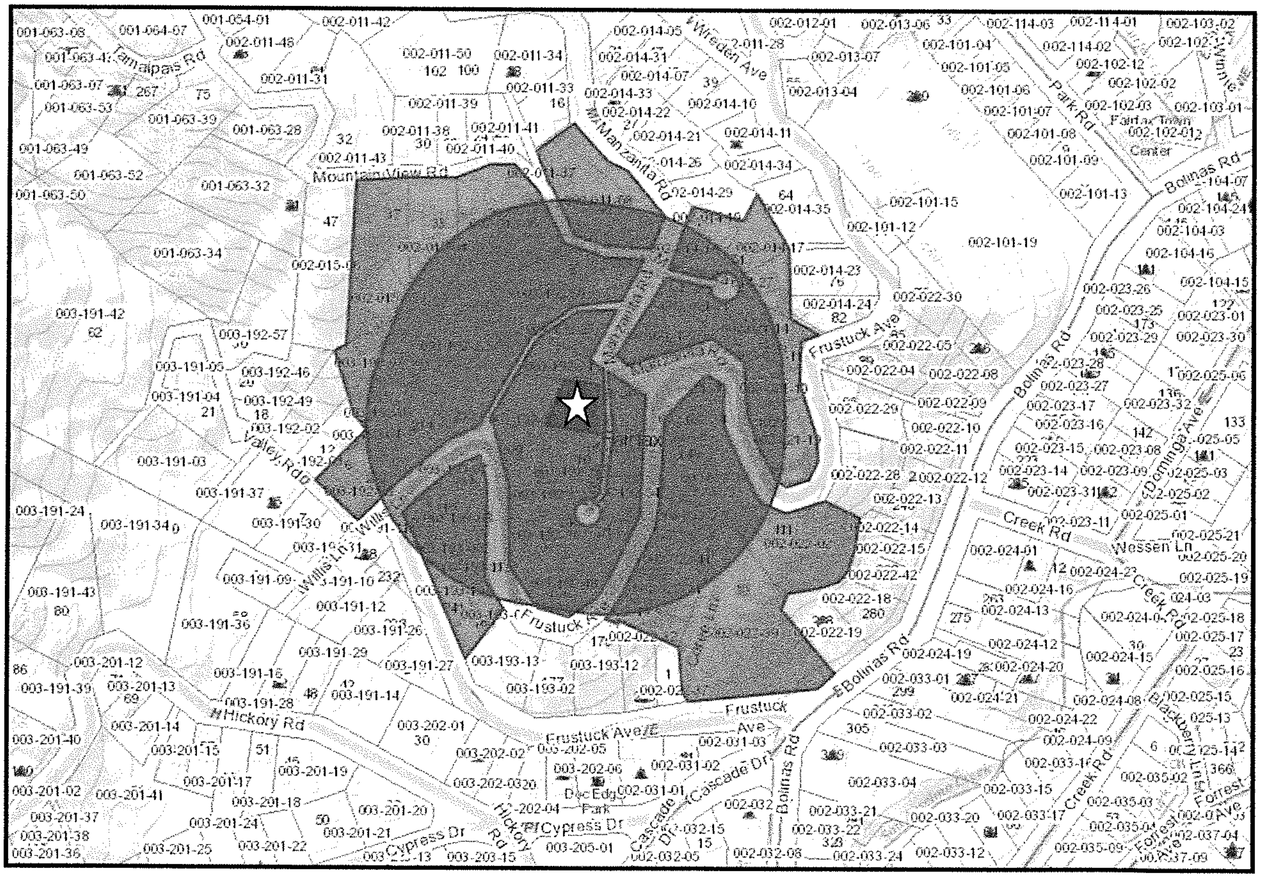
TOWN OF FAIRFAX
STAFF REPORT
Department of Planning and Building Services

TO:	Fairfax Planning Commission
DATE:	August 20, 2020
FROM:	Kara Spencer, Assistant Planner
LOCATION:	6 Walsh Lane
PROJECT:	50 percent remodel and two-story addition to single family residence
ACTION:	Hill Area Residential Development, Excavation, Design Review and Tree Removal permits; Application # 20-8
APPLICANT:	Laura Kehrlein, Architect
OWNER:	Irene Pan Panagoulias Survivor's Trust
CEQA STATUS:	Categorically exempt, § 15301(e)(2)(A)



6 WALSH LANE

AGENDA ITEM #2

DESCRIPTION

Applications were submitted for Hill Area Residential Development, Excavation, and Design Review permits on December 19, 2019. The project was declared complete on August 7, 2020.

The project proposes the following:

1. Remodeling and expanding an existing 1,510 square foot, two-story, 20-foot 10-inch tall, three bedroom, two bathroom, single-family residence into a 2,866 square-foot, approximately 31-foot 10-inch tall, five bedroom, four bathroom, residential structure with 1,916 square feet on the (upper) main floor and 950 square feet on the lower floor;
2. 294 square feet of new decks and in-kind replacement of an existing 66 square foot deck at the northwest corner of the upper floor;
3. A new 421 square foot, two car garage;
4. A new 704 square foot driveway with a retaining wall ranging in height from one foot six inches to five feet six inches;
5. Replacement of the existing foundation; and,
6. Replacement of the existing wood shingle siding with cement board siding.

The upper floor of the residential structure would consist of the primary bedroom with a bathroom, two additional bedrooms (one with a private bathroom), a kitchen, great room, and one bathroom. The lower floor would have two bedrooms, one bathroom, and a family room.

Project grading consists of approximately 233 cubic yards of cut material for the new foundation, driveway, and garage, which will be off-hauled.

It should be noted that the Fairfax Tree Committee has not reviewed the Tree Removal Permit, as the Committee has not met since February 24, 2020 (prior to shelter-in-place requirements for the COVID 19 pandemic). The Town Council is aware that the Tree Committee has not met due to the COVID 19 pandemic. In order to meet State permit streamlining act requirements, the tree removal permit application will be acted on by the Planning Commission without the recommendation of the Fairfax Tree Committee. The Fairfax Tree Committee is scheduled to meet August 24, 2020, but due to a significant backlog of applications, it is unknown when the Tree Removal Permit for this project would have been reviewed by the Fairfax Tree Committee.

The following table illustrates the project's compliance with the regulations of the RS-6 Single-family Residential Zone, High-Density District where the property is located:

	Front Setback	Rear Setback	Combined Front/rear Setback	Side Setbacks	Combined Side Setbacks	FAR	Lot Coverage	Height
Required/ Permitted	6 ft.	12 ft.	35 ft.	5 ft. & 5 ft.	20 ft.	.40	.35	35 ft., 3 stories
Existing	11 ft.	18 ft.	29 ft.	4 ft., 6 in. & 34 ft.	38 ft., 6 in.	.21	.33	20 ft. 10 in., 2 stories
Proposed	11 ft.	18 ft.	29 ft.	4 ft., 6 in. & 15 ft., 6 in.	19 ft., 6 in.	.40	.30	31 ft. 10 in., 2 stories

BACKGROUND

The approximately 7,200 square-foot project site slopes down from Walsh Lane at an average of 32%. It is developed with a 1,510 square foot, two-story single-family home that was constructed in 1967. The lower floor consists of unconditioned space and the upper floor contains three bedrooms, two bathrooms, a kitchen, dining area, and living room. The upper floor and lower floor are connected by an internal stairway. An existing dirt parking area is located at the front of the residence and several low retaining walls are located downslope to the rear of the property. Walsh Lane is a narrow dirt and gravel road that is not maintained by the Town.

The site is identified as being within Stability Zone 3 (with 1 being the most stable and 4 the least) by "Geology for Planning: Central and Southeastern Marin County" prepared by Rice, Smith, and Strand of the California Division of Maines and Geology in 1976. Town of Fairfax Figure S-3 "Areas Susceptible to Landslides" (adopted by Ordinance No. 846 on February 25, 2020 by the Town Council) identifies the site as "Multiple Landslides." There was no sliding reported on the site during the severe weather events of 1982 and 1997-98.

The existing sewer lateral travels southwest downslope from the residence through 10 and 20 Walsh Lane and empties into a main in lower Frustuck Avenue. Ross Valley Sanitary District did not note any issues regarding the location of the lateral within 10 and 20 Walsh Lane. The sewer lateral was recently replaced and RVSD confirmed that the work met their requirements. See Attachment B for sewer lateral replacement report.

There is no record of an easement for the existing sewer lateral across the 10 and 20 Walsh Lane properties. A neighbor has written and provided photos documenting his

concerns with the current sewer lateral for 6 Walsh Lane. Refer to Attachment C for the neighbor's comments and photos regarding the sewer lateral on her property.

REQUIRED DISCRETIONARY APPROVALS

The project requires the approval of Hill Area Residential, Excavation, Design Review and Tree Removal permits. It meets the Town's parking requirements [Town Code § 17.052.030(A)(1)] with the two proposed spaces in the garage and third off-street guest space in the driveway.

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. The project proposes a new concrete retaining wall that would be located between the proposed driveway and existing home. The retaining wall would slope downward from Walsh Lane and range in height from 1'-6" to 5'-6".

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. All construction will occur in areas that have already been disturbed by the existing development. A new foundation would replace the existing foundation within the footprint of the existing house. New foundation walls for the two-story lower floor garage/upper floor primary bedroom addition would be constructed in an area that had previously been contoured, graded, and developed with patios. The proposed retaining wall and driveway would also be located in this formerly disturbed area and require only modest grading to provide adequate access to the proposed garage. The new garage would provide two covered off-street parking spaces for the residence, while the driveway would provide the one additionally required off-street guest parking space. The new foundation would provide a beneficial effect of stabilizing the existing single-family home on the site.

Drainage and Slope Stability

The Town Engineer reviewed the entire body of information provided by the applicant regarding the project, including the project engineering and architectural plans, as well

as the geotechnical report by Herzog Associates dated 12/19/20 (Attachment D). After completing the review and visiting the site on 1/16/20, the Town Engineer determined that the project can be constructed as proposed without creating any significant geologic or hydrologic hazards for adjacent public or private properties as long as certain conditions are met (incorporated as conditions of project approval).

A new downspout collection system would be installed that would collect runoff and convey it via a combination of four and six inch piping around the north and south sides of the house to a six inch dispersal pipe downslope of the existing residence and proposed two-story lower floor garage/upper floor primary bedroom addition.

House Siting and Design

As indicated above, the project would not extend beyond areas of the site that are already disturbed by development. It also includes converting existing unconditioned space in the lower level into interior living space. Aside from raising the house elevation by two feet, the conversion would not affect the visual aspect of the house.

Excavation

Town Code §12.20.080 requires that the Planning Commission approve an Excavation Permit for excavation and fill amounts of over 100 cubic yards. Implementation of the project requires 233 cubic yards of excavation.

In order to approve an Excavation Permit, the Commission must be able to find that the health, safety and welfare of the public will not be adversely affected, that adjacent properties are adequately protected by project investigation and design from geologic and hydrologic problems, that the amount of excavation or fill proposed is not more than is required to allow the owner substantial use of his or her property, that the visual and scenic enjoyment of the area by others will not be adversely affected by the project more than is necessary, that natural landscaping will not be removed by the project more than is necessary and that the time of year during which the construction will take place is such that the work will not result in excessive siltation from storm run-off nor prolonged exposure of unstable slopes.

The excavation of 233 cubic yards is the minimum necessary for the creation of the driveway to the garage, the garage pad, and the building walls and floor slabs, per the Town Engineers' recommendations to ensure slope stability throughout the project site and to comply with building and fire codes. In their final report (Attachment D), the Town Engineers have indicated that the site can be developed without causing adverse geologic or hydrologic impacts on adjacent properties as long as the following conditions are complied with, and the plans are reviewed and approved by them, prior to issuance of the project building permit:

1. The applicant shall submit with the building permit application plans the recommendation from the project geotechnical engineer on the suitability of the

proposed foundations improvements and existing drainage systems, and plans shall be revised if/as needed to reflect the geotechnical engineer's recommendations.

2. Design level grading, drainage, structural, and construction management plans shall be provided.

Design Review

Town Code §17.020.030(A) requires that the Fairfax Planning Commission review and approve the design of new residences to ensure 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."

The hillside setting of Walsh Lane is like many other residential neighborhoods in Fairfax and is characterized by an eclectic mix of homes surrounded by mature oak and bay trees, along with other native vegetation and landscaped yards. Walsh Lane is not a highly visually prominent street and the project's location on Walsh Lane is largely obscured by vegetation and other homes. The existing home is clad in natural wood shingles and generally conforms with the eclectic mix of homes in the surrounding vicinity.

The project proposes new light brown cement board panels to replace the existing natural wood shingles, a fire safety improvement. The two-story lower floor garage/upper floor primary bedroom addition would be covered in 4' by 8' dark blue cement board panels. The door and window frames, trim, and railings would be black. The retaining wall adjacent to the driveway would be unfinished concrete and gray asphalt shingles are proposed for the roof. The proposed exterior would meet Wildland Urban Interface (WUI) fire requirements and be natural or dark colors to blend in with the natural setting and the assorted mix of homes in the surrounding neighborhood.

The remodeled home would be similar to many other homes located on sloped sites throughout the hillsides of Fairfax and would meet all of the relevant development standards in the Fairfax Municipal Zoning Ordinance, including the Design Review

Criteria. The siting and design of the residence is generally in keeping with other residences in the neighborhood and provides a balanced, well-composed design on the project site. Additionally, the project would require minimal disturbance to a site that has been previously disturbed by the existing development. While three bay tree clumps would be removed with project implementation, their removal would be necessary for fire safety clearance regardless of whether the project is approved or is not approved.

The addition of 1,357 square feet of living space to the existing 1,501 square foot home (for a total of 2,866 square feet of living space) would make it one of the larger homes in the immediate neighborhood. However, with the exception of the addition, the majority of the additional living space would be created by converting unconditioned space that already exists within the lower level. While the addition would fall outside of the footprint of the existing home, it was designed to blend in with the existing home and complement its rooflines. Moreover, it would be located in an area of the project site that has already been disturbed by the existing development.

The butterfly design of the roof over the proposed addition creates the greatest building height. The 31 foot 10 inch height is within the Town's 35 foot height limit.

The table below provides a summary of lot and home sizes in the immediate area. The proposed project would have approximately twice the Floor Area Ratio (FAR of .40) of most of the other homes in the vicinity. As noted above, most of the residence's additional area comes from conversion of underfloor space, and only results in a modest visual impact from the 2 foot increase in general building height.

6 Walsh Avenue – Immediate Neighborhood Comparison						
APN #	ADDRESS	LOT SIZE	HOUSE SIZE	# BEDROOMS	# BATHS	Floor Area Ratio
002-021-17	65 Manzanita	7,500	1,437 SF	3	2	.19
003-192-23	68 Manzanita	8,100 SF	793 SF	1	1	.10
003-192-24	70 Manzanita	6,500 SF	1,359 SF	2	2	.21
003-192-55	76 Manzanita	9,277 SF	1,990 SF	4	2	.21
003-192-20	10 Walsh	9,000 SF	2,000 SF	4	2	.22
003-192-32	20 Walsh	7,000 SF	1,531 SF	3	2	.22
003-192-36	24 Walsh	6,600 SF	1,472 SF	1	1	.22
003-201-18	21 Walsh	10,449 SF	900 SF	1	1	.09

Tree Removal Permit

The project includes the removal of three bay tree clumps. One bay clump is in the location of the garage addition, but removal of all three clumps is warranted for fire safety purposes regardless of whether the project is constructed or not. While the Tree Committee has not met since February due to the COVID 19 pandemic and has not reviewed the Tree Removal Application for the project, recent changes in the Tree Ordinance assign the Planning Commission the responsibility to make decisions on Tree Permits accompanying projects within their purview.

OTHER DEPARTMENT/AGENCY COMMENTS/CONDITIONS

Ross Valley Fire Department (RVFD)

The following summarizes RVFD requirements, which have been incorporated into conditions of approval in the attached resolution. Construction shall comply with the requirements of Chapter 7A of the 2016 California Building Code. A Class "A" roof assembly is required. All vegetation and construction materials are to be maintained away from the residence during construction. A fire sprinkler system shall be installed throughout the entire building. Smoke detectors shall be installed throughout the entire building and be provided with AC power and be interconnected for simultaneous alarm. Carbon monoxide alarms shall be provided outside each sleeping area in the immediate vicinity of the bedrooms. Address numbers at least 4 " tall are required and must visible from the street, controlled by a photocell and illuminated all night. A Vegetation Management Plan (VMP) is required for the project. RVFD approved the VMP for the project on June 24, 2020.

Marin Municipal Water District (MMWD)

Written requirements submitted by MMWD have been incorporated into conditions of approval in the attached resolution. The following summaries those comments: comply with Ordinance No. 429 requiring the installation of grey water recycling system when practicable for existing structures undergoing a substantial remodel that necessitates enlarged water service; indoor and outdoor requirements of District Code Title 13 - Water Conservation must be complied with; any landscaping plans subject to review by the Town of Fairfax or subject to a Town permit must be reviewed and approved by the District; backflow prevention requirements must be met;. all the District's rules and regulations if effect at the time service is requested must be complied with.

Ross Valley Sanitary District (RVSD)

RVSD submitted the following written requirements, which have been incorporated into conditions of approval in the attached resolution: Plans shall be reviewed and approved by RVSD which show the location of the RVSD sewer main, existing lateral, and point-of-connection for the proposed improvements, the elevation of the lowest-habitable-floor in the structure (the basement) and the elevation of the nearest downstream sewer manhole on the RVSD mainline; and, the location of all existing or proposed sewer cleanouts, check and/or backwater devices located outside the foundation of the proposed structures.

A neighbor has complained that the existing sewer across the neighboring property does not comply with standards for private sewers, and that there is no easement for the sewer. No evidence has been presented regarding sewer noncompliance, and RVSD inspected the recent sewer line sleeving and did not comment on any violations.

Given that the sewer lateral traverses across two adjacent properties, staff requests that the Planning Commission provide direction on whether the applicant should improve the existing sewer lateral and document the existence of an easement, revise the sewer plan to route the lateral down Walsh Avenue to Manzanita Road, or whether this is a private matter to be worked out between the private property owners?

Police, Building and Public Works Departments

There were no comments received from the Police, Building or Public Works Departments.

RECOMMENDATION

1. Conduct the public hearing.
2. Move to approve Application 20-8 and adopt Resolution No. 2020-08 (Attachment A), setting forth the findings and conditions for project approval

ATTACHMENTS

Attachment A – Resolution No. 2020-08
Attachment B – Sewer Lateral Replacement Report
Attachment C – Neighbor Sewer Comment and Photos
Attachment D – 12/19/20 Herzog Geotechnical Investigation report
Attachment E – Town Engineer's final report on project
Attachment F – Tree Removal Application
Attachment G – Vegetative Management Plan Approval Letter from Ross Valley Fire District

RESOLUTION NO. 2020-08

A Resolution of the Fairfax Planning Commission Approving Application No. 20-08 for a Hill Area Residential Development, Excavation, Design Review, and Tree Removal Permits for a 50 Percent Remodel and Addition at 6 Walsh Lane

WHEREAS, the Town of Fairfax has received an application from the Irene Pan Panagoulias Survivor's Trust for an addition and 50% of remodel of single-family residence on December 19, 2019; and

WHEREAS, the Planning Commission held a duly noticed Public Hearing on August 20, 2020 at which time the Planning Commission determined that the project complies with the Hill Area Residential Development Overlay Ordinance, Excavation Ordinance, Design Review Regulations, and Tree Ordinance; 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, Design Review, and Tree Removal 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.

ATTACHMENT A

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 an addition and 50 percent remodel of a single-family residence on a 7,200 square foot parcel shall not constitute a grant of special privilege and shall not contravene the doctrines of equity and equal treatment.

5. The development 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 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 Town.

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:

   Architectural plans Frederic C. Divine Associates revision date 8/12/20; geotechnical report by Herzog Associates, dated 12/19/19; preliminary grading and drainage plan by Oberkamper and Associates, dated 12/18/19

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; and

16. Town Code § 17.072.090(c)(4) prohibits grading of hillside properties from October 1st through April 1st 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.

Tree Permit

17. The alteration of the trees is necessary to protect the public health and safety and prevent damage to property (Town Code §8.36.060(B)(1); and

18. Is necessary to allow the owner to reasonably develop and use the property (Town Code §8.36.060(B)(4).

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

1. The project is approved per the following plans and documents: Frederic C. Divine Associates revision date 8/13/20, pages A1,1, 2, F1, F2, A2.0 through A2.3, A3.0 through A3.2, A4.0 and A4.1; the geotechnical report by Herzog Associates, dated 12/19/19, and the Tree Removal Application dated 5/5/20.

2. Prior to issuance of any of the building permits for the project the applicant or his assigns shall:

    a. Submit a construction plan to the Public Works Department which may include but is not limited to the following:

        i. Construction delivery routes approved by the Department of Public Works.
        ii. Construction schedule (deliveries, worker hours, etc.)
        iii. Notification to area residents
        iv. Emergency access routes

    b. 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).

    c. 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.

d. 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.

e. 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.

f. 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.

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

h. Prior to the removal of any trees not 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. To further minimize impacts on trees and significant vegetation, the applicant shall submit plans for any utility installation (including sewer, water and drainage) which incorporates the services of the project arborist to prune and treat trees having roots 2 inches or more in diameter that are disturbed during the construction, excavation or trenching operations. In particular, cross country utility extensions shall minimize impacts on existing trees. Tree root protection measures may include meandering the line, check dams, rip rap, hand trenching, soil evaluation and diversion dams. Any pruning shall take place during the winter when trees are dormant for deciduous species and during July to August for evergreen species.

i. If deemed necessary by the Town Engineers, 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.

3. During the construction process the following shall be required:

a. The geotechnical engineer shall be on-site during the grading process and shall submit written certification to Town Staff that the grading 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 be situated off the travel lane of the adjacent public right(s)-of-way at all times. 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.

4. 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.

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

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

7. Any changes, modifications, additions, or alterations made to the approved set of plans will require a modification of Application # 20-8. 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 20-8 will result in the job being immediately stopped and red tagged.

8. Any damages to the public portions of Walsh, Manzanita, Frustuck, or other public roadway used to access the site resulting from construction-related activities shall be the responsibility of the property owner.

9. 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.

10. 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.

11. In accordance with Town Code §8.20.060(C)(1) and (2), the operation of any tools or equipment used in construction or demolition work or in property maintenance work between the hours of 6:00 PM and 8:00 AM Monday through Friday, or on weekends and holidays between 4:00 PM and 9:00 AM is prohibited.

12. 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.

13. 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

14. Project has been deemed a "substantial remodel" and as such requires installation of a fire sprinkler system that complies with the National Fire Protection Association regulation 13-D and local standards. The system will require a permit from the Fire Department and the submittal of plans and specifications for a system submitted by an individual or firm licensed to design and/or design-build sprinkler systems.

15. 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.

16. All smoke detectors in the residence shall be provided with AC power and be interconnected for simultaneous alarm. Detectors shall be located in each sleeping room, outside of each sleeping room in a central location in the corridor and over the center of all stairways with a minimum of 1 detector on each story of the occupied portion of the residence.

17. Carbon monoxide alarms shall be provided in existing dwellings when a permit is required for alterations, repairs, or addition and the cost of the permit exceeds $1,000.00. Carbon monoxide alarms shall be located outside of each sleeping area in the immediate vicinity of the bedrooms and on every level of the dwelling, including basements.

18. Address numbers at least 4 inches tall must be in place adjacent to the front door. If not clearly visible from the street, additional numbers must be placed in location that is visible from the street. The numbers must be internally illuminated or illuminated by an adjacent light controlled by a photocell that can be switched off only by a breaker so it will remain illuminated all night.

19. Alternative materials or methods may be proposed for any of the above conditions in accordance with Section 104.9 of the Fire Code.

20. All approved alternatives requests, and their supporting documentation, shall be included in the plan sets submitted for final approval by the Fire Department.

21. All vegetation and construction materials are to be maintained away from the residence during construction.

Marin Municipal Water District (MMWD)

22. A copy of the building permit must be provided to the district along with the required applications and fees.

23. All indoor and outdoor requirements or District Code Title 13, Water Conservation must be complied with.

24. Any landscaping plans subject to review by the Town of Fairfax or subject to a Town permit must be reviewed and approved by the District.

25. Backflow prevention requirements must be met.

26. Ordinance 429, requiring installation of grey water recycling system when practicable, must be incorporated into the project building permit plans or an exemption letter from the District must be provided to the Town.

27. All of the District's rules and regulations if effect at the time service is requested must be complied with.

Ross Valley Sanitary District (RVSD)

28. The applicant shall submit plans to RVSD for review which show the following:

    a. The location of the RVSD sewer main, exiting lateral, and point-of-connection for the proposed improvements.
    b. The elevation of the lowest-habitable-floor in the structure (the basement) and the elevation of the nearest downstream sewer manhole on the RVSD mainline.
    c. The location on of all exiting or proposed sewer cleanouts, check and/or backwater devices located outside the foundation of the proposed structures.

29. All new connections, remodels, additions, and improvements are subject to Sewer Capacity Charges and Permit Fees.

Miscellaneous

30. Any future tree removal, beyond the trees proposed for removal in the 5/5/2020 Tree Removal Application will require the review and approval of the Tree Committee and may also require review and approval with mitigation measures of the geotechnical engineer if the tree removal may effect hillside stability below the structure at a future date.

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, Design Review Permit, and Tree Removal 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 20th day of August 2020 by the following vote:

AYES:
NOES:
ABSTAIN:

_____
Chair Green

Attest:

_____
Ben Berto, Director of Planning and Building Services

Inspections Work Order

Scheduling

Team Leader	Aaron Dillingham	Work Order ID	6 Walsh Ln FX 11/6/2019 6:05 AM
Contractor	Hardiman Construction's	Contractor Phone	
Contractor Contact		Address	6 Walsh Ln FX
Permit Type	Property Sale	Task status	Completed
Permit No	[illegible]	APN	[illegible]
Date/Time planned	Wednesday, November 6, 2019 8:00 AM	Number of Units	
LRGP #		LRLP #	

Record of Private Sewer Connection

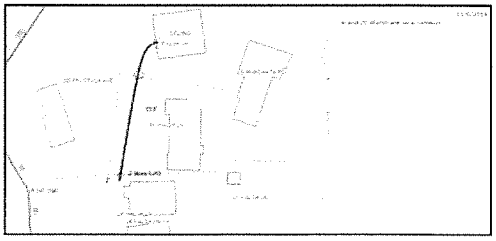
Location of Public Sewer	Common with 20 Walsh	Depth of Sewer at Curb	
Depth of Public Sewer		Size of Main	
Distance to Right of Property Line		Distance to Left of Property Line	

ATTACHMENT B

Location of Nearest Manhole		Distance to Nearest Manhole	
	☐ Downstream ☐ Upstream	Upper Lateral Pipe Material	
Location of Backwater Prevention Device	left rear of house	Lower Lateral Pipe Material	HDPE-DR17 (HDPE DR-17)
Location of Cleanout 1	at P/L	Method	Pipe Bursting
Full Upper Length	153	Full Lower Length	
Partial Upper Length		Partial Lower Length	

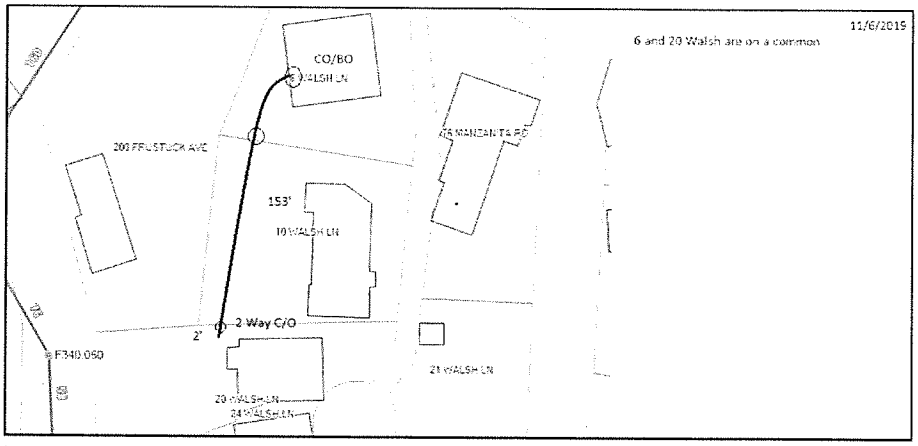
Location photo

Location sketch



Attachments


11/06/2019 09:25
11/06/2019 09:30



Notes: 11/6/2019 Common with 20 Walsh, 10 has seperate connection (BD)

Resource details

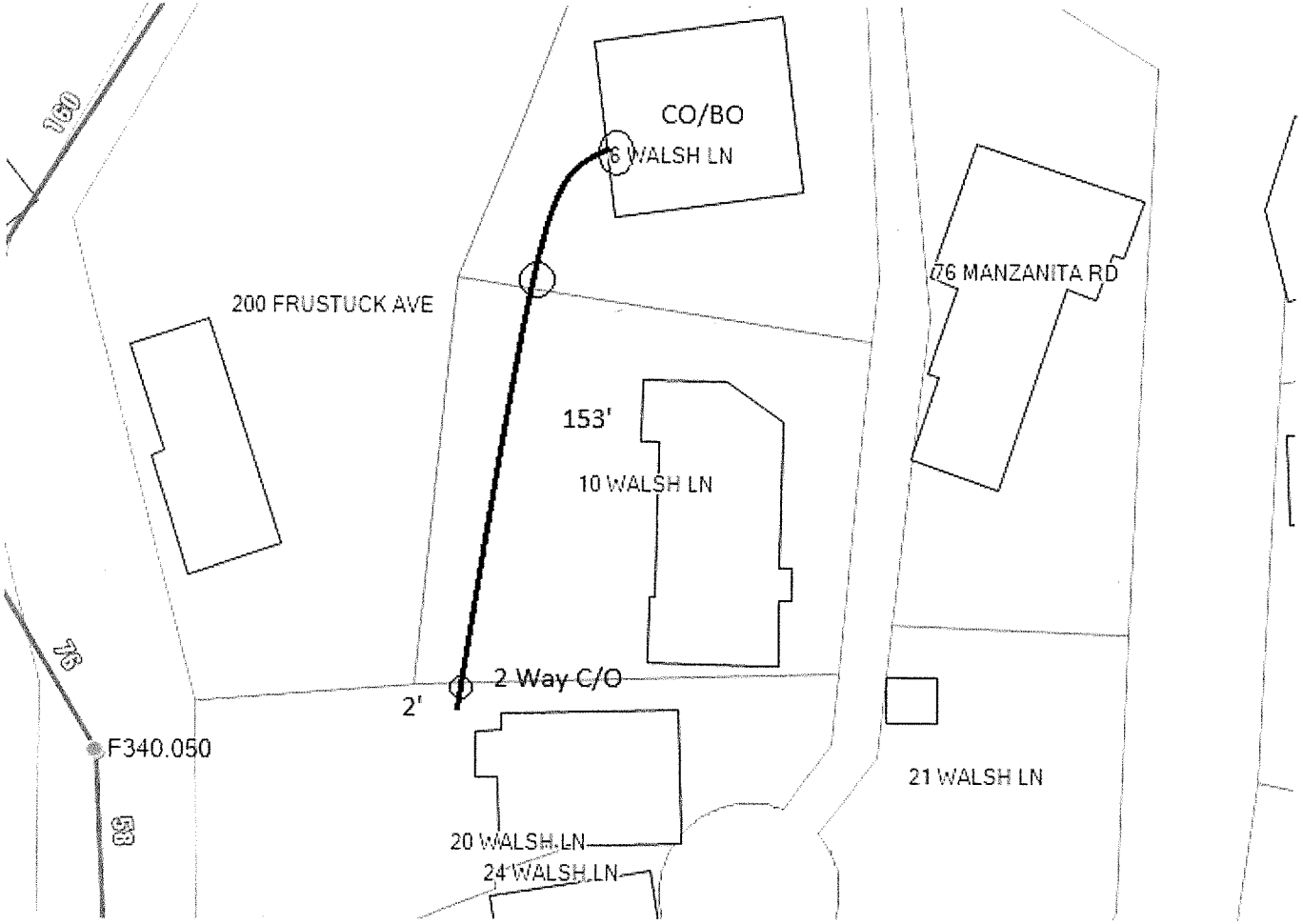
Resource ID	Actual hours	Actual overtime hours	Actual double time hours
Aaron Dillingham	1		
PT02	1		

Connection: Existing — Completed: ☑

Status: — Compliant:

11/6/2019

6 and 20 Walsh are on a common



Private Sewer Lateral Inspection Record*

Address of Project: 6 Walsh Ln FX

Description of Work: P/S Replacement

Permit No. 8156 **Issued on** 10/24/19 **Grant or Loan #** —

Permit Type: ☐ Pressure Test ☐ Repair ☑ Replacement ☐ Substantial Remodel
☐ New Connection ☐ Burn Down ☐ Other

Trigger: ☑ Property Sale ☐ Remodel ☐ Failure ☐ Add a Bathroom
☐ Common Interest ☐ Paving Project ☐ CIP

SEWER PERMIT INSPECTIONS

Type of Inspection	Date	Inspector	Notes/Comments
GRAVITY SEWER	11/6/19	BD	
Bedding			☑ 3/4 Crush ☐ Other:
Pipe			☐ C-900 ☐ Sch 80 ☐ DIP ☑ HDPE
Backfill			☐ Class II ☑ Indigenous Material
Cleanout(s)			
Tie-in to Public Sewer			Common with 20 Walsh
Connection to plumbing			
PRESSURE SEWER			
Bedding			☐ 3/4 Crush ☐ Other:
Pipe			☐ Sch 80 ☐ HDPE
Backfill			☐ Class II ☐ Indigenous Material
Connection to side sewer			
Cleanout(s)			
Check Valve, Gate Valve, Union Pressure test			
Function test			
FINAL INSPECTIONS	11/6/19	BD	
CCTV			pws
Water Test			☑ Pass
Air Test			☑ Pass
Back Flow Preventer			☑ Contra Costa ☐ Sewer Popper ☐ Other:
Cleanout Caps/Covers			
Gate/Check Valves			
Electrical Permit & Encroachment permit- to be signed off by issuing agency			
Final Approval:	11/6/19	BD	pws

Inspector Notes: Common with 20 Walsh

153' of 4" HDPE upper
One CO/BO left rear of house
One 2 way C/O @ P/L one 2 way at P/L 20 Walsh

- If this inspection is for the Pressure test or CCTV this will serve as your CERTIFICATE OF COMPLAINCE with Ordinance 66 requirements and is good for the specified timelines.
THE HOMEOWNER SHOULD KEEP THIS DOCUMENT FOR THEIR RECORDS.

Revised Jul 2016

Ross Valley Sanitary District

2960 Kerner Blvd, San Rafael, CA 94901
Tel.(415) 259-2949 Fax(415) 259-2957

PROPERTY OWNER(S): **WALLACE ROBERT REVOC TRUST**
PROPERTY TYPE: **Residential**

ADDRESS OF PROJECT: **6 WALSH LN**

TOWN/CITY: **Fairfax**
ZIP: **94930**

PHONE:
APN: **003-192-20**

ALTERNATE ADDRESS: 6 WALSH LN FAIRFAX CA 94930

PERMIT TYPE: **Replacement**
TRIGGERS: **Property Sale**

COMMENTS: PAID BY/ISSUED BY HARDIMAN CONSTRUCTION

CONTRACTOR **Hardiman Construction**
CONTRACTOR LIC NO: **611970**

CONTRACTOR PHONE: **(415) 847-7651**

GRANT/LOAN NUMBER:

FOR REPAIR, REPLACEMENT, PRESSURE TEST, CCTV OR POOL DRAIN INSPECTION FEE IS $250.00. EACH ADDITIONAL SEWER INSPECTION $150.00

TOTAL PERMIT FEE: **$250.00**

SD#1 PERMIT NO: 8156

DATE ISSUED: 10/24/2019

NOTE PERMIT EXPIRES 1 YR FROM DATE OF ISSUE

CHECK #:5543

The above-stated owner/contractor is hereby granted permission to connect, repair or replace a building sewer lateral to the main public sewer at the above-stated property in accordance with the ordinances and resolutions and Standard Specifications and Drawings ('Standards') of Sanitary District No.1 of Marin County California. In addition to this permit, an encroachment permit and other permits from resource agencies may be required by the City/County/State/Federal Government where work is to be done. ALL LATERALS MUST BE INSPECTED BY AUTHORIZED DISTRICT PERSONNEL PRIOR TO BACK-FILLING. Any violation of the Ordinances of Sanitary District No.1 is punishable by a fine not exceeding $1000.00 or by imprisonment not exceeding thirty (30) days, or both. This permit will expire if connection is not made within one (1) year from date of issue.

F-10

Permit No. Record

Date 9/20/95

No. of Units

SANITARY DISTRICT NO. 1

Record of Private Sewer Connections

Tract FairfaxPark City Fairfax

A/P No. 3-192-20 Sub. Street 6 Walsh Lane

Lot No. Owner Wallace, Robert

Location of public sewer Frustuck

Depth of house sewer at curb Depth of public sewer Size of main 6" VCP

Distance to right property line

Distance to left property line

Location of nearest manhole RH above tie-in

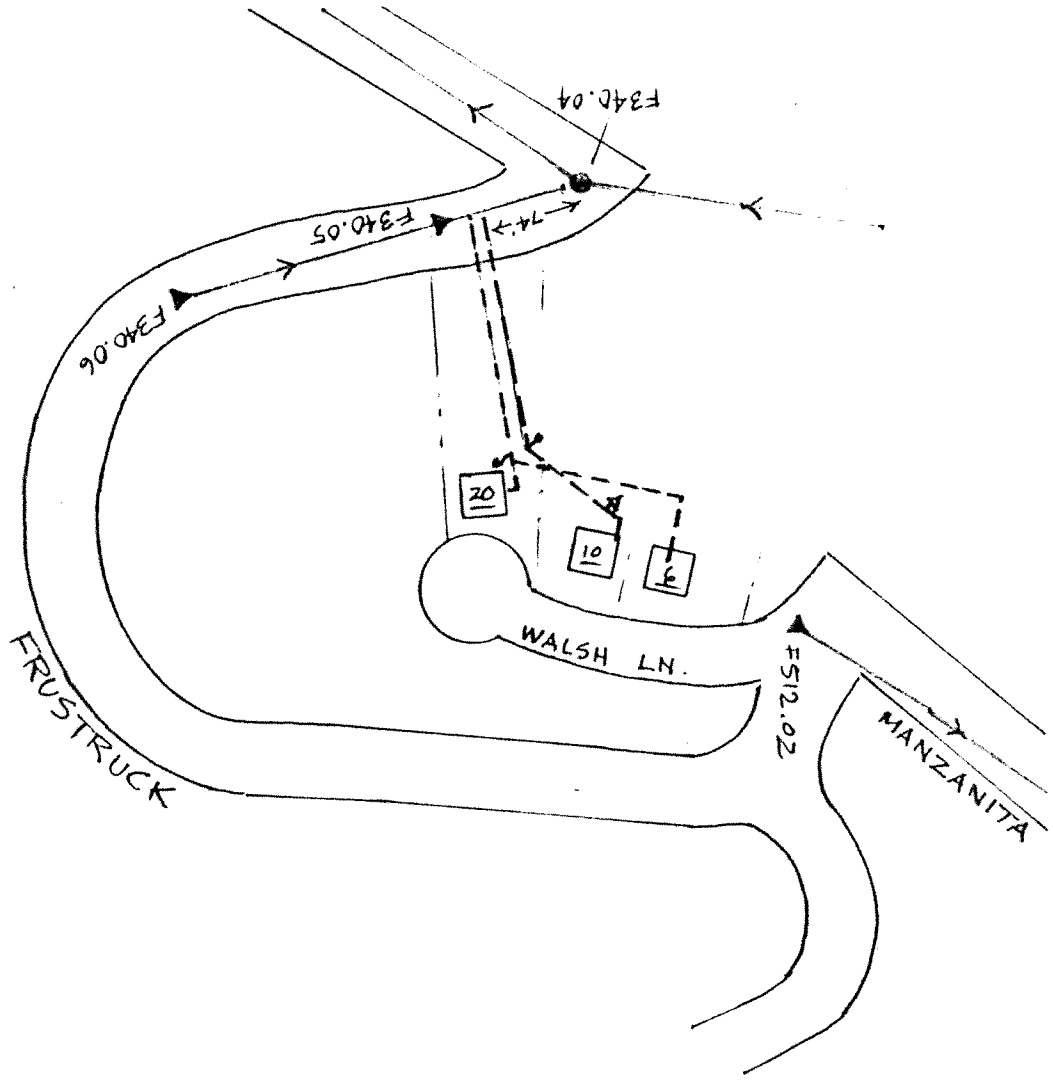
Distance to nearest manhole

House sewer material

Location of cleanout see drawing

Plumbing outlet

Remarks Research of lines as result of #20 stating the she believes #6 tied into her line and that #20 was connected to Public Sewer prior to #6.


F34C.04
F340.05
74'
F340.06
20
10
5
WALSH LN.
FRUSTRUCK
F512.02
MANZANITA

Kara Spencer

From: Morgan Hall <morgan@morganhallarchitect.com>
Sent: Thursday, August 13, 2020 7:13 PM
To: Kara Spencer
Cc: Ben Berto; Linda Neal
Subject: Re: 6 Walsh Lane Planning Proposal

Hi Kara,
Here is additional information regarding the illegal sewer lateral from 6 Walsh Lane traversing the rear yard of 10 Walsh Lane. Attached please find:

- Site plan of rear yards of 6, 10 and 20 Walsh Lane showing locations of lateral lines.
- Photographs (keyed to Site plan)
- #1. Lateral from #6 breaking surface. Note story poles for #6 in rear.
- #2. Lateral from #6 cracking ground and endangered oak tree.
- #3. Location of #6 lateral (marked by orange tape) as it heads toward connection with #20's lateral.

My previous letter covered many of the issues created by the #6 Walsh Lane lateral traversing the rear yard of #10 Walsh Lane. I won't revisit all that at this point.

Sharab Bogan-Ziegler, the owner of #10, believes the #6 lateral in her rear yard will significantly reduce the value of her property. Her offer to help pay for the legal relocation of the #6 lateral to the front of the house has gone unanswered.

Some final observations: My own experience as an architect has been that non-conforming land use issues must be corrected (or incorporated into the scope of work) before approval of a major remodel, especially a Hill Area Residential Development in Fairfax, is granted.

It is clear that the lateral sewer from #6 Walsh Lane is non-conforming as well as not legal. The property at #6 Walsh Lane has no access to a public sewer from the rear of the house. The public sewer to the front of the house may or may not have existed when the house was built in +/- 1967. In any event, running a lateral to the rear and across the adjacent neighbor's property was easiest and is what was done. Doing it this way accounts for the lack of documentation anywhere for it.
The #6 lateral observes no setbacks and restricts future expansion possibilities for #10 Walsh Lane.
The rear half (12 feet) of the house at #10 has settled about 1 inch. Given the careless nature of the #6 lateral installation, it may be regarded as a cause of this settling.
Should the illegal #6 lateral fail, is #10 obligated to grant access to repair?
There were 2 incidents in the past in which sewage from #6 entered both #10 (filling the lower level washing machine) as well as #20 (flooding the lower level floor).

We feel that the sewer lateral from #6 Walsh Lane must be corrected before the Fairfax Planning Commission grants approval of Application # 20-8.

Thank you for you consideration,
Morgan Hall, Architect
Sharab Bogan-Ziegler, Owner

ATTACHMENT C

On Thu, Aug 13, 2020 at 12:22 PM -0700, "Morgan Hall" <morgan@morganhallarchitect.com> wrote:

Hi Kara,
Thanks for getting on this so quickly. I will try to get some photos to you.
Unfortunately, someone, awhile back, saw fit to clandestinely weight the line down with rocks. That covert operation brought it down to grade.
This helps visually, but doesn't render it 1. code compliant vis a vis burial depth and 2. legal, having no documentation whatsoever.
Thank you,
Morgan Hall

Get Outlook for iOS

On Mon, Aug 3, 2020 at 10:22 AM -0700, "Kara Spencer" <kspencer@townoffairfax.org> wrote:

Hi Morgan,

I'm the planner on this project. Linda took it over when I was on furlough and I'm back now. I talked to Ben and Linda about your concerns and we decided that it would be helpful to have some documentation of the sewer line broaching the ground (it's the sleeve with the sewer line in it that broaches the ground, correct?). Do you think you could send us some photos of it?

Thanks,
Kara

From: Linda Neal <lneal@townoffairfax.org>
Sent: Wednesday, July 29, 2020 12:49 PM
To: Kara Spencer <kspencer@townoffairfax.org>
Cc: Ben Berto <bberto@townoffairfax.org>
Subject: FW: 6 Walsh Lane Planning Proposal

From: Morgan Hall [mailto:morgan@morganhallarchitect.com]
Sent: Thursday, July 09, 2020 3:45 PM
To: Linda Neal <lneal@townoffairfax.org>
Cc: Mark Lockaby <mlockaby@townoffairfax.org>
Subject: 6 Walsh Lane Planning Proposal

Hi Linda and Mark,
I believe my new next door neighbor (Maritsa Chew) at 6 Walsh Lane has an application in for a garage addition and remodel. Sharab Bogan, owner of 10 Walsh Lane, and I have a problem with 6 Walsh Lane that you might able to help us with.

The existing sewer lateral from 6 Walsh Lane travels across our rear yard at 10 Walsh Lane and is not legal and never has been.

When Sharab bought #10 Walsh Lane (next door to #6) about ten years ago, the existence of this sewer lateral was never disclosed to her nor was it included in the Title Report. She first became aware of it when 6 Walsh Lane went up for sale a year or so ago.

I've searched for documentation of the sewer and there is none. There is no easement, no record of a permit. Apparently, Bob Wallace, owner of #6, must have clandestinely installed the lateral line in the 1960's when he built the house.

Bob Wallace passed away a year or so ago and his children put the house on the market. At that time, they asked Sharab if they could put dye in our toilet to confirm that our sewer was tied into their father's sewer line in our rear yard. Needless to say, were taken aback by this sudden surprise. It also sounded a little "fishy" so we didn't allow the test until we got more information. The Wallace children claimed that everything about it was legal. When I persued things a little further, they got a bit defensive and aggressive about it. In this and further dealings with them, I'll just say that they were not forthright with us.

The only "evidence" I found of the sewer lateral is a sketch of a dotted line emanating from #6 (Walsh Lane), traversing #10 (Walsh Lane) and meeting a dotted line emanating from #20 (Walsh Lane). (I've attached the sketch. There is also some vague neighbor narrative about the sewer) I found the sketch at the Ross Valley Sanitary District. This sketch is not identified, not dated, it's drawer is not identified and it is minimally labeled. Based on other (unrelated) drawings I've seen, it is my guess is that the sketch was done by Bob Norwood, an engineer and previous owner of 10 Walsh Lane. Mr. Norwood was deceased when Sharab bought the house. The Norwoods originally bought 10 Walsh Lane in 1983, roughly 20 years after Bob Wallace put in the sewer lateral for 6 Walsh Lane. Why the sketch of the line was done is anybody's guess; perhaps to lend it a sense of legitimacy.

Making matters more complicated, the new owner of #6 Walsh Lane had the existing sewer sleeved by Titan Trenchless without our knowledge or permission. The installed sleeve doesn't comply with Calif. Plumbing Code requirements, breaking the surface of the ground (in our back yard) and much of it buried less than the required 1 foot.
When I brought this to the attention of the Sanitary District, I was informed abruptly that the line was OK and that the Sanitary District doesn't concern itself with in neighbor squabbles over sewers.

That's the long and the short of this situation. Sharab and I are not exactly sure what to do. I've brought the matter of the sewer up via email the new owner and contractor. They appear to be "stonewalling" it.

We have suggested to the new owner that the sewer in our rear yard be abandoned and a new one be run out the front of #6 Walsh Lane where a public sewer is about 40 feet away. This appears on the attached sketch. Sharab has offered to help pay for this change. This would simplify things in the long run, especially if there were a failure in the line in her rear yard.

Sharab feels that there is a history of irresponsible behavior toward the 10 Walsh Lane property in the past. Individuals and entities continue to treat her and her property without prudence and propriety. Sharab has done nothing wrong. Whereas
previous and present owners have unilaterally granted themselves and their agents access the #10 Walsh Lane property to:

- Install a sewer lateral without easements, permits or permission
- Claim that this sewer was the dominant line and has easements to that effect.
- Had the line videotaped without permission
- Had the line sleeved without permission
- Attempted to bury the exposed sleeve without permission
- Claim that the sleeve installation was done properly

The actions have been taken in an almost casual way, as if all involved were entitled to do whatever they like. The ramifications of these actions however, could have a substantial effect upon the value of Sharab's property. These improprieties, along with the complete lack of documentation, are quite upsetting for Sharab. We do not think the neighbor's sewer in our back yard is legal. We also think that access to it on our property is not necessarily prescriptive because it was never disclosed and Sharab had no knowledge of it.

This situation is truly unfortunate and shouldn't be allowed to remain. Hopefully some one at the the Town can help us with this.

Thanks,
Sharab Bogan
Morgan Hall

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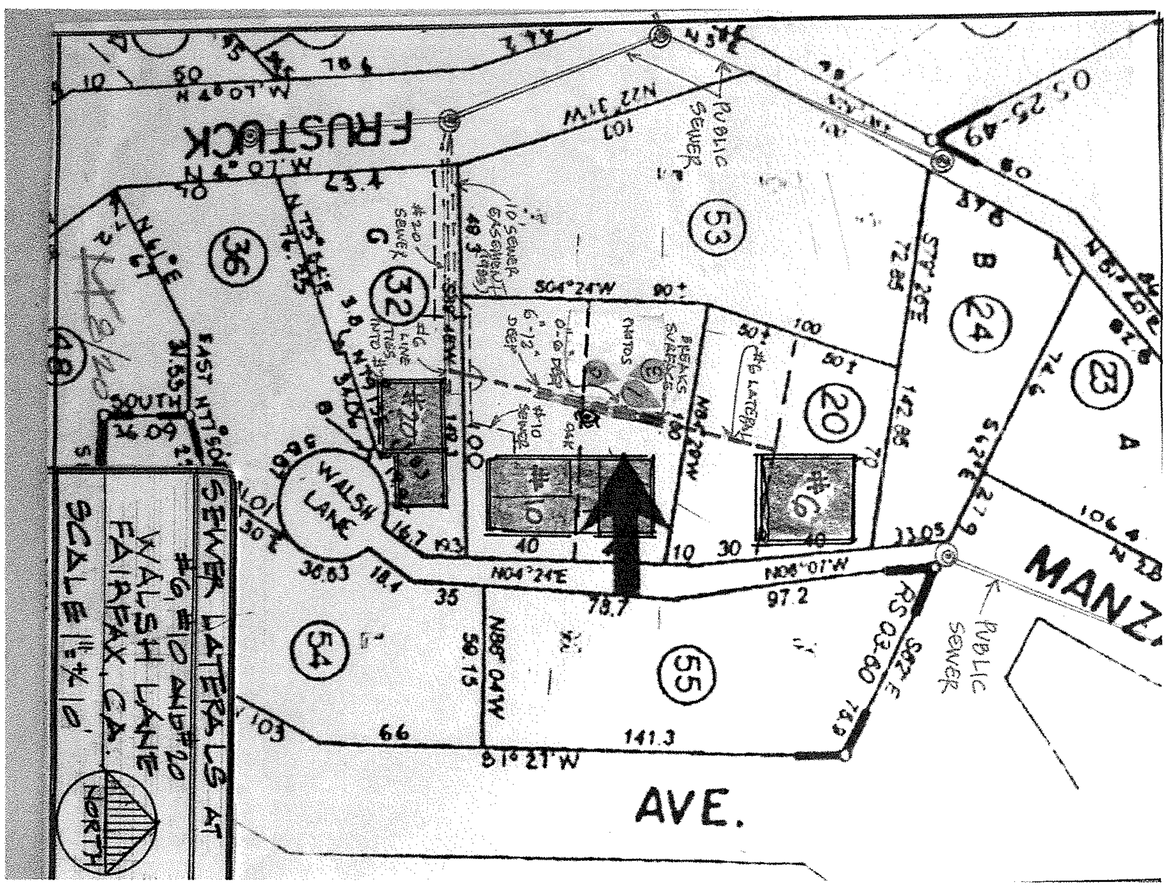
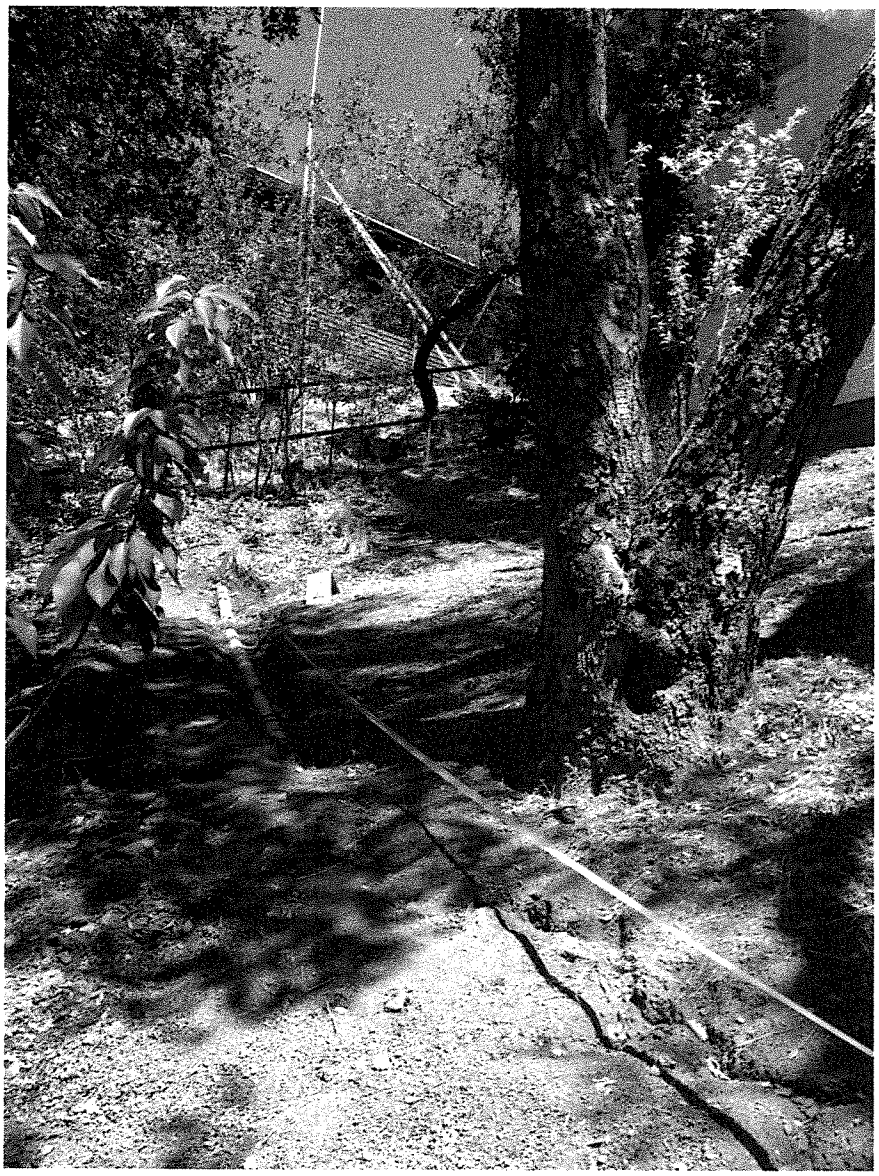
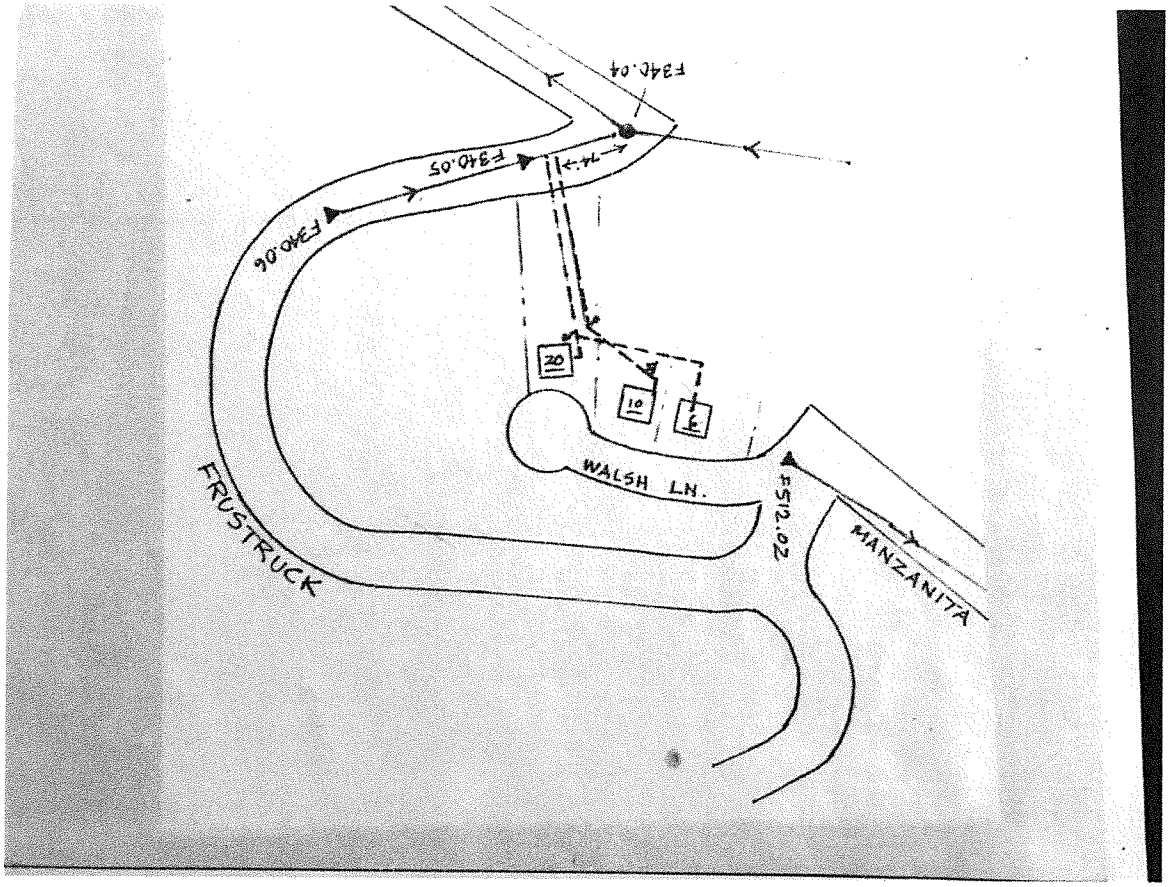

AVE.
FRUSTUCK
PUBLIC SEWER
PUBLIC SEWER
WALSH LANE
10' SEWER EASEMENT
#6 LATERAL
BREAKS SURFACE
SEWER LATERALS AT
WALSH LANE
FAIRFAX, CA.
NORTH




F34C.04
F340.05
74'
F340.06
20
10
5
WALSH LN.
FRUSTRUCK
F512.02
MANZANITA

HERZOG
GEOTECHNICAL
CONSULTING ENGINEERS

December 19, 2019
Project Number 3861-01-19

Irene Pan Pangoulias Survivor's Trust
Attention: Maritsa B. Chew, Trustee
P.O. Box 1848
El Granada, California 94018

RE: Report
Geotechnical Investigation
6 Walsh Lane
Fairfax, California

Dear Ms. Chew:

This presents the results of our geotechnical investigation for the proposed additions to the residence at 6 Walsh Lane in Fairfax, California. The scope of our investigation was to review selected geologic references, observe exposed site conditions, drill three test borings in the project area, perform laboratory testing, conduct engineering analyses, and develop geotechnical recommendations for the design and construction of the addition. Our scope of work was outlined in our proposal dated December 3, 2019.

PROJECT DESCRIPTION

We understand that the project will consist of renovating the residence, constructing a new garage on the south side of the house, and upgrading foundations for the structure. The project footprint is shown on the plan by Fredric C. Divine Architects transmitted November 20, 2019.

WORK PERFORMED

Prior to performing our investigation, we reviewed selected geologic references. We explored the subsurface conditions in the project area on December 12, 2019 to the extent of three test borings approximately 3 and 8-1/3 feet deep and extending into bedrock. Due to limited access, the test borings were drilled with portable drilling equipment. The approximate locations of the test borings are shown on the attached *Site Plan*, Plate 1.

Our personnel observed the drilling, logged the subsurface conditions encountered, and collected soil samples for visual examination and laboratory testing. Samples were retrieved using Sprague and Henwood and Standard Penetration Test samplers driven with a 70-pound hammer. Penetration resistance blow counts were obtained by dropping the hammer through a 30-inch

ATTACHMENT D

free fall. The number of blows was recorded for each 6 inches of sampler penetration. These blow counts were then correlated to equivalent standard penetration resistance blow counts. The blows per foot recorded on the boring logs represent the accumulated number of correlated standard penetration blows that were required to drive the sampler the last 12 inches or fraction thereof.

Logs of the test borings are presented on Plates 2 through 4. The soils encountered are described in accordance with the criteria presented on Plate 5. Bedrock is described in accordance with the *Engineering Geology Rock Terms* presented on Plate 6. The logs depict our interpretation of subsurface conditions on the date and at the depths indicated. The stratification lines on the logs represent the approximate boundaries between soil types; the actual transitions may be gradational.

Selected samples were laboratory tested to determine their moisture content and dry density. Laboratory test results are posted on the boring logs in the manner described on the *Key to Test Data*, Plate 5.

FINDINGS

Site Conditions

The site is situated on the western side of Walsh Lane in Fairfax, California. The site is located near the top of the western flank of a south-trending spur ridge. The house is situated on a sloping pad which was created by excavating along the ridge crest and placing fill on the ridge flank. The fills downslope and adjacent to the house are supported by a series of terraced timber bulkheads ranging to about 4 feet high. Some of these walls are yielding, resulting in tension cracks within the wall backfill. Downslope of the bulkheads, the ridge flank continues down towards the west at between about 1-1/2:1 and 2:1 (horizontal:vertical).

The existing residence is a wood framed structure which appears to be supported on spread footing foundations. The house foundations have experienced severe cracking as a result of differential settlement and downslope creep. Roof downspouts for the structure discharge into conduits which outlet on the slope downhill of the house.

Subsurface Conditions

The site is within the Coast Range Geomorphic Province which includes San Francisco Bay and the northwest-trending mountains that parallel the coast of California. These features were formed by tectonic forces resulting in extensive folding and faulting of the area. Previous geologic mapping by Rice (1976) indicates the site to be underlain by sandstone and shale of the Franciscan Assemblage, and the ridge flank to be blanketed by Quaternary aged colluvial soils which have been deposited by slopewash processes.

Our test borings encountered fill, topsoil, colluvium (slopewash) and residual soil overlying bedrock. The fill encountered generally consists of soft sandy silt and very loose clayey sand and gravel. The topsoil encountered consists of soft and organic sandy silt. The colluvium encountered consists of soft to medium stiff sandy and gravelly clay. The residual soils encountered consist of loose to medium dense clayey sand derived from the in-place weathering of the underlying parent bedrock. The soils encountered are relatively weak and compressible, are of low expansion potential, and are subject to downslope creep on hillsides. Bedrock encountered in the borings generally consists of moderately hard sandstone.

The approximate test boring locations are shown on the *Site Plan* (Plate 1). The test borings encountered the following profiles:

	Depth (feet)			
Boring	Fill	Topsoil/Colluvium	Residual Soil	Bedrock
B-1	0-3.0	3.0-7.5	---	7.7-8.3+
B-2	0-4.0	4.0-5.0	5.0-6.0	6.0-7.3+
B-3	0-0.5	0.5-1.0	1.0-1.5	1.5-3.0+

Descriptions of the subsurface conditions encountered are presented on the boring logs.

Groundwater

Free groundwater did not develop in the borings prior to backfilling. Groundwater levels at the site are expected to fluctuate over time due to variations in rainfall and other factors. Rainwater percolates through the relatively porous surface soils. On hillsides, the water typically migrates downslope in the form of seepage within the porous soils, at the interface of the soil/bedrock contact, and within the upper portions of the weathered and fractured bedrock.

GEOLOGIC AND SEISMIC HAZARDS

Landsliding

Regional mapping by Rice (1976) does not indicate the presence of previous landsliding at the site, and maps of slope failures resulting from the severe 1982 storms (Davenport, 1984) and of slope failures resulting from the heavy 1997/1998 storms (USGS, 1999) do not indicate that sliding was reported at the site at either of those times. The slopes at the site lie within Slope Stability Zone 3 as defined in *"Geology for Planning: Central and Southeast Marin County"* (Rice, 1976). Zone 3 includes areas where steepness of slopes approaches the stability limits of the underlying geologic materials. The zones range from 1 to 4, with Zone 4 indicating least stable.

We did not observe evidence of landsliding within the project area at the time of our investigation. However, the existing timber bulkheads at the site are yielding, resulting in creep

and tension cracking of the retained backfill. We judge that these bulkheads are subject to failure, particularly as a result of earthquake shaking and/or heavy rainfall. Failures could undermine upslope areas and result in material flowing downslope. We judge that the risk to the residence will be mitigated by extending foundation support into bedrock, and by designing foundations to resist lateral pressures imposed by the soils above the bedrock. Bulkheads should be replaced with pier supported retaining walls as outlined in this report.

Fault Rupture

The property is not within a current Alquist-Priolo Earthquake Fault Zone (EFZ), and we did not observe geomorphic features that would suggest the presence of active faulting at the site. As such, we judge that the risk of ground rupture along a fault trace is low at this site.

Ground Shaking

The San Francisco Bay Region has experienced several historic earthquakes from the San Andreas and associated active faults. Mapped active faults (those experiencing surface rupture within the past 11,000 years) nearest the site are summarized in the following table.

Fault	Distance		Moment Magnitude[1]	Acceleration (g)[2]	
	Miles	Kilometers		M[3]	M+1[3]
San Andreas (Northern)	6.7	10.8	8.0	0.41	0.73
Seal Cove/San Gregorio	7.5	12.0	7.4	0.34	0.62
Hayward	11.6	18.6	7.3	0.22	0.40
Healdsburg/Rodgers Creek	15.1	24.3	7.3	0.20	0.36

(1) Estimated maximum magnitudes from Caltrans Fault Database (Version 2A).
(2) Peak ground acceleration averaged from New Generation Attenuation (NGA-West 2) relationships by Abrahamson, Silva & Kamai (2104), Boore, Stewart, Seyhan and Atkinson (2014), Campbell and Bozorgnia (2014), Chiou and Youngs (2014), and Idriss (2014). Estimated shear wave velocity (V_{S30}) = 525 m/s.
(3) M = mean value; M+1 = mean+1 standard deviation value.

Deterministic information generated for the site considering the proximity of active faults and estimated ground accelerations are presented in the table above. The estimated ground accelerations were derived from the above-referenced mean attenuation relationships, and are based on the published estimated maximum earthquake moment magnitudes for each fault, the shortest distance between the site and the respective fault, the type of faulting, and the estimated shear wave velocities of the on-site geologic materials. The deterministic evaluation of the potential for ground shaking assumes that the anticipated maximum magnitude earthquake produces fault rupture at the closest proximity to the site, and does not take recurrence intervals or other probabilistic effects into consideration. This evaluation also does not consider

directivity effects, topographic amplification, or other phenomena which may act to amplify ground motions.

Data presented by the U.S. Geological Survey (2016) estimates the chance of one or more large earthquakes (Magnitude 6.7 or greater) in the San Francisco Bay region before the year 2043 to be 72 percent. Consequently, we judge that the site will likely be subject to strong earthquake shaking during the life of the improvements.

Liquefaction

During ground shaking from earthquakes, liquefaction can occur in saturated, loose, cohesionless sands. The occurrence of this phenomenon is dependent on many factors, including the intensity and duration of ground shaking, soil density, particle size distribution, and position of the ground water table (Idriss and Boulanger, 2008). The soils encountered in our test borings contain a high percentage of fine grained materials (silt and clay). Thus, we judge that the likelihood of liquefaction during ground shaking is low.

Densification

Densification can occur in low density, uniformly-graded sandy soils above the groundwater table. We judge that significant densification is unlikely to occur in the areas explored because of the high silt and clay content of the soils encountered in the test borings.

CONCLUSIONS

Based on the results of our investigation, we conclude that the project is feasible from a geotechnical standpoint provided the recommendations presented in this report are incorporated into the project. The primary geotechnical concerns are discussed below.

Foundation Support

Our test borings indicate that the project area is blanketed by weak and compressible fill and native soils which are subject to settlement and to gradual downslope creep. We therefore conclude that new and remedial foundation support should be derived from drilled, cast-in-place, reinforced concrete piers which extend into bedrock and which are designed to resist lateral forces imposed by the creeping soils above the bedrock. To avoid differential settlement, slabs should be designed to span between pier foundations. We estimate that differential settlements of foundations designed in accordance with the recommendations contained in this report will be on the order of half an inch.

Non-underpinned foundations not supported in bedrock would be subject to settlement and creep relative to underpinned foundations. Therefore, remedial foundation support should be extended

as necessary to encompass all non-bedrock supported foundations in order to avoid differential movement.

Grading and Retaining Walls

Due to the presence of relatively weak soils, it will be necessary to fully retain all new cuts and fills with engineered retaining walls.

Some of the existing bulkheads within and downslope of the proposed project are yielding and are subject to failure, particularly as a result of earthquake shaking and/or heavy rainfall. The yielding bulkheads should therefore be replaced with engineered retaining walls designed in accordance with the recommendations presented in this report. New and replacement retaining walls should be supported on drilled pier foundations which extend into undisturbed bedrock, and which are designed to resist creep forces imposed by the soils above the rock. Walls should be provided with adequate backdrainage to prevent hydrostatic buildup.

Geotechnical Drainage

It is important that surface and subsurface water be controlled to reduce future moisture variations in the weak on-site soils. Perimeter subdrains should be provided to reduce water infiltration beneath the structure. In order to avoid exacerbating the risk of slope instability, all drains and downspouts should be collected in new closed conduits and discharged at approved erosion resistant outlets well away from improvements and potentially unstable slopes.

RECOMMENDATIONS

Seismic Design

Based on the results of our investigation, the following seismic design criteria were developed in accordance with the *California Building Code* (2016) and *ASCE 7-10* (July 2013 errata):

Site Class	C
Site Coefficient F_a	1.0
Site Coefficient F_v	1.3
0.2 sec Spectral Acceleration S_S	1.50
1.0 sec Spectral Acceleration S_1	0.64
0.2 sec Max Spectral Response S_{MS}	1.50
1.0 sec Max Spectral Response S_{M1}	0.83
0.2 sec Design Spectral Response S_{DS}	1.00
1.0 sec Design Spectral Response S_{D1}	0.55
Design Category	D

Site Preparation

Designated walls and flatwork should be removed, and areas to be developed should be cleared of vegetation, roots and deleterious material, and then stripped of the upper soils containing root growth and organic matter. The cleared materials and strippings should be removed from the site. Pipes, vaults and other buried objects should be removed, and the resultant voids cleaned and backfilled with approved fill.

Excavation and Shoring

Temporary slopes should be laid back or shored in conformance with OSHA standards. The Contractor should slope temporary excavations no steeper than 1-1/2:1, or should install shoring as excavations proceed in order to maintain lateral support. All temporary slopes, shoring, and protection of existing improvements should be contractually established as solely the responsibility of the Contractor. The design and inspection of temporary slopes and shoring are specifically excluded from our scope of work. Shoring should be designed to resist the lateral earth pressures outlined in the *Retaining Walls* section of this report.

Foundations

Drilled piers should be at least 18 inches in diameter and should extend at least 8 feet into bedrock. Design pier depths and diameters should be calculated by the Project Structural Engineer using the criteria presented below. The materials encountered during pier drilling should be evaluated by our representative in the field. Drill spoils should be removed from the site or placed as retained engineered fill.

The sidewalls of pier holes allowed to remain open may be subject to desiccation and deterioration which adversely impacts skin friction capacity. If concrete is not placed in pier holes within 72 hours of drilling, we should be notified to reevaluate the holes to determine if they need to be reamed out or re-drilled.

Piers should be interconnected with grade beams to support structural loads and to redistribute stresses imposed by the creeping surficial soils. Piers supporting retaining walls located on or within 15 feet of downslopes steeper than 5:1 should be designed to resist soil pressures as outlined in the *Retaining Walls* section of this report. Remaining piers located on or within 15 feet of downslopes steeper than 5:1 should be designed and reinforced to resist creep forces acting from the ground surface to the top of the rock, and exerting an active equivalent fluid pressure of 60 pounds per cubic foot (pcf). For piers, this pressure should be assumed to act on 2 pier diameters.

The portion of the piers extending into bedrock can impose a passive equivalent fluid pressure of 400 pcf acting over 2 pier diameters, and vertical dead plus real live loads of 1000 pounds per square foot (psf) in skin friction. These values may be increased by 1/3 for seismic and wind loads, but should be decreased by 1/3 for determining uplift resistance. The portion of piers

designed to impose passive pressures should have at least 7 feet of horizontal confinement from the face of the nearest slope or wall. End bearing should be neglected due to the uncertainty of mobilizing end bearing and skin friction simultaneously.

If groundwater is encountered, it may be necessary to dewater the holes and/or to place concrete by the tremie method. If caving soils are encountered, it will be necessary to case the holes. Hard drilling or coring will be required to achieve the required bedrock penetrations.

Retaining Walls

Retaining walls should be supported in bedrock on drilled pier foundations designed in accordance with the recommendations presented in this report. Free-standing retaining walls should be designed to resist active lateral earth pressures equivalent to those exerted by a fluid weighing 45 pounds per cubic foot (pcf) where the backslope is level, and 60 pcf for backfill at a 2:1 slope. Retaining walls restrained from movement at the top should be designed to resist an "at-rest" equivalent fluid pressure of 60 pcf for level backfill and 75 pcf for backfill at a 2:1 slope. For intermediate slopes, interpolate between these values. Where wall backfill will be subject to vehicular loading, a traffic surcharge equivalent to 2 feet of additional backfill should be added to walls. Lateral earth pressures should be assumed to act on the wall facing, and over two diameters of the portion of piers located above the bedrock. A minimum factor of safety against instability of 1.5 should be used to evaluate static stability of retaining walls. Wall facing should extend at least 12 inches below undisturbed downslope grade.

Seismic wall stability should be evaluated based on a uniform lateral earth pressure of 12xH psf (where H is the height of the wall in feet). This pressure is in addition to the active equivalent fluid pressures presented in this report. For restrained walls, seismic pressures may be assumed to act in combination with active rather than at-rest earth pressures. The factor of safety against instability under seismic loading should be at least 1.1.

In addition to lateral earth pressures, retaining walls must be designed to resist horizontal pressures that may be generated by uphill retaining walls. Where an imaginary 1-1/2:1 (horizontal:vertical) plane projected downward from the base of an upslope retaining wall intersects the downslope wall, that portion of the downslope wall below the intersection should be designed for an additional horizontal uniform pressure equivalent to the maximum calculated lateral earth pressure at the base of the upslope wall.

Retaining walls should be fully backdrained. The backdrains should consist of 4-inch diameter, rigid perforated pipe surrounded by a drainage blanket. The top of the drain pipe should be at least 8 inches below lowest adjacent downslope grade. The pipe should be PVC Schedule 40 or ABS with an SDR of 35 or better, and the pipe should be sloped to drain at least 1 percent by gravity to an approved outlet. Frequent cleanout risers should be provided for the drain, and sweeps or sanitary wyes should be used to allow for future inspection and maintenance of the drains. The drainage blanket should consist of clean, free-draining crushed rock or gravel wrapped in a filter fabric such as Mirafi 140N. Alternatively, the drainage blanket could consist

of Caltrans Class 2 "Permeable Material", in which case the filter fabric may be omitted. A prefabricated drainage structure such as Mirafi Miradrain may also be used provided that the backdrain pipe is embedded in permeable material or fabric-wrapped crushed rock. The drainage blanket should be continuous, at least 1 horizontal foot thick, and should extend to within 1 foot of the surface. The uppermost 1 foot should be backfilled with compacted soil to exclude surface water. Where migration of moisture through retaining walls would be detrimental or undesirable, retaining walls should be waterproofed as specified by the Architect or Structural Engineer.

We anticipate that on-site soils will be suitable for reuse as wall backfill. However, considerable moisture conditioning of materials may be required. Lumps greater than 4 inches in largest dimension and perishable materials should be removed, and the fill materials should be approved by Herzog Geotechnical prior to use. Imported fill should have a plasticity index of 15 or less, a liquid limit of 40 or less, and should be free of organic matter and of rocks larger than 4 inches. Herzog Geotechnical should observe and approve fill materials prior to importing.

Wall backfill should be spread in level lifts not exceeding 8 inches in thickness, brought to near the optimum moisture content, and compacted to at least 90 percent relative compaction. Relative compaction refers to the in-place dry density of a soil expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM D1557 test procedure. Optimum moisture content is the water content of the soil (percentage by dry weight) corresponding to the maximum dry density. Retaining walls will yield slightly during backfilling. Therefore, walls should be backfilled prior to building onto or adjacent to the walls, and should be properly braced during the backfilling operations. Backfilling adjacent to walls should be performed only with hand-operated equipment to avoid over-stressing the walls.

Finished backfill slopes should be constructed at an inclination no steeper than 2:1. Backfill slopes should be overbuilt and trimmed back as necessary to expose a well-compacted surface. Routine maintenance of slopes should be anticipated. Fill slopes and areas disturbed during construction should be planted with vegetation to resist erosion. If vegetation is not established prior to rains, exposed slopes should be protected with an erosion control matting such as North American Green SC150, or equivalent. Erosion that occurs must be repaired promptly before it can enlarge.

Even well compacted backfill will settle about 1 percent of its thickness. Therefore, non-structural slabs and other improvements crossing the backfill should be designed to span or to accommodate this settlement.

Slab Support

Slabs should be designed to structurally span between bedrock supported elements.

Interior and garage slab subgrade should be sloped to drain into 12 inch deep trenches excavated beneath the middle of each slab. The trenches should be lined completely with a filter fabric

such as Mirafi 140N, or equivalent. A 4-inch diameter rigid-perforated PVC or ABS (Schedule 40, SDR 35 or equivalent) pipe should be placed on a 1-inch layer of drain rock at the bottom of the trenches with perforations down. The trenches should be backfilled with drain rock up to slab subgrade elevation. The filter fabric should be wrapped over the top of the drain rock. The pipes should be sloped to drain by gravity to a non-perforated pipe which discharges at an approved outlet. The trench for the non-perforated pipe should be backfilled with properly compacted soil.

Interior and garage slabs should be underlain by a capillary moisture break consisting of at least 4 inches of free-draining, crushed rock or gravel (slab base rock) at least 1/4 inch, and no larger than 3/4 inch, in size. Moisture vapor detrimental to floor coverings or stored items will condense on the undersides of slabs. A moisture vapor barrier should therefore be installed over the capillary break. The barrier should be specified by the slab designer. It should be noted that conventional concrete slab-on-grade construction is not waterproof. The local standard under-slab construction of crushed rock and vapor barrier will not prevent moisture transmission through slab-on-grade. Where moisture sensitive floor coverings are to be installed, a waterproofing expert and/or the flooring manufacturer should be consulted for their recommended moisture and vapor protection measures, including moisture barriers, concrete admixtures and/or sealants.

Geotechnical Drainage

Positive drainage should be provided away from foundations, walls and slopes. All roofs should be provided with gutters and downspouts. All downspouts and surface drains should be connected to non-perforated conduits which discharge at discharged at approved erosion resistant outlets well away from improvements and potentially unstable slopes. New conduit should consist of rigid PVC or ABS pipe which is Schedule 40, SDR 35 or equivalent. Downspouts, surface drains and subsurface drains should be checked for blockage and cleared and maintained on a regular basis. Surface drains and downspouts should be maintained entirely separate from wall backdrains, slab underdrains and foundation drains.

Foundation drains should be installed adjacent to perimeter foundations. Perimeter retaining wall backdrains may be substituted for foundation drains. The drains should consist of trenches which extend 18 inches deep, or 12 inches below lowest adjacent interior or crawl space grade, whichever is deeper, and which are sloped to drain at least 1 percent by gravity. The trenches should be lined completely with a filter fabric such as Mirafi 140N, or equivalent. A 4-inch diameter rigid perforated PVC or ABS pipe (Schedule 40, SDR 35 or equivalent) should be placed on a 1-inch thick layer of drain rock at the bottom of the trenches with perforations down. Frequent cleanout risers should be provided for the drain, and sweeps or sanitary wyes should be used to allow for future inspection and maintenance of the drain. The pipes should be sloped to drain at least 1 percent by gravity to a non-perforated pipe (Schedule 40, SDR 35 or equivalent) which discharges at an approved erosion resistant outlet. The trench for the perforated pipe should be backfilled to within 6 inches of the ground surface with drain rock. The filter fabric should be wrapped over the top of the drain rock. The upper 6 inches of the trenches should be

backfilled with compacted clayey soil to exclude surface water. The trench for the non-perforated outlet pipe should be completely backfilled with compacted soil.

Water will accumulate in depressed or sloping crawl spaces. Crawl spaces should be graded to create a smooth sloping surface, and covered with an approved pre-fabricated drainage material such as Mirafi Miradrain 6000. A 4-inch diameter, perforated Schedule 40 or SDR 35 pipe should be provided in a trench at the base of the crawl space. The trench should extend 18 inches deep or 12 inches below lowest adjacent interior grade, whichever is deeper, and should be sloped to drain at least 1 percent by gravity. The trench should be completely lined with Mirafi 140N filter fabric, or equivalent. The perforated pipe should slope to drain at least 1 percent to a non-perforated Schedule 40 or SDR 35 pipe which discharges at an approved outlet. The slope and trench should then be covered with reinforced gunite.

Supplemental Services

Our conclusions and recommendations are contingent upon Herzog Geotechnical being retained to review the project plans and specifications to evaluate if they are consistent with our recommendations, and being retained to provide observation and appropriate field and laboratory testing during site clearing, void backfilling, pier drilling, retaining wall backdrain installation, wall backfilling, slab underdrain installation, and subdrainage installation to evaluate if subsurface conditions are as anticipated and to check for conformance with our geotechnical recommendations. We should also be notified to observe the completed project. Steel, concrete, slab moisture barriers, temporary slopes, shoring, surface drainage, and/or waterproofing should be inspected by the appropriate party and are not part of our scope of work.

If during construction subsurface conditions different from those described in this report are observed, or appear to be present beneath excavations, we should be advised at once so that these conditions may be reviewed and our recommendations reconsidered. The recommendations made in this report are contingent upon our being notified to review changed conditions.

If more than 18 months have elapsed between the submission of this report and the start of work at the site, or if conditions have changed because of natural causes or construction operations at or adjacent to the site, the recommendations of this report may no longer be valid or appropriate. In such case, we recommend that we review this report to determine the applicability of the conclusions and recommendations considering the time elapsed or changed conditions. The recommendations made in this report are contingent upon such a review.

We should be notified at least 48 hours before the beginning of each phase of work requiring our observation, and upon resumption after interruptions. These services are performed on an as-requested basis and are in addition to this geotechnical reconnaissance. We cannot provide comment on conditions, situations or stages of construction that we are not notified to observe.

LIMITATIONS

This report has been prepared for the exclusive use of Irene Pan Pangoulias Survivor's Trust and their consultants for the proposed project described in this report. Our services consist of professional opinions and conclusions developed in accordance with generally-accepted geotechnical engineering principles and practices. We provide no other warranty, either expressed or implied. Our conclusions and recommendations are based on the information provided us regarding the proposed construction, the results of our field exploration and laboratory testing programs, and professional judgment. Verification of our conclusions and recommendations is subject to our review of the project plans and specifications, and our observation of construction.

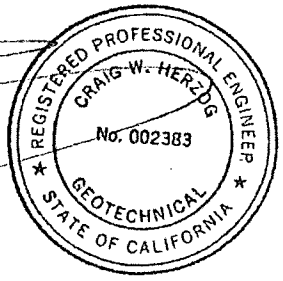
The test boring logs represents subsurface conditions at the locations and on the date indicated. It is not warranted that they are representative of such conditions elsewhere or at other times. Site conditions and cultural features described in the text of this report are those existing at the time of our field exploration, and may not necessarily be the same or comparable at other times. The locations of the test borings were established in the field by reference to existing features, and should be considered approximate only.

There is an inherent risk of instability associated with all hillside construction. We therefore recommend that the owner obtains appropriate landslide and earthquake insurance.

Our scope of services did not include an environmental assessment or an investigation of the presence or absence of hazardous, toxic or corrosive materials in the soil, surface water, ground water or air, on or below, or around the site, nor did it include an evaluation or investigation of the presence or absence of wetlands. Our work also did not include an evaluation of any potential mold hazard at the site.

We appreciate the opportunity to be of service to you. If you have any questions, please call.

Sincerely,
HERZOG GEOTECHNICAL



Craig Herzog, G.E.
Principal Engineer

Attachments: References
Plate 1 - 6

cc. Fredric C. Divine Associates
Attention: Laura Kehrlein
1924 Fourth Street
San Rafael, California 94901

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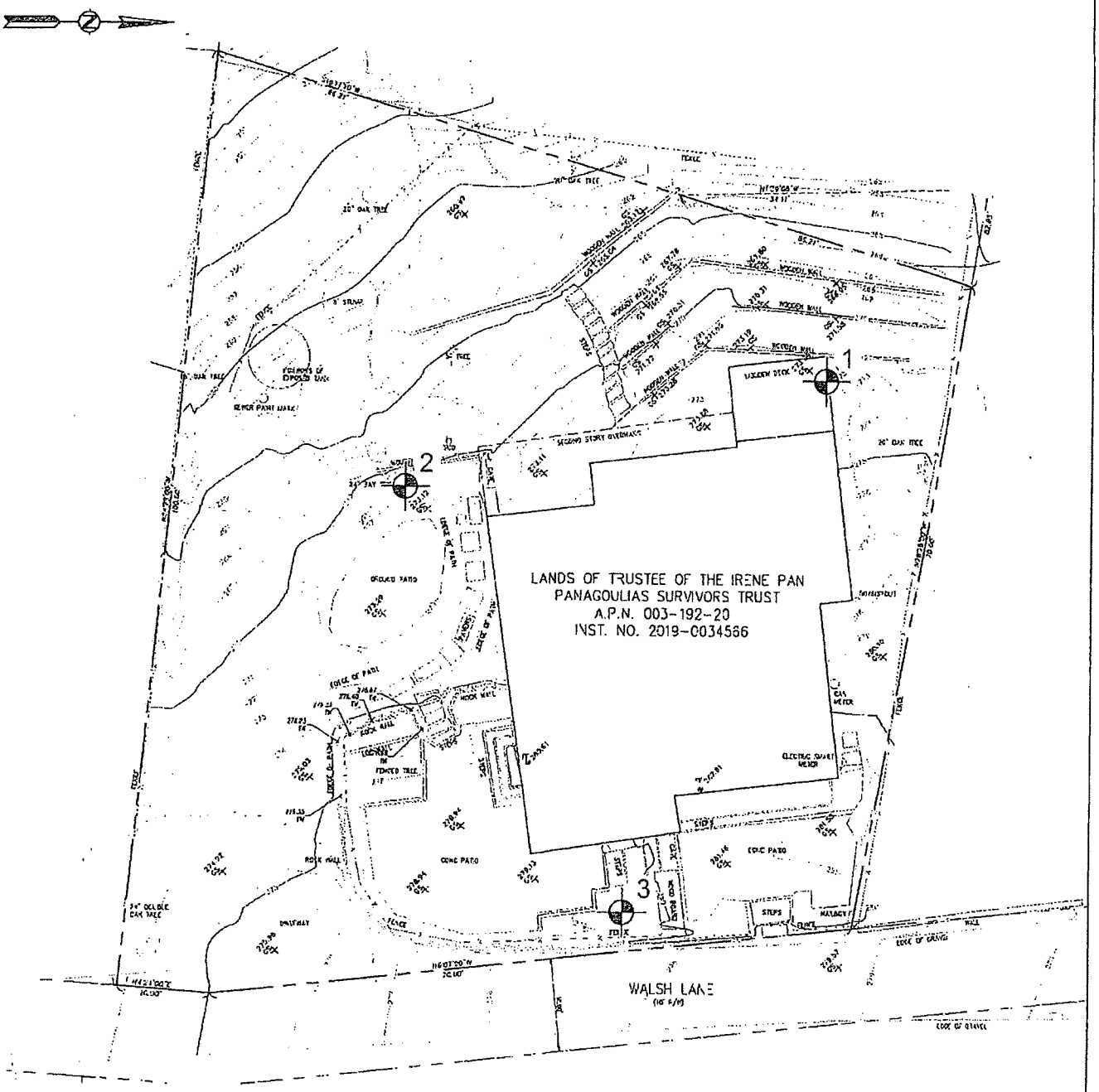

LEGEND

1 Test Boring

16 8 0 16

scale feet

Reference: Boundary and Topographic Survey by Oberkamper & Associates, dated Oct. 19, 2019.

HERZOG
GEOTECHNICAL
CONSULTING ENGINEERS

Job. No: 3861-01-19
Appr:
Drwn: LPDD
Date: DEC 2019

SITE PLAN

6 Walsh Lane

Fairfax, California

PLATE 1

EQUIPMENT: 4" Flight Auger
ELEVATION: **
LOGGED BY: G.M.
START DATE: 12-12-19
FINISH DATE: 12-12-19

Other Laboratory Tests	Pocket Penetrometer (ksf)	Moisture Content (%)	Dry Density (pcf)	% Passing #200 sieve	Blows/Foot *	Sample	DEPTH (FEET)	
							0	BROWN SANDY SILT (ML), soft, moist (Fill)
							1	YELLOW-BROWN SILTY GRAVEL (GM), very loose, moist (Fill)
		10.9	106		3		2	
							3	DARK BROWN SANDY SILT (ML), soft, moist
							4	MOTTLED ORANGE-GRAY SANDY CLAY (CL), soft to medium stiff, moist, with roots
		19.1	102		9		5	
							6	
							7	
							8	LIGHT ORANGE-BROWN SANDSTONE, moderately hard, moderately strong, highly weathered
					33/3"			

BOTTOM OF BORING 1 @ 8.3 FEET
No Free Water Encountered

* Converted to equivalent standard penetration blow counts.

** Existing ground surface at time of investigation.

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Appr:
Drwn: LPDD
Date: DEC 2019

LOG OF BORING 1

6 Walsh Lane
Fairfax, California

PLATE 2

EQUIPMENT: 4" Flight Auger
LOGGED BY: G.M.
ELEVATION: **
START DATE: 12-12-19
FINISH DATE: 12-12-19

Other Laboratory Tests	Pocket Penetrometer (ksf)	Moisture Content (%)	Dry Density (pcf)	% Passing #200 sieve	Blows/Foot *	Sample	DEPTH (FEET)	
							0	BROWN SANDY SILT (ML), soft, moist (Fill)
							1	BROWN CLAYEY SAND WITH GRAVEL (SC), very loose, moist (Fill)
		12.4	110		4		2	
							3	
							4	BROWN GRAVELLY CLAY (CL), soft, moist
		16.8	108		5		5	
							6	BROWN CLAYEY SAND (SC), loose, wet (Residual Soil)
								YELLOW-BROWN SANDSTONE, moderately hard, moderately strong, highly weathered
					33/3"		7	

BOTTOM OF BORING 2 @ 7.3 FEET
No Free Water Encountered

* Converted to equivalent standard penetration blow counts.

** Existing ground surface at time of investigation.

HERZOG GEOTECHNICAL CONSULTING ENGINEERS

Job No: 3861-01-19
Appr:
Drwn: LPDD
Date: DEC 2019

LOG OF BORING 2

6 Walsh Lane
Fairfax, California

PLATE 3

Other Laboratory Tests	Pocket Penetrometer (ksf)	Moisture Content (%)	Dry Density (pcf)	% Passing #200 sieve	Blows/Foot *	Sample	DEPTH (FEET)	
							0	YELLOW-BROWN GRAVEL (GP), loose, moist (Fill)
								DARK BROWN SANDY SILT (ML), soft, moist
							1	BROWN CLAYEY SAND (SC), medium dense, moist (Residual Soil)
								LIGHT BROWN SANDSTONE, moderately hard, moderately strong, highly weathered
							2	
							3	BOTTOM OF BORING 3 @ 3 FEET No Free Water Encountered

EQUIPMENT: 4" Flight Auger

LOGGED BY: G.M.

ELEVATION: **

START DATE: 12-12-19

FINISH DATE: 12-12-19

* Converted to equivalent standard penetration blow counts.

** Existing ground surface at time of investigation.

HERZOG GEOTECHNICAL CONSULTING ENGINEERS

Job No: 3861-01-19

Appr:

Drwn: LPDD

Date: DEC 2019

LOG OF BORING 3

6 Walsh Lane

Fairfax, California

PLATE 4

MAJOR DIVISIONS				TYPICAL NAMES
COARSE GRAINED SOILS More than Half > #200 sieve	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND
			GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 12% FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS, POOORLY GRADED SAND-SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE GRAINED SOILS More than Half < #200 sieve	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

UNIFIED SOIL CLASSIFICATION SYSTEM

			Shear Strength, psf / Confining Pressure, psf	
Consol	Consolidation	Tx	2630 (240)	Unconsolidated Undrained Triaxial
LL	Liquid Limit (in %)	Tx sat	2100 (575)	Unconsolidated Undrained Triaxial, saturated prior to test
PL	Plastic Limit (in %)	DS	3740 (960)	Unconsolidated Undrained Direct Shear
PI	Plasticity Index	TV	1320	Torvane Shear
Gs	Specific Gravity	UC	4200	Unconfined Compression
SA	Sieve Analysis	LVS	500	Laboratory Vane Shear
■	Undisturbed Sample (2.5-Inch ID)	FS	Free Swell	
◪	2-inch-ID Sample	EI	Expansion Index	
◺	Standard Penetration Test	Perm	Permeability	
⊠	Bulk Sample	SE	Sand Equivalent	

KEY TO TEST DATA

HERZOG GEOTECHNICAL CONSULTING ENGINEERS

Job No: 3861-01-19
Appr:
Drwn: LPDD
Date: DEC 2019

SOIL CLASSIFICATION CHART AND KEY TO TEST DATA

6 Walsh Lane

Fairfax, California

PLATE 5


SHALE OR CLAYSTONE


CHERT


SERPENTINITE


SILTSTONE


PYROCLASTIC


METAMORPHIC ROCKS


SANDSTONE


VOLCANIC


DIATOMITE


CONGLOMERATE


PLUTONIC


SHEARED ROCKS

LAYERING

MASSIVE	Greater than 6 feet
THICKLY BEDDED	2 to 6 feet
MEDIUM BEDDED	8 to 24 inches
THINNLY BEDDED	2-1/2 to 8 inches
VERY THINNLY BEDDED	3/4 to 2-1/2 inches
CLOSELY LAMINATED	1/4 to 3/4 inches
VERY CLOSELY LAMINATED	Less than 1/4 inch

JOINT, FRACTURE, OR SHEAR SPACING

VERY WIDELY SPACED	Greater than 6 feet
WIDELY SPACED	2 to 6 feet
MODERATELY SPACED	8 to 24 inches
CLOSELY SPACED	2-1/2 to 8 inches
VERY CLOSELY SPACED	3/4 to 2-1/2 inches
EXTREMELY CLOSELY SPACED	Less than 3/4 inch

HARDNESS

SOFT - Pliable; can be dug by hand

FIRM - Can be gouged deeply or carved with a pocket knife

MODERATELY HARD - Can be readily scrached by a knife blade; scratch leaves heavy trace of dust and is readily visable after the powder has been blown away

HARD - Can be scratched with difficulty; scratch produces little powder and is often faintly visable

VERY HARD - Cannot be scratched with pocket knife; leaves a metallic streak

STRENGTH

PLASTIC - Capable of being molded by hand

FRIABLE - Crumbles by rubbing with fingers

WEAK - An unfractured specimen of such material will crumble under light hammer blows

MODERATELY STRONG - Specimen will withstand a few heavy hammer blows before breaking

STRONG - Specimem will withstand a few heavy ringing hammer blows and usually yields large fragments

VERY STRONG - Rock will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments

DEGREE OF WEATHERING

HIGHLY WEATHERED - Abundant fractures coated with oxides, carbonates, sulphates, mud, etc., thourough discoloration, rock disintegration, mineral decomposition

MODERATELY WEATHERED - Some fracture coating, moderate or localized discoloration, little to no effect on cementation, slight mineral decomposition

SLIGHTLY WEATHERED - A few stained fractures, slight discoloration, little or no effect on cementation, no mineral decomposition

FRESH - Unaffected by weathering agents, no appreciable change with depth

MILLER PACIFIC ENGINEERING GROUP

May 12, 2020
File: 201.187bltr.doc

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

Attn: Ms. Linda Neal, Principal Planner

Re: Second Planning-Level Geologic, Geotechnical, and Civil Engineering Review
New Single-Family Residence
6 Walsh Drive (APN 003-192-20)
Fairfax, California

Introduction

In response to your request and in accordance with our agreement dated March 20, 2018, this letter summarizes our second review of project plans and supporting documentation for the proposed remodel, addition, and associated improvements to the existing single-family residence at 6 Walsh Drive (APN 003-192-20) 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. Our first review comments were summarized in our letter dated January 22, 2020.

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.

Project Description

The project generally includes remodeling and constructing a new, 1,229 square-foot, 2-story addition to the existing 1,510 square-foot residence. Existing exterior flatwork and vegetation will be removed to accommodate the new addition at the southwest corner of the structure. The addition

ATTACHMENT E

will include a new master suite with a large wrap-around deck on the upper floor and a 2-car garage on the ground level, which will be accessed by a new concrete driveway extending from Walsh Lane at the eastern property line. The existing deck at the northwest corner of the house will be replaced in kind, and a small ground-floor addition is planned. An existing basement/crawl space will be converted to interior living space, and existing kitchen and bathroom spaces will be remodeled. Ancillary improvements will include new site retaining walls, revised exterior patio/hardscape areas, upgraded electrical service, landscaping, and other "typical" residential items.

Project Review

We performed a brief site reconnaissance on January 16, 2020 to observe existing conditions at the site. Additionally, we reviewed the following documents provided by the Town for our first review, which was summarized in our letter dated January 22, 2020:

- Herzog Associates (2019), "Report, Geotechnical Investigation, 6 Walsh Lane, Fairfax, California", Project No. 3861-01-19, dated December 19, 2019.

- Frederic C. Divine Associates (2019), "Residential Addition/Remodel, 6 Walsh Lane, Fairfax, CA 94930" (Preliminary Architectural Plans), Sheets A1 through A4.0 and L1 (10 sheets total), Job No. 19046.00, Planning Application set dated December 20, 2019.

- Oberkamper & Associates (2019), "Boundary and Topographic Survey", 6 Walsh Lane, APN 003-192-20), Town of Fairfax, Marin County, California", Sheet 1, Job No. 19-175, dated December 18, 2019.

- Oberkamper & Associates (2019), "Preliminary Grading and Drainage Plan", 6 Walsh Lane, APN 003-192-20), Town of Fairfax, Marin County, California", Sheet 2, Job No. 19-175, dated December 18, 2019.

More recently, we reviewed the following materials for this second review:

- Fidelity National Title Company, "Preliminary Report, 6 Walsh Lane, Fairfax, CA, Title No. FMNA-9031900308-BF, dated June 6, 2019.

- Fidelity National Title Insurance Company, "(Title Insurance Policy Packet), 6 Walsh Lane, Fairfax, CA 94978, Order No. FMNA-9031900308, dated November 8, 2019.

- Frederic C. Divine Associates (2020), "Residential Addition/Remodel, 6 Walsh Lane, Fairfax, CA 94930" (Preliminary Architectural Plans), Sheets A1 through A4.1 (10 sheets total), Job No. 19046.00, Response to Planning Comments (4th revision) set dated April 22, 2020.

- Oberkamper & Associates (2019), "(unrecorded) Record of Survey, of the Lands of Maritsa B. Chew, 6 Walsh Lane, APN 003-192-20), Town of Fairfax, Marin County, California", Sheet 1, Job No. 19-175, undated/unrecorded.

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 geotechnical report (Page 4) states, "the risk [of landsliding] to the residence will be mitigated by extending foundation support into bedrock, and by designing foundations to resist lateral pressures imposed by the soils above the bedrock. Bulkheads should be replaced with pier-supported retaining walls as outlined in this report".

   We note that the latest plans indicate the new additions and portions of the existing structure will be provided with drilled-pier foundations as recommended by the Geotechnical Engineer, and that the new garage will utilize a structural slab on similar drilled-pier foundations to span existing fills. No improvements are planned to existing timber walls on the downslope side of the residence.

   Updated plans also indicate a new downspout collection system will be installed, with runoff to be dispersed via a 6-inch pipe downslope of the residence and failed retaining walls. The Geotechnical Engineer should comment on the suitability of the proposed foundations improvements and existing drainage systems, and plans should be revised if/as needed to reflect the Geotechnical Engineer's recommendations.

- Section 17.072.080(F) – Grading and Erosion-Control Plan

2) The Preliminary Grading and Drainage Plan indicates a total of 261 cubic yards of offhaul. Given the relatively limited access and staging areas, a Construction Management Plan should be submitted to limit neighborhood impacts.

- Section 17.072.110(C) – Geotechnical Report Adequacy

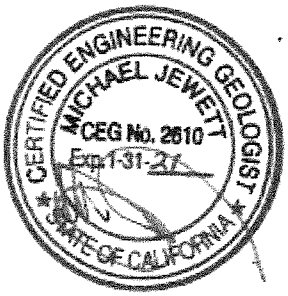
  We judge that the project geotechnical report adequately demonstrates the site may be developed without significant effects due to geologic, hydrologic, or seismic hazards.

Recommendations

We recommend geotechnical approval of the project at the Planning level. Remaining comments/items, including review of design-level grading, drainage, structural, and construction management plans, 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



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

REVIEWED BY:

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

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

TOWN OF FAIRFAX
RECEIVED
MAY 05 2020

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
IRENE PAN PANAGOULIAS SURVIVORS TRUST

OWNER (APPLICATIONS MUST BE FILED BY PROPERTY OWNER): MARITSA CHEW, TRUSTEE	DATE OF APPLICATION: 2.12.2020
JOB ADDRESS/ASSESSOR'S PARCEL NO. IF SITE IS VACANT 6 WALSH LANE, FAIRFAX	PHONE NUMBER: 415.457-0220 x103
EMAIL ADDRESS: Laura@Fdivinearchitects.com	FAX NUMBER: 415.454.9581
PROPERTY OWNER'S ADDRESS IF DIFFERENT FROM ABOVE P.O. BOX 1848 EL GRANADA, CA 94018	ALTERNATE PHONE NUMBER: 415-300-7337

TREE INFORMATION

SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE: BAY #(1) CLUMP	CIRCUMFERENCE BREAST HEIGHT: 47"
	REASON FOR REMOVAL/ALTERATION GARAGE ADDITION IMPACT, FIRE CLEARANCE
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE: BAY #(2) CLUMP #(3)	CIRCUMFERENCE BREAST HEIGHT: #2 22", #3 16"
	REASON FOR REMOVAL/ALTERATION FIRE CLEARANCE
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE:	CIRCUMFERENCE BREAST HEIGHT:
	REASON FOR REMOVAL/ALTERATION
SPECIES AND DESIGNATION OF HERITAGE/SPECIMEN/UNDESIRABLE TREE:	CIRCUMFERENCE BREAST HEIGHT:
	REASON FOR REMOVAL/ALTERATION

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 4.5feet above grade at tree base, property boundaries and easements, location of structures, foundation lines of neighboring structures and paved areas including driveways, .

ATTACHMENT F

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

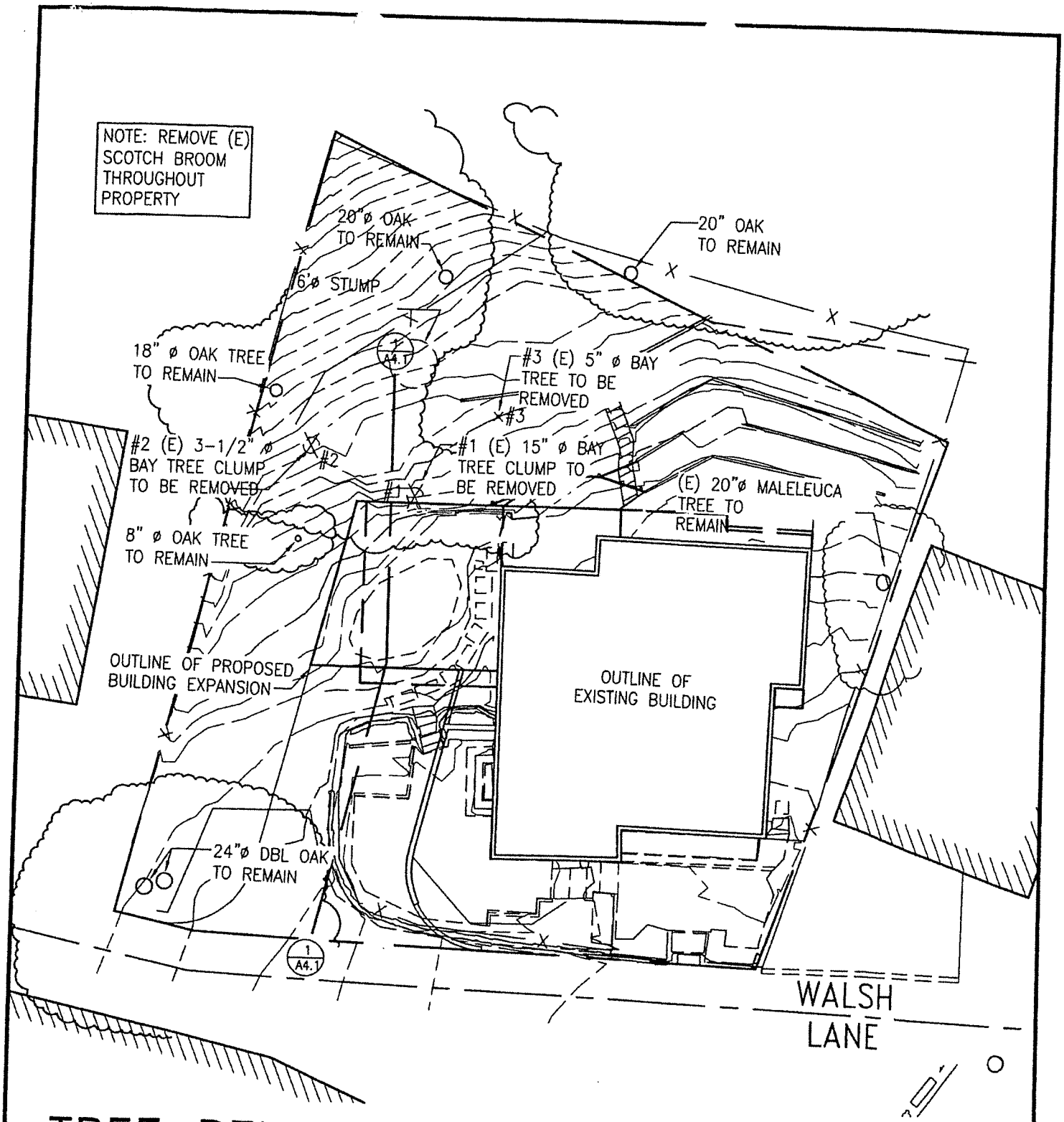
2.11.2020

Date

[AREA BELOW FOR STAFF USE ONLY]

Permit Number: 20-T-23	
Date Received: 5-5-20	Received by: S Dalton
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.



TREE REMOVAL PLAN

SCALE: 1/16" = 1'-0"

RESIDENTIAL ADDITION/REMODEL

6 WALSH LANE
FAIRFAX, CA 94930
APN: 003-192-20
FOR: PANAGOULIAS SURVIVORS TRUST

A R C H I T E C T S

FREDRIC C. DIVINE ASSOCIATES
1924 FOURTH ST., SAN RAFAEL, CA 94901
Phone: (415) 457 - 0220 Fax: (415) 454 - 9581

Ross Valley Fire Department
777 San Anselmo Avenue, San Anselmo, CA 94960

Mark Mills
FIRE CHIEF

TOWN OF FAIRFAX
RECEIVED
MAY 0 5 2020

March 5, 2020

RESPONSE

Address: 6 Walsh Lane, FWX
Applicant: Laura Kehrlein
Application #: 20-0054

The Vegetation Management Plan submitted for review by the Ross Valley Fire Department is not approved at this time. Please address the following and resubmit:

1. **Please provide on the existing plan all the types of vegetation and the crown spacing.**
   EXISTING PLANTING & TREE CROWNS SHOWN ON DRAWING L/F1.
2. **For the proposed planting again please identify the crown spacing.**
   CROWNS SHOWN ON DRAWING L/F1 AND ADDED TO PLANT LIST.
3. **Where reference is made to the small Bay Trees to remain, field inspection will determine the potential hazard as these type of trees are highly flammable.**
   SMALL BAY TREE NOTE REMOVED

Please do not remove any tree that requires a permit from the town without first securing such permit.
NOTE #4 ADDED TO FIRE DEPT REQUIREMENTS

Please note that all vegetation within the 30 foot zone shall be irrigated. Seasonal grasses within the 30 foot zone are not permitted unless regularly irrigated. If not kept as green grass the area shall be covered in a weed barrier which should be covered in a layer of mulch.
NOTE #5 FIRE DEPT. REQUIREMENTS.

Every effort shall be taken to ensure erosion control efforts are in compliance with standards established by Town regulations.
NOTE #6 FIRE DEPT. REQUIREMENTS.

The approved plan is to last the life of the property. Any changes to the plan now or in the future will require Fire Department review. It is recommended that if the applicant has plans to landscape in the future that those plans be intermingled into this plan.
NOTE #7 FIRE DEPT. REQUIREMENTS.

Vegetation shall be maintained to ensure address numbers are visible from both angles of approach.
NOTE #8 FIRE DEPT. REQUIREMENTS.

Minimum standards shall be in place prior to final fire clearance.
NOTE #9 FIRE DEPT. REQUIREMENTS.

If you have any questions about any of the items listed above please call me. I am available to meet with you on site to help you develop a plan. Please contact me to schedule (415) 453-1289 Ext 21 if you desire my assistance.

Sincerely,

Ross Valley Fire Department
777 San Anselmo Avenue, San Anselmo, CA 94960

Mark Mills
FIRE CHIEF

June 24, 2020

Address: 6 Walsh Lane, Fairfax
Applicant: Divine Architects
Application #: 20-0135

The Vegetation Management Plan submitted for review by the Ross Valley Fire Department is approved with the following conditions:

Please do not remove any tree that requires a permit from the town without first securing such permit.

Please note that all vegetation within the 30 foot zone shall be irrigated. Seasonal grasses within the 30 foot zone are not permitted unless regularly irrigated. If not kept as green grass the area shall be covered in a weed barrier which should be covered in a layer of mulch.

Every effort shall be taken to ensure erosion control efforts are in compliance with standards established by Town regulations.

The approved plan is to last the life of the property. Any changes to the plan now or in the future will require Fire Department review. It is recommended that if the applicant has plans to landscape in the future that those plans be intermingled into this plan.

Vegetation shall be maintained to ensure address numbers are visible from both angles of approach.

Minimum standards shall be in place prior to final fire clearance.

If you have any questions about any of the items listed above please call me. I am available to meet with you on site to help you develop a plan. Please contact me to schedule (415) 258-4673 if you desire my assistance.

Sincerely,

/ Rob Bastianon /

Rob Bastianon
Sr. Fire Inspector

ATTACHMENT G