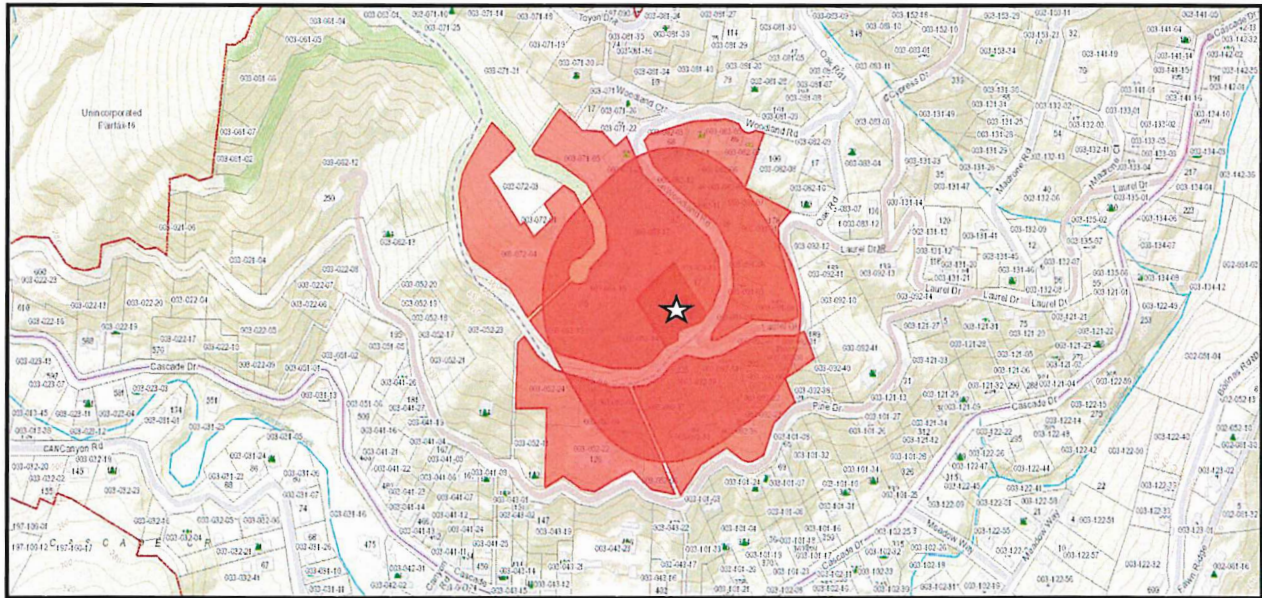


# TOWN OF FAIRFAX STAFF REPORT

## Department of Planning and Building Services

**TO:** Fairfax Planning Commission  
**DATE:** October 15, 2020  
**FROM:** Linda Neal, Principal Planner  
**LOCATION:** 5 Woodland Road; Assessor's Parcel No. 003-053-10  
**PROJECT:** Single-family residence and garage  
**ACTION:** Hill Area Residential Development, Design Review, Excavation, Encroachment, Tree Removal and Variance Permits; Application # 20-11

**APPLICANT:** Jeff Kroot, Architect  
**OWNER:** Chris and Lindsay Bolter  
**CEQA STATUS:** Categorically exempt, § 15303(a) and (e), 15305(a) and (b) and 15332



**5 WOODLAND ROAD**

## DESCRIPTION

The project consists of the following: construction of a new 3 story, 28.5 foot tall, 2,588 square foot, 3 bedroom, 3 bathroom, single-family residence in the upper second and third floors, a 584 square foot accessory dwelling unit (ADU) on the first floor and a new 576 square foot, detached two car garage with a deck on top. The second story of the structure which is the first floor of the main residence provides a three bedrooms, 2 bathrooms and a laundry room while the third uppermost floor provides a dining room, living room, kitchen, pantry, bathroom and family room. A new 20-foot-wide driveway is proposed to access the garage and will provide an additional 2 uncovered parking spaces. Two new retaining walls are proposed which vary in height from 1 foot to 11.25 feet, to retain the hillside on either side of the driveway. The project includes a drainage system and construction of three retaining walls. The back two walls reach a maximum of 4 feet in height, and the wall immediately behind the house reaches a maximum of 9.5 feet in height.

Applications were submitted for Hill Area Residential Development, Design Review, Excavation, Encroachment, and Tree Removal permits, as well as a retaining wall height variance on June 18, 2019. At staff's direction, the project plans were subsequently redesigned to eliminate a detached 2-story garage from the project and to decrease the underutilized subfloor areas and were resubmitted on January 30, 2020. The project was declared complete on October 2, 2020 and placed on the October 15, 2020 Planning Commission meeting agenda.

The ADU unit is regulated by State ADU regulations and is not under the purview of the Planning Commission.

The project grading consists of roughly 381 cubic yards of cut material and 52 cubic yards of fill to create the garage, driveway, residence foundation and drainage improvements, with roughly 329 cubic yards of off-haul. Approximately 206 cubic yards of material is being excavated to create the required garage structure.

The house entryway is located on the east side of the structure, providing access to the second story of the structure (and first living level of the main house) from the garage and roof deck.

The residence complies with the regulations set forth in the Residential Single-family RS- 6 Zone District as follows:

	Front Setback	Rear Setback	Combined Front/rear Setback	Side Setbacks	Combined Side Setbacks	FAR	Coverage	Height
<b>Required/ Permitted</b>	6 ft.	12 ft.	35 ft.	5 ft. & 5 ft.	20 ft.	.40	.35	28.5 ft., 3 stories
<b>Existing</b>	0 ft.	137	137	67 ft. & 65 ft.	132 ft.	.02	.02	1 story, ± 18 ft.
<b>Proposed</b>	10 ft.	121 ft.	131 ft.	5 ft. & 40 ft.	45 ft.	.13	.13	28.5 ft., 3 stories

## **BACKGROUND**

The 24,297 square foot site is 150 feet wide and made up of 3 lots from the original Map No. 2 Cascades subdivision which were merged into one property by the Town on June 28, 1984. The site slopes up from the intersection of Laurel Drive and Woodland Road at an average rate of 48%.

There is a 380 square foot cottage on the site that is estimated to have been built in 1924, is in a state of disrepair, and is uninhabitable.

There is a storm drain manhole within the intersection of the Laurel Drive and Woodland Roads and an existing fire hydrant and water meter box along the property frontage.

There is also a small storage shed on the site.

## **REQUIRED DISCRETIONARY PERMITS**

The project requires the approval of a Hill Area Residential Development permit, Excavation permit, Encroachment permit, Retaining Wall Height Variance, Tree Removal permit, and a Design Review permit. The required discretionary permits and analysis of project compliance with the related sections of the Town Code and Zoning Ordinance are found below.

The project provides the required 3 parking spaces per Town Code 17.052.030(A)(1) and (2) including the covered space required in Code § 17.052.010(D).

The ADU being proposed on the first floor of the residence is exempt from any parking requirement because it will be located within the proposed residence. Town Code § 17.048.010(7)(b)(3) exempts ADU's being created within proposed single-family residences from any additional parking requirement. Review of the ADU itself is not subject to review or approval by the Planning Commission and will be processed ministerially with the building permit in accordance with State Law and Town Code § 17.048.010(D)(1)(a)1.

### **Hill Area Residential Development**

The purpose of the Hill Area Residential Development Permit is to encourage the maximum retention of natural topographic features, minimize grading of hillside areas, provide a safe means of ingress and egress to and within hillside areas, minimize water run-off and soils erosion during and after construction, prevent loss of life, reduce injuries and property damage and minimize economic dislocations from geologic hazards, and to ensure that infill development on hillside lots is of a size and scale appropriate to the property and is consistent with other properties in the vicinity under

the same zone classification [Town Code sections 17.072.010(A) and (B)].

Town Code §17.072.090(C)(1) requires graded slopes to be sculptured and contoured to blend with the natural terrain and Town Code §17.072.090(C)(3) requires that the height of retaining walls be minimized within the Hill Area Residential Development Overlay Zones.

Town Code § 17.072.090(D) indicates that projects within the Hill Area Residential Development Overlay Zone shall be designed to minimize disruptions of existing ecosystems.

The garage and house have been located at the front of the site with the garage adjacent to Woodland Road, with the house set roughly 4 feet further up the hillside and accessed by an at-grade stairway. A small approximately 295 square foot front patio provides a small level outdoor area for the residence and provides access to the front stairway to the lower level accessory dwelling unit. Most of the usable outdoor area for the residence of both the main unit and the ADU is provided via decks off the main structure, a small porch off the bedroom of the ADU, and a roof deck on top of the garage. No large areas are proposed for further excavation to create additional level yard area.

### **Drainage and Slope Stability**

The Town Engineer has reviewed the entire body of information submitted for the project including the development plans, The project approval is limited to the project depicted and described in the following plans and reports: development plans, pages 1, 1A, 1B, and 2 through 9 by Jeff Kroot, Architect, revision date 8/3/20, the landscaping plan page L1 by Roseann DaBello, revision date 4/20, the boundary survey and topographic plan and the story pole plan by Stephen Flatland, Surveyor, pages S1 and SP and dated 01/19, the Ross Valley Fire Department approved vegetative management plan revision date 7/29/20 and the Civil Engineering plans by Vlad Iojica, pages C1.0, C2.0, C2.1, C3.0, C4.0 and C4.1 revision date 8/5/20.

After the applicants moved the private drainage improvements out of the undeveloped portion of the Laurel Drive right-of-way per the Town Engineer's direction, the Town Engineer has determined that the project as designed will comply with the Hill Area Residential Development Ordinance. The project has been designed to provide a safe means of ingress and egress at its hillside location, minimize water run-off and soils erosion during and after construction, and prevent loss of life, reduce injuries and property damage and minimize economic dislocations from geologic hazards as currently designed (Attachment B – Town Engineer's final memorandum dated 7/28/20 and final e-mail relating to the drainage improvement location).

Test borings for the site located bedrock 1 to 4 feet beneath the ground surface but given the steepness of the slope, the project engineer has required the residential structure utilize a drilled pier and grade beam foundation while the detached garage can

be constructed on a footings because it will be built in a deep, level bedrock cut (Attachment C – Geotechnical reports by Dave Olnes, Civil and Soils Engineer dated 5/20/19 and 3/14/20).

The retaining walls proposed above the house will be constructed with 4-inch perforated back drains leading to the storm drain system. Both the house and the garage structure will include gravel and 4-inch storm drains surrounding the side and rear walls, collect roof runoff in downspouts and drainage from the hillside above the structure, and will carry the water around the structures into a combination stormwater detention planter and stormwater dissipater system. The detention/dissipater system will slow down the run-off from the structures and dissipate it at a slow rate to emulate natural drainage speeds on the site so there is no net increase in water run-off speeds or the amount of naturally occurring run-off leaving the site prior to construction (Attachment D – Stormwater Control Plan by Vlad Iojica, Professional Engineer dated January 2020).

The drainage system will include 17 storm-drain clean outs, as maintaining the system if the project is approved will be crucial to on-site and off-site stability. To ensure maintenance of this system, staff has included a condition that a storm drain system maintenance agreement be recorded at the Marin County Recorder's Office to memorialize this requirement and alert future owners of their responsibility to maintain the system to ensure that it remains effective for the life of the development.

### **Retaining Wall Height Variance, Encroachment and Excavation Permits**

The tallest retaining walls are proposed along the driveway where they range in height from 1 foot to 11.5 inches in height (see east garage elevation, plan page 9) and the wall immediately behind the house that ranges from 1 to 9.5 feet in height. These walls must be their proposed gross heights to provide the required parking and a garage floor elevation that complies with slope and grade break requirements for steep driveways (those in excess of 18%), and to construct the foundation and drainage system and provide maintenance access and hillside stability at the rear of the residence. The Planning Commission could if it deems it appropriate, require the applicant to step the retaining walls on either side of the driveway to allow for mid-level plantings that would soften their visual impact.

The other 2 walls north of the residence, above the proposed 9-foot wall, will provide added stability and act as additional debris barriers between the house and slope behind the house. The walls were included in the plans in response to the Town Engineer's request that the project engineer address the potential for slope instability originating in or above the upper portions of the site, to protect the planned residence and garage from potential debris impacts.

Due to the site sloping uphill immediately adjacent to the improved portion of Woodland Road, a portion of the front access stairway and driveway retaining walls will encroach into the Woodland Avenue right-of-way and require an encroachment permit. Staff is recommending approval of the encroachment permit because the encroachment

distance being proposed is the minimum necessary to create an access path to the residence and a driveway to the garage, which provides the code required parking for the residence.

The project will result in a total grading amount of roughly 432 cubic yards of material (380 cubic yards of cut, 52 cubic yards of fill) with a total off-haul amount of roughly 329 cubic yards of material. Most of the excavation is due to the construction of the parking area to create the three 9 foot x 19 foot parking spaces required by Town Code §§ 17.052.030(A)(1) and (2) and 17.052.040(B)(1) and (2) and an accessible driveway slope in compliance with Marin County steep driveway standards.

The Town Engineer has commented on the amount of off-haul and the relatively limited access and parking in the project area and has required that a construction management plan must be submitted with the building permit application for review and approval by the Building Official prior to issuance of the building permit. This is a standard condition for new residences, to minimize the impact of construction vehicles and repeated off-haul trips on the neighborhood and has been included the Resolution for this project.

The Town Code § 17.072.090(C)(4) prohibits grading during the rainy season from October 1 through April 1 each year to avoid excavation hazards, which has been included as a condition of approval.

### **Design Review**

Town Code §17.020.030(A) requires that the design of new residences be reviewed and approved by the Fairfax Planning Commission for compliance with the design review criteria contained in Town Code §17.020.040.

These criteria include but are not limited to the following:

“The proposed development shall create a well composed design harmoniously related to other facilities in the immediate area and to the total setting as seen from hills and other key vantage points in the community”.

“The size and design of the structure shall be considered for the purpose of determining that the structure is in proportion to its building site and that it has balance and unity among its external features so as to present a harmonious appearance”.

“The extent to which natural features, including trees, shrubs, creeks and rocks and the natural grade of the site are to be retained”.

### **House Siting and Design**

As described above, the house and garage have been located at the front of the property to minimize the disturbance to the natural environment of the site, excavation, tree removal, and other impacts on the natural vegetation.

The house and the resulting floor area ratio (FAR) are similar in size to other homes on similar sized lots with similar slopes as described in the table below.

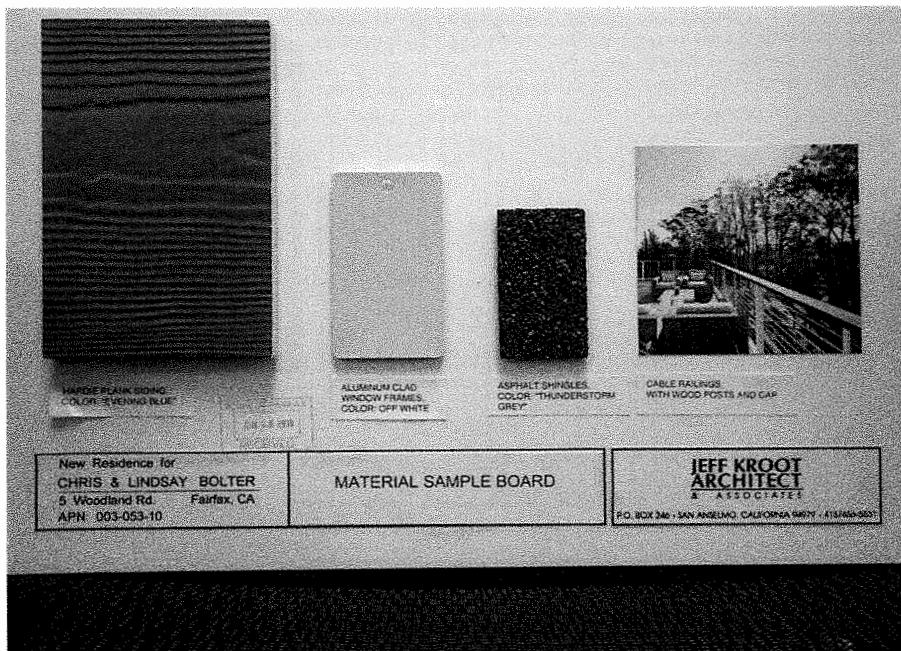
5 WOODLAND ROAD – SIMILAR PROPERTIES' DEVELOPMENT							
APN #	ADDRESS	LOT SIZE	HOUSE SIZE	# BEDROOMS	# BATHS	GARAGE	FAR
003-053-13	17 Woodland Rd.	16,800	1,641	1	1.5	0	.1
003-053-16	35 Woodland Rd.	31,500	1,038	2	2	0	.03
003-081-30	51 Oak Rd.	20,400	2,596	3	2.5	420	.13
003-081-38	120 Toyon Rd.	19,875	1,508	2	2	380	.08
003-082-08	100 Woodland Rd.	25,500	3,793	5	4	280	.15
003-083-03	26 Oak Rd.	14,400	2,247	3	2.5	429	.16
003-083-04	22 Oak Rd.	19,680	1,550	2	1	209	.08
003-083-11	348 Cypress Dr.	20,000	952	2	1	0	.05
003-091-01	178 Laurel Dr.	24,000	2,617	3	3.5	685	.11
003-091-08	192 Laurel Dr.	14,600	942	1	1	308	.06
003-092-11	183 Laurel Dr.	14,200	1,904	3	3	0	.13
003-092-13	127 Laurel Dr.	27,202	2982	4	3.5	864	.11
DEVELOPMENT OF PROPERTIES IN THE IMMEDIATE NEIGHBORHOOD ON WOODLAND ROAD							
003-082-01	32 Woodland Rd.	13,860	2,414	4	3	660	.17
003-082-11	40 Woodland Rd.	5,500	1,549	1	2	380	.28
003-082-12	44 Woodland Rd.	6,500	1,411	2	1	0	.22
003-091-04	14 Woodland Rd.	6,300	1,785	3	3	390	.28
003-091-05	20 Woodland Rd.	6,600	864	2	1	180	.13
003-091-06	205 Laurel Dr.	7,000	1,664	3	3.5	0	.24
003-091-07	199 Laurel Dr.	9,450	1,352	4	2	0	.14
003-092-34	215 Laurel Dr.	10,480	1,290	2	2	0	.12
003-092-39	225 Laurel Dr.	16,150	1,212	2	2	0	.08
5 Woodland Road		24,297	2,588 sfd 584 ADU	3 1	3 1	576	.11 (.13 w/ADU)

The house has been designed to be in scale with the site and it is similar in size to other structures on similar sized and sloped sites in the neighborhood (32 & 100 Woodland Rd., 127 & 178 Laurel Dr. and 51 Oak Rd.) and on properties throughout the hillsides of Fairfax. Town Code §§ 17.136.030(A) and (B) set the maximum Floor Area Ratio allowed for single-family residences in the residential zones at .40, excluding 500 square feet of garage space, and a maximum allowable square footage of 3,500 square feet. The proposed structure is well below the allowable FAR and maximum size square footage with a Floor Area Ratio of .11 and a maximum residence square footage

of 2,588 square feet.

The façade of the 3 story structure has been articulated by: a) stepping back both the east and west portions of the residence relative to the center portion - the west side is stepped back 12 ft. and the east side is stepped back 8 ft.); b) decks off the 1<sup>st</sup> and 2<sup>nd</sup> floors; and c) a porch off the first floor ADU and a partially covered entry porch to the main residence. The roof for the entry porch to the main residence and the main roof for the residence slope back from the street which helps minimize the apparent height of the structure. Two bay windows in each of the second-floor bedrooms (bedroom 2 and 3) also helps break up the massing of the building. While the structure does reach the maximum 28.5 ft in height allowed for upsloping sites, only one small section of the upper roof ridge and upper floor eave reaches that height. Most of the rest of the structure, due to the undulations of the natural grade across the site, is roughly 26 to 26.5 feet in height [Town Code § 17.080.060(A)]. The garage is at the maximum 15-foot height limit at the front when measured from the graded garage floor elevation, not including the safety railing for the roof deck. However, since the Town Code indicates that height is measured from the natural grade, the height as measured per the Town code is only 2.5 feet above the natural grade (not including the roof deck safety railing which is exempt from being calculated into the height measurement per Town Code § 17.080.060(B) – height of accessory structures).

The colors chosen for the structure will also minimize the visual impacts of the building with a dark grey-blue for the siding (Hardie plank “Evening Blue”) and dark grey asphalt shingles (“Thunderstorm Grey”). The window frames will be aluminum clad in off white which will match the off-white deck framing for the cable railings and wooden caps (see color board below and color elevation contained in the plan sets). The off-white color framing and deck railing are the only element that may stand out.





## **Landscaping and Lighting**

Lighting is proposed in the following locations: the length of the access stairway, on either side of the garage door, both sides of the door to the ADU, north side of the front door to the main residence (on the east side of the building), the uppermost story along the north, south and west sides of the building. The fixtures to be used are shown at the bottom of pages 2 and 3 of the project plans. None of them appear to be dark sky compliant (designed to minimize glare while reducing light trespass and skyglow).

Staff has no concerns about the placement of the lighting but we have included a recommended condition of approval that all exterior fixtures be dark sky compliant (fully shielded and emit no light above the horizontal plane with no sag or drop lenses, side light panels or uplight panels) and the lighting plan shall be submitted with the building permit application and be approved by the Planning Department prior to issuance of the project building permit.

The landscaping plan proposed on page L1 of the plans set indicates that all landscaping proposed has been chosen from the Firesafe Marin Plant List and shall be irrigated in compliance with Marin Municipal Water District Water Efficient Landscape Code (also included in the conditions list of the Resolution – Attachment A).

## **Tree Removal Permit**

The Fairfax Tree Committee (FTC) acted recommending that the Planning Commission approve tree removal permits for only the trees within the development footprint at their July 22, 2019 meeting (Attachment E – 7/23/19 letter of action, application form and meeting minutes). The Ross Valley Fire Department however has approved a vegetative management plan (VMP) that includes removal of all the trees proposed for removal in this planning application and also shown for removal in the tree removal application reviewed by the TC at the July meeting (the VMP is sheet 20 of the project plans and is signed “approved” by the RVFD). As discussed in more detail below, in sum the FTC approved the removal of 4 trees, and the VMP anticipates removing 43 trees.

The FTC may have been unwilling to recommend approval of all the trees because they were not provided with an arborist report along with the tree removal application which is customarily provided for new construction projects requiring Planning Commission review and approval. The arborist report typically assesses the health of each tree proposed for removal, indicates whether the tree is actually having negative impacts on neighboring oaks, etc. and whether the tree must come out for fire safety which often assists the GTC in determining whether removal of significant numbers of trees is supportable. Also, the minutes of the meeting indicate that there was no applicant representative present at the FTC meeting who might have been able to address the tree committee concerns about the trees outside of the building envelope. The minutes also indicate that not all the trees were marked in the field.

When the Council adopted the ordinance change giving tree removal authority to the Planning Commission, the ordinance gave the FTC 30 days after receipt of the application to make a recommendation [Town Code § 8.36.030(B)]. This group meets once a month, which impacts their ability to continue an application to request additional information before making a recommendation to the Commission [see Town Code §§ 8.36.060(A)].

Staff spoke with the Ross Valley Department on 10/5/20 to try and gain some clarity on the removal of additional bay trees. We were told that the fire department does not require the removal of all Bay trees within 30 feet of structures but that there should be a minimum of 10 feet between tree crowns and that with each 10% increase in slope, that distance should increase 5 feet. Therefore, on a property with a 48% slope, such as 5 Woodland Road, the tree crowns should be a minimum of 30 feet apart.

The number of trees listed in the letter of action recommended for approval by the FTC is 4. The number of trees listed for removal in the application form are 15 Bays, 3 combination oak/bays clusters, 13 Oaks and 2 Madrones. Staff counts 13 Bays, 3 oak/bay clusters, 13 Oaks and 4 Madrones marked for removal on the approved VMP.

Staff has determined that all but one of the Bays, Madrones and Oaks proposed for removal are within 30 feet of the 5 larger Oak trees the project is proposing to preserve on the site. Only 1 unidentified tree species which we believe to be one of the oak/bay clusters is located 32 feet to the west of the large Oak at the rear northwest corner of the construction area but less than 4 feet from 2 of the retaining walls proposed at the rear of the house and is more than 30 feet from the adjacent oak and proposed for removal. Construction of the 9 foot-tall retaining wall directly behind the house and the second wall only 8 feet to the north are likely to require the removal of a significant number of roots from that tree cluster unless the walls are redesigned/relocated.

Staff is concerned that this project does not have an arborist's report, while other proposals for new residences proposing removing a large number of trees generally do include arborist's reports. This is important for several reasons. The report evaluates trees on the project site both proposed for removal and those that may remain (health, construction impacts, etc.). Significant damage can also be done to trees during project construction (e.g., root cutting, grade changes, compaction, etc.), and a competent arborist's report also includes recommendation for protecting trees that do remain. The Town's standard conditions for new houses includes a requirement that the project arborist be on site during the grading process and shall submit written certification to the Town Staff that the grading, tree protection measures, etc. have been completed as recommended prior to grading and other construction.

Staff recommends that the Commission approve the Tree Permit to allow the removal of the 13 bays, 3 oak/bay clusters, 13 Oaks and 4 Madrones in accordance with the approved VMP by the Ross Valley Fire Department. Removal of those trees appears to either be necessary to protect the public health and safety, prevent damage to the

property, assist the continued good health of the oak trees to remain and/or because they are within the construction area of the house, garage, retaining walls or front access stairway. However, staff has included the following condition in the Resolution to address the tree protection issue:

Prior to submittal of the building permit the applicants shall provide the Town with tree removal/protection plan from an ISA certified consulting arborist. The arborist shall make every effort to retain as many healthy trees as possible outside the construction zone. If the report results in trees being preserved that are shown to be removed in the RVFD-approved VMP, the applicants shall obtain an approved revised VMP plan from RVFD prior to issuance of a building permit. The report shall include recommendations for tree protection during and after construction, to be included as conditions of approval.

### **Northern Spotted Owl**

The property is within ¼ mile of a known Northern Spotted Owl nesting site. Therefore, construction during the nesting season may not occur or must be minimized and/or monitored to be kept below certain noise levels to limit negative impacts to the birds. The nesting season runs from February 1<sup>st</sup> through July 31<sup>st</sup>. Acts that result in the disturbance or death of Northern Spotted Owls are a federal offense.

Staff has included the following condition of approval in the Resolution:

Construction shall be prohibited during the Northern Spotted Owl nesting season from February 1<sup>st</sup> through July 31<sup>st</sup> unless a plan for allowing construction activities during this period is submitted by a qualified spotted owl biologist and approved by the State, with documentation of the approval provided to the Town, prior to initiating any construction activities. All requirements listed in the plan, including potential onsite monitoring, must always be met by the applicants.

### **Other Agency/Department Comments/Conditions**

#### **Ross Valley Fire Department (RVFD)**

RVFD submitted written requirements for the project and the approved Vegetative Management Plan (VMP) which have been incorporated into conditions of approval in the attached resolution and are summarized as follows:

The property is located within the Wildland Urban Interface Area for Fairfax and the new construction must comply with Chapter 7A of the California Building Code or equivalent, all vegetation and construction materials are to be maintained away from the residence during construction, hydrant flow and location are to be identified before construction begins and hydrant must no flow less than 500 gallons per minute at 20 pounds per square inch (psi), a note shall be include on the building permit plans that fire apparatus access and water supply shall be in place and serviceable prior to delivery of

combustibles to the site, a fire sprinkler system shall be installed throughout the entire building in compliance with the requirements of the National Fire Protection Association 13-D and local standards (plans must be submitted to the fire department and be approved prior to issuance of the building permit), interconnected smoke detectors with AC power shall be installed throughout the structure in each bedroom, centrally located in the corridor and over the center of all stairways with a minimum of one detector per story, carbon monoxide alarms shall be installed throughout the building and back lit or internally illuminated address numbers at least 4 inches tall must be installed near the front door and controlled by a photocell that is switched off only by a breaker so the address remains illuminated all night.

Conditions pertaining to the VMP are: no tree subject to regulation by the Fairfax Tree Ordinance shall be removed without obtaining a tree removal permit from the Town, vegetation within 30 feet of the structure shall be irrigated and no seasonal grasses shall be allowed, every effort shall be taken to ensure erosion control efforts are in compliance with standards established by Town regulations, the approved VMP is in effect for the life of the property, vegetation shall be maintained to ensure address numbers are visible from the street from both angles of approach and minimum standards must be in place prior to final fire clearance which is required prior to the project final building inspection and issuance of the occupancy permit.

#### **Ross Valley Sanitary District (RVSD)**

RVSD submitted written requirements which have been incorporated into conditions of approval in the attached resolution and are summarized as follows:

A permit shall be obtained from the Sanitary District prior to the issuance of the building permit, the existing sewer lateral shall be tested in accordance with RVSD Ordinance 100 and Section 02735 and correction made if necessary, a certificate of compliance shall be obtained from the district prior to the project final building inspection.

#### **Marin Municipal Water District (MMWD)**

MMWD submitted written requirements which have been incorporated into conditions of approval in the attached resolution and are summarized as follows:

Complete a High Pressure Water Service application, submit a copy of the building permit, pay fees, complete structure foundation within 120 days of application, comply with District's rules and regulations in effect at the time service is requested, comply with all indoor and outdoor requirements of District Code 13 (Water Conservation), landscaping plans must be reviewed and approved by the district, comply with backflow prevention requirements and Ordinance 429 requiring the installation of greywater recycling systems when practicable.

## **RECOMMENDATION**

Move to approve application # 12-11 by adopting Resolution No. 2020-10 setting forth the findings and the conditions for the project approval.

## **ATTACHMENTS**

Attachment A – Resolution No. 2020-10

Attachment B – Town Engineer's final memorandum and e-mail dated 9/21/20

Attachment C - Soils reports by Dave Olnes, Geotechnical Engineer dated 3/14/20 and 5/30/19

Attachment D – Stormwater Control Plan by Vlad Iojica date April 2020

Attachment E – Tree Committee letter of action, completed removal application form and July 22, 2019 Tree Committee meeting minutes

## RESOLUTION NO. 2020-10

### **A Resolution of the Fairfax Planning Commission Approving Application No. 20-11 for a Hill Area Residential Development Permit, Excavation Permit, Encroachment permit, Tree Permit, and Design Review Permit for a Residence at 5 Woodland Road**

**WHEREAS**, the Town of Fairfax has received a revised project proposal for previously submitted planning applications for a new residence from Chris and Lindsay Bolter, to build a 3-story, 2,588 square-foot, 3 bedroom, 3 bathroom single-family residence with a detached, 1-story, 576 square-foot, 2-car, garage on January 30, 2020; and

**WHEREAS**, the Planning Commission held a duly noticed Public Hearing on October 15, 2020 at which time the Planning Commission determined that the project complies with the Hill Area Residential Development Overlay Ordinance, Excavation Ordinance, Encroachment Ordinance, Tree Removal regulations, and Design Review Regulations; and

**WHEREAS**, based on the plans and other documentary evidence in the record the Planning Commission has determined that the applicant has met the burden of proof required to support the findings necessary to approve the Hill Area Residential Development, Excavation, Encroachment, Tree Removal, and Design Review Permits; and

**WHEREAS**, the Commission has made the following findings:

The project is consistent with the 2010-2030 Fairfax General Plan as follows:

Policy LU-7.1.5: New and renewed residential development shall preserve and enhance the existing character of the Town's neighborhoods in diversity, architectural character, size, and mass.

Policy LU-7.2.2: To the extent feasible natural features including the existing grade, mature trees and vegetation shall be preserved for new and renewed development.

Policy LU-4.1.4: New and renewed development shall be designed to minimize run-off in a manner that does not cause undue hardship on neighboring properties.

#### **Hill Area Residential Development**

The proposed development is consistent with the General Plan and the Residential Single-family RS 6 Zone regulations.

1. The site planning preserves identified natural features as much as possible while also complying with other agencies' regulations.

2. Vehicular access and parking are adequate.
3. The proposed development harmonizes with surrounding residential development and meets the design review criteria contained in Town Code § 17.020.040.
4. The approval of the Hill Area Residential Development permit for one single-family residence and one accessory dwelling unit on this 24,297 square foot site shall not constitute a grant of special privilege and shall not contravene the doctrines of equity and equal treatment.
5. The redevelopment and use of property as approved under the Hill Area Residential Development Permit will not cause excessive or unreasonable detriment to adjoining properties or premises, or cause adverse physical or economic effects thereto, or create undue or excessive burdens in the use and enjoyment thereof, or any or all of which effects are substantially beyond that which might occur without approval or issuance of the use permit.
6. Approval of the proposed Hill Area Residential Development permit is not contrary to those objectives, goals or standards pertinent to the particular case and contained or set forth in any Master Plan, or other plan or policy, officially adopted by the City.
7. Approval of the Hill Area Residential Development permit will result in equal or better development of the premises than would otherwise be the case.

### **Excavation Permit**

8. The Town Engineers have reviewed the following plans and reports and have determined the project can be constructed, with certain conditions of approval, without creating any hazards:
  - a. Development plans, pages 1, 1A, 1B, 2 through 9 by Jeff Kroot, Architect, dated January 2020, the landscaping plan page L1 by Roseanne DaBello, dated January 2020, the boundary survey and topographic plan and the story pole plan by Stephen Flatland, Surveyor, dated January 2019, the Ross Valley Fire Department approved vegetative management plan dated April 2019 and the Civil Engineering plans by Vlad Iojica, pages C1.0, C2.0, C2.1, C3.0, C4.0 and C4.1 dated August 10, 2020.
9. Based on the Town Engineer's review and recommendation that the project can be safely constructed, the Planning Commission finds that:
10. The health safety and welfare of the public will not be adversely affected;
11. Adjacent properties are adequately protected by project investigation and design from geologic hazards as a result of the work;

12. Adjacent properties are adequately protected by project design from drainage and erosion problems as a result of the work;
13. The amount of the excavation or fill proposed is not more than that required to allow the property owner substantial use of his or her property.
14. The visual and scenic enjoyment of the area by others will not be adversely affected by the project more than is necessary.
15. Natural landscaping will not be removed by the project more than is necessary.
16. Town code § 17.072.090(c)(4) prohibits grading of hillside properties from October 1<sup>st</sup> through April 1<sup>st</sup> of each year. Therefore, the time of year during which construction will take place is such that work will not result in excessive siltation from storm runoff nor prolonged exposure of unstable excavated slopes; and
17. Construction may not occur or must be minimized and/or monitored to be kept below certain noise levels to limit negative impacts to the Northern Spotted Owls during the nesting season which runs from February 1<sup>st</sup> through July 31<sup>st</sup>

#### **Encroachment Permit**

18. In accordance with Town Code § 12.32.010 the Commission has determined that the proposed driveway/retaining wall improvements proposed in the Woodland Road right-of-way are proposed in an area not being used by the public and therefore they grant approval of the revocable encroachment permit.

#### **Tree Permit**

19. After reviewing the directed considerations for approving a Tree Removal permit contained in Town Code § 8.36.060(B)(1) through (7) the Commission has determined that as conditioned the project design results in the requested tree removals depicted in the approved Vegetative Management plans, subject to an ISA certified consulting arborist deeming removals necessary to protect the public health and safety and prevent damage to property, maintain the health of the existing oaks to be retained, the removal will not substantially impact the aesthetics, shade, and property values in the immediate neighborhood, the removals are necessary to reasonably allow the owner to develop the property, and will not have a detrimental effect on erosion, soils retention or diversion or increased flow of surface water.

**WHEREAS**, the Commission has approved the project subject to the applicant's compliance with the following conditions:



1. The project approval is limited to the project depicted and described in the following plans and reports: development plans, pages 1, 1A, 1B, and 2 through 9 by Jeff Kroot, Architect, revision date 8/3/20, the landscaping plan page L1 by Roseann DaBello, revision date 4/20, the boundary survey and topographic plan and the story pole plan by Stephen Flatland, Surveyor, pages S1 and SP and dated 01/19, the Ross Valley Fire Department approved vegetative management plan revision date 7/29/20 and the Civil Engineering plans by Vlad Iojica, pages C1.0, C2.0, C2.1, C3.0, C4.0 and C4.1 revision date 8/5/20.
2. Prior to issuance of any of the building permits for the project the applicant or his assigns shall submit a construction plan to the Public Works Department which may include but is not limited to the following:
  - A. Construction delivery routes approved by the Department of Public Works.
  - B. Construction schedule (deliveries, worker hours, etc.)
  - C. Notification to area residents
  - D. Emergency access routes
3. The applicant shall prepare, and file with the Public Works Director, a video tape of the roadway conditions on the public construction delivery routes (routes must be approved by Public Works Director).
  - A. Submit a cash deposit, bond, or letter of credit to the Town in an amount that will cover the cost of grading, weatherization, and repair of possible damage to public roadways. The applicant shall submit contractor's estimates for any grading, site weatherization and improvement plans for approval by the Town Engineer. Upon approval of the contract costs, the applicant shall submit a cash deposit, bond or letter of credit equaling 100% of the estimated construction costs.
  - B. The foundation and retaining elements shall be designed by a structural engineer certified as such in the state of California. Plans and calculations of the foundation and retaining elements shall be stamped and signed by the structural engineer and submitted to the satisfaction of the Town Structural Engineer.
  - C. The grading, foundation, retaining, and drainage elements shall also be stamped and signed by the site geotechnical engineer as conforming to the recommendations made by the project Geotechnical Engineer.
  - D. Prior to submittal of the building permit plans, the applicant shall secure written approval from the Ross Valley Fire Authority, Marin Municipal Water District and the Ross Valley Sanitary District noting the development conformance with their recommendations.
  - E. Prior to submittal of the building permit the applicants shall provide the Town with tree removal/protection plan from an ISA certified consulting arborist. The arborist shall make every effort to retain as many healthy trees as possible outside the construction zone. If the report results in trees being

preserved that are shown to be removed in the RVFD-approved VMP, the applicants shall obtain an approved revised VMP plan from RVFD prior to issuance of a building permit. The report shall include recommendations for tree protection during and after construction, to be included as conditions of approval.

F. Submit 3 copies of the record of survey with the building permit plans.

4. All retaining walls that are visible from the street and are constructed of concrete shall be heavily textured or colorized in a manner approved by planning staff prior to issuance of the building permit. This condition is intended to mitigate the visual impact of the proposed walls.
5. Prior to the removal of any trees not shown on the approved VMP Plan and/or approved by the Planning Commission through this action, the applicant shall secure a tree cutting permit, if required, from the Fairfax Tree Committee prior to removal of any on-site trees subject to a permit under Town Code Chapter 8.36.
6. The applicants shall prepare a drainage system maintenance agreement including a recordable exhibit of the proposed drainage system in its entirety including a maintenance schedule to be approved by the Town Engineer. The maintenance agreement will have to be signed by the owner, notarized, and recorded at the Marin County Recorder's office prior to issuance of the building permit.
7. During the construction process the following shall be required:
  - A. The geotechnical engineer and the project arborist shall be on-site during the grading process and both shall submit written certification to Town Staff that the grading and tree protection measures have been completed as recommended prior to installation of foundation and/or retaining forms and drainage improvements, piers and supply lines.
  - B. Prior to the concrete form inspection by the building official, the geotechnical and structural engineers shall field check the forms of the foundations and retaining elements and provide written certification to Town staff that the work to this point has been completed in conformance with their recommendations and the approved building plans.
  - C. The Building Official shall field check the concrete forms prior to the pour.
  - D. All construction-related vehicles including equipment delivery, cement trucks and construction materials shall always be situated off the travel lane of the adjacent public right(s)-of-way. This condition may be waived by the Building Official on a case-by-case basis with prior notification from the project sponsor.
  - E. Any proposed temporary closures of a public right-of-way shall require prior approval by the Fairfax Police Department and any necessary traffic control, signage or public notification shall be the responsibility of the applicant or

his/her assigns. Any violation of this provision will result in a stop work order being placed on the property and issuance of a citation.

8. Prior to issuance of an occupancy permit the following shall be completed:

A. The geotechnical engineer shall field check the completed project and submit written certification to Town Staff that the foundation, retaining, grading and drainage elements have been installed in conformance with the approved building plans and the recommendations of the soils report.

B. The Planning Department and Town Engineer shall field check the completed project to verify that all planning commission conditions and required engineering improvements have been complied with including installation of landscaping and irrigation prior to issuance of the certificate of occupancy.

9. Excavation shall not occur between October 1st and April 1<sup>st</sup> of any year. The Town Engineer has the authority to waive this condition depending upon the weather.

10. The roadways shall be kept free of dust, gravel, and other construction materials by sweeping them, daily, if necessary.

11. Any changes, modifications, additions, or alterations made to the approved set of plans will require a modification of Application # 20-11. Modifications that do not significantly change the project, the project design or the approved discretionary permits *may* be approved by the Planning Director. Any construction based on job plans that have been altered without the benefit of an approved modification of Application 20-11 will result in the job being immediately stopped and red tagged.

12. Any damages to the public portions of Cascade, Laurel or Woodland Road, or other public roadway used to access the site resulting from construction-related activities shall be the responsibility of the property owner.

13. The applicant and its heirs, successors, and assigns shall, at its sole cost and expense, defend with counsel selected by the Town, indemnify, protect, release, and hold harmless the Town of Fairfax and any agency or instrumentality thereof, including its agents, officers, commissions, and employees (the "Indemnitees") from any and all claims, actions, or proceedings arising out of or in any way relating to the processing and/or approval of the project as described herein, the purpose of which is to attack, set aside, void, or annul the approval of the project, and/or any environmental determination that accompanies it, by the Planning Commission, Town Council, Planning Director, Design Review Board or any other department or agency of the Town. This indemnification shall include, but not be limited to, suits, damages, judgments, costs, expenses, liens, levies, attorney fees or expert witness fees that may be asserted or incurred by any

person or entity, including the applicant, third parties and the Indemnitees, arising out of or in connection with the approval of this project, whether or not there is concurrent, passive, or active negligence on the part of the Indemnitees. Nothing herein shall prohibit the Town from participating in the defense of any claim, action, or proceeding. The parties shall use best efforts, acting in good faith, to select mutually agreeable defense counsel. If the parties cannot reach agreement, the Town may select its own legal counsel and the applicant agrees to pay directly, or timely reimburse on a monthly basis, the Town for all such court costs, attorney fees, and time referenced herein, provided, however, that the applicant's duty in this regard shall be subject to the Town's promptly notifying the applicant of any said claim, action, or proceeding.

14. The applicant shall comply with all applicable local, county, state and federal laws and regulations. Local ordinances which must be complied with include, but are not limited to: the Noise Ordinance, Chapter 8.20, Polystyrene Foam, Degradable and Recyclable Food Packaging, Chapter 8.16, Garbage and Rubbish Disposal, Chapter 8.08, Urban Runoff Pollution Prevention, Chapter 8.32 and the Americans with Disabilities Act.
15. Conditions placed upon the project by outside agencies or by the Town Engineer may be eliminated or amended with that agency's or the Town Engineer's written notification to the Planning Department prior to issuance of the building permit.
16. Conditions placed upon the project by the project arborist may be amended or eliminated by the approval of the Planning Director after receiving a request for the elimination/amendment in writing from the project arborist.
17. The building permit plans shall be reviewed and approved by the Town Engineer, at the expense of the applicant, prior to issuance of the building permit. The project shall be inspected by the Town Engineer prior to issuance of the occupancy permit for the residential structures for compliance with the engineering plans.

#### **Ross Valley Fire Department**

18. The property is located within the Wildland Urban Interface Area for Fairfax and the new construction must comply with Chapter 7A of the California Building Code or equivalent.
19. All vegetation and construction materials are to be maintained away from the residence during construction.
20. Hydrant flow and location are to be identified before construction begins and hydrant must no flow less than 500 gallons per minute at 20 pounds per square inch (psi).
21. A note shall be included on the building permit plans that fire apparatus access

and water supply shall be in place and serviceable prior to delivery of combustibles to the site.

22. A fire sprinkler system shall be installed throughout the entire building in compliance with the requirements of the National Fire Protection Association 13-D and local standards (plans must be submitted to the fire department and be approved prior to issuance of the building permit).
23. Interconnected smoke detectors with AC power shall be installed throughout the structure in each bedroom, centrally located in the corridor and over the center of all stairways with a minimum of one detector per story.
24. Carbon monoxide alarms shall be installed throughout the building.
25. Back lit or internally illuminated address numbers at least 4 inches tall must be installed near the front door and controlled by a photocell that is switched off only by a breaker so the address remains illuminated all night.
26. No tree subject to regulation by the Fairfax Tree Ordinance shall be removed without obtaining a tree removal permit from the Town of Fairfax.
27. Vegetation within 30 feet of the structure shall be irrigated and no seasonal grasses shall be allowed.
28. Every effort shall be taken to ensure erosion control efforts are in compliance with standards established by Town regulations.
29. The approved VMP is in effect for the life of the property.
30. Vegetation shall be maintained to ensure address numbers are visible from the street from both angles of approach.
31. Minimum standards must be in place prior to final fire clearance which is required prior to the project final building inspection and issuance of the occupancy permit.

#### **Ross Valley Sanitary District (FVSD)**

32. A permit shall be obtained from the Sanitary District prior to the issuance of the building permit
33. The existing sewer lateral shall be tested in accordance with RVSD Ordinance 100 and Section 02735 and correction made if necessary.
34. A certificate of compliance shall be obtained from the district prior to the project final building inspection.

### **Marin Municipal Water District (MMWD)**

35. Complete a High-Pressure Water Service application, submit a copy of the building permit, pay fees and complete structure foundation within 120 days of application.
36. Comply with District's rules and regulations in effect at the time service is requested.
37. Comply with all indoor and outdoor requirements of District Code 13 (Water Conservation).
38. Landscaping plans must be reviewed and approved by the district.
39. Project must comply with backflow prevention requirements.
40. Where possible, comply with Ordinance 429 requiring the installation of greywater recycling systems when practicable.

### **Fairfax Building and Public Works Departments**

41. All large trucks with more than 2 axles accessing the site for construction will be limited to the hours of 9 AM to 3 PM.
42. Trucks removing off-haul will be limited to 10-yard dump trucks.
43. The driveway and garage improvements shall be completed and be signed off by the Town Engineer, the Building Official/Public Works Managers, and the Ross Valley Fire Department before construction on the house begins.
44. Road closures shall be noticed in the field a minimum of 5 days prior to the event and individual written notifications shall be delivered to each resident on Bay Road.
45. A flag person shall precede any vehicles accessing or leaving the site in reverse until they are positioned to proceed "front end" either down the private driveway or heading southeast down Scenic Road towards Sir Francis Drake Boulevard.

### **Miscellaneous**

46. Construction shall be prohibited during the Northern Spotted Owl nesting season from February 1<sup>st</sup> through July 31<sup>st</sup> unless a plan for allowing construction activities during this period is submitted by a qualified spotted owl biologist and approved by the State, with documentation of the approval provided to the Town,

prior to initiating any construction activities. All requirements listed in the plan, including potential onsite monitoring, must always be met by the applicants.

47. All exterior fixtures be dark sky compliant (fully shielded and emit no light above the horizontal plane with no sag or drop lenses, side light panels or upright panels) and the lighting plan shall be submitted with the building permit application and be approved by the Planning Department prior to issuance of the project building permit.

**NOW, THEREFORE BE IT RESOLVED**, the Planning Commission of the Town of Fairfax hereby finds and determines as follows:

The approval of the Hill Area Residential Development Permit, Excavation Permit, and Design Review Permit are in conformance with the 2010 – 2030 Fairfax General Plan, the Fairfax Town Code and the Fairfax Zoning Ordinance, Town Code Title 17; and

Construction of the project can occur without causing significant impacts on neighboring residences and the environment.

The foregoing resolution was adopted at a regular meeting of the Planning Commission held in said Town, on the 15th day of October 2020 by the following vote:

AYES:  
NOES:  
ABSTAIN:

\_\_\_\_\_  
Chair Green

Attest:

\_\_\_\_\_  
Ben Berto, Director of Planning and Building Services



July 8, 2020  
File: 201.183cltr.doc

Town of Fairfax  
Planning and Building Services Department  
142 Bolinas Avenue  
Fairfax, California 94930

Attn: Ms. Linda Neal, Principal Planner

Re: Third Planning-Level Geologic, Geotechnical, and Civil Engineering Review  
New Single-Family Residential Development  
5 Woodland Road (APN 003-053-10)  
Fairfax, California

### Introduction

In response to your request and in accordance with our agreement dated March 20, 2018, we have reviewed submitted responses to our Second Review<sup>1</sup> comments concerning the proposed new single-family residence and associated improvements at 5 Woodland Road (APN 003-053-10) in Fairfax, California. The purpose of our services is to review the submitted documents, comment on the completeness and adequacy of the submittal in consideration of Town requirements, and to provide a recommendation to Town Planning and Building staff regarding project approval.

The scope of our services includes:

- A site reconnaissance to observe existing conditions and review proposed development features;
- Review of provided project documents for conformance to the Town of Fairfax Hill Area Residential Development Ordinance, specifically Town Code Sections 17.072.080(B), (C), (E), and (F), and Section 17.072.110 (C).
- Development of opinions regarding project compliance with applicable Town Code requirements; and
- Development of recommendations to Town staff as to whether the project may be safely constructed in consideration of any geologic, hydrologic, or geotechnical hazards.

It should be noted that the scope of our review is limited solely to geologic, geotechnical, and civil portions of the project, and does not include review of structural, architectural, mechanical, or other items beyond the scope of our qualifications. We recommend that non-geotechnical aspects of the plans be reviewed by suitably qualified professionals.

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<sup>1</sup> Miller Pacific Engineering Group (2020), "Second Planning-Level Geologic, Geotechnical, and Civil Engineering Review, New Single-Family Residential Development, 5 Woodland Road (APN 003-053-10), Fairfax, California", dated February 13, 2020.



Project Description

The project generally consists of constructing a new, approximately 2,588 square-foot, 2-story residence on a steeply-sloping parcel above the intersection between Woodland Road and Laurel Drive. The new residence structure will apparently be constructed largely at-grade, incorporating supported floors over sloping interior crawl spaces. A new 2-story garage structure will be constructed via excavation into the lower part of the lot near the Woodland Road frontage, with a new ADU/guest unit on the upper floor. Retaining walls ranging up to about 16-feet high will be needed to accommodate the garage, and lower walls will be utilized for the new residence, driveway, and rear patio/landscape areas. Ancillary improvements will include a new concrete driveway, and other "typical" residential improvements such as landscaping, exterior hardscape, new utility connections, site drainage, and other minor items.

Project Review

We performed a brief site reconnaissance on July 7, 2019 to observe existing conditions at the site. We previously reviewed the following documents provided by the Town, as summarized in our July 15, 2019 First Review letter:

- Stephen J. Flatland (2019), "Boundary & Topographic Survey, for Chris Bolter, 5 Woodland Road, Fairfax, California, APN 003-053-10", Sheet C1 (Sheet 10 of 12), Job No. F1142, dated January 2019.
- Jeff Kroot & Associates (2019), "New Residence for Chris and Lindsay Bolter, 5 Woodland Rd., Fairfax, CA, APN: 003-053-10" (Preliminary Architectural Plans), Sheets 1 through 9 and 11 through 12, dated April 2019.
- Dave Olnes, P.E. (2019), "RE: Geotechnical Investigation, Proposed New Residence, 5 Woodland Drive, Fairfax", dated May 30, 2019.

Subsequently, we reviewed additional documentation in response to our first review comments, as summarized in our February 13, 2020 Second Review letter:

- J.L. Engineering (2013), "Record of Survey, Lands of May and Teevan, Fairfax, Marin County, California" recorded June 20, 2013.
- Old Republic Title Company (2018), "Grant Deed, Escrow/Order No. 0436022060, APN 003-053-14, 003-053-10", dated November 15, 2018.
- Stephen J. Flatland (2019), (untitled correspondence to Mr. Jeff Kroot regarding Record of Survey), dated November 6, 2019.
- Jeff Kroot & Associates (2019), "New Residence for Chris and Lindsay Bolter, 5 Woodland Rd., Fairfax, CA, APN: 003-053-10" (Preliminary Architectural Plans), Sheets 1 through 9 and L1, dated January 2020.
- Via Atelier (2019), "Bolter Residence, 5 Woodland Road, Fairfax, CA 94930" (Preliminary Civil Plans), Sheet C1.0 through C4.0 (5 Sheets), Job No. 1711B, dated October 17, 2019.

Most recently, we reviewed the following materials in response to our Second Review comments:

- Dave Olnes, P.E. (2020), "RE: Response to Planning Comments, Proposed New Residence, 5 Woodland Avenue, Fairfax", dated March 14, 2020.
- Jeff Kroot & Associates (2020), "Bolter Residence, 5 Woodland Rd., Fairfax, CA 94930, Response to Town Planning Letter dated February 28, 2020", dated June 19, 2020.
- Jeff Kroot & Associates (2020), "New Residence for Chris and Lindsay Bolter, 5 Woodland Rd., Fairfax, CA, APN: 003-053-10" (Preliminary Architectural Plans), Sheets 1 through 9 and L1, Planning Revision Set dated April 20, 2020.

### Conclusions

Based on our site reconnaissance and document review, the following submittal items required by the Town of Fairfax Hill Area Residential Development Ordinance remain outstanding:

#### **Hill Area Residential Development Ordinance**

- Section 17.072.080(C) – Site Plan
  - 1) The site retaining wall and the garage structure itself are both planned 6-feet from the property line. A Temporary Shoring Plan should be required at the building submittal level.
  - 2) Site drainage is proposed to be collected and discharge via a new dissipator located beyond the property line, within the Laurel Drive "paper street" Right-of-Way. It is our understanding that the property at 225 Laurel Drive has been historically subject to adverse drainage conditions related to the paper street area, and that the Town neither owns nor is responsible for the area.

Therefore, we recommend the applicant pursue one of the following options:

- Secure an easement across 225 Laurel Drive to allow conveyance of runoff through a new pipe across the property and discharge to the asphalt surface on Pine Drive below the 225 Laurel site.
  - Secure a maintenance agreement or similar document with the Owners of 225 Laurel Drive outlining who is legally responsible for facility construction and future maintenance.
  - Relocate all drainage improvements within the parcel, and design new improvements to maintain the pre-project runoff peak net flow rate.
- Section 17.072.080(F) – Grading and Erosion-Control Plan
    - 3) The Preliminary Grading and Drainage Plan indicates that significant off-haul (more than 300 cubic yards) will be required for the project. Given the relatively limited access and

July 8, 2020

parking in the area, a Construction Management Plan should be required at the Building submittal level.

- 4) All drainage improvements need to be designed (sized) to accommodate runoff from a 100-year storm event. Hydraulic calculations need to be submitted indicating that the site drainage system has been designed in accordance with Town standards and to result in no net increase in peak flow rate during a 100-year storm. We note that the response to comments memo indicates that a stormwater control plan/calculation package was submitted; however, no such package was forwarded to us for review.

Recommendations

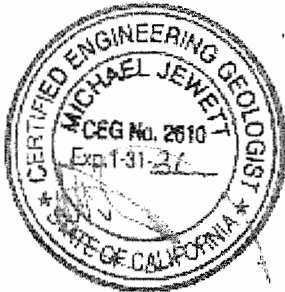
Based on our review of submitted materials, we recommend that project processing be delayed at the Planning level pending an acceptable solution for the drainage issue affecting 225 Laurel Drive.

We judge that other items, including review of design-level Grading, Drainage, and Erosion control plans, review of Structural and Construction Management plans, and review of hydrologic calculations can be handled at the Building Permit submittal level with minimal anticipated impact.

We trust that this letter contains the information you require at this time. If you have any questions, please call. We will directly discuss our comments with the applicant's consultants if they wish to do so.

Yours very truly,  
MILLER PACIFIC ENGINEERING GROUP

REVIEWED BY:



Mike Jewett  
Town of Fairfax Contract Geologist  
Engineering Geologist No. 2610  
(Expires 1/31/21)



Scott Stephens  
Town of Fairfax Contract Engineer  
Geotechnical Engineer No. 2398  
(Expires 6/30/21)

## Linda Neal

---

**From:** Michael Jewett <MJewett@millerpac.com>  
**Sent:** Monday, September 21, 2020 9:45 AM  
**To:** Linda Neal  
**Subject:** RE: 5 Woodland Road Town Engineer Review

Lind,

Yes that was the last letter and last contact on this one. The report you forwarded after this email likely satisfies comment #4, and comments #1 and #2 were OK to do at building level.

Only outstanding planning issue was the drainage. Simple thing is to keep improvements on their property and design to zero net flow rate increase.

If your current plans show it all onsite and not in the ROW (which everybody says they don't own), then we are probably OK.

Mike Jewett  
Miller Pacific Engineering Group  
415-577-8196

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**From:** Linda Neal <lneal@townoffairfax.org>  
**Sent:** Monday, September 21, 2020 7:15 AM  
**To:** Michael Jewett <MJewett@millerpac.com>  
**Subject:** RE: 5 Woodland Road Town Engineer Review

Hi Mike,

So I missed the deadline on this one. I think the last memo I received from you was July 15, 2020 indicating the project was still incomplete. I am hoping there are not any huge outstanding issues left because we really don't have the opportunity to ask for more information at this point. Can you take a look at it ASAP? I thought you were almost done when the issue of the modification of the storm drain in the undeveloped portion of Woodland Road by some neighbor came up. Mark and I are sure that the project property had nothing to do with the modification and it was done for the benefit of the neighbor's downhill of the site to diver water over onto the downhill property to the west.

The owners are chomping at the bit to get on a PC meeting agenda.

Thanks,

Linda Neal  
Principal Planner  
(415) 453-1584

---

**From:** Michael Jewett <MJewett@millerpac.com>  
**Sent:** Monday, July 6, 2020 11:15 AM  
**To:** Linda Neal <lneal@townoffairfax.org>  
**Subject:** FW: 5 Woodland Road Town Engineer Review

Hi Linda,



**GEOTECHNICAL MEMORANDUM:**

**To:** Linda Neal  
Fairfax Planning Department

**RE:** Response to Planning Comments  
Proposed New Residence  
5 Woodland Avenue, Fairfax

**Date:** March 14, 2020

This memo is in response to planning comments directed toward our soils report for the subject residential project. There are two specific comments directed toward our report, which was otherwise deemed acceptable by the third party reviewer, Miller Pacific.

The first comment is with regard to the passive pressure we provided in the report. As is our custom, we recommended a passive resistance of 450pcf in *bedrock*, neglecting support in the overlying soil. We have used this value for thousands of projects in Marin and other counties, and in at least 50 approved projects in Fairfax, including the ongoing retaining wall project under construction across the street from the subject site (at 225 Laurel). We have never had this value questioned, nor have any of the structures that we have designed using this value had any issues. We strongly disagree that this is value is unusual. That having been said, to keep the permit process moving, we would be open to considering whatever reasonable value the Miller Pacific recommends.

The second comment regards evaluation of the potential for instability up-slope of the site. The slopes rising above the proposed building site are relatively steep (varying from 1.5:1 to 2:1). However, the site is situated on the flank of a knoll and the slope contours are convex, meaning the slopes tend to naturally disperse runoff over a broad area, rather than funneling it into narrow, concentrated flow which could affect the proposed development. In the absence of concentrated storm water flows, there can be very little risk of debris flow activity (which typically occur within topographic draws or swales). As required by the Town of Fairfax, on Figure 3 (attached) we included a large scale topographic map which showed the *maximum* potential watershed above the site, based on the orientation of the slope contours. Whereas this watershed is fairly large, only a limited amount of the potential runoff will pass through the areas of development, and only as unconcentrated sheet flow. Many hillside sites in Fairfax have similar or greater runoff watersheds above them.

Figure 2 from our report (also attached) included an excerpt of the Landslide map by Smith, Rice and Strand. Like much of the Fairfax hills, there is a large area of potential landsliding to the north of the subject property. However, neither the site itself nor the slopes above it are mapped as slide areas, and the stability study associated with the Smith-Rice map has assigned the area a

Geotechnical Response to Planning Comments  
5 Woodland Avenue, Fairfax  
March 14, 2020  
Page 2


stability number of 3, indicating a moderate (ie not severe) potential for instability. We had walked the slopes above the site during our initial investigation, and we did so again in preparation of this response memo. No areas of active landsliding were noted in either reconnaissance. The borings we performed at the upper reaches of the proposed building site found weathered bedrock within 1 to 2 feet of the surface.

Our report does include cautions and considerations regarding the potential for runoff from the subject site, which could potentially flow through the adjacent property at 225 Laurel Drive (which also happens to be our client). Fortunately the compromised retaining wall supporting the driveway at that property is currently being replaced with a tied back wall, which our office designed. With regard to the dispersal of collected storm water, one option would be to work with the neighbor to divert storm water around their residence to the natural drainage swale beyond. If on-site dispersal of storm water is required by the City, it should occur at the southeast corner of the lot, in the flat area at the base of the existing driveway ramp, where the overflow will run directly to the Woodland Avenue, and where it will merge with the communal runoff without flowing over steep slopes.

All of this information was contained in our original report. Frankly, I wonder what more evaluation Miller Pacific would have expected us to perform in this regard. As with any steep hillside site, there is some potential for instability, but we concur with the Smith-Rice map that the risk is *moderate* at this site, and less severe than many other sites in Fairfax.

If there are further questions regarding this matter, please contact my office.

Sincerely,



Dave Olnes, CEGE



DAVE  
**OLNES** P.E.  
INC.  
CIVIL & SOIL ENGINEER

7915 CREST AVENUE, OAKLAND, CALIFORNIA 94605  
PHONE & FAX: (510) 568-2662 davednes@sbcglobal.net



May 30, 2019

O-4550

Chris and Lindsay Bolter  
c/o Jeff Kroot, Architect  
P.O. Box 246  
San Anselmo, CA 94979

RE: Geotechnical Investigation  
Proposed New Residence  
5 Woodland Road, Fairfax

Dear Mr. and Mrs. Mrs. Bolter:

In accordance with your request, we have conducted a geotechnical investigation into the subsurface conditions at your property, located at 5 Woodland Road in Fairfax. The purpose of the investigation was to evaluate the suitability of this site for a proposed new residence and garage and accessory dwelling unit (ADU) on the property.

The property is situated on a steep up-slope. The proposed residence will conform to the slope with minimal excavation. However, the proposed detached garage and ADU will be bunkered into the base of the slope, requiring perimeter foundation walls up to 10 feet in height.

Our investigation included the drilling of six borings, covering the proposed building sites. All of the borings encountered competent Sandstone bedrock within 1 to 4 feet of the surface. Given the steepness of the slopes, the proposed house structure will require pier and grade beam foundations. Pier depths on the order of 10 to 15 feet are anticipated. The proposed garage structure will bear within a deep, level bedrock cut, and therefore may bear on footings.

If you have any questions regarding the findings or recommendations contained in this report, or if you are ready for a pier or footing inspection, please contact our office.

Sincerely,

Dave Olnes, PE  
GE 2469



## **GEOTECHNICAL INVESTIGATION**

**PURPOSE AND SCOPE OF SERVICES:** The purpose of this investigation was to explore the soils and geological conditions in the vicinity of proposed improvements at the subject property, and to provide appropriate geotechnical guidelines governing the construction of the proposed new residence and pool.

The scope of services for this investigation included review of published geological literature, a brief examination of the foundation conditions of the existing structure, exploration of the subsurface conditions in the vicinity of proposed construction, limited laboratory testing and preparation of this report. This investigation did not include screening for potential hazardous materials.

**SITE DESCRIPTION AND PROPOSED CONSTRUCTION:** The subject property consists of a steeply down-sloping lot situated above the hairpin turn where Woodland Road meets Laurel Drive. The property is located along the eastern flank of a promontory known as Blue Ridge. The slopes at the property descend to the southeast at a gradient that varies from approximately 1.5:1 to 2.5:1. An unpaved driveway ramps up the slope from the southeast corner of the lot, terminating in front of an existing, post-supported cottage structure. The cottage dates back to 1924, and exists in a highly dilapidated state.

It is our understanding that you plan to demolish the exist cottage and construct a new two-story residence on the property. The new house will be sited up-slope of the present structure, and will step up with the existing slope, which rises at a gradient steeper than 2:1. Wood decks will wrap around the downslope perimeter of the house. No significant grading is anticipated for the main house. However a new 2-car garage will be cut into the base of the slope in the vicinity of the existing driveway ramp. The garage will require foundation walls up to 16 feet in height. There will be a secondary dwelling unit above the garage.

**GEOLOGY:** Review of a geology map for the area by Smith, Rice and Strand indicates that the site is underlain by Franciscan Melange bedrock (see Figure 1). Franciscan Melange (FM) is common throughout much of Marin County, and consists of jumbled rock masses, highly altered by ancient tectonic activity. The bedrock units in the vicinity of the site are composed largely of sheared Sandstone and Shale. Weathered Sandstone is exposed in the cut bank of the existing driveway ramp and elsewhere near the site. The exposed rock appears fairly decomposed and should not be difficult to excavate or drill piers into.

No landslide features are mapped in the immediate vicinity of the site (see Figure 1), and no evidence of active sliding was observed in our reconnaissance of the property. The stability study associated with the Smith-Rice map has assigned the site a stability number of 3, indicating a moderate potential for instability. However, the hillside a few hundred feet to the north of the site is indicated as a coalesced area of surficial sliding, and has been assigned a stability number of 4, indicating a high potential for instability.

**SITE DRAINAGE:** As stated, the lot is sited along the eastern flank of a prominent ridge line, and the local slopes descend to the southeast at a variable gradient. Another



landlocked residence (35 Woodland?) exists above the subject property, accessed via a driveway easement through a property to the north. Above that house the slope continues to rise to a knoll that serves as a site for water tanks. The potential watershed through the site rises approximately 500 feet to the crest of the knoll, and comprises roughly 1.25 acres. It appears that historically drainage off the site ran through a subtle drainage swale on the property situated at the opposite side of the hairpin turn (225 Laurel Drive). This swale is interrupted by street grading, which includes a short, undeveloped extension of Laurel Drive that creates a level area below the southwest corner of the subject property. There is a cast iron drainage grate located within this level area. The grate apparently feeds two small flex lines which run around the west side of the residence at 225 Laurel Drive, where they disperse on the slope below that house.

**SEISMICITY:** It should be considered common knowledge that this site and the Bay Area in general are subject to strong ground shaking due to the regular occurrence of large earthquakes. The site is located approximately 6 miles east of the San Andreas Fault (type A), which has a Maximum Credible Earthquake (MCE) of 8.1 moment magnitude. Other surrounding active faults with equal or lesser expected magnitudes and probabilities include the Hayward Fault (type A), located approximately 15 miles to the east, and the Concord/Calaveras Fault (type B), located approximately 25 miles to the east.

The northern section of the San Andreas Fault has been estimated at a 22% probability for producing an earthquake larger 6.7 before 2043, and the Bay Area as a whole has a probability of 65%.

As no alluvial soils were observed in the area, there is no potential for liquefaction at the site. Since the site is located outside of the Alquist-Priolo Special Studies Zone, the risk of ground rupture is also considered to be very low. Given the shallow depth to competent bedrock, there is little risk of seismically induced landsliding.

Design of the new improvements in accordance with the 2016 CBC should utilize the following factors:

<b>Mapped Short Period Spectral Acceleration, S<sub>s</sub>:</b>	1.504
<b>Mapped 1-Second Spectral Acceleration, S<sub>1</sub>:</b>	0.672
<b>Site Class:</b>	B
<b>Short Period Site Coefficient, F<sub>a</sub>:</b>	1.0
<b>1-Second Site Coefficient, F<sub>v</sub>:</b>	1.0
<b>Modified Short Period Acceleration, S<sub>ms</sub>:</b>	1.504
<b>Modified Short Period Acceleration, S<sub>m1</sub>:</b>	0.672
<b>Design Short Period Acceleration, S<sub>ds</sub>:</b>	1.002
<b>Design Short Period Acceleration, S<sub>d1</sub>:</b>	0.448
<b>Design Category:</b>	D

**FIELD AND LABORATORY INVESTIGATION:** Subsurface conditions at the site were investigated by performing 6 exploratory borings at the locations shown on the attached Boring Location Plan (Figure 2). The first two borings B1 and B2 were drilled with a truck mounted rig along the present driveway alignment. These borings utilized a 6-inch auger and were sampled with a 140-pound dropping hammer. The other four borings were performed on the slope using a 2-inch hand auger, and were sampled with a 70-pound dropping hammer. The blow counts at each hand auger location were converted to standard values using a conversion factor of 2/3. Samples were initially logged in the field and later returned to the laboratory for extrusion and further identification. The samples were then weighed and dried for moisture content determination. Logs of the borings are included on attached Figures 3 through 8.

**SUBSURFACE FINDINGS:** The upper borings encountered a soft top soil layer consisting of brown fine sandy Silt with Sandstone fragments, which varied from 1 to 2 feet in depth. All of the borings contained 1 to 2 feet of residual soils, consisting of red brown clayey fine Sand with increasing rock structure. Rusty tan Sandstone was encountered at depths of 1 foot along the driveway, and at depths of 3 to 4 feet on the upper slope.

The first boring at the driveway was extended to depth of 17 feet to assess the quality of the bedrock at depth. As is typically the case with Franciscan Melange, the Sandstone was found to have a variable structure, and contained layers of sheared Shale. This material should not be difficult to drill or excavate, but will require shoring or lay-back at the deep vertical cuts for the garage.

No groundwater was encountered during drilling.

**CONCLUSIONS AND COMMENTARY:** Based on our assessment, it is our opinion that the subject site is stable and suitable for the proposed construction. The new house structure will be sited on the steep slope, and therefore will require pier and grade beam foundations. The piers should be 18 inches in diameter and should be drilled at least 8 feet into bedrock. Thus total depths of 10 to 15 feet should be anticipated.

The proposed garage structure will be carved well into the slope, and may therefore bear on spread footings. The deep cuts required for the garage should be shored to protect workers from possible collapse of the sheared rock. The side cuts may be shored with soldier piers braced at the top by cross struts spanning across the excavation. The back cut may require soil nails if it cannot be laid back at 45 degrees.

Gravel drains should be installed around the up-slope perimeters of both the garage and the main house. Where the slope descends directly against the buildings, concrete V-ditches should be constructed, to shed surface runoff around to either side.

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The existing storm drain system located in the easement off the hairpin bend in the road is not of high quality. Before tying into this system (which apparently exists within the "paper street" easement of Laurel Drive), it would be well to work with the owners of 225 Laurel to upgrade the piping and verify that an appropriate outlet dissipater is in place. If on-site dispersal of storm water is required by the City, it should occur at the southeast corner of the lot, in the flat area at the base of the existing driveway ramp, where the overflow will run directly to the street, without flowing over steep slopes.

In summary, it is our opinion that the site is suitable for the proposed construction, provided that the following recommendations are adhered to.

## RECOMMENDATIONS

1. **GRADING:** Fairly significant cuts will be required in order to create the pad for the garage.
  - 1.1 **Site Preparation:** Areas to receive fill or flatwork shall be cleared of vegetation and stripped to a sufficient depth to remove major root systems. The stripped organic top soil material may be stock piled for later use in landscaping areas. Existing pavement and foundation elements should be removed as part of the demolition of the existing structure, taking care to disturb the subgrade as little as possible.
  - 1.2 **Cut Grading:** Permanent cut slopes shall be at a maximum inclination of 2:1 (horizontal to vertical) or shall be retained by structural walls in accordance with the recommendations below. Temporary cut slopes over 5 feet in height should be laid back at 45-degrees, or shall otherwise be shored with temporary walls. The design and implementation of embankment shoring, in conformance with OSHA requirements, shall be the sole responsibility of the contractor.
  - 1.3 **Fill Grading:** Fills placed on slopes shall be retained at the base by structural walls, and shall be progressively step benched proceeding up the slope from the wall. The undersigned Geotechnical Engineer shall inspect and approve all keyways and shall intermittently inspect all fill placement in progress. Fills shall be placed in level lifts no more than 8 inches in thickness, and shall be compacted to 95% relative compaction. Fill slopes shall not exceed a 2:1 gradient. Existing site soils are suitable as fill provided they are free of organic material and of rocks or rubble greater than 6 inches in diameter.
  - 1.4 **Backfill of Utility Trenches:** Utility trench backfill shall be compacted to a relative density of 95% under pavement and foundation areas, and 90% elsewhere. Trenches shall be capped with at least 18 inches of relatively impermeable material (site soils are acceptable).
2. **FOUNDATIONS:** Where the proposed new structures are sited in level cuts exposing bedrock, foundations may consist of continuous spread footings per Section 2.1. Structures sited on or within 8 feet of descending grades shall bear on drilled pier and grade beam foundations per Section 2.2.
  - 2.1 **Spread Footings:** Spread footings shall be a minimum of 18 inches in width, and shall extend a minimum 24 inches below the *existing ground surface*, or as needed to achieve full bearing in bedrock. No footings shall bear on fill or top soils. Footings located in areas of cut need only extend 12 inches into weathered sandstone bedrock. The undersigned Geotechnical Engineer

shall inspect and verify all footing trenches prior to placement of reinforcing steel concrete.

**2.1a Bearing Pressures of Footings:** Footings bearing on bedrock may be designed for bearing pressure of 2500 psf.

**2.1b Lateral Resistance of Footings:** Lateral resistance for spread footings constructed in accordance with Section 2.1, may assume a friction value of 0.40 and a passive resistance of 450pcf for footings bearing on sandstone bedrock. The bearing and passive resistance may be increased by 1/3 for short-term seismic and wind loads.

**2.1c Minimal Footing Reinforcing:** Where minor T-footings are used, they shall contain a minimum of one #5 bar top and bottom, with #3 shear ties at 18 inches on center.

**2.2 Pier and Grade Beam Foundations:** Pier and grade beam foundations shall be used on or within 8 feet of sloping grades. All piers should be at least 18-inches in diameter and should extend at least 8 feet into bedrock, or to minimum depths of 10 feet.

**2.2a Bearing Friction of Piers:** Piers constructed in accordance with Section 2.2 may be designed for a friction value of 750psf for the portion of pier extending into bedrock (Assumed to begin at a depth of 4 feet in the hillside locations).

**2.2b Lateral Resistance of Piers:** No soil creep forces are assumed to exist at this site. However, resistance to retained earth forces or other lateral structural loadings may be achieved assuming a passive pressure of 450pcf, acting against 2 pier diameters, beginning at the top of bedrock (assume a depth of 2 feet for down-slope locations). This value may be increased by 1/3 for short-term seismic loads.

**2.2c Minimal Pier Reinforcing:** All piers shall contain a minimum of six #5 bars enclosed by a #3 spiral at a 6-inch pitch.

**3. FLOOR SLABS ON GRADE:** Floor slabs constructed on grade shall be a minimum of 5 inches thick and shall be reinforced with a minimum of #4 bars at 18 inches on center each way. Slab reinforcing shall be integrated into the structural foundations. Floor slabs used as living space shall be constructed over a moisture barrier consisting of 4 inches of *3/8-inch pea gravel* (do not use 3/4-inch crushed rock as the sharp edges tend to perforate the membrane), covered by a minimum 10-mil plastic membrane.

4. **RETAINING WALLS:** Retaining walls or foundation walls shall be designed for an active pressure of 45pcf where the backfill gradient is less than 3:1, or 55pcf where the backfill gradient is steeper than 3:1. Walls bearing on level cuts exposing bedrock may be supported on spread footings per Section 2.1. Walls perched on sloping grades must be supported by drilled piers per Section 2.2.
  - 4.1 **Wall Above Old Slide:** In order to prevent further up-slope advancement of the shallow landslide at the western perimeter of the lot, we recommend that a wall be constructed across the upper reaches of the slide scarp. The wall should have a minimum height of 4 feet, and should be keyed at least 18 inches below the base of the scarp, for a total design height of 5.5 feet. This wall should be supported on 18 inch diameter piers drilled to minimum depths of 10 feet. Where the upper lobes of the slide scarp extends above the alignment of the wall, the cavities should be filled with rock rip-rap. The slide cavity below the wall should be track-walked and smoothed out, particularly along the vertical lateral scarps.
  - 4.2 **Seismic Surcharge:** Walls exceeding a retained height of 6 feet shall include a uniform seismic surcharge of 10psf/foot of height (ie for a 10 foot tall wall, the surcharge would be 100psf). For retaining walls supporting bedrock cuts, the active pressure may be reduced to 30pcf when considering the seismic case. For walls supporting fill soils, there should be no reduction in active pressure, so the seismic case will govern.
  - 4.3 **Retaining Wall Drainage:** Retaining walls and foundation walls shall ideally be fully back drained with 3/4-inch drain rock wrapped in filter cloth or CALTRANS Class II Permeable drain rock without filter cloth. However the foundation walls of the garage may utilize a Miradrain panel, if the wall is to be constructed with shotcrete, provided that the installer of the waterproofing and drainage panel are willing to guarantee the wall against leaks for a period of at least 10 years. A 4-inch PVC pipe shall be installed along the base of the wall, placed at least 6 inches below the adjacent floor slab or crawlspace grade, and shall be sloped at 1% minimum to outlet to an appropriate discharge point. In addition, foundation walls shall incorporate waterproofing membranes (such as Paraseal), installed per manufacturer's recommendations. Landscape walls may utilize weep holes in lieu of drainage piping.
  - 4.4 **Elimination of Footing Heals:** We recommend that foundation walls be designed without footing heals, as they tend to interfere with the proper placement of drainage piping, and require deeper back cuts. Walls without heals will require commensurately larger toe extensions.

5. **Drainage:** Adequate drainage is important to maintain bearing support for shallow foundations and to prevent potential mold and mildew problems related to seepage intrusion under the house.
  - 5.1 **Surface Drainage:** All roof downspouts shall be fitted with 4-inch solid PVC discharge pipes. Surrounding yard and patio areas shall utilize cast iron or brass catch basins tied to the roof downspout lines, or shall be graded to shed runoff away from the house in an unconcentrated manner.
  - 5.2 **Perimeter Subsurface Drainage:** A perimeter gravel subdrain shall be constructed around the up-slope and side perimeters of the house structures. The subdrain shall consist of a trench extending at least 12 inches below the adjacent floor slab or crawlspace grades, sloped at 1% toward a suitable outlet point. A perforated PVC pipe shall be placed along the bottom of the trenches, and the trenches shall be backfilled with 3/4-inch drain rock wrapped in filter cloth, or CALTRANS Class II Permeable drain rock without filter cloth.
  - 5.3 **Piping:** All piping shall be 4-inch SDR-35 PVC. All drain lines shall be continuously sloped at 1% minimum. The manner and location of discharge shall be approved by the undersigned Geotechnical Engineer prior to implementation. Capped clean-outs shall be installed at the beginning of each subdrain line, and at alternate bends in the line.
  - 5.4 **Maintenance:** Drainage systems require regular maintenance to ensure proper functioning. Catch basins and downspout pipes should be flushed regularly (dependant on the rate of falling leaf litter). Discharge points should also be periodically inspected to ensure that outlet piping is not obstructed. It is recommended that an accurate as-built plan of the drainage systems be prepared, and that maintenance requirements be disclosed to all future buyers of the property.
6. **EXTERIOR FLATWORK:** Exterior flatwork, including driveways, walkways and patios shall be constructed as 5-inch thick concrete slabs and should be reinforced with a minimum of #4 bars at 18-inch centers. Flexible pavements such as decomposed granite or pavers set in sand may be preferable over fill areas, as they can be built up over time if settlement occurs.
7. **PLAN REVIEW AND CONSTRUCTION OBSERVATION:** The undersigned Geotechnical Engineer should review the final foundation and drainage plans for conformance with the above recommendations. All grading work shall be inspected in progress on an intermittent basis, including approval of all benching and compaction testing for fills. All pier drilling, footing excavations and subdrain

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trenches should also be inspected prior to placement of reinforcing steel, concrete or backfill. Allowances should be made for potential changes to the final design requirements in the event that actual construction conditions differ from the conditions assumed in this report.

**LIMIT OF LIABILITY:** This report was prepared under written contractual agreement with the addressee (client) indicated above. The client has agreed to limit the liability of Dave Olnes P.E., Inc. to an amount not to exceed ten times the fee for services indicated above, for any and all matters arising from this visual examination and report. The information provided herein is for the exclusive use of the specified client. Dave Olnes P.E., Inc. shall assume no liability for other parties who use the report without its express written consent. The recommendations contained in this report are valid for a period of two years, pending further review by the undersigned Geotechnical Engineer.



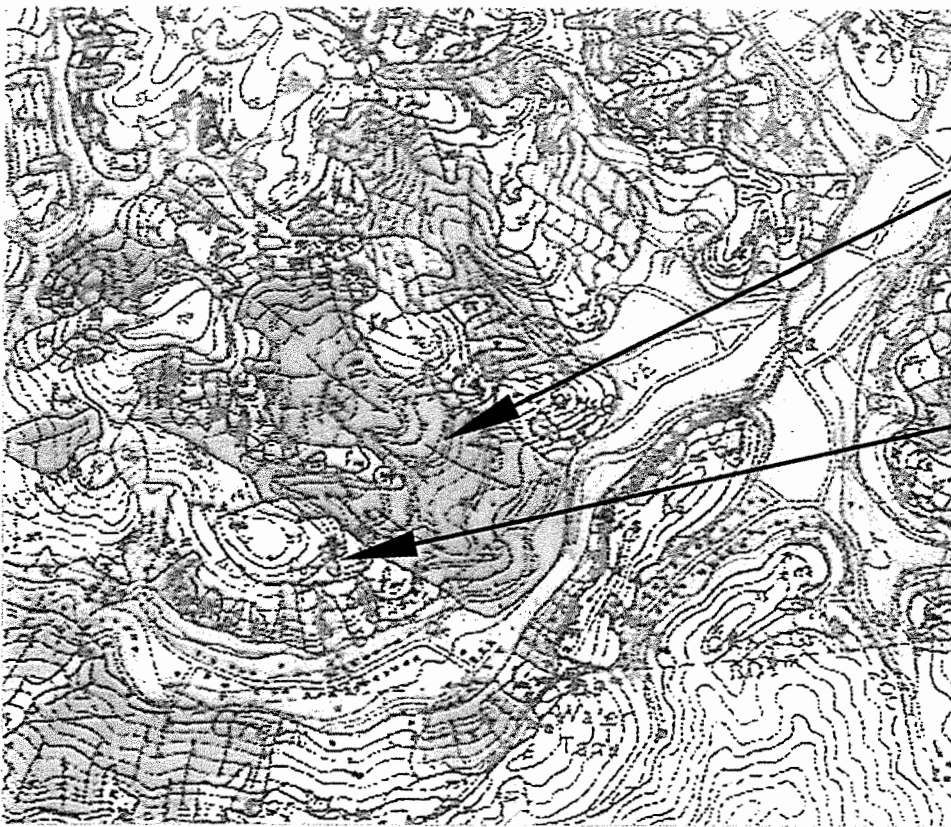
## REFERENCES

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Olnes, David A., "Preliminary Geotechnical Reconnaissance, 5 Woodland Avenue, Fairfax", April 15, 2019.

Rice, Salem J.; Smith, Theodore C.; Strand, Rudolph G., State of California Division of Mines and Geology, Open File Report 76-2, "Geology for Planning: Central and Southwest Marin County, California", 1976.

State of California Division of Mines and Geology, "Maps of Known Active Fault Near-Source Zones in California and Adjacent portions of Nevada", 1998.



**TYPICAL  
MAPPED LAND  
SLIDE FEATURE  
(ORANGE).**

**SITE, MAPPED  
AS FRANCISCAN  
MELANGE  
(Fm).**

**SOURCE:**

STATE OF CALIFORNIA DEPT. OF MINING & GEOLOGY, OPEN FILE REPORT 76-2  
GEOLOGY FOR PLANNING: CENTRAL & SOUTHEAST MARIN COUNTY, CALIFORNIA,  
SALEM J. RICE, THEODORE C. SMITH & RUDOLPH G. STRAND, 1976.

**GEOLOGY AND SITE  
LOCATION PLAN**

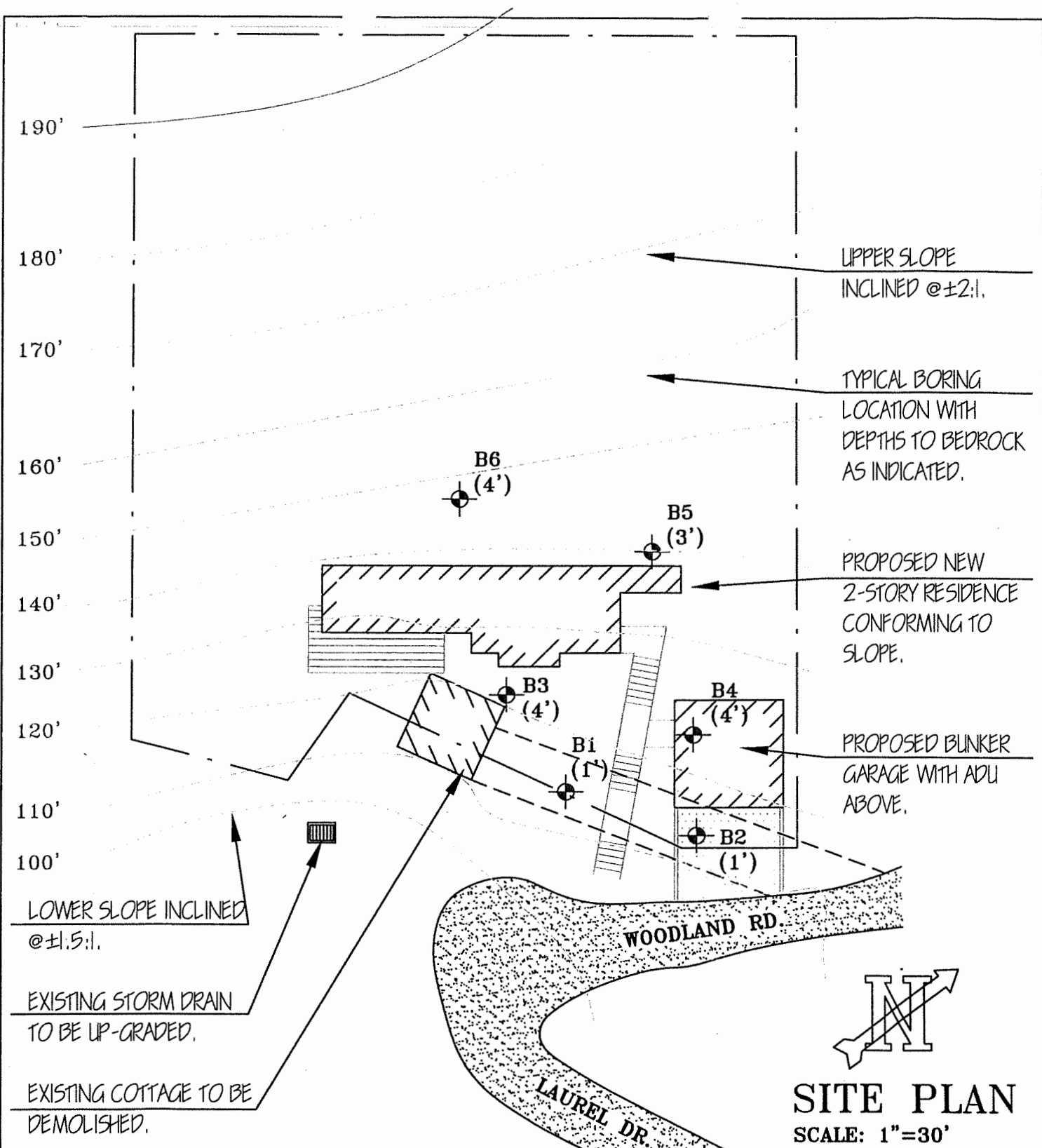
**SCALE: 1"=1500'**

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**SCALE: 1"=1500'**  
**JOB #: 0-4550**  
**DRAWN: OSO/DAO**  
**DATE: 5-30-19**

**GEOTECHNICAL RECONNAISSANCE**  
**5 WOODLAND ROAD**  
**FAIRFAX, CALIFORNIA**

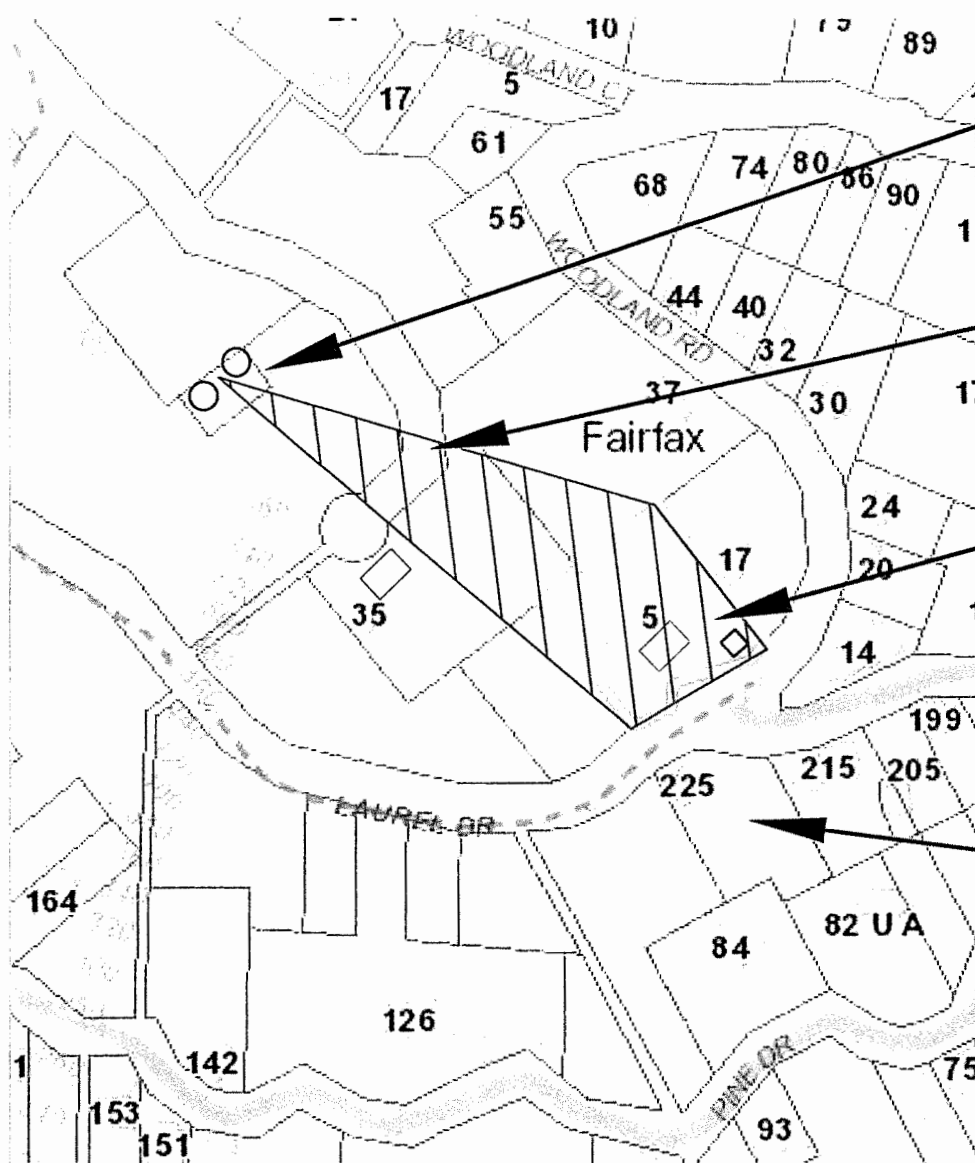
**FIGURE: 1**



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 DRAWN: OSO/DAO  
 DATE: 5-30-19

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 FAIRFAX, CALIFORNIA



KNOLL ABOVE,  
SITE OF WATER  
TANKS.

APPROXIMATE  
WATERSHED  
THROUGH SITE.

SUBJECT  
PROPERTY WITH  
APPROXIMATE  
LOCATIONS OF  
PROPOSED  
STRUCTURES.

SUBTLE  
TOPOGRAPHIC  
SWALE  
DESCENDING  
THROUGH  
225  
LAUREL.

SOURCE: MARIN COUNTY GIS MAPS.

# GEOLOGY AND SITE LOCATION PLAN

SCALE: 1"~500'

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SCALE: 1"~500'  
JOB #: 0-4550  
DRAWN: OSO/DAO  
DATE: 5-30-19

GEOTECHNICAL RECONNAISSANCE  
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FAIRFAX, CALIFORNIA

FIGURE: 3

**BORING: 1**

Location: CENTER OF EXISTING DRIVEWAY

DESCRIPTION	DEPTH FEET	SAMPLE NUMBER	BLOW COUNT	MOISTURE CONTENT	COMMENTS
red-brown Sandy CLAY with Rock fragments					Topsoil? Residual Soil?
yellow-tan weathered SANDSTONE		1-1	23	11%	Weathered Bedrock
	5	1-2	100+	9%	
brown weathered SANDSTONE-SHALE	10	1-3	30	15%	
with clayey shear zones					
	15	1-4	75	13%	Drilling Terminated No Groundwater
Bottom of Boring @ 16.5'					
	20				
	25				
	30				

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Figure: 4

**BORING: 2**

Location: **FRC**

**LEFT CORNER OF PROPOSED GARAGE**

DESCRIPTION	DEPTH FEET	SAMPLE NUMBER	BLOW COUNT	MOISTURE CONTENT	COMMENTS
brown Silty SAND (SM)					Topsoil
tan weathered SANDSTONE		2-1	55	10%	Weathered Bedrock
tan weathered SANDSTONE-SHALE	5	2-2	100+	11%	
Bottom of Boring @ 6.5'	10 15 20 25				Auger Refusal




  
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 Fairfax, California  
 Date: May 10, 2019

Figure: 5

**BORING: 2**

Location: **FRC**

**LEFT CORNER OF PROPOSED GARAGE**

DESCRIPTION	DEPTH FEET	SAMPLE NUMBER	BLOW COUNT	MOISTURE CONTENT	COMMENTS
brown Silty SAND (SM)	-	-	-	-	Topsoil
tan weathered SANDSTONE	-	-	-	-	Weathered Bedrock
	-	2-1	55	10%	
tan weathered SANDSTONE-SHALE	5	2-2	100+	11%	
Bottom of Boring @ 6.5'	10 15 20 25				Auger Refusal

**DAVE**   

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 Fairfax, California

**Date:** May 10, 2019

Figure: 5

**BORING: 3**

Location: ABC

EXISTING COTTAGE

DESCRIPTION	DEPTH FEET	SAMPLE NUMBER	BLOW COUNT	MOISTURE CONTENT	COMMENTS
red-brown Clayey SILT (MH)	—				Topsoil
rusty-orange-tan Silty SAND (SM)	—	3-1	8	16%	Residual Soil
rusty-orange-tan decomposed Sandstone	5	3-2	16	20%	Weathered Bedrock
Bottom of Boring @ 6.5'	10 15 20 25				Drilling Terminated




  
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Figure: 6



**BORING: 4**

Location: **BES**

**EXISTING SHED, REAR OF PROPOSE**

**ARAGE**

DESCRIPTION	DEPTH FEET	SAMPLE NUMBER	BLOW COUNT	MOISTURE CONTENT	COMMENTS
red-brown Clayey SILT (MH)	—	—	—	—	Top Soil
rusty-tan Fine SAND with grey Clay seams (SM)	—	4-1	13	20%	Residual Soil
tan weathered SANDSTONE	5	4-2	100+	17%	Weathered Bedrock
Bottom of Boring @ 5.5'	10  15  20  25				Refusal




  
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 Fairfax, California  
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Figure: 7

**BORING: 5**      Location: RIG      REAR CORNER OF PROPOSED HOUS

DESCRIPTION	DEPTH FEET	SAMPLE NUMBER	BLOW COUNT	MOISTURE CONTENT	COMMENTS
red-brown Clayey SILT (MH)					Colluvium
yellow-tan Silty SAND with Sandstone fragments (SM)		5-1	23	14%	Residual Soil
yellow-brown SANDSTONE					Weathered Bedrock
	5	5-2	100+	11%	
Bottom of Boring @ 5'					Refusal
	10				
	15				
	20				
	25				
	30				




  
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Figure: 8

**BORING: 6**      Location: **LEF**      **EAR CORNER OF PROPOSED HOUSE**

DESCRIPTION	DEPTH FEET	SAMPLE NUMBER	BLOW COUNT	MOISTURE CONTENT	COMMENTS
red-brown Clayey SILT (MH)	—				Topsoil
tan fine Sandy SILT	—	6-1	14	14%	Residual Soil
tan weathered SANDSTONE	5	6-2	27	13%	Weathered Bedrock
Bottom of Boring @ 6.5'	10 15 20 25 30				Drilling Terminated



  
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Project: Geotechnical Investigation  
 5 Woodland Road  
 Fairfax, California  
 Date: May 10, 2019

Figure: 9



## Stormwater Control Plan

---

# Bolter Residence

Parcel Address:

5 Woodland Road, Fairfax, CA (APN: 003-053-10)

Prepared For:

Chris & Lindsay Bolter  
5 Woodland Road  
Fairfax, CA 94930

Prepared By:

ViA Atelier, Inc.  
Vlad Iojica, P.E., QSD



Date:

January 2020  
April 2020 (Rev.)

ATTACHMENT D

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## I. PROJECT DATA

The Stormwater Control Plan (SCP) has been prepared in support of the proposed re-development of a residential property that will include demolition of an existing dwelling and construction of a new, modern single-family residence with a detached two car garage and associated site improvements. The APN: 003-053-10. Parcel's longitude and latitude: 37°58'39" North, and 122°36'12" West.

Project Name/Number	Bolter Residence
Application Submittal Date	June, 2020
Project Location	5 Woodland Rd., Fairfax, CA 94930
Project Phase No.	No project phasing planed
Project Type and Description	Demolition of an existing residential structure, driveway and site shed and construction of a new single-family residence with a detached two-car garage
Total Parcel Area	0.5578 Acres (24,297.8 sq.ft.)
Total Project Area (see Exhibit)	0.2045 Acres (8,910 sq.ft.)
Total New and Replaced Impervious Surface Area	0.1256 Acres (5,471 sq.ft.)
Total Pre-Project Impervious Surface Area	0.027Acres (1,181 sq.ft.)
Total Post-Project Impervious Surface Area	0.0985 Acres (4,290 sq.ft.)

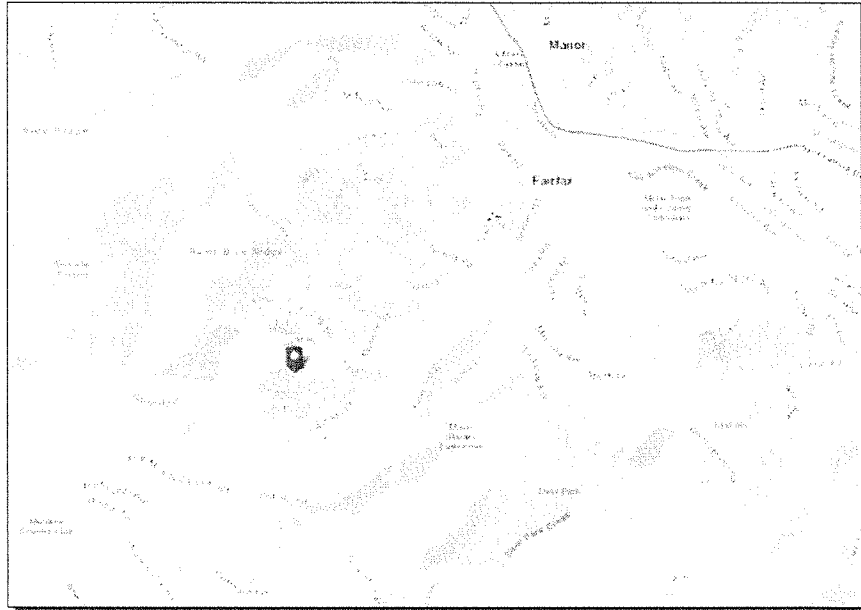
## II. SETTING

### II.A PROJECT LOCATION AND DESCRIPTION

As shown on the Vicinity Map (Fig.1) the project site is located on a hillside parcel, uphill from the alignment of Woodland Road, a local street. The parcel under conditions is under current conditions developed and includes a single family dwelling with connections to public utilities, access driveway and no garage or covered parking. Other existing improvements include paved walks and a detached shed.

The drainage tributary area to parcel is limited to the north and northeast areas due to the topography of the site. See exhibit SCP-1 under attachments of the report for the existing conditions.

- The current zoning designation is RS-6 Single Family Residential
- No construction phasing applicable to this project.
- Proposed number of residential units: 1,
- Site percent slope: 48.33%



**FIGURE 1 LOCATION MAP (GIS MARIN COUNTY)**

## **II.B EXISTING SITE FEATURES AND CONDITIONS**

Under the current conditions the property is developed with established drainage patterns conveying and discharging the stormwater runoff to lower elevations along the south and southeast of the property and along the alignment of Woodland Road.

The site slopes from northwest towards southeast with a calculated average slope of 48.3%.

Potential drainage tributary areas located to the north of the parcel consists of undeveloped land and the any surface discharges across the property line are likely minimal with no concentrated flows.

## **II.C. OPPORTUNITIES AND CONSTRAINTS FOR STORM WATER CONTROL**

New site improvements will enhance the protection of the house pad for both surface water runoff as well as ground water, and convey the captured runoff to points of discharge located by the easterly corner of the house pad.

A bio-detention basin is proposed for construction at the east corner of the pad, corresponding with the point of discharge for the runoff.

This basin will ensure that under the post development conditions, the storm water discharged to the site will not exceed the discharge rate under current conditions.

### III. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES

In the design process the following strategies have been taken into consideration:

- Limit disturbance to the area and incorporating natural features. Maintain existing drainage patterns.
- Minimize the compaction of permeable soils for the portions of the lot not proposed for development.
- Maintain existing vegetation to the possible extent.
- Concentrating development areas.

### IV. DOCUMENTATION OF DRAINAGE DESIGN

#### A. DESCRIPTION OF DRAINAGE MANAGEMENT AREAS

DMA Name	Surface Type	Area
#1	New House Roof	1,600 sq.ft.
#2	Patios / Roof Deck	1,546 sq.ft.
#3	Paved Surfaces incl. Driveway	1,140 sq.ft.
#4	Landscaped Areas	4,620 sq.ft.

#### B. TABULATION AND SIZING CALCULATIONS

##### Areas Draining to Bio-Detention Basin

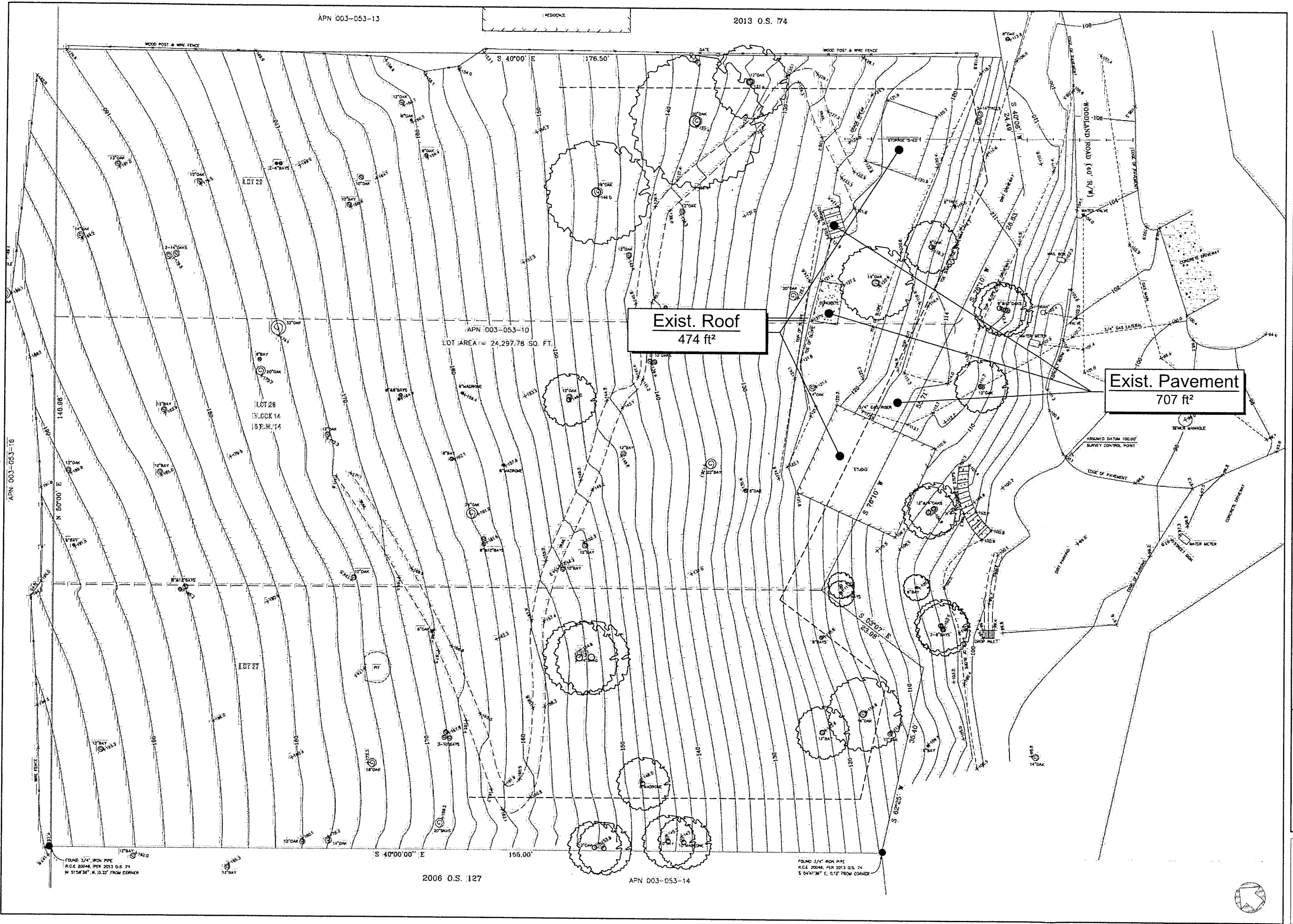
DMA Name	DMA Area (sq.ft.)	Post-project surface type	DMA Runoff factor	Product of Area x Runoff Factor	Facility Name		
					Bio-Detention Basin		
#1	1,600	New House Roof	1.0	1,600	Sizing Factor	Minimum Facility Size [sq.ft.]	Proposed Facility Size [sq.ft.]
#2	1,546	Patios	1.0	1,546			
#3	1,140	Paved Surfaces	1.0	1,140			
#4	4,620	Landscape	0.1	462			
<b>Total:</b>				<b>4,748</b>	<b>0.04</b>	<b>190</b>	<b>202</b>



## APPENDIXES

A CURRENT CONDITIONS

B PROPOSED CONDITIONS



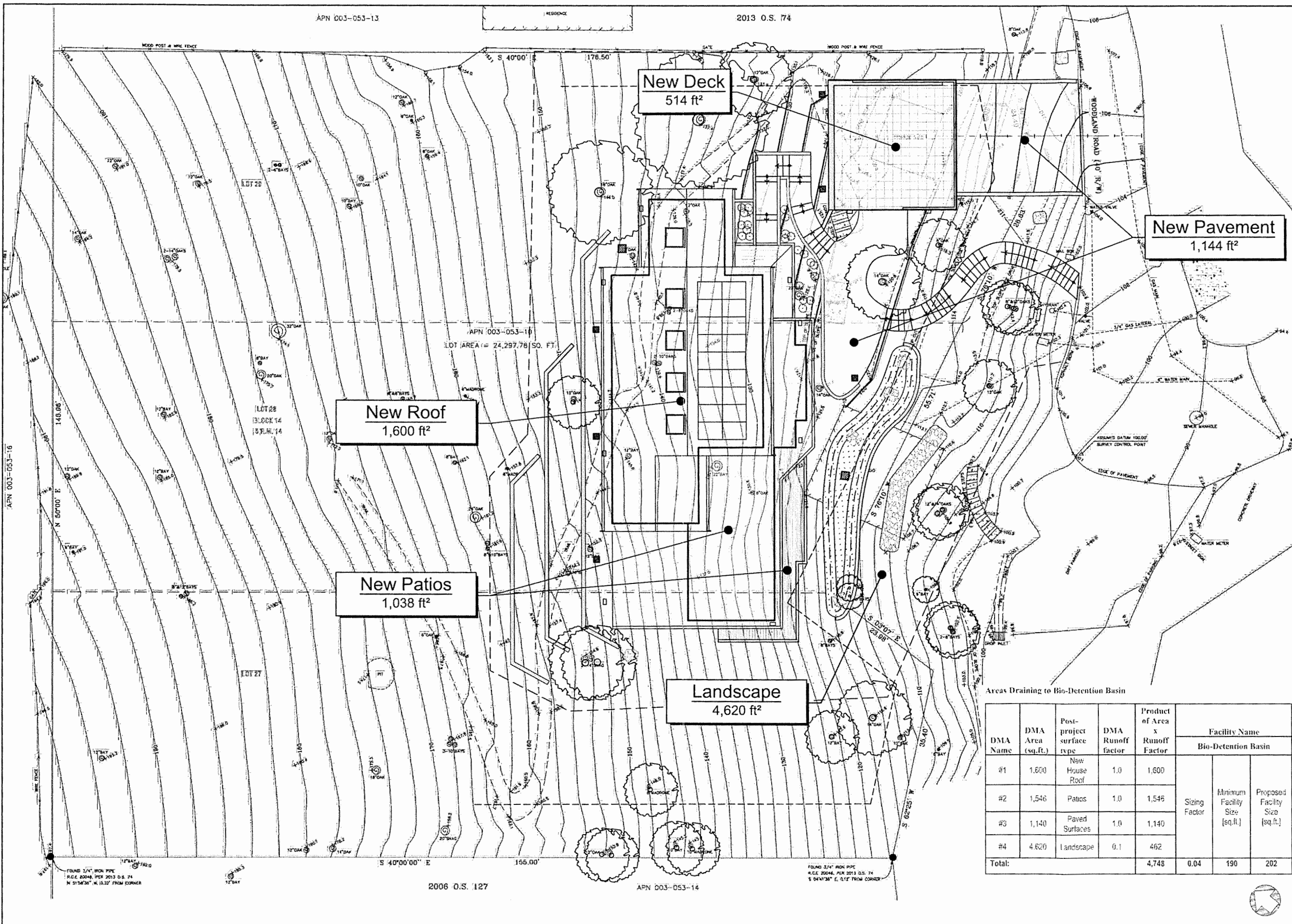
SCALE:	1" = 16'
ISSUE DATE:	4/15/20
DRAWN BY:	N.C.
REVIEWED BY:	V.I.
PROJECT NO:	1912B
SHEET NO.:	SCP-1
REF. SHEET:	-

Current Site Conditions  
**BOLTER RESIDENCE**  
 5 WOODLAND RD., FAIRFAX, CA (APN: 003-053-10)

9 Brookside Court  
 San Anselmo  
 CA 44060  
 T: 415-774-6716  
 E: office@via-eng.com  
 www.via-eng.com © 2017



Apr 24, 2020 - 2:22pm Vlad Iojica C:\Users\Vlad Iojica\Documents\VA\1912b\_Bolter, Fairfax\CADD\SDP\_Pref&Post.dwg APN 003-053-16



Areas Draining to Bio-Detention Basin

DMA Name	DMA Area (sq.ft.)	Post-project surface type	DMA Runoff factor	Product of Area x Runoff Factor	Facility Name		
					Bio-Detention Basin		
					Sizing Factor	Minimum Facility Size (sq.ft.)	Proposed Facility Size (sq.ft.)
#1	1,600	New House Roof	1.0	1,600			
#2	1,546	Patios	1.0	1,546			
#3	1,140	Paved Surfaces	1.0	1,140			
#4	4,620	Landscape	0.1	462			
<b>Total:</b>				<b>4,748</b>	<b>0.04</b>	<b>190</b>	<b>202</b>

ISSUE DATE: 4/15/20	SCALE: 1" = 16'
DRAWN BY: N.C.	SHEET NO: SCP-2
REVIEWED BY: V.I.	PROJECT NO: 1912.B
PROJECT NO: 1912.B	REF SHEET: -

Post Development Conditions  
**BOLTER RESIDENCE**  
 5 WOODLAND RD., FAIRFAX, CA (APN: 003-053-10)

1 Brookside Court  
 San Anselmo  
 CA 94960  
 T: 415-714-6716  
 E: office@via-eng.com  
 www.via-eng.com





# TOWN OF FAIRFAX

142 BOLINAS ROAD, FAIRFAX, CALIFORNIA 94930  
(415) 453-1584 / FAX (415) 453-1618

Date: July 23, 2019

Permit 19-T-55

## NOTICE OF TREE COMMITTEE ACTION

*This action may be appealed to the Fairfax Town Council within 10 days of the Tree Committee decision.  
This permit is not in effect until the 10 day appeal period is over.*

Request for a tree permit to remove: (1) Bay  
(1) "Tree" – Mixture Oak/Bay  
(1) Oak  
(1) Madrone

Address of Tree(s) to be removed: 5 Woodland Rd

Applicant's Phone: Chris & Lindsay Bolter (415) 786-0882

On July 22, 2019 the Fairfax Tree Committee took the following action on the above referenced tree permit application:

\_\_\_\_\_ APPROVED

### **FOR RECOMMENDATION ONLY TO PLANNING COMMISSION**

Applicant not present.

Flores and Benson mentioned no trees were tagged during their site visit. The "Trees to be Removed/Altered" section of the agenda items designates a total of four (4) trees to be removed but the submitted application showed approximately 31 trees. Tree types were not coordinated with the plans provided. There was a consensus that trees not within the footprint of the building should remain.

Richardson-Mack made a motion to recommend that the applicant coordinate on the plans the identity of the trees and clarify on the Tree Committee agenda the total number of trees proposed to be removed; the motion was seconded by Romaidis and voted on.

Vote:

Benson- Aye

Flores- Aye

Richardson Mack- Aye

Romaidis- Aye

Item #2 Vote: Ayes- 4 Noes- 0

**REMINDER: PLEASE KEEP PERMIT NOTICE UP DURING THE 10 DAY WAITING PERIOD**

\_\_\_\_\_ CONTINUED

\_\_\_\_\_ DENIED

CONDITIONS OF APPROVAL:

*THIS APPROVED APPLICATION IS YOUR PERMIT-KEEP IT ON THE JOB SITE. FAILURE TO HAVE THE PERMIT ON THE SITE WHILE THE TREE WORK IS IN PROGRESS MAY RESULT IN THE WORK BEING HALTED UNTIL YOU SHOW PROOF OF APPROVAL.*

Please verify that the tree company performing the work has a current Fairfax Business license and worker's compensation coverage.

**THIS TREE PERMIT EXPIRES IN SIX MONTHS.** If necessary, you may apply for an extension in writing prior to the expiration date.

NEW RESIDENCE + DRIVEWAY



**TOWN OF FAIRFAX**  
 142 BOLINAS ROAD, FAIRFAX, CA 94930  
 (415) 453-1584 / FAX (415) 453-1618

TOWN OF FAIRFAX  
 JUN 18 2019  
 RECEIVED

**APPLICATION FOR TREE REMOVAL OR ALTERATION**

A permit is required to remove or alter one or more trees on any parcel in the Town of Fairfax. All trees for which a permit is requested shall be tagged with an orange ribbon, a minimum of 10 days prior to the Tree Advisory Committee meeting date. Applicants must also post a notice of intent to alter or remove the marked Tree(s) in a prominent location visible along the frontage of the affected property.

**APPLICANT INFORMATION**

mail to →

OWNER (APPLICATIONS MUST BE FILED BY PROPERTY OWNER): <b>CHRIS + LINDSAY BOLTER</b>	DATE OF APPLICATION: <b>6/17/19</b>
JOB ADDRESS/ASSESSOR'S PARCEL NO. IF SITE IS VACANT <b>5 WOODLAND RD., APN 003-053-10</b>	PHONE NUMBER: <b>CHRIS (415) 786-0882</b>
EMAIL ADDRESS: <b>BOLTERBUILDERS@GMAIL.COM</b>	FAX NUMBER:
PROPERTY OWNER'S ADDRESS IF DIFFERENT FROM ABOVE <b>204 SCENIC RD., FAIRFAX 94930</b>	ALTERNATE PHONE NUMBER: <b>LINDSAY (415) 416-4761</b>

**TREE INFORMATION**

SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE: <b>BAY</b>	CIRCUMFERENCE BREAST HEIGHT: <b>3-6", 8-9", 1-10", 2-12", 1-22"</b> REASON FOR REMOVAL/ALTERATION <b>LOCATED AT HOUSE SITE AND FIRE DEPT. REQUIREMENTS</b>
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE: <b>'TREE' (MIXTURE OAK/BAY) per "key"</b>	CIRCUMFERENCE BREAST HEIGHT: <b>1-6", 2-14"</b> REASON FOR REMOVAL/ALTERATION <b>LOCATED AT GARAGE AND DRIVEWAY</b>
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE: <b>OAK</b>	CIRCUMFERENCE BREAST HEIGHT: <b>4-8", 2-10", 3-12", 1-14", 1-18", 2-20"</b> REASON FOR REMOVAL/ALTERATION <b>LOCATED AT HOUSE SITE AND FIRE DEPT. REQUIREMENTS</b>
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE: <b>MADRONE</b>	CIRCUMFERENCE BREAST HEIGHT: <b>1-8", 1-10"</b> REASON FOR REMOVAL/ALTERATION <b>FIRE DEPT. REQUIREMENTS</b>

Please attached a site plan to this application showing the location and species of all trees with a diameter of 4 inches (circumference of 12 inches or more), measured 4.5 feet above grade at tree base, property boundaries and easements, location of structures, foundation lines of neighboring structures and paved areas including driveways, .

**AGENDA ITEM #2**

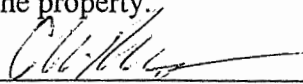
Any tree company used for the removal or alteration must have a current and valid Fairfax Business license. Please include the name, address, and phone number of the person or company doing the above listed work:

NAME: T B D	PHONE NUMBER:
ADDRESS:	CONTRACTOR BUSINESS LICENSE NUMBER

*Please note the Tree Advisory Committee may require applicants to submit their application to a Qualified Arborist for a report or recommendation at the expense of the applicant. A Qualified Arborist is defined as a Certified Arborist, A Certified Urban Forester, a Registered Consulting Arborist, or a Registered Professional Forester.*

**OWNER'S STATEMENT**

I understand that in order to properly process and evaluate this application, it may be necessary for Town personnel to inspect the property, which is the subject of the application. I also understand that due to time constraints it may not always be possible for Town personnel to provide advanced notice of such inspections. Therefore, this application will be deemed to constitute my authorization to enter upon the property for the purpose of inspecting the same, provided that Town personnel shall not enter any building on the property except in my presence or the presence of any other rightful occupant of such building. I understand that my refusal to permit reasonable inspection of any portion of the property by town personnel may result in a denial of this application due to the lack of adequate information regarding the property.



Signature of Property Owner

6/25/2019

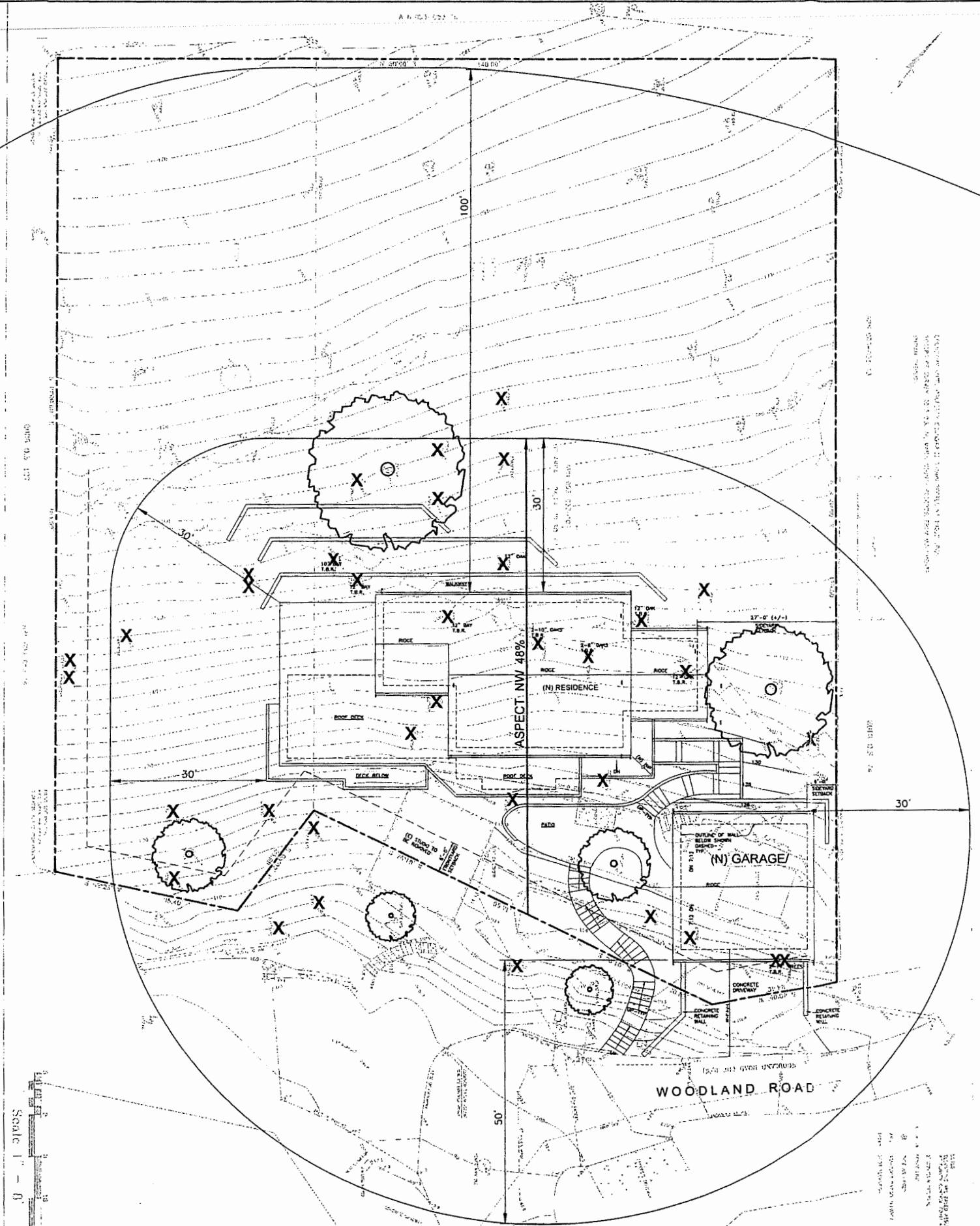
Date

[AREA BELOW FOR STAFF USE ONLY]

Permit Number: 19-T-55	
Date Received: 6-18-19	Received by: S. Waters
Conditions of Approval:	
Tree Committee Action:	Date:

Tree Committee Actions can be appealed to the Town Council within 10 days of the Tree Committee Action. Contact Town Hall for more information.

AGENDA ITEM # 5



**VEGETATION MANAGEMENT PLAN**  
3/32" = 1'-0"

**SYMBOL SCHEDULE**

- X** (E) TREE TO BE REMOVED - MIXTURE OF OAK AND BAY TREES
- O** (E) OAK TREE TO REMAIN - TO BE CLEANED, HAVE CROWNS REDUCED AND BE MAINTAINED
- GRASSES** - PER COUNTY OF MARIN DEFENSIBLE SPACE 30'-100' GRASSES TO BE KEPT MOWED

**ROSS VALLEY FIRE DEPARTMENT**

Developed by: Robert Bastanen, Fire Inspector  
Approved by: Roger Mauger, Fire Chief

**Fire Protection Standard 220**

**Vegetation Fuels Management Plan**

Date: 3/28/2019  
Revision: \_\_\_\_\_  
Page: 4 of 6

Figure 1

**HAZARD ASSESSMENT MATRIX**

Hazard Points	1	2	3	4	5	6	7	8	Points
Aspect	NE, E	NW, N	SE, W	S	SW				2
Slope	0-10					11-20		31+	8
Fuel 0-30	Specimen Garden	Hardwood	Grass	Mostly Grass	Mostly Brush	Pyrophytic Hardwoods Chaparral	Conifer	Conifer with brush under story	3
Fuel 31-100	Grass, Mostly Grass	Mostly Brush		Pyrophytic Hardwoods Chaparral	Conifer with brush under story				1
Total Hazard Points									14

Minimum Horizontal Modification Requirement in feet: **50**

1-2	3-4	5-6	7	8-9	10-11	12-13	14	15-16	17-18	19-20	21-22	23-24	25+
30x30x30 ft.				30x30x50 ft.				50x50x100 ft.					

- Fuel Types:**
- A. Specimen Garden: a well-maintained ornamental garden, usually irrigated. Trees and shrubs are well spaced or clustered, thinned and free of deadwood. The lawn is mowed and clean. No pyrophytic plants within 10 ft. of house.
  - B. Hardwood (Model 9): Broadleaf (non-pyrophytic) trees such as oaks, maples, ash, etc.
  - C. Grass (Model 1): Wild field grass dominates; trees and shrubs occupy less than 1/3 of the area.
  - D. Mostly Grass (Model 2): Brush and tree reproduction occupy more than 1/3 and less than 2/3 of the area.
  - E. Mostly Brush (Model 5): Brush and tree reproduction occupies 2/3 of the area. Includes young chaparral, coastal scrub and broom stands.
  - F. Pyrophytic Hardwoods (Model 12): Broadleaf trees that is high in volatile oils, which produce heavy debris and burn intensely. May have some conifers mixed in but the flammable hardwoods dominate the fire behavior.
  - G. Chaparral (Model 4): Six foot and taller old, pyrophytic brush with excessive deadwood. Includes mixed chaparral of Manzanita, scrub oak, chaparral pea, tall ceanothus, chamise, etc. Often has some young Douglas fir or pines.
  - H. Conifer (Model 8): Needleleaf trees typically with heavy litter, low branches and plentiful deadwood. Often mixed with some hardwoods or even pyrophytic hardwoods, but conifers dominated and carry the fire.

**A. INTRODUCTION**

The following report is the Vegetation Fuels Management Plan for Chris and Lindsay Bolter at their proposed new residence at 5 Woodland Road, Fairfax, Calif. The project is a two story residence and a one story garage at the bottom of the property that is cut into the hillside. This report describes the project and outline the measures being taken to provide effective fire hazard mitigation. The plan accompanying this report shows the property boundaries, existing trees, the residence and the driveway, patio, as well as the diagram of the defensible space and proposed treatments of the defensible space and plantings.

**B. SITE DESCRIPTION**

The 0.53-acre parcel fronts on and is above Woodland Road. The residence is shown being sited as close as possible to Woodland Road. The residence and garage are set 6 ft. from the south (front) and east (side) property lines. The property slopes up from Woodland Road in a north to northwest aspect with a slope of approximately 48%. The property is a mixture of grasses and oak and bay trees. There are existing trees at the frontage which is town property. There are adjacent residences to the east of the property and two houses to the south across Woodland Road.

The southern property frontage is a steep earth/rock slope that levels out to a flat area below the proposed residence and then slopes up at a consistent slope to the rear of the property. It is proposed to remove approximately 35 oak, bay and madrone trees starting at the proposed garage and ending above the proposed residence.

Six oak trees are shown as remaining. Three at the east side of the property, one at the proposed patio space below the residence and next to the garage and two towards the west property line below the proposed residence. These trees would be cleaned, and the crowns reduced and a maintenance program will be created to manage the cleaning of the trees yearly.

Most of the property vegetation is natural grasses which will be cut yearly.

Any new landscaping will be in the form of irrigated ornamental planters between the front patio and the residence.

**C. ASSESSMENT**

Defensible spaces or fire fuel breaks are required around all residences to provide fire suppression personnel with adequate time to protect homes and neighborhoods during wildland fires. The size of these defensible spaces around the residence are determined by using the Hazard Assessment Matrix. The matrix uses factors of slope, aspect, vegetation fuel type to dictate the size of these defensible spaces. See the Hazard Assessment Matrix attached. The Bolter Residence scored a total of 14 points requiring a protection zone of 30 feet around on the north, east and west and 50' at the south of the residence as defined by the fire protection standards.

- D. VEGETATION AND VEGETATION MANAGEMENT DEFENSIBLE SPACES A & B**
- Critical Zone A: 0' to 30' from the residence**  
The zone is the area surrounding the residence to a point approximately 30' from the residence. This area will have no pyrophytic trees, shrubs, groundcovers, or plants. The only plants in this zone will be potted.  
The east frontage will have all vegetation removed to the property line. The Bolters will initiate a dialog with the eastern neighbor to explore vegetation management on the neighboring property.
  - Zone B: 30' to 100' from the residence**  
Natural grasses between trees which are to be kept mowed  
Due to the tight location and footprint of the property there is no control by the Bolters to the east and south of the proposed residence and garage.

REVISIONS BY

**JEFF KROOK ARCHITECT & ASSOCIATES**  
P.O. BOX 246 - SAN ANSELMO, CALIFORNIA 94079 - 415/455-5531

**VEGETATION MANAGEMENT PLAN**

New Residence for  
**CHRIS & LINDSAY BOLTER**  
5 Woodland Rd. Fairfax, CA  
APN: 003-053-10

Date: APRIL 2019  
Scale: 3/32" = 1'-0"  
Drawn: DMS  
Job: BOLTER  
Sheet: **VMP**  
Of: 12



**TOWN OF FAIRFAX  
TREE COMMITTEE  
MINUTES OF THE MEETING  
July 22, 2019**

**\*\*\*DRAFT\*\*\***

**CALL TO ORDER/ROLL CALL**

Jane Richardson-Mack called the meeting to order at 7:00 p.m.  
The following Committee members were present: Deborah Benson, Kathy Flores, Jane Richardson-Mack, John Romaidis.

***New Business items:***

1. 164 Toyon Dr.  
Applicant present.

Flores made a motion to approve the application; the motion was seconded by Romaidis and voted on.

Vote:

Benson- Aye

Flores- Aye

Richardson-Mack- Abstain

Romaidis- Aye

Item #1 Vote: Ayes- 3, Noes- 0, Abstention- 1

---

2. 5 Woodland Rd.  
Applicant not present.

Flores and Benson mentioned no trees were tagged during their site visit. The "Trees to be Removed/Altered" section of the agenda items designates a total of four (4) trees to be removed but the submitted application showed approximately 31 trees. Tree types were not coordinated with the plans provided. There was a consensus that trees not within the footprint of the building should remain.

Richardson-Mack made a motion to recommend that the applicant coordinate on the plans the identity of the trees and clarify on the Tree Committee agenda the total number of trees proposed to be removed; the motion was seconded by Romaidis and voted on.

**TOWN OF FAIRFAX  
TREE COMMITTEE  
MINUTES OF THE MEETING  
July 22, 2019**

**\*\*\*DRAFT\*\*\***

Vote:

Benson- Aye  
Flores- Aye  
Richardson Mack- Aye  
Romaidis- Aye

Item #2 Vote: Ayes- 4 Noes- 0

---

3. 37 Spruce Rd.  
Applicant not present.

Richardson-Mack made a motion to approve the application; the motion was seconded by Benson and voted on.

Vote:

Benson- Aye  
Flores- No  
Richardson Mack- Aye  
Romaidis- Aye

Item #3 Vote: Ayes- 3 Noes- 1

---

4. 234 Tamalpais Rd.  
Applicant not present.

Flores made a motion to approve the application; the motion was seconded by Benson and voted on.

Vote:

Benson- Aye  
Flores- Aye  
Richardson Mack- Aye  
Romaidis- Aye

Item #4 Vote: Ayes- 4, Noes- 0

---

REVISIONS	BY
PLANNING REVISIONS 4/20	DMS
PLANNING REVISIONS 02/2020	DMS

<b>JEFF KROOT ARCHITECT &amp; ASSOCIATES</b>	
P.O. BOX 204 - SAN ANSELMO, CALIFORNIA 94960 - 415/455-5531	

<b>PARIAL SITE PLAN &amp; ROOF PLAN</b>	
<b>SITE INFORMATION</b>	

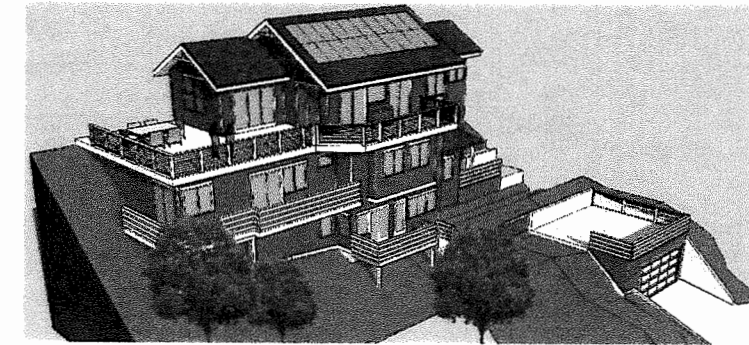
<b>PARIAL SITE PLAN &amp; ROOF PLAN</b>	
<b>SITE INFORMATION</b>	

<b>CHRIS &amp; LINDSAY BOLTER</b>	
5 Woodland Rd. Fairfax, CA	
APN: 003-053-10	

Date	JAN 2020
Scale	1/8" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	1
of 21	



VIEW FROM SOUTHWEST

**SITE INFORMATION**

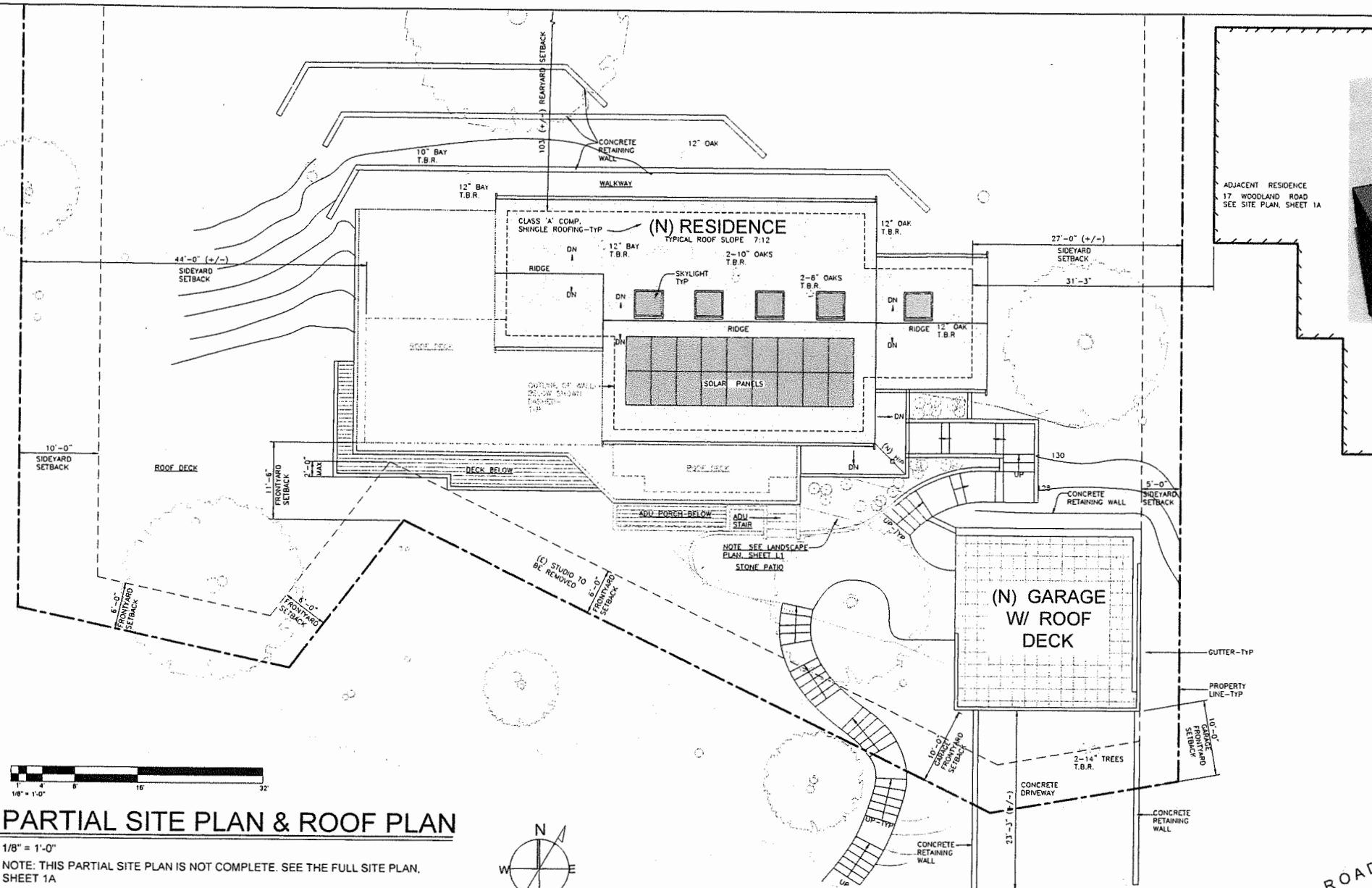
APN:	003-053-10
SITE AREA:	24,297 SF
ZONING:	RS-6
AREAS:	
LOWER FLOOR RESIDENCE:	1,262 SF
UPPER FLOOR RESIDENCE:	1,326 SF
TOTAL RESIDENCE:	2,588 SF
ACCESSORY DWELLING UNIT:	584 SF
TOTAL FLOOR AREA W/ ADU:	3,172 SF
GARAGE AREA:	576 SF
DECK AREA:	1,987 SF
PORCH AREA:	43 SF
LOT COVERAGE:	13.12%
FLOOR AREA RATIO:	13.1%

**VICINITY MAP**



**DRAWING INDEX**

- 1 PARTIAL SITE PLAN, SITE INFORMATION, ROOF PLAN
- 1A SITE PLAN
- 1B EXISTING SITE PLAN
- 2 LOWER FLOOR ADU PLAN, GARAGE PLAN
- 3 MIDDLE FLOOR PLAN, GARAGE/ROOF DECK PLAN
- 4 UPPER FLOOR PLAN
- 5 SECTIONS, SITE PHOTOS
- 6 SECTIONS, GREEN BUILDING ELEMENTS
- 7 RESIDENCE NORTH & SOUTH EXTERIOR ELEVATIONS
- 8 RESIDENCE EAST & WEST EXTERIOR ELEVATIONS
- 9 GARAGE / ROOF DECK EXTERIOR ELEVATIONS, SECTION
- L1 LANDSCAPE PLAN
- S1 TOPOGRAPHIC SURVEY
- SP STORY POLE PLAN
- VMP VEGETATION MANAGEMENT PLAN (STAMPED & SIGNED BY ROSS VALLEY FIRE DEPT.)
- C1.0 COVER SHEETS & NOTES
- C2.0 EROSION & SEDIMENT CONTROL PLAN
- C2.1 EROSION CONTROL DETAILS
- C3.0 CONCEPTUAL GRADING & DRAINAGE PLAN
- C4.0 DETAILS
- C5.0 SECTIONS AND PROFILES



**PARTIAL SITE PLAN & ROOF PLAN**

1/8" = 1'-0"  
NOTE: THIS PARTIAL SITE PLAN IS NOT COMPLETE. SEE THE FULL SITE PLAN, SHEET 1A

- ABBREVIATIONS**
- T.B.R. - TO BE REMOVED
  - (E) - EXISTING
  - (N) - NEW
  - DN - DOWN
  - TYP - TYPICAL
  - (+/-) - PLUS OR MINUS

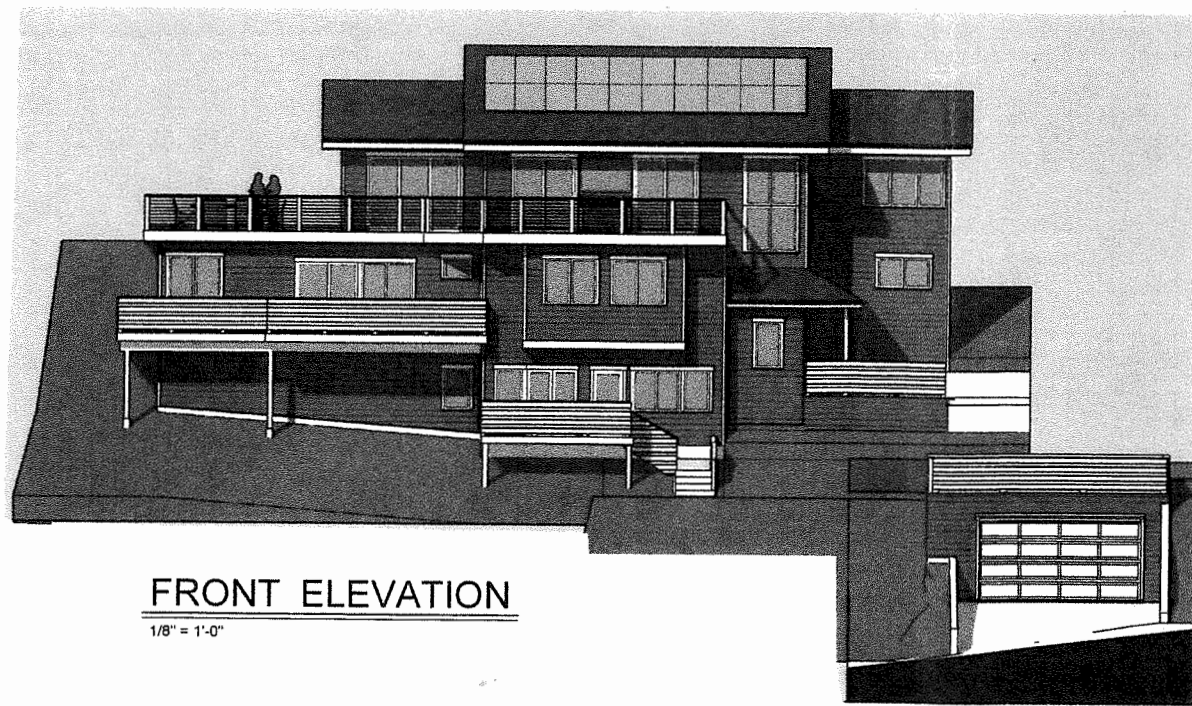
**CONSULTANTS**

**SURVEYOR**  
Stephen J. Flatland  
PROFESSIONAL LAND SURVEYOR  
P.O. Box 1837  
San Anselmo, CA 94960  
415-457-5081

**SOILS ENGINEER**  
DAVE OLNES, PE INC  
7915 Crest Ave.  
Oakland, CA 94605  
510-851-5298

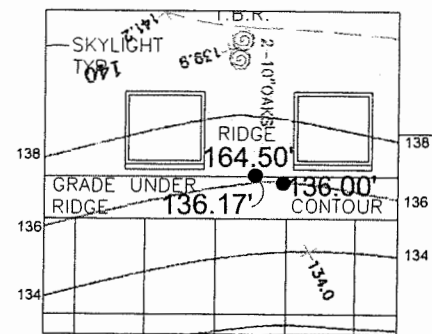
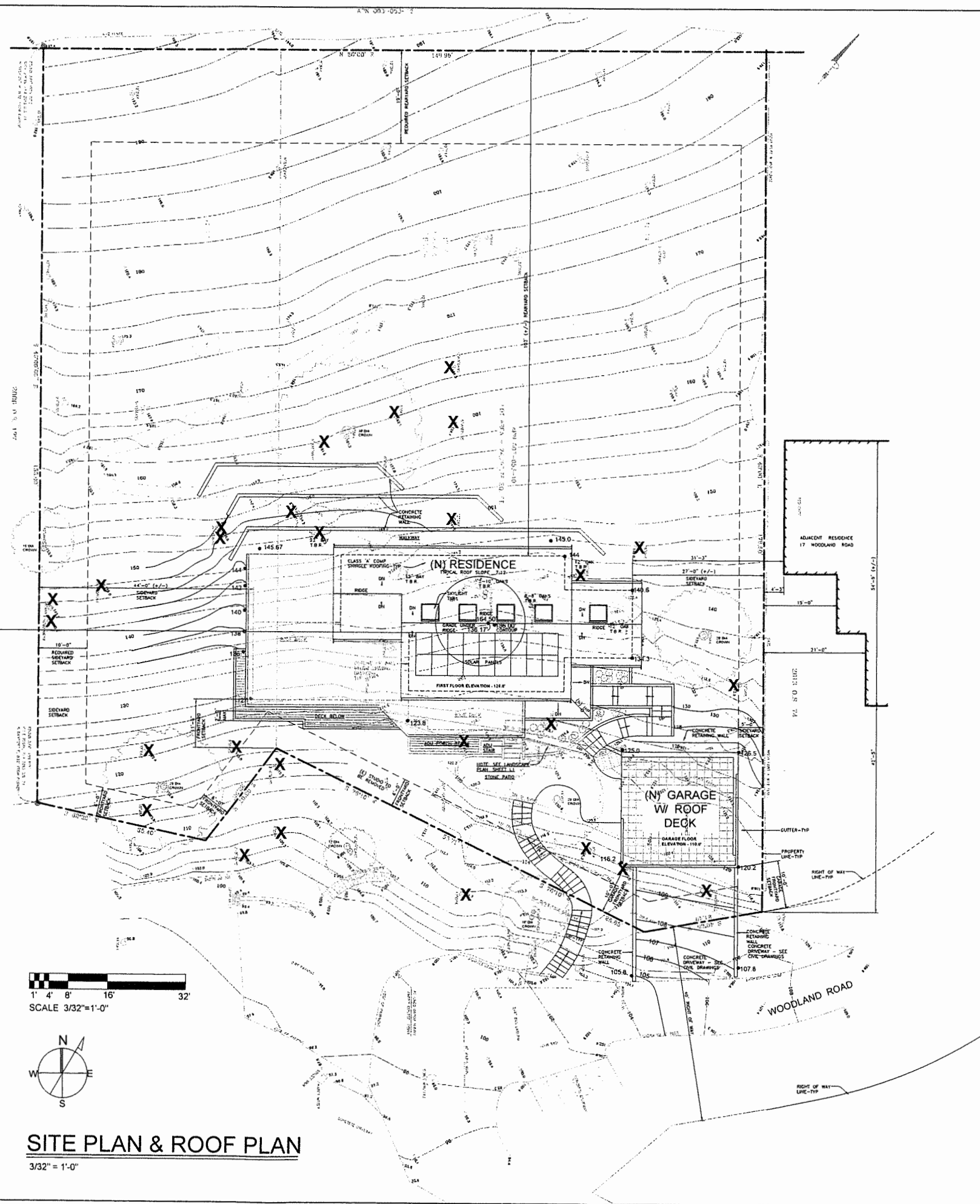
**CIVIL ENGINEER**  
VIA ATELIER, INC  
CIVIL ENGINEERING-CONSULTING  
9 Brookside Ct.  
San Anselmo, CA 94960  
415-774-6776

**LANDSCAPE ARCHITECT**  
ROSEANN DAL BELLO  
P.O. Box 972  
Woodacre, CA  
415-297-4364

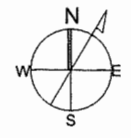
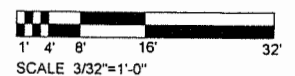


**FRONT ELEVATION**

1/8" = 1'-0"



**HIGHEST GRADE UNDER RIDGE**  
1/4" = 1'-0"



**SITE PLAN & ROOF PLAN**  
3/32" = 1'-0"

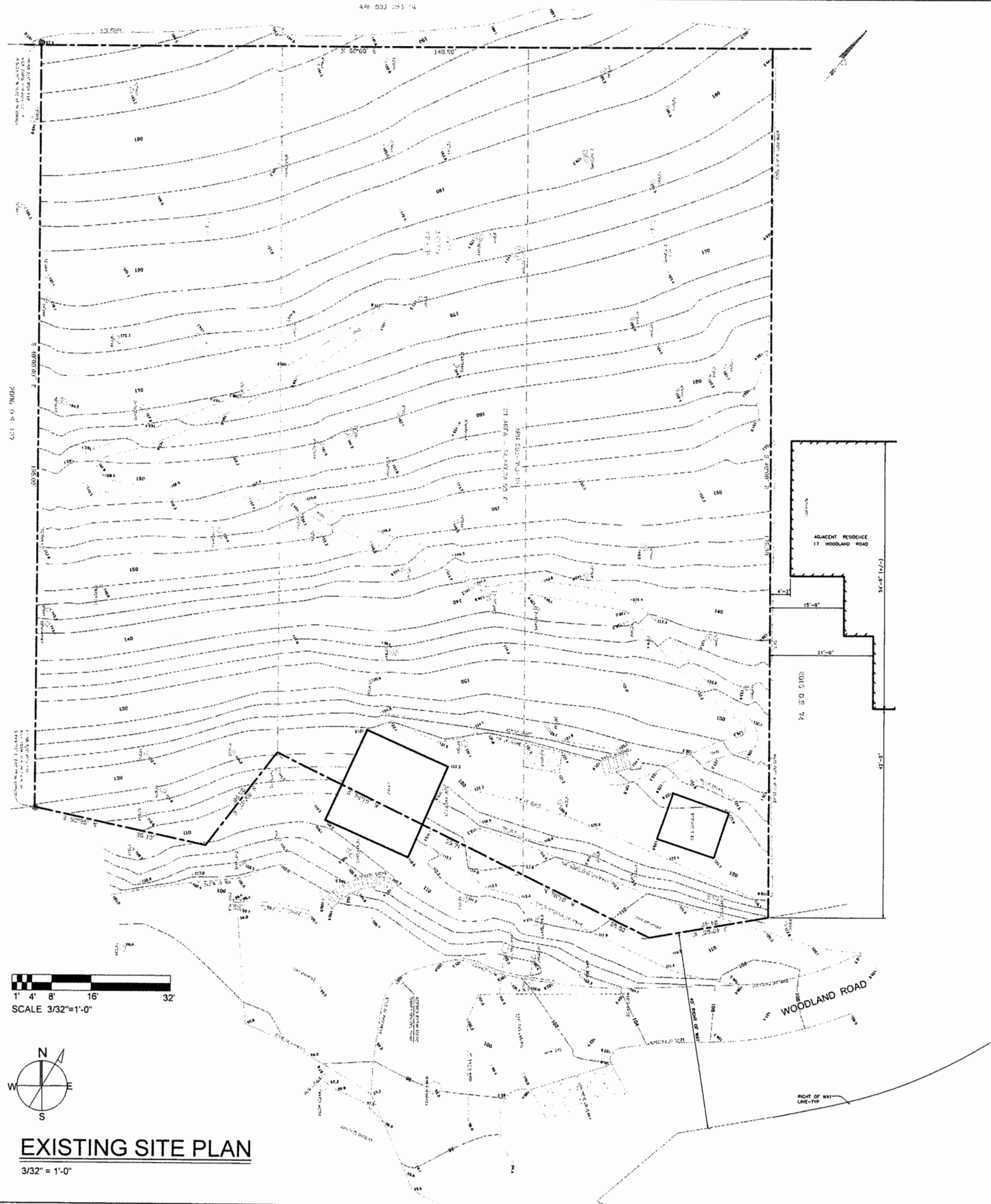
REVISIONS	BY
PLANNING REVISIONS 4/20	DMS
PLANNING REVISIONS 8/2020	DMS

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

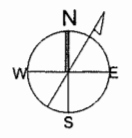
**SITE PLAN & ROOF PLAN**

New Residence for  
**CHRIS & LINDSAY BOLTER**  
5 Woodland Rd. Fairfax, CA  
APN: 003-053-10

Date	JAN 2020
Scale	3/32" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	<b>1A</b>
of	21



1' 4' 8' 16' 32'  
SCALE 3/32"=1'-0"



**EXISTING SITE PLAN**  
3/32" = 1'-0"

REVISIONS	BY
PLANNING REVISIONS	DMS
4/20	DMS
PLANNING REVISIONS	DMS
8/2/20	DMS

**JEFF KROOT ARCHITECT & ASSOCIATES**  
P.O. BOX 286 - SAN ANSELMO, CALIFORNIA 94977 - 415/456-5531

**EXISTING SITE PLAN**

New Residence for  
**CHRIS & LINDSAY BOLTER**  
5 Woodland Rd. Fairfax, CA  
APN: 003-053-10

Date	JAN 2020
Scale	3/32" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	<b>1B</b>
	of 21

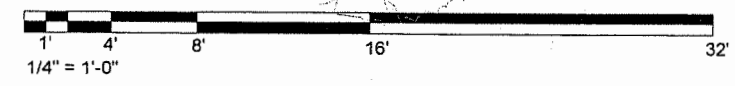
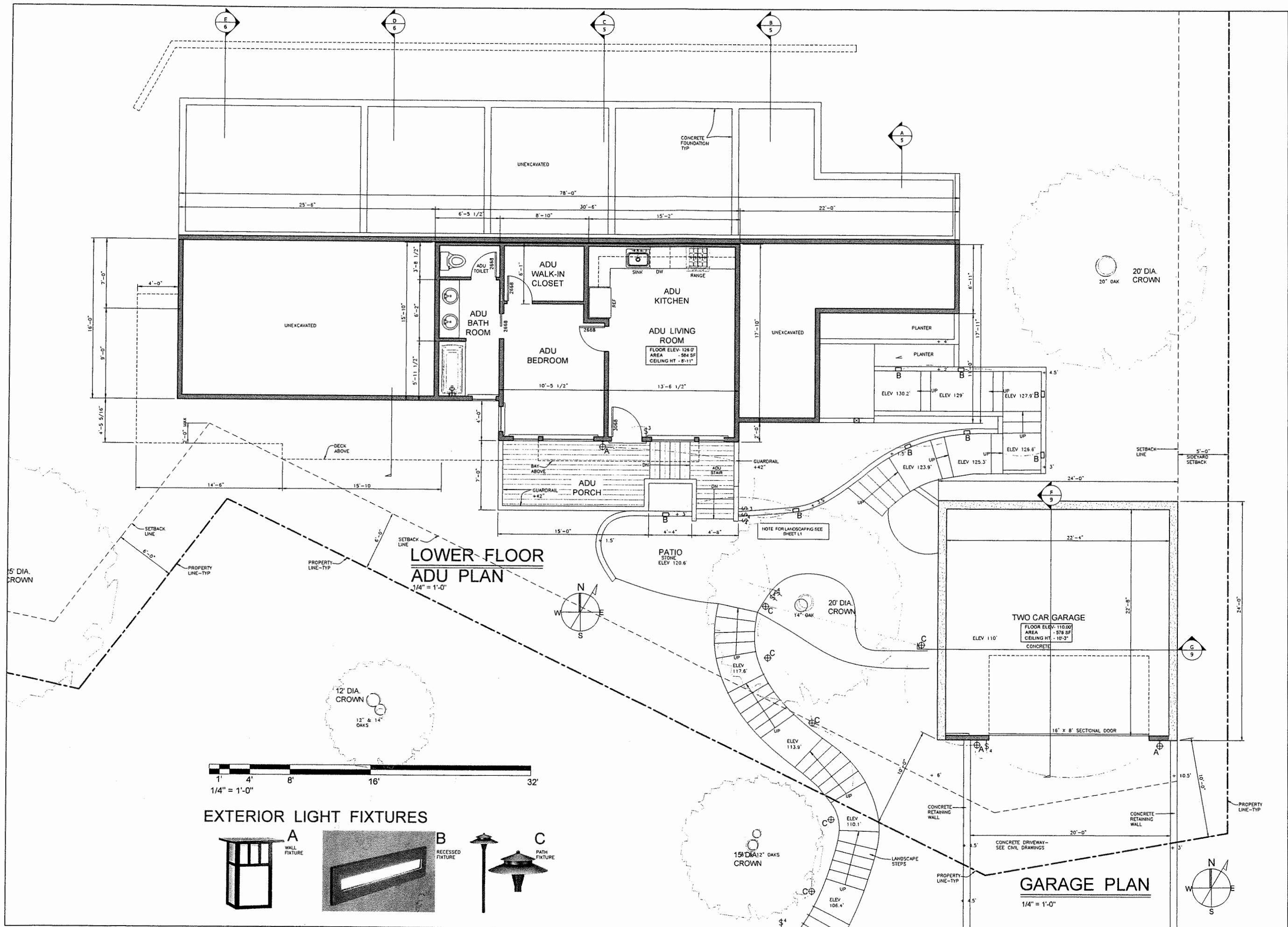
REVISIONS	BY
PLANNING REVISIONS	DMS
4/25	
PLANNING REVISIONS	DMS
8/3/2020	

**JEFF KROOK**  
ARCHITECT  
&  
ASSOCIATES  
P.O. BOX 240, SAN ANSELMO, CALIFORNIA 94979 - 415/455-5531

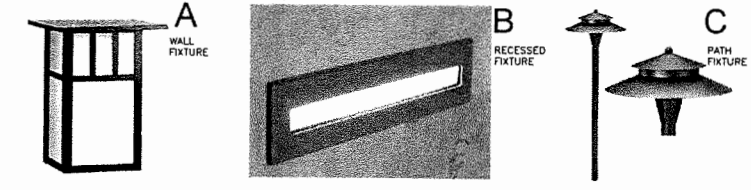
**LOWER FLOOR ADU PLAN**  
**GARAGE PLAN**

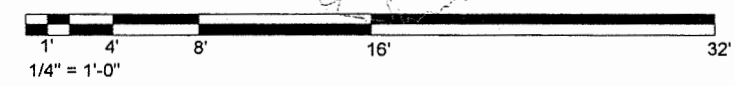
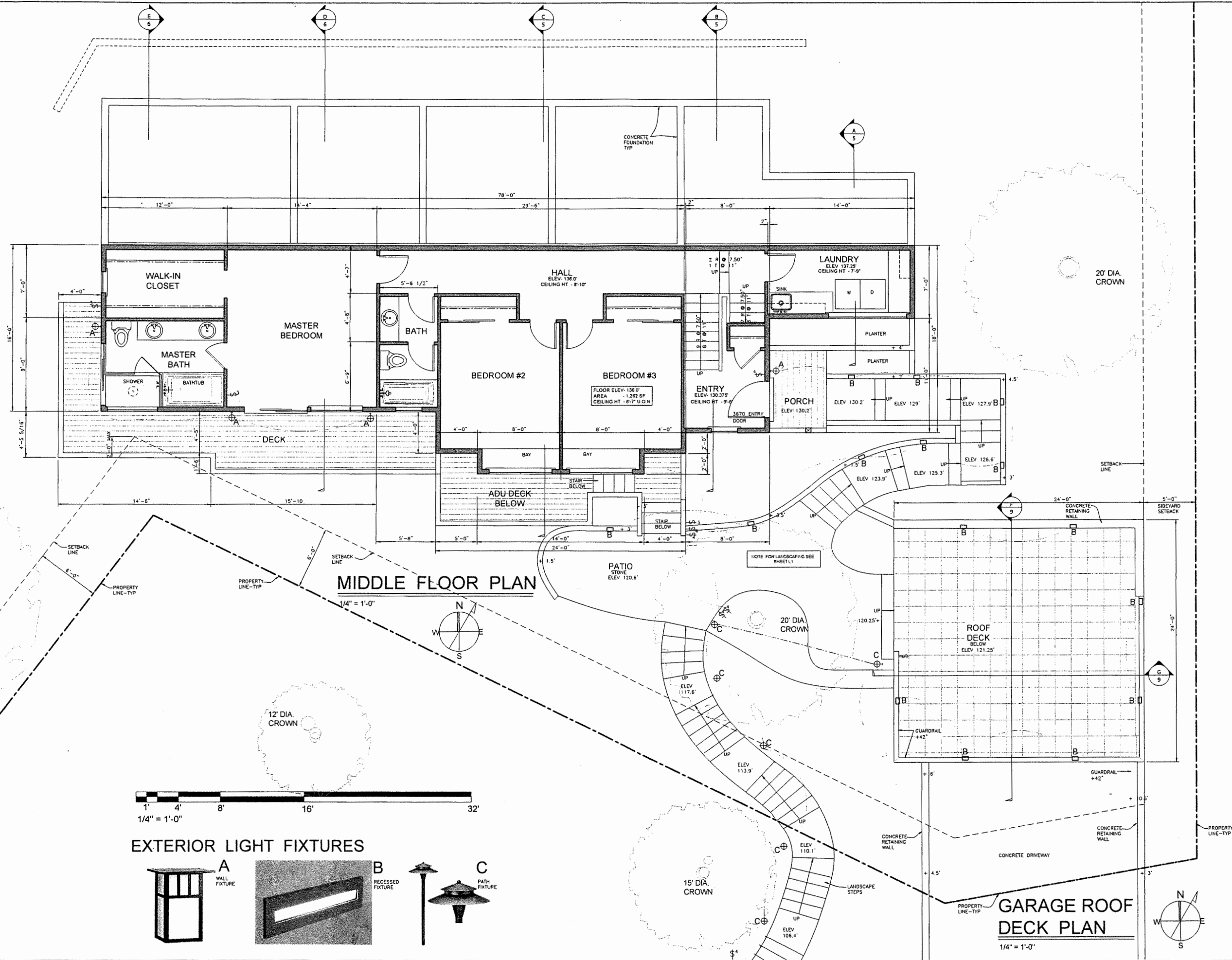
New Residence for  
**CHRIS & LINDSAY BOLTER**  
5 Woodland Rd. Fairfax, CA  
APN: 003-053-10

Date	JAN 2020
Scale	1/4" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	2
of 21	

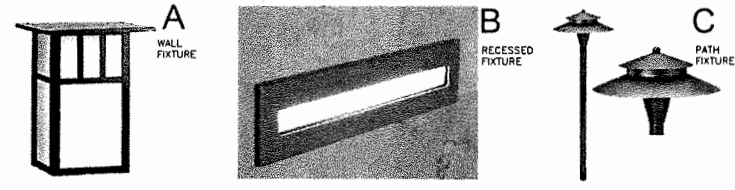


**EXTERIOR LIGHT FIXTURES**





**EXTERIOR LIGHT FIXTURES**



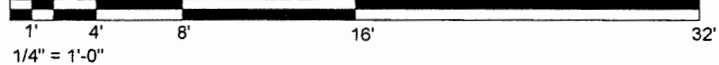
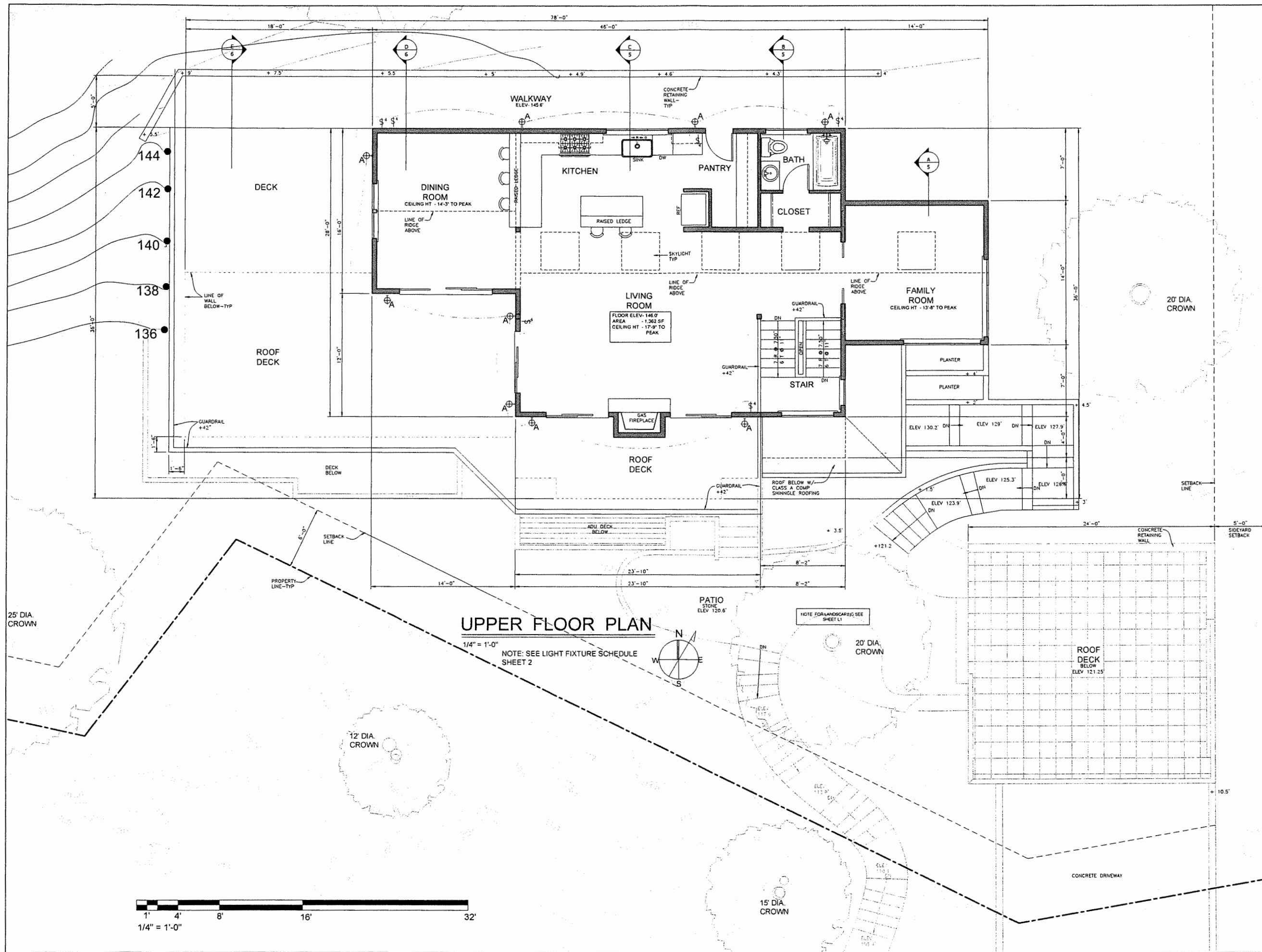
REVISIONS	BY
PLANNING REVISIONS	DMS
4/20	DMS
PLANNING REVISIONS	DMS
8/2/2022	DMS

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

**MIDDLE FLOOR PLAN  
 GARAGE ROOF DECK PLAN**

New Residence for  
**CHRIS & LINDSAY BOLTER**  
 5 Woodland Rd. Fairfax, CA  
 APN: 003-053-10

Date	JAN 2020
Scale	1/4" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	3
of 21	



### UPPER FLOOR PLAN

1/4" = 1'-0"  
 NOTE: SEE LIGHT FIXTURE SCHEDULE SHEET 2



REVISIONS	BY
PLANNING REVISIONS	DMS
4/20	DMS
PLANNING REVISIONS 8/20/20	DMS

**JEFF KROOFT ARCHITECT & ASSOCIATES**  
 P.O. BOX 246 · SAN ANSELMO, CALIFORNIA 94977 · 415/456-5531

## UPPER FLOOR PLAN

New Residence for  
**CHRIS & LINDSAY BOLTER**  
 5 Woodland Rd. Fairfax, CA  
 APN: 003-053-10

Date	JAN 2020
Scale	1/4" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	<b>4</b>
of 21	



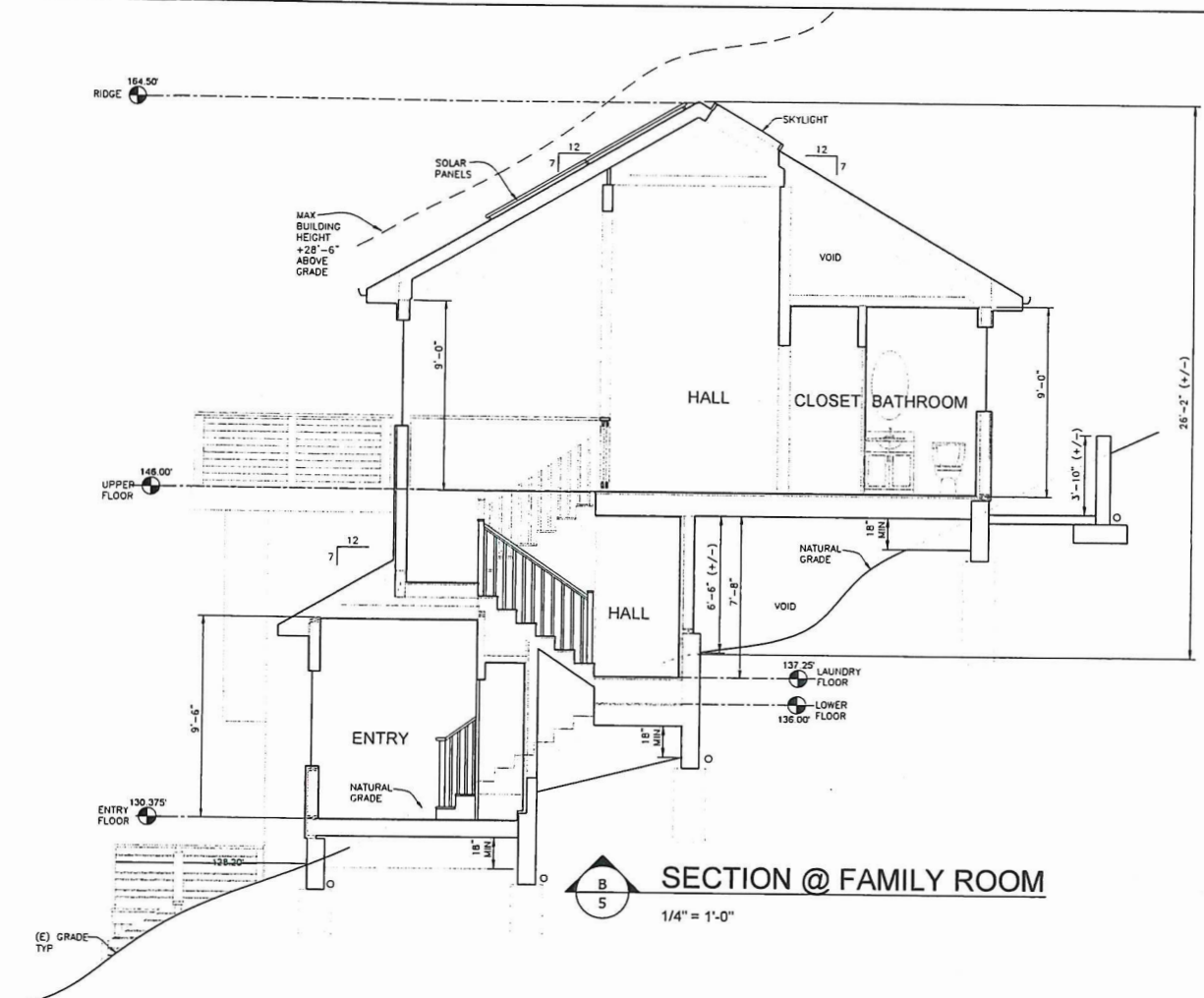
REVISIONS	BY
PLANNING REVISIONS	DMS
4/20	DMS
PLANNING REVISIONS	DMS
8/2022	DMS

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

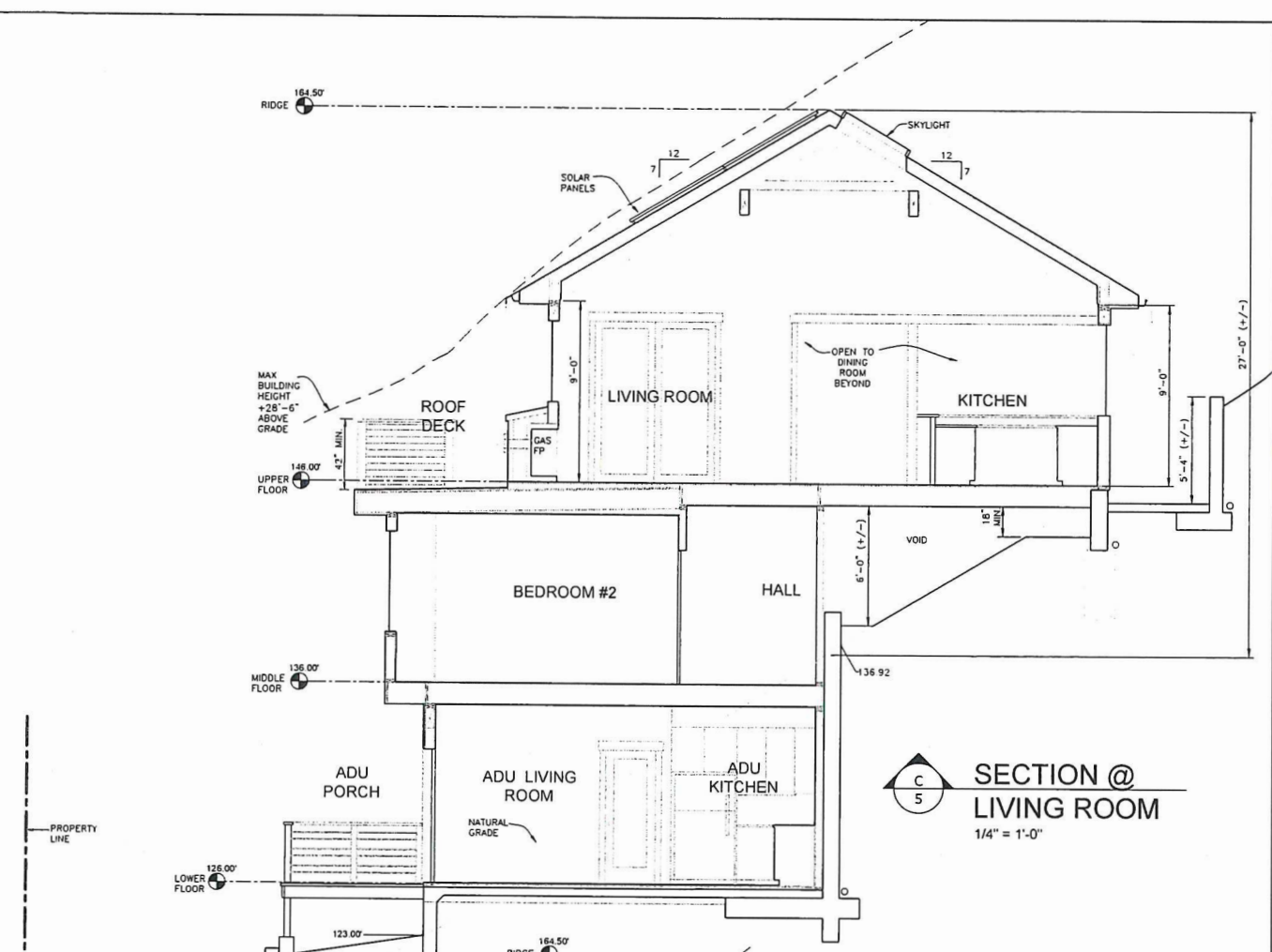
SECTIONS  
 SITE PHOTOS

New Residence for  
**CHRIS & LINDSAY BOLTER**  
 5 Woodland Rd. Fairfax, CA  
 APN: 003-053-10

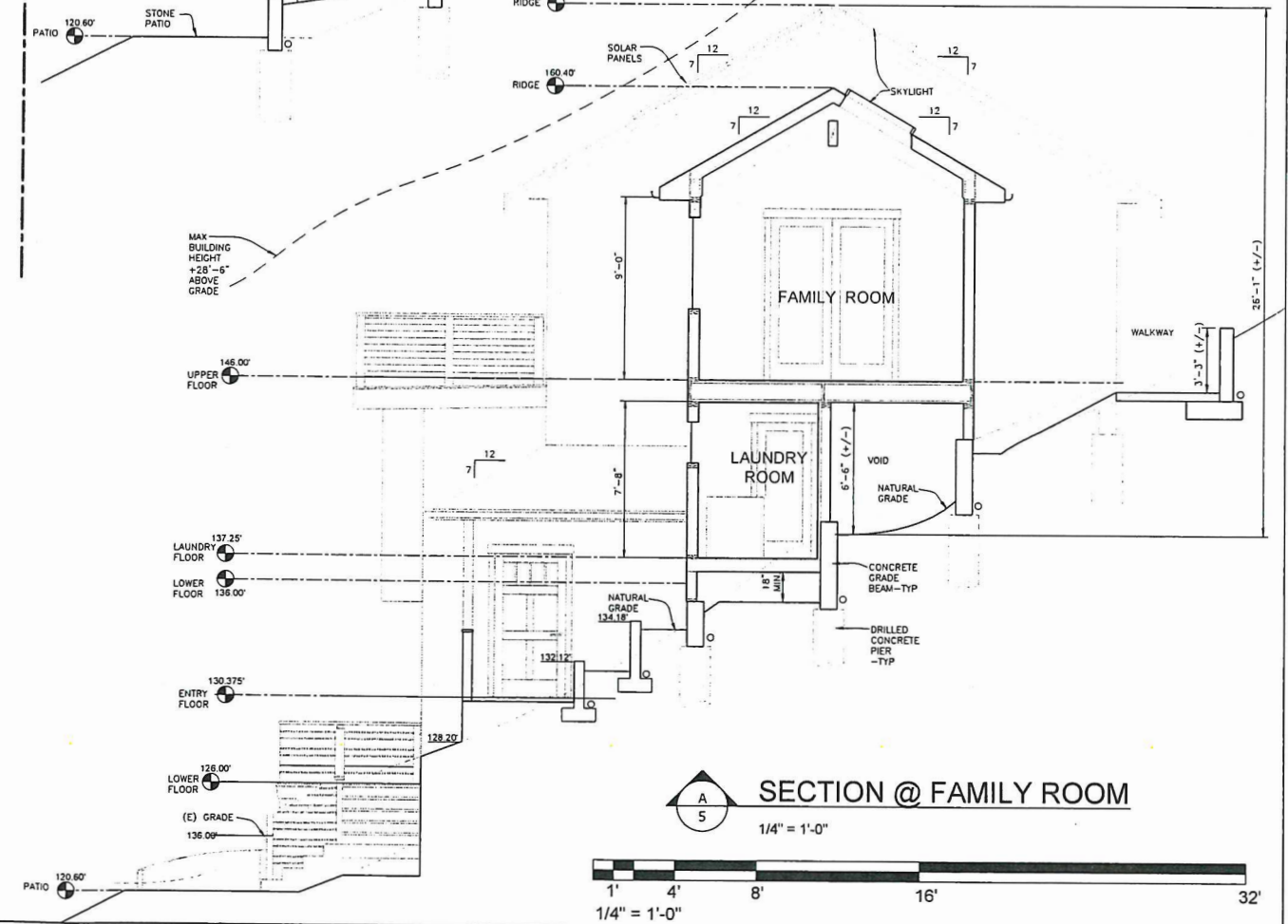
Date JAN 2020  
 Scale 1/4" = 1'-0"  
 Drawn DMS  
 Job BOLTER  
 Sheet  
**5**  
 OF 21



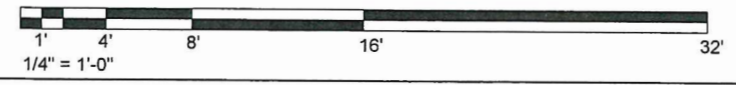
**SECTION @ FAMILY ROOM**  
 1/4" = 1'-0"



**SECTION @ LIVING ROOM**  
 1/4" = 1'-0"



**SECTION @ FAMILY ROOM**  
 1/4" = 1'-0"



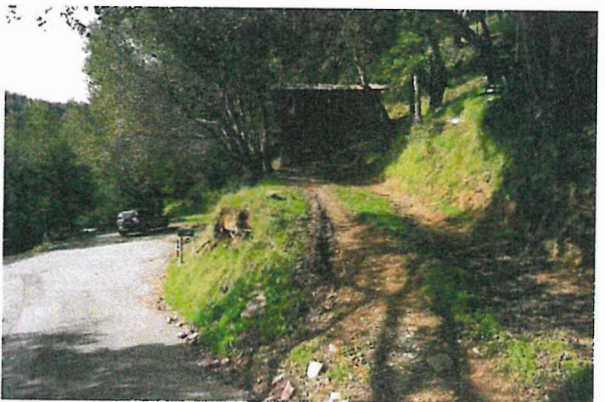
VIEW OF WOODLAND ROAD FROM PROPERTY



VIEW LOOKING NORTH



WOODLAND ROAD



EXISTING STRUCTURE

**SITE PHOTOS**

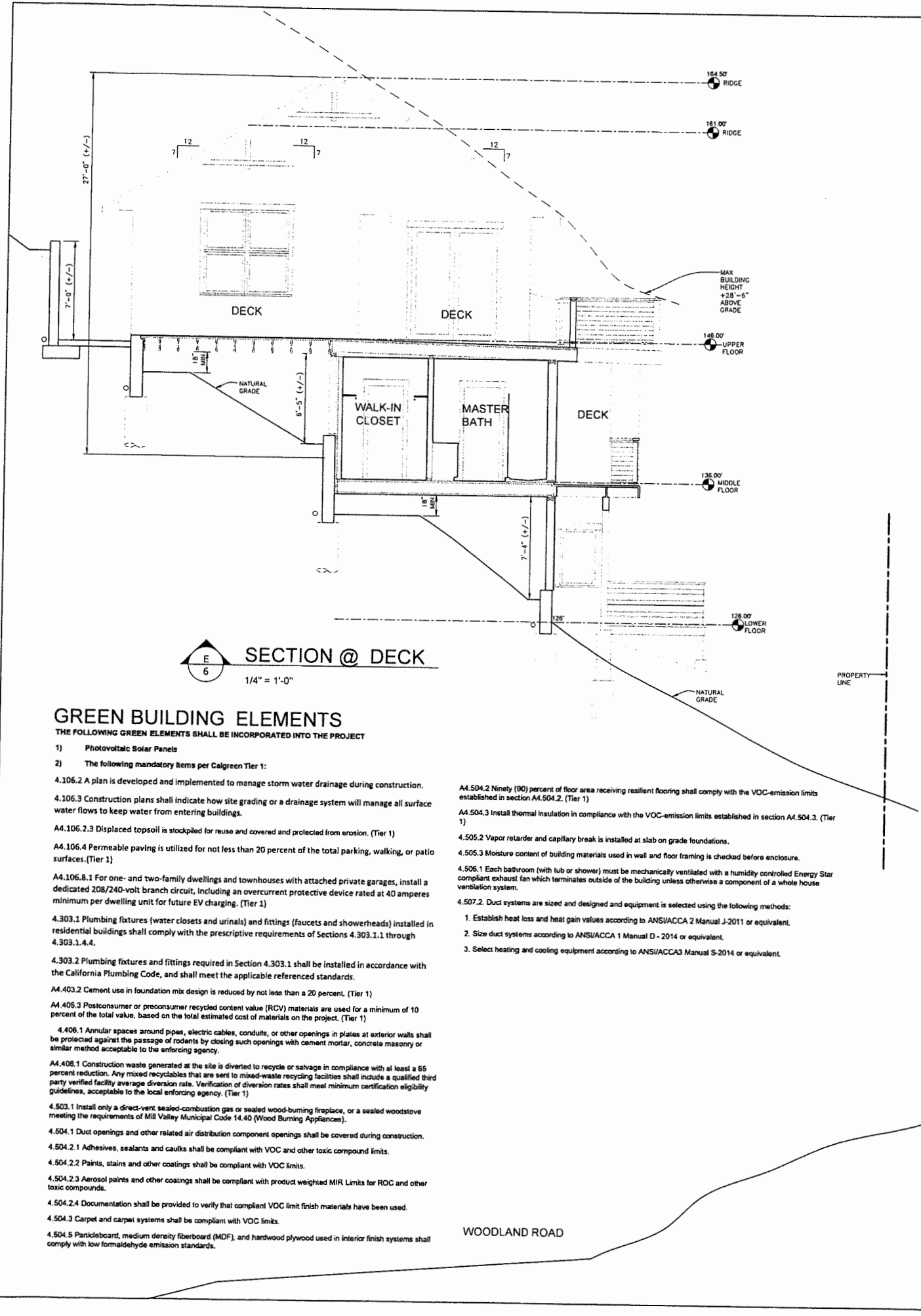
REVISIONS	BY
PLANNING REVISIONS 4/20	DMS
PLANNING REVISIONS 8/2020	DMS

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**SECTIONS**

New Residence for  
**CHRIS & LINDSAY BOLTER**  
 5 Woodland Rd. Fairfax, CA  
 APN: 003-053-10

Date	JAN 2020
Scale	1/4" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	6
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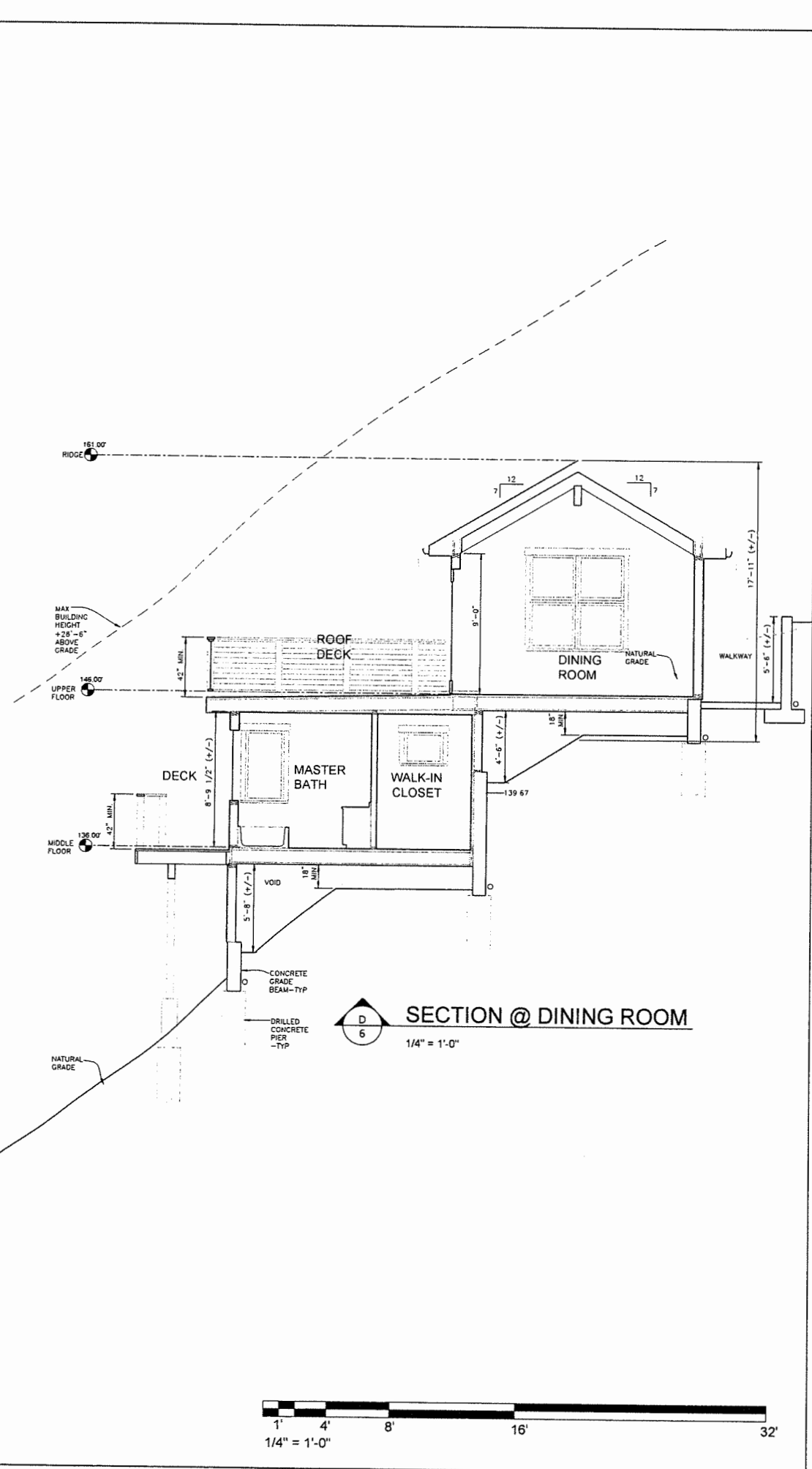
**SECTION @ DECK**  
 1/4" = 1'-0"

**GREEN BUILDING ELEMENTS**

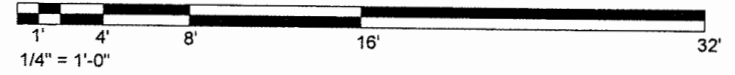
THE FOLLOWING GREEN ELEMENTS SHALL BE INCORPORATED INTO THE PROJECT

- 1) Photovoltaic Solar Panels
- 2) The following mandatory items per CalGreen Tier 1:
  - 4.106.2 A plan is developed and implemented to manage storm water drainage during construction.
  - 4.106.3 Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.
  - 4.106.2.3 Displaced topsoil is stockpiled for reuse and covered and protected from erosion. (Tier 1)
  - 4.106.4 Permeable paving is utilized for not less than 20 percent of the total parking, walking, or patio surfaces. (Tier 1)
  - 4.106.8.1 For one- and two-family dwellings and townhouses with attached private garages, install a dedicated 208/240-volt branch circuit, including an overcurrent protective device rated at 40 amperes minimum per dwelling unit for future EV charging. (Tier 1)
  - 4.303.1 Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.4.
  - 4.303.2 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the California Plumbing Code, and shall meet the applicable referenced standards.
  - 4.403.2 Cement use in foundation mix design is reduced by not less than a 20 percent. (Tier 1)
  - 4.405.3 Postconsumer or preconsumer recycled content value (RCV) materials are used for a minimum of 10 percent of the total value, based on the total estimated cost of materials on the project. (Tier 1)
  - 4.406.1 Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.
  - 4.408.1 Construction waste generated at the site is diverted to recycle or salvage in compliance with at least a 65 percent reduction. Any mixed recyclables that are sent to mixed-waste recycling facilities shall include a qualified third party verified facility average diversion rate. Verification of diversion rates shall meet minimum certification eligibility guidelines, acceptable to the local enforcing agency. (Tier 1)
  - 4.503.1 Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove meeting the requirements of Mill Valley Municipal Code 14.40 (Wood Burning Appliances).
  - 4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.
  - 4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.
  - 4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.
  - 4.504.2.3 Aerosol paints and other coatings shall be compliant with product weighted MIR Limits for ROC and other toxic compounds.
  - 4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.
  - 4.504.3 Carpet and carpet systems shall be compliant with VOC limits.
  - 4.504.5 Particleboard, medium density fiberboard (MDF), and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.

- A4.504.2 Ninety (90) percent of floor area receiving resilient flooring shall comply with the VOC-emission limits established in section A4.504.2. (Tier 1)
- A4.504.3 Install thermal insulation in compliance with the VOC-emission limits established in section A4.504.3. (Tier 1)
- 4.505.2 Vapor retarder and capillary break is installed at slab on grade foundations.
- 4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.
- 4.506.1 Each bathroom (with tub or shower) must be mechanically ventilated with a humidity controlled Energy Star compliant exhaust fan which terminates outside of the building unless otherwise a component of a whole house ventilation system.
- 4.507.2 Duct systems are sized and designed and equipment is selected using the following methods:
  1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2011 or equivalent.
  2. Size duct systems according to ANSI/ACCA 1 Manual D - 2014 or equivalent.
  3. Select heating and cooling equipment according to ANSI/ACCA3 Manual S-2014 or equivalent.



**SECTION @ DINING ROOM**  
 1/4" = 1'-0"



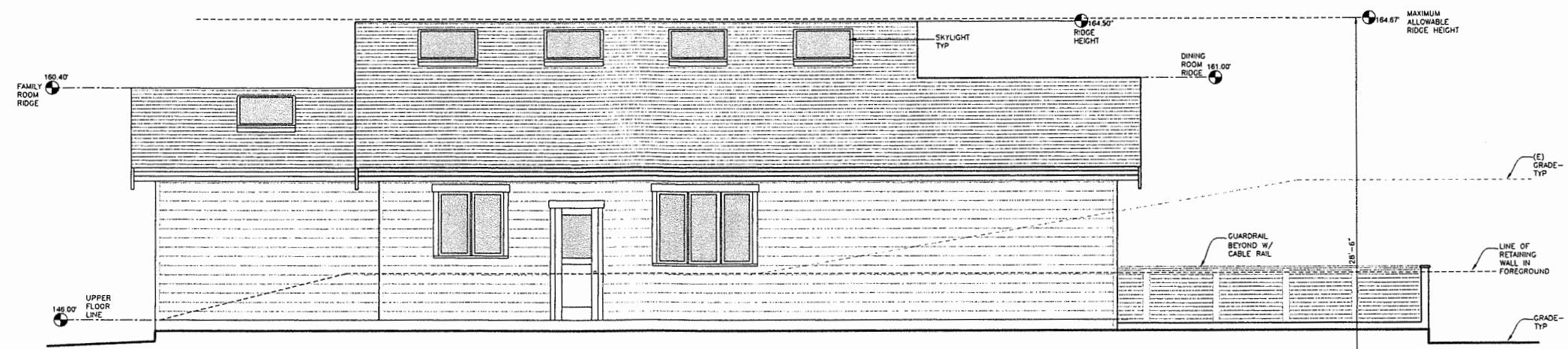
REVISIONS	BY
PLANNING REVISIONS	DMS
4/20	DMS
PLANNING REVISIONS	DMS
2/2/22	DMS

**JEFF KROOT ARCHITECT & ASSOCIATES**  
 P.O. BOX 246 • SAN ANSELMO, CALIFORNIA 94979 • 415/452-5531

**RESIDENCE NORTH & SOUTH EXTERIOR ELEVATIONS**

**New Residence for**  
**CHRIS & LINDSAY BOLTER**  
 5 Woodland Rd. Fairfax, CA  
 APN: 003-053-10

Date	JAN 2020
Scale	1/4" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	7
of 21	



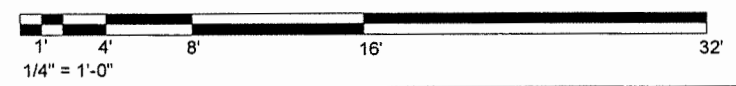
**NORTH ELEVATION**  
 1/4" = 1'-0"



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

**EXTERIOR MATERIAL**

- |                        |  |
|------------------------|--|
| ROOFING                | - CLASS 'A' COMP SHINGLE ROOFING-COLOR: DARK BROWN |
| BARGE RAFTERS          | - 2X8 CEDAR RESAWN ONE FACE-PAINTED                |
| FASCIAS                | - 2X8 CEDAR RESAWN ONE FACE-PAINTED                |
| RAFTER TAILS           | - 2X6 @ 24" O.C. - PAINTED                         |
| EAVE SHEATHING         | - 1X8 T&G V-RUSTIC RESAWN CEDAR                    |
| SIDING                 | - 8' HARDPLANK SIDING - PAINTED                    |
| CORNER TRIM            | - 1X BORAL TRIM - PAINTED                          |
| DOOR & WINDOW TRIM     | - BORAL TRIM - 1X4 JAMB, 5/4 X6 HEAD - PAINTED     |
| WINDOWS                | - MARVIN ULTIMATE CLAD                             |
| SLIDING GLASS DOORS    | - MARVIN ULTIMATE CLAD                             |
| WOOD DECKING           | - 2X8 REDWOOD S4S - NATURAL                        |
| MEMBRANE DECKING       | - CLASS 'A' MEMBRANE W/ TEXTURE- COLOR: BEIGE      |
| OPEN GUARDRAIL         | - 4X4 CEDAR POST & CAP W/ 4" OSM MESH              |
| SOLID GUARDRAIL        | - 4X4 CEDAR POST & CAP W/ 1X CEDAR HORIZ           |
| GARAGE DOOR            | - 8'X16' SECTIONAL METAL DOOR W/ GLASS PANELS      |
| FOUNDATION VENTS       | - VULCAN VENT                                      |
| FOUNDATIONS, RET WALLS | - NATURAL CONCRETE                                 |
| SOLAR PANELS           | - GLASS PANELS ON FRAME                            |
| GUTTERS                | - 5" OGEE GALVANIZED SHEET METAL, PRE-FINISHED     |
| DOWNSPOUTS             | - 2"X3" C.S.M. PRE-FINISHED TO MATCH SIDING        |
| HANDRAILS              | - STEEL - PAINTED                                  |



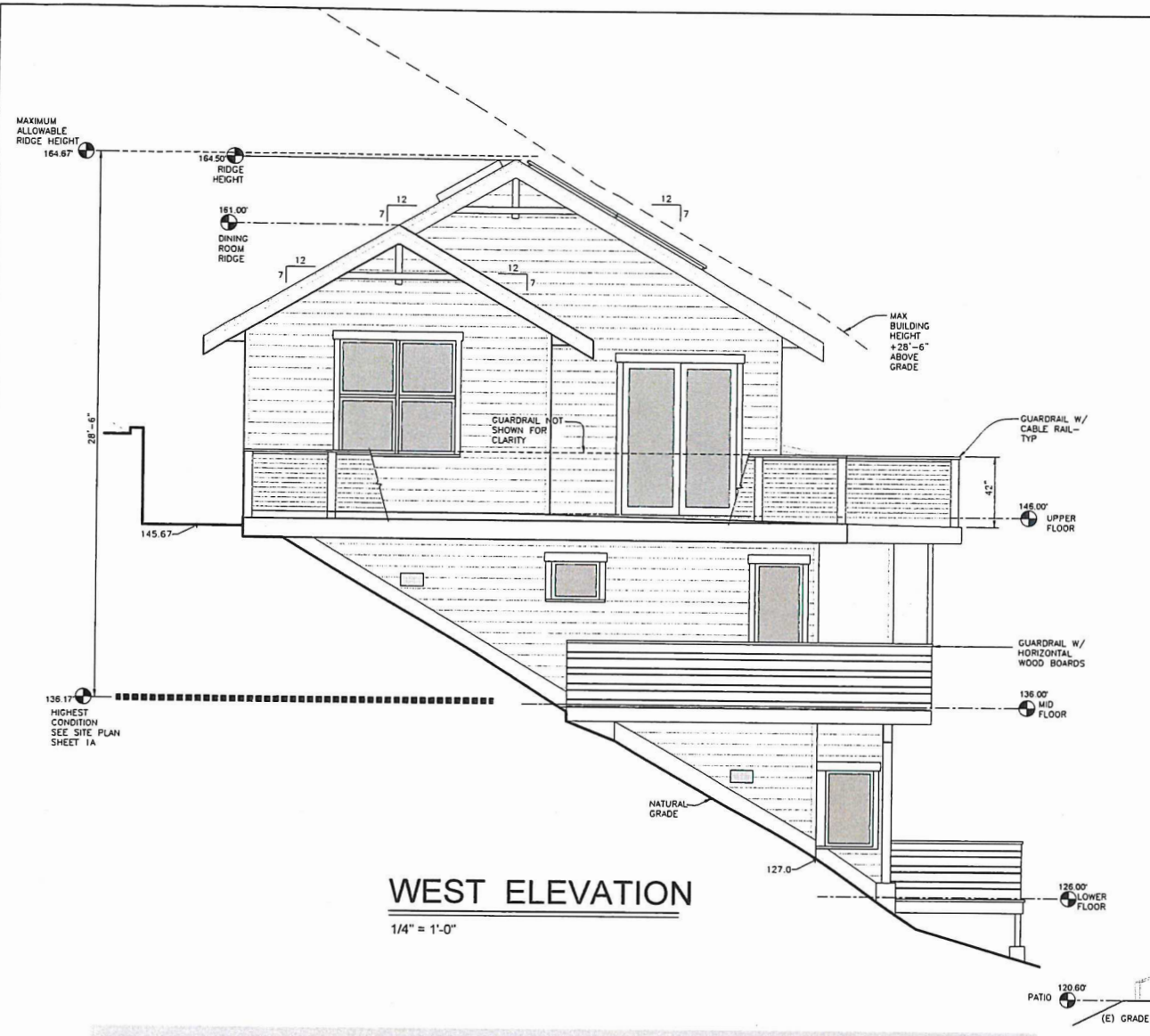
REVISIONS	BY
PLANNING REVISIONS	DMS
4/20	
PLANNING REVISIONS	DMS
8/3/2020	

**JEFF KROOT ARCHITECT & ASSOCIATES**  
 P.O. BOX 240 - SAN ANSELMO, CALIFORNIA 94979 - 415/456-5531

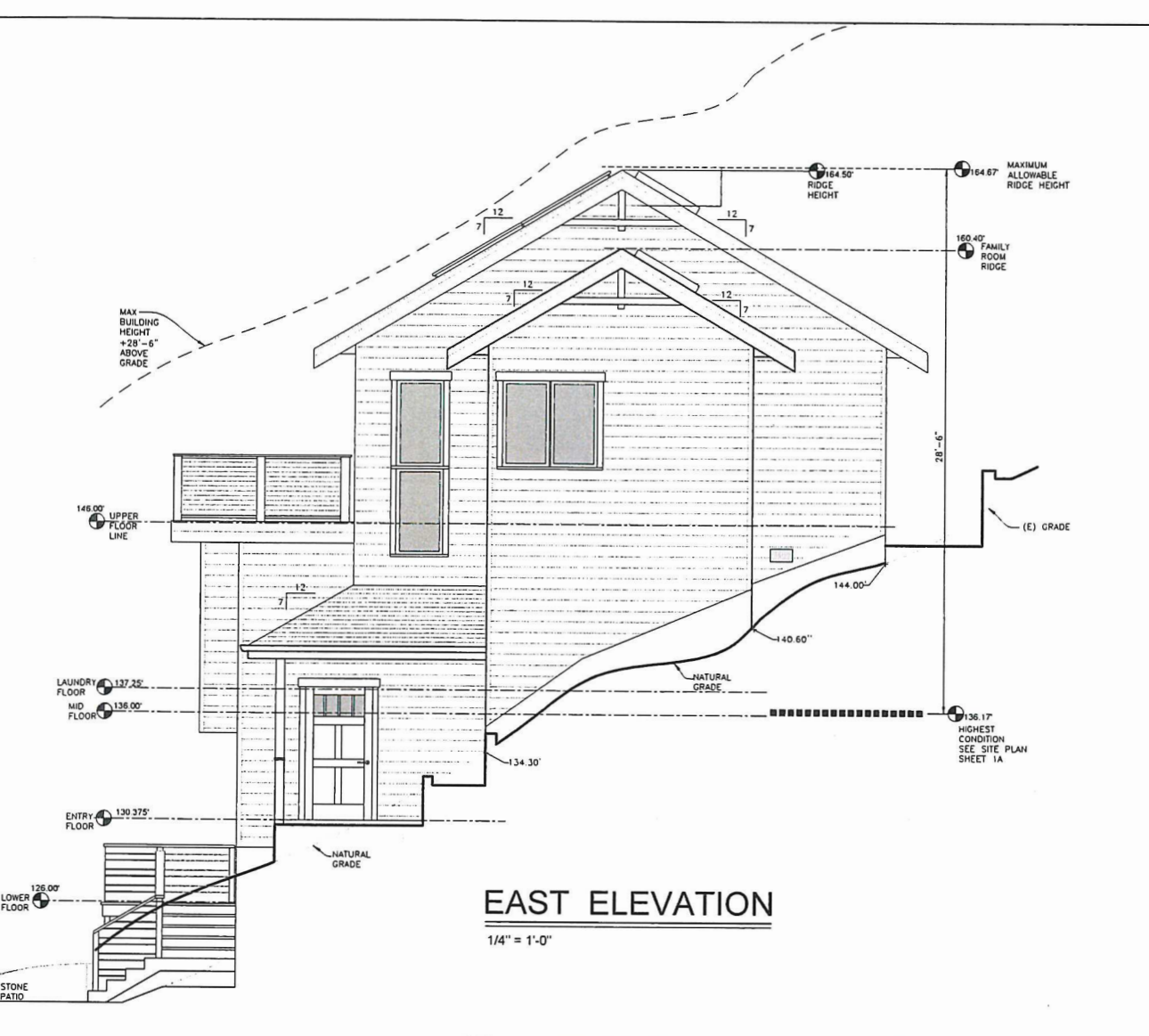
**RESIDENCE EAST & WEST EXTERIOR ELEVATIONS**

New Residence for  
**CHRIS & LINDSAY BOLTER**  
 5 Woodland Rd. Fairfax, CA  
 APN: 003-053-10

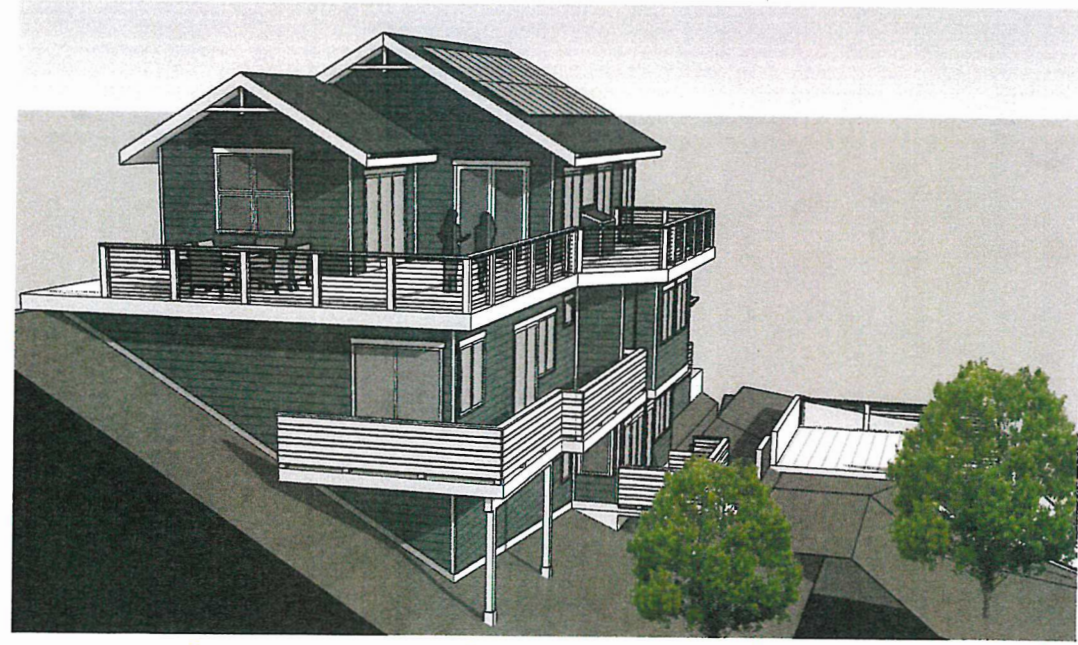
Date	JAN 2020
Scale	1/4" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	8
Of 21	



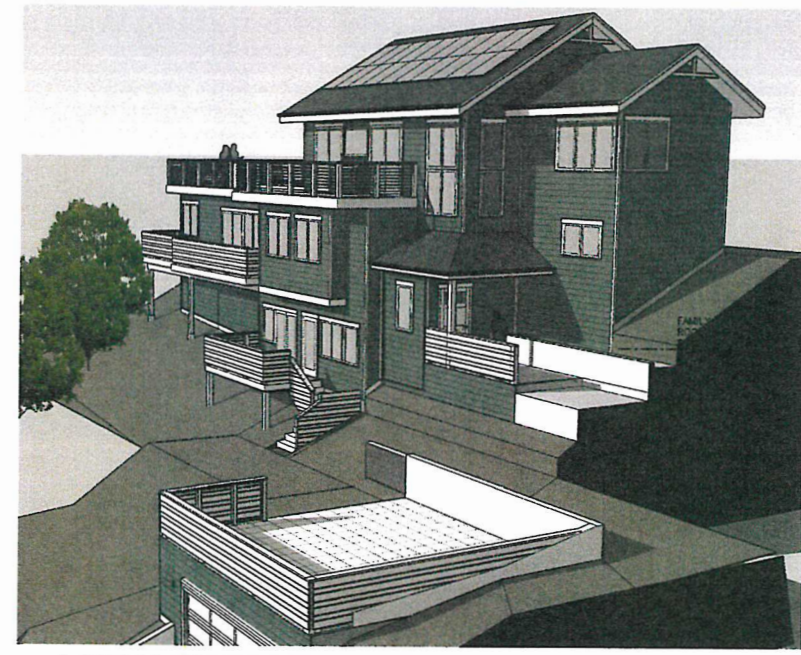
**WEST ELEVATION**  
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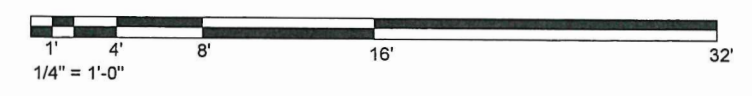
**EAST ELEVATION**  
 1/4" = 1'-0"



**VIEW FROM SOUTH WEST**



**VIEW FROM SOUTH EAST**



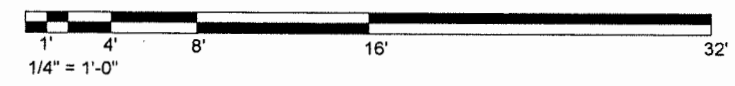
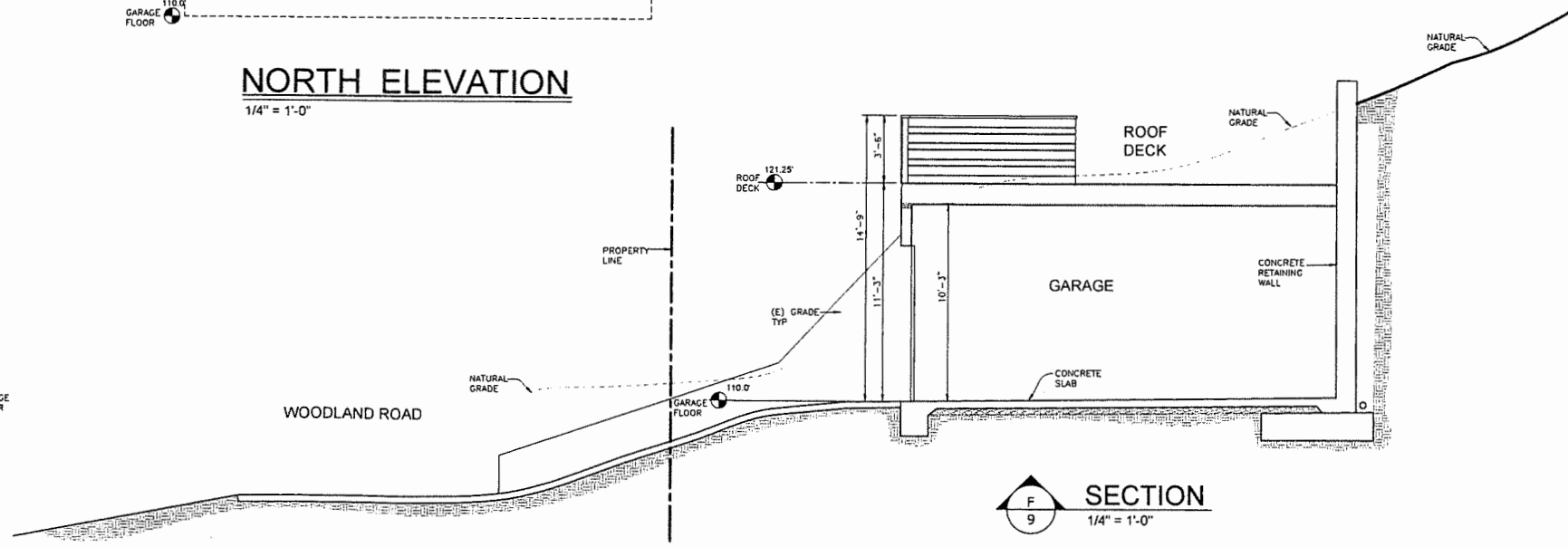
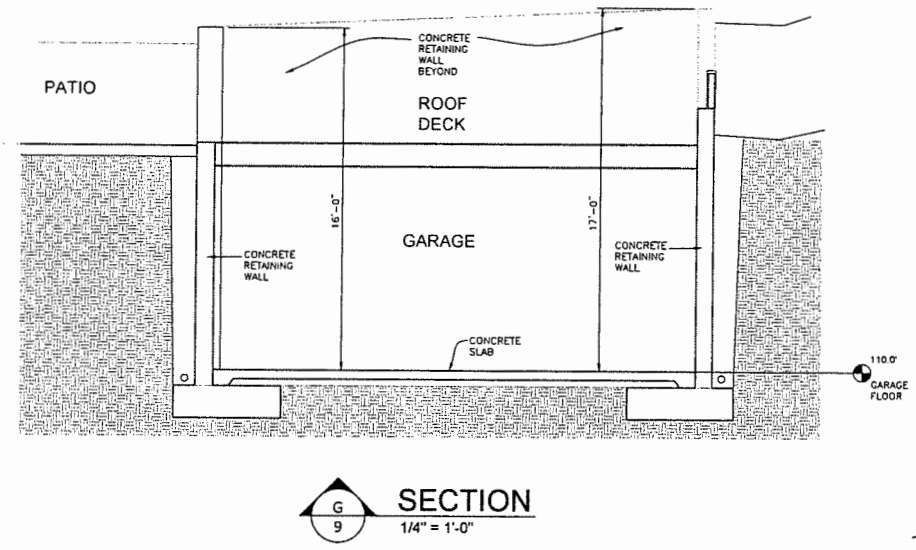
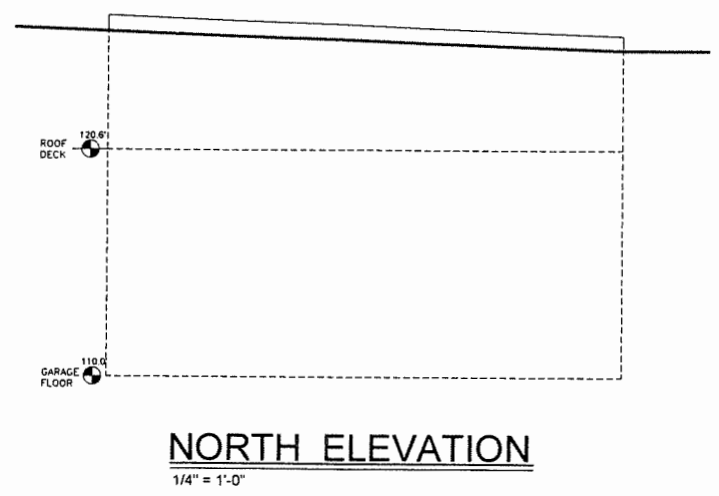
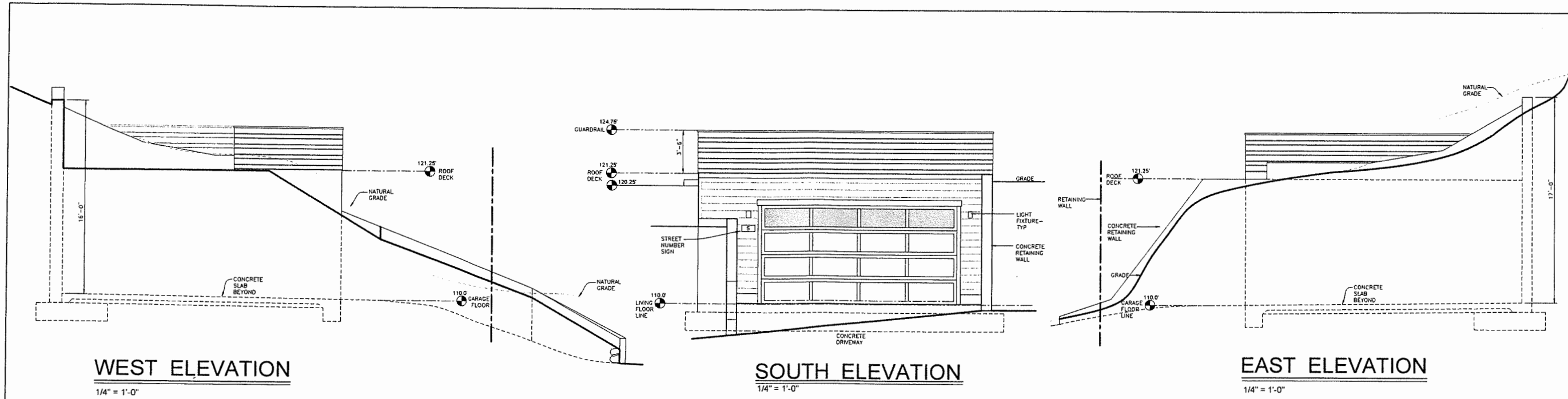
REVISIONS		BY
PLANNING REVISIONS	4/20	DMS
PLANNING REVISIONS	8/2/2020	DMS

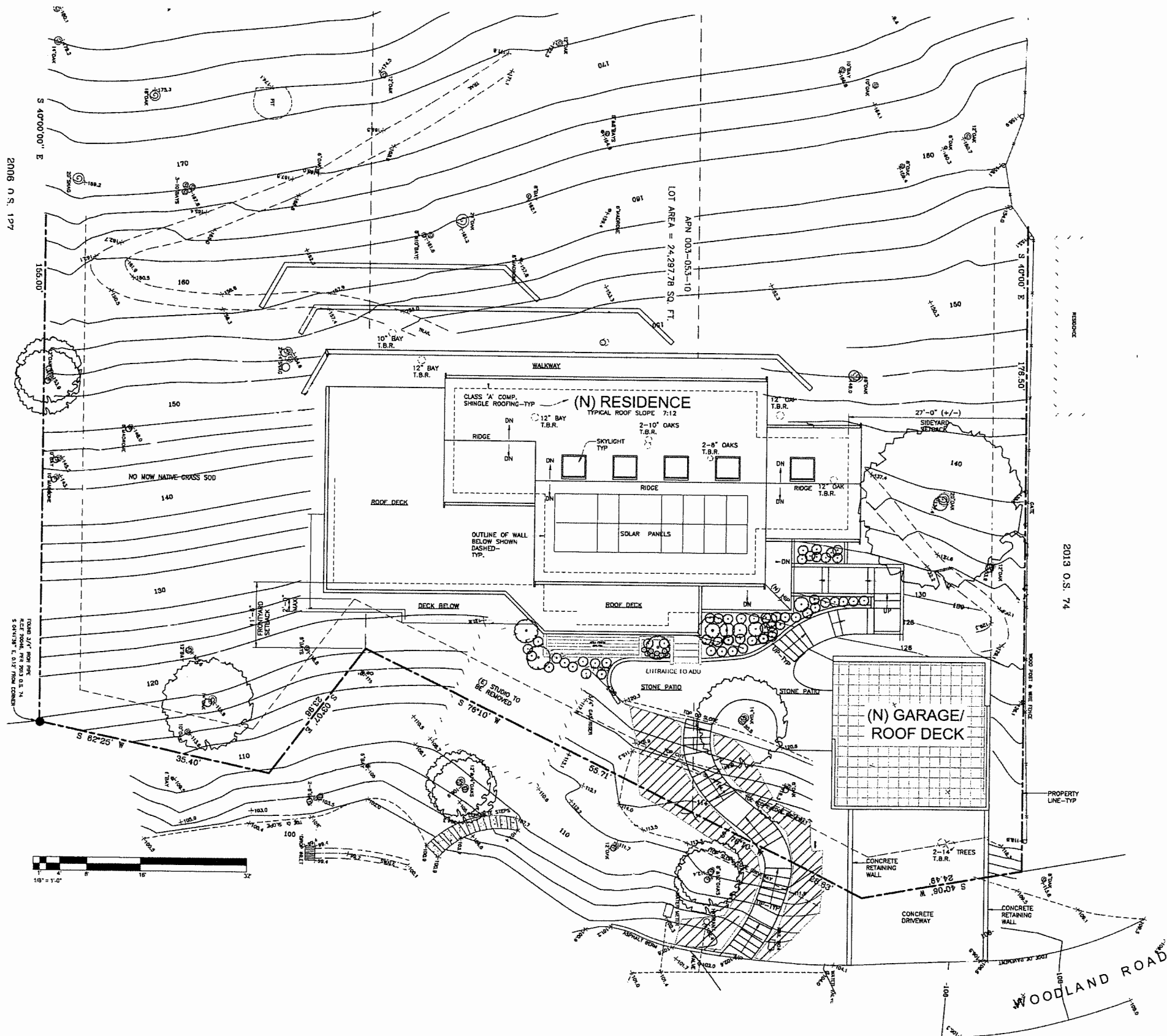
**JEFF KROOT ARCHITECT & ASSOCIATES**  
 P.O. BOX 246 · SAN ANSELMO, CALIFORNIA 94979 · 415/456-5531

**GARAGE / ROOF DECK EXTERIOR ELEVATIONS / SECTIONS**

New Residence for  
**CHRIS & LINDSAY BOLTER**  
 5 Woodland Rd. Fairfax, CA  
 APN: 003-053-10

Date	JAN 2020
Scale	1/4" = 1'-0"
Drawn	DMS
Job	BOLTER
Sheet	9
of 21	



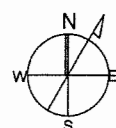


2008 O.S. 127

2013 O.S. 74

LANDSCAPE PLAN

SCALE 1/8" = 1'-0"

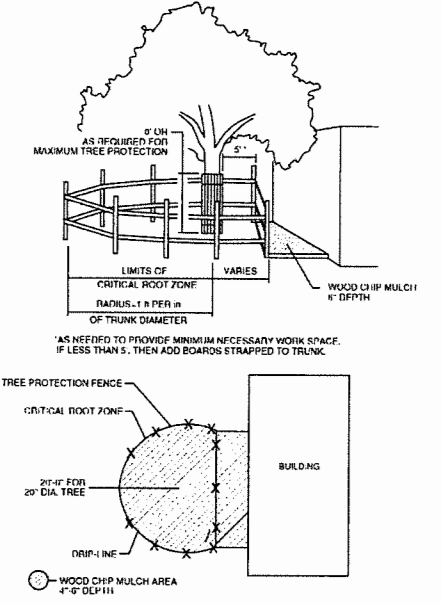


PLANTING LEGEND

	EXISTING TREE TO REMAIN - REFER TO ARBORIST REPORT FOR ANY CORRECTIVE WORK
	NEW NURSERY TREE - ARBUTUS MARINA, QUERCUS AGRIFOLIA
	EVERGREEN SCREEN - PLANT AT THE REQUIRED DISTANCE FROM THE HOUSE PER FIRE CODE: PRUNUS ILICIFOLIA, MYRTA CALIFORNICA
	SHRUBS AND PERENNIALS: ACHILLEA TOMENTOSA, ERIGERON GLAUCUS, PENSTEMON SPECIES, RHAMNUS CALIFORNICA, HEUCHERA MAXIMA, MIMULUS SPECIES
	MIXED NATIVE GRASSES AND GROUNDCOVERS: FESTUCA RUBRA, MONARDELLA VILLOSA

NOTES:

1. PROTECT IN PLACE EXISTING NATIVE SHRUBS AND TREES UNLESS OTHERWISE NOTED ON PLANS. CONTRACTOR TO PROVIDE PROTECTION OF THE EXISTING TREES DURING CONSTRUCTION.
2. ALL NEW PLANTING TO BE IRRIGATED BY AN AUTOMATIC DRIP SYSTEM.
3. ALL PLANTS USED IN THIS LANDSCAPE ARE SELECTED FROM FIRESAFE MARIN PLANT LIST. THE LANDSCAPE PLAN SHALL BE DESIGNED IN ACCORDANCE WITH THE ROSS VALLEY FIRE DEPARTMENT.
4. THE LANDSCAPE PLAN SHALL BE DESIGNED IN ACCORDANCE WITH THE MARIN MUNICIPAL WATER DISTRICT (MMWD) WATER EFFICIENT LANDSCAPE CODE.
5. CONTRACTOR TO NOT FILL NEAR THE TRUNKS OF THE EXISTING TREES.
6. ALL PRUNING TO ACCOMMODATE THE CONSTRUCTION SHALL BE PERFORMED UNDER THE DIRECTION OF AN ARBORIST.



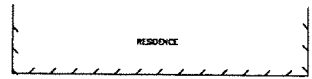
TREE PROTECTION DETAIL

SCALE NOT TO SCALE

REVISIONS	BY
PLUMBING REVISIONS 4/20	DMS
ROSEANN DAL BELLO REGISTERED LANDSCAPE ARCHITECT # 2216 P.O. BOX # 972 ■ WOODACRE, CA 94973 ■ 415.397-4184	
LANDSCAPE PLAN	
New Residence for <b>CHRIS &amp; LINDSAY BOLTER</b> 5 Woodland Rd. Fairfax, CA APN: 003-053-10	
Date:	JAN 2020
Scale:	1/8" = 1'-0"
Drawn:	
Job:	BOLTER
Sheet:	L1
of 19	

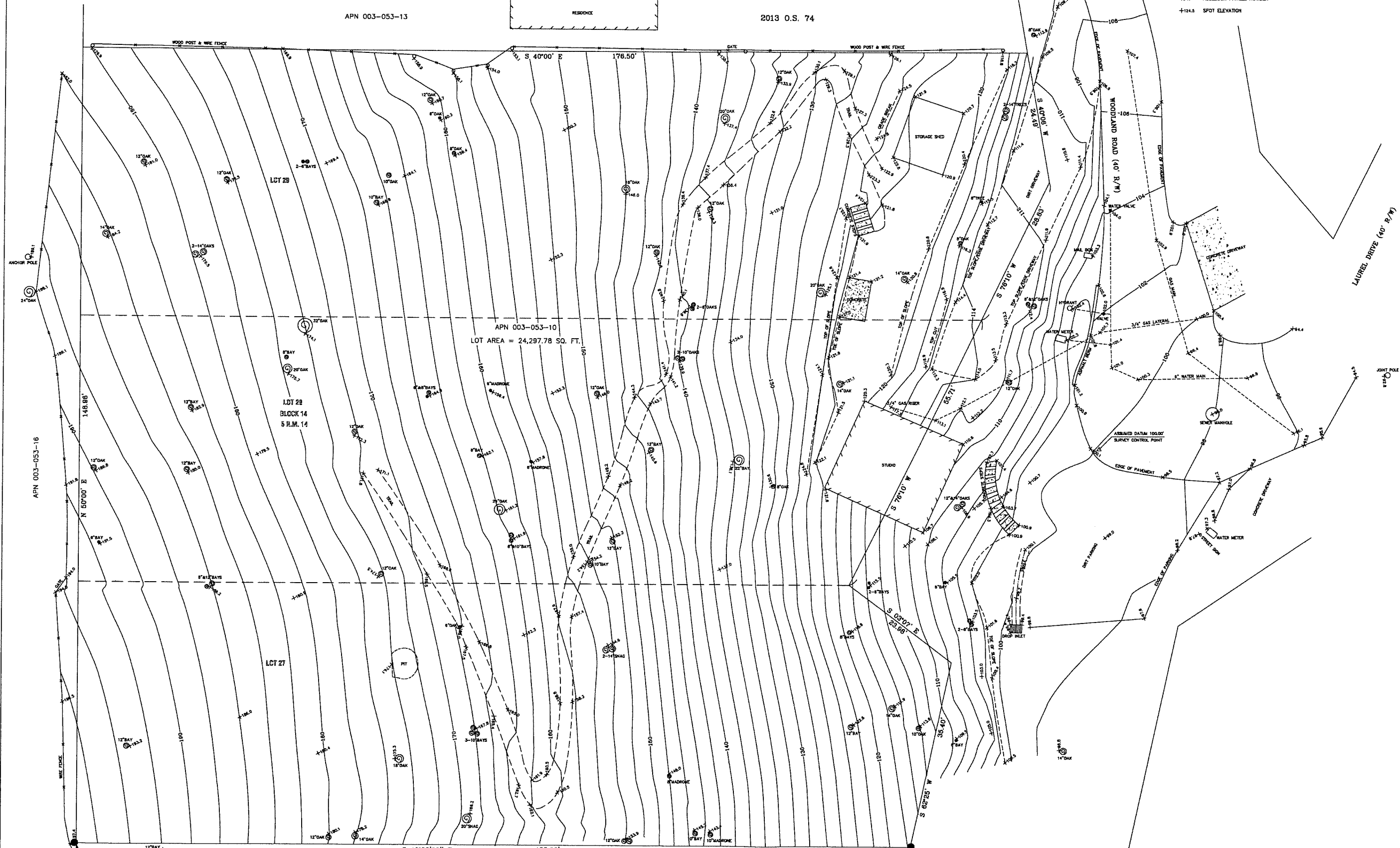
BOUNDARY NOTE: PROPERTY BOUNDARIES SHOWN REPRESENT THOSE UPON  
 RECORD OF SURVEY, 2013 O.S. 74, MARIN COUNTY RECORDS, FROM MONUMENTS  
 SHOWN THEREON.

APN 003-053-13



2013 O.S. 74

- NOTES  
 ELEVATIONS ARE BASED ASSUMED DATUM 100.00'  
 AT SURVEY CONTROL POINT AS SHOWN
- 2' CONTOUR INTERVAL
  - FENCE LINE
  - TREE AS NOTED
  - APN ASSESSOR PARCEL NUMBER
  - +124.5 SPOT ELEVATION

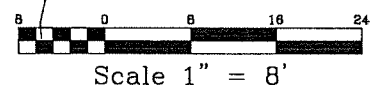


REVISIONS	
DATE	BY

STEPHEN J. FLATLAND  
 PROFESSIONAL LAND SURVEYOR  
 P.O. BOX 1837  
 SAN ANSELMO, CALIFORNIA 94960  
 (415) 457-5081

BOUNDARY & TOPOGRAPHIC SURVEY  
 FOR: CHRIS BOLTER  
 5 WOODLAND ROAD  
 FAIRFAX, CALIFORNIA  
 APN 003-053-10

DATE: JAN., 2019  
 SCALE: 1"=8'  
 DRAWN:  
 CHECKED:  
 JOB NO: F1142

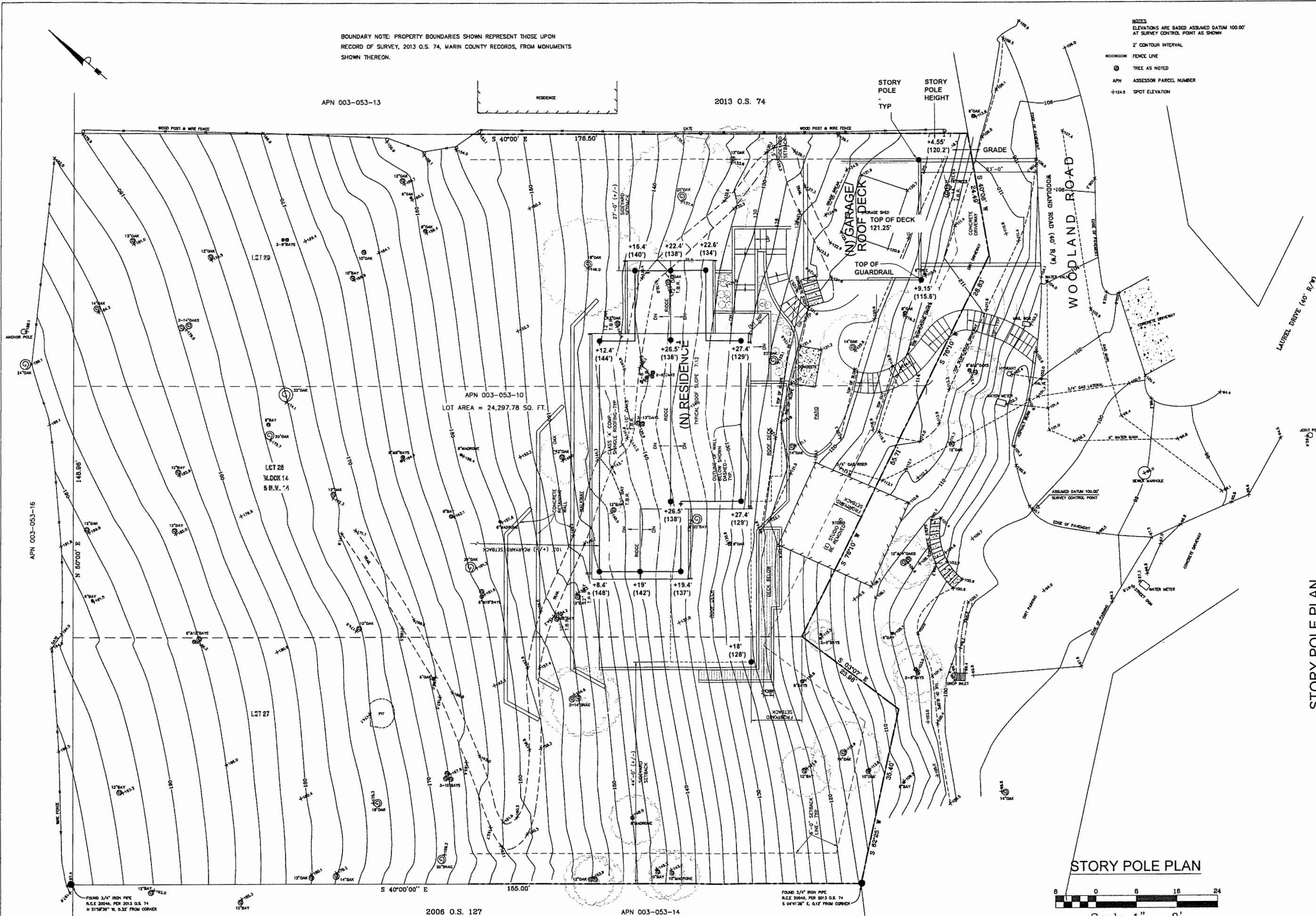


S1

BOUNDARY NOTE: PROPERTY BOUNDARIES SHOWN REPRESENT THOSE UPON RECORD OF SURVEY, 2013 O.S. 74, MARIN COUNTY RECORDS, FROM MONUMENTS SHOWN THEREON.

NOTES:  
 ELEVATIONS ARE BASED ASSUMED DATUM 100.00' AT SURVEY CONTROL POINT AS SHOWN  
 2' CONTOUR INTERVAL  
 FENCE LINE  
 TREE AS NOTED  
 APN ASSESSOR PARCEL NUMBER  
 +124.5 SPOT ELEVATION

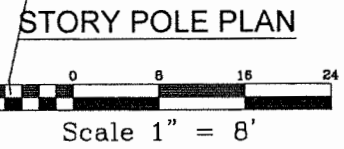
REVISIONS	
DATE	BY
PLANNING	420
REVISIONS	DMS



STEPHEN J. FLATLAND  
 PROFESSIONAL LAND SURVEYOR  
 P.O. BOX 1837  
 SAN ANSELMO, CALIFORNIA 94960  
 (415) 457-5081

BOUNDARY & TOPOGRAPHIC SURVEY  
 FOR: CHRIS BOLTER  
 5 WOODLAND ROAD  
 FAIRFAX, CALIFORNIA  
 APN 003-053-10

DATE: JAN., 2019  
 SCALE: 1"=8'  
 DRAWN:  
 CHECKED:  
 JOB NO: F1142



APN 003-053-13

2013 O.S. 74

APN 003-053-10  
 LOT AREA = 24,297.78 SQ. FT.

2006 O.S. 127

APN 003-053-14

APN 003-053-16

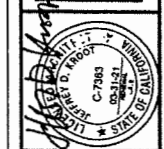
FOUND 3/4" IRON PIPE  
 R.C.E. 20044, PER 2013 O.S. 74  
 S 04°13'36" E, 0.12' FROM CORNER

FOUND 3/4" IRON PIPE  
 R.C.E. 20044, PER 2013 O.S. 74  
 N 91°58'34" W, 0.32' FROM CORNER



REVISIONS	BY
PLANNING REVISIONS	DMS
4/20	DMS
LANDSCAPE	DMS
7/29/20	DMS

JEFF KROOT  
ARCHITECT  
& ASSOCIATES  
P.O. BOX 246 - SAN ANSELMO, CALIFORNIA 94979 - 415/455-5531



VEGETATION MANAGEMENT PLAN

New Residence for  
**CHRIS & LINDSAY BOLTER**  
5 Woodland Rd. Fairfax, CA  
APN: 003-053-10

Date: APRIL 2019  
Scale: 3/32" = 1'-0"  
Drawn: DMS  
Job: BOLTER  
Sheet: **VMP**  
of 20

ROSS VALLEY FIRE DEPARTMENT

Developed by: Robert Barlett, Fire Inspector  
Approved by: Roger Messer, Fire Chief

Fire Protection Standard 220  
Vegetation Fuels Management Plan

Date: 9/25/09  
Revision: \_\_\_\_\_  
Page: 4 of 6

Figure 1

HAZARD ASSESSMENT MATRIX									
Hazard Points	1	2	3	4	5	6	7	8	Points
Aspect	NE, E	NW, N	SE, W	S	SW				2
Slope	0-10	11-20	21-30	31+					8
Facel 0-30	Specimen Garden	Hardwood	Grass	Mostly Grass	Mostly Brush	Pyrophytic Hardwoods Chaparral	Conifer	Conifer w/brush under story	3
Facel 31-100	Grass, Mostly Grass	Mostly Brush		Pyrophytic Hardwood	Conifer with brush under story				1

Total Hazard Points 14

Minimum Horizontal Modification Requirement in feet 50

1 2 3 4 5 6 7	8 9 10 11 12 13 14	15 16 17 18 19 20 21 22 23 24 25 >
30x30x30 ft.	30x30x50 ft.	50x50x100 ft.

- V. Fuel Types:
- A. Specimen Garden: a well-maintained ornamental garden, usually irrigated. Trees and shrubs are well spaced or clustered, thinned and free of deadwood. The lawn is mowed and clean. No pyrophytic plants within 10 ft. of house.
  - B. Hardwood (Model 9): Broadleaf (non-pyrophytic) trees such as oaks, maples, ash, etc.
  - C. Grass (Model 1): Wild field grass dominates; trees and shrubs occupy less than 1/3 of the area.
  - D. Mostly Grass (Model 2): Brush and tree reproduction occupy more than 1/3 and less than 2/3 of the area.
  - E. Mostly Brush (Model 5): Brush and tree reproduction occupies 2/3 of the area. Includes young chaparral, coastal scrub and broom stands.
  - F. Pyrophytic Hardwoods (Model 12): Broadleaf trees that is high in volatile oils, which produce heavy debris and burn intensely. May have some conifers mixed in but the flammable hardwoods dominate the fire behavior.
  - G. Chaparral (Model 4): Six foot and taller old, pyrophytic brush with excessive deadwood. Includes mixed chaparral of Manzanita, scrub oak, chaparral pea, tall ceanothus, chamise, etc. Often has some young Douglas fir or pines.
  - H. Conifer (Model 8): Needleleaf trees typically with heavy litter, low branches and plentiful deadwood. Often mixed with some hardwoods or even pyrophytic hardwoods, but conifers dominated and carry the fire.

A. INTRODUCTION

The following report is the Vegetation Fuels Management Plan for Chris and Lindsay Bolter at their proposed new residence at 5 Woodland Road, Fairfax, Calif. The project is a two story residence and a one story garage at the bottom of the property that is cut into the hillside. This report describes the project and outline the measures being taken to provide effective fire hazard mitigation. The plan accompanying this report shows the property boundaries, existing trees, the residence and the driveway, patio, as well as the diagram of the defensible space and proposed treatments of the defensible space and plantings.

B. SITE DESCRIPTION

The 0.53-acre parcel fronts on and is above Woodland Road. The residence is shown being sited as close as possible to Woodland Road. The residence and garage are set 6 ft. from the south (front) and east (side) property lines. The property slopes up from Woodland Road in a north to northwest aspect with a slope of approximately 48%. The property is a mixture of grasses and oak and bay trees. There are existing trees at the frontage which is town property. There are adjacent residences to the east of the property and two houses to the south across Woodland Road.

The southern property frontage is a steep earth/rock slope that levels out to a flat area below the proposed residence and then slopes up at a consistent slope to the rear of the property. It is proposed to remove approximately 35 oak, bay and madrone trees starting at the proposed garage and ending above the proposed residence.

Six oak trees are shown as remaining. Three at the east side of the property, one at the proposed patio space below the residence and next to the garage and two towards the west property line below the proposed residence. These trees would be cleaned, and the crowns reduced and a maintenance program will be created to manage the cleaning of the trees yearly.

Most of the property vegetation is natural grasses which will be cut yearly.

Any new landscaping will be in the form of irrigated ornamental planters between the front patio and the residence.

C. ASSESSMENT

Defensible spaces or fire fuel breaks are required around all residences to provide fire suppression personnel with adequate time to protect homes and neighborhoods during wildland fires. The size of these defensible spaces around the residence are determined by using the Hazard Assessment Matrix. The matrix uses factors of slope, aspect, vegetation fuel type to dictate the size of these defensible spaces. See the Hazard Assessment Matrix attached. The Bolter Residence scored a total of 14 points requiring a protection zone of 30 feet around on the north, east and west and 50' at the south of the residence as defined by the fire protection standards.

D. VEGETATION AND VEGETATION MANAGEMENT DEFENSIBLE SPACES A & B

1. Critical Zone A: 0' to 30' from the residence  
The zone is the area surrounding the residence to a point approximately 30' from the residence. This area will have no pyrophytic trees, shrubs, groundcovers, or plants. The only plants in this zone will be potted.  
The east frontage will have all vegetation removed to the property line. The Bolters will initiate a dialog with the eastern neighbor to explore vegetation management on the neighboring property.
2. Zone B: 30' to 100' from the residence  
Natural grasses between trees which are to be kept mowed  
Due to the tight location and footprint of the property there is no control by the Bolters to the east and south of the proposed residence and garage.

PLANTING LEGEND

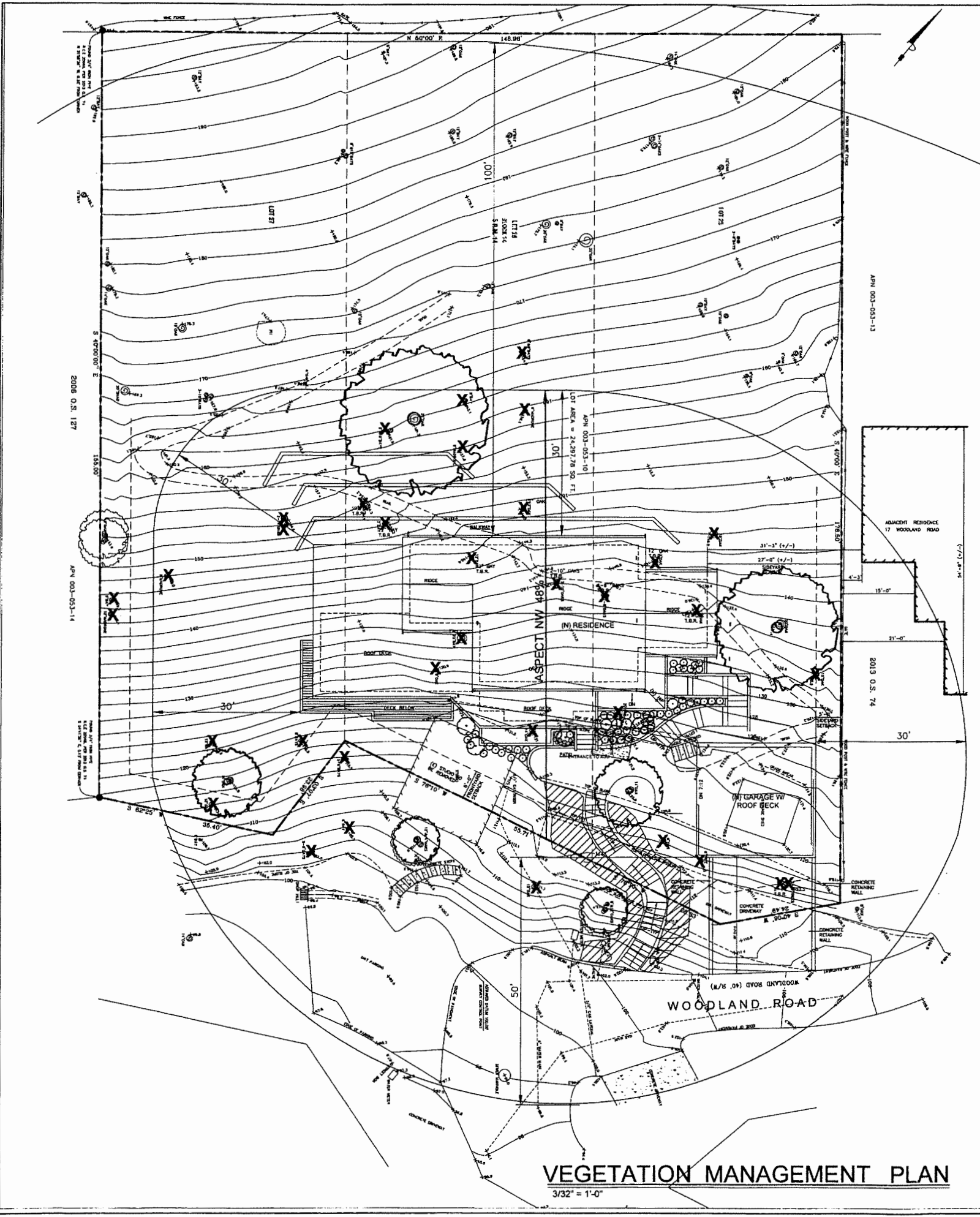
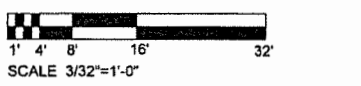
	EXISTING TREE TO REMAIN - REFER TO ARBORIST REPORT FOR ANY CORRECTIVE WORK
	NEW NURSERY TREE - ARBUSTUS MADERA QUERCUS AGROPHILA
	EVERGREEN SCREEN-PLANT AT THE REQUIRED DISTANCE FROM THE HOUSE FOR FIRE CODE PRUNUS LAETIFLORA MYRTICA CALIFORNICA
	SHRUBS AND PERENNIALS ACHILLEA TAMBORICA ERIGONUM GLAUCUM PORTULACA SPICES ROMANUS CALIFORNICA REICHARDIA MADRA MALKUS SPICES
	MIXED NATIVE GRASSES AND ORNAMENTALS FESTUCA RUBRA MONARDELLA VILLOSA

- NOTES:
1. PROTECT IN PLACE EXISTING NATIVE SHRUBS AND TREES UNLESS OTHERWISE NOTED ON PLANS. CONTRACTOR TO PROVIDE PROTECTION OF THE EXISTING TREES DURING CONSTRUCTION.
  2. ALL NEW PLANTING TO BE IRRIGATED BY AN AUTOMATIC DRIP SYSTEM
  3. ALL PLANTS USED IN THIS LANDSCAPE ARE SELECTED FROM FRESAFE MARIN PLANT LIST. THE LANDSCAPE PLAN SHALL BE DESIGNED IN ACCORDANCE WITH THE ROSS VALLEY FIRE DEPARTMENT
  4. THE LANDSCAPE PLAN SHALL BE DESIGNED IN ACCORDANCE WITH THE MARIN MUNICIPAL WATER DISTRICT (MWD) WATER EFFICIENT LANDSCAPE CODE.
  5. CONTRACTOR TO NOT FILL NEAR THE TRUNKS OF THE EXISTING TREES.
  6. ALL PLANTING TO ACCOMMODATE THE CONSTRUCTION SHALL BE PERFORMED UNDER THE DIRECTION OF AN ARBORIST.

SYMBOL SCHEDULE

- X (E) TREE TO BE REMOVED - MIXTURE OF OAK AND BAY TREES
- 
- (E) OAK TREE TO REMAIN - TO BE CLEANED, HAVE CROWNS REDUCED AND BE MAINTAINED
- PREDOMINANT GROWTH - GRASSES - PER COUNTY OF MARIN DEFENSIBLE SPACE 30'-100' GRASSES TO BE KEPT MOWED

ROSS VALLEY FIRE DEPT  
Approved  
Approved with Conditions  
Not Approved - insert revision  
Incomplete  
Date: 7/30/20



VEGETATION MANAGEMENT PLAN

3/32" = 1'-0"

PRELIMINARY - NOT FOR CONSTRUCTION

# BOLTER RESIDENCE

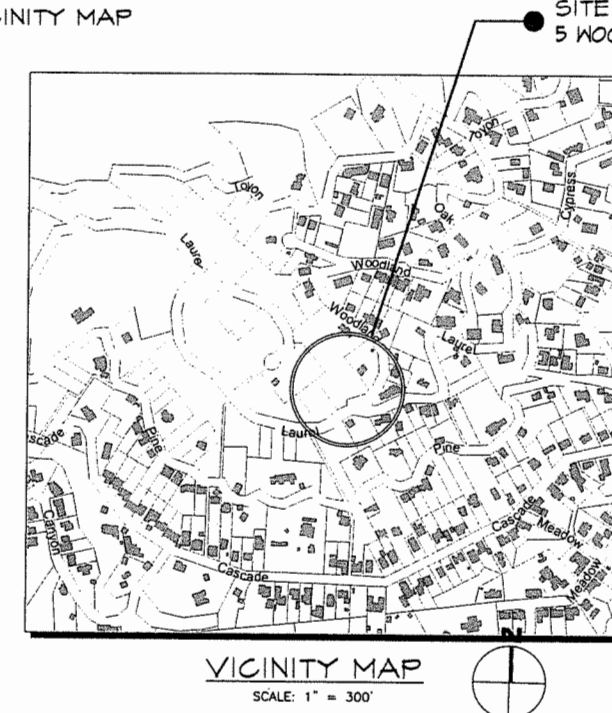
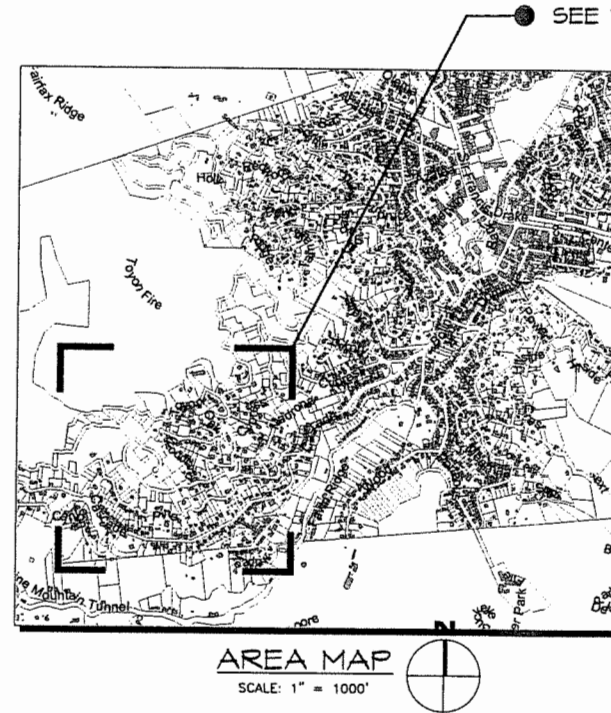
5 WOODLAND ROAD, FAIRFAX, CA 94930  
A.P.N. No: 003-053-10

### LEGEND:

- SUBDIVISION BOUNDARY
- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- EASEMENT AS NOTED
- SANITARY SEWER MAIN PIPE (PUBLIC)
- SANITARY SEWER MAIN PIPE (PRIVATE)
- SANITARY SEWER MANHOLE
- SANITARY SEWER MAIN PLUG
- SANITARY SEWER LATERAL
- WATER MAIN PIPE
- WATER FIRE HYDRANT
- WATER VALVE
- WATER REDUCER
- WATER MAIN PLUG
- WATER AIR RELEASE VALVE
- WATER BLOW-OFF
- WATER SERVICE AND METER
- ACCESS HATCH IN U/G STORAGE TANK
- STORM DRAIN PIPE
- STORM DRAIN MANHOLE
- STORM DRAIN PIPE PLUG
- VERTICAL CURB AND GUTTER
- ROLL CURB AND GUTTER
- VERTICAL CURB/EXTRUDED CURB
- SIDEWALK
- LOT LINE
- 449 LOT NUMBER
- RETAINING WALL
- TRW=20.67  
TF=17.33
- 1202.81  
1202.85
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR (5' INTERVAL)
- PROPOSED CONTOUR (1' INTERVAL)
- 12+00 ROAD STATION

### LEGEND (cont.):

- GRADE BREAK
- EXISTING ROADWAY CENTERLINE
- EXISTING RIGHT-OF-WAY
- EXISTING EASEMENT AS NOTED
- EXISTING SANITARY SEWER MAIN PIPE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MAIN PLUG
- EXISTING WATER MAIN PIPE
- EXISTING WATER FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER REDUCER
- EXISTING WATER MAIN PLUG
- EXISTING WATER AIR RELEASE VALVE
- EXISTING WATER BLOW-OFF
- EXISTING STORM DRAIN PIPE
- EXISTING STORM DRAIN MANHOLE
- EXISTING STORM DRAIN PIPE PLUG
- EXISTING VERTICAL CURB AND GUTTER
- EXISTING ROLL CURB AND GUTTER
- EXISTING VERTICAL CURB/EXTRUDED CURB
- EXISTING SIGN AS NOTED
- EXISTING CONTOUR (1' INTERVAL)
- FL= FLOW LINE (GUTTER ELEVATION)
- TC= TOP OF CURB ELEVATION
- FS= FINISH SURFACE
- HWE= HIGH WATER ELEVATION
- FF= FINISH FLOOR ELEVATION
- FG= FINISH GRADE ELEVATION
- EG= EXISTING GRADE ELEVATION
- Ri= RIM ELEVATION
- IE= INVERT ELEVATION
- DN= DOWN (STAIRS)
- EL= ELEVATION
- SURVEY CONTROL POINT
- SLOPE INDICATOR
- 0.75% SURFACE SLOPE INDICATOR
- (P)= PROPOSED
- (E)= EXISTING
- L/S= LANDSCAPE
- STREET LIGHT
- w/= WITH
- R= STAIR RISER
- T= STAIR TREAD
- S= SLOPE



### EARTHWORK QUANTITIES:

Area of the Project	Grading Quantities		
	cut	fill	total
New Driveway	38.76		
New Garage	205.64		
New House	92.59	20.37	
Stormwater Treatment	35.16	31.39	
Stormwater Dissipater	8.43		
<b>Totals [cu.yd.]:</b>	<b>380.58</b>	<b>51.76</b>	<b>432.34</b>
<b>Export [cu.yd.]:</b>		<b>328.82</b>	

### GENERAL NOTES:

- DESIGN ENGINEER SHALL CERTIFY TO THE COUNTY IN WRITING UPON THE COMPLETION OF WORK THAT ALL GRADING AND DRAINAGE IMPROVEMENTS WERE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND FIELD DIRECTION.
- ALL WORK SHALL CONFORM TO THE CURRENT UNIFORM CONSTRUCTION/DEVELOPMENT STANDARDS OF COUNTY OF MARIN.
- LOCATION OF UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND DEPTHS OF UTILITIES WITH THE APPROPRIATE AGENCIES PRIOR TO STARTING WORK.
- RAINWATER LEADERS SHALL UTILIZE PTE CONNECTIONS.
- CORRUGATED OR FLEXIBLE DRAIN PIPES ARE NOT PERMITTED.
- DROP INLETS SHALL BE AS SHOWN ON PLANS OR APPROVED EQUIVALENT.
- ALL ROOF DOWNSPOUTS SHALL BE CONNECTED TO UNDERGROUND STORM DRAINS.
- NO GRADING SHALL BE COMMENCED PRIOR TO OBTAINING A GRADING PERMIT.
- FOR RAISED FOUNDATIONS, AT LEAST TWO INCHES 2-INCH DIAMETER HOLES SHALL BE PLACED IN THE FOUNDATION TO DRAIN THE SUBFLOOR AREA. SIMILAR DRAINS SHALL BE INSTALLED IN ANY INTERIOR FOUNDATIONS SO THAT WATER IS NOT TRAPPED UNDER THE BUILDING.
- TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST 'MANUAL OF TRAFFIC CONTROLS' PUBLISHED BY THE CALIFORNIA DEPARTMENT OF TRANSPORTATION.
- ALL BMP'S SHALL CONFORM TO THE CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA) LATEST STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK.

### DESIGN TEAM:

<b>OWNER:</b> CHRIS & LINDSAY BOLTER 5 WOODLAND RD. FAIRFAX, CA 94930	<b>ARCHITECT:</b> JEFF KROOT ARCHITECT & ASSOCIATES P.O. BOX 246 SAN ANSELMO, CA 94960 T: (415) 456-5531	<b>CIVIL ENGINEER:</b> VIA ATELIER, INC. 9 BROOKSIDE CT. SAN ANSELMO, CA T: (415) 774-6776 E: VLAD@VIA-ENG.COM	<b>SURVEY:</b> STEPHEN J. FLATLAND PROFESSIONAL LAND SURVEYOR P.O. BOX 1831 SAN ANSELMO, CA 94960 T: (415) 451-5081	<b>GEOTECHNICAL:</b> DAVE OLNES, PE 7915 CREST AVE. OAKLAND, CA 94605 T: (510) 851-5298
<b>CONTACT:</b> CHRIS BOLTER	<b>CONTACT:</b> JEFF KROOT	<b>CONTACT:</b> VLAD IOJICA	<b>CONTACT:</b> STEPHEN FLATLAND	<b>CONTACT:</b> DAVE OLNES

### SYMBOLS:

- SECTION TAG:**
- ② DRAWING NUMBER
  - ② SHEET NUMBER
  - ① REVISION NUMBER
  - ② KEY NOTE
- DETAIL TAG:**
- ② DETAIL NUMBER
  - ② SHEET NUMBER
  - ↔ DIMENSION TO FACE OF FINISH

### CIVIL ENGINEERING SHEET INDEX

1 OF 6	COVER SHEET, AREA & VICINITY MAP	C1.0
2 OF 6	CONCEPTUAL EROSION AND SEDIMENT CONTROL PLAN	C2.0
3 OF 6	EROSION CONTROL DETAILS	C2.1
4 OF 6	CONCEPTUAL SITE GRADING AND DRAINAGE PLAN	C3.0
5 OF 6	DETAILS	C4.0
6 OF 6	SECTIONS & PROFILES	C4.1

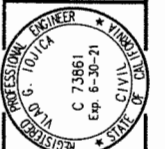


By:	V.I.
Date:	4/17/20
Revisions:	REVISIONS TO THE SITE PLAN LAYOUT
REVISIONS IN RESPONSE TO COMMENTS DATED 06/13/20	6/5/20

COVER SHEET

**BOLTER RESIDENCE**

5 WOODLAND ROAD, FAIRFAX, CA 94930 (APN: 003-053-10)



Plans Prepared By: *[Signature]*

VIA ATELIER, INC.  
Civil Engineering - Consulting  
9 Brookside Ct., San Anselmo, CA 94960  
Ph: (415) 774-6776 E: office@via-eng.com

Date: 08.05.2020

JOB NO: 1912.B

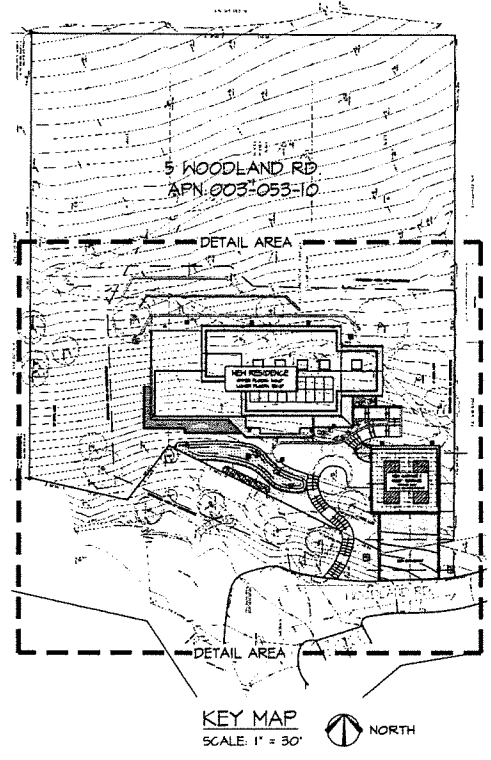
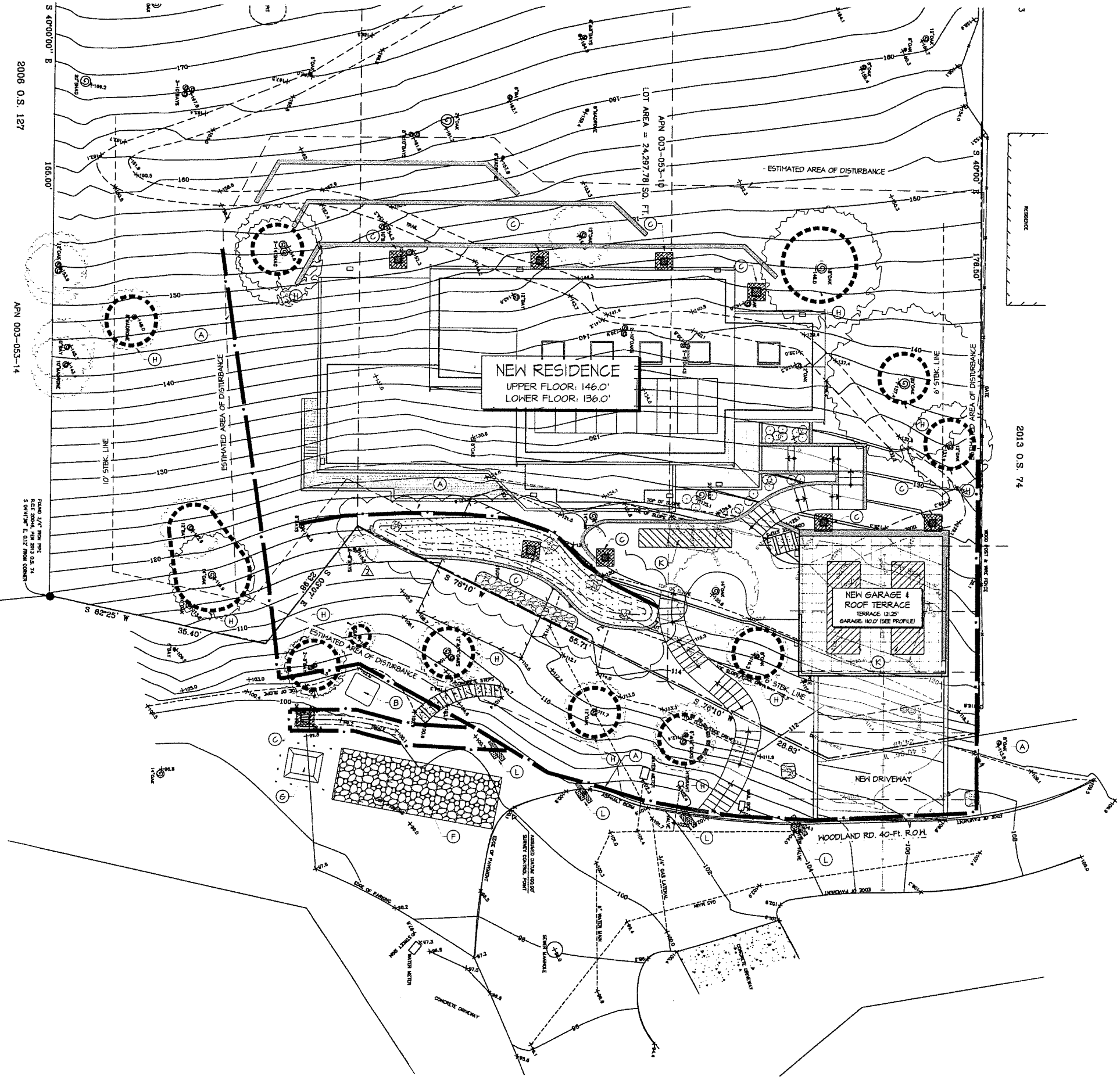
DATE: 8/10/20

Drawn By: N.C.  
Reviewed: V.I.

SHEET: C1.0  
1 OF 6

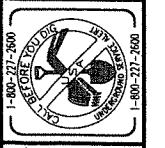
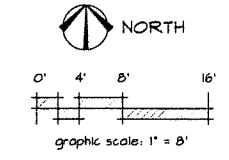
PRELIMINARY - NOT FOR CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION



EROSION CONTROL LEGEND:

- (A) INSTALL FIBER ROLLS PER CASQA SE-5
- (B) INSTALL SANITARY WASTE MANAGEMENT (PORTABLE RESTROOM) PER CASQA WM-1
- (C) INSTALL STORM DRAIN INLET PROTECTION PER CASQA SE-10
- (D) IMMEDIATELY REVEGETATE WITH LANDSCAPING OR UTILIZE GEOTEXTILE MATTING (PER CASQA EC-1) OF DISTURBED SOILS UNTIL LANDSCAPE IMPROVEMENTS ARE COMPLETED. APPROX. LIMITS SHOWN.
- (E) DUST CONTROL, TO IMPLEMENT THROUGHOUT THE CONSTRUCTION SITE DURING ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH BMP TABLE.
- (F) CONSTRUCTION ENTRANCE PER CASQA TC-1
- (G) CONCRETE WASH AREA
- (H) TREE FENCE (Tree Protection Zone)
- (J) LIMITS AND DISTURBED AREA
- (K) CONSTRUCTION STORAGE AREAS PER CASQA WM-1
- (L) INSTALL GRAVEL BAG SEDIMENT TRAP DURING CONSTRUCTION TO PREVENT SEDIMENT TRANSPORT PER CASQA SE-6.

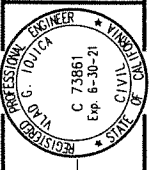


By:	V.I.
Date:	4/17/20
Revisions:	
△	REVISIONS TO THE SITE PLAN LAYOUT
▽	REVISIONS IN RESPONSE TO COMMENTS DATED 06/15/20

Sheet Title: **EROSION & SEDIMENT CONTROL PLAN**

Project: **BOLTER RESIDENCE**

Address: **5 WOODLAND ROAD, FAIRFAX, CA 94930 (APN: 003-053-10)**



Plans Prepared By: **VIA Atelier, Inc.**  
 Civil Engineering - Consulting  
 9 Brookside Ct., San Anselmo, CA 94960  
 Ph: (415) 774-6716 E: office@via-atelier.com

JOB NO: 1912.B

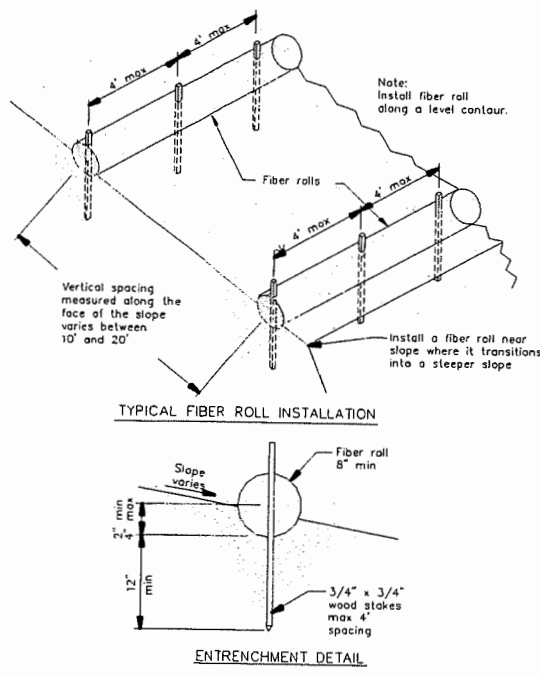
DATE: 8/10/20

Drawn By: N.C.  
 Reviewed: V.I.

SHEET: **C2.0**  
 2 OF 6

PRELIMINARY - NOT FOR CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION



1 FIBER ROLL  
CASQA-BMP SE-5  
SECTION SCALE: NO SCALE

**Purpose:**  
A fiber roll consists of straw, coir, or other biodegradable materials bound into a light tubular roll wrapped by netting, which can be biodegradable or natural. Additionally, gravel cores fiber rolls are available, which contain an embedded ballast material such as gravel or sand for additional weight when staking the rolls are not feasible (such as on steep slopes). When fiber rolls are placed on the face of the slope and on the face of slopes along the contours, they intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff (through sedimentation). By intercepting the length of a slope, fiber rolls can also reduce sheet and rill erosion until vegetation is established.

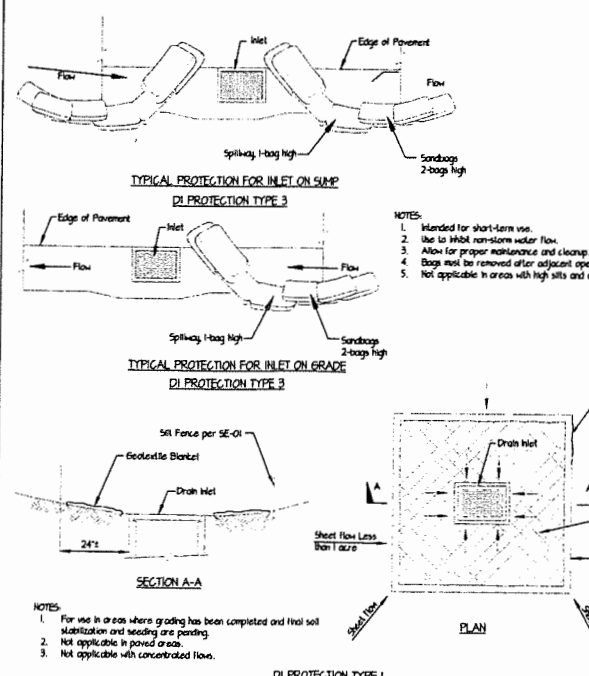
**Application:**

- Along the toe, top, face, and of grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- At the end of a downward slope where it transitions to a steeper slope.
- Along the perimeter of a project.
- As check dams in unlined ditches with minimal grade.
- Down-slope of exposed soil areas.
- All operational storm drains as a form of inlet protection.
- Around temporary stockpiles.

**Installation:**  
Follow manufacturer's recommendations for installation. In general, these will be as follows:  
Locate fiber rolls on level contours spaced as follows:  
- Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.  
- Slope inclination between 4:1 and 2:1 (H:V): Fiber rolls should be placed at a maximum interval of 15 ft. (a closer spacing is more effective).  
- Slope inclination 2:1 (H:V) or greater: Fiber rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective).

• Prepare the slope before beginning installation.  
• Dig small trenches across the slope on the contour. The trench depth should be 1/2 to 1/3 of the thickness of the roll, and the width should equal the roll diameter, in order to provide area to backfill the trench.  
• It is critical that rolls are installed perpendicular to water movement, and parallel to the slope contour.  
• Start building trenches and installing rolls from the bottom of the slope and work up.  
• It is recommended that pilot holes be driven through the fiber roll. Use a straight bar to drive holes through the roll and into the soil for the wooden stakes.  
• Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.  
• Stake fiber rolls into the trench.  
- Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center.  
- Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.  
• If more than one fiber roll is placed in a row, the rolls should be overlapped, not abutted.

**Inspection & Maintenance:**  
• BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.  
• Repair or replace silt, silt, or debris, and replace as needed. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered). Replace damaged stakes. At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height.  
• Grovel filters: If the grovel becomes clogged with sediment, it should be carefully removed from the site and either cleaned or replaced. Since cleaning grovel at a construction site may be difficult, consider using the sediment-laden straw as fill material and put fresh straw around the silt. Inspect bags for holes, tears, and snags, and replace bags as needed. Check grovel bags for proper arrangement and displacement.  
• Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when sediment accumulation reaches one-third the designated sediment storage depth.  
• If fiber rolls are used for erosion control, such as in a check dam, sediment removal should not be required as long as the system continues to control the grade. Sediment control BMPs will likely be required in conjunction with this type of application.  
• Repair any rills or gulches promptly.

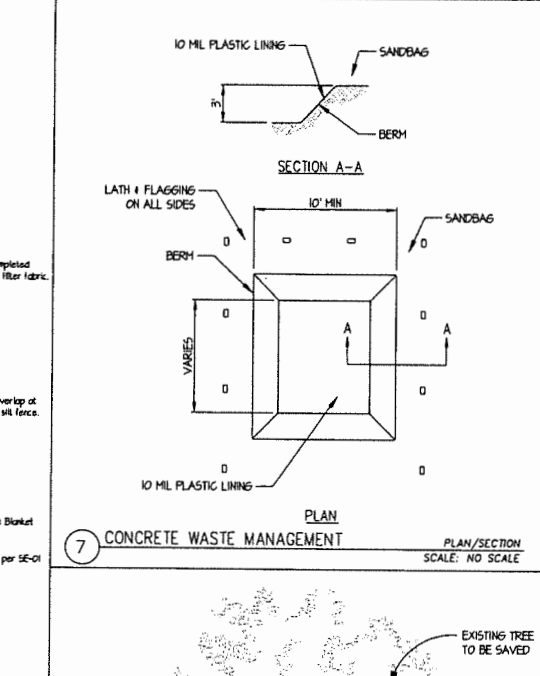


2 STORM DRAIN INLET PROTECTION  
CASQA-BMP SE-10  
SCALE: NO SCALE

**Purpose:**  
Storm drain inlet protection consists of a sediment filter or an impounding area in, around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction. Temporary geotextile storm drain inserts attach underneath storm drain grates to capture and filter storm water.

**Application:**  
Every storm drain inlet receiving runoff from unconsolidated or otherwise active work areas should be protected. Inlet protection should be used in conjunction with other erosion and sediment controls to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.

**Inspection & Maintenance:**  
• BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.  
• Silt fences: If the fabric becomes clogged, torn, or degrades, it should be replaced. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered), and are reasonably perpendicular to the ground. Replace damaged stakes. At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height.  
• Grovel filters: If the grovel becomes clogged with sediment, it should be carefully removed from the site and either cleaned or replaced. Since cleaning grovel at a construction site may be difficult, consider using the sediment-laden straw as fill material and put fresh straw around the silt. Inspect bags for holes, tears, and snags, and replace bags as needed. Check grovel bags for proper arrangement and displacement.  
• Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third the height of the barrier height.  
• Inspect and maintain temporary geotextile insert devices according to manufacturer's specifications.  
• Remove storm drain inlet protection once the drainage area is stabilized.  
• Clean and regrade area around the inlet and clean the inside of the storm drain inlet, as it should be free of sediment and debris at the time of final inspection.



7 CONCRETE WASTE MANAGEMENT  
SCALE: NO SCALE

**Implementation**  
**Dust Control Practices**

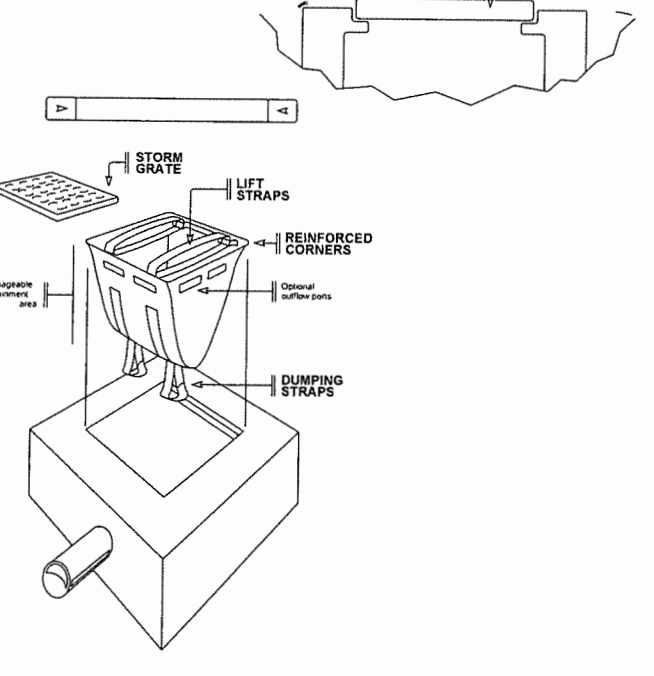
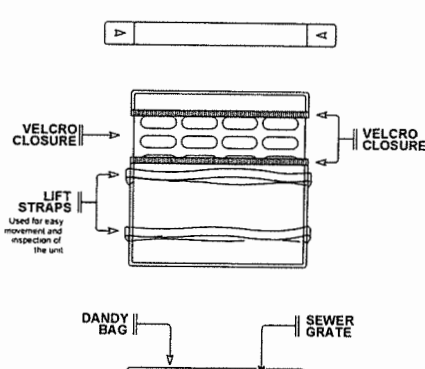
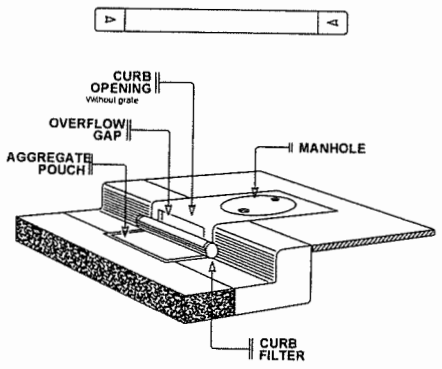
Dust control BMPs generally stabilize exposed surfaces and minimize activities that suspend or track dust particles. The following table presents dust control practices that can be applied to varying site conditions that could potentially cause dust for heavily traveled and disturbed areas, wet suppression (watering), chemical dust suppression, gravel asphalt surfacing, temporary gravel construction entrances, equipment wash-out areas, and wind track covers can be employed as dust control applications. Permanent or temporary vegetation and mulching can be employed for areas of occasional or no construction traffic. Preventive measures include minimizing surface area to be disturbed, limiting on-site vehicle traffic to 15 mph or less, and controlling the number and activity of vehicles on a site at any given time.

Practice	Permanent Vegetation	Wet Suppression	Wet Suppression (Prohibited)	Chemical Dust Suppressants	Gravel Asphalt	Temporary Gravel Construction Entrances	Equipment Wash-Out	Stabilizer Covers	Mulching or Windbreak Mats
Gravel Asphalt	X	X	X	X	X	X	X	X	X
Temporary Gravel Construction Entrances						X	X	X	X
Equipment Wash-Out							X	X	X
Stabilizer Covers							X	X	X
Mulching or Windbreak Mats								X	X

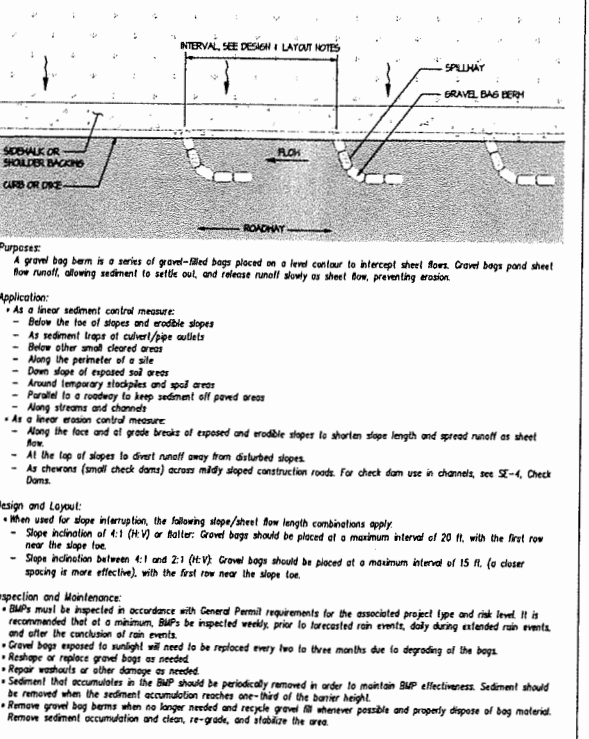
**Chemical dust suppressants include:** mulch and fiber based dust palliatives (e.g. paper mulch with gypsum binder), salts and brines (e.g. calcium chloride, magnesium chloride), non-petroleum based organics (e.g. vegetable oil, lignosulfonates), petroleum based organics (e.g. asphalt emulsion, dust ads, petroleum resins), synthetic polymers (e.g. polyvinyl acetate, vinyls, acrylics), clay additives (e.g. bentonite, montmorillonite) and electrochemical products (e.g. enzymes, ionic products).

**Additional preventive measures include:**  
• Schedule construction activities to minimize exposed area (see EC-1, Scheduling).  
• Quickly treat exposed soils using water, mulching, chemical dust suppressants, or stone/gravel layering.  
• Identify and stabilize key access points prior to commencement of construction.  
• Minimize the impact of dust by anticipating the direction of prevailing winds.  
• Restrict construction traffic to stabilized roadways within the project site, as practicable.  
• Water should be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.  
• All distribution equipment should be equipped with a positive means of shut-off.  
• Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.  
• If reclaimed waste water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality

8 TREE PROTECTION DETAIL  
SCALE: NO SCALE



3 STORM DRAIN INLET PROTECTION  
CASQA-BMP SE-10  
SCALE: NO SCALE



4 GRAVEL BAG FLOW DIVERSION  
CASQA-BMP SE-6  
SCALE: NO SCALE

**Purpose:**  
A gravel bag berm is a series of gravel-filled bags placed on a level contour to intercept sheet flow. Gravel bags pond sheet flow runoff, allowing sediment to settle out, and release runoff slowly as sheet flow, preventing erosion.

**Application:**

- As a linear sediment control measure:  
- Below the toe of slopes and erodible slopes
- As sediment traps at culvert/pipe outlets
- Below other small cleared areas
- Along the perimeter of a site
- Down slope of exposed soil areas
- Around temporary stockpiles and spoil areas
- Parallel to a roadway to keep sediment off paved areas
- Along streams and channels

- As a linear erosion control measure:  
- Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow
- At the top of slopes to divert runoff away from disturbed slopes.
- As chevrons (small check dams) across mildly sloped construction roads. For check dam use in channels, see SE-4, Check Dams.

**Design and Layout:**

- When used for slope interruption, the following slope/roll length combinations apply:  
- Slope inclination of 4:1 (H:V) or flatter: Gravel bags should be placed at a maximum interval of 20 ft, with the first row near the slope toe.
- Slope inclination between 4:1 and 2:1 (H:V): Gravel bags should be placed at a maximum interval of 15 ft. (a closer spacing is more effective), with the first row near the slope toe.

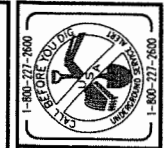
**Inspection & Maintenance:**  
• BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.  
• Gravel bags exposed to sunlight will need to be replaced every two to three months due to degrading of the bags.  
• ReShape or replace gravel bags as needed.  
• Repair washouts or other damage as needed.  
• Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third the height of the barrier height.  
• Remove gravel bag berms when no longer needed and recycle gravel fill whenever possible and properly dispose of bag material. Remove sediment accumulation and clean, re-grade, and stabilize the area.

URBAN RUNOFF POLLUTION NOTES

1. Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and May 1. Remove all-bad materials promptly. Stockpiled soils and other materials shall be topped, at the request of the Building Department or Public Works.
2. Store, handle and dispose of construction materials and wastes so as to prevent their entry to the storm drain system. Contractors must not allow concrete, washwaters, slurries, paint or other materials to enter catch basins, the onsite storm drain system, or onsite or offsite surface flow runoff.
3. Use filtration or other measures to remove sediment from dewatering effluent.
4. No cleaning, fueling or maintaining vehicles on site shall be permitted in any manner that allows deleterious materials from entering catch basins or to enter site runoff.
5. Use of pesticides and/or fertilizers shall be reduced and shall be controlled to prevent pollution runoff.

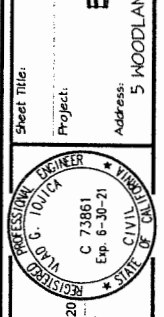
EROSION & SEDIMENT CONTROL NOTES

1. Erosion, sedimentation and pollution controls shall be provided in accordance with CASQA's Best Management Practices, current edition and with the CA RWQCB's erosion and sediment control field manual, current edition.
2. Erosion control measures shall be installed prior to October 15 and shall be maintained by the contractor in proper working order throughout the first winter. This protection shall consist of appropriate filter fences, diversion berms, straw bale dikes, etc. These devices shall be placed in order to minimize erosion and to collect sediment generated by the construction of this project. Except for paved and landscaped areas already completed, all graded areas shall be hydroseeded in order to prevent erosion of bare earth. The contractor is responsible for erosion & sediment control of year long during site work.
3. All banks and all graded areas shall be hydroseeded to control erosion or the approved groundcover installed by October 15.
4. The contractor shall maintain a clean site at all times which is free of debris, hazardous wastes, or stockpiled material unless approved by the project engineer. Except for paved and landscaped areas already completed, all graded areas shall be hydroseeded in order to prevent erosion of bare earth. The contractor is responsible for erosion & sediment control of year long during site work.
5. Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and April 15.
6. Remove spoils promptly and avoid stockpiling of fill materials when rain is forecast. If rain threatens, stockpiled soils and other materials should be topped, at the request of the city engineer.
7. Store, handle and dispose of construction materials and wastes so as to avoid their entry to the storm system. Contractor must not allow concrete, washwaters, slurries, paint or other materials to enter catch basins or to enter site runoff.
8. Use filtration or other measures to remove sediment from dewatering effluent.
9. Install filter fabric bags inside all catch basins and maintain during winter storms.
10. No cleaning, fueling, or maintaining vehicles on-site, except in an area designed to contain and treat runoff.
11. Use of pesticides and/or fertilizers, when applied, shall be controlled to prevent pollution runoff.
12. All areas of cut, fill and ungraded areas disturbed by the grading operation shall be hydroseeded or approved landscaping groundcover planted after all work has been completed. The contractor shall be responsible for furnishing labor and material to accomplish a dense plant cover for erosion control.
13. Dewater basements and excavations with tank and filtration device prior to discharge into SD system. Provide effluent samples for testing hourly per regional water standards.
14. Per the Federal and State Water Quality Acts, the owner is solely responsible for controlling construction water discharge.
15. Project is subject to the requirements of the winter grading moratorium as per the Town of Fairfax Municipal Code.



1-800-277-8800  
Date: 4/17/20  
By: VI  
Revisions to the Site Plan Layout  
Revisions in Response to Comments Dated 06/13/20

Sheet Title: EROSION CONTROL DETAILS  
Project: BOLTER RESIDENCE  
Address: 5 WOODLAND ROAD, FAIRFAX, CA 94930 (APN: 003-053-10)



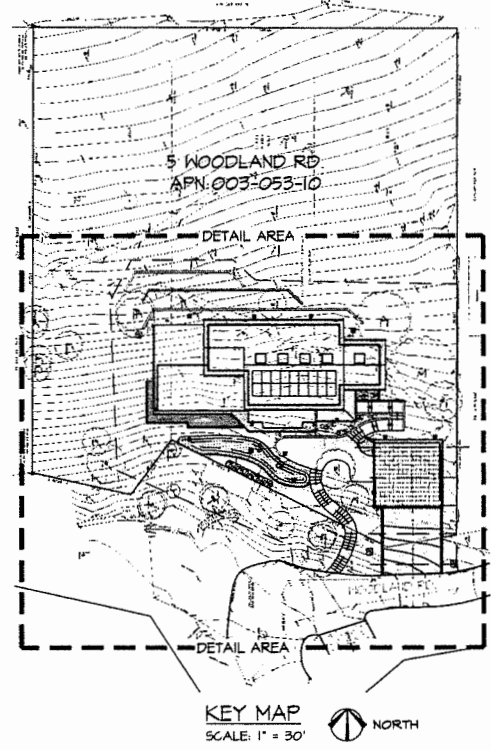
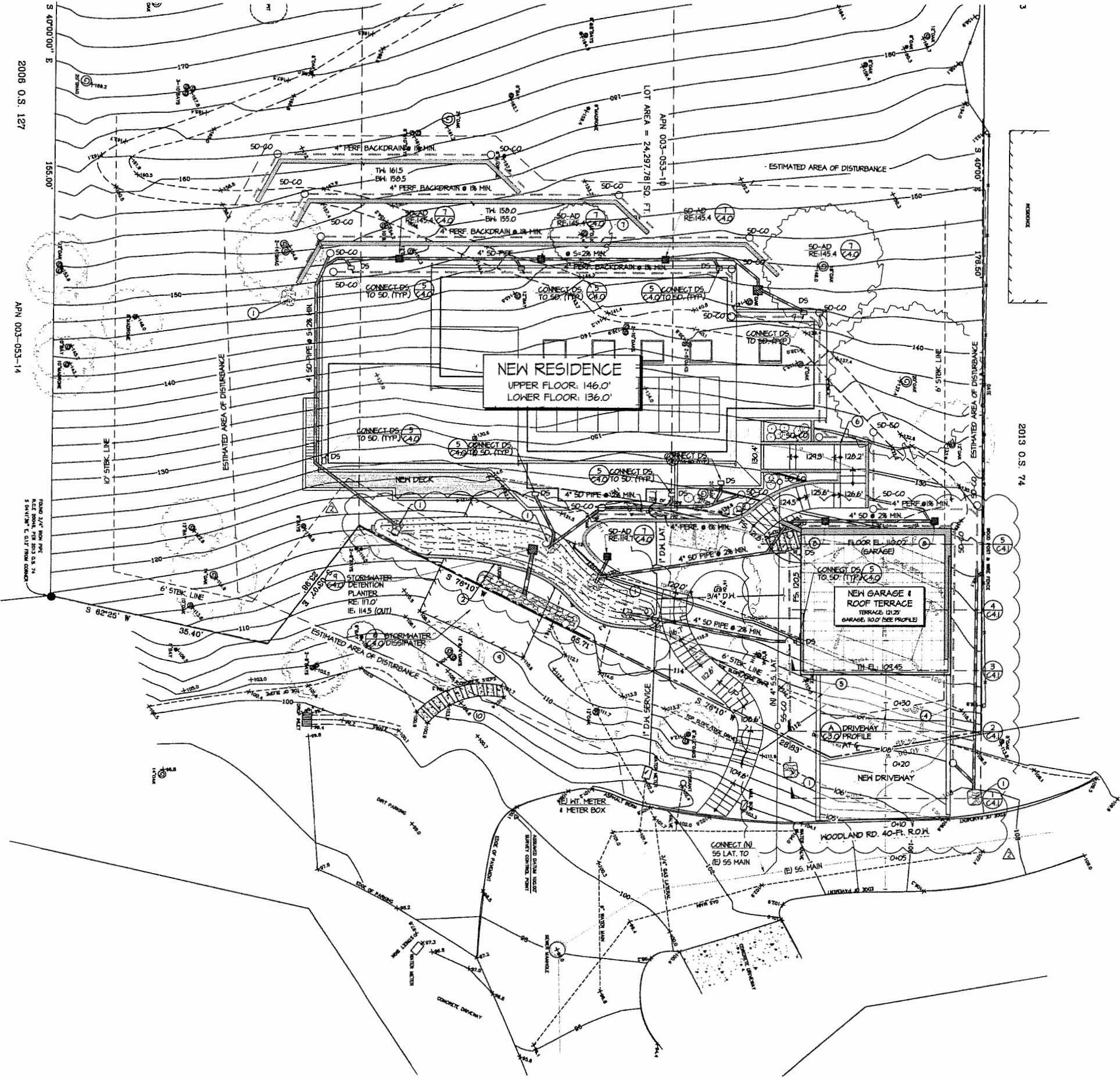
08.05.2020  
Date: 8-30-21  
Via Atelier, Inc.  
Civil Engineering - Consulting  
17425177th St, San Anselmo, CA 94960  
Ph: (415) 776-8788, E: atelier@viaatelier.com

JOB NO: 1912.B  
DATE: 8/10/20  
Drawn By: N.C.  
Reviewed: VI

SHEET: C2.1  
3 OF 6

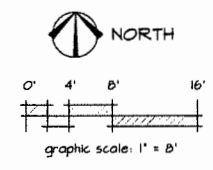
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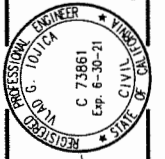
**PLAN NOTES:**

- ① CONTROL SOIL EROSION BY INSTALLING 6\"/>



By:	VI
Date:	4/17/20
Revisions:	
△	REVISIONS TO THE SITE PLAN LAYOUT
▽	REVISIONS IN RESPONSE TO COMMENTS DATED 06.19.20

**CONCEPTUAL GRADING & DRAINAGE PLAN**  
**BOLTER RESIDENCE**  
 5 WOODLAND ROAD, FAIRFAX, CA 94930 (APN: 003-053-10)



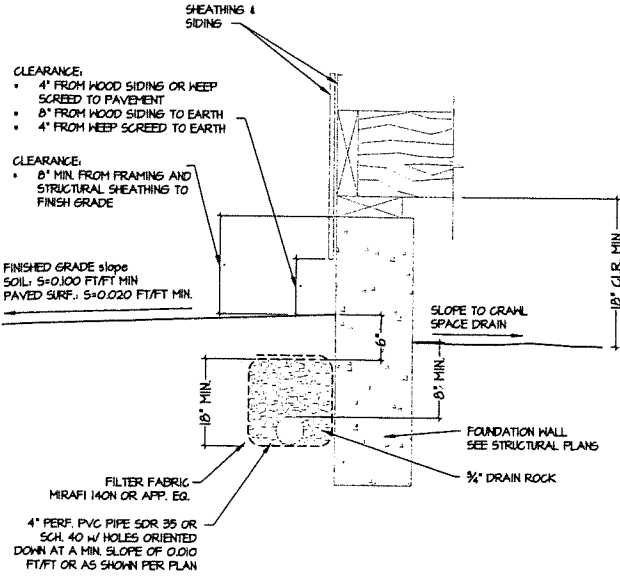
Plans Prepared By:  
**VJA Atelier, Inc.**  
 Civil Engineer, Inc.  
 9 Brockside Ct., San Anselmo, CA 94960  
 Ph: (415) 714-6716 E: office@vja-eng.com

JOB NO: 1912B  
 DATE: 8/10/20  
 Drawn By: NC  
 Reviewed: VI

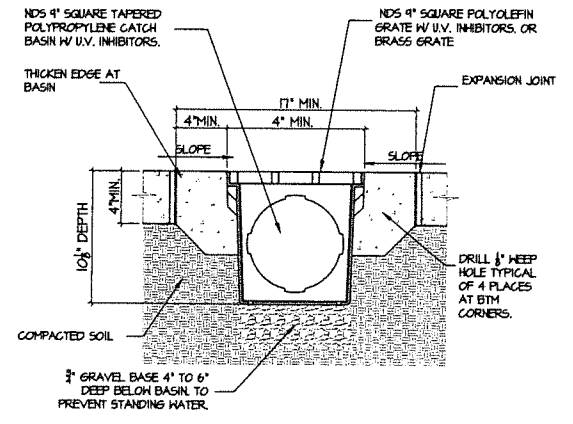
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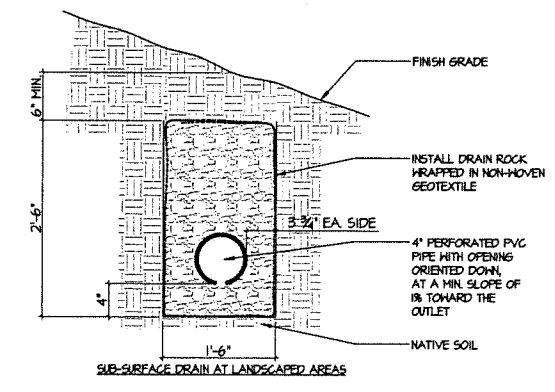
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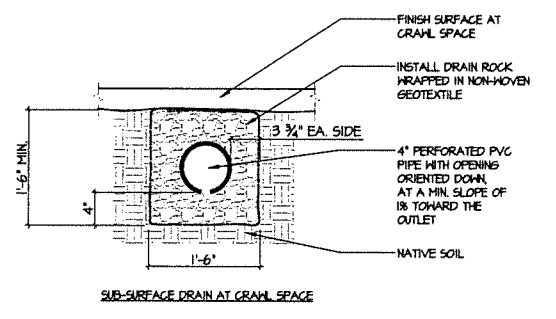
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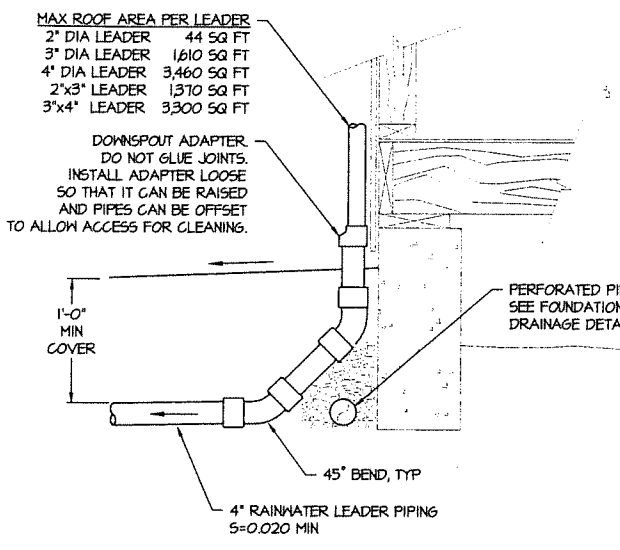
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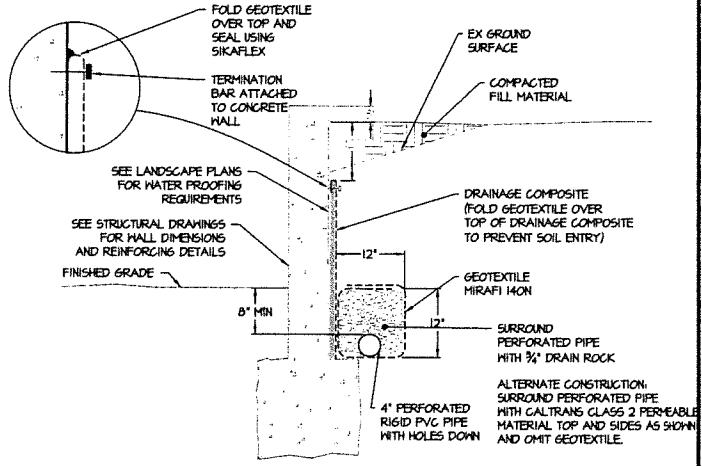
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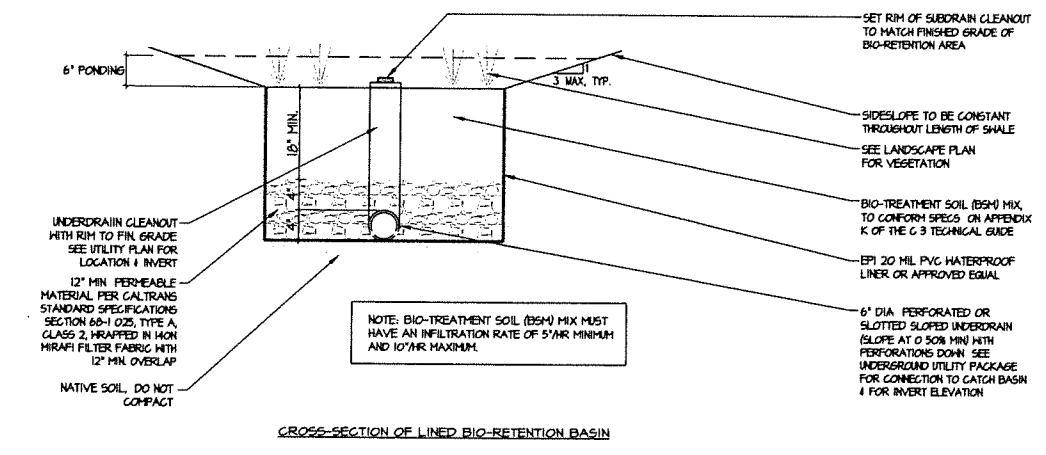
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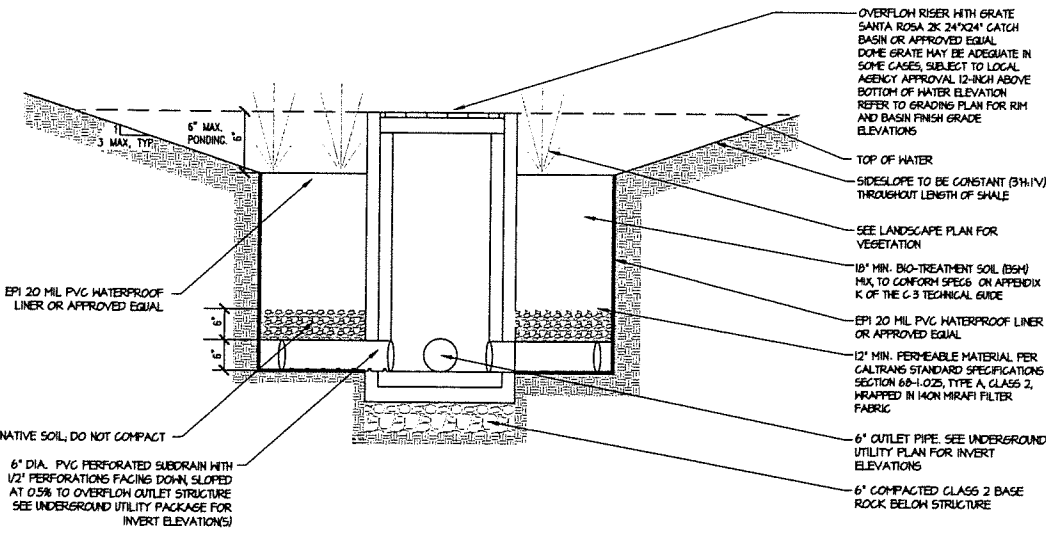
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**2 TYP. RETAINING WALL BACKDRAIN**  
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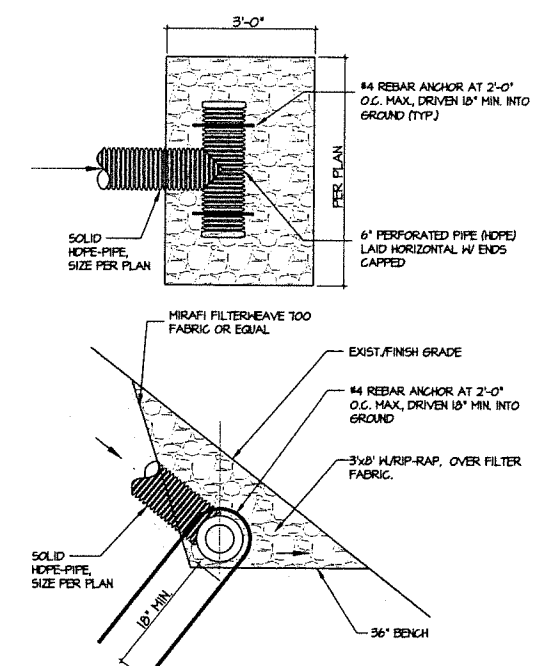


**CROSS-SECTION OF LINED BIO-RETENTION BASIN**

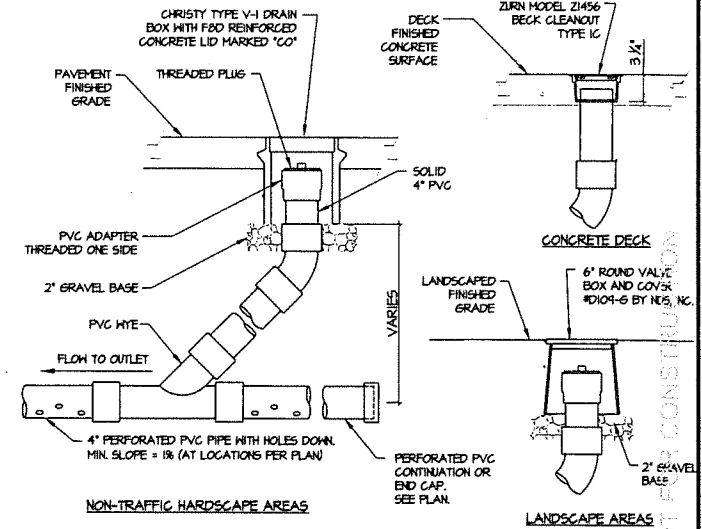


**SECTION OF A BIO-DETENTION BASIN AT OVERFLOW OUTLET STRUCTURE**

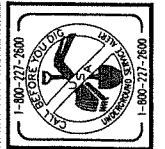
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**6 STORM WATER DISSIPATER**  
 SCALE: N.T.S. FILE NAME: SD-CO DRAWN BY: V.I.



**3 STORM DRAIN CLEANOUT**  
 SCALE: N.T.S. FILE NAME: SD-CO DRAWN BY: V.I.



By: V.I.

Date: 4/11/20

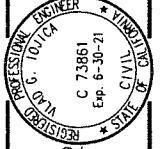
Revisions:

1	REVISIONS TO THE SITE PLAN LAYOUT	V.I.
2	REVISIONS IN RESPONSE TO COMMENTS DATED 06/13/20	06/20

**BOLTER RESIDENCE**

5 WOODLAND ROAD, FAIRFAX, CA 94930 (APN: 003-053-10)

Project Address:



Sheet Title:

Project:

Date: 08.05.2020

VIA Atalter, Inc. - Consulting  
 Civil Engineers & Architects  
 4 Broadway, 2nd Floor, San Francisco, CA 94104  
 Ph: (415) 774-6716 E: info@via-engineers.com

Job No: 1912B

Date: 8/10/20

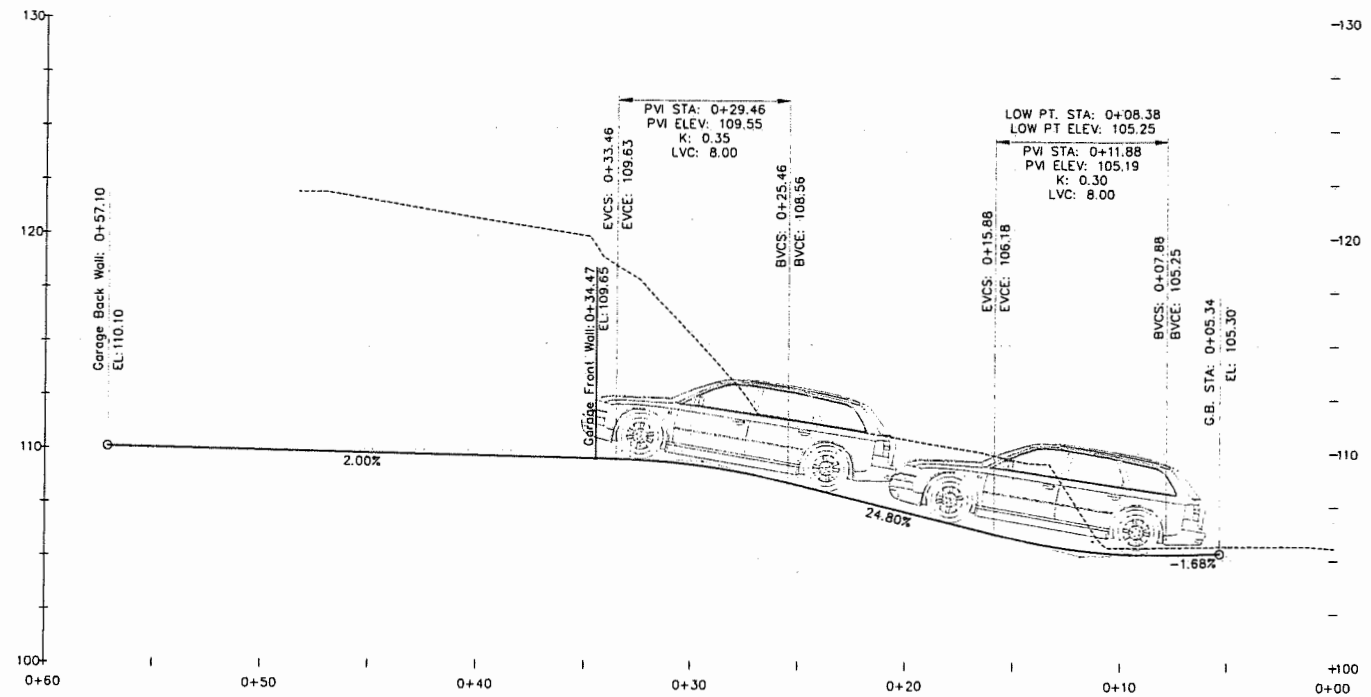
Drawn By: N.C.

Reviewed: V.I.

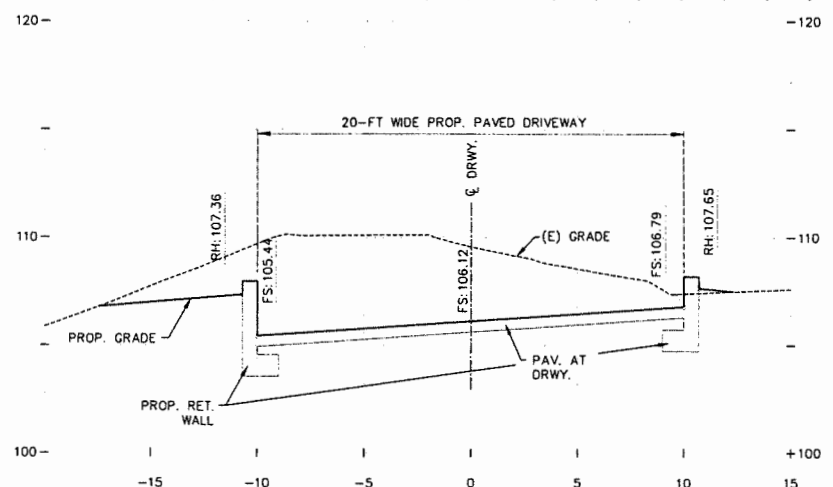
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PRELIMINARY - NOT FOR CONSTRUCTION

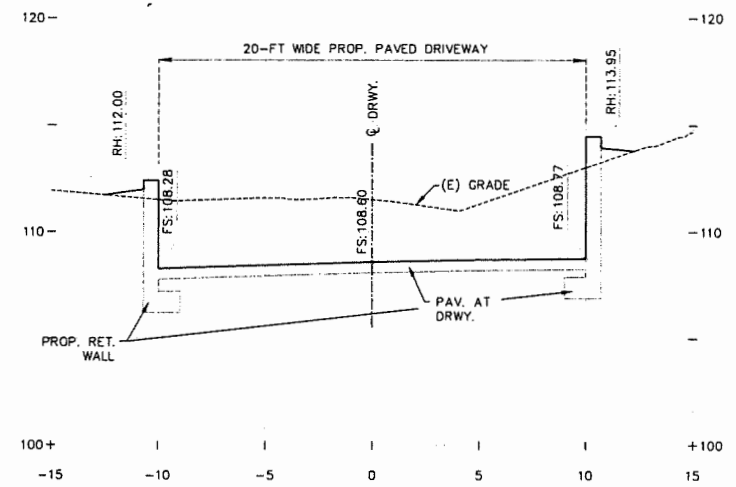
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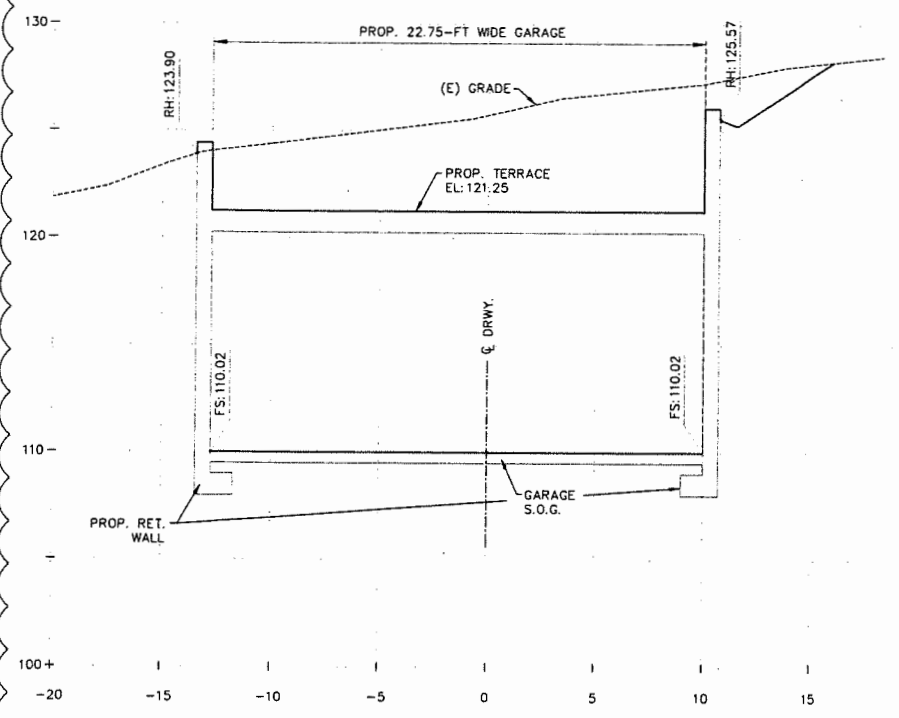
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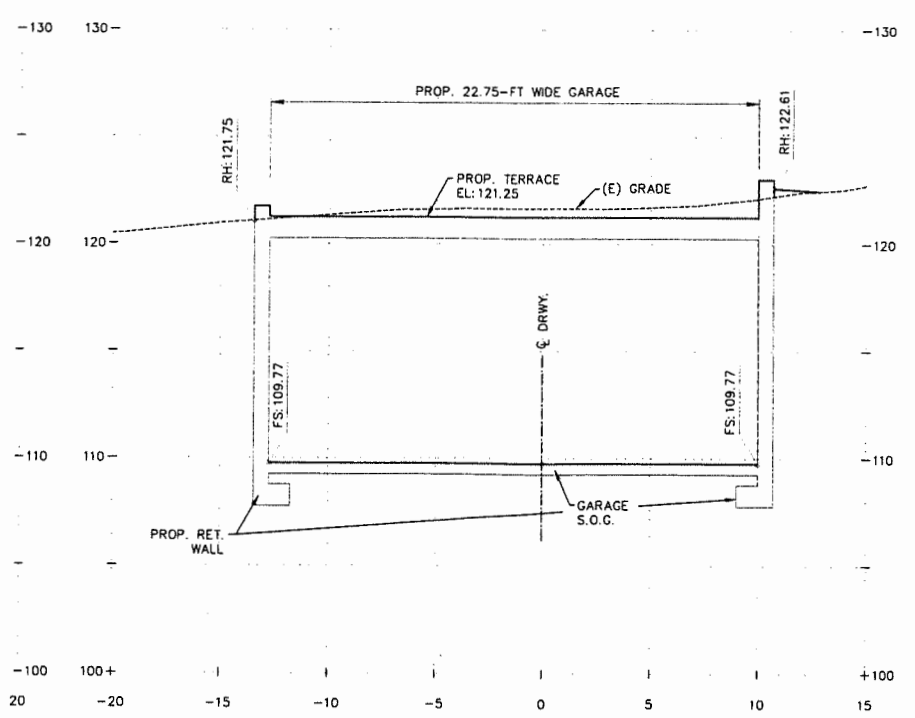
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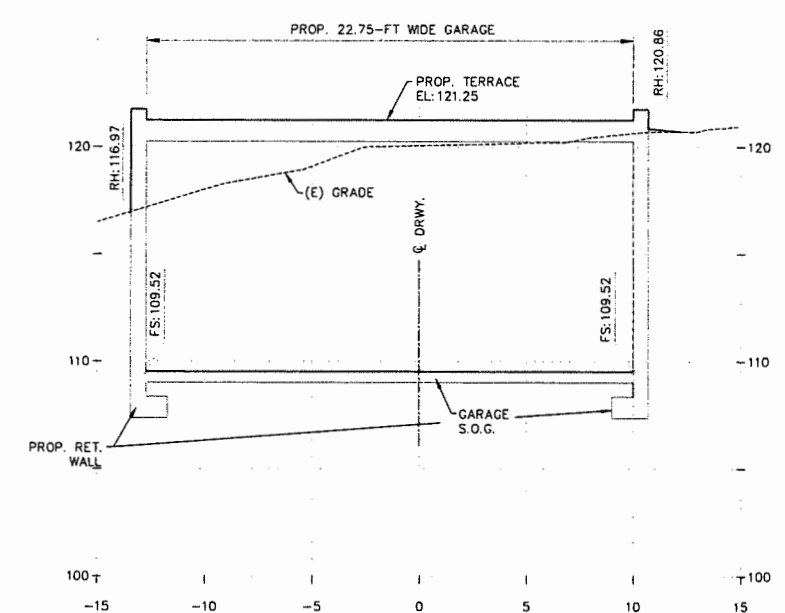
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Revisions:	By	Date
△	V.I.	4/17/20
△	V.I.	6/5/20
△	V.I.	06/18/20
REVISIONS IN RESPONSE TO COMMENTS DATED 06/18/20		

SECTION AND PROFILES  
**BOLTER RESIDENCE**  
Address: 5 WOODLAND ROAD, FAIRFAX, CA 94930 (APN: 003-053-10)



Plans Prepared By: *V.I.*  
Date: 08.05.2020  
VIA Atelier, Inc.  
Civil Engineering - Consulting  
17495 174th St, Fairfax, CA 94930  
PH: (925) 714-5716 E: [office@viaatelier.com](mailto:office@viaatelier.com)

JOB NO: 1912B  
DATE: 8/10/20  
Drawn By: N.C.  
Reviewed: V.I.

SHEET:  
**C4.1**  
6 OF 6

PRELIMINARY - NOT FOR CONSTRUCTION

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