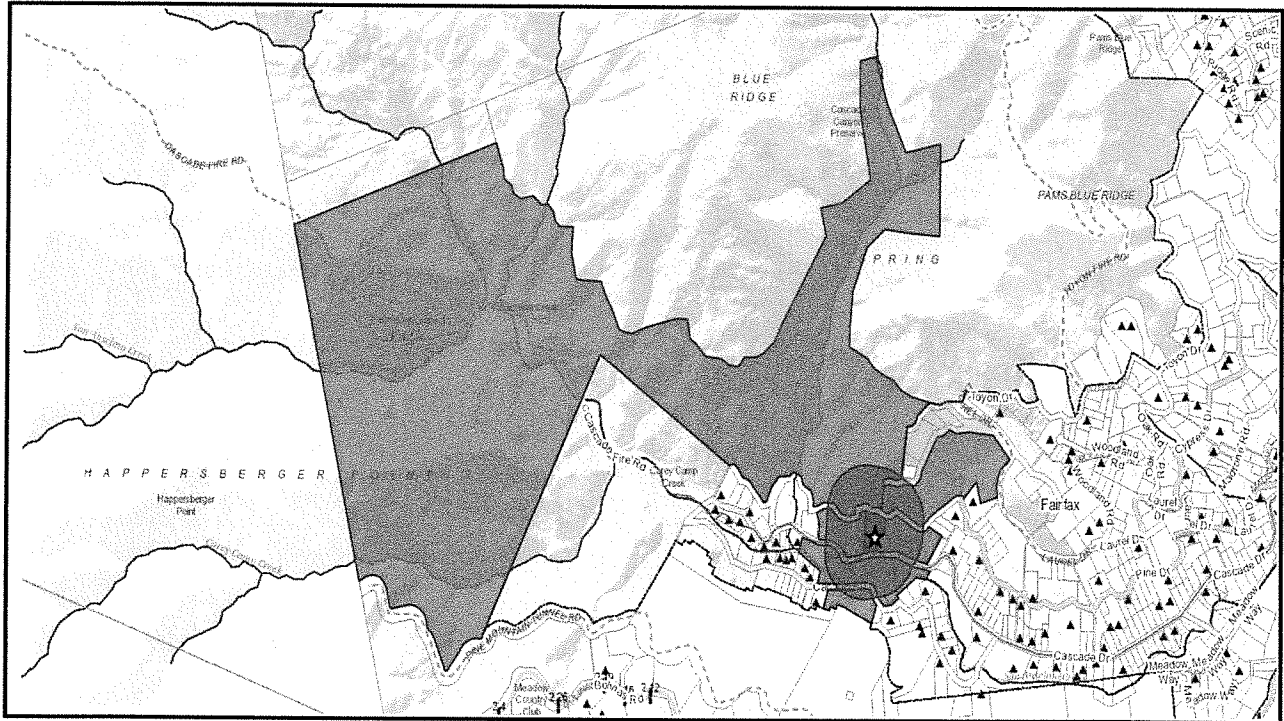


**TOWN OF FAIRFAX
STAFF REPORT**
Department of Planning and Building Services

TO: Fairfax Planning Commission
DATE: July 16, 2020
FROM: Linda Neal, Principal Planner
LOCATION: 572 Cascade Drive; Assessor's Parcel No. 003-022-20
PROJECT: New single-family residence and driveway improvements
ACTION: Hill Area Residential Development, Excavation, Tree Removal and Design Review permits; Application # 20-4
APPLICANT: Richard Rushton, Architect
OWNER: George Pederson
CEQA STATUS: Categorically exempt, §15303(a)



572 CASCADE DRIVE

AGENDA ITEM # 2

BACKGROUND

The Commission continued this item from their May 21, 2020 meeting where they gave the application the following direction with regards to the project:

1. The landscaping plan shall be updated to include replacement trees location, species, and size for all 11 healthy trees being removed per the Tree Committee's recommendation.
2. The house is out of character with the "cozy" cabin design of the most of the homes in the immediate "rural" neighborhood adjacent to a creek and open space. The proposed design is not the correct "style" to harmonize with the neighboring structures.
3. The overall, 26-foot height and 3 stacked stories of the front of the structure, along with the oversized garage door, and elongated triangular upper floor deck, create an imposing, looming, and unbalanced façade.
4. The 18-foot-high garage door is not appropriate for a residential structure and might be more appropriately designed in a stand-alone garage/workshop. Designing the house around the need for an oversized garage for a specific vehicle is compounding the irregularities of the house design. The oversized garage should not drive the design of the house.
5. The colors chosen for the exterior of the house and garage doors do not help minimize its mass and alternative materials and/or colors should be considered.
6. The amount of grading and off-haul have not been minimized so consideration should be given to making design changes to decrease the amount of grading and the off-haul of material.

The staff also suggested after the meeting that at least one street-level perspective of the house be provided, and any trees proposed out front be shown with no more than 5 year's anticipated growth. Staff does not consider the size of the trees depicted in the street elevation plan at the last meeting to be realistically achievable for a considerably longer time period than that, unless the applicant was proposing to plant 60-inch box trees.

DISCUSSION

Landscaping

The landscaping plan has been updated to include indications that 11 new trees will be planted to replace the 11 healthy trees being removed per the Tree Committee recommendation and the approved Ross Valley Fire Department Vegetative Management Plan (VMP). Six of the replacement trees will be oaks, and five will be

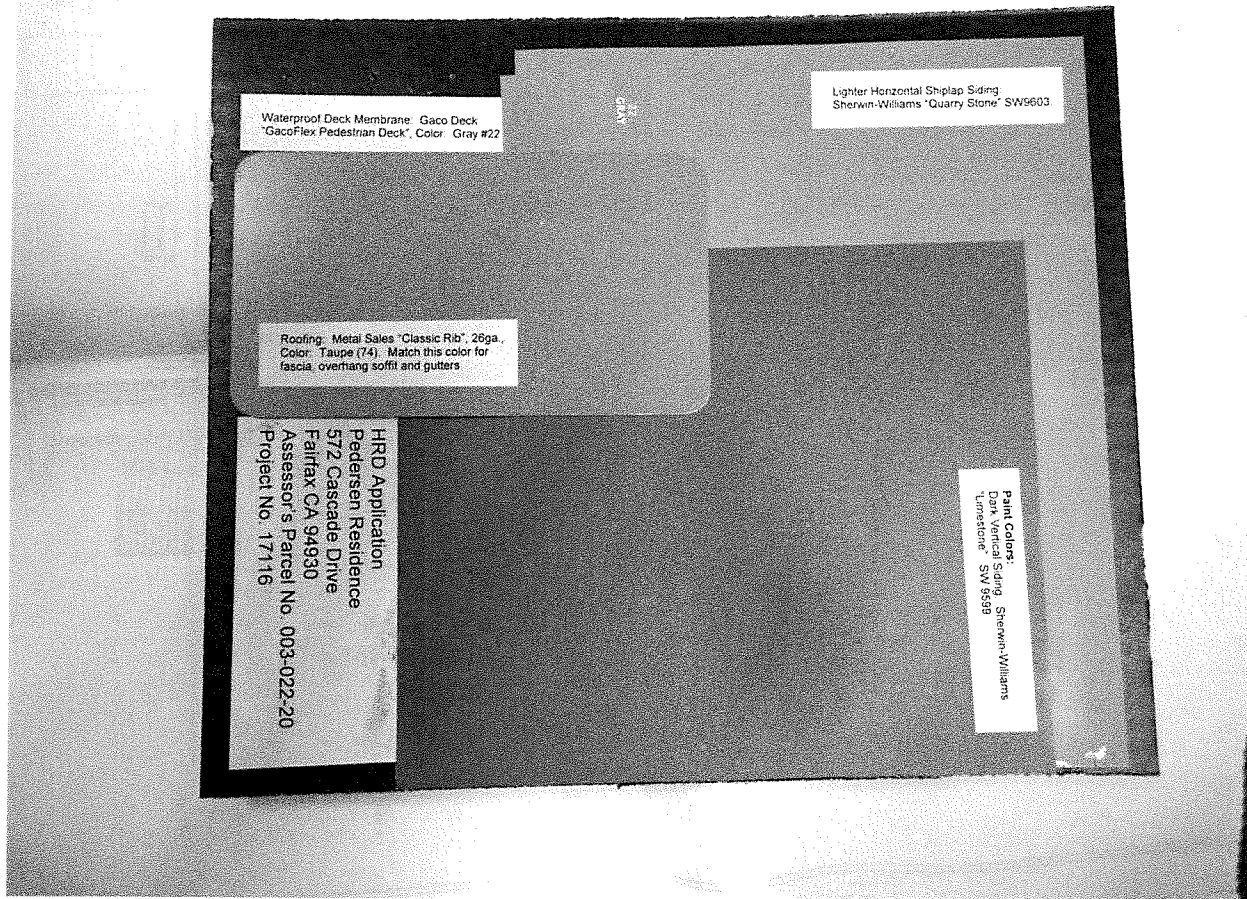
olive trees. Three oak tree planting locations have been identified by the plans with the remaining three to be determined after taking into consideration existing vegetation type and location at a later date. All the approved landscaping will need to be in place prior to the project final inspection and issuance of the occupancy permit for the project.

For a more in-depth background on the engineering, soils and hydrology of the project, as well as the proposed septic system, drainage system, site restoration aspects of the project, and professional project reports, see the May 21, 2020 Planning Commission staff report posted on the Town Website at www.townoffairfax.org in the May 21, 2020 Planning Commission meeting packet.

Project Design

The following changes have been made to the design of the structure:

1. The third floor of the structure has been stepped back 11 feet, the triangular deck that projected off the front southwest corner of the third floor has been removed and has been replaced with a roughly 13 foot deep deck over the garage. One foot of the third floor front deck projects out from the façade of the second floor above the garage.
2. Shifting the third floor back from the front of the first 2 floors has removed the expanded 2-story ceiling area previously above the study and the plan has been modified to provide a covered patio area at the rear northeast corner of the building off the kitchen.
3. The redesign has decreased the height of the structure's street-facing façade from 25 -26 feet to 17 feet.
4. The redesign has altered the cut and fill quantities, decreasing the total cut material from 690 cubic yards to 472 cubic years, increasing the on-site fill amount from 26 cubic yards to 199 cubic yard and decreasing the amount of off-haul that will be required from roughly 664 cubic yards to 273 cubic yards. This eliminates approximately 40 10-yard truckloads of offhaul.
5. The exterior colors for the structure have been darkened but still use an alternating color palette between the horizontal and vertical siding, and the bright white has been eliminated. The vertical siding and the front access stairway walls would be painted Sherwin Williams "Limestone" (a dark grey), the horizontal siding would be painted Sherwin Williams "Quarry Stone" (a light grey/brown), the waterproof deck membrane, visible through the stainless steel cable deck railing, would be a lighter gray than the vertical siding gray, and the metal roof would be a medium grey and the gutters, fascia and overhang soffit will match the roof color (Attachment B – architect's supplemental information and the photo of the color board below).



No modifications have been made to the proposed industrial-sized garage door except to change its color from bright white to the lighter grey/brown to match the horizontal siding surrounding the door. This does help minimize its size and visual impact. However, if the Commission does not feel the color change does enough to help the door size fit into the structure design, perhaps its visual impact could be further reduced by including a condition that a lattice/arbor structure be placed up the sides and over the top of the door, planted with some type of vine that would grow to cover the trellis.

REQUIRED DISCRETIONARY PERMITS

The project requires the approval of a Hill Area Residential permit, Excavation permit, Tree Removal permit and a Design Review permit. The required discretionary permits and analysis of project compliance with the related sections of the Town Code and Zoning Ordinance can be found in the May 21, 2020 staff report in the May 21, 2020 Planning Commission meeting packet on the Town website at www.townoffairfax.org.

The Town Engineers have indicated that the site can be developed without causing adverse geologic or hydrologic problems for 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 (Attachment D):

1. A Title Report shall be submitted with the building permit application.
2. Design level grading, drainage and erosion control plans shall be submitted.
3. Structural, wastewater and construction management plans shall be provided.
4. A design level Geotechnical report shall be provided.

Design Review

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

These criteria include but are not limited to the following:

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

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

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

The proposed redesigned structure complies with the Design Review Criteria. The structure conforms to the general character of other structures in the vicinity (Attachment B – see page 5 of the architect’s supplemental information including photos of other similar structures within the neighborhood), will require minimal disturbance to the 34,029 square-foot site for grading of the house pad, driveway, septic and drainage system and water line improvements. The construction will require the removal of 23 trees - 7 Bays and 2 Bay clusters, 4 Oaks, 8 Douglas Firs, 1 Monterey Pine, and 1 Deodar Cedar, to comply with the fire safety, fire access, and defensible space requirements of the Ross Valley Fire Department and the recommendations of the project arborist (Attachment F). The vegetative management plan was approved by the Fire Department on 2/25/20 and the number of trees being removed matches those identified in the Tree Protection Plan by Dan McKenna, ISA Certified Arborist, dated 2/19/20 which was submitted to the Tree Committee with the tree removal permit application.

At the 1/27/20 Tree Committee meeting the Committee took action recommending the Commission approve the Tree Permit Application subject to the conditions that the applicants work with the Ross Valley Fire Department to try and keep as many healthy

trees as possible and that any trees that are removed be replaced at a minimum ratio of 1 to 1 (Attachment F).

The exterior of the structure will be articulated through the redesigned stepping back of the street-facing portion of the third floor, alternating horizontal and vertical siding, varied roof heights and pitches, varied window sizes throughout the exterior of the building, the stepping back of the front façade between the two garage door building faces, the inclusion of the expanded entry walkway up the east side of the building to the second floor entry, and with the inclusion of two modest decks off the front of the building.

The site is very large by Fairfax standards – 34,029 square feet - and the house will not have a significant visual impact from any of the neighboring residences due to the large setbacks it will maintain from the property lines. Additionally, the house has a relatively small footprint, 2,044 square feet, in relation to the site size, with a maximum height of 28 feet, 6 inches and the remainder of the site will be retained in its natural state.

572 CASCADE DRIVE – SIMILAR PROPERTIES DEVELOPMENT							
APN #	ADDRESS	LOT SIZE	HOUSE SIZE	# BEDROOMS	# BATHS	GARAGE	FAR
003-012-07	650 Cascade	55,000	2,282	3	2	400	.04
003-022-13	588 Cascade	22,000	2,477	5	3	308	.11
003-023-07	597 Cascade	21,000	2,680	3	3	999	.15
003-023-04	581 Cascade	15,000	1,030	3	2	0	.07
003-031-25	551 Cascade	51,200	1,400	3	2	440	.03
003-032-23	151 Cascade	29,700	1,869	3	2	720	.07
DEVELOPMENT OF PROPERTIES IN THE IMMEDIATE NEIGHBORHOOD ON CASCADE DRIVE							
003-011-03	654 Cascade	13,600	1,053	2	1	0	.08
003-011-20	676 Cascade	12,880	924	2	1	0	.07
003-011-22	680 Cascade	5,843	2,224	3	2	0	.38
003-011-16	690 Cascade	19,200	2,246	3	2	400	.12
003-011-24	696 Cascade	20,170	1,534	3	2	877	.09
003-022-19	578 Cascade	14,962	1,000	2	1	0	.07
003-022-17	570 Cascade	17,784	1,210	2	1	0	.07
003-023-03	571 Cascade	20,000	1,224	1	1	0	.06
003-023-12	591 Cascade	11,200	1,782	3	2	446	.16
572 Cascade Drive		34,029	2,569	3	3 ½	603	.08

Note: 103 square feet of 603 square foot garage counts towards the project Floor Area Ratio (FAR) per Town Code § 17.136.030(A) as do the garages in the table above that exceed 500 square feet on the other property.

Overall, the redesigned house is in scale with the project site and similar in size to other structures in the neighborhood and on similar sized and sloped sites throughout the

hillsides of Fairfax.

Landscaping and Lighting

The landscaping plan indicates that six 10-gallon oaks and five 15-gallon Olive trees will be planted on the site to replace the 11 healthy trees being removed in accordance with the Tree Committees January 27, 2020 recommendation.

The project proposes using exterior LED wall-mounted light fixtures. The fixtures have a silver finish and the number of fixtures has been increased from the 2 previously proposed to 2 above the large garage door, one on the south side of the smaller garage door, 3 on the wall adjacent to the entry stairway, 1 above the rear patio cover and 1 adjacent the sliding door on the second floor off bedroom number 3. The fixtures are dark sky compliant, directing the light downwards and limiting light spillage beyond the area being lit.

OTHER DEPARTMENT/AGENCY COMMENTS/CONDITIONS

Ross Valley Fire Department (RVFD)

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

An 8-foot by 40-foot length of Cascade Drive, along the property frontage shall be a minimum of 20 feet wide and must be asphalt or concrete capable of taking 50,000 pounds of vehicle weight, 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, illuminated address numbers at least 4 inches tall must be in place adjacent to the front door and be lit in a manner that will keep them illuminated all night, alternative materials or methods may be proposed for any of the above conditions in accordance with Section 104.9 of the Fire Code, all approved alternatives requests, and their supporting documentation, shall be included in the plan sets submitted for final approval by the Fire Department and hydrant flow and location are to be identified prior to submittal of the building permit and shall be shown on the plans.

Marin Municipal Water District (MMWD)

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

Submit a High Pressure Water Service Agreement along with a copy of the building permit with the required fees, the foundation must be completed within 120 days of the date of application, all indoor and outdoor requirements or District Code Title 13, Water Conservation must be complied with, any landscaping plans must be reviewed and

approved by the MMWD, backflow prevention requirements must be met and Ordinance 420, requiring installation of grey water recycling system when practicable, must be incorporated into the project building permit plans or an exemption letter from MMWD must be provided to the Town, all of MMWD's rules and regulations if effect at the time service is requested must be complied with.

Ross Valley Sanitary District (RVSD)

RVSD did not comment as they have no sewer improvements in this area of Cascade Drive, and is not recommending requiring that a sewer main be extended to serve this project.

Marin County Environmental Health Services

Marin County Environment Health Services has performed a preliminary plan check for a 4-bedroom septic system design for the project that consists of a recirculating sand filter (for pretreatment) with a drip disposal leach field above/behind the proposed house and has found that the proposed system is in conformance with the requirements of the Marin County Health Department. A sewage disposal permit will be required prior to issuance of the building permit.

Building Department

The Building Department submitted verbal requirements which have been incorporated into conditions of approval in the attached resolution and are summarized as follows:

All large trucks with more than 2 axles accessing the site for construction will be limited to the hours of 9 AM to 3 PM, trucks removing off-haul will be limited to 10-yard dump trucks, the driveway improvements shall be completed and be signed off by the Town Engineer, the Building Official/Public Works Managers and the Ross Valley Fire Department before construction on the house begins, and road closures shall be noticed in the field a minimum of 48 hours prior to the event.

Fairfax Police and Public Works

Staff received no comments from the Police and Public Works Departments.

Miscellaneous

The owner has already executed an easement agreement guaranteeing vehicle access/egress over the subject property for the developed property at 578 Cascade Drive to continue to use the driveway (Attachment G).

RECOMMENDATION

1. Conduct the public hearing.

2. Move to approve application 20-4 by adopting Resolution No. 2020-03, attachment A, setting forth the findings and conditions for project approval.

ATTACHMENTS

Attachment A – Resolution No. 2020-03

Attachment B- Architect's supplemental information

Attachment C – Engineer's supplemental information

RESOLUTION NO. 2020-03

A Resolution of the Fairfax Planning Commission Approving Application No. 20-4 for a Hill Area Residential Development, Excavation, Tree Removal and Design Review Permits for a Residence at 572 Cascade Drive

WHEREAS, the Town of Fairfax has received an application from to build a 3-story, 2,659 square-foot, 3 bedroom, 3½ bathroom single-family residence with an attached 603 square-foot internally connected garage July 19, 2019 which was declared complete on May 8, 2020; and

WHEREAS, the Planning Commission held a duly noticed Public Hearing on May 21, 2020 and continued the project for redesign. The Commission held another hearing on the redesigned project on July 16, 2020 at which time the Planning Commission determined that the project complies with the Hill Area Residential Development Overlay Ordinance, Excavation Ordinance, Tree Removal Ordinance, and Design Review Regulations; and

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

WHEREAS, the Commission has made the following findings:

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

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

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

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

Policy S-3.1.3: Maximize access and egress for emergency response vehicles.

Hill Area Residential Development

As amended, 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 and being designed to

ATTACHMENT A

meet the owner's personal needs.

2. Vehicular access and parking are adequate.
3. The amended design depicted in the plan revisions by Rich Rushton, Rushton Chartock Architects, with the revision date of 6/1/20 will harmonize with surrounding residential development and meets the design review criteria contained in Town Code § 17.020.040.
4. The approval of the Hill Area Residential Development permit for one single-family residence and one accessory dwelling unit on this 34,029 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 use permit.
6. Approval of the proposed Hill Area Residential Development permit is not contrary to those objectives, goals or standards pertinent to the particular case and contained or set forth in any Master Plan, or other plan or policy, officially adopted by the City.
7. Approval of the Hill Area Residential Development permit will result in equal or better development of the premises than would otherwise be the case.

Excavation Permit

8. The Town Engineers have reviewed the following plans and reports and have determined the project can be constructed, with certain conditions of approval, without creating any hazards:
 - a. Architectural plans by Rich Rushton, revision date 6/1/20, pages A1.1, A2.2, A2.5, A4.1, A4.2, A6.1, A7.1, A7.2 and A7.5, Engineering plans by Vlad Iojica, P.E. revision date 6/26/20, pages C1.0 through C5.0 and C2.1, L1.0, L1.1, CM.1, and septic system preliminary design plans by Noahdiah Eckman, Geologist dated 7/16/19, pages 1 through 3, the tree protection and removal plan and reports by Dan McKenna, ISA certified project arborist, report dated 3/12/18, plan revision date 12/19/19.
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, ***with the addition of a trellis with vines over the large garage door, to be reviewed by the Planning Director, to minimize visual impacts of the 3rd floor deck and the garage door,*** 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.
17. Construction may not occur or must be minimized and/or monitored to be kept below certain noise levels between February 1st and July 1st each year during the Northern Spotted Owl nesting season. Therefore, negative impacts to the owl species will be limited..

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: Architectural plans by Rich Rushton, revision date 2/20/20, pages A1.1, A2.2, A2.5, A4.1, A4.2, A6.1, A7.1, A7.2, A7.1, Engineering plans by Vlad Iojica, P.E. dated 2/20/20, pages C1.0 through C5.0 and C2.1, L1.0, L1.1, CM.1, and septic system preliminary design plans by Noahdiah Eckman, Geologist dated 7/16/19, pages 1 through 3, the tree protection and removal plan and reports by Dan McKenna, ISA certified project arborist, report dated 3/12/18, plan revision date 12/19/19, with the following amendment:
 - a. Prior to building permit submittal, the applicant shall submit a plan for a trellis over the large garage with vine plantings, for review and approval by the Planning Director.

2. Prior to issuance of any of the building permits for the project the applicant or his assigns shall submit a construction plan to the Public Works Department which may include but is not limited to the following:
 - a. Construction delivery routes approved by the Department of Public Works.
 - b. Construction schedule (deliveries, worker hours, etc.)
 - c. Notification to area residents
 - d. Emergency access routes
3. The applicant shall prepare, and file with the Public Works Director, a video tape of the roadway conditions on the public construction delivery routes (routes must be approved by Public Works Director).
4. 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.
5. 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.
6. 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.
7. 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.
8. Submit 3 copies of the record of survey with the building permit plans.
9. All retaining walls that are visible from the street and are constructed of concrete shall be heavily textured or colorized in a manner approved by planning staff prior to issuance of the building permit. This condition is intended to mitigate the visual impact of the proposed walls.
10. Three copies of the Tree Protection/Preservation Plan by prepared by Dan McKenna, project arborist, shall be submitted with the building permit application and all recommendations included in this report shall be conditions of the project approval including but not limited to recommendations for the treatment of multi-

stemmed trees and tree protection fencing, trunk and limb protection and soil armoring. All the inspections contained in the inspection schedule on page 14 of the report shall be made by the project arborist who shall provide the Town with written verification after each inspection that the work is progressing in compliance with the recommendations and conditions of the arborist.

11. 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.
12. 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.
13. During the construction process the following shall be required:
 - a. The geotechnical engineer and the project arborist shall be on-site during the grading process and both shall submit written certification to Town Staff that the grading and tree protection measures have been completed as recommended prior to installation of foundation and/or retaining forms and drainage improvements, piers and supply lines.
 - b. Prior to the concrete form inspection by the building official, the geotechnical and structural engineers shall field check the forms of the foundations and retaining elements and provide written certification to Town staff that the work to this point has been completed in conformance with their recommendations and the approved building plans.
 - c. The Building Official shall field check the concrete forms prior to the pour.
 - d. All construction-related vehicles including equipment delivery, cement trucks and construction materials shall 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.
14. 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.
 15. 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.
 16. The roadways shall be kept free of dust, gravel and other construction materials by sweeping them, daily, if necessary.
 17. Any changes, modifications, additions or alterations made to the approved set of plans will require a modification of Application #20-4. 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 20-4 will result in the job being immediately stopped and red tagged.
 18. Any damages to the public portions of Toyon, Oak, Laurel, Cascade, or other public roadway used to access the site resulting from construction-related activities shall be the responsibility of the property owner.
 19. 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.

20. 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.
21. 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.
22. Conditions placed upon the project by the project arborist may be amended or eliminated by the approval of the Planning Director after receiving a request for the elimination/amendment in writing from the project arborist.
23. 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

24. An 8-foot by 40-foot length of Cascade Drive, along the property frontage shall be a minimum of 20 feet wide and must be asphalt or concrete capable of taking 50,000 pounds of vehicle weight.

25. A fire sprinkler system shall be installed throughout the entire building.
26. Smoke detectors shall be installed throughout the entire building and 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.
27. 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.
28. 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 and adjacent light controlled by a photocell that can be switched off only by a breaker so it will remain illuminated all night.
29. Alternative materials or methods may be proposed for any of the above conditions in accordance with Section 104.9 of the Fire Code.
30. All approved alternatives requests, and their supporting documentation, shall be included in the plan sets submitted for final approval by the Fire Department.
31. Hydrant flow and location are to be identified prior to submittal of the building permit and shall be shown on the plans.

Marin County Environmental Health Services (MCEHS)

32. A sewage disposal permit will be required prior to issuance of the building permit.

Marin Municipal Water District (MMWD)

33. Submit a High Pressure Water Service Agreement along with a copy of the building permit with the required fees.
34. The foundation must be completed within 120 days of the date of application.
35. All indoor and outdoor requirements or District Code Title 13, Water Conservation must be complied with.
36. Any landscaping plans must be reviewed and approved by the MMWD.
37. Backflow prevention requirements must be met.

38. Ordinance 420, requiring installation of grey water recycling system when practicable, must be incorporated into the project building permit plans or an exemption letter from MMWD must be provided to the Town.
39. All of MMWD's rules and regulations in effect at the time service is requested must be complied with.
40. A copy of the building permit must be provided to the district along with other the required applications and fees.

Fairfax Building and Public Works Departments

41. All large trucks with more than 2 axels accessing the site for construction will be limited to the hours of 9 AM to 3 PM.
42. Trucks removing off-haul will be limited to 10-yard dump trucks.
43. The driveway improvements shall be completed and be signed off by the Town Engineer, the Building Official/Public Works Managers and the Ross Valley Fire Department before construction on the house begins.
44. Road closures shall be noticed in the field a minimum of 48 hours prior to the event and individual written notifications shall be delivered to each potentially impacted resident on Cascade Drive.

Miscellaneous

45. Construction shall be prohibited during the Northern Spotted Owl nesting season from February 1st through July 1st.
46. The approved lighting fixture (shown on page 5 of the architect's 7/13/19 letter that was attached to the plan set approved by the Commission at the 5/21/20 meeting) may also be installed adjacent to the both of the patio doors, next to each of the doors to the front decks and one next the front door at the top of the entry stairway.
47. A revised landscaping plan must be submitted for Planning Director and Ross Valley Fire Department approval showing a 1 to 1 replacement for the 23 trees being removed.

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

The approval of the Hill Area Residential Development Permit, Excavation Permit, and Design Review Permit are in conformance with the 2010 – 2030 Fairfax General Plan,

the Fairfax Town Code and the Fairfax Zoning Ordinance, Town Code Title 17; and

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

The foregoing resolution was adopted at a regular meeting of the Planning Commission held in said Town, on the 16th day of July, 2020 by the following vote:

AYES:

NOES:

ABSTAIN:

Chair Green

Attest:

Ben Berto, Director of Planning and Building Services

Richard Rushton

235 SCENIC ROAD FAIRFAX, CA 94930
WEB SITE: www.richardrushtonarchitect.net

Architect

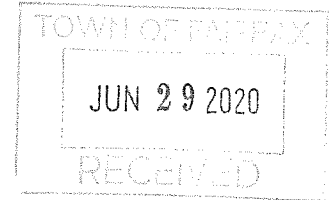
(415) 306-4714
Email: rich@rushtonarchitect.com

Letter of Transmittal

June 29, 2020

To: Linda Neal
Fairfax Planning Dept.

Re: HRD Application
Pedersen Residence
572 Cascade Drive
Fairfax CA 94930
Assessor's Parcel No. 003-022-20
Project No. 17116



The following revised drawings and cover letter are in response to the Planning Commission comments at the meeting of May 21, 2020:

Copies	Date	No. Pages	Description
10	6/1/20	9 sheets	Architectural Sheets A1.1, A2.2, A2.5, A4.1, A4.2, A6.1, A7.1, A7.2 and A7.5
10	6/26/20	9 sheets	Civil sheets C1.0, C2.0, C3.0, C4.0, C5.0, C5.1, L1.0, L1.1 & CM.1.
10	7/16/19	3 sheets	Waste Water System plans
10	6/29/20	7 pages	This Letter of Transmittal for re-submission
1	6/29/20	1 board	8 1/2 x 11" color samples

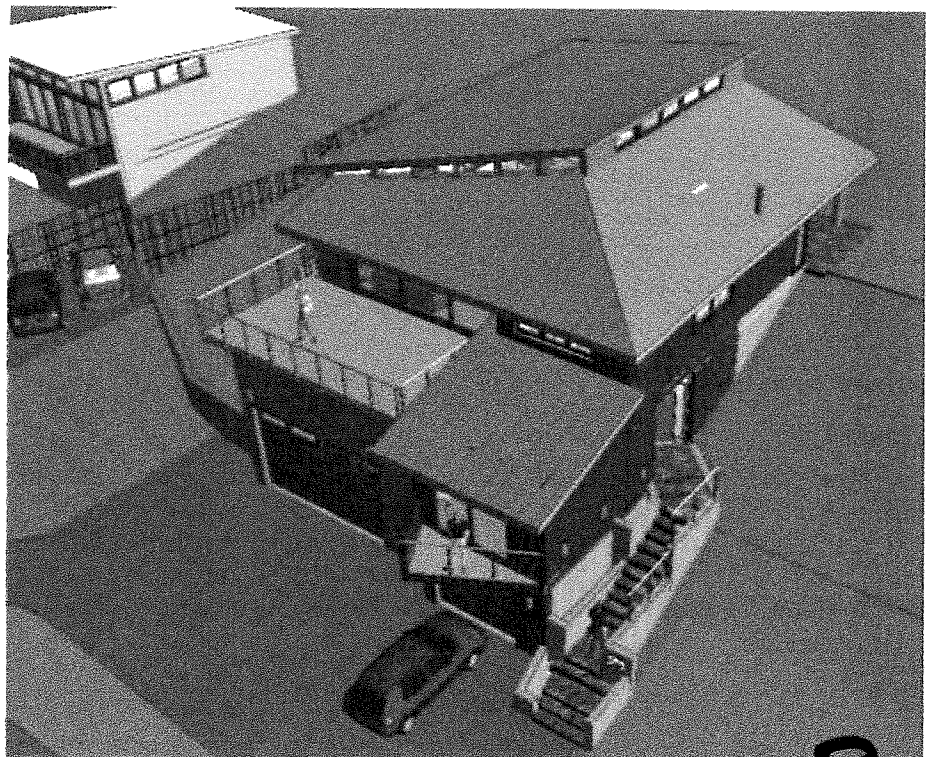
Remarks:

For your use, for HRD approval. 10 complete printed sets of drawings and cover letters submitted per your request for Planning Commissioners as required.

Height at South Wall facing street

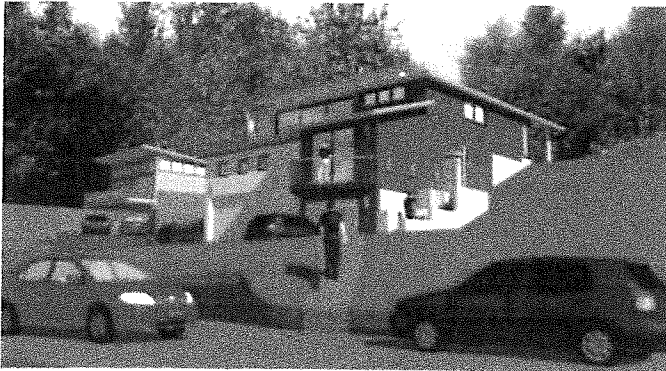
The primary concern of the Planning Commissioner's comments was the 3-story height facing the street. While the face of the building is set back more or less 50 feet from the edge of the road paving, the height at the entire front wall has been reduced to 2 stories. This reduces the scale of the building as it appears from the street. This revision has been achieved without redesigning the floor plan, by simply pushing the 3rd floor plan northward by 12', giving the building stepped appearance. The kitchen area is now located in the area previously used by the northerly patio, and the patio area is instead located just to the east of the kitchen. The patio area is covered to provide shade from the summer sun.

Pedersen Residence



Street View

The step-back design is most effective as seen from the street. And as before, the Fruitless Olive trees, 10' high at 5-year growth, provide an effective visual screen. Even without the trees shown, the building volumes are differentiated by pattern, color, height and shadows. Transparent railings relieve the apparent height.



Without Trees Shown



View from Street looking Northwest



South Elevation from Street

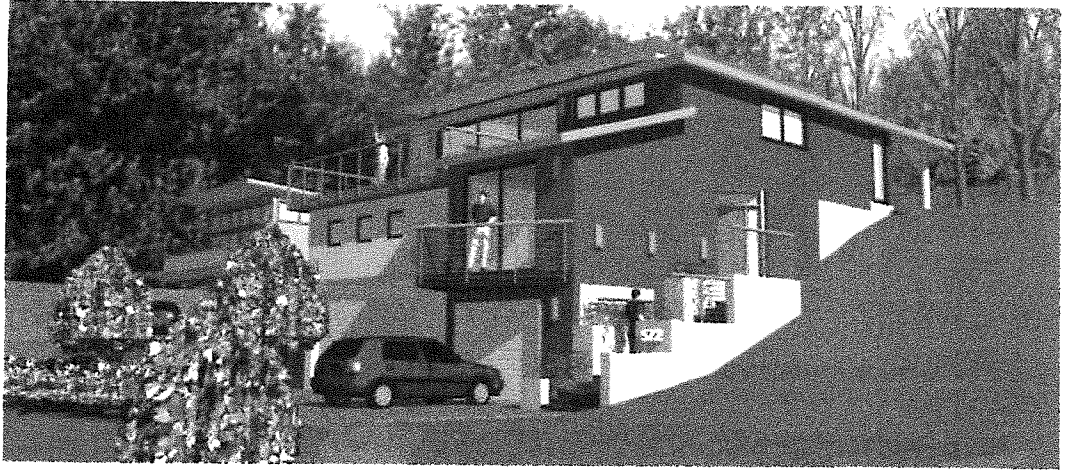
Variety of Materials, Pattern, Color and Shadow adds interest

Moving clockwise around the building, each perspective shows varied forms responding to solar orientation, views and privacy demands.

The **East Elevation** shows the exterior entry steps up to the front door. The darker colored siding is Boral vertical scored siding. The lighter colored siding is Boral shiplap, 4" o.c. horizontally. The sloping roof over Bedroom 2 creates an interesting interior space as well as repeats the corrugated metal roofing material used above. This solution reduces the scale of the previous solid railing and solves water-proofing issues.



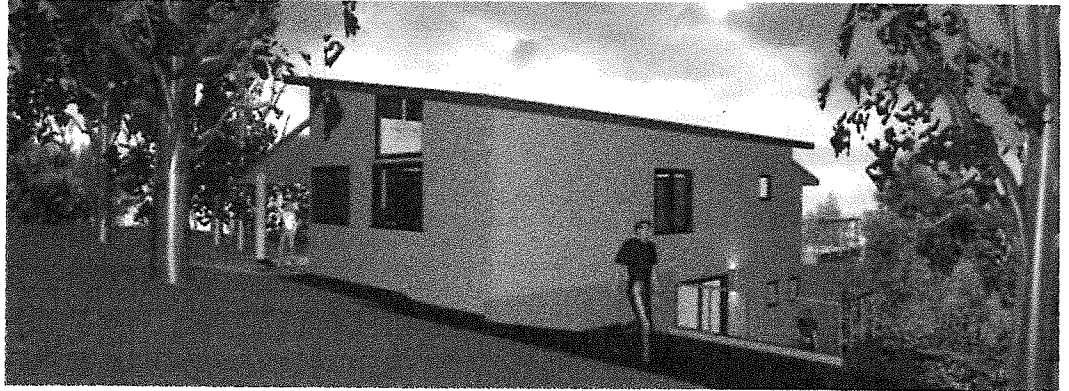
**View from the
southeast**



**View from the
southwest**



**View from the
northwest**



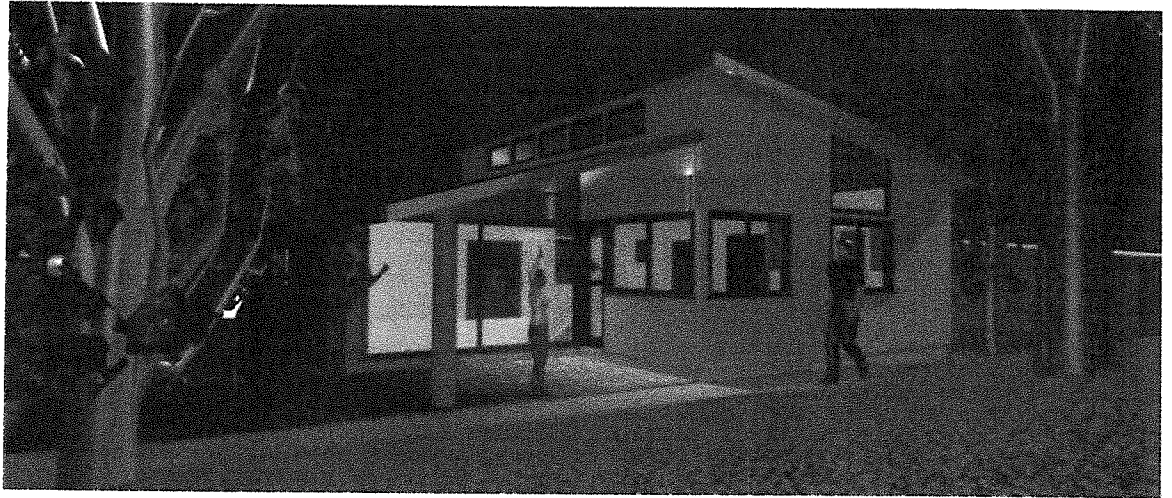
North Elevation



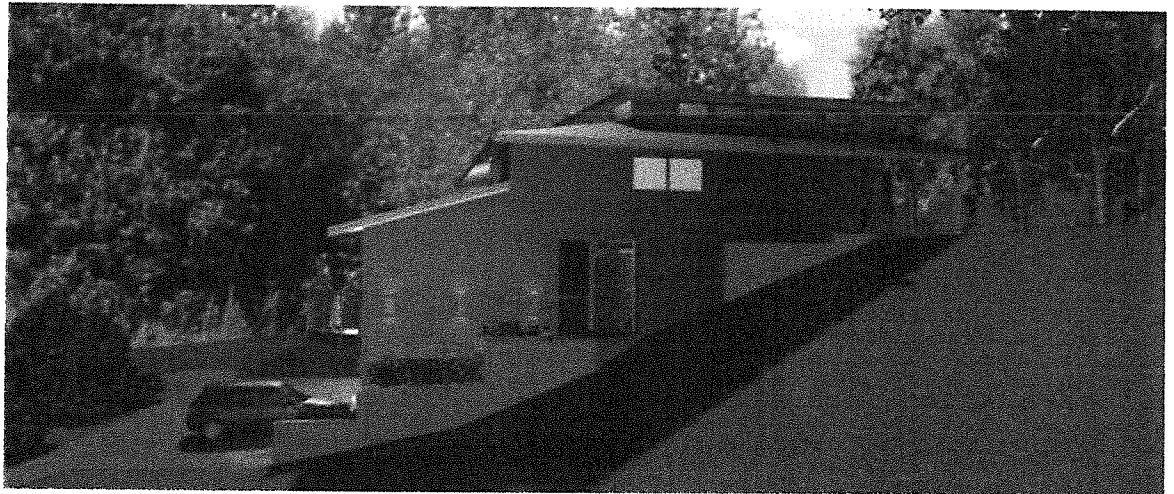
Exterior Lighting

The number of exterior light fixtures have been increased to provide better lighting coverage around the building. A complete lighting layout is shown on sheets A4.1 and A4.2. The fixture used remains the same "dark sky" downlight as previously shown. (The perspectives indicate a downlight/uplight but only downlights will be specified.)

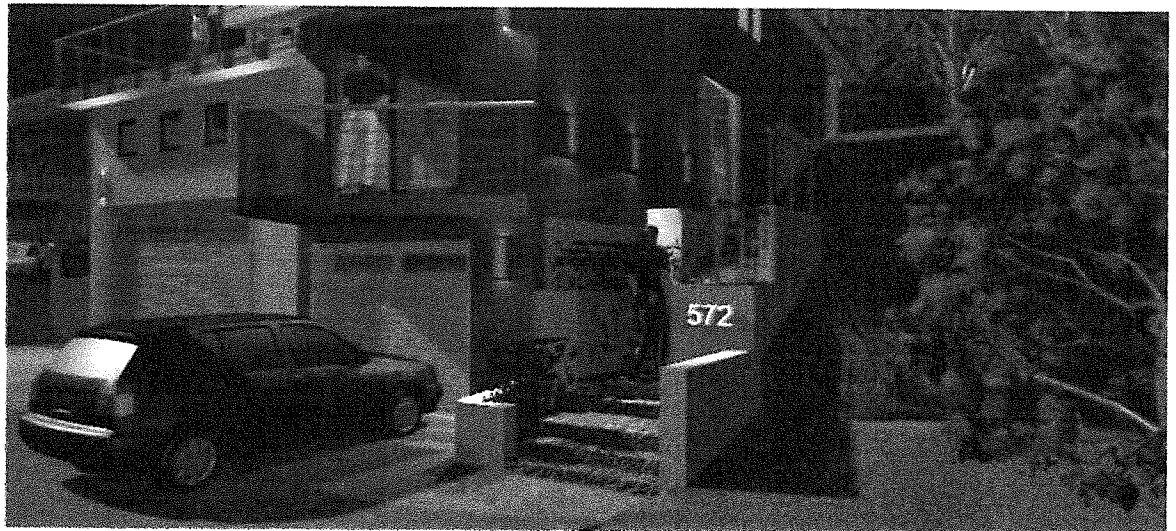
Looking South at North Patio



East Elevation at Twilight



Entry Stairs at night



Building Colors

The siding colors have been darkened from the previous submittal but still provide a color contrast between the differing horizontal & vertical siding patterns. The darker colors blend more easily into the surrounding landscape and the bright, contrasting whites have been eliminated. Window frames have been revised from white to dark bronze. The fascias and gutters match the roofing color. Transparent wire railings will be galvanized metal with stainless steel wire.

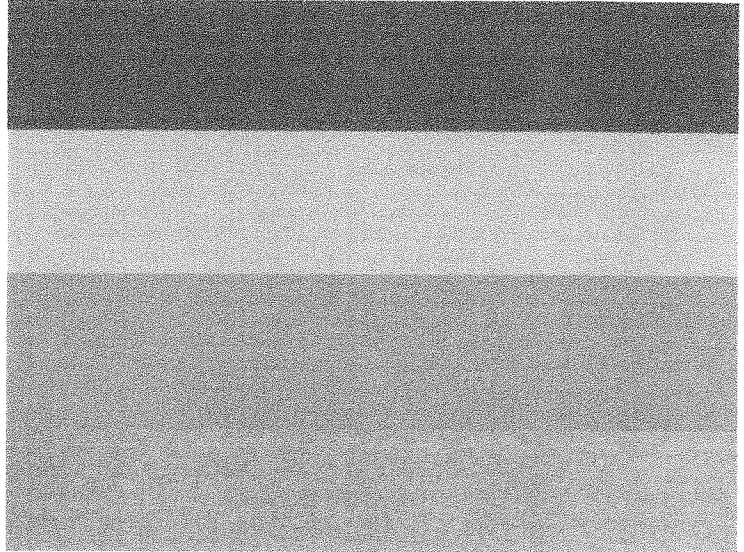
Paint Colors:

Dark Vertical Siding: Sherwin-Williams
"Limestone" SW 9599

Lighter Horizontal Shiplap Siding: Sherwin-Williams
"Quarry Stone" SW9603.

Roofing: Metal Sales "Classic Rib", 26ga.,
Color: Taupe (74). Match this color for
fascia, overhang soffit and gutters

Waterproof Deck Membrane: Gaco Deck
"GacoFlex Pedestrian Deck", Color: Gray #22



* Colors are a rough approximation. See Color Board.

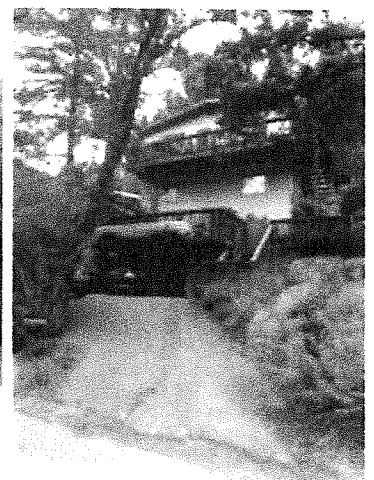
Septic System

The septic system is unaffected by the revisions.

The Precedent of Upslope Lots on Cascade Drive

There are numerous homes on Cascade Drive that set a precedent for what is standard and acceptable construction and style for the Pedersen Residence. Generally the Pedersen Residence has less impact, largely due to the generous setback from the street.

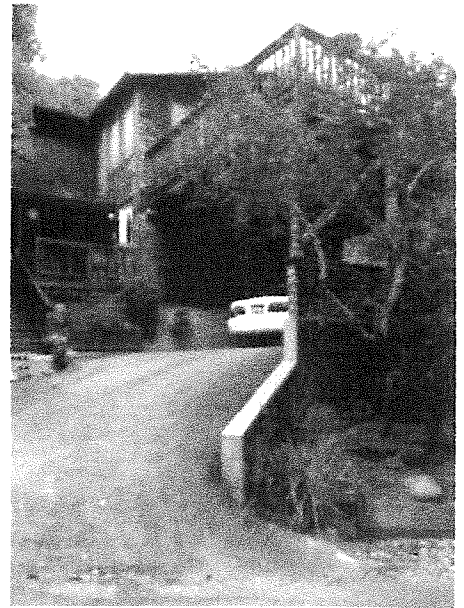
Three-story front face at existing homes:



There are existing homes on the upslope side of Cascade Drive that present the volume of the buildings in different ways. These homes have front building facades that are three-story and they are generally considerably closer to the street with less opportunity for landscaping to mask the front façade. This is generally a problem when building on on-slope lots. The Pedersen Residence has lessened the impact by lowering the front wall to 2-stories, breaking up the scale of the wall with varying planes and colors, and using muted colors to blend into the background. The building is now 4' under the height limit at its highest point and 11' under the height limit at the front wall.



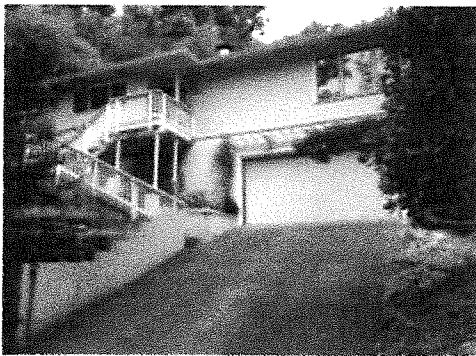
This 3-story home on Cascade is set back from the street but exposes the front façade since the driveway leads directly from the street to the front building wall.



This two and a half story building face accommodates parking but apparently extends the structure close to the front property line.

Proximity to the street

Many upslope solutions have moved the buildings close to the street in order to minimize excavation, with the obvious visual impact on the street view. By contrast, because the Pedersen Residence is located off of an already-graded level area, the amount of excavation for the driveway & parking is approximately equivalent.



Excavation and Off-Haul

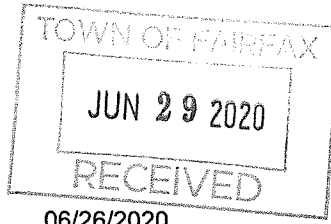
See revised Civil Drawings for reduction of off-haul quantity.

Sincerely,

A handwritten signature in black ink that reads "Richard Rushton". The signature is written in a cursive, slightly slanted style.

Richard Rushton
(415) 306-4714

Copy to: Planning staff, Owner & Vlad Iojica



**ENGINEERING
COVER LETTER**

Date: 06/26/2020

To: Linda Neal,
Principal Planner
Planning & Building Department
Town of Fairfax, CA

APN: 003-022-20

Fax No.

From: Vlad Iojica

Project: Pedersen Residence –
572 Cascade Drive,
Town of Fairfax, CA

ViA Project: 1711.d

Subject: Revisions to the proposed architectural site plan, landscaping and grading quantities.

Transmitted: Application Drawings Addendum Invoice
 Letter Specifications Suppl. Instr. Check List
 Memorandum Calculations Sample Punch List

For Your: Information Use Review Approval

Via: Mail Overnight Courier/Printer Fax

Remarks: Following the Planning Commission meeting held on May 21, the civil engineering and landscape architectural plans have been revised in accordance with the comments received and changes made to the architectural site plan:

1. Site Grading Plan has been revised to accommodate the revised footprint of the residence. The earthwork quantities have been subsequently changed to reflect the new site plan. Please see plan sheet C3.0.
2. Consideration has been given to the traffic associated with hauling off-site the excavated material during construction. In addition to the considerable reduction in soil being proposed to be off-hauled from the site, this activity will be scheduled over an extended period of time, in a manner that will not create disturbance to the traffic.
3. The Landscape and Vegetation management plan have been revised to show additional trees proposed to be planted in order to compensate for the healthy trees being removed during the demolition phase of the project. Please see L1.0 and L1.1 sheets.

C:\Users\Vlad Iojica\Documents\ViA\1711D_Pedersen Residence, Fairfax\T-out\2020-06-26 Planning\2020-06-26_Transmittal Letter.docx

9 Brookside Court • San Anselmo, CA 94960 • Tel: (415) 774-6776 • Email: office@via-eng.com • www.via-eng.com

ATTACHMENT 

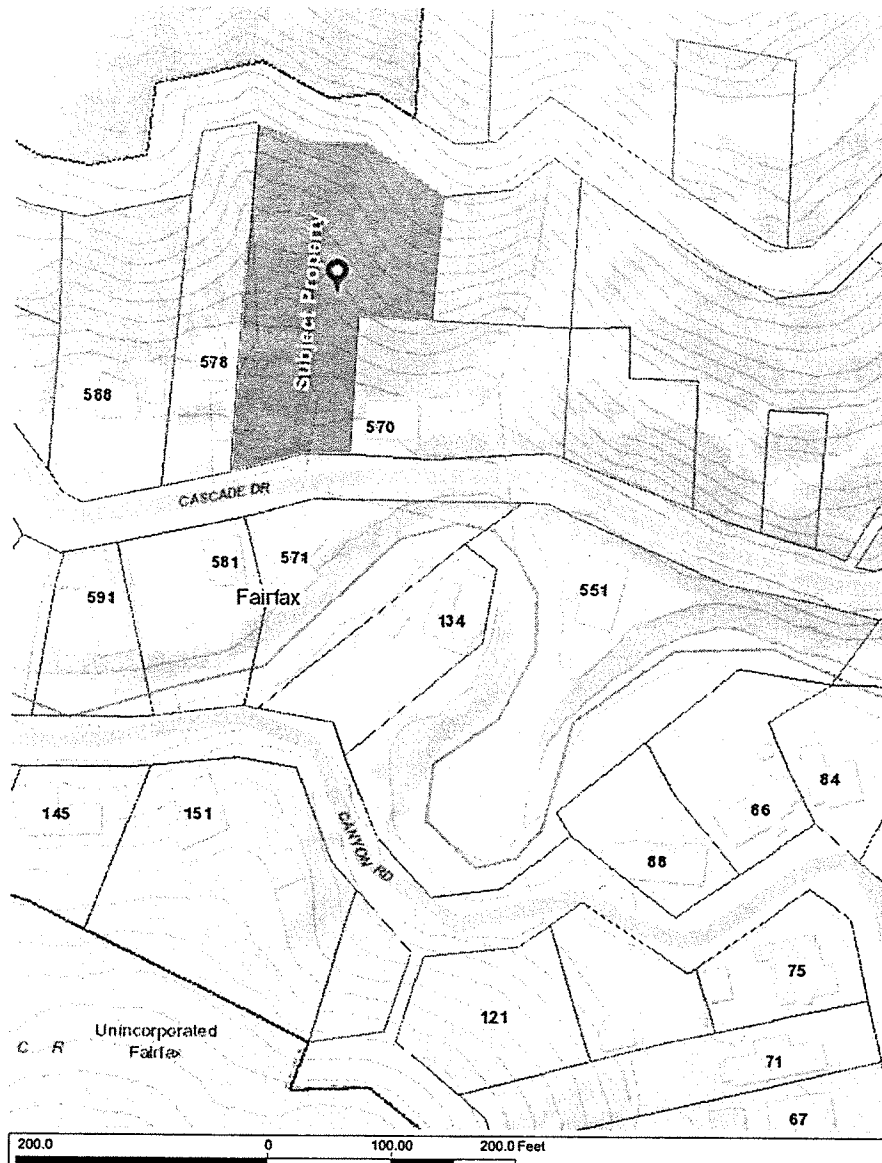
ENGINEERING COVER LETTER

- Enclosed:
- a. Architect's Letter of Transmittal: 10 copies
 - b. Color samples: 1 copy
 - c. Revised Plans 24"x36" format (Architectural, Civil and Sanitary Sewer): 10 copies
 - d. Revised Plans 11"x17" format (Architectural, Civil and Sanitary Sewer): 1 copy.
 - e. 24 postage stamps

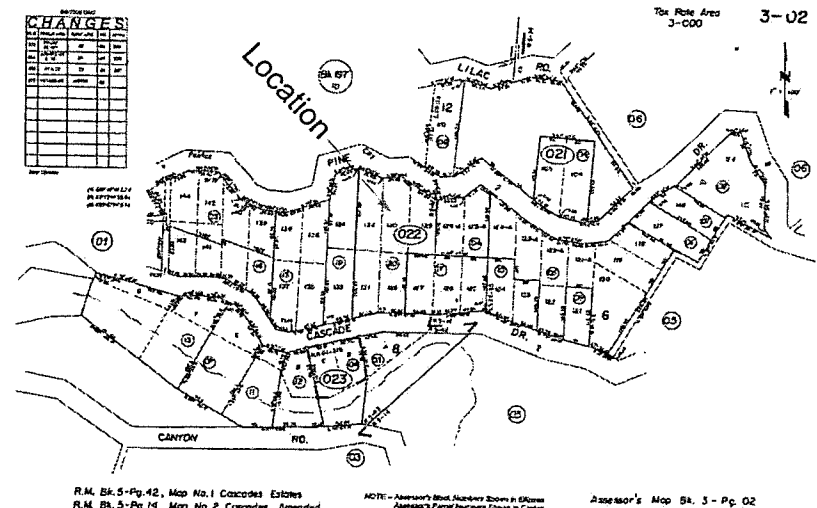
If the attachments are not complete or as described, please notify the sender immediately.

Signature

Date



1 NEIGHBORHOOD PLAN
NOT TO SCALE



2 PARCEL MAP

NOTES

- 01000 GENERAL**
- The following code editions shall be used for the design of this project: 2016 C.B.C., 2016 C.R.C., 2016 C.M.C., 2016 C.P.C., 2016 C. Elect. C., 2016 C. Energy Code, 2016 C.F.C., and 2016 California Green Building Standards Code including those measures specified as mandatory.
 - All construction shall comply with the governing codes of the Town of Fairfax Adopted Building Ordinances.
 - TITLE 24:** Applicable sections of the energy installation compliance for CP-6R must be provided to the Owner and the Town prior to a request for a final inspection.
 - Manufacturer's installation instructions as required by this code shall be available on the job site at the time of inspection.
 - DEFERRED SUBMITTAL:** Fire sprinkler calculations shall be provided by the installer as per Note 15330. Submittal documents shall be submitted to the Building Official. The deferred submittal items shall not be installed until their design & submittal documents have been approved by the building official.

- 01330 STRUCTURAL OBSERVATION**
- Structural observation shall be required by the Engineer for structural conformance to the approved plans for seismic resistance and wind requirements. Owner shall employ a registered design professional to perform structural observation as defined in Section 1710 of the 2013 CBC.
 - Structural observation per CBC shall be performed for the following: The Contractor shall provide 48 hours notice for all site visits needed to perform the required Structural Observations and all follow-up visits. As coordinated by the Contractor, a written statement by the appropriate engineer shall be provided to the Building Department.
 - Foundation excavation and pier drilling, prior to placement of reinforcement or concrete, by the project geotechnical engineer.
 - Foundation reinforcement, prior to placement of concrete, by the project design civil or structural engineer.
 - Seismic-force-resisting system, prior to installation of interior and exterior wall finishes, by the project design civil or structural engineer.

- 02000 SITEWORK**
- SURVEY:** Property lines must be surveyed and staked prior to start of construction.
 - ROOF DOWNSPOUTS** shall outlet into solid PVC piping and exited as shown to assure drainage away from the building.
 - LOCATION OF UTILITIES:** It is the Contractor's responsibility to verify locations and depths of utilities with the appropriate agencies prior to starting work.
 - CONSTRUCTION VEHICLES:** Construction related vehicles including equipment delivery, cement trucks and construction materials shall be located off the travel lane of the adjacent public right-of-way at all times.
 - UTILITIES:**
 - Electricity: underground.
 - Telephone: underground.
 - Sewer: Connect to new septic system by Eckman Environmental.
 - Gas: underground
 - Water: new meter.
 - PAVING:**
 - Driveway, parking and other site improvements shall be inspected by a Department of Public Works engineer.
 - Any areas on the property used for driving or parking must be approved with asphalt or concrete or a material approved in advance by the Public Works Director. (Gravel is not allowed.)
 - EROSION CONTROL:**
 - If this project is to be performed between October 15 and April 15, submit & obtain approval of an EROSION CONTROL PLAN from the Town Engineer prior to start of work. Erosion control measures must be in place and maintained continuously during those periods. A signed copy of the Erosion Control Plan must be posted at the site, along with the Building Permit.
 - Before a request for a final inspection, any area where soil is disturbed must be totally re-vegetated with a ground cover acceptable to the RVFD and Public Works Director or a permanent erosion control system such as an erosion-control blanket or mulch covered with a tackifier. There are no exceptions to this requirement and may require temporary plantings in order to comply. For information and details on permanent erosion control methods, refer to MCSTOPP.org. Treatment for stabilizing any bare soil must be clearly described on the drawings.

- 02010 MMWD REQUIREMENTS**
- SCHEDULE:** Complete the structure's foundation within 120 days of the date of the MMWD application.
 - WATER CONSERVATION:** Comply with all indoor and outdoor requirements of District Code Title 13. This may include verification of specific indoor fixture efficiency compliance.
 - LANDSCAPE:** If pursuing a landscaping project subject to review by your local planning dept. and/or subject to a city permit, contact the district water conservation dept. at 415-945-1497 or email to plancheck@marinwater.org.
 - BACKFLOW PREVENTION:** Comply with backflow prevention requirements, if upon the District's review backflow protection is warranted, including installation, testing and maintenance. Questions: 415-945-1558.
 - GRAY WATER:** Comply with Ordinance No. 429 requiring the installation of gray water recycling systems when practical for all projects required to install new water service.

- 02230 WILDLAND-URBAN INTERFACE AREA**
- Prior to building permit final approval the property shall be in compliance with the vegetation clearance requirements prescribed in California Public Resources Code 4291 California Government Code Section 51182. CBC 701A.3.2.4.
 - Roofing assemblies shall be installed in accordance with their listings and manufacturer's installation instructions. 704A.1.1.
 - When provided, valley flashings shall be not less than 0.019" (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36" wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley. 704A.1.3.
 - Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. 704A.1.5.
 - Vent openings in exterior walls, where allowed, shall be designed to resist the intrusion of flame and embers into the structure, or shall be screened with corrosion-resistant, noncombustible wire mesh with 1/2" openings or equivalent. 704A.3.2.1.
 - Exterior windows, window walls, glazed doors, and glazed openings in exterior doors shall be insulating glass units with a minimum of one tempered pane, or glass block units, or have a fire-resistance rating of not less than 20 minutes when tested according to ASTM E 2010, or conform to the performance requirements of SFM 12-7A-2. 704A.3.2.2.
 - Exterior door assemblies shall conform to the performance requirements of SFM12-7A-1 or shall be of approved noncombustible construction, or solid core wood having stiles and rails not less than 1 3/8" thick with interior panels no less than 1 1/2" thick, or shall have a fire-resistance rating not less than 20 minutes when tested according to ASTM E 2074. (Exception: noncombustible or exterior fire-retardant treated wood vehicle access doors.)

- 02310 SITE GRADING**
- The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of 5% for a minimum distance of 10 feet.
 - If physical obstructions, or lot lines prohibit 10 feet of horizontal distance, a 5% slope shall be provided to an approved alternative method of diverting water away from the foundation. Swales used for this purpose shall be sloped a minimum of 2% where located within 10 feet of the building foundation.
 - Imperious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2% away from the building.

- 05515 EGRESS**
- EMERGENCY ESCAPE:** Every sleeping room below the 4th floor shall have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside opening without the use of separate tools. Where windows are provided as a means of egress or rescue, the window opening shall be located no more than 44" above the floor. All egress or rescue windows from sleeping rooms must have a minimum net clear opening of five and seven tenths (5.7) square feet. The minimum net clear opening height dimension shall be 24 inches. The minimum net clear opening width dimension shall be 20 inches.
 - Exception: Grade floor windows may have a minimum net clear opening of five (5) square feet.
 - The Contractor shall verify that all new window sizes & configurations meet egress requirements, shall notify the Architect immediately if non-compliance exists, and shall insure that revisions are made to insure compliance.
 - STAIRWAY:** Minimum width of stair treads shall not be less than 36". Maximum riser is 7.75"; minimum tread is 10", a 3/4" nosing is required if treads are less than 11".
 - THRESHOLD HEIGHT:** Landings or floors at the required egress doors shall not be more than 1.5" from the top of threshold. (Exception: the exterior landing or floor shall not be more than 7.75" below the top of threshold provided the door does not swing over the landing or floor) CRC R311.3.1.
 - ESCAPE LADDERS:** Provide a permanent ladder as a means of escape from sleeping rooms above the first floor, or equivalent height, Marin County Code Sec. 19.04.070, Firefold Folding Escape Ladder, sizes as required; available from Mill Valley Lumber Co., 129 Miller Ave., Mill Valley. Install strictly according to manufacturer's specifications.
 - BARs, GRILLES OR SCREENS** placed over emergency escape windows shall be releasable or removable from the inside without the use of a key, tool or excessive force.
 - GUARDRAILS:** All guardrails to be minimum of 42" in height with openings less than 4", around stair walls, decks and balconies. (Exceptions: At stair guard; at open sides of stairs guards shall not be less than 34" in height; openings less than 4.375" are allowed; at a triangle opening formed by riser, tread and bottom rail an opening less than 6" is allowed.) Provide a guardrail at any walking surface over 30" above grade within 36" horizontally of the open edge of the walkway or stair.
 - GUARDRAILS:** shall be mounted so that the completed rail and supporting structure are capable of withstanding a load of at least 20 pounds per lineal foot applied horizontally at right angles to the top rail, and so that intermediate rails, panel fillers and their connections are capable of withstanding a load of at least 25 psf applied horizontally at right angles over the entire tributary area, including openings and spaces between rails.
 - HANDRAILS** shall be 1-1/2" diameter wood dowel located continuously 34" to 38" above the tread nosing. Return both ends to wall. Space out from wall 1-1/2" minimum. Metal brackets as intermediate support at approximately 3 feet o.c. unless shown otherwise.

- 06100 CARPENTRY**
- GREEN POINTS:** Re-use form boards for framing where possible.
 - GREEN POINTS:** Use Forest Stewardship Council (FSC) certified wood for framing.
 - GREEN POINTS:** Treated wood shall not contain chromium or arsenic.
 - GREEN POINTS:** Use formaldehyde-free composite materials for paintable trim instead of wood.

- 06101 FIRE BLOCKING**
- Fire blocks shall be provided in the following locations:
 - In concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor levels and at 10'-0" intervals both horizontal and vertical.
 - At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
 - In concealed spaces between stair stringers at the top and bottom of the run and between studs along and in line with the run of stairs if the walls under the stairs are unfinished.
 - Use noncombustible materials in openings around vents, pipes, ducts, chimneys, fireplaces and similar openings at ceiling and floor levels.

- 06103 BUILDING WRAP**
- Building paper and window flashing:
 - Either of the following are acceptable:
 - "Tyvek" housewrap by Dupont; polyethylene air infiltration barrier.
 - Sisalkraft paper.
 - Apply strictly according to manufacturer's recommendations.

- 06410 CABINetry**
- General Contractor and/or cabinetmaker shall be responsible for verifying existing conditions for proper fit of proposed cabinetry including correct fit of all proposed equipment and plumbing fixtures.
 - Cabinet maker or supplier shall provide shop drawings for review and approval by Owner or Owner's representative before cabinetry is ordered.

- 07000 WATERPROOFING**
- Retaining wall backfill and drainage: Waterproofing shall be installed on the exterior surface of all walls enclosing habitable space, and at any other areas required by the Owner, Architect or Engineer. Unless noted otherwise, performance and serviceability of the waterproofing shall be the responsibility of the Contractor.

CONTENTS

PROJECT
PEDERSEN RESIDENCE
572 Cascade Drive, Fairfax
Job No. 17116

SCOPE OF WORK
New Residence.

DESCRIPTION:
Zone: RS6
Building Occupancy Group: R-3/U
Type of Construction: V-N
WUI: Located in a designated Wildland-Urban Interface area.
Stories: Three

OWNER
George Pedersen & Christine Chalk
gpedersen@comcast.net

ARCHITECT
RUSHTON-CHARTOCK ARCHITECTS
1620 Sir Francis Drake Blvd.
P.O. Box 173, Fairfax CA 94978-0173
(415) 457-2802 Fax: (415) 457-2873
Email: rushtonchartock@gmail.com
Web site: www.rushtonchartock.net
Project Architect: Richard Rushton, Ext. 205

CIVIL ENGINEER
Vlad Iojica, P.E., QSD/P Registered Civil Engineer, VIA-Atelier, Inc.
Civil & Structural Engineering Consultants
9 Brookside Ct., San Anselmo, CA 94960
415-774-6776 v.ijica@via-enu.com

ENERGY CONSULTANT
ENERGY CALC CO.
45 Mitchell Blvd., #16, San Rafael CA 94903
457-0990, fax: 457-1986

DRAWINGS

sheet	title
A1.1	GENERAL Contents Neighborhood Map Parcel Map Notes
A2.2	SITWORK Site Plan
A2.5	Tree Removal Plan
A4.1	FLOOR PLAN Garage & 2 nd Floor Plans
A4.2	Third Floor Plan/ Roof Plan
A6.1	SECTIONS Sections
A7.1	EXTERIOR Exterior Elevations
A7.2	Exterior Elevations
A7.5	Exterior Details
C1.0	CIVIL Cover Sheet
C2.0	Existing Conditions - Site Topography
C3.0	Proposed Site Improvements Plan
C4.0	Details
C5.0	Erosion Control Plan
C5.1	Erosion Control Details
L1.0	Landscape & Planting Plan
L1.1	Vegetation Management Plan
CM.1	Construction Management Plan
1	SEPTIC SYSTEM Septic System Plan by Eckman Environmental Designs
2	Details
3	Details & Notes
	UNDER SEPARATE COVER Arborist Report by Dan McKenna, including: Tree Protection Plan Risk Assessment Vegetation Management Plan Tree Protection Plan by Kent Julin, 10/24/19. Soil Report by Dennis Furby, amended 10/22/19. Drainage Report by Vlad Iojica

END OF CONTENTS

Preliminary Not for Construction

Richard Rushton Architect
235 Scenic Road, Fairfax CA 94930
(415) 306-4714
Email: rich@rushtonarchitect.com
Website: www.richardrushtonarchitect.net

Richard Rushton
REGISTERED ARCHITECT
CALIFORNIA
EXPIRES 06/30/2021

PEDERSEN RESIDENCE
New Residence for George Pedersen
(415) 454-8531
572 Cascade Drive, Fairfax CA
A.P. No. 003-022-20

Project No. 17116
Project Architect: Richard Rushton
Date: 7/11/18
Revisions:
4/17/19
10/21/19
2/20/20
3/29/20
6/1/20

TITLE SHEET

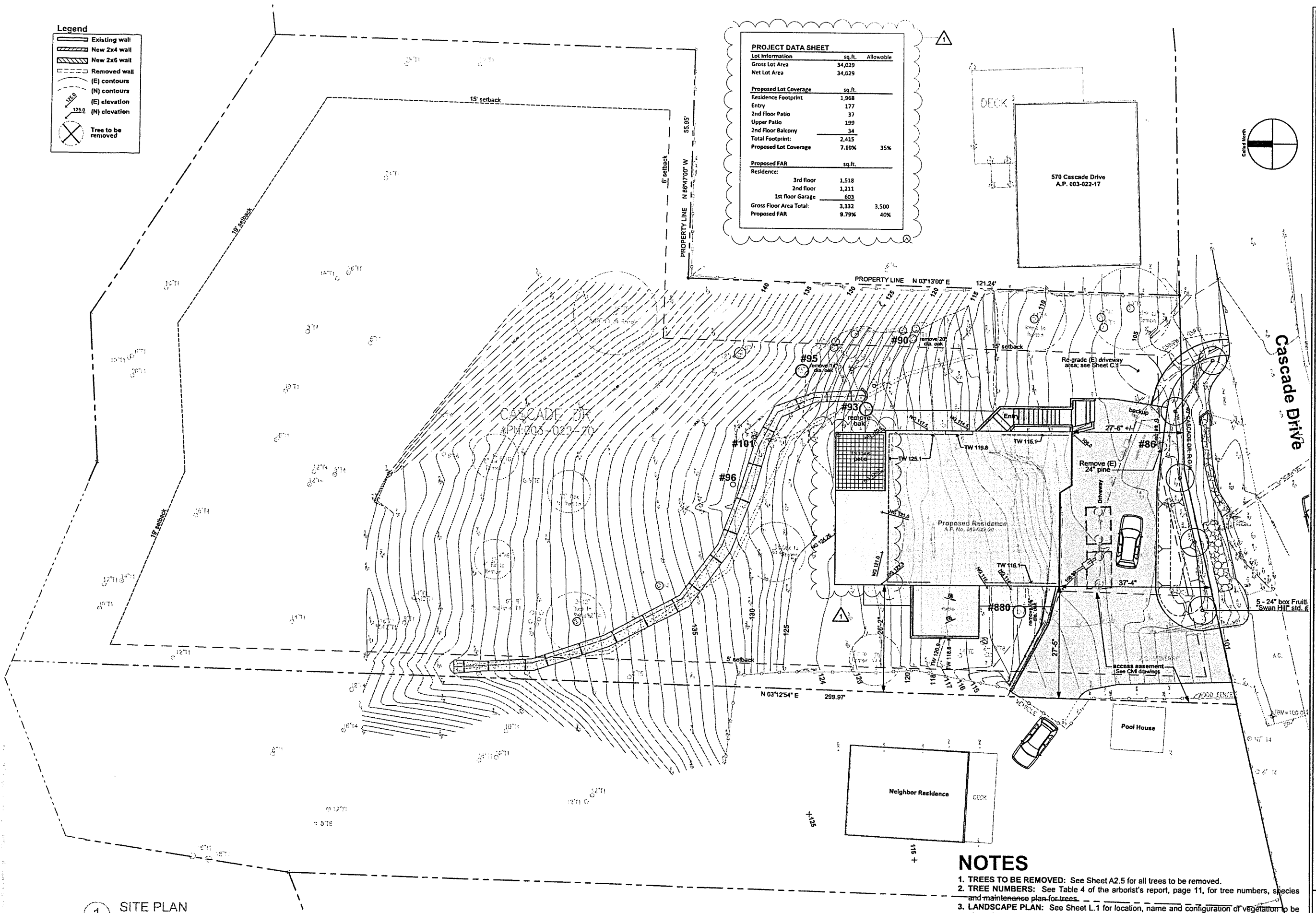
A1.1

Legend

	Existing wall
	New 2x4 wall
	New 2x6 wall
	Removed wall
	(E) contours
	(N) contours
	(E) elevation
	(N) elevation
	Tree to be removed

PROJECT DATA SHEET

Lot Information	sq. ft.	Allowable
Gross Lot Area	34,029	
Net Lot Area	34,029	
Proposed Lot Coverage		
Residence Footprint	1,968	
Entry	177	
2nd Floor Patio	37	
Upper Patio	199	
2nd Floor Balcony	34	
Total Footprint	2,415	
Proposed Lot Coverage	7.10%	35%
Proposed FAR		
Residence:		
3rd floor	1,518	
2nd floor	1,211	
1st floor Garage	603	
Gross Floor Area Total:	3,332	3,500
Proposed FAR	9.79%	40%



NOTES

- TREES TO BE REMOVED:** See Sheet A2.5 for all trees to be removed.
- TREE NUMBERS:** See Table 4 of the arborist's report, page 11, for tree numbers, species and maintenance plan for trees.
- LANDSCAPE PLAN:** See Sheet L.1 for location, name and configuration of vegetation to be planted.

1 SITE PLAN
SCALE: 1" = 10'

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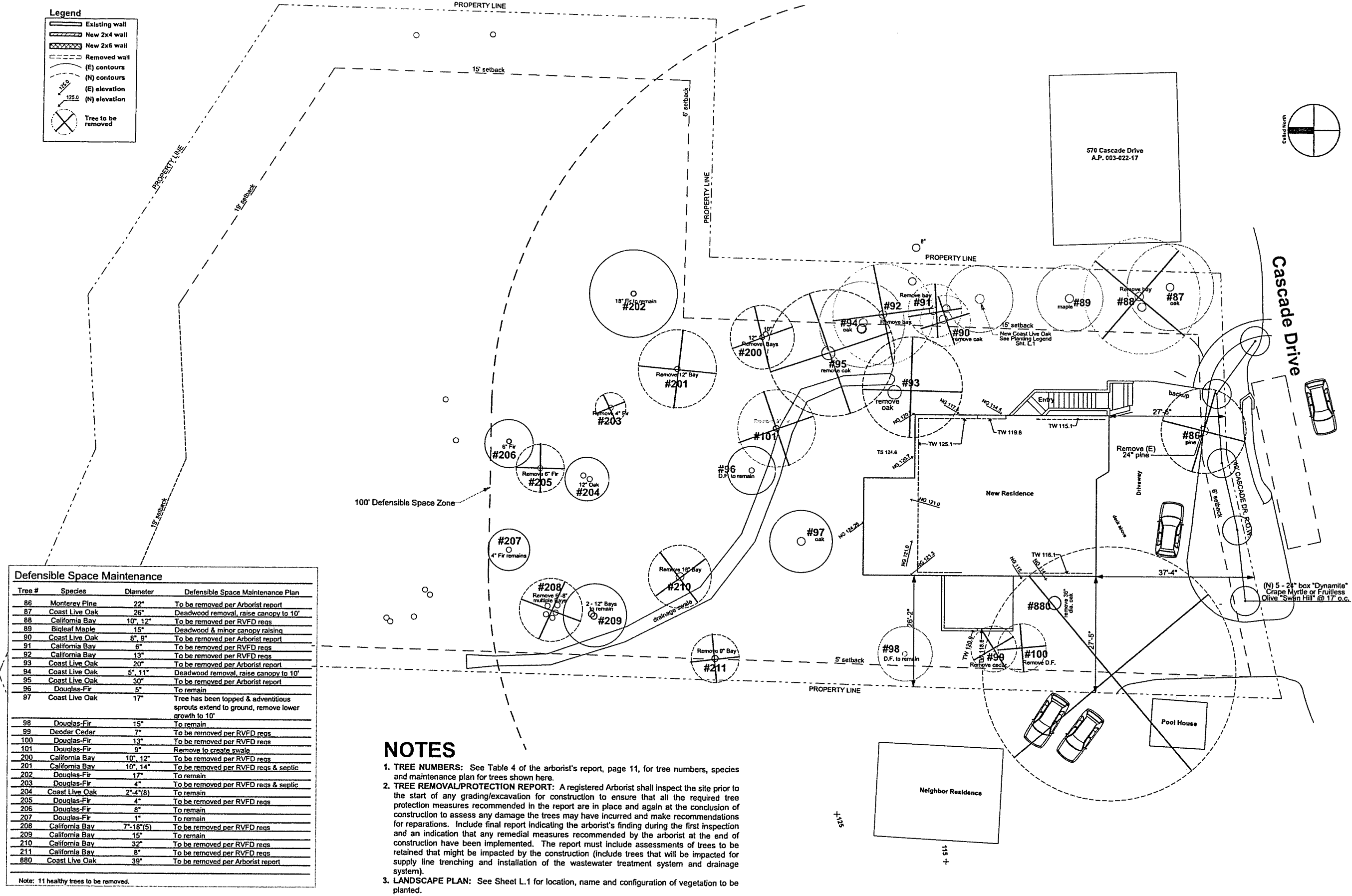
PEDERSEN RESIDENCE
New Residence for George Pedersen
(415) 454-8531
572 Cascade Drive, Fairfax CA
A.P. No. 003-022-20

Project No. 17116
Project Architect: Richard Rushton
Date: 7/1/18
Revisions:
4/17/19
7/28/19
10/21/19
2/20/20
3/29/20
6/1/20

A2.2

Legend

- Existing wall
- New 2x4 wall
- New 2x6 wall
- Removed wall
- (E) contours
- (N) contours
- (E) elevation
- (N) elevation
- Tree to be removed



Defensible Space Maintenance

Tree #	Species	Diameter	Defensible Space Maintenance Plan
86	Monterey Pine	22"	To be removed per Arborist report
87	Coast Live Oak	26"	Deadwood removal, raise canopy to 10'
88	California Bay	10", 12"	To be removed per RVFD regs
89	Bigleaf Maple	15"	Deadwood & minor canopy raising
90	Coast Live Oak	8", 9"	To be removed per Arborist report
91	California Bay	6"	To be removed per RVFD regs
92	California Bay	13"	To be removed per RVFD regs
93	Coast Live Oak	20"	To be removed per Arborist report
94	Coast Live Oak	5", 11"	Deadwood removal, raise canopy to 10'
95	Coast Live Oak	30"	To be removed per Arborist report
96	Douglas-Fir	5"	To remain
97	Coast Live Oak	17"	Tree has been topped & adventitious sprouts extend to ground, remove lower growth to 10'
98	Douglas-Fir	15"	To remain
99	Deodar Cedar	7"	To be removed per RVFD regs
100	Douglas-Fir	13"	To be removed per RVFD regs
101	Douglas-Fir	9"	Remove to create swale
200	California Bay	10", 12"	To be removed per RVFD regs
201	California Bay	10", 14"	To be removed per RVFD regs & septic
202	Douglas-Fir	17"	To remain
203	Douglas-Fir	4"	To be removed per RVFD regs & septic
204	Coast Live Oak	2"-4"(8)	To remain
205	Douglas-Fir	4"	To be removed per RVFD regs
206	Douglas-Fir	8"	To remain
207	Douglas-Fir	1"	To remain
208	California Bay	7"-18"(15)	To be removed per RVFD regs
209	California Bay	15"	To remain
210	California Bay	32"	To be removed per RVFD regs
211	California Bay	6"	To be removed per RVFD regs
880	Coast Live Oak	39"	To be removed per Arborist report

Note: 11 healthy trees to be removed.

NOTES

- TREE NUMBERS:** See Table 4 of the arborist's report, page 11, for tree numbers, species and maintenance plan for trees shown here.
- TREE REMOVAL/PROTECTION REPORT:** A registered Arborist shall inspect the site prior to the start of any grading/excavation for construction to ensure that all the required tree protection measures recommended in the report are in place and again at the conclusion of construction to assess any damage the trees may have incurred and make recommendations for reparations. Include final report indicating the arborist's finding during the first inspection and an indication that any remedial measures recommended by the arborist at the end of construction have been implemented. The report must include assessments of trees to be retained that might be impacted by the construction (include trees that will be impacted for supply line trenching and installation of the wastewater treatment system and drainage system).
- LANDSCAPE PLAN:** See Sheet L.1 for location, name and configuration of vegetation to be planted.

Note: Trees shaded to be removed.

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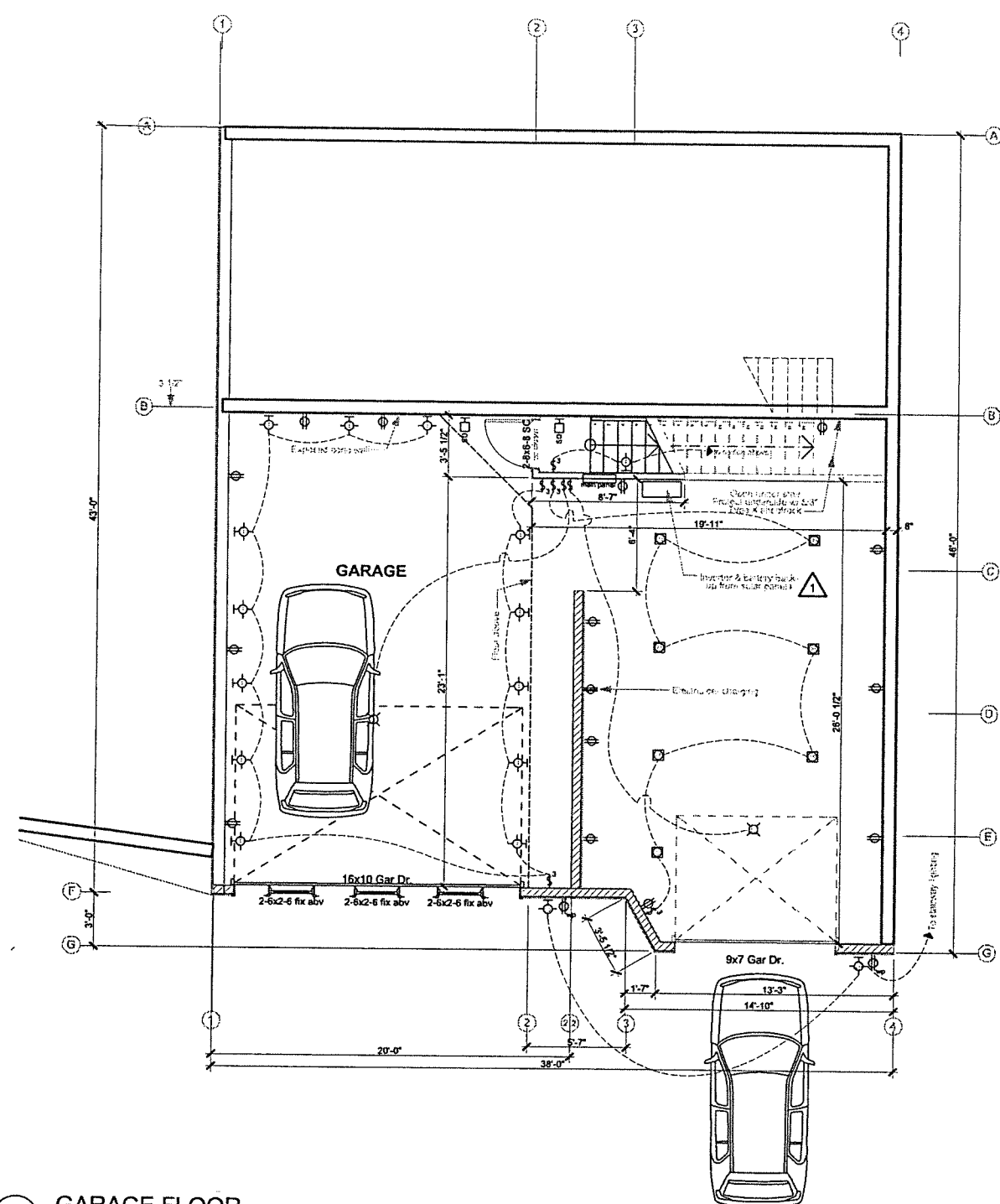


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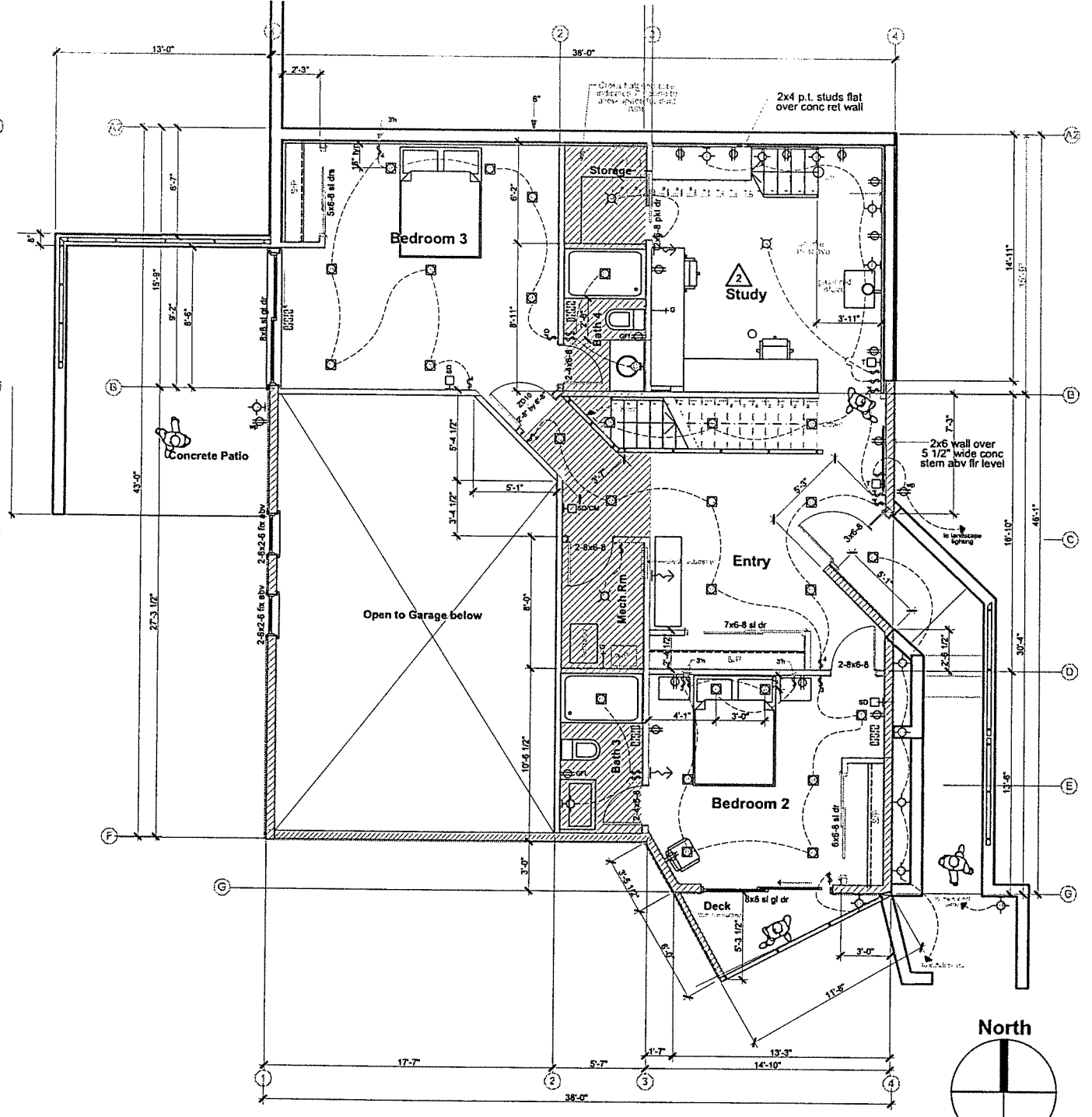
TREE REMOVAL PLAN

Project No.	17116
Project Architect	Richard Rushton
Date	6/9/19
Revisions	10/21/19
	2/20/20
	6/1/20

A2.5



1 GARAGE FLOOR
SCALE: 1/4" = 1'-0"



2 SECOND FLOOR
SCALE: 1/4" = 1'-0"

Note: See Electrical/Mechanical Symbols on Sheet A6.1

NOTES

07200 THERMAL INSULATION

- All roof joint insulation shall be spray foam as per Section 07213.
- Provide R-19 batt insulation in all exterior 2x6 stud walls.
- Provide R-19 insulation in all floors over unheated space.
- R value shall be for insulation only, not installed.

07213 SPRAY POLYURETHANE FOAM INSULATION

- SPF injected foam insulation: R-value per heat loss cales; Bear, Earthseal, Bayseal or equivalent.
- Closed cell: R = 6.5/inch, 2M, 4 1/2" to achieve R30
- or Open cell: R = 3.6-3.9/inch; 7 1/2" to achieve R30.
- No vapor retarder.

07300 ROOFING

- Class A 25-year composition shingles (minimum). Fiberglass shingles, Pabco, Sherwood or Elk.
- Over entire area, place one ply of underlayment, with ends and edges weatherlapped minimum 4 inches. Stagger end joints of each consecutive layer. Nail protective underlayment sufficiently to hold in place.
 - Low Slope Application:** On slopes of 2" to 4" per foot, install a double layer of asphalt felt by first applying a 19" wide strip along the eaves and overlapping the drip edge 1/4" to 1/2". Over this starter, apply a full 36" wide sheet. Continue with 36" wide sheets, lapping each 19" over the preceding course. Secure with sufficient fasteners to hold in place until shingles are applied. End laps are to be 12" wide minimum and offset at least 6 feet from course to course.
 - Alternative Low Slope Application:** Grace Vycor Ice & Water Shield, installed according to manufacturer's recommendations for low-slope installation.

07561 SIDING

- Boral cement-fiber vertical groove siding; color of siding & trim as shown on Drawings.
- Boral 4" shiplap cement-fiber siding; color of siding and trim as shown on Drawings.

07111 LIQUID URETHANE MEMBRANE WATERPROOFING

- Waterproof Membrane: Liquid Urethane Rubber Membrane material. Products as manufactured or supplied by Gaco Western, Inc.
 - Meet published properties.
 - Meet applicable Air Pollution Control regulations. LM-60 is solvent free.
 - Urethane Coatings: Gaco Western LM-60H for horizontal surfaces and LM-60V for vertical.
 - Other materials required: Primer, thinner and cleaner, expansion joint covers, reinforcing materials, caulking and flashing compounds as supplied by Gaco. Protection board by others.
- Acceptable installers include: Division 7, Mack Construction, 46 Digital Dr., Suite 2, Novato 94949, 883-6548.
- Apply waterproofing membrane in accordance with the manufacturer's recommendations.
- Finish coat color as selected by Owner.

08150 EXTERIOR FIBERGLAS DOORS

- DOORS; either of the following are acceptable.
 - Therma-Tru "Smooth-Star", flush-face fiberglass door; paint-grade.
 - Equivalent by PlastPro.

08300 GARAGE DOOR

- To be selected by Owner. Remote controlled; 2 remotes. Provide allowance.

08600 WINDOWS

- Fletwood aluminum frame, white finish.
- Sliding Doors: Fletwood, white finish.
- All windows double-glazed and tempered to meet WUI requirements. Complete with screens where operable.
- See Title 24 calcs for U-factor and SHGC required.
- Window supplier shall verify that all new windows meet egress requirements and take responsibility for same.
- Provide for 2 of the east-facing clerestory windows to be awning type, motorized and controlled by remote switch where shown on Drawings.

08800 GLAZING

- Window glazing at exterior walls shall be double-glazed through-out.
- Safety glazing shall be installed in hazardous locations as defined in CBC and shall be identified by a label.
- Tempered glass is required at the following locations:
 - Glazing in ingress and egress doors.
 - Glazing in fixed and sliding panels of sliding door assemblies and panels in swinging doors.
 - Glazing in doors and enclosures for bathtubs and showers. Glazing in walls within these enclosures with edge less than 60" above a walking surface and drain inlet.
 - Glazing within a 24" arc of either vertical edge of a door (in the closed position) and is less than 60" above the floor. (Except when there is an intervening wall of permanent barrier or leaded, faceted and carved glass used for decoration.)
 - Glazing: where the area of pane is greater than 9 sq. ft.; and the window bottom is less than 18" above the floor; and the top is more than 36" above the floor; and the walking surface is within 36" horizontally.
 - Glazing with bottom edge less than 60" above the walking surface in walls enclosing landings or within 5'-0" of the top and bottom stairways.
- Glazing at tubs/showers: Shower and tub enclosures shall be of shatterproof materials and/or tempered glass. Walls at shower locations shall be ceramic tile or integral fiberglass tub surround. Shower surround height shall be a minimum of 70" above the drain inlet and as shown on Drawings where shown. Shower doors shall maintain a min. 22" unobstructed opening for egress.
- Frameless glass shower enclosures require structural design or use brackets as shown on Drawings. Silicone caulking and/or sealant are not an acceptable means of securing glass to the building framing unless the manufacturer's structural data is submitted and approved.
 - Glass panels and hinged doors of a tub and/or shower enclosure shall be supported by brackets and/or channels with at least 1/2" grip firmly affixed to the building framing and the edges of the glass. Notched tile 1/2" in depth shall be acceptable in place of brackets or channels. The glass shall be firmly secured on at least two sides with brackets and/or channels. The supports should be on opposing edges of the glass where possible. Intersections of glazing must be secured by either a bracket or a channel.
 - Brackets: A minimum of two brackets shall be installed on each vertical edge of glass panels up to eight feet in height. Panels over 8' in height require at least three brackets. If no brackets are installed on the opposing vertical edge, at least one bracket is required on a horizontal edge.
 - Channels: If the top edge of the glass is supported by a channel, the channel must be stiff enough to restrain deflection. If attached to the building framing only at the ends of the channels, the top channel must be one continuous section from one wall to another or have rigid splices.

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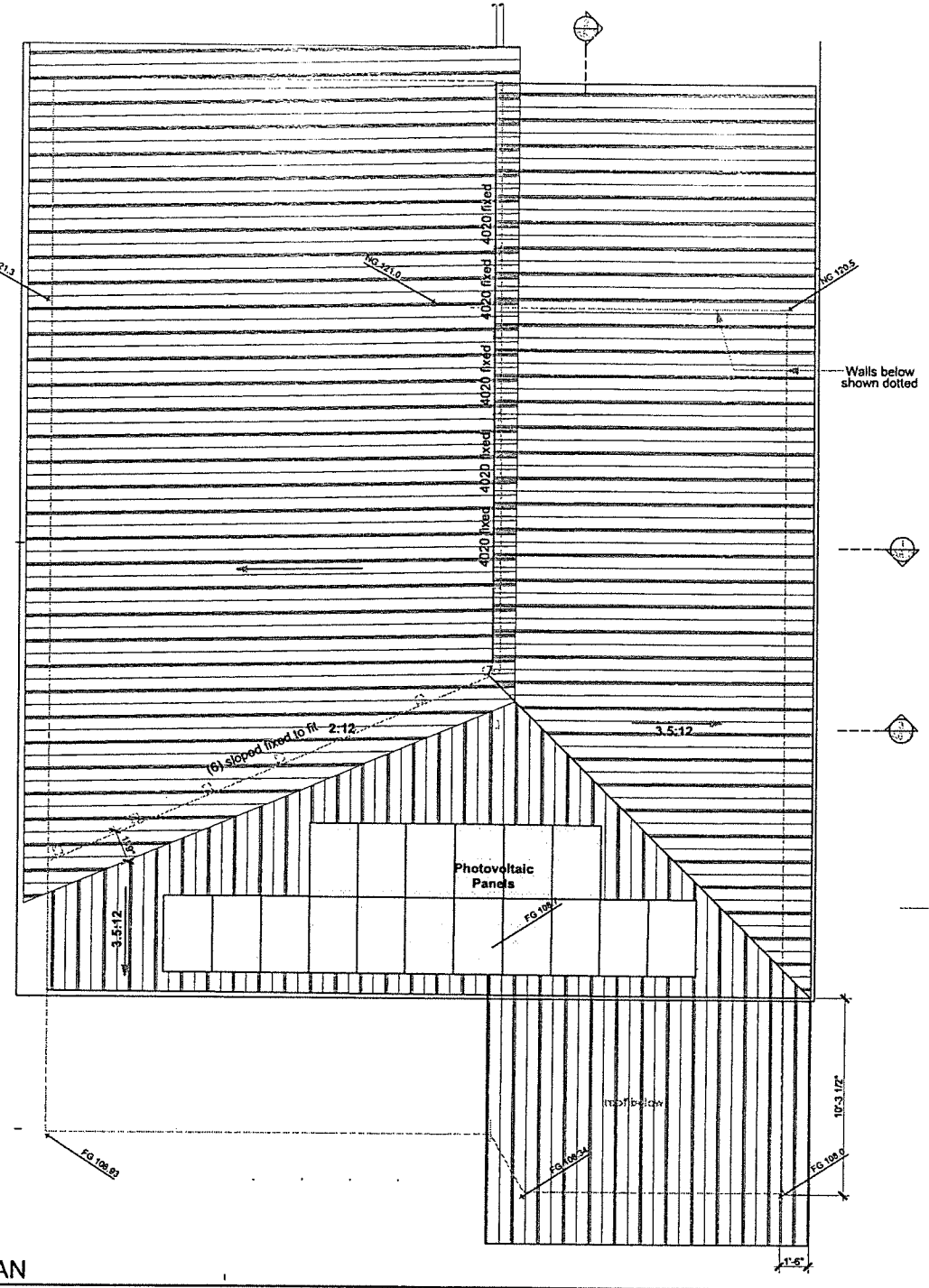
Project No. 17116
Project Architect Richard Rushton
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6/1/20

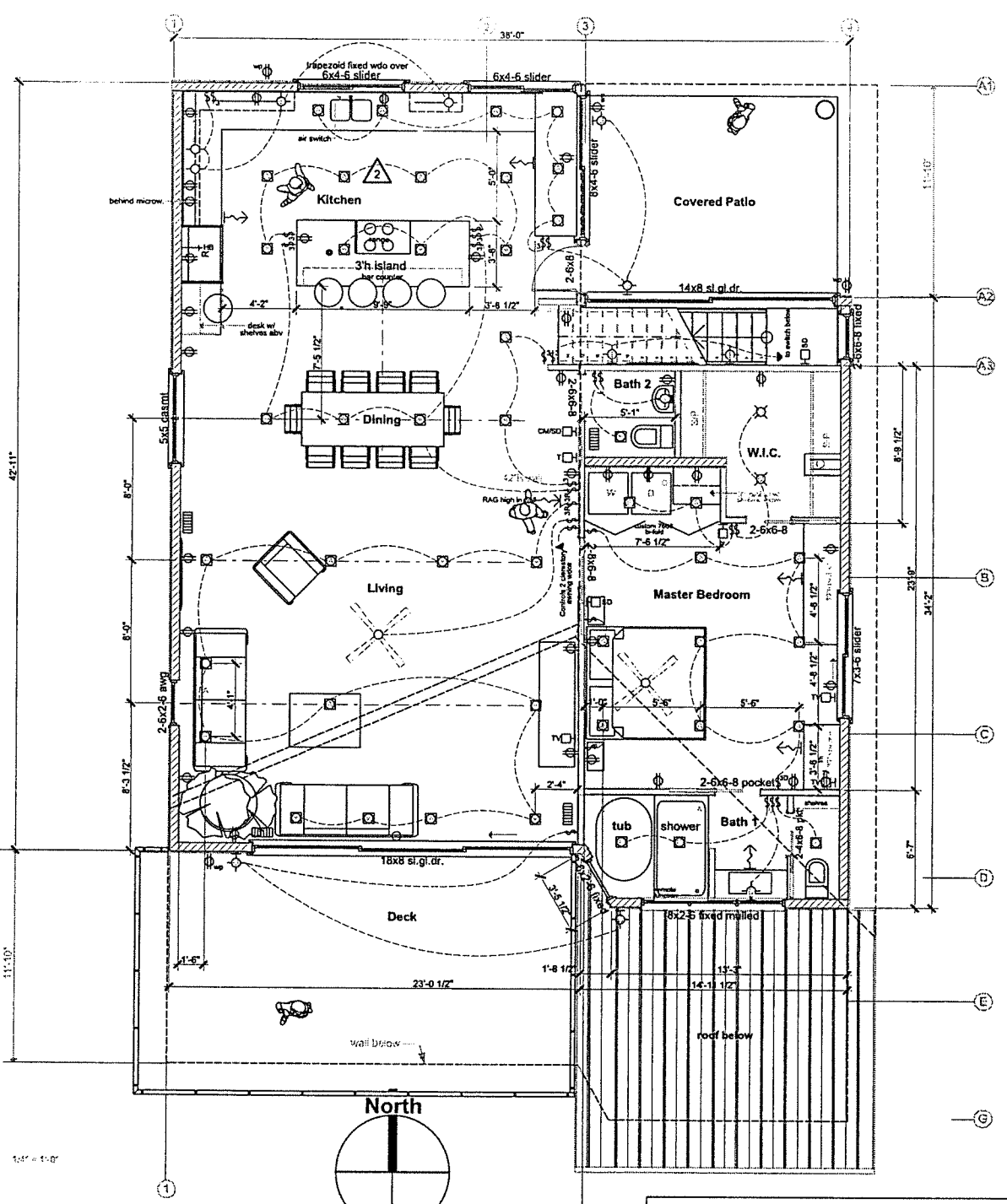
FLOOR PLANS

A4.1

Legend	
	New 2x4 wall
	New 2x6 wall
	Removed wall
	(E) contours
	(N) contours
	(E) elevation
	(N) elevation
	Story Pole HL



2 ROOF PLAN
SCALE: 1/4" = 1'-0"



1 THIRD FLOOR

NOTES

- 09100 FIRE RATING**
- Interior wood paneling less than 1/2" thick shall be applied over 1/2" gypsum board or have a flame spread of class 3 or better.
 - Provide one-hour fire protection at the underside of the stair.
 - Provide one-hour fire resistive separation between garage and dwelling; provide 1-3/8" solid core self-closing door, unless shown otherwise.
 - Garage, carport, and parking deck surfaces, including ramps, shall be non-combustible materials.
 - All walls, beams, posts and ceilings supporting a horizontal occupancy separation shall be 1-hour resistive.
- 09250 GYPSUM WALLBOARD**
- The following are based upon U.S. Gypsum materials. Contractor may substitute equal materials.
 - Interior Gypsum Wallboard: 1/2" tapered edge, 48" wide and in lengths to produce the fewest joints. At roof rafters where spacing is 24" o.c., use 5/8" sheetrock or 1/2" Dornier Gypsum controlled density CD ceiling board.
 - Use 5/8" Type "X" gypsum wallboard at the following locations:
 - At the enclosed side of walls and soffit at the enclosed space under stairs.
 - At walls between garage and residence.
 - At ceiling of garage.
 - At garage ceiling, at one-hour fire assembly, where TJI's are used for the floor framing above, use 2 layers of 5/8" Type "X" gypsum wallboard.
 - Metal Accessories: Use cornerbeads at all outside corners and edge trim at all exposed edges and where gypsum wallboard meets another material.
 - Joint Treatment: Perf-A-Bead, USG joint compound taping, and USG joint compound-topping, or Ready-Mixed products by USG.

- 09310 TILEWORK**
- All shower and tub/shower walls to be finished with a smooth, hard, non-absorbent surface (e.g. ceramic tile) over a cement board moisture resistant underlayment to a minimum height of 70 inches above the drain inlet. (Gypsum board, including greenboard, is not allowed as backing).
 - Custom site-built showers:
 - Showers are to be provided with a water dam mit. 2" high point of shower drain to retain water to drain.
 - Finish floor in shower to have min. 1/4" and max. 1/2" pitch to drain per foot.
 - Waterproof membrane to extend a minimum 3" above top of finish dam at back and sides.
 - Locate the shower head & controls per code requirements.
 - The base for wall tile in tub and shower areas and wall and ceiling panels in shower areas shall be cement, fiber-cement or glass mat gypsum backers.
- 09900 PAINTING**
- GREEN POINTS:**
 - Use low/no-VOC and formaldehyde-free paint.
 - Use low VOC, water-based wood finishes.
 - Use solvent-free adhesives.
 - Seal all exposed particleboard or MDF.
 - Use FSC certified trim material.
 - Air out project with natural ventilation for at least one week between end of construction and occupancy.

- 13650 PHOTOVOLTAIC COLLECTORS**
- Provide complete photovoltaic system where indicated on Drawings, including the following:
 - Solar Collectors of size to serve residence and backup batteries.
 - Collector installation including roof brackets for support.
 - Electrical connections and utility runs to equipment in garage.
 - Battery backup.
 - Provide wiring diagram and material specifications for review and approval by the Owner before proceeding with work.
 - Installation:
 - Solar panels to generate DC voltage.
 - The solar array's output to be routed from the roof to the inverter in the garage, mounted next to the main electric panel.
 - The inverter to convert the solar array's power from a high voltage DC to a clean 60 Hz, 120V AC.
 - The 120V AC output of the inverter to go through a dedicated electric meter whose only function is to record all the solar energy kWh that are produced for the entire year.
 - The 120V AC to continue to flow from the solar meter to a dedicated breaker in the house electric panel. This integrates the solar electricity with both the house and the utility grid.
 - Operation:
 - When the solar system is providing the exact amount of power that the house is currently using, then the electric meter will stand still.
 - When the solar system in providing more power than the house is using, then any excess will flow backwards through the utility meter and building a credit with the utility company.
 - When the solar system is providing less power than the house is using, then the utility grid will provide the rest. The meter will be spinning forward only for the excess electricity that is required.

- 15330 RESIDENTIAL FIRE SPRINKLER SYSTEM**
- DESCRIPTION**
Work Included: Designing, furnishing and installing a hydraulically calculated fire sprinkler system, complete with low-profile heads, for the Building.
 - CODES AND STANDARDS**
 - Uniform Fire Code
 - National Fire Protection Association
 - DESIGN**
 - Before proceeding with the work, prepare Shop Drawings of the sprinkler system and obtain written approval from the Architect. Obtain approval of the governing Fire Rating Bureau and the local Fire Department. Shop Drawings must be submitted to all authorities having jurisdiction and must be stamped and approved before submittal to the Architect.
 - Make all arrangements with utility company for water service including required payment for piping services, connection charges and for materials furnished and installed by them. Work and materials shall be in strict accordance with the rules of the utility company.
 - Contractor for the Fire sprinkler installation shall thoroughly familiarize himself with the Architectural, Structural, Plumbing, Electrical and Heating Drawings and shall adjust his work to conform to the conditions shown thereon to provide the best possible assembly of the combined work.
 - Layout of equipment, accessories and piping system is generally diagrammatic, unless specifically dimensioned. Check Drawings for interferences as governed by the structural, lighting or other details before installing the work.
 - FIRE DEPARTMENT TESTING AND APPROVAL**
 - The completed and installed fire sprinkler system shall be tested and approved in writing by the local Fire Department having jurisdiction.
 - It is the responsibility of the Contractor to schedule the Ross Valley Fire Department Final inspection before the Building Dept. Final Inspection. To schedule an inspection, call at least 72 hours before desired inspection date.

16051 LIGHT FIXTURE SCHEDULE

- LED Recessed Downlights: 4" Halo H4 LED Gen2 adjustable gimbal, ELG4069, white finish, 2700K (warm) temperature.
- LED Recessed Downlights: Halo H4 housing, Halo RL-4 all-purpose LED baffle-trim modules, white baffle, 2700K (warm) temperature.
- Shower Light: Halo SLD6 LED surface downlight, 6", white finish, wet location listed, 2700K color temperature.
- Wall-mount LED bathroom lights: to be selected by Owner. Switched with occupancy sensor dimmer, WaitStopper.
- Undercabinet Kitchen Lights: Illume, white, 36" wide, LED light. Available at Lamps Plus.
- Bath Fan: Panasonic FV-S10VSL1 "Whisper Value fan/lite with Condensation Sensor, 50-80-111 CFM, 10W dimmable light switched separately; set for switched operation at 50 CFM.
- Exterior wall-mount lights: LED wall-mount, down-lights, "dark-sky" compatible; Toth Lighting "Pitch" wall sconce, silver finish, 2700K bulb; available at Lumens. All controlled by photocell and motion sensor.
- Address Light: Luxello LED backlit Modern "Neutra" House Numbers, brushed aluminum finish, white illumination, 5" tall at Entry Stairs. See Modern Lighting at "Surrounding" website. Meet criteria shown on Sheet A6.1, Note 16050(14). Connect directly to main panel (no switching). Locations as shown on Drawings.
- Interior LED Wall Sconce: to be selected by Owner.
- IAQ fan: Panasonic FV-0511VK2 "WhisperGreen Select" fan; 50-80-110 CFM.
- Ceiling paddle fan: selected by Owner
- Garage Door Opener w/ lite: controlled by remote and switch where shown.
- Ceiling mount LED: to be selected by Owner.

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FLOOR PLANS

Project No. 17116
Project Architect Richard Rushton
Date 7/11/18
Revisions: 8/31/19, 11/5/19, 2/20/20
3/29/20
6/1/20

A4.2

15400 PLUMBING

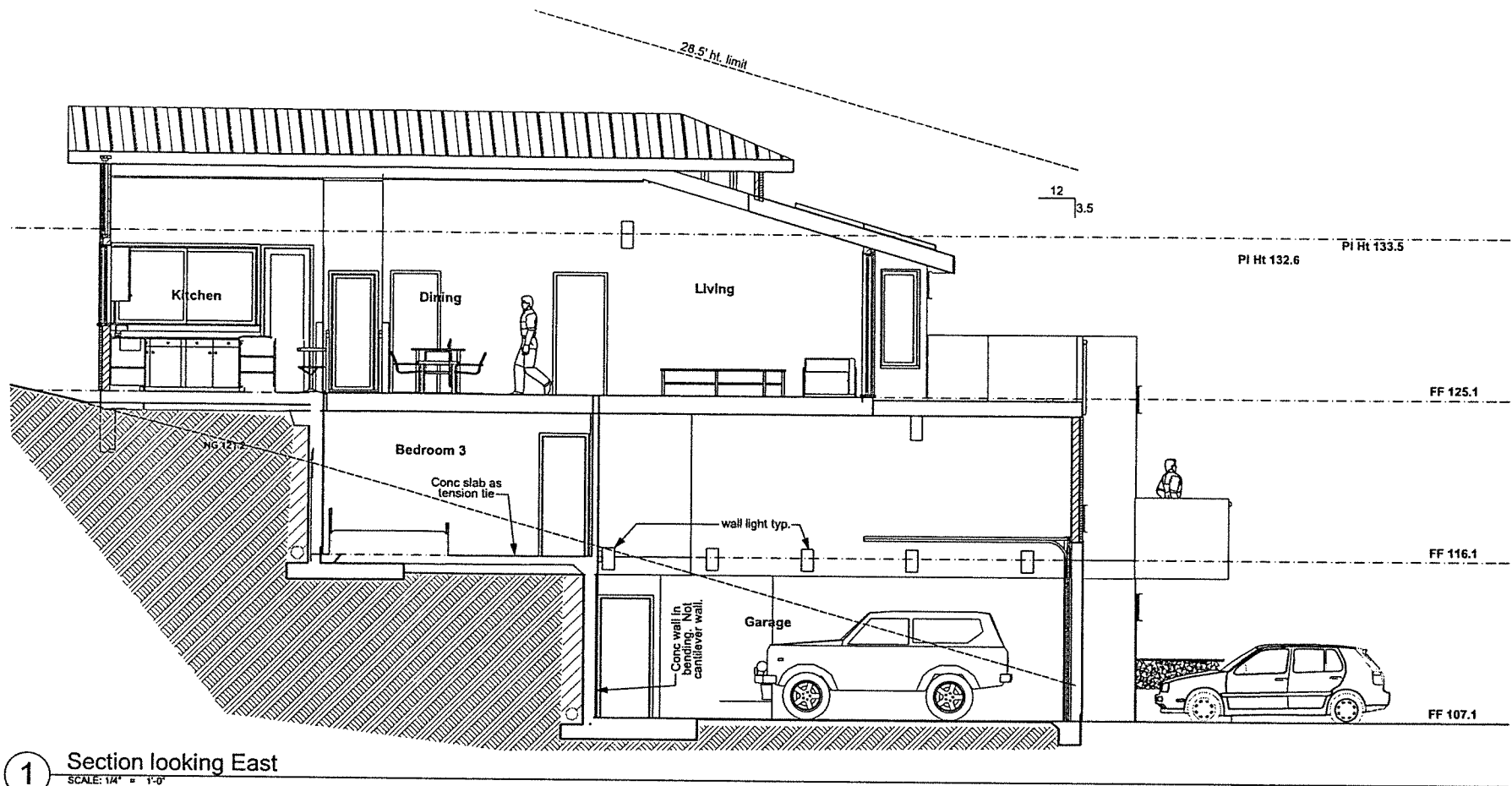
- Plumbing equipment and materials shall comply with and be installed in accordance with the local plumbing code and CPC. Plumbing fixtures to be in compliance with Title 24.
- Work shall be in compliance with Marin Municipal Water District Ordinance #421: all plumbing fixtures that are replaced, removed or added shall be high-efficiency fixtures and shall meet the following minimum plumbing efficiency standards (notify Architect if fixtures specified below do not meet these criteria):
 - High-efficiency kitchen and lavatory faucets: The maximum flow rate shall not exceed 1.5 gallons of water per minute at a pressure of 60 psi at the inlet, when water is flowing. (Kitchen faucets in San Anselmo may be 1.8 gpm max.)
 - High-efficiency Shower Head: The manufacturer shall specify a maximum flow rate equal to or less than 2.0 gallons per minute (gpm), at a pressure of 60 pounds per square inch (psi) at the inlet, when water is flowing.
 - High-efficiency Toilet: Any WaterSense listed toilet rated at an effective flush volume of no greater than 1.28 gallons.
 - Bar & Utility sinks: faucets shall deliver 2.2 gpm or less.
- CALGREEN REQUIREMENTS:** All newly constructed residential buildings shall be designed to include the green building measures specified as mandatory in the CalGreen State code and detailed in the application checklists found in Section A4.602. Voluntary green building measures are also included in these application checklists and may be included in the design and construction of structures covered in this code, but are not required by statute.
 - In San Rafael, Tier 1 requirements are mandatory for all newly constructed Residential buildings.
 - Alterations: The mandatory provisions for residential dwellings spelled out in CalGreen shall be applied to additions or alterations of existing residential buildings only where the addition or alteration increases the building's conditioned area, volume, or size. Additionally, the requirements shall apply only to and/or within the specific area of the addition or alteration.
 - Replacement of fixtures: Residential buildings undergoing permitted alterations, additions or improvements shall replace any and all noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacements are required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building dept.
- GREEN POINTS:** Install flow reducers in faucets and showerheads.
- GREEN POINTS:** Insulate hot water pipes.
- MIXING VALVE CONTROLS:** All shower and tub/shower combination valves must be temperature balancing or thermostatic mixing. Valves shall be adjusted per the manufacturer's instructions to deliver a maximum of 120 degrees F.
- AIR GAP:** No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwasher machine.
- Protect fixtures against use & damage during construction.
- Provide cleanouts at bends and angles. Extend to make flush installation with floor, wall or finish grade.
- Install each fixture with trap, easily removable for servicing and cleaning. At completion thoroughly clean plumbing fixtures and equipment.
- An approved **BACKFLOW PREVENTION DEVICE** is required for each water service. Provide the appropriate model of double check valve assembly.
- Provide a non-removable backflow prevention device on all exterior hose bibs, and lawn sprinkler/irrigation systems.
- WATER HEATER:** 50-gallon or less water heater shall have a minimum Energy Factor of 0.62. Where backflow prevention devices are installed, an approved expansion tank shall be installed at the water heater.
- All **WATER HEATERS** shall be anchored or strapped to resist horizontal displacement; strapping shall be at points within the upper one-third and lower one third of its vertical dimensions, with lower strap at least 4" above controls.
- WATER HEATERS** installed in areas where they may be subjected to mechanical damage shall be suitably guarded against such damage. Provide adequate barriers.
- Appliances shall be accessible for inspection, service, repair, & replacement without removing permanent construction. A platform or slab-on-grade shall be provided in front of appliances, with minimum 30" in depth, width & height of appliances.
- PRESSURE TESTS:** The Contractor shall subject all supply and water piping to pressure tests as prescribed by the local plumbing code and to assure proper operation.
- All **GAS PIPING** shall be tested in accordance with the requirements of the local gas company.
- GAS PIPING:** Provide automatic natural gas shut-off device as per local requirements. Provide approved seismic or excess flow gas shut-off device per Marin County Code concerning new buildings, additions, and alterations containing gas piping. The building and safety division of the community development agency maintains a list of approved devices.
- GAS SHUT-OFF** must be located within 6' of appliance and must be accessible and shall not be located behind appliance.
- Gas appliances in garage shall be raised 18" above the floor.

15810 FORCED AIR FURNACE

- Work included:
 - Forced-air furnace
 - Ductwork and registers
 - Sheetmetal work
 - Ductwork insulation
- Material: New furnace to have a minimum AFUE rating as per Title 24 codes.
- Codes and Standards:
 - All work shall comply with federal, state, and local laws, ordinances and codes.
 - "HVAC DUCT SYSTEM DESIGN" as published by the Sheet Metal & Air Conditioning Contractors National Association (SMACNA).
 - "Heating and Air Conditioning Systems Installation Standards for One & Two Family Dwelling & Multi-family Housing", Sheet Metal and Air Conditioning Contractors National Assoc. (SMACNA).
- This Subcontractor shall place the system in operation and operate it for sufficient time to prove that it functions properly and in accordance with the heat loss requirements.
- All transverse duct, plenum and fitting joints shall be sealed with pressure sensitive tape or mastic to prevent air loss.
- Insulate ducts not in conditioned space with minimum R-4.2.

15870 VENTILATION

- Clothes Dryer Vent:** A dryer duct is required and shall terminate outside the building, a minimum of 3'-0" away from any openings into the building, and equipped with a back-draft damper. Duct shall be 4" min. diameter rigid with a maximum length of 14' and maximum of two 90-degree elbows. Vent shall be of metal and have smooth interior surfaces. Route of venting as shown on Drawings.
- Clothes Dryer Make-up Air:** Provide 100 square inch make-up air opening at the clothes dryer room per CMC 504.3.2. This may be provided by louvered opening in the door.
- Mechanical ventilating systems in laundry rooms and similar rooms shall provide five air changes per hour directly to the outside.
- Mechanical exhaust fans in bathrooms shall be ENERGY STAR compliant and be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidistat which shall be readily accessible. Humidistat controls shall be capable of adjustment between a relative humidity range of 50 to 80%. Fixture C as specified on the Light Fixture Schedule, A4.1, is 80 CFM, with 4" diameter, smooth, metal duct with a maximum run of 14'.
- Ductwork from bathroom fans shall be 4" min. diameter, smooth interior surface, with a maximum length of run not to exceed 20', per Table 4-9 of C.E.C.
- Kitchens require mechanical ventilation to the outside (a non-circulating fan) with a minimum of 100 cfm.
- A whole house indoor air quality ventilation fan must be provided. It must be sized according to ANSI/ASHRAE 62.2 and run continuously. Air flow shall be a minimum of 2 cfm per square foot of conditioned space. The bathroom or kitchen fans may be utilized for this but must be sized for the whole house and switched to run continuously. A plastic engraved label must be placed on the switch noting it controls the IAG fan and must remain on at all times.



1 Section looking East
SCALE: 1/4" = 1'-0"

16050 ELECTRICAL

- LIGHTING:**
 - Luminaire Efficacy: All installed luminaires shall be high-efficiency in accordance with Table 150.0-A of 2016 California Energy Code.
 - Recessed downlight luminaires in Ceiling: shall meet all of the requirements of Section 150.0(K)-1C of 2016 California Energy Code.
 - Under-cabinet Lighting: shall be switched separately from other lighting systems.
 - Vacancy Sensor: At least one luminaire in bedrooms, Laundry rooms, Utility rooms and Garage shall be controlled by a vacancy sensor.
 - All hardwired lighting in all rooms, except closets less than 70 s.f. in area, must be high efficiency and controlled by a manual-on occupant sensor or a dimmer.
 - Outdoor Lighting attached to building: must be high efficiency and controlled by both a motion sensor and photo-control.
 - Cans for all recessed lights must be IC/AT rated.
 - Light fixtures in tub or shower enclosures or other wet-damp locations shall be labeled "suitable for damp locations". CEC 410.4(a).
 - Lights in clothes closets must maintain a minimum of 6" horizontal clearance from the edge of shelves for fluorescent fixtures and recessed fixtures, and 12" for incandescent fixtures.
 - High efficiency luminaire is one that contains only high efficacy lamps and must not contain a conventional (medium) screw-based socket.
- LIGHT FIXTURE SCHEDULE:** See Sheet A4.2.
- SWITCHES & OUTLETS:**
 - Flush mount all switches and receptacles.
 - Receptacle outlets shall be installed at each wall space 2' or wider. Receptacles shall be installed so that no point along the wall line is more than 6', measured horizontally, from a receptacle outlet in that space. Hallways longer than 10' require a minimum of one receptacle.
 - Typical mounting heights from the floor to centerline shall be for wall switches, 46 inches; wall receptacles, 12 inches. Other conditions may be shown otherwise on Drawings. Verify all special conditions with Architect before proceeding.
 - Compliant Occupant Sensors: are those that do not allow the luminaire to be turned on automatically and do not have an override that allows it to remain on. Occupant sensors must be "manual-on", i.e., the sensors must not have the ability to turn the lights on automatically and have a setting that can leave the lights in a permanent-on position.
 - Sensors: Where a motion detector is required and dimmers are desired, such as in bedrooms, provide WatStopper RD-200 Passive Infrared (PIR) Dimming Wall Switch Vacancy Sensor, white color.
 - Dimmers shall be provided at all LED lighting unless specifically shown as "switch only."
 - All new and replaced receptacles (both regular and GFCI) in a dwelling unit must be tamper-resistant. (CEC 406.11)
 - The control switch for exhaust fans at bathrooms & kitchen, for indoor air quality & mechanical ventilation, shall be operated separately from lighting switches.
- GROUND-FAULT CIRCUIT-INTERRUPTER:** shall be installed at receptacles in bathrooms, kitchens to serve countertop surfaces, within 6' of all sinks, outdoors, garages and accessory buildings.
- ARC FAULT PROTECTION:** Listed combination type arc fault circuit interrupters shall protect all branch circuits serving family room, dining room, living room, dens, bedrooms, closet or halls.
- OUTDOOR:** Provide outdoor outlets (one at the front and one at the back within 6'-6" of grade level). All outdoor outlets shall be GFCI protected and shall have weather proof outlet covers.
- KITCHEN:** counter outlets as follows:
 - A minimum of 1 outlet per counter space 12" wide or more.
 - A minimum of 1 outlet within 24" of each end of each counter.
 - Additional outlets located not more than 48" apart measured along counter edges.
- CIRCUITS:**
 - Provide at least two separate 20 amp circuits for small appliances in kitchen, pantry, dining room and similar areas, with no other outlets on the circuits. CEC 210.11(C)(1), 210.52(B).
 - Provide at least one separate 20 amp circuit to laundry appliances with no other outlets on the circuit. 210.11(C)(2).
 - Provide at least one 20 amp circuit for bathroom outlets with no other outlets on the circuit. 210.11(C)(3).
 - All receptacles in dwelling units for 125-volt, 15 & 20 amp shall be listed tamper-resistant receptacles.
 - At least one receptacle, in addition to any provided for laundry equipment, shall be installed in each basement & in each attached garage, and in each detached garage with electric power.
 - Receptacles for fixed appliances shall be accessible, not behind appliance.
- SMOKE DETECTORS AND CARBON MONOXIDE ALARMS:** State law requires smoke alarms and carbon monoxide alarms be installed throughout the house, including areas not otherwise affected by the proposed work. To comply, the Contractor is to install or verify the existence of smoke detectors & carbon monoxide alarms outside each bedroom as well as one on every level. Smoke alarms shall also be provided in each bedroom. Power Source - in new construction & existing buildings where accessible, smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source & shall be equipped with a battery backup. Alarms in existing areas where wiring is not accessible may be powered by a DC battery source.
 - Install **SMOKE DETECTORS** in the following locations:
 - Each level, including basements
 - In all sleeping rooms
 - Corridor or area giving access to sleeping areas
 - Top of all stairways leading to sleeping areas
 - In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24" or more, smoke detectors shall be installed in the hallway and in the adjacent room.
 - Mount the smoke alarms high on ceilings or walls. Ceiling-mounted alarms should be installed at least 4" away from the nearest wall. Wall-mounted alarms should be installed 4 to 12" away from the ceiling. On vaulted ceilings, mount the alarm at the highest point of the ceiling.
- PANEL:** Electrical panel working space shall be in compliance with CEC.
- GROUND:** Provide minimum 20 feet number 4 AWG bare copper wire in the lower 2" of the footing for electrical ground.
- Provide minimum 24" horizontal separation for electrical boxes located on opposite sides of firewall (garage to house) per CBC 709.7.
- SERVICE:** Electrical service to the house shall be under-ground.
- ADDRESS NUMBERS:** Contractor shall install or verify the existence of address numbers at least 4" tall with a minimum 0.5" stroke on contrasting background, clearly visible from the street. Numbers shall be self-illuminated. Self-illuminated numbers are on all night and meet the energy code for providing for a low energy draw.

MECH. & ELECT. SYMBOLS

	CIRCUIT BREAKER PANEL
	SWITCH
	3-WAY, 4-WAY SWITCH
	DIMMER
	WEATHERPROOF SWITCH
	OCCUPANCY SENSOR
	CEILING FIXTURE OUTLET
	RECESSED FIXTURE OUTLET
	WALL FIXTURE OUTLET
	FLUORESCENT FIXTURE
	W/ARC FAULT INTERRUPTER
	DUPLEX C.O.
	4-PLEX C.O.
	W/GRD FAULT INTERRUPTER
	W/ONE SIDE SWITCHED
	FLOOR OUTLET
	WEATHERPROOF OUTLET
	220 VOLT OUTLET
	TELEPHONE OUTLET
	TV CABLE OUTLET
	THERMOSTAT
	BELL OR CHIMES
	PUSH BUTTON
	SMOKE DETECTOR
	CARBON MONOXIDE ALARM
	EXHAUST FAN
	SPEAKER TERMINAL
	SPEAKER VOLUME CONTROL
	VACUUM INLET
	AIR DUCT
	SUPPLY DUCT SECTION
	RETURN AIR DUCT SECTION
	FLOOR REGISTER
	WALL REGISTER
	RETURN AIR GRILLE
	HOSE BIB
	GAS OUTLET

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A.P. No. 003-022-20

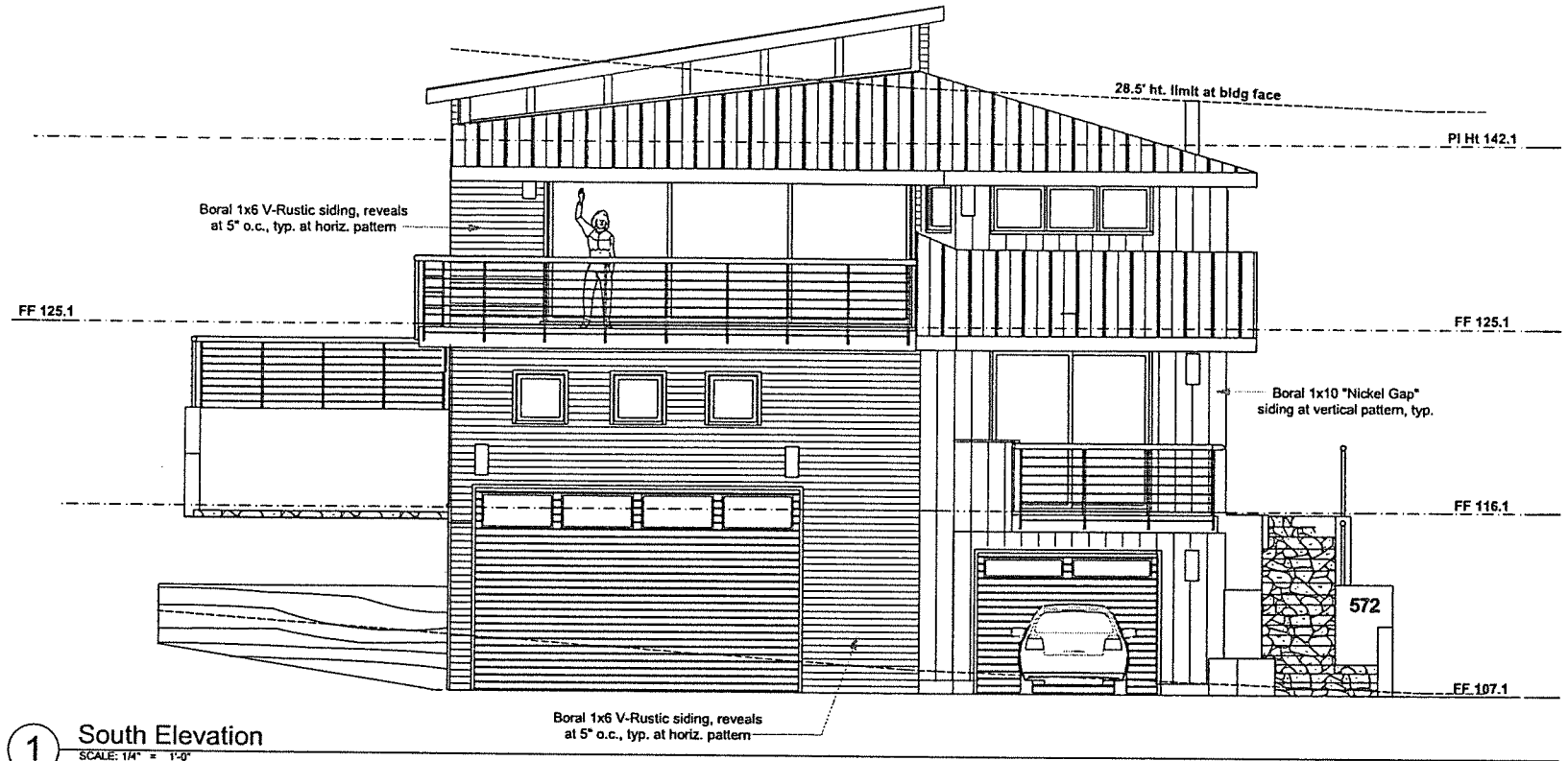
Project No. 17116
Project Architect Richard Rushton
Date 7/11/18
Revisions: 8/31/19, 2/20/20, 3/29/20, 6/1/20

SECTIONS

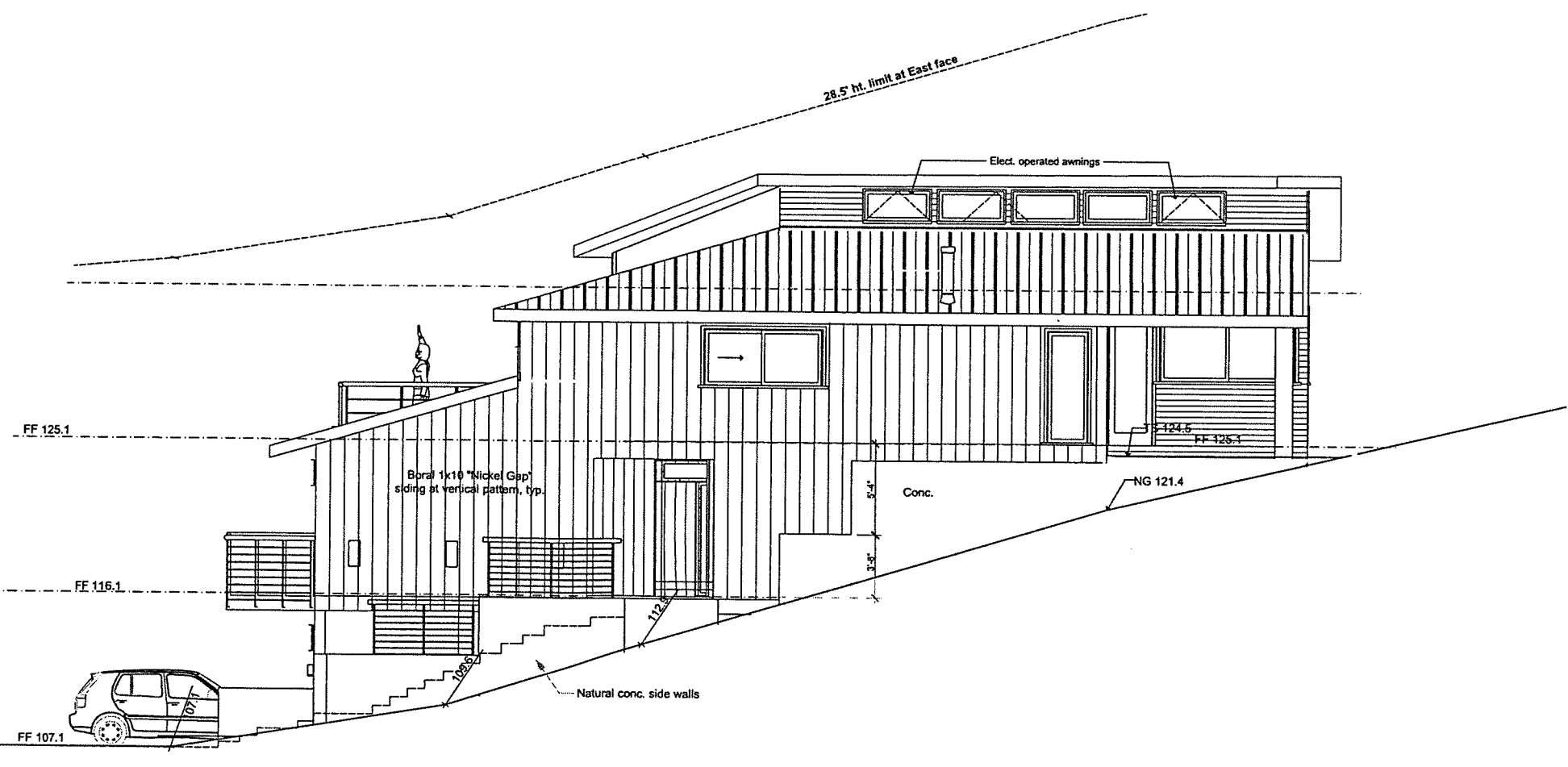
A6.1

ABBREVIATIONS

A A.C. ARCHITECT A.M. ARCHITECT A.S. ARCHITECT A.P. ARCHITECT A.P.A. ARCHITECT A.P.A. ARCHITECT A.P.A. ARCHITECT A.P.A. ARCHITECT	B B.A. ARCHITECT B.A. ARCHITECT B.A. ARCHITECT B.A. ARCHITECT B.A. ARCHITECT B.A. ARCHITECT B.A. ARCHITECT B.A. ARCHITECT	C C.A. ARCHITECT C.A. ARCHITECT C.A. ARCHITECT C.A. ARCHITECT C.A. ARCHITECT C.A. ARCHITECT C.A. ARCHITECT C.A. ARCHITECT	D D.A. ARCHITECT D.A. ARCHITECT D.A. ARCHITECT D.A. ARCHITECT D.A. ARCHITECT D.A. ARCHITECT D.A. ARCHITECT D.A. ARCHITECT	E E.A. ARCHITECT E.A. ARCHITECT E.A. ARCHITECT E.A. ARCHITECT E.A. ARCHITECT E.A. ARCHITECT E.A. ARCHITECT E.A. ARCHITECT	F F.A. ARCHITECT F.A. ARCHITECT F.A. ARCHITECT F.A. ARCHITECT F.A. ARCHITECT F.A. ARCHITECT F.A. ARCHITECT F.A. ARCHITECT	G G.A. ARCHITECT G.A. ARCHITECT G.A. ARCHITECT G.A. ARCHITECT G.A. ARCHITECT G.A. ARCHITECT G.A. ARCHITECT G.A. ARCHITECT	H H.A. ARCHITECT H.A. ARCHITECT H.A. ARCHITECT H.A. ARCHITECT H.A. ARCHITECT H.A. ARCHITECT H.A. ARCHITECT H.A. ARCHITECT	I I.A. ARCHITECT I.A. ARCHITECT I.A. ARCHITECT I.A. ARCHITECT I.A. ARCHITECT I.A. ARCHITECT I.A. ARCHITECT I.A. ARCHITECT	J J.A. ARCHITECT J.A. ARCHITECT J.A. ARCHITECT J.A. ARCHITECT J.A. ARCHITECT J.A. ARCHITECT J.A. ARCHITECT J.A. ARCHITECT	K K.A. ARCHITECT K.A. ARCHITECT K.A. ARCHITECT K.A. ARCHITECT K.A. ARCHITECT K.A. ARCHITECT K.A. ARCHITECT K.A. ARCHITECT	L L.A. ARCHITECT L.A. ARCHITECT L.A. ARCHITECT L.A. ARCHITECT L.A. ARCHITECT L.A. ARCHITECT L.A. ARCHITECT L.A. ARCHITECT	M M.A. ARCHITECT M.A. ARCHITECT M.A. ARCHITECT M.A. ARCHITECT M.A. ARCHITECT M.A. ARCHITECT M.A. ARCHITECT M.A. ARCHITECT	N N.A. ARCHITECT N.A. ARCHITECT N.A. ARCHITECT N.A. ARCHITECT N.A. ARCHITECT N.A. ARCHITECT N.A. ARCHITECT N.A. ARCHITECT	O O.A. ARCHITECT O.A. ARCHITECT O.A. ARCHITECT O.A. ARCHITECT O.A. ARCHITECT O.A. ARCHITECT O.A. ARCHITECT O.A. ARCHITECT	P P.A. ARCHITECT P.A. ARCHITECT P.A. ARCHITECT P.A. ARCHITECT P.A. ARCHITECT P.A. ARCHITECT P.A. ARCHITECT P.A. ARCHITECT	Q Q.A. ARCHITECT Q.A. ARCHITECT Q.A. ARCHITECT Q.A. ARCHITECT Q.A. ARCHITECT Q.A. ARCHITECT Q.A. ARCHITECT Q.A. ARCHITECT	R R.A. ARCHITECT R.A. ARCHITECT R.A. ARCHITECT R.A. ARCHITECT R.A. ARCHITECT R.A. ARCHITECT R.A. ARCHITECT R.A. ARCHITECT	S S.A. ARCHITECT S.A. ARCHITECT S.A. ARCHITECT S.A. ARCHITECT S.A. ARCHITECT S.A. ARCHITECT S.A. ARCHITECT S.A. ARCHITECT	T T.A. ARCHITECT T.A. ARCHITECT T.A. ARCHITECT T.A. ARCHITECT T.A. ARCHITECT T.A. ARCHITECT T.A. ARCHITECT T.A. ARCHITECT	U U.A. ARCHITECT U.A. ARCHITECT U.A. ARCHITECT U.A. ARCHITECT U.A. ARCHITECT U.A. ARCHITECT U.A. ARCHITECT U.A. ARCHITECT	V V.A. ARCHITECT V.A. ARCHITECT V.A. ARCHITECT V.A. ARCHITECT V.A. ARCHITECT V.A. ARCHITECT V.A. ARCHITECT V.A. ARCHITECT	W W.A. ARCHITECT W.A. ARCHITECT W.A. ARCHITECT W.A. ARCHITECT W.A. ARCHITECT W.A. ARCHITECT W.A. ARCHITECT W.A. ARCHITECT
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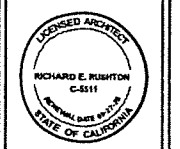


1 South Elevation
SCALE: 1/4" = 1'-0"



2 East Elevation
SCALE: 1/4" = 1'-0"

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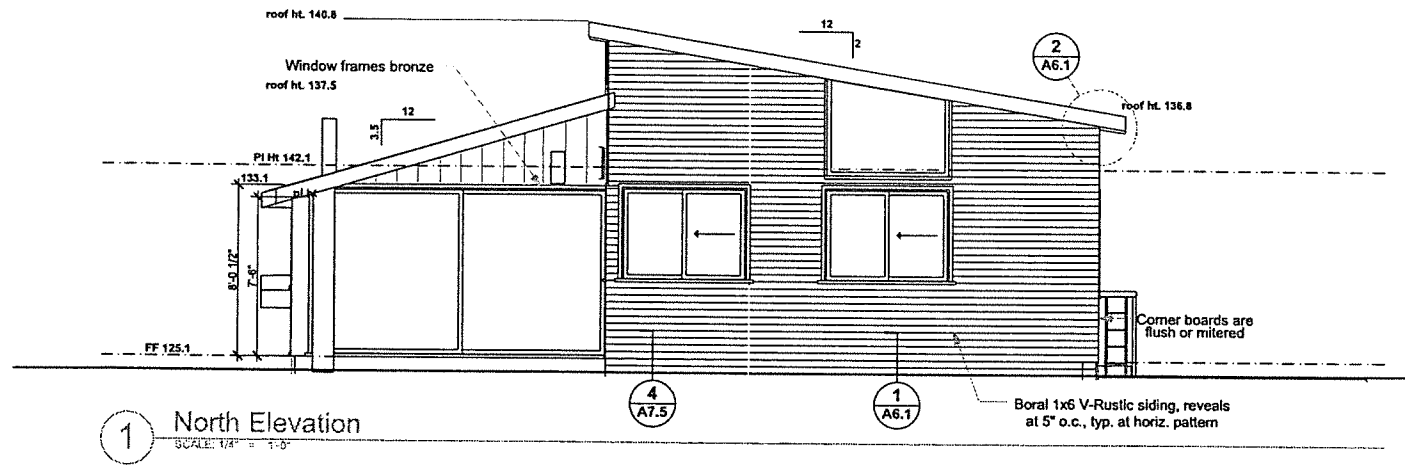


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A.P. No. 003-022-20

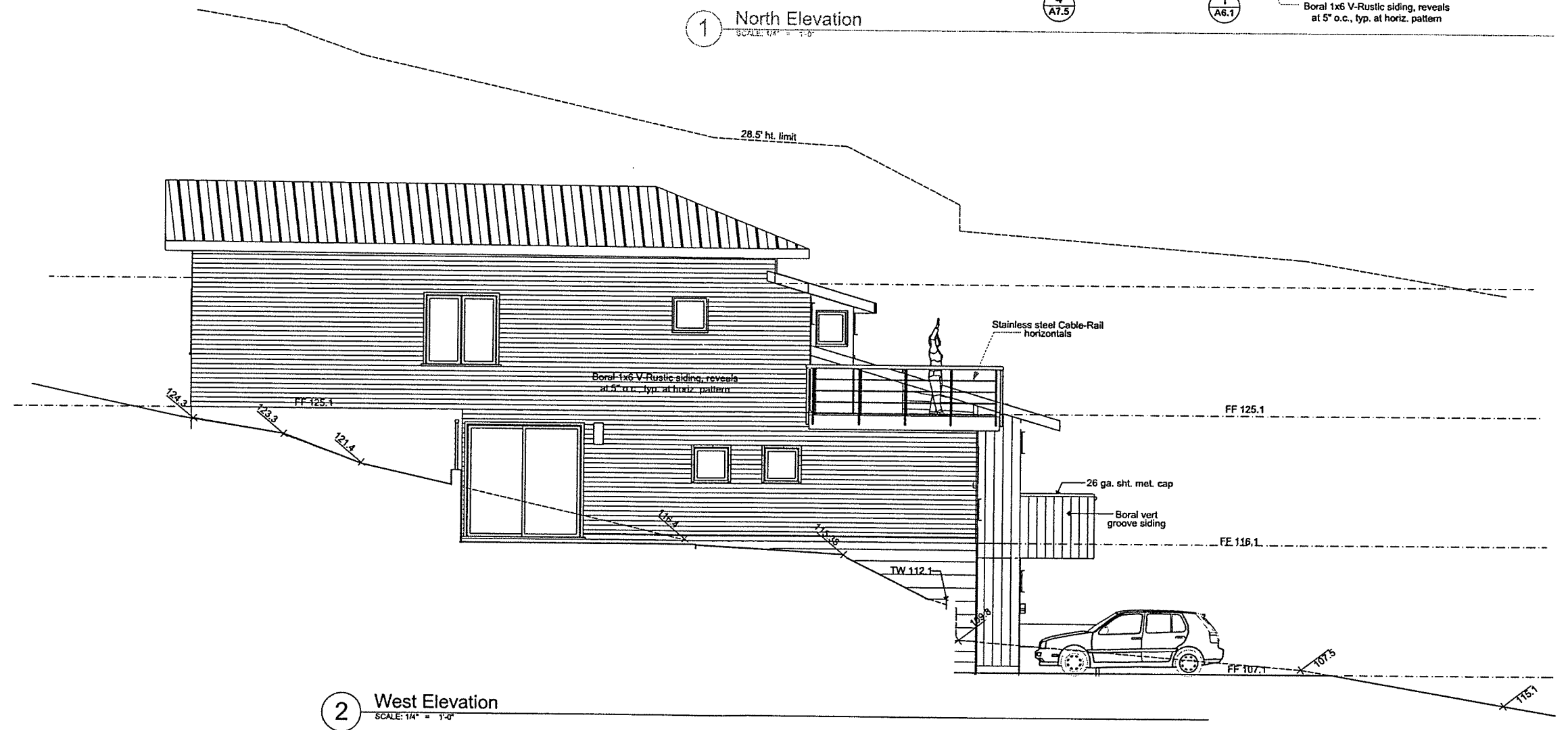
Project No.	17116
Project Architect	Richard Rushton
Date	7/11/18
Revision	10/21/19
planning residential	
2/20/20	
planning residential	
3/10/20	
6/1/20	
planning residential	

EXTERIOR ELEVATIONS, ABBREVIATIONS

A7.1



1 North Elevation
SCALE: 1/4" = 1'-0"



2 West Elevation
SCALE: 1/4" = 1'-0"

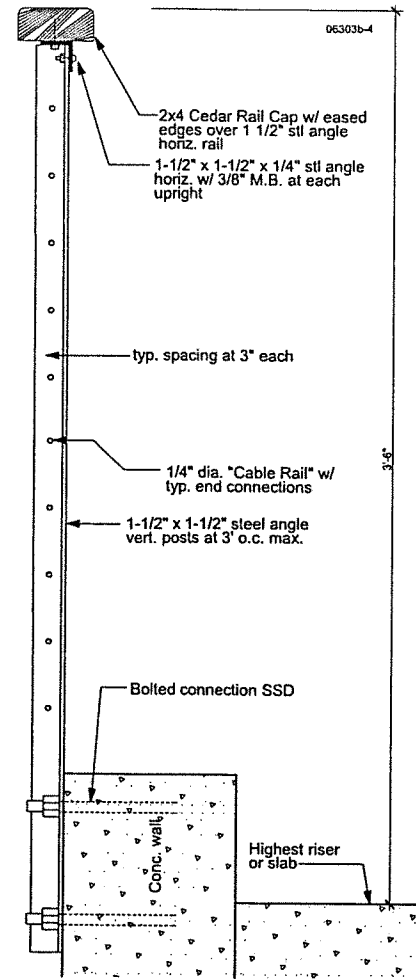
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EXTERIOR ELEVATIONS

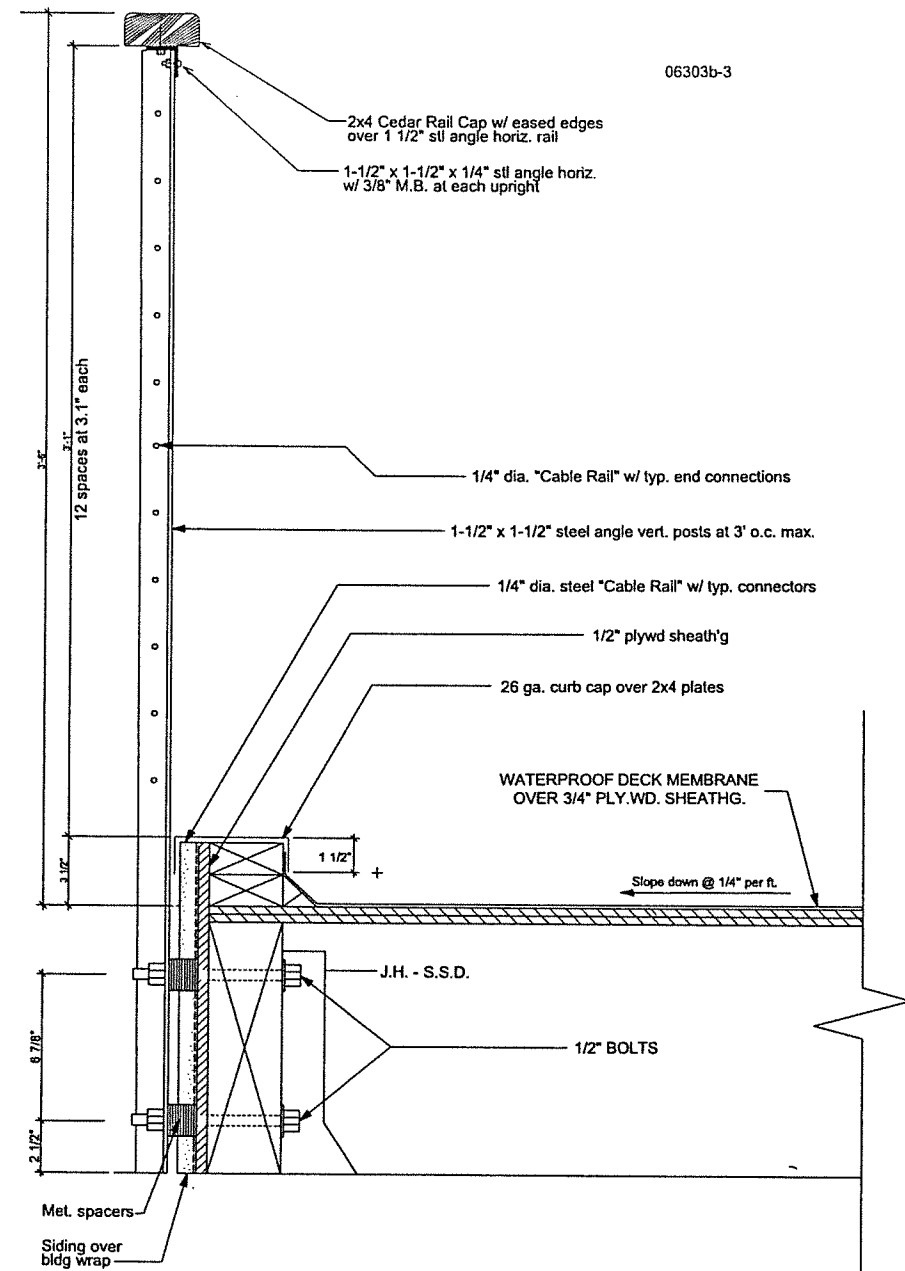
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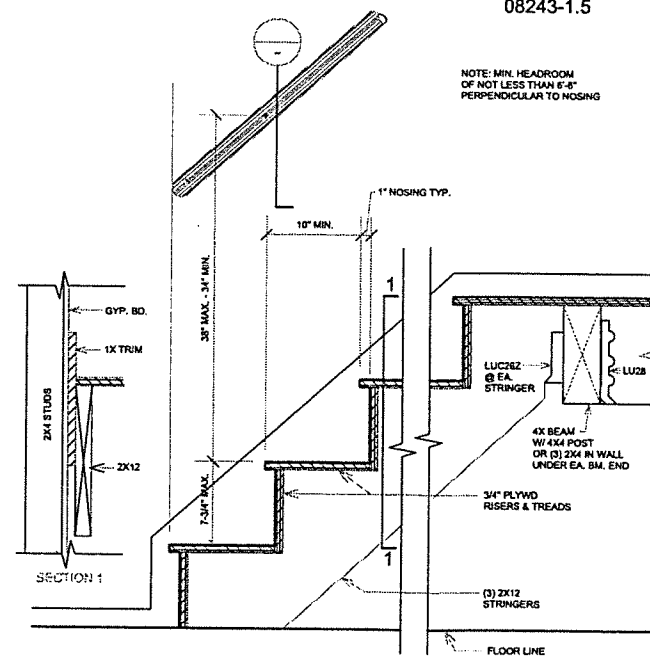
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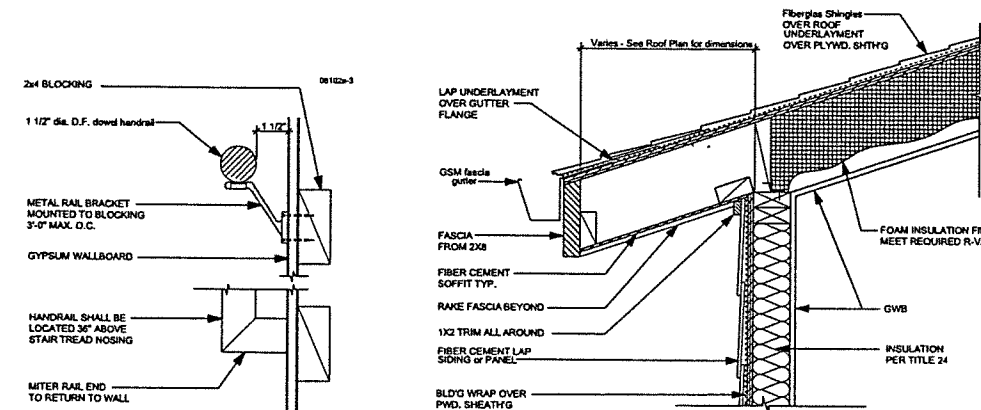
4 Railing at Concrete Wall
SCALE: 3" = 1'-0"



3 Typical Railing
SCALE: 3" = 1'-0"



5 INTERIOR STAIR
SCALE: 1 1/2" = 1'-0"



2 Typical Overhang
SCALE: 1 1/2" = 1'-0"

3 Interior Handrail
SCALE: 3" = 1'-0"
Exterior Handrail similar

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Date	7/1/18
Revisions	2/20/20 Planning Residential 6/1/20

DETAILS

A7.5

PEDERSEN RESIDENCE

572 CASCADE DR., FAIRFAX, CA
A.P.N. NO: 003-022-20

LEGEND:

- SUBDIVISION BOUNDARY
- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- EASEMENT AS NOTED
- SANITARY SEWER MAIN PIPE (PUBLIC)
- SANITARY SEWER MAIN PIPE (PRIVATE)
- SANITARY SEWER MANHOLE
- SANITARY SEWER MAIN PLUG
- SANITARY SEWER LATERAL
- WATER MAIN PIPE
- WATER FIRE HYDRANT
- WATER VALVE
- WATER REDUCER
- WATER MAIN PLUG
- WATER AIR RELEASE VALVE
- WATER BLOW-OFF
- WATER SERVICE AND METER
- ACCESS HATCH IN U/G STORAGE TANK
- ▨ STORM DRAIN PIPE
- ▨ STORM DRAIN MANHOLE
- ▨ STORM DRAIN PIPE PLUG
- ▨ VERTICAL CURB AND GUTTER
- ▨ ROLL CURB AND GUTTER
- ▨ VERTICAL CURB/EXTRUDED CURB
- ▨ SIDEWALK
- ▨ LOT LINE
- 449 LOT NUMBER
- ▨ RETAINING WALL
- TRW=20.67 TOP OF RETAINING WALL ELEV
- TF=17.33 TOP OF FOOTING ELEV
- 1202.81 EXISTING SPOT ELEVATION
- 1202.65 PROPOSED SPOT ELEVATION
- ~ PROPOSED CONTOUR (5' INTERVAL)
- ~ PROPOSED CONTOUR (1' INTERVAL)
- 12+00 ROAD STATION



AREA MAP
SCALE: 1" = 700'



VICINITY MAP
SCALE: 1" = 100'



LEGEND (cont.):

- GRADE BREAK
- EXISTING ROADWAY CENTERLINE
- EXISTING RIGHT-OF-WAY
- EXISTING EASEMENT AS NOTED
- EXISTING SANITARY SEWER MAIN PIPE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MAIN PLUG
- EXISTING WATER MAIN PIPE
- EXISTING WATER FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER REDUCER
- EXISTING WATER MAIN PLUG
- EXISTING WATER AIR RELEASE VALVE
- EXISTING WATER BLOW-OFF
- ▨ EXISTING STORM DRAIN PIPE
- ▨ EXISTING STORM DRAIN MANHOLE
- ▨ EXISTING STORM DRAIN PIPE PLUG
- ▨ EXISTING VERTICAL CURB AND GUTTER
- ▨ EXISTING ROLL CURB AND GUTTER
- ▨ EXISTING VERTICAL CURB/EXTRUDED CURB
- ⊥ EXISTING SIGN AS NOTED
- EXISTING CONTOUR (1' INTERVAL)
- FL= FLOW LINE (GUTTER ELEVATION)
- TC= TOP OF CURB ELEVATION
- P= PAVEMENT ELEVATION
- HWE= HIGH WATER ELEVATION
- FEE= FINISH FLOOR ELEVATION
- PAD= FINISH PAD ELEVATION
- POT= POINT OF TANGENCY
- POC= POINT OF CURVATURE
- PRC= POINT OF REVERSE CURVATURE
- BTM= BASIN BOTTOM ELEVATION
- TL= TRUE LENGTH
- SURVEY CONTROL POINT
- SLOPE INDICATOR
- 0.75% ROAD SLOPE INDICATOR
- CMU= CONCRETE MASONRY UNIT
- EXG= EXISTING
- L/S= LANDSCAPE
- ⊥ STREET LIGHT

DESIGN TEAM:

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CONTACT: RICHARD RUSHTON	CONTACT: VLAD IOJICA	CONTACT: DENNIS FURBY	CONTACT: NOADIAH ECKMAN	CONTACT: JAY HALLBERG

CIVIL / LANDSCAPE SHEET INDEX

1 OF 9	COVER SHEET	C1.0
2 OF 9	EXISTING CONDITIONS - SITE TOPOGRAPHY	C2.0
3 OF 9	PROPOSED SITE IMPROVEMENTS PLAN	C3.0
4 OF 9	DETAILS	C4.0
5 OF 9	EROSION CONTROL PLAN	C5.0
6 OF 9	EROSION CONTROL DETAILS	C5.1
7 OF 9	LANDSCAPE AND PLANTING PLAN	L1.0
8 OF 9	VEGETATION MANAGEMENT PLAN	L1.1
9 OF 9	CONSTRUCTION MANAGEMENT PLAN	CM.1

By	Date	Rev.
VI	7/28/19	1
VI	10/14/19	2
VI	4/03/20	3
VI	6/26/20	4

COVER SHEET
PEDERSEN RESIDENCE
572 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 003-022-20

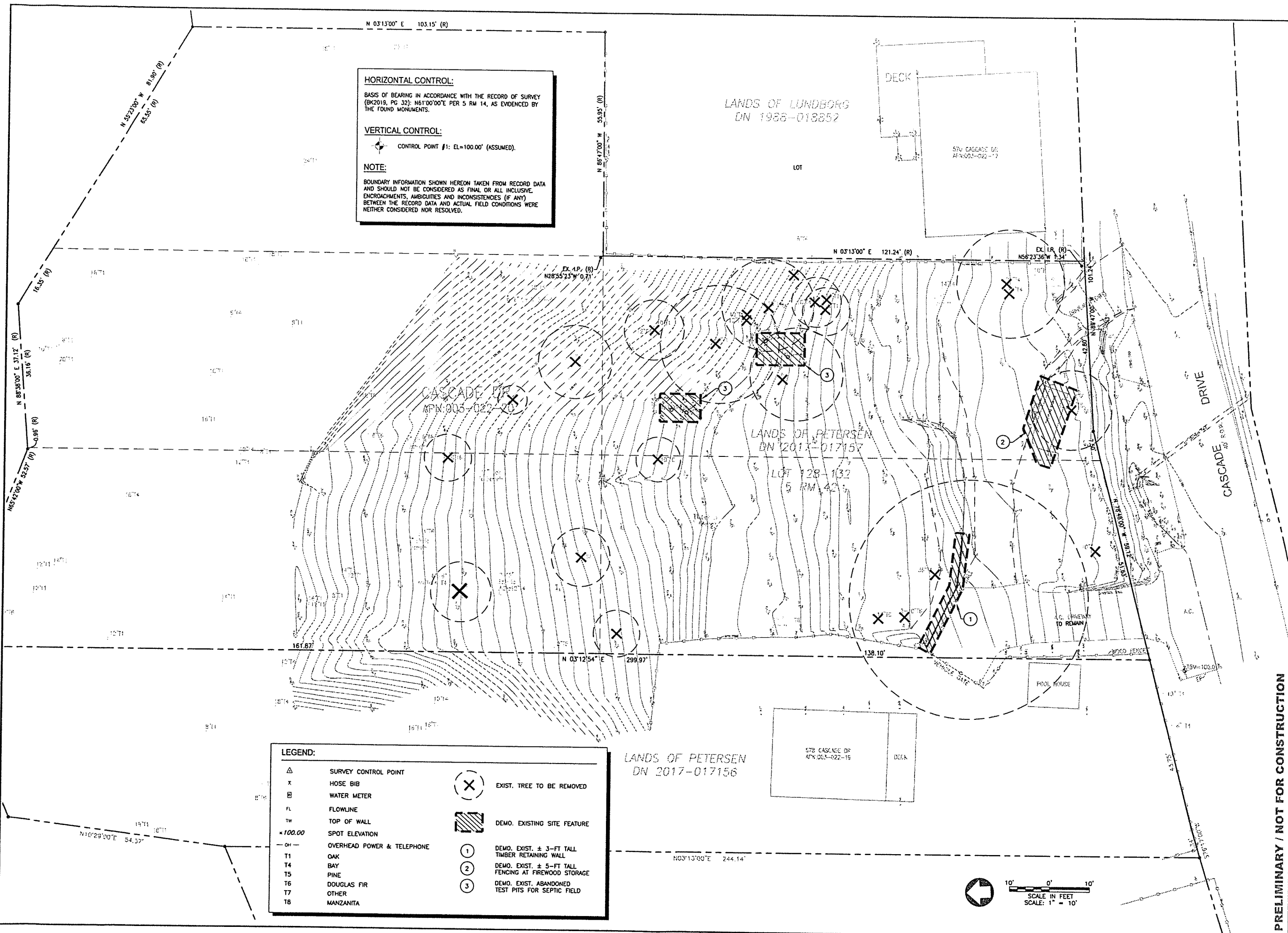


Drawn: N.C.
Revised: VI
JOB NO: 1711D
DATE: 6/26/20

PRELIMINARY / NOT FOR CONSTRUCTION
SHEET:
C1.0
1 OF 9

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HORIZONTAL CONTROL:
 BASIS OF BEARING IN ACCORDANCE WITH THE RECORD OF SURVEY (BK2018, PG. 32). N61°00'00"E PER 5 RM 14, AS EVIDENCED BY THE FOUND MONUMENTS.

VERTICAL CONTROL:
 CONTROL POINT #1: EL=100.00' (ASSUMED).

NOTE:
 BOUNDARY INFORMATION SHOWN HEREON TAKEN FROM RECORD DATA AND SHOULD NOT BE CONSIDERED AS FINAL OR ALL INCLUSIVE. ENCROACHMENTS, AMBIGUITIES AND INCONSISTENCIES (IF ANY) BETWEEN THE RECORD DATA AND ACTUAL FIELD CONDITIONS WERE NEITHER CONSIDERED NOR RESOLVED.

LEGEND:

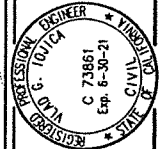
△	SURVEY CONTROL POINT	⊗	EXIST. TREE TO BE REMOVED
x	HOSE BIB	▨	DEMO. EXISTING SITE FEATURE
⊠	WATER METER	①	DEMO. EXIST. ± 3-FT TALL TIMBER RETAINING WALL
FL	FLOWLINE	②	DEMO. EXIST. ± 5-FT TALL FENCING AT FIREWOOD STORAGE
TW	TOP OF WALL	③	DEMO. EXIST. ABANDONED TEST PITS FOR SEPTIC FIELD
+100.00	SPOT ELEVATION		
OH	OVERHEAD POWER & TELEPHONE		
T1	OAK		
T4	BAY		
T5	PINE		
T6	DOUGLAS FIR		
T7	OTHER		
T8	MANZANITA		

**Via
Atelier**

By:	Date:	Rev.:
VJ	1/28/19	1
VJ	10/14/19	2
VJ	4/02/20	3
VJ	6/26/20	4

Revisions:
 △ REVISED DRIVEWAY / WALKWAY LAYOUT
 △ REV. ALIGNMENT FOR THE ON-SITE PROP. DRAINAGE HAYS
 △ REV. PER COMMENTS DATED 3/17/2020
 △ REVISED HOSE LAYOUT

Sheet Title: **EXISTING CONDITIONS & DEMOLITION PLAN**
 Project: **PEDERSEN RESIDENCE**
 Address: 512 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 003-022-20



Files Prepared By: [Signature]
 Date: [Blank]
 VIA Atelier, Inc.
 Engineering Consultants
 4 Brookside Ct., San Anselmo, CA 94960
 PH: (415) 714-6716 Email: jg@viaatelier.com

PRELIMINARY / NOT FOR CONSTRUCTION

JOB NO. 1711D
 DATE: 6/26/20
 DRAWN BY: VJ
 REVISED BY: VJ
 SHEET:
C2.0
 2 OF 4

ABBREVIATIONS:

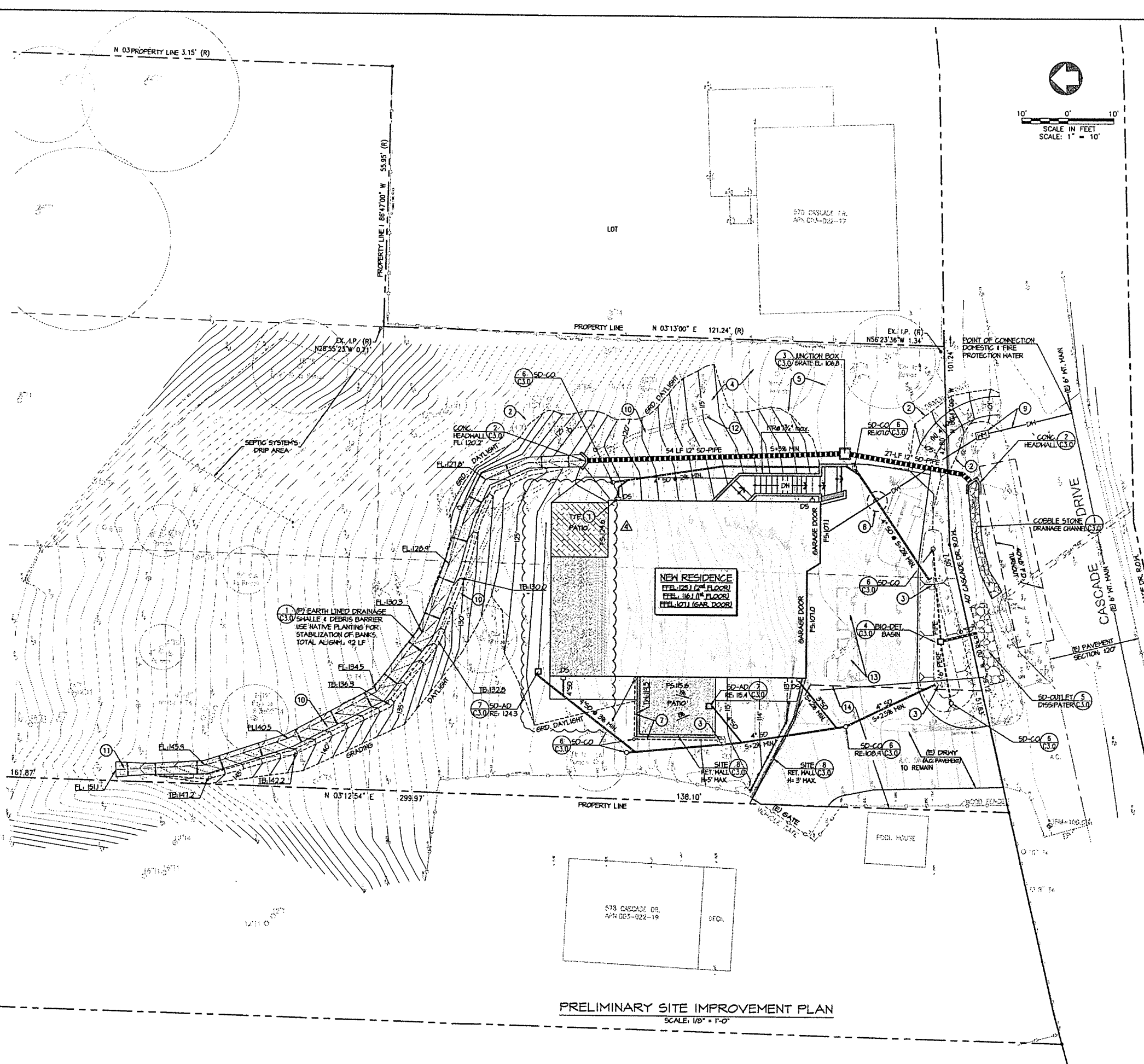
- CL CENTER LINE
- CO CLEAN OUT
- DIA. DIAMETER
- EX. EXISTING
- FG FACE OF CURB
- FF FINISHED FLOOR ELEVATION
- FG FINISH GRADE
- FL FLOWLINE
- FN FENCE
- GM GAS METER
- GR GRATE
- GV GATE VALVE
- HB HEADER BOARD
- HGL HYDRAULIC GRADE LINE
- IE OR INV. INVERT ELEVATION OR FLOWLINE OF PIPES
- ICV IRRIGATION CONTROL VALVE
- LF LINEAR FEET
- LIP LIP OF BUTTER
- LOH LIMITS OF WORK
- LRP LEGALLY RESPONSIBLE PERSON
- MON MONUMENT
- O.C. ON CENTER
- (P) PROPOSED
- (R) RECORD
- R RADIUS
- RLM GRATE OF CATCH BASIN, MANHOLE OR AREA DRAIN RIM ELEVATION
- SDCB STORM DRAIN CATCH BASIN
- SDMH STORM DRAIN MANHOLE
- SJ SCORE JOINT
- SV SHUT-OFF VALVE
- SSMH SANITARY SEWER MANHOLE
- TC TOP OF CURB
- TR TOP OF RAMP
- TS TOP OF STAIR
- TH TOP OF HALL
- UNO. UNLESS NOTED OTHERWISE
- TB TOP OF BERM

PLAN NOTES:

- 1 CONNECT ALL ROOF DOWNSPOUTS TO THE ON-SITE STORM WATER DRAINAGE SYSTEM
- 2 GRADING DAYLIGHT
- 3 PROTECT SOIL FROM ERODING AT DRAINAGE PIPES AND SWALLE OUTLETS BY INSTALLING MIN. 6" RIP-RAP
- 4 SEPTIC SYSTEMS RE-CIRCULATING SAND FILTER DESIGN BY OTHERS
- 5 SEPTIC SYSTEMS 1200 GAL. TANK, DESIGN BY OTHERS
- 6 GRADE SURFACES ALONG THE PERIMETER OF THE HOUSE FOR MINIMUM OF 10' AS FOLLOWS:
28 MIN. FOR PAVED SURFACES
58 MIN. FOR LANDSCAPED AREAS.
- 7 INSTALL 4-IN PERFORATED PIPE EMBEDDED IN DRAINROCK SUB-DRAIN AT THE BACK OF THE RETAINING WALLS. INSTALL CLEANOUTS AT EACH TURN OF THE SUB-DRAIN SYSTEM.
- 8 PROVIDE MIN. 12-IN VERTICAL CLEARANCE AT UTILITY CROSSINGS
- 9 INSTALL NEW 1" WATER SERVICE AND WATER METER FOR DOMESTIC AND FIRE USE
- 10 ALIGNMENT OF EXIST. 8-IN STORM DRAIN PIPE TO BE ABANDONED IN PLACE. TOTAL LENGTH OF PIPE: 155 LF.
- 11 EXIST. CATCH BASIN INLET, TO BE ABANDONED AND REMOVED
- 12 EXIST. STORM DRAIN PIPE OUTLET, TO BE ABANDONED AND RE-GRADED TO NATURAL CONDITION
- 13 NEW SEPTIC TANKS, DESIGN BY OTHERS.
- 14 NEW 24-FT WIDE INGRESS EGRESS EASEMENT DEFINED UNDER SEPARATE DOCUMENT

PRELIMINARY GRADING QUANTITIES:

Grading Quantities Estimate			
Pedersen Residence Cascade Drive, Fairfax		Date: 5-Jul-18 Rev. 2: 25-Jun-20	
Item	location on the site	estimated quantities (cu.yd.)	
		cut	fill
1	New House Pad	338.4	46.9
2	West Elevation Patio	5.8	2.4
3	Stormwater Detention Basin	10.7	1.2
4	Drainage Swalle Above the House	24.6	98.3
5	Other Site Grading	52.8	48.4
6	Septic Tanks	22.7	0.8
7	Septic's Sand Filter	17.3	1.3
Totals:		472.3	199.2
Export Material:		273.0	

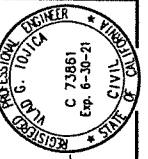


PRELIMINARY SITE IMPROVEMENT PLAN
SCALE: 1/8" = 1'-0"



Date	By	Revision
10/28/18	VJ	REVISED DRIVEWAY / ALIQUAY LAYOUT
10/14/19	VJ	REV. ALIGNMENT FOR THE ON-SITE PROF. DRAINAGE MAYS
4/02/20	VJ	REV. PER COMMENTS DATED 3/27/2020
6/26/20	VJ	REVISED HOUSE LAYOUT

PRELIMINARY SITE IMPROVEMENT PLAN
PEDERSEN RESIDENCE
512 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 009-022-20



Drawn By: VIA Atelier, INC.
Engineering Consultants
4900 Cascade Ct., San Anselmo, CA 94960
PH: (415) 774-5716 E: office@via-atelier.com

Job No: 1711D
Date: 6/26/20
Drawn By: VJ
Revised By: VJ
Sheet:

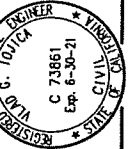
C3.0
3 OF 9

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By	VJ
Date	7/20/19
Rev.	10/14/19
Rev.	4/02/20
Rev.	6/26/20

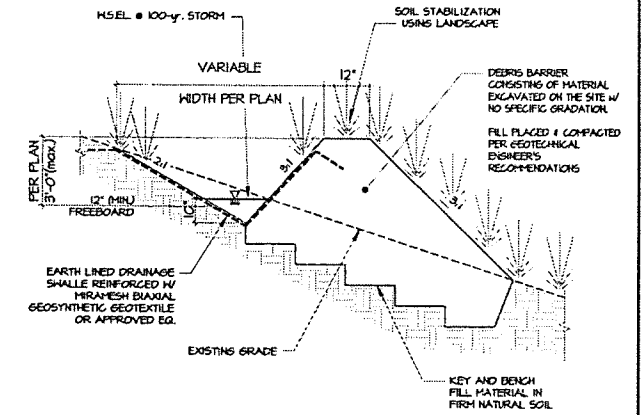
Revisions:
 1 REVISED DRIVEWAY / ALIQUAY LAYOUT
 2 REV. ALIGNMENT FOR THE ON-SITE PROP. DRAINAGE MATS
 3 REV. PER COMMENTS DATED 3/27/2020
 4 REVISED HOSE LAYOUT

CONSTRUCTION DETAILS
PEDERSEN RESIDENCE
 512 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 009-022-20

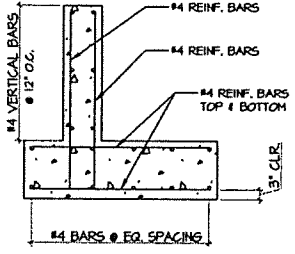


From Prepared By: V. J. Jepsen
 Date: 6/26/20
 Project: PEDERSEN RESIDENCE
 Address: 512 CASCADE DRIVE, FAIRFAX, CA 94960
 Phone: 714-6716-6716 | E: office@via-atelier.com

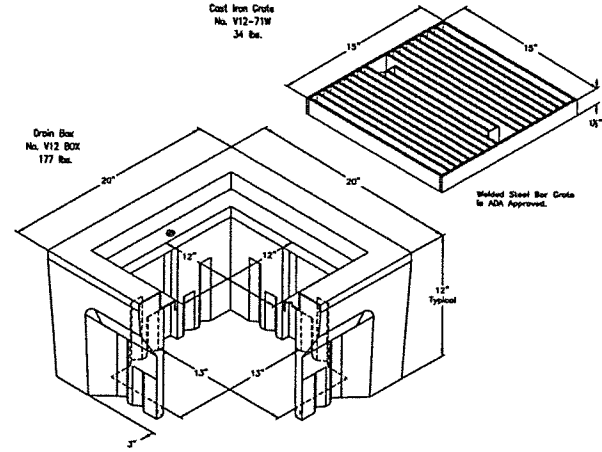
JOB NO: 1711D
 DATE: 6/26/20
 DRAWN BY: V. Jepsen
 REVISED BY:
 SHEET:



1 DRAINAGE SWALE & DEBRIS BARRIER
 Scale: N.T.S.



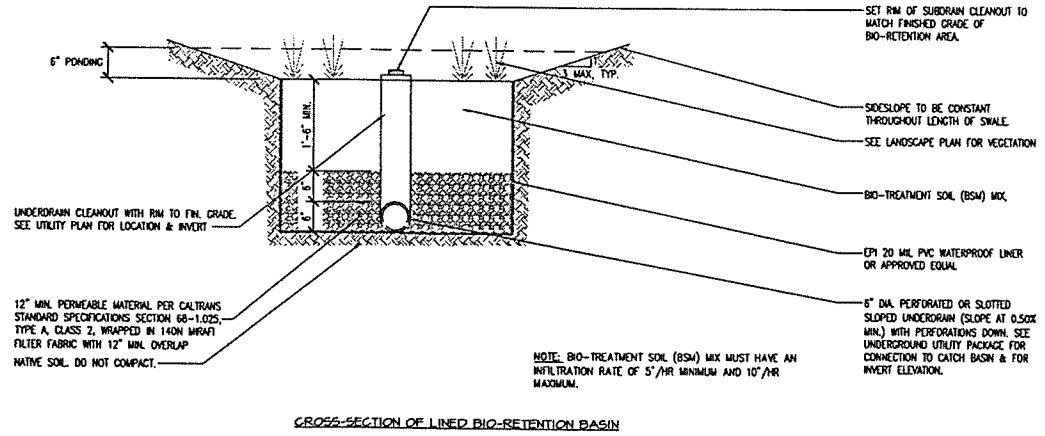
2 CONCRETE HEADWALL
 Scale: N.T.S.



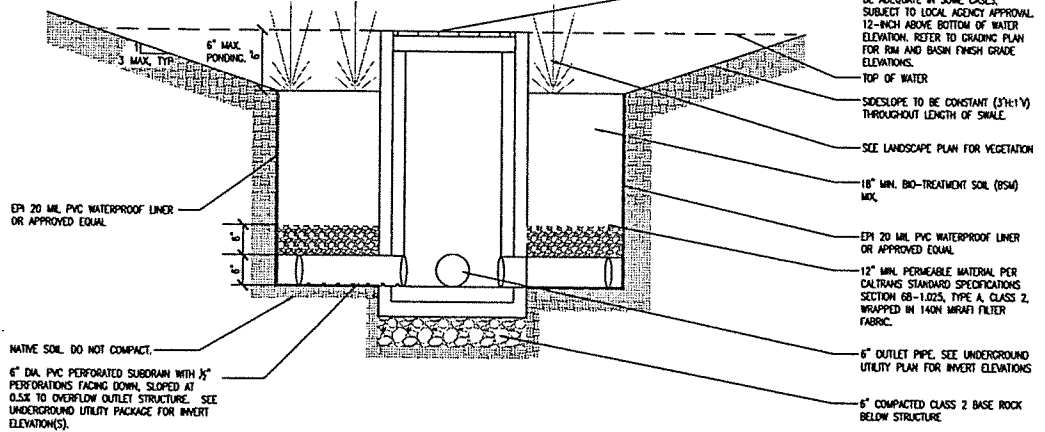
A high density reinforced concrete box with cast in galvanized frame, specifically engineered for heavy traffic areas. Approximate dimensions and weight shown.

Manufacturer Code	Item	Approx. Shipping Weight	Description
V12B02	BOX	177 lbs.	V12 Drain Box (12" x 12") w/ N/20 Loading, Ball Down, Interchangeable with Series #112 Basin. 12 per pallet.
V12-71W	LD	34 lbs.	Welded, Steel Grate Bars, N/20 Loading, Galvanized, ADA Approved
V12K12	EXTENSION	120 lbs.	12" Reinforced Concrete - 12 per pallet

3 CONCRETE CATCH BASIN
 Scale: N.T.S.

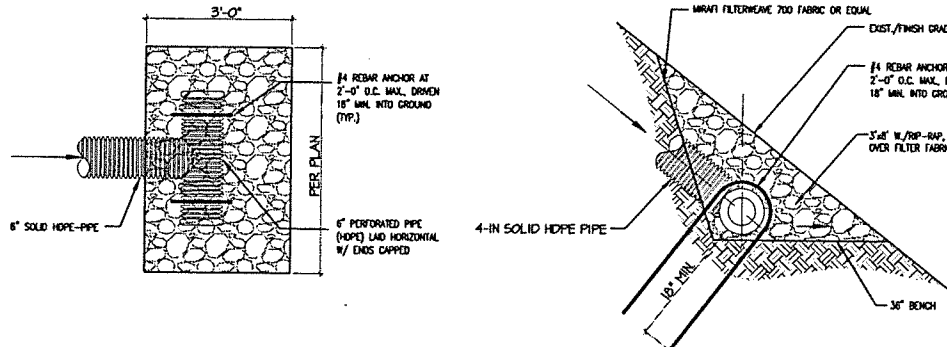


CROSS-SECTION OF LINED BIO-RETENTION BASIN

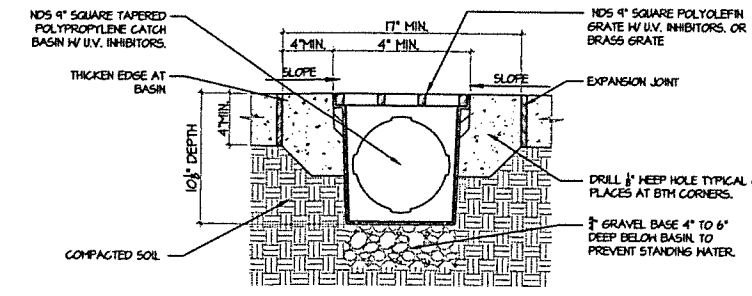


SECTION OF A BIO-RETENTION BASIN AT OVERFLOW OUTLET STRUCTURE

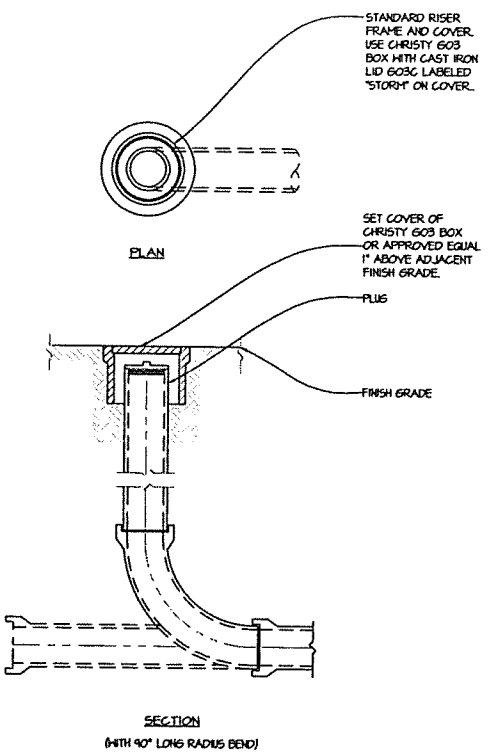
4 BIO-DETENTION BASIN
 Scale: N.T.S.



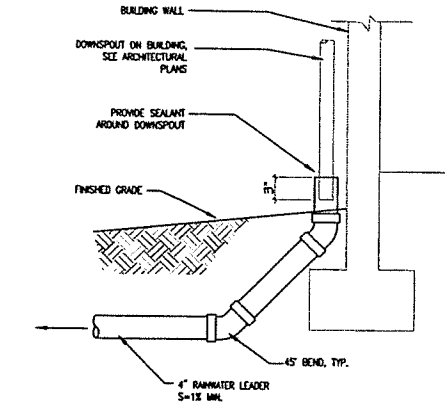
5 STORMWATER DISSIPATOR
 Scale: N.T.S.



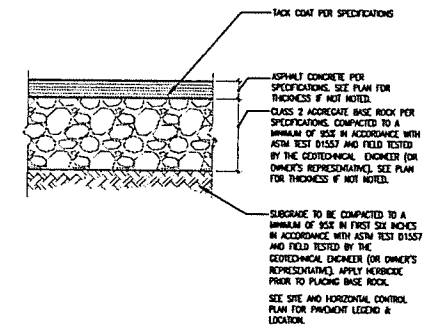
7 AREA DRAIN
 Scale: N.T.S.



6 DRAIN CLEAN OUT
 Scale: N.T.S.



9 CONNECT DOWNSPOUT TO SD
 Scale: N.T.S.

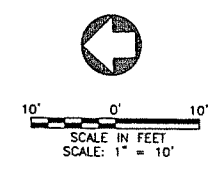
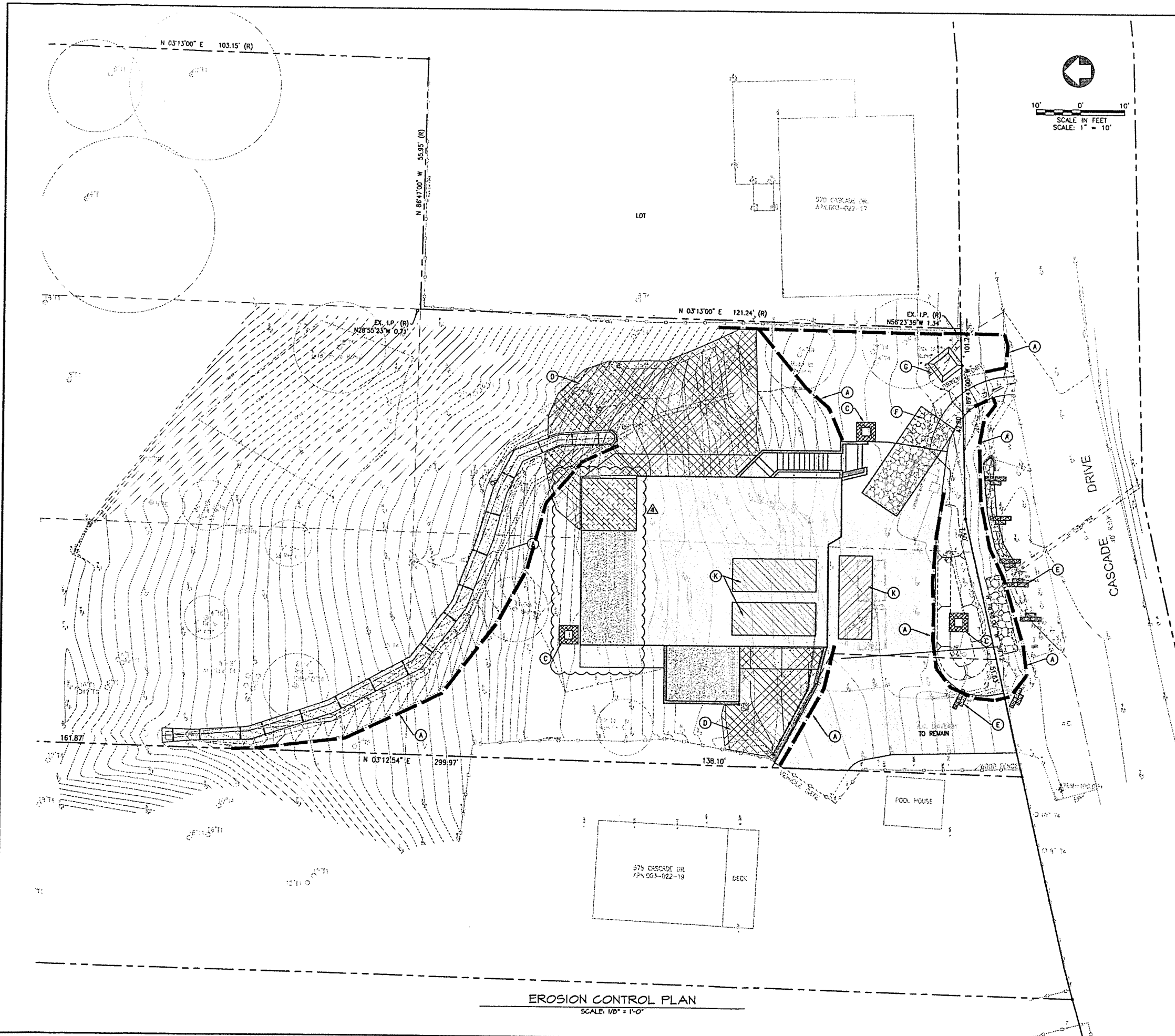


10 A.C. PAVEMENT AT DRWY.
 Scale: N.T.S.

6 DRAIN CLEAN OUT
 Scale: N.T.S.

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EROSION CONTROL PLAN
SCALE: 1/8" = 1'-0"

PLAN NOTES:

1. ALL DISTURBED AREAS TO BE REVEGETATED OR LANDSCAPED WITHIN A REASONABLE TIME. PROVIDE EROSION BLANKETS IF RAIN IS EMINENT.
2. LIMITS OF DISTURBED AREAS ARE APPROXIMATE ONLY. LIMITS TO BE ADJUSTED AS NEEDED TO PROTECT ALL DISTURBED AREAS.
3. THIS PLAN IS FOR EROSION, SEDIMENT CONTROL, AND TREE PROTECTION ONLY. SEE OTHER CIVIL SHEETS FOR GRADING AND UTILITIES.
4. SEE EROSION CONTROL DETAILS ON C5.1
5. REFER TO ARBORIST REPORT AND TREE PROTECTION PLAN FOR ADDITIONAL INFORMATION, AND FOR EROSION CONTROL PROTECTION WITHIN DRIFLINE AREAS OF TREES.
6. PER COMPLIANCE WITH CALGREEN SECT.4.106.2, MAINTAIN CONTINUOUS EROSION AND SEDIMENTATION CONTROL TO PREVENT FLOODING OF ADJACENT PROPERTIES AND STREETS, AS WELL AS PREVENT EROSION AND RETAIN SOIL RUNOFF ON-SITE. CONTRACTOR SHALL TAKE MEANS AS NECESSARY TO COMPLY WITH THIS MANDATORY MEASURE INCLUDING, BUT NOT LIMITED TO, INSTALLING RETENTION BASINS AND INSTALLING ADDITIONAL EROSION CONTROL MEASURES.

EROSION CONTROL LEGEND:

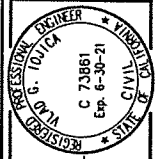
- (A) INSTALL FIBER ROLLS PER CASQA SE-5 1 (C5.1)
- (B) INSTALL SILT FENCE PER CASQA SE-1 2 (C5.1)
- (C) INSTALL STORM DRAIN INLET PROTECTION PER CASQA SE-10 3 (C5.1)
- (D) UTILIZE GEOTEXTILE MATTING (PER CASQA EC-7) OF DISTURBED SOILS UNTIL LANDSCAPE IMPROVEMENTS ARE COMPLETED. APPROX. LIMITS SHOWN. 4 (C5.1)
- (E) INSTALL GRAVEL BAG SEDIMENT TRAP DURING CONSTRUCTION TO PREVENT SEDIMENT TRANSPORT PER CASQA SE-6. 5 (C5.1)
- (F) CONSTRUCTION ENTRANCE PER CASQA TC-1 6 (C5.1)
- (G) CONCRETE WASH AREA 7 (C5.1)
- (H) TREE FENCE (Tree Protection Zone) NOT PER THIS PLAN, SEE LANDSCAPE PLANS
- (J) LIMITS AND DISTURBED AREA
- (K) CONSTRUCTION STORAGE AREAS



By	Date	VI.
VI.	7/28/14	VI.
VI.	10/14/19	VI.
VI.	4/03/20	VI.
VI.	6/26/20	VI.

Revisions:
 ▲ REVISED DRIVEWAY / MAINTENANCE LAYOUT
 ▲ REV. ALIGNMENT FOR THE ON-SITE PROF. DRAINAGE MATS
 ▲ REV. PER COMMENTS DATED 3/7/2020
 ▲ REVISED HOUSE LAYOUT

Sheet Title: **EROSION CONTROL PLAN**
 Project: **PEDERSEN RESIDENCE**
 Address: 512 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 003-022-20



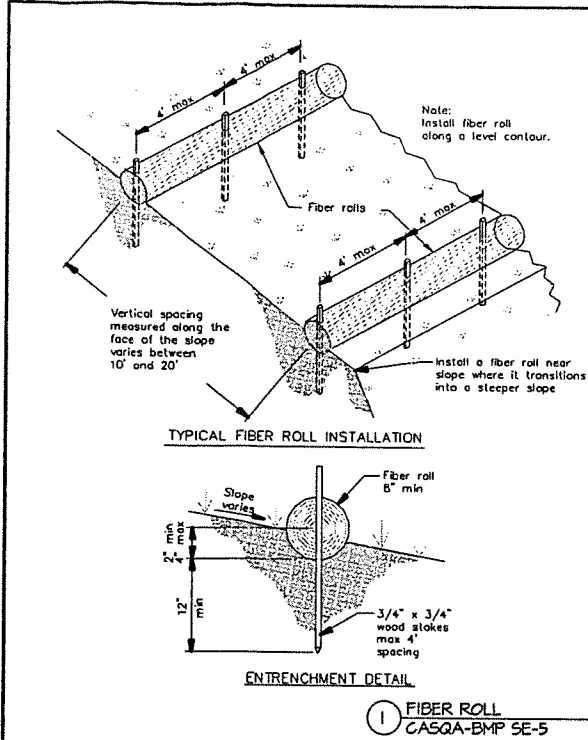
Plans Prepared By: **VIA Atelier, Inc.**
 Engineering Consultants
 1711D Pedersen Residence, Fairfax, CA 94960
 Phone: 415-278-2128, Email: via@viaatelier.com

Date: **6/26/20**

PRELIMINARY / NOT FOR CONSTRUCTION

JOB NO. 1711D
 DATE: 6/26/20
 DRAWN BY: VI.
 REVIEWED BY: VI.
 SHEET:

C5.0
5 OF 9



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

Application:

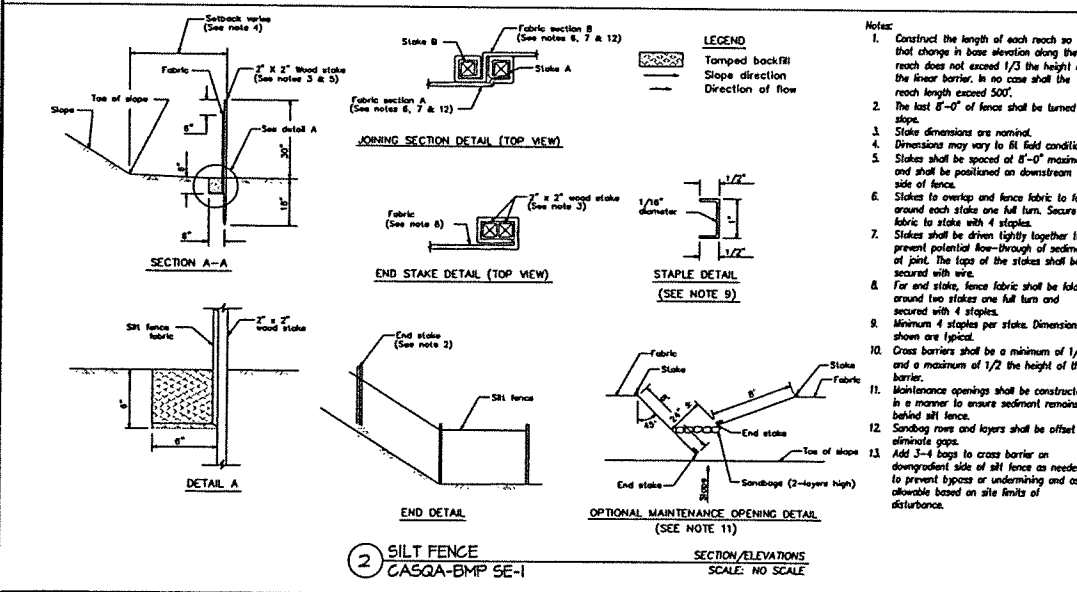
- Along the toe, top, face, and of grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- At the end of a downward slope where it transitions to a steeper slope.
- Along the perimeter of a project.
- As check dams in unlined ditches with minimal grade.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

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

Inspection and Maintenance:

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Repair or replace silt, torn, unraveling, or slumping fiber rolls.
- If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flow, sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when sediment accumulation reaches one-third the designated sediment storage depth.
- Fiber rolls are used for erosion control, such as in a check dam, sediment removal should not be required as long as the system continues to control the grade. Sediment control BMPs will likely be required in conjunction with this type of application.
- Repair any rills or surface promptly.

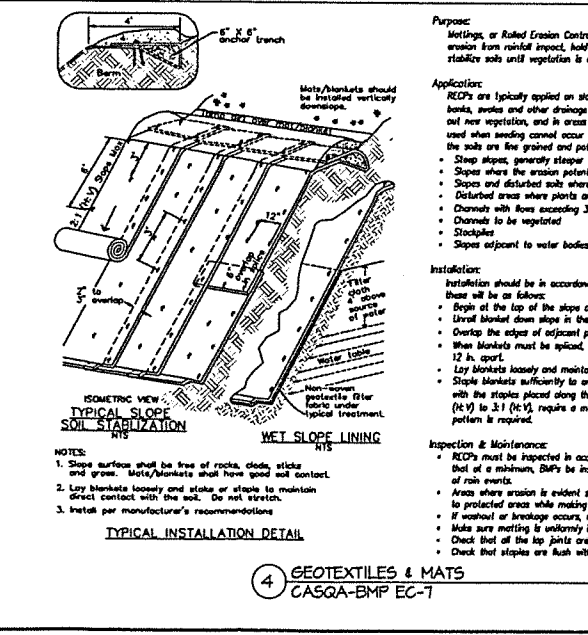
1 FIBER ROLL
CASQA-BMP SE-5
SCALE: NO SCALE



Notes:

- Contracted the length of each reach so that change in base elevation along the reach does not exceed 1/3 the height of the linear barrier. In no case shall the reach length exceed 500'.
- The last 8'-0" of fence shall be turned up slope.
- Stake dimensions are nominal.
- Dimensions may vary to fit field conditions.
- Stakes shall be spaced at 8'-0" maximum and shall be positioned on downstream side of fence.
- Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
- Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The top of the stakes shall be secured with wire.
- For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
- Minimum 4 staples per stake. Dimensions shown are typical.
- Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the barrier.
- Maintenance openings shall be constructed in a manner to ensure sediment remains behind all fence.
- Sandbag rows and layers shall be offset to eliminate gaps.
- Add 3-4 bags to cross barrier on downstream side of all fence as needed to prevent bypass or undermining and as observable based on site limits of disturbance.

2 SILT FENCE
CASQA-BMP SE-1
SCALE: NO SCALE



Purpose:
Mats, or Rolled Erosion Control Products (RECPs), can be made of natural materials. RECPs are used to cover the soil surface to reduce erosion from rainfall impact, hold soil in place, and absorb and hold moisture near the soil surface. Additionally, RECPs may be used to stabilize soils until vegetation is established or to reinforce non-woody surface vegetation.

Application:
RECPs are typically applied on slopes where erosion hazard is high and vegetation will be slow to establish. Mats are also used on stream banks, swales and other drainage channels where moving water of velocities between 3 ft/s and 6 ft/s are likely to cause scour and wash out near vegetation, and in areas where the soil surface is disturbed and where existing vegetation has been removed. RECPs may also be used when seeding covered areas (e.g., late season construction and/or the arrival of an early rain season). RECPs should be considered when the soils are fine grained and potentially erosive. RECPs should be considered in the following situations:

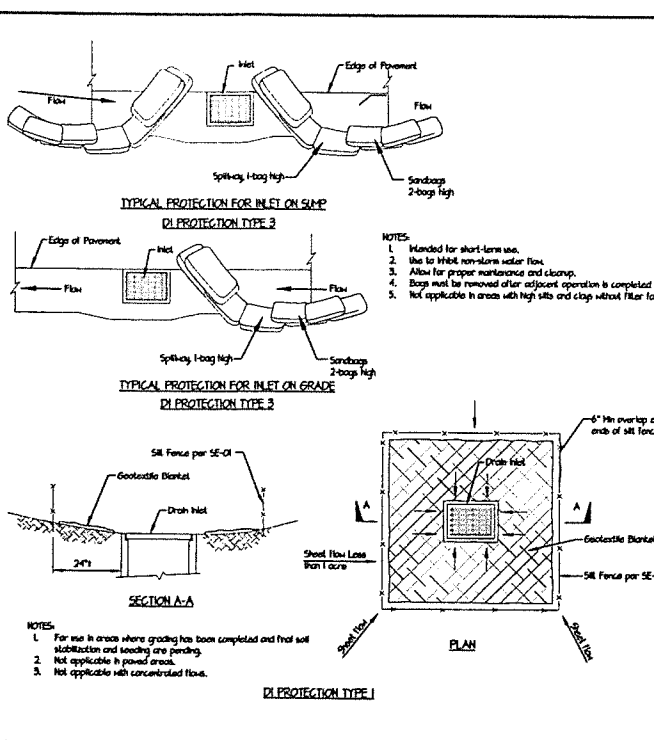
- Steep slopes, generally steeper than 3:1 (H:V)
- Slopes where the erosion potential is high
- Spores and disturbed soils where mats must be anchored
- Disturbed areas where plants are slow to develop
- Channels with flows exceeding 3.3 ft/s
- Channels to be vegetated
- Stockpiles
- Slopes adjacent to water bodies

Installation:
Installation should be in accordance with the manufacturer's recommendations. In general, these will be as follows:
- Begin at the top of the slope and anchor the blanket in a 6 in. deep by 6 in. wide trench. Backfill trench and tamp earth firmly.
- Lay blanket down slope in the direction of water flow.
- Overlap the edge of adjacent parallel rolls 2 to 3 ft, and staple every 3 ft (or greater, per manufacturer's specifications).
- When blankets must be applied, place blankets and over and (single style) with it overlap. Staple through overlapped area, approximately 12 in. apart.
- Lay blankets loosely and maintain direct contact with the soil. Do not stretch.
- Staple blankets sufficiently to anchor blanket and maintain contact with the soil. Staples should be placed down the center and staggered with the staples placed along the edges. Staple spacings: 1:1 (H:V) to 2:1 (H:V), require a minimum of 2 staples/yds. Moderate slopes, 2:1 (H:V) to 3:1 (H:V), require a minimum of 1 1/2 staples/yds. Check manufacturer's specifications to determine if a higher density staple pattern is required.

Inspection & Maintenance:

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Areas where erosion is evident shall be repaired and BMPs replaced as soon as possible. Care should be exercised to minimize the damage to protected areas while making repairs, as any area damaged will require reapplication of BMPs.
- If removal or breakage occurs, re-install the material after repairing the damage to the slope or channel.
- Make sure matting is uniformly in contact with the soil.
- Check that all top joints are secure.
- Check that staples are flush with the ground.

4 GEOTEXTILES & MATS
CASQA-BMP EC-7
SCALE: NO SCALE



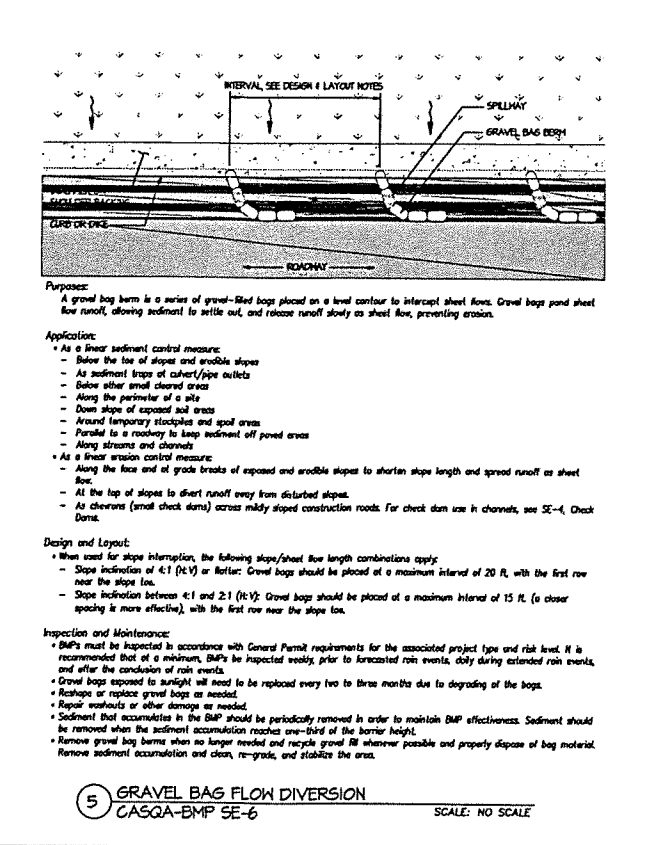
Notes:

- Manded for short-term use.
- Use to limit non-storm water flow.
- Allow for proper maintenance and cleanup.
- Bags must be removed after adjacent operation is completed.
- Not applicable in areas with high silt and clay without filter fabric.

Notes:

- For use in areas where grading has been completed and final soil stabilization and seeding are pending.
- Not applicable in paved areas.
- Not applicable with concentrated flow.

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



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

Application:

- As a linear sediment control measure:
 - Below the toe of slopes and erodible slopes
 - At sediment traps of culvert/pipe outlets
 - Below other soil cleared areas
 - Along the perimeter of a site
 - Down slope of covered soil areas
 - Around temporary stockpiles and spoil areas
 - Parallel to a roadway to keep sediment off paved areas
 - Along streams and channels
- As a linear erosion control measure:
 - Along the face and of grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
 - At the top of slopes to divert runoff away from disturbed slopes.
 - As chevrons (small check dams) across mildly sloped construction roads. For check dam use in channels, see SE-4, Check Dams.

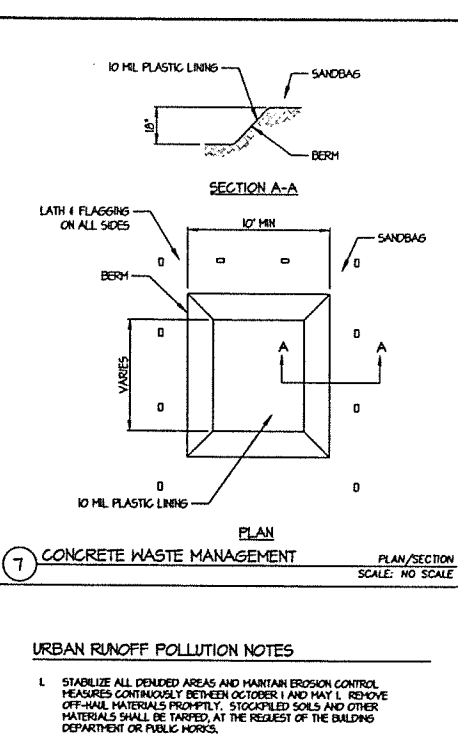
Design and Layout:

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

Inspection and Maintenance:

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

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



URBAN RUNOFF POLLUTION NOTES

- STABILIZE ALL DENuded AREAS AND MAINTAIN EROSION CONTROL MEASURES CONTINUOUSLY BETWEEN OCTOBER 15 AND MAY 15. REMOVE OFF-HOUR MATERIALS PROMPTLY. STOCKPILED SOILS AND OTHER MATERIALS SHALL BE TARPEDED, AT THE REQUEST OF THE BUILDING DEPARTMENT OR PUBLIC WORKS.
- STORE, HANDLE AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES SO AS TO PREVENT THEIR ENTRY TO THE STORM DRAIN SYSTEM. CONTRACTOR MUST NOT ALLOW CONCRETE, WASHWATERS, SLURRIES, PAINT OR OTHER MATERIALS TO ENTER CATCH BASINS, THE ON-SITE STORM DRAIN SYSTEM, OR OFF-SITE SURFACE FLOW RUNOFF.
- USE FILTRATION OR OTHER MEASURES TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.
- NO CLEANING, FUELING OR MAINTAINING VEHICLES ON SITE SHALL BE PERMITTED IN ANY MANNER THAT ALLOWS DELETERIOUS MATERIALS FROM ENTERING CATCH BASINS OR TO ENTER SITE RUNOFF.
- USE OF PESTICIDES AND/OR FERTILIZERS SHALL BE REDUCED AND SHALL BE CONTROLLED TO PREVENT POLLUTION RISK.

EROSION & SEDIMENT CONTROL NOTES

- EROSION, SEDIMENTATION AND POLLUTION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH CASQA'S BEST MANAGEMENT PRACTICES, CURRENT EDITION AND WITH THE CA REGULAR'S EROSION AND SEDIMENT CONTROL FIELD MANUAL, CURRENT EDITION.
- EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15 AND SHALL BE MAINTAINED BY THE CONTRACTOR IN PROPER WORKING ORDER THROUGHOUT THE FIRST WINTER. THIS PROTECTION SHALL CONSIST OF APPROPRIATE FILTER FENCES, DIVERSION BERMS, STRAIN BAILE DICES, ETC. THESE DEVICES SHALL BE PLACED IN ORDER TO PREVENT EROSION AND TO COLLECT SEDIMENT GENERATED BY THE CONSTRUCTION OF THIS PROJECT. EXCEPT FOR PAVED AND LANDSCAPED AREAS ALREADY COMPLETED, ALL GRADED AREAS SHALL BE HYDROSEEDDED IN ORDER TO PREVENT EROSION OF BARE EARTH. THE CONTRACTOR IS RESPONSIBLE FOR EROSION & SEDIMENT CONTROL ALL YEAR LONG DURING ALL SITE WORK.
- ALL BANKS AND ALL GRADED AREAS SHALL BE HYDROSEEDDED TO CONTROL EROSION OR THE APPROVED GRASSCOVER INSTALLED BY OCTOBER 15.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN SITE AT ALL TIMES WHICH IS FREE OF DEBRIS, HAZARDOUS WASTES, OR STOCKPILED MATERIAL UNLESS APPROVED BY THE PROJECT ENGINEER. ALL APPROVED STOCKPILES SHALL BE COVERED AND PROTECTED TO PREVENT STORM WATER POLLUTION.
- STABILIZE ALL DENuded AREAS AND MAINTAIN EROSION CONTROL MEASURES CONTINUOUSLY BETWEEN OCTOBER 15 AND APRIL 15.
- REMOVE SPOILS PROMPTLY, AND AVOID STOCKPILING OF FILL MATERIALS WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCKPILED SOILS AND OTHER MATERIALS SHOULD BE TARPEDED TO PREVENT STORM WATER POLLUTION.
- USE FILTRATION OR OTHER MEASURES TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.
- INSTALL FILTER FABRIC BAGS INSIDE ALL CATCH BASINS AND MAINTAIN DURING WINTER STORMS.
- NO CLEANING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN AN AREA DESIGNED TO CONTAIN AND TREAT RUNOFF.
- USE OF PESTICIDES AND/OR FERTILIZERS, WHEN APPLIED, SHALL BE CONTROLLED TO PREVENT POLLUTION RISK.
- ALL AREAS OF CUT, FILL, AND UNGRADED AREAS DISTURBED BY THE GRADING OPERATION SHALL BE HYDROSEEDDED OR APPROVED LANDSCAPING GRASSCOVER PLANTED AFTER ALL WORK HAS BEEN COMPLETED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING LABOR AND MATERIAL TO ACCOMPLISH A DENSE PLANT COVER FOR EROSION CONTROL.
- DEWATER BASEMENT AND EXCAVATIONS WITH TANK AND FILTRATION DEVICE PRIOR TO DISCHARGE INTO SD SYSTEM. PROVIDE EFFLUENT SAMPLES FOR TESTING HOURLY PER REGIONAL WATER STANDARDS.
- PER THE FEDERAL AND STATE WATER QUALITY ACTS, THE OWNER IS SOLELY RESPONSIBLE FOR CONTROLLING CONSTRUCTION WATER DISCHARGE.
- PROJECT IS SUBJECT TO THE REQUIREMENTS OF THE WINTER GRADING MORATORIUM AS PER THE TOWN'S ORDINANCES.

7 CONCRETE WASTE MANAGEMENT
SCALE: NO SCALE

Via Atelier

By: [Signature] Date: 7/28/19 VI
REV. ALIEN/SEC. FOR THE ON-SITE PROP. DRAINAGE MATS 10/14/19 VI
REV. PER COMMENTS DATED 3/27/20 4/02/20 VI
REVISED HOUSE LAYOUT 6/26/20 VI

EROSION CONTROL DETAILS

PEDERSEN RESIDENCE

5172 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 003-022-20

Sheet Title: [Blank] Project: [Blank] Address: [Blank]

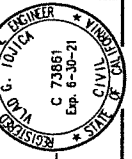
Plans Prepared By: [Signature] Date: 6/26/20
VIA Atelier, Inc. C 73861 Exp. 6-30-21
Engineering Office: 4000 Wilshire Blvd., Suite 1000, Los Angeles, CA 90048
Ph: (415) 774-6716 - E: info@viaatelier.com

JOB NO: 1711D
DATE: 6/26/20
DRAWN BY: [Signature]
REVISED BY: [Signature]
SHEET: C2.1
6 OF 9

PRELIMINARY / NOT FOR CONSTRUCTION

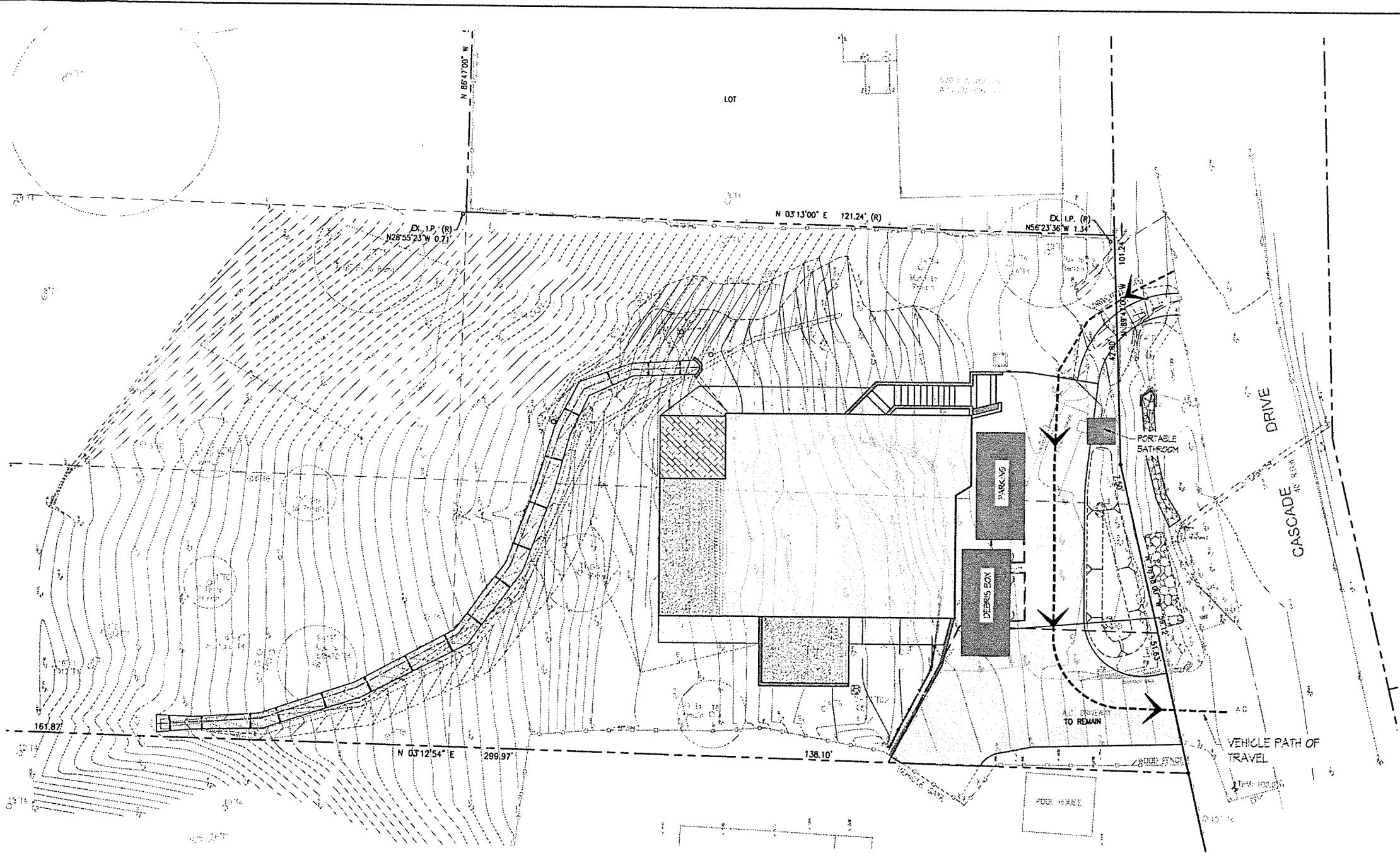
Date	By	Revision
7/28/19	V.I.	REVISED DRIVEWAY / WALKWAY LAYOUT
10/14/19	V.I.	REV. ALIQUOT. FOR THE ON-SITE PROP. DRAINAGE HAYS
4/02/20	V.I.	REV. PER COMMENTS DATED 3/27/2020
6/26/20	V.I.	REVISED HOSE LAYOUT

Sheet Title: CONSTRUCTION MANAGEMENT PLAN
 Project: PEDERSEN RESIDENCE
 Address: 512 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 003-022-20



Plans Prepared By: VIA Atelier, Inc.
 Engineering Consultants
 4 Brockside Ct., San Anselmo, CA 94960
 PH: (415) 774-6716 E: office@via-atelier.com

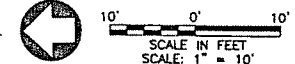
Job No. 1711D
 Date: 6/26/20
 Drawn By: REVISOR: V.I.
 SHEET: CM.1
 9 OF 9



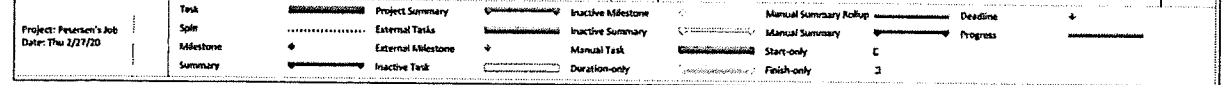
PLAN NOTES:

- PARKING FOR THE CONSTRUCTION WORKERS WILL BE PROVIDED IN FRONT OF THE PROJECT'S PARCEL AND ADJACENT LOT WITH PERMISSION FROM THE PARCEL'S OWNER.
- DURING CONSTRUCTION ACTIVITIES THE ELECTRIC POWER WILL BE SUPPLIED BY TEMPORARY SOURCE.
- LOADING AND UNLOADING AREAS ON THE PARKING LOT.
- MATERIAL STORAGE AREAS ON THE PARKING AREA.
- TEMPORARY TOILET DURING CONSTRUCTION TO BE LOCATED ON THE PARKING AREA, SEE PLAN.
- CONSTRUCTION VEHICLES HAVE THE SPACE TO TURN AROUND IN FRONT OF THE PROPERTY AND RETURN THE SAME WAY THEY CAME.
- NO ROAD CLOSURE DUE TO THIS PROJECT IS ANTICIPATED AS NECESSARY.
- PROJECT'S START DATE: _____ April 2021
- PROJECT'S END DATE: _____ June 2022
- TOTAL RE-VEGETATION (LANDSCAPING) WILL BE COMPLETED BEFORE THE REQUEST FOR THE FINAL INSPECTION.
- INSTALL WIND EROSION CONTROL MEASURES ALONG THE PERIMETER OF THE CONSTRUCTION SITE IN ACCORDANCE WITH THE CASGA'S SPEC. WE-1.

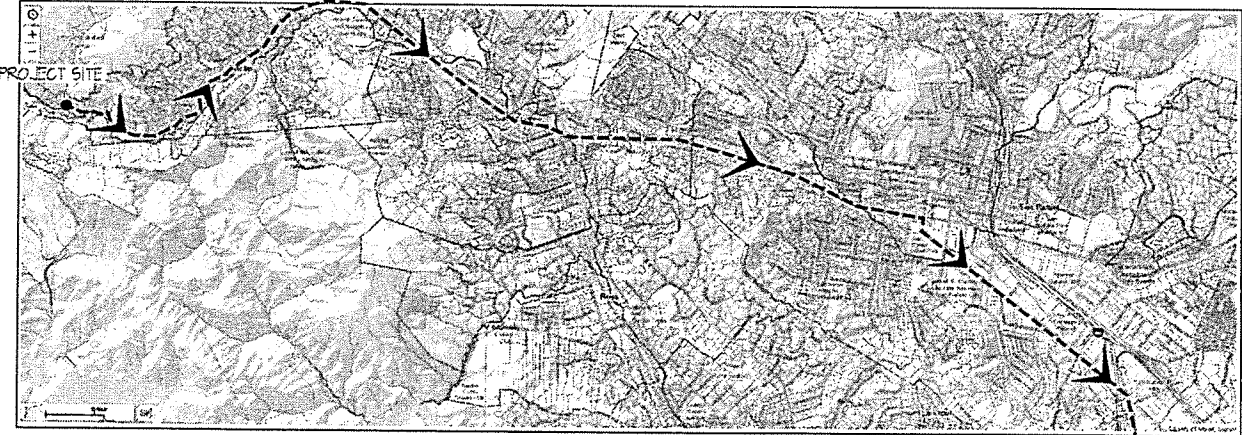
CONSTRUCTION MANAGEMENT PLAN



ID	Task Code	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		Mobilization	3 days	Mon 4/20/20	Wed 4/22/20		
2		Demolition - Tree Removal	8 days	Thu 4/23/20	Mon 5/4/20	1	
3		Rough Grading	20 days	Tue 5/5/20	Mon 6/1/20	2	
4		UTILITIES	45 days	Tue 6/2/20	Mon 8/3/20	3	
5		Foundations & Site Walls	30 days	Tue 6/22/20	Mon 7/13/20	3	
6		Framing	90 days	Fri 9/11/20	Thu 1/14/21	5	
7		Plumbing	90 days?	Fri 11/15/21	Thu 2/25/21	6	
8		Pavement	15 days	Tue 7/14/20	Mon 8/3/20	5	
9		Finishes	90 days	Fri 2/26/21	Thu 7/1/21	7	
10		Fine Grading & Landscaping	30 days	Tue 8/4/20	Mon 9/14/20	8	



PRELIM. CONSTRUCTION SCHEDULE



PROPOSED TRUCK ROUTE MAP

to Marin Resource Recovery Center

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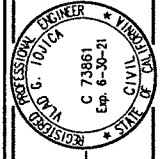
PRELIMINARY / NOT FOR CONSTRUCTION

By	Date	VI	VI	VI	VI
	7/28/19				
	10/14/19				
	4/02/20				
	6/26/20				

Revisions:

- REVISED DRIVEWAY / WALKWAY LAYOUT
- REV. AUG. SEC. FOR THE ON-SITE PROF. DRAINAGE HAYS
- REV. PER COMMENTS DATED 3/27/2020
- REVISED HOUSE LAYOUT

PRELIMINARY LANDSCAPING PLAN
PEDERSEN RESIDENCE
 512 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 003-022-20



Plans Prepared By: V/A Atelier, Inc.
 Engineering Consultants
 4 Brookside Ct., San Anselmo, CA 94960
 PH: 415-774-5716 E: office@via-atelier.com

Job No. 1711D
 Date: 6/26/20
 Drawn By: VI
 Revised By: RD
 SHEET:
L1.0
 7 OF 9



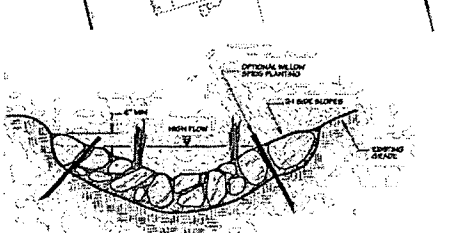
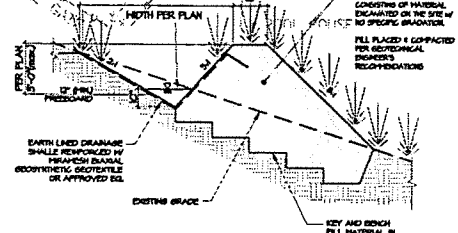
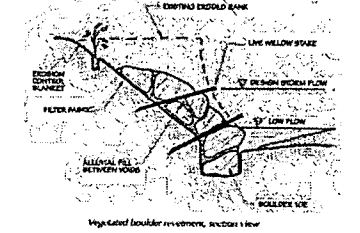
PLANTING AND IRRIGATION NOTES

- NEW LANDSCAPING AROUND IMMEDIATE VICINITY OF HOUSE WILL BE COMPRISED OF WIDELY SPACED TREES, IRRIGATED, WIDELY-SPACED ORNAMENTAL SHRUBS AND IRRIGATED GROUNDCOVERS. AREAS OF PAVEMENT, PATHS OR IRRIGATED LAWN OCCUR AROUND THE PERIMETER OF THE HOUSE PROVIDING A FIRE SAFE BUFFER. THE STREET ON THE SOUTHERN SIDE OF THE PROPERTY PROVIDE AN ADDITIONAL BUFFER.
- NEW LANDSCAPING IN INTERFACE AREAS TO THE EXISTING NATIVE VEGETATION ARE LOW PYROPHYTIC PLANTS, AND SPACED TO PROVIDE A FIRE SAFETY BUFFER, PER REGULATORY REQUIREMENTS. (20' MIN. VEGETATION MANAGEMENT ZONE).
- ALL PLANTING AREAS ARE WATERED BY AN AUTOMATIC IRRIGATION SYSTEM.
- SEPARATE IRRIGATION VALVES ARE PROVIDED FOR AREAS OF DIFFERENT WATER REQUIREMENTS (E.G. FULL SHADE, PARTIAL SHADE, FULL SUN, ETC.).
- CONVENTIONAL 8" & 12" POP-UP STREAM SPRAY HEADS ARE USED IN ALL LAWN AREAS AROUND THE IMMEDIATE VICINITY OF THE HOUSE (MODERATE WATER USE AREAS).
- DRIP IRRIGATION IS USED FOR ALL OTHER NEW PLANTS WITHIN THE PROPERTY LINE.

(LOW WATER USE AREAS)

- THE PROPERTY IS AND WILL BE MAINTAINED REGULARLY BY PROFESSIONAL GARDENERS.
- ALL TREE CROWN SPACING TO BE WITH ACCORDANCE OF ROSS VALLEY FIRE DEPARTMENT.
- A MINIMUM OF 8" OF NON-MECHANICALLY COMPACTED SOIL SHALL BE AVAILABLE FOR WATER ABSORPTION AND ROOT GROWTH IN PLANTED AREAS.
- INCORPORATE COMPOST OR NATURAL FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 8" AT A MINIMUM RATE OF 6 CUBIC YARDS PER 1000 SQUARE FEET OR PER SPECIFIC AMENDMENT RECOMMENDATIONS FROM A SOILS LABORATORY REPORT.
- A MINIMUM 3" LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT IN TURF AREAS, CREEPING OR ROOTING GROUND COVERS, AND DIRECT SEEDING APPLICATION.

NOTE:
 SEE L1.1 FOR PLANTING INDEX AND LEGEND



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PRELIMINARY / NOT FOR CONSTRUCTION

VEGETATION MANAGEMENT REQUIREMENTS:

WITHIN DESIGNATED DEFENSIBLE SPACE OF ALL STRUCTURES DEFENSIBLE SPACE MUST BE MAINTAINED.

WITHIN THE FIRST 10 FEET:

- NO PYROPHYTIC PLANTS WITHIN 10 FT. OF THE HOUSE.
- TRIM TREE LIMBS TO A MINIMUM OF 10 FEET AWAY FROM THE ROOF OF HOUSE.
- REMOVE OR CUT ALL COMBUSTIBLE VEGETATION SUCH AS, DEAD TREES, AND ALL DEAD VEGETATION.
- REGARDLESS OF PLANT SELECTION, SHRUBS SHOULD BE SPACED SO THAT NO CONTINUITY EXISTS BETWEEN THE GROUND FUELS AND TREE CROWNS.

WITHIN 8-100 FEET:

- REMOVE DEAD AND DYING GRASS, SHRUBS, AND TREES.
- REDUCE THE DENSITY OF VEGETATION AND LARGER FUELS.
- CUT GRASSES TO 3 INCHES IN HEIGHT ABOVE THE GROUND.

ADJACENT TO ROADWAYS AND DRIVEWAYS:

- TRIM AND MAINTAIN VEGETATION WITHIN 10 FEET OF ROADWAYS AS FOR DEFENSIBLE SPACE.
- TRIM TREES SO THEY DO NOT HANG LOWER THAN 5-FT. ABOVE THE ROADWAY.

PLANT SPACING AND CROWN SEPARATION:

- REGARDLESS OF PLANT SELECTION, SHRUBS SHOULD BE SPACED SO THAT NO CONTINUITY EXISTS BETWEEN THE GROUND FUELS AND TREE CROWNS, SUCH THAT A GROUND FIRE WILL NOT EXTEND INTO THE TREE CANOPY.
- TREES SHOULD BE PLANTED SUCH THAT WHEN MATURE, THEIR CROWNS WILL BE SEPARATED BY AT LEAST 10 FEET. ADD AN ADDITIONAL FIVE FEET FOR EVERY TEN (10%) PERCENT INCREASES IN GROUND COVER. EXISTING TREES MAY BE REQUIRED TO BE THINNED AND/OR REMOVED DEPENDING ON THEIR CONFIGURATION AND DISTANCE FROM THE STRUCTURES.
- SEPARATE INDIVIDUAL SHRUB CROWNS BY AT LEAST TWO TIMES THE HEIGHT OR CLUMP SHRUBS INTO ISLANDS OF NO GREATER THAN 16-FT. DIAMETER. SEPARATE THE ISLANDS BY A DISTANCE OF NO LESS THAN TWO TIMES THE CANOPY HEIGHT.

NOTE:

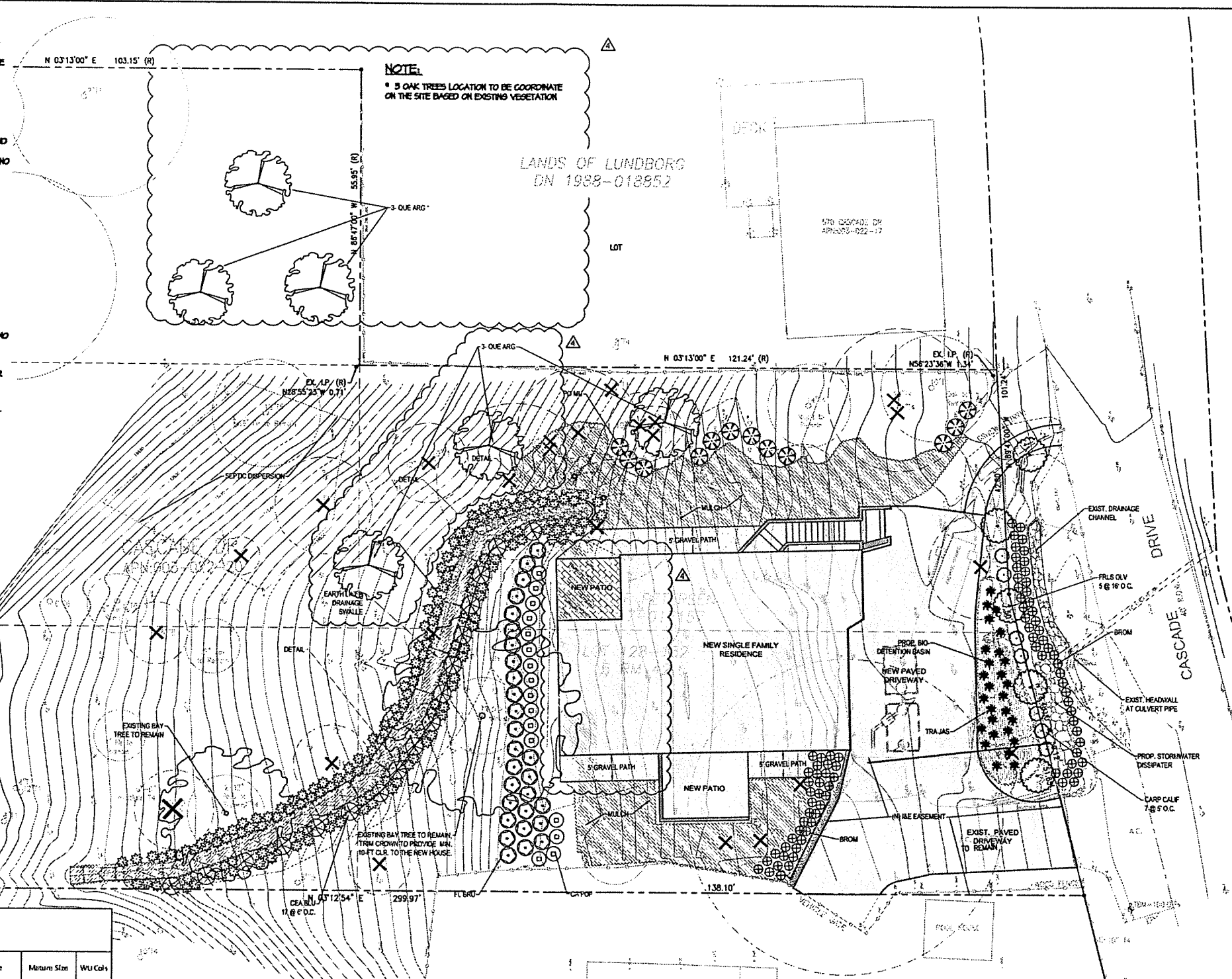
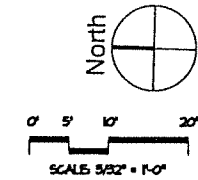
ALL NEW SHRUBS & GRASSES WITHIN 50' OF HOUSE SHALL BE DRIP IRRIGATED WITH DRIP TYPE 1 OR 2, PER IRRIGATION PLAN

PLANTING & IRRIGATION NOTES:

- NEW LANDSCAPING AROUND IMMEDIATE VICINITY OF HOUSE WILL BE COMPOSED OF WIDELY SPACED (10-FT CLEARANCE AT CROWN ELEVATION) TREES, IRRIGATED, WIDELY-SPACED ORNAMENTAL SHRUBS AND IRRIGATED GROUNDCOVERS. AREAS OF PAVEMENT, PATHS OR IRRIGATED LAWN OCCUR AROUND THE PERIMETER OF THE HOUSE PROVIDING A FIRE SAFE BUFFER, THE STREET ON THE SOUTHERN SIDE OF THE PROPERTY PROVIDE AN ADDITIONAL BUFFER.
- NEW LANDSCAPING IN INTERFACE AREAS TO THE EXISTING NATIVE VEGETATION ARE LOW PYROPHYTIC PLANTS, AND SPACED TO PROVIDE A FIRE SAFETY BUFFER, PER REGULATORY REQUIREMENTS, 0.07 MIN. VEGETATION MANAGEMENT ZONE)
- ALL PLANTING AREAS ARE WATERED BY AN AUTOMATIC IRRIGATION SYSTEM (BY OTHERS).
- SEPARATE IRRIGATION VALVES ARE PROVIDED FOR AREAS OF DIFFERENT WATER REQUIREMENTS (E.G. FULL SHADE, PARTIAL SHADE, FULL SUN, ETC.)
- CONVENTIONAL 6" & 1/2" POP-UP STREAM SPRAY HEADS ARE USED IN ALL LAWN AREAS AROUND THE IMMEDIATE VICINITY OF THE HOUSE (MODERATE WATER USE AREAS)
- DRIP IRRIGATION IS USED FOR ALL OTHER NEW PLANTS WITHIN THE PROPERTY LINE (LOW WATER USE AREAS)
- THE PROPERTY IS AND WILL BE MAINTAINED REGULARLY BY PROFESSIONAL GARDENERS.
- ALL TREE CROWN SPACING TO BE WITH ACCORDANCE OF ROSS VALLEY FIRE DEPARTMENT.
- A MINIMUM OF 8% OF NON-MECHANICALLY COMPACTED SOIL SHALL BE AVAILABLE FOR WATER ABSORPTION AND ROOT GROWTH IN PLANTED AREAS.
- INCORPORATE COMPOST OR NATURAL FERTILIZER INTO THE SOIL TO A MINIMUM
- DEPTH OF 8" AT A MINIMUM RATE OF 6 CUBIC YARDS PER 1000 SQUARE FEET OR PER SPECIFIC AMENDMENT RECOMMENDATIONS FROM A SOILS LABORATORY REPORT.
- A MINIMUM 5% LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL.
- SURFACES OF PLANTING AREAS EXCEPT IN TURF AREAS, GREENING OR ROOTING GROUND COVERS, AND DIRECT SEEDING APPLICATION.

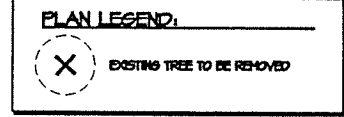
NOTE:

3 OAK TREES LOCATION TO BE COORDINATE ON THE SITE BASED ON EXISTING VEGETATION



PLANTING LEGEND

Quantity	Symbol	Botanical Name	Common Name	Size	Mature Size	WU Cols
Trees						
6	QUE ARG	Quercus Agrifolia	Coast Live Oak	4' Tall	25' - 62' Tall	VL
5	FALS OLV	Olea Europaea	Fruitless Olive Standards	6' Tall	25' Tall	L
Shrubs & Perennials						
660 SQ.FT.	ART CA	Artemisia Californica	California Sagebrush	1' Tall	1' - 6' Tall	L
550 SQ.FT.	CEA BLU	Ceanothus Thyrsiflorus	Blueblossom Ceanothus	1.5' Tall	1' - 10' Tall	L
50	CA POP	Eschscholzia Californica	California Poppy	0.5' Tall	1' Tall	VL
18	TRA JAS	Trachelospermum jasminoides	Star Jasmine	0.5' Tall	2' Tall	L
30	FL BRU	Fremontodendron Californicum	Flannel Bush	1' Tall	1' - 8' Tall	VL
7	CARP CAL	Carpenteria Californica	Bush Anemone	2' Tall	4'-7' Tall	L
Grass						
260 SQ.FT.	BROM	Bromus Carinatus	California Brome Grass	1' Tall	1' - 5' Tall	L
230 SQ.FT.	BLU EY	Sisyrinchium Bellum	Blue Eyed Grass	1' Tall	1' - 2' Tall	VL
12	PO MU	Polystichum Munium	Sword Fern	1' Tall	1' - 5' Tall	VL



Revisions	Date	By
REVISED DRIVEWAY / HALLOWAY LAYOUT	1/28/19	VL
REV. ALIGNMENT FOR THE ON-SITE PROF. DRAINAGE PAYS	10/14/19	VL
REV. PER COMMENTS DATED 9/27/2020	4/02/20	VL
REVISED HOSE LAYOUT	6/26/20	VL

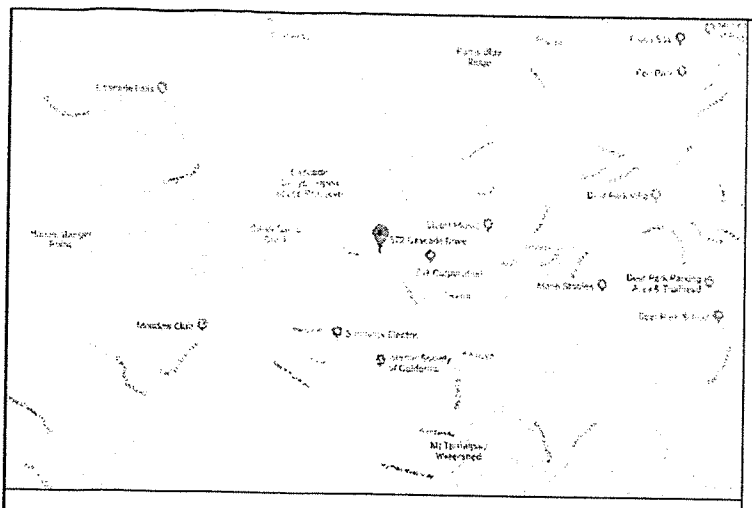
VEGETATION MANAGEMENT PLAN
PEDERSEN RESIDENCE
 512 CASCADE DRIVE, FAIRFAX, CA 94960 - APN: 009-022-20



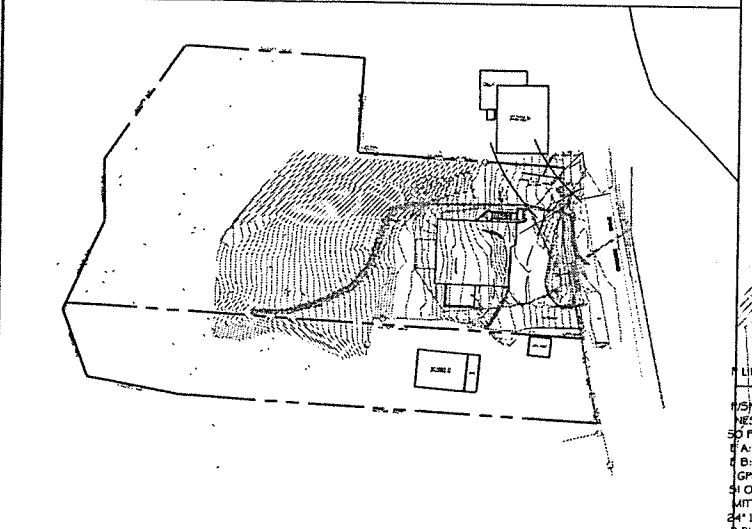
Plans Prepared By:
 VIA Atelier, Inc.
 Engineering Consultants
 4 Brockside Ct., San Anselmo, CA 94960
 PH: (415) 714-5718 E: office@via-atelier.com

PRELIMINARY / NOT FOR CONSTRUCTION
 JOB NO. 1711D
 DATE: 6/26/20
 DRAWN BY: VL
 REVISION BY: RL
 SHEET:
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 8 OF 9

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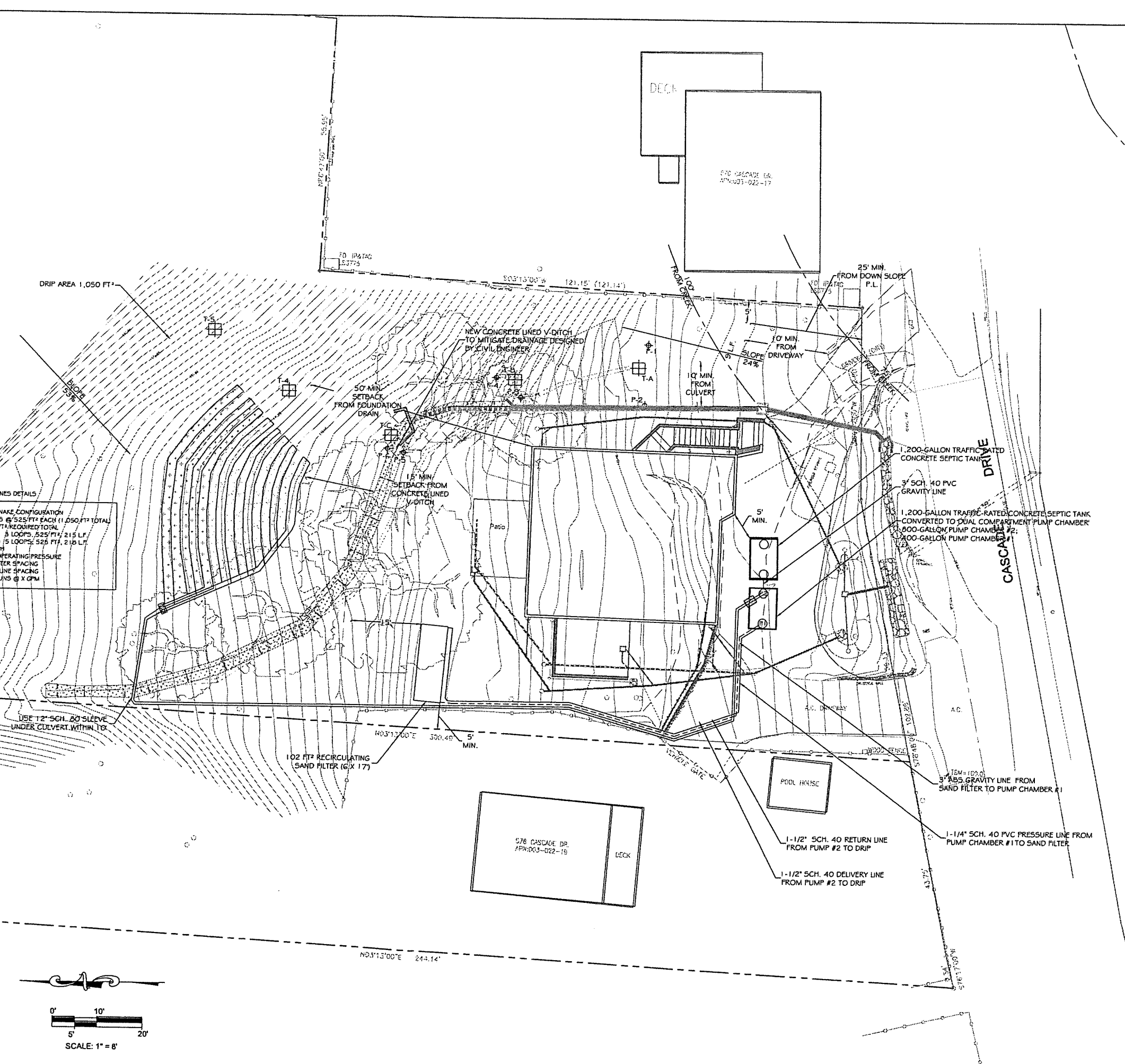


PROPERTY BOUNDARIES (1" = 50')



- LEGEND**
- | | | | | | |
|--|---------------------|--|-----------------|--|---------------|
| | Soil Profile Trench | | GW-1 | | Contour Line |
| | Percolation Test | | Clean Out | | Gravity Line |
| | Check Valve | | Monitoring Well | | Pressure Line |

- NOTES**
- Survey provided by owner. EED assumes no responsibility.
 - 420 GPD System
 - 1' Contours show

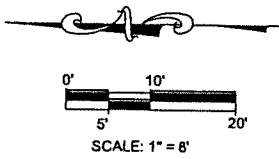


PIPES DETAILS

1/2" SNAKE CONFIGURATION
 N.E.S @ 525' FT EACH (1,050' FT TOTAL)
 50' FT REQUIRED TOTAL

1" A: 3 LOOPS, 525' FT, 215 LF
 1" B: 5 LOOPS, 525' FT, 215 LF

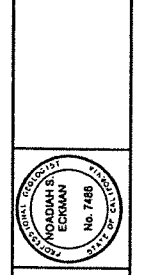
1 GPM
 5' OPERATING PRESSURE
 MITER SPACING
 24" LINE SPACING
 4" RUNS @ X GPM



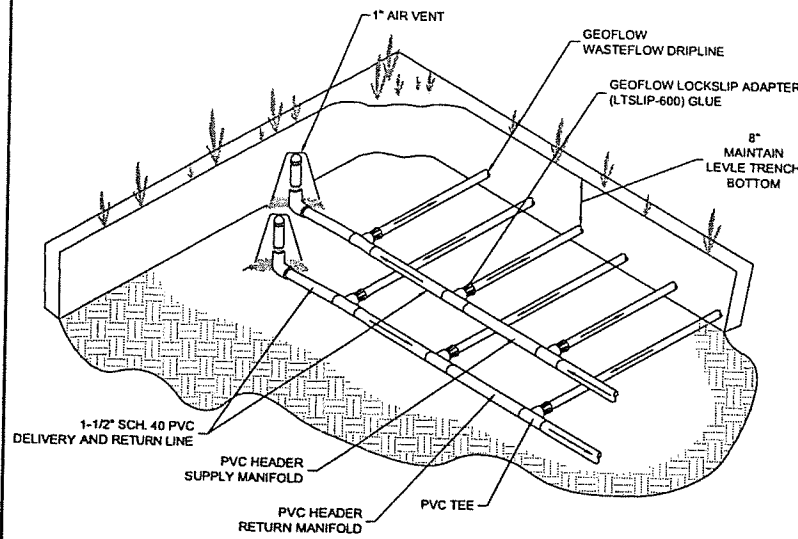
APN	003-022-20
DATE / REV.	07-16-2019 / A
SCALE/SIZE	1" = 10' / ARCHD
SHEET	1 OF 3

**CLASS 1 4-BEDROOM
 ON-SITE WASTEWATER SYSTEM
 SITE PLAN**

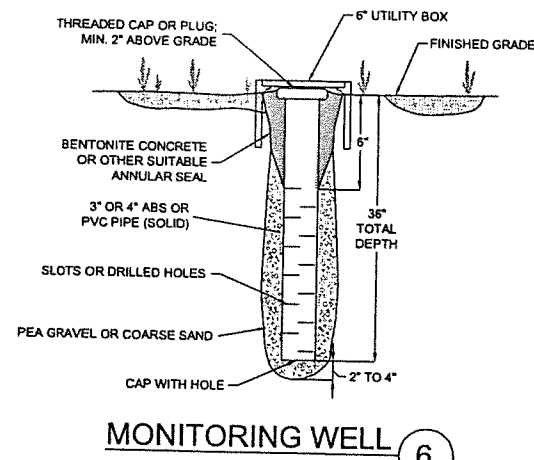
PEDERSEN RESIDENCE
 578 CASCADE DRIVE
 FAIRFAX, CALIFORNIA



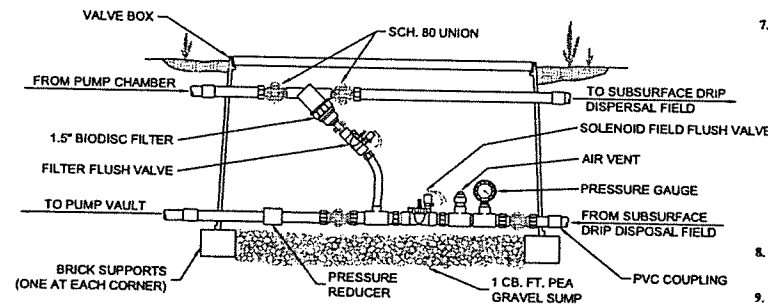
eckman environmental
 designs, inc
 10000 Sherman Highway
 d B. Suite 8100
 III Valley, CA 94841
 0.390.3982



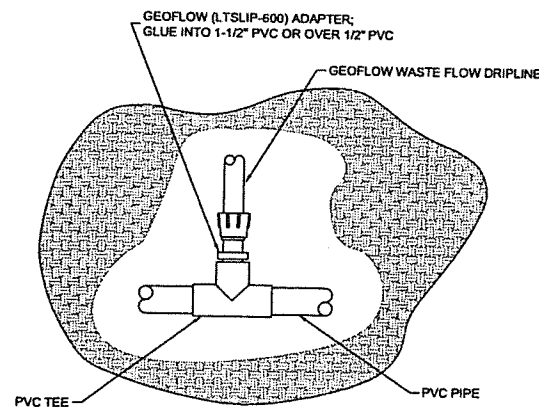
MANIFOLD CONNECTION (END FEED) 5



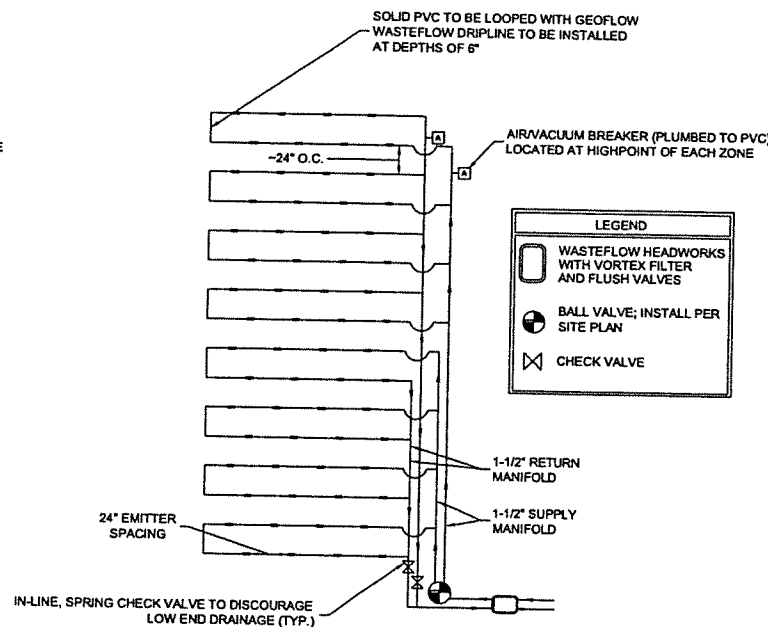
MONITORING WELL 6



SIMPLE WASTE FLOW HEADWORKS BOX MODEL # WHW-1.5-AUTO AND 30 PSI PRESSURE REGULATOR 7



MANIFOLD CONNECTION (PVC TO ADAPTER) 8



SLOPE LAYOUT FOR WASTEFLOW PRESSURE COMPENSATING DRIPLINE (LOOPED) 9

CONSTRUCTION SPECIFICATIONS

GENERAL

Changes to plans or specifications shall be made only after consultation with and approval of the Designer.

At all times during the work, keep the premises clean and orderly, and upon completion of the work, repair all damage caused by equipment. Stockpile excavated material in a manner that will cause the least damage to native vegetation and landscaping. Leave the project site free of rubbish or excess materials of any kind.

Construction inspection by the Designer shall be required at points outlined in the attached Construction Inspection Schedule. It shall be the responsibility of the contractor to call for the required inspections, and to provide at least 48-hours advance notification of the Designer and Marin County EHS Department.

All installation shall be in accordance with Marin County Environmental Health Building Codes.

Marin County Building Division Electrical Permit Required.

MATERIALS

Eckman Environmental Designs Inc. to approve construction material prior to placement.

- Access Risers. Shall be made of PVC, watertight, and shall be installed over the inlet and outlet openings of the septic tank and pump basins with fiberglass lids. The riser must be watertight at all points and have a watertight seal at the top of the tank. Manufactured by Oremco Systems Inc. 814 Airway Avenue, Sutherlin, OR, (800) 348-9843, or equal.
- Septic Tank. 1,200-gallon concrete tank. See installation instructions per Selvage Concrete.
- Pump Vaults. Chamber #1 is to be 800-gallon with pump capable of 20 gpm at 20 ft TDH to time dose pretreatment unit. Chamber #2 is to be 400-gallon. The pump for the dripfield is to be Sta-Rite model 20GPM or equal, capable of delivering 12 gpm at 90 ft TDH. Junction boxes #SB4 and #SB1 and high head assembly.
- Distribution Piping. All piping for the delivery and pressure distribution network shall be Schedule 40 PVC and have a minimum pressure rating of 150 psi unless otherwise specified. All joints shall be solvent-cement socket type conforming to ASTM D-2672.
- Control Panel. The treatment pumping system and drip irrigation system will be controlled by control panel which meets all specifications for Marin County Codes. The pumping system includes two effluent pump with time-dosing. The control panel will also operate the Geoflow® automatic Headworks box.
- Dripline. Dripline shall be Geoflow® Wasteflow™ PC with variable line spacing (between 18 and 24-inches). There shall be pressure-regulating emitters inserted every 12 inches inside the tube. These emitters shall have a nominal flow rate of 1/2 gallon per hour. The emitters shall be impregnated with Treflan to inhibit root intrusion for a minimum period of 10 years, a period guaranteed by the manufacturer. The dripline shall be identified as being used with non-potable water by means of two purple stripes permanently incorporated into the outside wall of the tube. Operating pressure is 10 to 40 psi. As manufactured by Geoflow, Inc., 1(800) 828-3388.
- Automatic Headworks Box. The preassembled headworks box shall be Geoflow® #WHW-1.5-AUT with an automatic flush configuration and shall include the following: bioidic filter, zone flush valve, filter flush valve, pressure gauge, air vent, and utility box. As manufactured by Geoflow, Inc.

Vortex Filter Flush Valve (Solenoid). Set the control panel so that the filter flush valve will automatically open for 15 seconds at the end of the pump cycle. When the vortex filter flush is complete the filter flush valve will close and the system drain function begins.

Field Flush Valve. Will open at the end of the dosing cycle. The pump will continue to run for 5 seconds (field adjustable) to accommodate the opening of this valve. After the pump is deactivated the field flush valve will remain open for five minutes (field adjustable) to allow for drainage of the return line. It is best to clock the length of time it takes to return flush line to drain and use this to set your drain time. The field flushing will be directed to the inlet side of the septic tank and is controlled by a solenoid valve located in the automatic headworks box. This setting shall be programmed by Contractor into the control panel.

- Supply Manifold. The supply manifold delivers treated effluent from the pump. The supply manifold shall be 1-1/2-inch Schedule 40 PVC. 2-inch Schedule 40 PVC for PuroFlow Modules.
- Return Manifold. The return manifold collects the water flushed from the emitter lines and returns it to the pump chamber #2. The return manifold shall be 1-1/2-inch Schedule 40 PVC.
- Dripline Fittings. All connections shall be made with barb or compression-type fitting connections. Fitting shall be as manufactured by Geoflow® to ensure the integrity of the subsurface disposal system.
- Geoflow Air/Vacuum Relief Valves. The air and vacuum relief valves shall be Model No. APVBK-1, or equivalent. The dispersal zone shall utilize a 1-inch MPT air/vacuum relief valve at its high point(s). The purpose of this valve is to evacuate air from the zones at startup and to relieve vacuum at system shut down to prevent back siphoning or back pressure.
- Recirculating Sand Filter. See sand spec detail #3.

GENERAL CONSTRUCTION

13. Installation. All installation work shall be in accordance with applicable Marin County

14. Septic Tank and Pump Chamber Leak Test. All tanks and vaults shall be required to be certified as watertight. Field testing of tanks shall be required and conducted as follows:

Designer to visually inspect tank prior to conducting leak test. Fill tank and pump chamber so water level is 2 inches ± above tank/access riser joints. Note depth of water and re-measure not less than 1 hour later. A water drop will be considered to be an indicator of a leaking tank; and tank shall be repaired or replaced to the satisfaction of the designer.

15. Location of Drip Disposal Area. Location shown for the drip disposal area is approximate, subject to adjustment in the field by the Contractor according to building constraints and noted setback requirements.

16. Pump Chamber Locations. Location for the pump chamber is approximate, subject to adjustment in the field by the contractor according to building constraints and any noted setback requirements.

17. Pump Controls. Pumps controlled on a timed basis. Timer setting and final setting of float switches shall be determined in the field, based on actual pump chamber dimensions.

18. Electrical.

- High water audio and visual alarm IS required within the house.
- All electrical work shall conform to procedures and codes of Marin County Building Department.

Effluent Pump: The pump shall be of the size and type to accommodate the intended use and shall include the following:

- A "Hand-off-auto" (HOA) switch.
- An audio and visible alarm and necessary sump water sensing device to indicate a "high water" condition.
- Float switches shall be anchored to a suitable float tree for controlling the starting and stopping of pump operation.

Sump:

- Access shall be provided by a minimum 24-inch diameter opening;
- All pipes and/or electrical conduits through the sump shall be either precast into the sump or sealed with gas-tight compression connectors.

Electrical Features: The following electrical features shall be provided:

- An outdoor-type control box containing fused disconnect and motor protection switch.
- The control box may be mounted on the building served if located within 30 feet and within direct view of the sump, otherwise the control box shall be mounted on a pipe stand or wooden post.
- Electrical conduit shall be PVC. Separate conduits shall be provided for control wire and power supply. Separate circuits with individual breakers at the main panel shall be provided for the control panel/ alarm and pump.

19. Pressure Pipe Network.

- All pressure pipe shall be Schedule 40 PVC or approved equal.
- All joints shall be glued with solvent cement.
- Hydraulic testing shall be conducted in the presence of the Designer to determine any leaks in the system and pump operation.
- A concrete thrust block shall be installed at all pipe bends of 45° or greater in all pressure lines.

GEOFLOW INSTALLATION

All Geoflow drip systems require: 100 micron / 150 mesh filter, Filter flush valve, Field flush valve and Air vent in each zone. All Wasteflow PD drip systems require pressure regulation. Handle your dripline and components with care. ROOTGUARD® is temperature sensitive. To assure a long life store the drip line out of direct sunlight in a cool place. Install the system headfirst: pumps, control panel, and automatic headworks box.

- All dripline construction shall be done in accordance with Local rules and regulations.
- No utilities, cable wire, drain tile, etc shall be located in dripline.
- Fence off entire dripline prior to any construction.
- System is not to be installed when ground is wet.
- Be sure you have everything required for the installation before opening trenches. Pre-assemble as many sets of components as practical above ground and in a comfortable place. Compression or Lockslip adapters should be glued to PVC tees, riser units should be pre-assembled, the submain manifold with tees can be pre-assembled and used to mark the beginning and end of WASTEFLOW lines.
- For particularly tough soil conditions moisten the soil the day before opening trenches or installing WASTEFLOW. Remember it is much easier to install the system in moist soil. The soil should be moist but still should allow the proper operation of the installation equipment and not cause smearing in the trenches. The soil surface should be dry so that the installation equipment maintains traction.
- Mark the four corners of the field. The top two corners should be at the same elevation and the bottom two corners should be at a lower elevation. In freezing conditions the bottom dripline must be higher than the supply and return line elevation at the dosing tank.
- Install the PVC supply line from the dosing tank, up hill through one lower and one upper corner stake of the dispersal field. 18-inch depth of burial.
- Paint a line between the two remaining corner stakes.
- Install the Geoflow WASTEFLOW dripline from the supply line trends to the painted line, approximately 8" deep as specified. Upon reaching the painted line, pull the plow out of the ground and cut the dripline 1' above the ground. Tape the end of the dripline to prevent debris from entering. Continue this process until the required footage of pipe is installed. Geoflow dripline must be spaced according to specification. Depth of burial of dripline must be consistent throughout the field. Take care not to get dirt into the lines.
- Install the supply header with tees lined up at each Geoflow line. Hook up the Geoflow lines to the supply header. Do not glue WASTEFLOW dripline.
- Installing Lockslip fittings:
 - Hold the fitting in one hand and position the tubing with the other hand.
 - Move the sleeve back, and push the tubing onto the exposed stem as far as possible.
 - Push the sleeve out over the tubing and thread the sleeve onto tubing, as though tightening a nut to a bolt. Hand tighten. Do not use tools.
- Install the pre-assembled Headworks between the field and the pump tank on the supply line.
- If using a pressure regulator, install it downstream of the filter or Headworks, just ahead of the dispersal field, on the supply line. The pressure regulator can be installed inside a small valve box for easy access.
- Install the floats in the dosing tank and wire up to the timer control. The timer control should be set to pump no more than the design flow, do not set to match the treatment capacity.
- Fill the dosing tank with fresh water and turn on the pump. Check for flow out the ends of all of the Geoflow lines. Let the pump run for about five minutes to flush out any dirt. Shut off the pump and tape the ends of the lines.
- Dig the return header ditch along the line painted on the ground and back to the pre-treatment tank. Start the return header at the farthest end from the dosing tank. The return line must have slope back to the treatment tank or septic tank.
- Install the return header and connect all of the Geoflow lines. Care must be taken not to kink the dripline.
- Install air vacuum breakers at the highest points in the dispersal field. Use pipe dope or Teflon tape and hand tighten.
- If Headworks was installed on the supply line, connect the return line back through the Headworks box. Open the field flush valve and turn on the pump to flush lines then close the valve and check the field and all piping and connections for leaks. Turn off the system.
- Turn on the pump and check the pressure at the air vacuum breaker(s). It should be between 15 to 60 PSI. Check the pressure in the WASTEFLOW Headworks if used. It should be five psi or higher. If using a manual valve for field flushing, crack it open until at least one PSI is lost or design pressure is reached and leave in that position.
- Check the filter for construction debris and clean.

CONSTRUCTION INSPECTION SCHEDULE

In accordance with requirements of Marin County EHS, the following construction activities shall be inspected by Designer and EHS Staff.

INSPECTION #1

- Onsite pre-construction conference to discuss project with Contractor.
- Staking of septic tank and pump chamber.
- Staking of and installation review for sand material.
- Staking and layout of subsurface drip dispersal system.

INSPECTION #2

- Septic Tank and pump chamber leak test.
- Check water tight sand filter liner
- Placement of ABS, delivery & return drip lines to drip, delivery lines and gravity to and from sand filter.

INSPECTION #3

- Assembly and layout of Geoflow drip pipe network, check level layout.
- Testing of pumps and distribution systems.
- Complete sand filter installation. Set timer and determine dose rates.

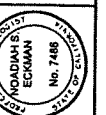
INSPECTION #4

- Complete Geoflow installation. Set timer and determine dose rates and other settings.
- Final backfill of distribution area and sand filter.
- Final grading for drainage and erosion control.
- General site clean up.

APN	003-022-20
DATE / REV.	07-16-2019 / A
SCALE/SIZE	NONE / ARCHD
SHEET	3 OF 3

ON-SITE WASTEWATER SYSTEM PLAN
CONSTRUCTION DETAILS

PEDERSEN RESIDENCE
572 CASCADE DRIVE
FAIRFAX, CALIFORNIA



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