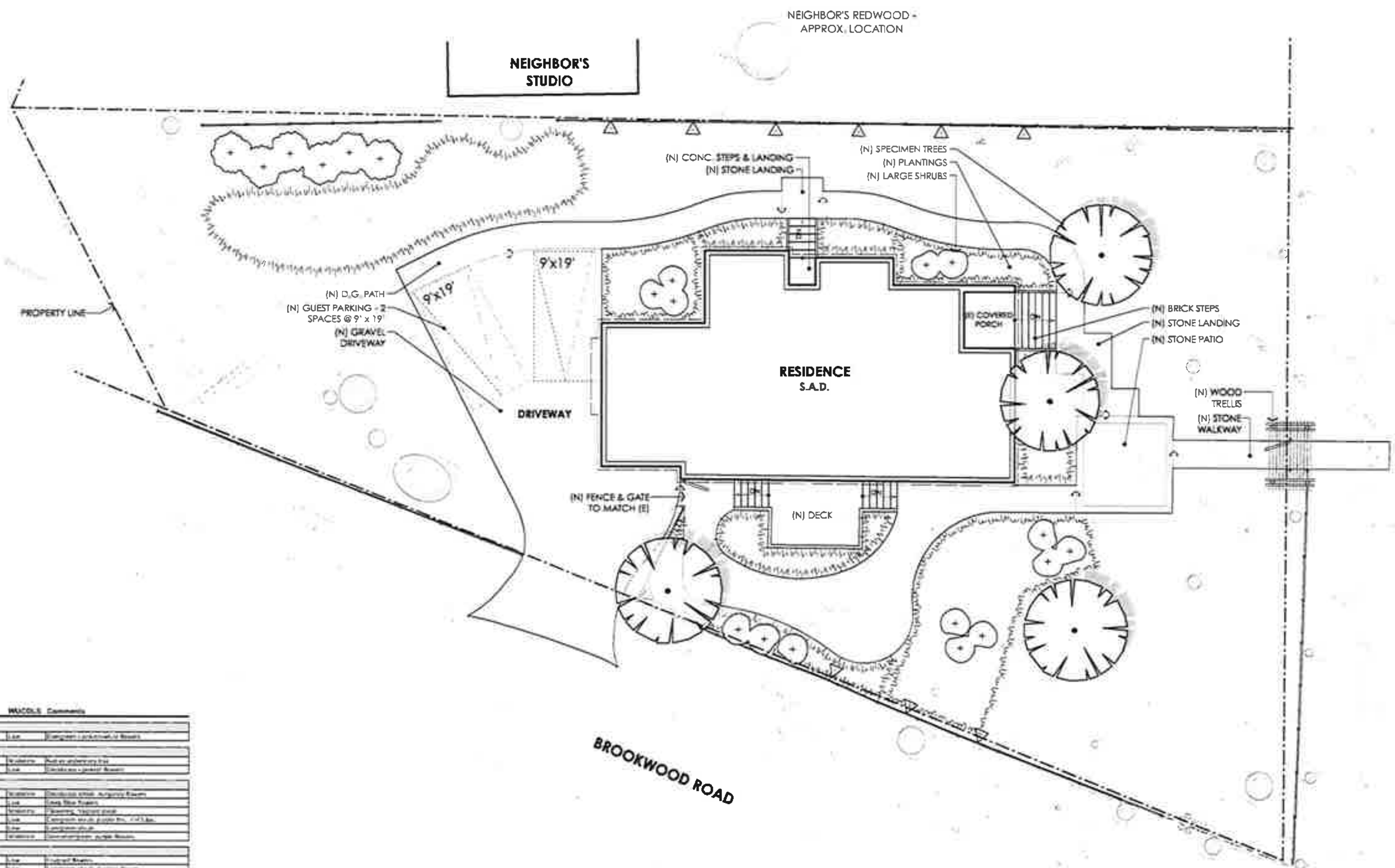


LEGEND

- PAVING - SAND SET STONE
- PAVING - GRAVEL
- PAVING - D.G.
- FLUSH
- (N) STEPS
- TREE LOCATION PER SURVEY - V.I.F.
- PLANTING - SHRUBS, PERENNIALS & FERNS (IRRIGATED)
- PLANTING - PERENNIALS & GRASSES (IRRIGATED)
- PLANTING - VINES ALONG FENCE (IRRIGATED)
- PLANTING - LARGE SHRUBS (IRRIGATED)
- PLANTING - SPECIMEN TREES (IRRIGATED)

NOT FOR CONSTRUCTION

1 / L1.0 CONCEPT PLAN
1/8" = 1' - 0"

SCALE OF FEET

Roth LaMotte
Landscape Architecture

CONSULTANT

KARKABI RESIDENCE
24 REDWOOD DR.
ROSS, CA
APN: 073-271-07

LANDSCAPE CONCEPT PLAN

Date: 7/5/16
File name: Ross House Plan.vwx

NO.	DATE	ISSUE NOTES

NO.	DATE	REV. NOTES

DATE: 7/5/16
SCALE: AS SHOWN
DESIGNED BY: SL
DRAWN BY: SL/LR
CHECKED BY: SL

L1.0

ATTACHMENT 7

July 5, 2016

Dear Ross Town Council:

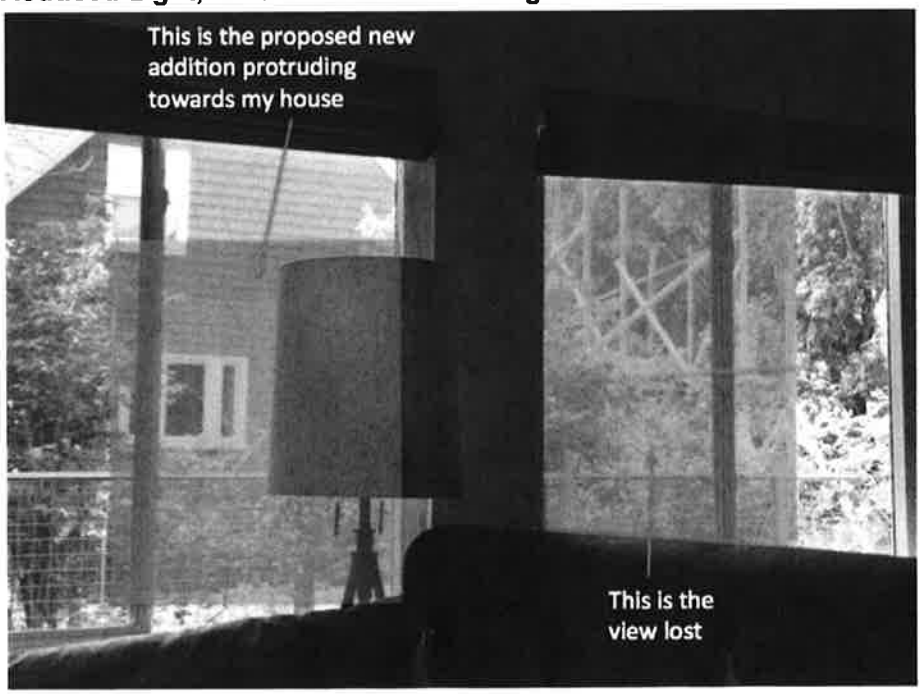
My name is Margaret Francis. I am the homeowner at 20 Redwood Drive in Ross, and have been since 2004. My daughters Julia and Jane attend Ross School, most recently third and fourth grade. I am familiar with the project proposed by Mr. Naim Karkabi for 24 Redwood Drive, per the current plans on file with the Town as of June 2016.

As the homeowner next door to the project and most physically proximate to the proposed expansions, I have deep concerns about the design coming before you at the Council next Tuesday July 12 because of the negative effects the project will have on our enjoyment of our home and the value of our property. I would like the Council to have Mr. Naim Karkabi address these concerns with a revised design before granting any permits to proceed.

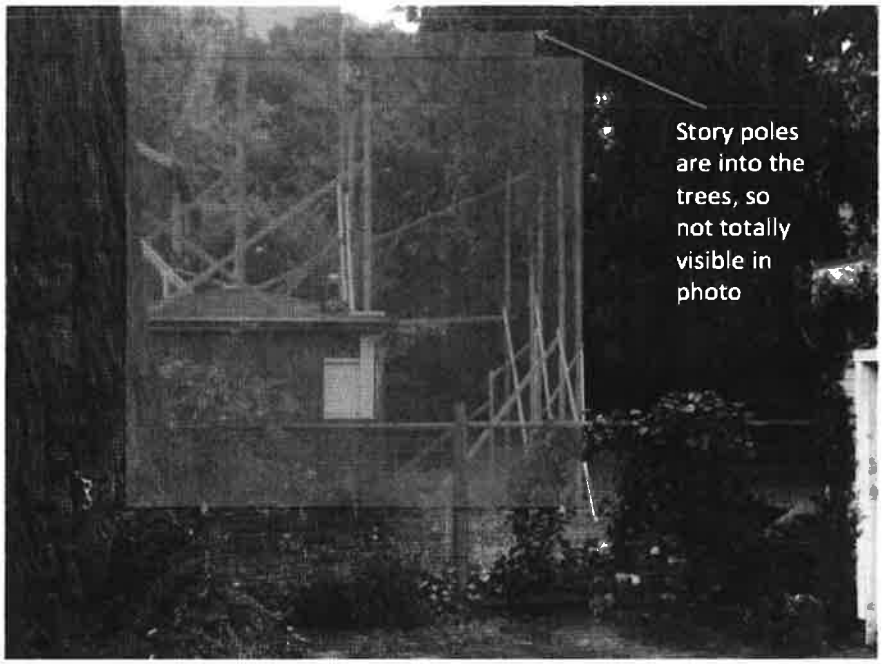
Negative impacts to 20 Redwood Drive from Proposed Project at 24 Redwood:

1) **The increased mass and height of the proposed project at 24 Redwood would significantly and negatively impact the light, air flow and views for the property at 20 Redwood.** This impact has not been sufficiently taken into account in the design proposed for 24 Redwood. Here are examples of what the design actually looks like from my windows:

Reduced Light, Air and View from Living Room



Reduced Light, Air and View from Bedroom



2) **The proposed design for the house at 24 Redwood is a negative change to the current prospect as seen from 20 Redwood**. It extends the footprint of the house towards my house at 20 Redwood and presents several high, blank, shingled walls with few windows on that side. Only walls without windows will be visible from the entire back half of the property at 20 Redwood, including the master bedroom. No other aspect of the proposed design is so institutional and severe. The mass of house is really concentrated towards my lot and not visually centered or distributed on the property in a way that makes it loom over my lot and shade all my South facing windows.

3) **The proposed design significantly reduces neighborhood greenspace.** The house at 24 Redwood has an unusually deep setback relative to all other houses in that block of Redwood Drive. The proposed new footprint would maintain that front setback and locate new mass in the backyard, making that house further out of alignment with the rest of the block. The back yard would be converted to attached garage, two open air parking spots and a driveway, reducing overall backyard greenspace. This is inconsistent with the overall character of the neighborhood around 24 Redwood: homes that are traditional in character, with mass centered on their lots, conservative in design, surrounded by gardens. The new house would have a parking lot for a back yard.

I have one additional concern that may be addressed in the Staff Report, which is not complete/ available to me as of the time of this letter: the impact of the proposed design (and the

construction process) on the health and longevity of the 100 foot redwood tree located on my lot at 20 Redwood, 10 feet from the property line with 24 Redwood.

This issue was not scoped into the ADR process, so is part of the Town Council scope from what I understand of the Town laws. The report I have seen commissioned by the homeowner at 24 Redwood, from Kent Julin, says that the project will not endanger the tree. The report I have commissioned from Urban Forestry, says that the project will endanger the tree because cars should not be parked directly on the root system of the tree, and it lays out tree protections for the construction process, such as not stacking materials on the critical roots underneath the dripline. These protections have already been ignored by the crews working at 24 Redwood.

The Urban Forestry report also recommends creative design implementations that would support the design of parking 3 cars on the root system of the tree, which the current landscaping plan does not take into account. In the current plan, the proposed driveway and 2 car parking in the backyard will be directly on the root system of the tree.

I hope the Town can independently settle this question, because construction at 24 Redwood may negatively impact a tree that is my responsibility. I see the redwood tree as a feature of my property and of the Town, and if the tree is not healthy, I will be the homeowner responsible for improving its health or removing it to prevent threat to adjacent properties and other Ross residents, not Mr. Naim Karkabi.

I will be attending the Town Council meeting on Tuesday, July 12 2016. I would appreciate your attention to these concerns in reviewing the project proposed for 24 Redwood by Mr Naim Karkabi. Please feel free to visit the project site in advance of the meeting; the magnetic gate at 20 Redwood opens with a simple pull. You can walk down the driveway and see the story poles for the proposed project from the 20 Redwood Drive perspective. What looks aesthetic on paper without neighborhood context, looks very different from the viewpoint of the house next door. Please also feel free to contact me by phone or email at any time.

I am confident that with revision, the plan for 24 Redwood can be improved and the property re-developed in a manner more consistent with and respectful of the current character of the neighborhood- and less damaging to the views, the air flow, and the light at 20 Redwood Drive.

Sincerely,

Margaret Francis
20 Redwood Drive/ PO Box 645
Vice President, Product Management, Heroku/ Salesforce.com
margaretfrancis@gmail.com
415 260 8476

ATTACHMENT 8

Margaret Francis

URBAN FORESTRY ASSOCIATES, INC.
8 Willow Street San Rafael, CA 94901
(415) 454-4212 info@urbanforestryassociates.com

ARBORIST REPORT

For

20 Redwood Drive

PURPOSE

Urban Forestry Associates (UFA) was hired to assess the health of a mature coast redwood and to assess impacts from proposed construction on the neighboring property to the south. The inspection occurred

SCOPE OF WORK AND LIMITATIONS

Urban Forestry Associates has no personal or monetary interest in the outcome of this investigation. All observations regarding trees in this report were made by UFA, independently, based on our education and experience. All determinations of health condition, structural condition, or hazard potential of a tree or trees at issue are based on our best professional judgment. The health and hazard assessments in this report are limited by the visual nature of the assessment. Defects may be obscured by soil, brush, vines, aerial foliage, branches, multiple trunks or other trees. Even structurally sound, healthy trees are wind thrown during severe storms. Consequently, a conclusion that a tree does not require corrective surgery or removal is not a guarantee of no risk, hazard, or sound health.

OBSERVATION

Species	*Sequoia sempervirens* (coast redwood)
Size	97.8" DBH[1] Approximately 110' tall as measured with a hypsometer
Location	5' from the southeast corner of the home at 20 Redwood Drive. Approximately 10' to the property fence with the south neighbor.
Condition	Excellent health and structural condition. The roots were not causing easily observable damage to any of the adjacent structures or hardscape. No signs or symptoms of significant pest or disease were observed in the roots, on the main stem, or in what was observable of the canopy. The tree is growing in close proximity to a drainage, likely contributing to its good condition.

SPECIES CHARACTERISTICS

Coast Redwood, *Sequoia sempervirens*, has few enemies that affect tree stability other than fire, Brown Cubicle Rot, *Poria sequoiae*, white ring rot, P. albipellucida, and logging / edge effects (trees newly exposed to winds due to clear cutting or extensive thinning). Redwood does not have tap roots but where it develops large, wide-spreading lateral roots, it is considered to have better than average windfirmness. Second growth from stumps are generally less wind firm and prone to whole tree failure than first growth from a seed.

Redwoods can tolerate the loss of major portions (30 to 50%) of the root system through stream cutting, sedimentation or mechanical removal and suffer no significant threat to the over-all health of the tree. It sprouts a new system quickly from adventitious buds. The same is true of the crown of this species. It can lose

[1] DBH is Diameter at Breast Height, measured at 4.5' above grade.

most or even all of its crown (a "fire column") and suffer no permanent damage. It quickly forms a new crown from dormant buds.

Multiple-stemmed and multiple topped trees are more subject to wind breakage than single stem/leader trees. However, old growth seldom has a single leader. Over time most trees dieback due to drought, rodent damage or wind breakage, and form a new leader or leaders from dormant buds or small branches.

Coast redwood requires ample growing space as it's expansive, aggressive root systems is well known for causing havoc to infrastructure. Consequently, the species is poorly suited for urban environments where soils are often compacted and growing spaces are inadequate, significantly increasing the potential for damage.

CONCLUSIONS

This is an open grown tree, known as a "wolf tree" that has a high percentage of its height covered in live foliage (high live crown ratio) which leads to the development of a shorter tree with a large base. In a forest setting, a redwood with this size base could easily top 200'. Having such a high degree of taper in the main stem greatly increases the tree's stability in terms of whole tree failure from the root system.

A general rule for determining what is sometimes called the structural root zone is 3-5 times the diameter away from the base of the tree, depending on species characteristics. For redwoods, generally three is sufficient. For a tree of this size, three times the diameter of the tree is equal to 25'. As it is only 10' to the property fence, this would require a work exclusion zone of 15' onto the neighboring property during design and development. That is not to say nothing can occur within that zone, only that it should be protected from compaction and cutting major roots. Protecting this area is in the interest of keeping the tree structurally stable. The health of the tree is a separate issue.

The smaller diameter roots are those doing the bulk of the absorbing of water and nutrients and these are generally found further from the tree. These are also ephemeral, meaning they are continually dying and regenerating. These are also more prone to damage from soil compaction during construction. Redwood roots have been documented as far as 250 feet from the base of the tree. Even if we state conservatively that the majority of the fine roots are within 80' of the base, that gives an area of greater than 20,000ft^2. Approximately 8,800ft^2 or approximately 44% of the root system lies on the neighboring property. While redwood is highly tolerant of root damage, this is a high percentage of the roots potentially affected by the development.

RECOMMENDATIONS

The following recommendations are for optimal treatment of the tree and not necessarily required for the tree's survival. They are loosely listed in terms of priority.

1. The area within 20' of the base of the tree should be fenced off with at least 4' high metal deer fencing and filled with 2-4' of wood chips to avoid damage to the structural roots of the tree. No work should be permitted in this area without prior consent from either the tree owner or the Town Arborist.
2. Any necessary irrigation or planting in this fenced area shall be installed by hand and repositioned as necessary to avoid cutting any roots larger than approximately 2' in diameter.
3. The jobsite toilet should be stored on the opposite side of the site to avoid potentially hazardous chemicals in the root system during cleaning. The same is true for any potentially toxic materials stored on the site.
4. The foundation of the new home should utilize pier and grade beam with either raised floor joists or no compaction of native grade beneath the slab if at all possible.
5. The proposed parking deck near the tree could either be a raised deck as in the appended photos or utilize soil cells (http://www.deeproot.com/products/silva-cell/overview or equivalent) to mitigate the potential for future root damage to the deck and allow for greater access to the area beneath the pad for roots.

6. The area under the entire canopy should be maintained with a 2-4" deep layer of wood chips (mulch) to maintain soil moisture and temperature.
7. The tree may require some supplemental deep irrigation to help it to recover from root damage during construction if the canopy begins to show scattered dieback.

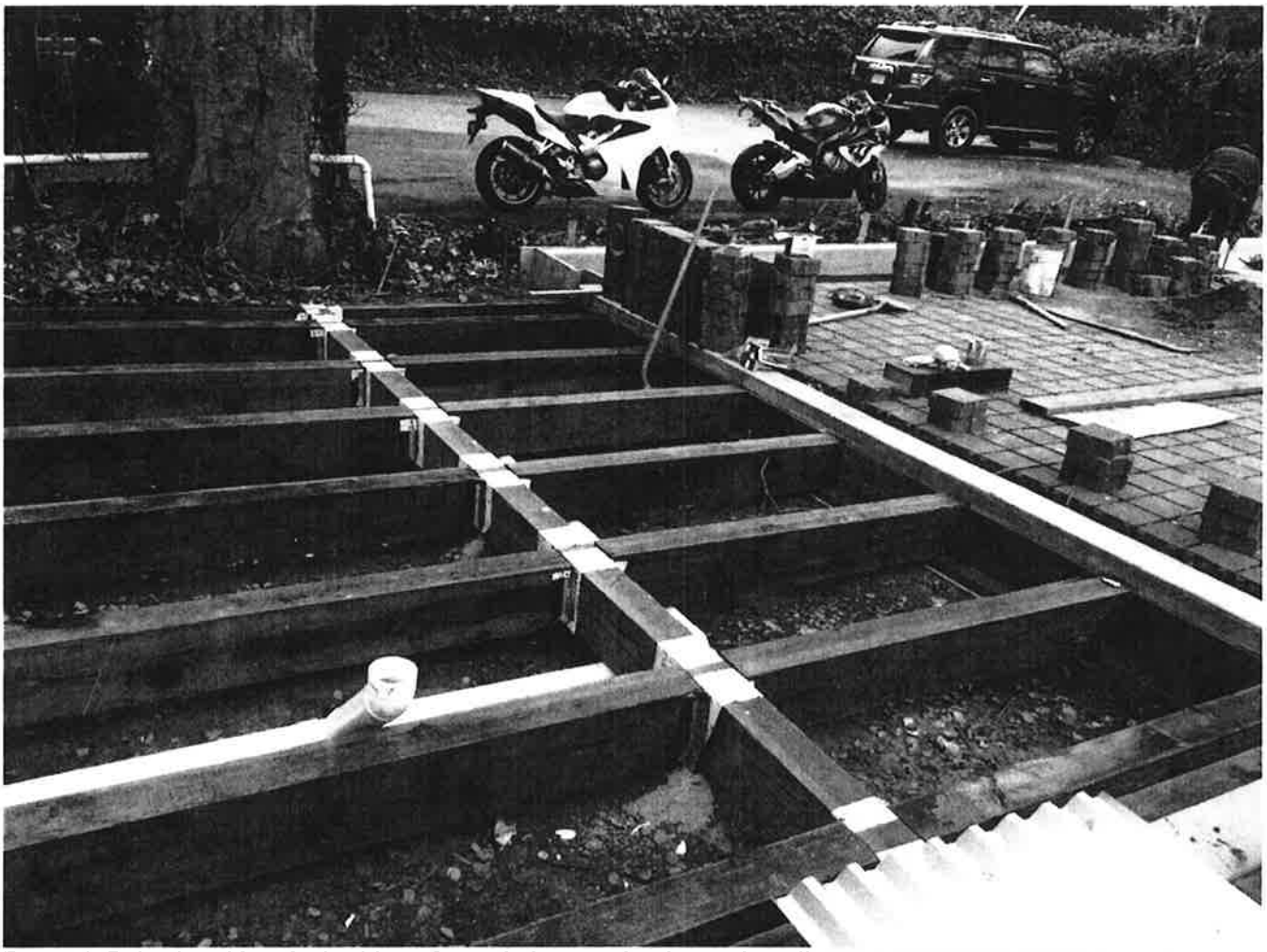


Figure 1. Raised parking deck with perforated pipe running beneath to disperse water from drains in the deck.

Benjamin Anderson, Urban Forester
ISA Certified Arborist & TRAQ
WE:10160A