Exhibit A

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EXHIBIT A
DRAFT RESOLUTION

Before the Planning Commission
in and for the County of Monterey, State of California

In the matter of the application of:
CORNEJO CARLOS V & LOPEZ SINDY HERNANDEZ (PLN210142)

RESOLUTION NO. ----

Resolution by the Monterey County Planning Commission:

1) Finding the project qualifies for Class 3 Categorical Exemption pursuant to section 15303 of the CEQA Guidelines, and there are no exceptions pursuant to Section 15300.2; and
2) Approving a Combined Development Permit consisting of:
    a) An Administrative Permit and Design Approval for the construction of a 2,490 square foot one-story single-family dwelling with a 900 square foot detached garage, and a 752 square foot detached accessory dwelling unit. Associated site improvements including grading consisting of approximately 950 cubic yards of cut and 950 cubic yards of fill;
    b) A Use Permit to allow the removal of 6 Coast live oak trees;
    c) A Use Permit to allow development on slopes greater than 25%; and
    d) An after the fact Use Permit for the removal of a total of 15 Coast live oak trees.

[PLN210142, Cornejo Carlos V & Lopez Sindy Hernandez, 1909 San Juan Road, Aromas, North County Area Plan (Assessor's Parcel Number: 267-041-023-000)]

The CORNEJO application (PLN210142) came on for public hearing before the Monterey County Planning Commission on March 26, 2025. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, the Monterey County Planning Commission finds and decides as follows:

FINDINGS

1. FINDING: **CONSISTENCY** – The Project, as conditioned, is consistent with the applicable plans and policies which designate this area as appropriate for development.

EVIDENCE: a) During the course of review of this application, the project has been reviewed for consistency with the text, policies, and regulations in:

- The 2010 Monterey County General Plan;
- North County Area Plan; and
- Monterey County Zoning Ordinance (Title 21).

No conflicts were found to exist. No communications were received during the course of review of the project indicating any inconsistencies with the text, policies, and regulations in these documents.

b) Project. The proposed project includes construction of a2,490 square foot one-story single-family dwelling with a 900 square foot detached garage, and a 752 square foot detached accessory dwelling unit. Site improvements include grading consisting of approximately 950 cubic yards of cut and 950 cubic yards of fill. The proposed development will require removal of six Coast live oak trees. These trees are proposed for removal due to their proximity to the construction site. A new onsite wastewater treatment system will be provided to serve the property and installed, operated and maintained in accordance with the manufacturer's recommendation. The property would be served by Danborm/Mayr Water System for domestic water service.

c) Allowed Use. The project is located on an undeveloped parcel at 1909 San Juan Road, Aromas, North County Area Plan, (Assessor's Parcel Number: 267-041-023-000). The parcel is zoned Low Density Residential with a maximum gross density of 2.5 acres per unit with a Visual Sensitivity zoning overlay or "LDR/2.5-VS" which allows the development of single family dwellings and accessory structures as a principally allowed use within the LDR zoning district pursuant to Monterey County Zoning Ordinance (Title 21) Section 21.14 (Low Density Residential). However, Title 21 Section 21.46 (Visual Sensitivity) requires the approval of a Use Permit or Administrative Permit from the Appropriate Authority. The proposed project involves the request for a new single-family dwelling, detached garage, an accessory dwelling unit and associated site improvements including grading of approximately 950 cu. yds. of cut/ 950 cu. yds. of fill. Therefore, the project is an allowed land use for this site, subject to the granting of a discretionary permit.

d) Lot Legality. The subject parcel subject parcel is identified as Parcel "D" of Volume 22 of Parcel Maps, Page 42. Therefore, the County recognizes the property as a legal lot of record.

e) Development Standards. Development standards for the Low Density Residential zoning district can be found in Title 21 Section 21.14.060. The proposed development is consistent with applicable development standards. All structures meet the required setbacks from the property lines and between structures. Pursuant to section 21.14.060.D, there must be 20 feet between main structures, 10 feet between any main structure and accessory structure, and there must be a minimum of 6 feet between all accessory structures. The proposed main structure is over 90 feet away from the accessory structure. Pursuant to section

21.14.060.C.1, the minimum front setback for main structures in LDR zoning districts is 30 feet, the proposed front setback is over 30 feet. The minimum side setback for main structures is 10 percent of the average lot width to a maximum required 20 feet, the proposed side setback for the main structure is over 20 feet. The minimum rear setback for main structures is 20 feet, the proposed rear setback is over 100 feet. The maximum allowed height for main structures in the LDR district shall be 30 feet, the proposed height of the main structure is 14 feet 6 inches. Required setbacks in the LDR district for accessory structures shall not be less than 50 feet from the front of the property, 6 feet from side and rear property lines. The maximum allowed height for accessory structures in the LDR district shall be 16 feet above average natural grade. As proposed, the height of the accessory dwelling structure is 15 feet 0 inches from the average natural grade. The County has applied a condition of approval (Condition No. 7, Height Verification) to ensure the constructed height of the accessory dwelling does not exceed the maximum allowed height. The project size, height, and setbacks are all within the allowed limits of the development standards of the LDR zoning district. The maximum allowed building site coverage for lots over 20,000 square feet which are zoned LDR is 25% (27,225 square feet); the proposed site coverage is 0.152% (4,142 square feet). Therefore, as proposed, the project meets all required development standards of Title 21 section 21.14.060.

f) Design/Neighborhood and Community Character. The proposed exterior colors and materials are consistent with the area's setting and surrounding residences. The development is designed to reflect a modern style architecture that enhances the eclectic mix of residential design styles in the area. Exterior colors and materials of the single-story family dwelling and detached accessory dwelling unit consist of smooth white stucco for walls, black metal roofing, black aluminum framed windows and clear cedar wood siding overhangs as accent. The proposed exterior colors and materials are consistent with the area's setting and surrounding residences. An exterior lighting plan has been made a condition of approval to ensure compliance with Monterey County Code (Condition No. 8).

g) Visual Sensitivity. Pursuant to Title 21 Chapter 21.46, Visual Sensitivity or "VS" zoning district overlay, a Use Permit or Administrative Permit for all development in the "VS" District is required. A Use Permit shall be required for any development in a "VS" District if any portion of that development, after flagging, staking and an on-site inspection is determined to have the potential to create a substantial adverse visual impact when viewed from a common public viewing area. An Administrative Permit shall be required for all other development. In this case, a site visit was conducted on April 2, 2024, to view the staking and flagging from the public road. When viewed from San Juan Road, the proposed project is approximately 1,200 feet from the nearest viewing point. Due to natural topography and existing vegetation, the view is restricted from San Juan Road. The proposed development is screened from the roadway by existing mature vegetation. The project is not ridgeline development and does not block

significant public views, would not result in adverse visual impacts, and the project is consistent with the visual integrity of the area. In accordance with the visual resource policies of the North County Area Plan and applicable regulations, the project has been conditioned to require submittal of final landscape and exterior lighting plans.

h) Cultural Resources. The project site is in an area identified in County records as having a low archaeological sensitivity; therefore, a Preliminary Archaeological Report was not required. The County's standard project condition (Condition No. 3) which requires the contractor to stop work if previously unidentified resources are discovered during construction was added as condition of approval for the proposed project.

i) Tree Removal. The project proposes to remove a total of six trees (6 protected oak trees). Pursuant to Title 21 section 21.64.260.D.3, this entitlement includes a Use Permit. See Finding No. 4 and supporting evidence.

j) Development on Slopes. The proposed project includes approximately 950 cubic yards of cut and 950 cubic yards of fill. Approximately 323 cubic yards of the grading will occur on slopes in excess of 25%. Pursuant to General Plan Policy OS-3.5, development on slopes in excess of 25% may be allowed pursuant to a Use Permit. Title 21 Chapter 21.64.230 requires a Use Permit for all development on slopes of 30% or more. In accordance with Title 21 Section 21.02.060 – Consistency with Adopted Plans, the General Plan prevails. Therefore, and in this case, the grading is subject to the granting of a Use Permit. The project meets the required finding to allow development on slopes in excess of 25% as demonstrated in Finding No. 3 and supporting evidence.

k) Land Use Advisory Committee (LUAC) Review. The project was referred to the North County Land Use Advisory Committee, at which the LUAC on March 5, 2025, voted 7-0 (7 ayes, 0 nays) and with two members absent to recommend approval of the project as proposed.

l) The project planner conducted a site inspection on April 2, 2024 to verify that the project on the subject parcel conforms to the plans listed above.

m) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN210142.

2. FINDING: **SITE SUITABILITY –** The site is physically suitable for the proposed development and/or use.

EVIDENCE: a) The project has been reviewed for site suitability by the following departments and agencies: Housing and Community Development (HCD), Environmental Health Bureau, and the North County Fire Protection District (FPD). County staff reviewed the application materials and plans to verify that the project on the subject site conforms to the applicable plans and regulations, and there has been no indication from these departments/agencies that the site is not suitable for the development. Conditions recommended have been incorporated.

b) Staff had identified potential impacts to trees and soils/slope stability. The following reports were reported to address these issues:
   - "Tree Assessment and Fuel Management Plan" Arborist Report (LIB220104) prepared by Albert Weisfuss, Carmel, CA, December 10, 2024.
   - "Geotechnical Investigation" (LIB220084) prepared by Taluban Soil Surveys Group Inc., Salinas, CA, April 2, 2021.

   County staff independently reviewed this report and concurs with their conclusions. There are no physical or environmental constraints that would indicate that the site is not suitable for the use. All development shall be in accordance with this report.

c) Staff conducted a site inspection on April 2, 2024, to verify that the site is suitable for this use.

d) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN210142.

3. FINDING: **DEVELOPMENT ON SLOPES OF 25% AND GREATER–** The proposed development better achieves the goals, policies and objectives of the Monterey County General Plan and North Master Plan than other development alternatives.

EVIDENCE:

a) Pursuant to MCC Section 21.64.230, development on slopes exceeding 25 percent is allowed if there are no feasible alternatives that would allow development to occur on slopes less than 25 percent.

b) The undeveloped site has sporadic 25% or greater slope areas on the north-western side of the parcel. The property also has a dedicated septic envelope area that is entirely on slopes in excess of 25%. To install the leach field and associated lateral trenching, approximately 150 cubic yards of excavation on slopes in excess of 25% is required. Installation of a septic system in this septic envelope was contemplated through approval of the subject subdivision, however a Use Permit is required to allow the proposed development on slopes (General Plan Policy OS-3.5). Additionally, to create a level building pad, the proposed residence's grading extends into the steeper slopes of the property. No structural development will be located on slopes in excess of 25%. In total, the project will impact approximately 4,805 square feet of slopes in excess of 25%. This square footage includes the trenching required to install the septic system. Given the sloped nature and site topography of the parcel and the existing vegetation, there is no alternative building site on the subject property that better meets the goals, policies and objectives of the Monterey County General Plan.

c) The County has reviewed the project plans and visited the site to analyze possible development alternatives. Relocating the structures to avoid slopes would result in additional tree removal. As such, the proposed project adheres to required development standards and better meets the goals and objectives of the 2010 General Plan.

d) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN210142.

4. FINDING: **TREE REMOVAL**- The removal of 6 trees is the minimum required under the circumstances and this removal will not involve a risk of adverse environmental impacts. The 15 trees removed without a benefit of a permit will be replaced by planting 15 coast live oak trees to address the violation and restore trees previously removed at the site.

EVIDENCE: a) Six Coast live oaks are proposed for removal for the proposed project. Additionally, 15 Coast live oaks trees were previously removed without a permit and this permit rectifies that prior removal. Oaks are considered protected trees, as specified in Title 21 section 21.64.260. A Tree Assessment/Forest Management Plan report dated December 10, 2024, (LIB220104) was submitted by Albert Weisfuss, Certified Arborist. Per the arborist report, of the fifteen (15) Coast live oak trees that were previously removed without a permit, none were landmark and their condition at the time of removal could not be determined. This permit requires the replanting of trees to restore the oaks previously removed without a permit (See Finding 6).

The project proposes the removal of an additional six (6) trees from the site as they are located within the area of development:

- One (1) Coast live oak, 9-inches diameter – Tree #475
- One (1) Coast live oak, 9-inches diameter – Tree #478
- One (1) Coast live oak, 11 inches diameter – Tree #483
- One (1) Coast live oak, 12 inches diameter – Tree #484
- One (1) Coast live oak, 14 inches diameter – Tree #485
- One (1) Coast live oak, 7 inches diameter – Tree #486

b) Four trees of the proposed six trees will be impacted by construction of the proposed driveway and two trees will be impacted by grading for the building pads. Driveway improvements are necessary to meet local fire standards, including a hammerhead turnaround. Alternative building locations would potentially result in additional tree removal.

c) The previously removed 15 trees were located throughout the property and it is unclear why these trees were removed. 12 of the 15 previously removed trees would have been within the proposed grading limits of the project.

d) The applicant submitted a Tree Assessment/Forest Management Plan report, (LIB220104) which provided tree assessments detailing the overall general health, vigor, and condition of protected trees and habitat. Protected trees were assessed within 15 feet of the proposed development. The condition of the assessed trees was determined to be in fair condition.

e) No landmark Oaks are proposed for removal.

f) Minimum Required: In this case, the proposed tree removal is the minimum required under the circumstances. The existing condition of the subject parcel is on a hillside that includes sporadic slopes in excess of 25%. As proposed, the siting of the single-family dwelling and the detached accessory dwelling unit is

in an area that minimizes land disturbance and tree removal. Relocating the proposed structures would involve more development for access resulting in more tree removal and further impact to slopes.

g) Tree Protection/Replacement: Trees not being removed shall be protected for the duration of all construction activities. The County's Notice of Report has been applied to the project as Condition No. 4, requiring the applicant to retain and protect trees not proposed for removal during construction. The condition shall also require that the applicant follow the best management practice recommendations of the arborist from the Tree Resources Assessment prepared for the project. Additionally, the County's tree replacement condition has been applied to the project as Condition No. 6, indicating a replacement ratio of one new tree to be planted for every tree removed. The recommended replanting on-site is a total of 21 five-gallon Coast live oaks.

h) Condition No. 13 has been applied to require that a raptor and bird nesting survey be completed prior to construction. The removal of six Coast live oak trees, as well as the after-the-fact removal of 15 Coast live oak trees, will not involve the risk of adverse environmental effects. Removal of these trees will not introduce conditions that promote soil erosion, will not impact ecological and biological systems, will not increase ambient noise levels, and will not reduce available habitat for wildlife.

i) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN210142.

5. FINDING: **HEALTH AND SAFETY -** The establishment, maintenance, or operation of the project applied for will not under the circumstances of this particular case be detrimental to the health, safety, peace, morals, comfort, and general welfare of persons residing or working in the neighborhood of such proposed use or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.

EVIDENCE: a) The project was reviewed by the HCD - Planning, HCD-Engineering Services, Environmental Health Bureau, HCD-Environmental Services and Aromas Tri- County Fire Protection District (FPD). The respective agencies have recommended conditions, where appropriate, to ensure that the project will not have an adverse effect on the health, safety, and welfare of persons either residing or working in the neighborhood.

b) Necessary utilities will be provided. Water service will be provided by Danborm/Mayr Water System #1/San Juan Road Water System #20 Can and Will Serve letter received, verifying that the water system can and will serve this property. Testing of the water produced at the well demonstrated that all primary drinking water standards have been met. The project includes installation of an on-site wastewater treatment system. The Environmental Health Bureau reviewed the application and found it acceptable with no conditions.

c) Staff conducted a site inspection on April 2, 2024 to verify that the site is suitable for this use.
d) The application, project plans, and related support materials submitted by the project applicant to the Monterey County HCD- Planning for the proposed development found in Project File PLN210142.

6. FINDING: **NO VIOLATIONS** – Evidence submitted with the application suggest that 15 Coast Live Oak trees were removed from the property without the benefit of a permit in violation of County Code. This permit includes replanting of 15 trees to address the violation. Restoration of trees removed will bring the property into compliance with all rules and regulations pertaining to provisions of the County's zoning ordinance and no violations would remain.

EVIDENCE: a) According to the Forest Management Plan submitted for the project, 15 Coast Live Oak trees were removed from the property sometime between 2018 and 2024. During this timeframe, a permit would have been required for the removal of more than 3 Coast Live Oaks pursuant to Section 21.64.230 of the County Code and the County of Monterey has no record of a permit for the removal of trees at this site. Therefore, the evidence suggest that trees were removed in violation of County Code.
b) Pursuant to Section 21.84.120 of the County Code, no permits shall be issued on a property where a violation exists except for permits necessary to abate the violation. In this case, this permit includes the replanting 15 five-gallon Coast Live Oak trees to address the violation as part of the consideration of granting a permit for the construction of a single family dwelling, assessor dwelling unit, and accessory structures (Condition No. 6)
c) Staff conducted a site inspection on April 2, 2024, and researched County records to assess if any violation exists on the subject property. There are no pending notices of violation on the property. Evidence of the tree removal in violation of the County Code was discovered during a review of the Forest Management Plan submitted with the application.
d) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN210142.

7. FINDING: **CEQA (Exempt): -** The project is categorically exempt from environmental review and no unusual circumstances were identified to exist for the proposed project.

EVIDENCE: a) The project is categorically exempt from environmental review pursuant to CEQA Guidelines section 15303, New Construction. The proposed project is the construction of a single-family residence in a residential zone.
b) None of the exceptions under CEQA Guidelines Section 15300.2 apply to this project. Project location is not considered a particularly sensitive environment. There is no significant effect on the environment due to unusual circumstances. Tree removal is the primary environmental concern, but the removal will not cause adverse environmental impacts in this case (See Finding 4 and supporting evidence). The site is not

included on any list compiled pursuant to Section 65962.5 of the Government Code to be considered on a hazardous waste site. No known historical resources are found in the geotechnical or archaeological reports which may cause a substantial adverse change in the significance of a historical resource.

d) Staff conducted a site inspection on April 2, 2024 to verify that the site is suitable for this use.

e) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning for the proposed development found in Project File PLN210142.

8. FINDING: **APPEALABILITY –** The decision on this project may be appealed to the Board of Supervisors.

EVIDENCE: Section 21.80.040 of the Monterey County Zoning Ordinance states that the proposed project is appealable to the Board of Supervisors.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Monterey County Planning Commission does hereby:

1. Find the project qualifies for Class 3 Categorical Exemption pursuant to section 15303 of the CEQA Guidelines, and there are no exceptions pursuant to Section 15300.2; and
2. Approve a Combined Development Permit consisting of:
    a. Administrative Permit and Design Approval for the construction of a 2,490 square foot one-story single-family dwelling with a 900 square foot detached garage, and a 752 square foot detached accessory dwelling unit. Associated site improvements include grading consisting of approximately 950 cubic yards of cut and 950 cubic yards of fill;
    b. A Use Permit to allow the removal of 6 Coast live oak trees;
    c. A Use Permit to all development on slopes greater than 25%; and
    d. An after the fact Use Permit for the removal of a total of 15 Coast live oak trees.

All of which are in general conformance with the project plans and subject to the conditions**,** all being attached hereto and incorporated herein by reference.

PASSED AND ADOPTED this 26th day of March 2025.

Melanie Beretti, AICP, Chief of Planning
Planning Commission Secretary

COPY OF THIS DECISION MAILED TO APPLICANT ON DATE

THIS APPLICATION IS APPEALABLE TO THE BOARD OF SUPERVISORS.

IF ANYONE WISHES TO APPEAL THIS DECISION, AN APPEAL FORM MUST BE COMPLETED AND SUBMITTED TO THE CLERK TO THE BOARD ALONG WITH THE APPROPRIATE FILING FEE ON OR BEFORE _____.

This decision, if this is the final administrative decision, is subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6. Any Petition for Writ of Mandate must be filed with the Court no later than the 90th day following the date on which this decision becomes final.

NOTES

1. You will need a building permit and must comply with the Monterey County Building Ordinance in every respect.

   Additionally, the Zoning Ordinance provides that no building permit shall be issued, nor any use conducted, otherwise than in accordance with the conditions and terms of the permit granted or until ten days after the mailing of notice of the granting of the permit by the appropriate authority, or after granting of the permit by the Board of Supervisors in the event of appeal.

   Do not start any construction or occupy any building until you have obtained the necessary permits and use clearances from Monterey County HCD-Planning and HCD-Building Services Department office in Salinas.

2. This permit expires 3 years after the above date of granting thereof unless construction or use is started within this period.

Form Rev. 1-27-2021

County of Monterey HCD Planning

DRAFT Conditions of Approval/Implementation Plan/Mitigation Monitoring and Reporting Plan

PLN210142

1. PD001 - SPECIFIC USES ONLY

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: This Combined Development Permit (PLN210142) allows construction of a single-family dwelling (Approximately 2,490 sq. ft.), a detached garage (Approximately 900 sq. ft.), a detached accessory dwelling unit (Approximately 752 sq. ft.), associated site improvements including the removal 15 Coast live oak trees previously removed unpermitted and an additional 6 Coast live oak trees to be removed and development on slopes in excess of 25%. Grading of approximately 950 cu. yds. of cut/ 950 cu. yds. of fill. The property is located at 1909 San Juan Road, Aromas, (Assessor's Parcel Number 267-041-023-000), North County Area Plan. This permit was approved in accordance with County ordinances and land use regulations subject to the terms and conditions described in the project file. Neither the uses nor the construction allowed by this permit shall commence unless and until all of the conditions of this permit are met to the satisfaction of the Director of HCD - Planning. Any use or construction not in substantial conformance with the terms and conditions of this permit is a violation of County regulations and may result in modification or revocation of this permit and subsequent legal action. No use or construction other than that specified by this permit is allowed unless additional permits are approved by the appropriate authorities. To the extent that the County has delegated any condition compliance or mitigation monitoring to the Monterey County Water Resources Agency, the Water Resources Agency shall provide all information requested by the County and the County shall bear ultimate responsibility to ensure that conditions and mitigation measures are properly fulfilled. (HCD - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to conditions and uses specified in the permit on an ongoing basis unless otherwise stated.

2. PD002 - NOTICE PERMIT APPROVAL

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a Permit Approval Notice. This notice shall state:
"A Combined Development Permit (Resolution Number _____) was approved by Planning Commission for Assessor's Parcel Number 267-041-023-000 on March 26, 2025. The permit was granted subject to 13 conditions of approval which run with the land. A copy of the permit is on file with Monterey County HCD - Planning."

Proof of recordation of this notice shall be furnished to the Director of HCD - Planning prior to issuance of grading and building permits, Certificates of Compliance, or commencement of use, whichever occurs first and as applicable. (HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading and building permits, certificates of compliance, or commencement of use, whichever occurs first and as applicable, the Owner/Applicant shall provide proof of recordation of this notice to the RMA - Planning.

3. PD003(A) - CULTURAL RESOURCES NEGATIVE ARCHAEOLOGICAL REPORT

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: If, during the course of construction, cultural, archaeological, historical or paleontological resources are uncovered at the site (surface or subsurface resources) work shall be halted immediately within 50 meters (165 feet) of the find until a qualified professional archaeologist can evaluate it. Monterey County HCD - Planning and a qualified archaeologist (i.e., an archaeologist registered with the Register of Professional Archaeologists) shall be immediately contacted by the responsible individual present on-site. When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for recovery.
(HCD - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to this condition on an on-going basis.

Prior to the issuance of grading or building permits and/or prior to the recordation of the final/parcel map, whichever occurs first, the Owner/Applicant shall include requirements of this condition as a note on all grading and building plans. The note shall state "Stop work within 50 meters (165 feet) of uncovered resource and contact Monterey County HCD - Planning and a qualified archaeologist immediately if cultural, archaeological, historical or paleontological resources are uncovered."

When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for the discovery.

4. PD049 - TREE AND ROOT PROTECTION

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: Prior to beginning any tree removal, trees which are located close to trees approved for removal shall be protected from inadvertent damage from equipment or tree removal activity by fencing off the canopy drip-lines and/or critical root zones (whichever is greater) with protective materials. Any tree protection measures recommended by a County-approved tree consultant, in addition to the standard condition, shall be implemented. (HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to construction or tree removal, the Owner/Applicant/Tree Removal Contractor submit evidence of tree protection to HCD -Planning for review and approval.

After construction or tree removal, the Owner/Applicant/Tree Removal Contractor shall submit photos of the trees on the property to HCD -Planning to document that the tree protection has been successful or if follow-up remediation measures or additional permits are required.

5. PD011(A) - TREE REMOVAL

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: Tree removal shall not occur until a construction permit has been issued in conformance with the appropriate stage or phase of development in this permit. Only those trees approved for removal shall be removed. (HCD-Planning)

Compliance or Monitoring Action to be Performed: Prior to tree removal, the Owner/ Applicant/ Tree Removal Contractor shall demonstrate that a construction permit has been issued prior to commencement of tree removal.

6. PD048 - TREE REPLACEMENT/RELOCATION

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: The applicant shall replace and or relocate each tree approved for removal as follows:
- Replacement ratio recommended by arborist: 1:1
HCD planning

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall submit evidence of tree replacement to HCD -Planning for review and approval. Evidence shall be a receipt for the purchase of the replacement tree(s) and photos of the replacement tree(s) being planted.

Six months after the planting of the replacement tree(s), the Owner/Applicant shall submit evidence demonstrating that the replacement tree(s) are in a healthy, growing condition.

One year after the planting of the replacement tree(s), the Owner/Applicant shall submit a letter prepared by a County-approved tree consultant reporting on the health of the replacement tree(s) and whether or not the tree replacement was successful or if follow-up remediation measures or additional permits are required.

7. PD041 - HEIGHT VERIFICATION

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: The applicant shall have a benchmark placed upon the property and identify the benchmark on the building plans. The benchmark shall remain visible on-site until final building inspection. The applicant shall provide evidence from a licensed civil engineer or surveyor to the Director of HCD - Building Services for review and approval, that the height of the structure(s) from the benchmark is consistent with what was approved on the building permit associated with this project. (HCD - Planning and HCD - Building Services)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading or building permits, the Owner/Applicant shall have a benchmark placed upon the property and identify the benchmark on the building plans. The benchmark shall remain visible onsite until final building inspection.

Prior to the foundation pre-pour inspection, the Owner/Applicant shall provide evidence from a licensed civil engineer or surveyor, to the Director of HCD - Building Services for review and approval, that the height of first finished floor from the benchmark is consistent with what was approved on the building permit.

Prior to the final inspection, the Owner/Applicant/Engineer shall provide evidence from a licensed civil engineer or surveyor, to the Director of HCD - Building Services for review and approval, that the height of the structure(s) from the benchmark is consistent with what was approved on the building permit.

8. PD014(A) - LIGHTING - EXTERIOR LIGHTING PLAN

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: All exterior lighting shall be unobtrusive, down-lit, harmonious with the local area, and constructed or located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting source shall be shielded and recessed into the fixture. The applicant shall submit three (3) copies of an exterior lighting plan which shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. The lighting shall comply with the requirements of the California Energy Code set forth in California Code of Regulations Title 24 Part 6. The exterior lighting plan shall be subject to approval by the Director of HCD - Planning, prior to the issuance of building permits.
(HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of building permits, the Owner/Applicant shall submit three copies of the lighting plans to HCD - Planning for review and approval. Approved lighting plans shall be incorporated into final building plans.

Prior to final/occupancy, the Owner/Applicant/Contractor shall submit written and photographic evidence demonstrating that the lighting has been installed according to the approved plan.

On an on-going basis, the Owner/Applicant shall ensure that the lighting is installed and maintained in accordance with the approved plan.

9. PD012(F) - LANDSCAPE PLAN & MAINTENANCE (SFD ONLY)

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: The site shall be landscaped. Prior to the issuance of building permits, three (3) copies of a landscaping plan shall be submitted to the Director of HCD - Planning. A landscape plan review fee is required for this project. Fees shall be paid at the time of landscape plan submittal. The landscaping plan shall be in sufficient detail to identify the location, species, and size of the proposed landscaping materials and shall include an irrigation plan. The plan shall be accompanied by a nursery or contractor's estimate of the cost of installation of the plan. Before occupancy, landscaping shall be either installed or a certificate of deposit or other form of surety made payable to Monterey County for that cost estimate shall be submitted to the Monterey County HCD - Planning. All landscaped areas and fences shall be continuously maintained by the applicant; all plant material shall be continuously maintained in a litter-free, weed-free, healthy, growing condition. (HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to issuance of building permits, the Owner/Applicant/Licensed Landscape Contractor/Licensed Landscape Architect shall submit landscape plans and contractor's estimate to the HCD - Planning for review and approval. Landscaping plans shall include the recommendations from the Forest Management Plan or Biological Survey as applicable. All landscape plans shall be signed and stamped by licensed professional under the following statement, "I certify that this landscaping and irrigation plan complies with all Monterey County landscaping requirements including use of native, drought-tolerant, non-invasive species; limited turf; and low-flow, water conserving irrigation fixtures."

Prior to occupancy, the Owner/Applicant/Licensed Landscape Contractor/Licensed Landscape Architect shall ensure that the landscaping shall be either installed or a certificate of deposit or other form of surety made payable to Monterey County for that cost estimate shall be submitted to the Monterey County HCD - Planning.

On an on-going basis, all landscaped areas and fences shall be continuously maintained by the Owner/Applicant; all plant material shall be continuously maintained in a litter-free, weed-free, healthy, growing condition.

10. PW0043 - REGIONAL DEVELOPMENT IMPACT FEE

Responsible Department: Public Works

Condition/Mitigation Monitoring Measure: Prior to issuance of building permits, applicant shall pay the Regional Development Impact Fee (RDIF) pursuant to Monterey Code Chapter 12.90. The fee amount shall be determined based on the parameters adopted in the current fee schedule.

Compliance or Monitoring Action to be Performed: Prior to issuance of Building Permits Owner/Applicant shall pay Monterey County Building Services Department the traffic mitigation fee. Owner/Applicant shall submit proof of payment to the HCD-Engineering Services.

11. PW0045 – COUNTYWIDE TRAFFIC FEE

Responsible Department: Public Works

Condition/Mitigation Monitoring Measure: Prior to issuance of building permits, the Owner/Applicant shall pay the Countywide Traffic Fee or the ad hoc fee pursuant to General Plan Policy C-1.8. The fee amount shall be determined based on the parameters in the current fee schedule.

Compliance or Monitoring Action to be Performed: Prior to issuance of Building Permits, the Owner/Applicant shall pay Monterey County HCD-Building Services the traffic mitigation fee. The Owner/Applicant shall submit proof of payment to HCD-Engineering Services.

12. CC01 INDEMNIFICATION AGREEMENT

Responsible Department: County Counsel-Risk Management

Condition/Mitigation Monitoring Measure: The property owner agrees as a condition and in consideration of approval of this discretionary development permit that it will, pursuant to agreement and/or statutory provisions as applicable, including but not limited to Government Code Section 66474.9, defend, indemnify and hold harmless the County of Monterey or its agents, officers and employees from any claim, action or proceeding against the County or its agents, officers or employees to attack, set aside, void or annul this approval, which action is brought within the time period provided for under law, including but not limited to, Government Code Section 66499.37, as applicable. The property owner will reimburse the County for any court costs and attorney's fees which the County may be required by a court to pay as a result of such action. The County may, at its sole discretion, participate in the defense of such action; but such participation shall not relieve applicant of his/her/its obligations under this condition. An agreement to this effect shall be recorded upon demand of County Counsel or concurrent with the issuance of building permits, use of property, filing of the final map, recordation of the certificates of compliance whichever occurs first and as applicable. The County shall promptly notify the property owner of any such claim, action or proceeding and the County shall cooperate fully in the defense thereof. If the County fails to promptly notify the property owner of any such claim, action or proceeding or fails to cooperate fully in the defense thereof, the property owner shall not thereafter be responsible to defend, indemnify or hold the County harmless. (County Counsel-Risk Management)

Compliance or Monitoring Action to be Performed: Upon demand of County Counsel or concurrent with the issuance of building permits, use of the property, recording of the final/parcel map, or recordation of Certificates of Compliance, whichever occurs first and as applicable, the Owner/Applicant shall submit a signed and notarized Indemnification Agreement to the Office of County Counsel-Risk Management for review and signature by the County.

Proof of recordation of the Indemnification Agreement, as outlined, shall be submitted to the Office of County Counsel-Risk Management

13. PD050 - RAPTOR/MIGRATORY BIRD NESTING

Responsible Department: Planning

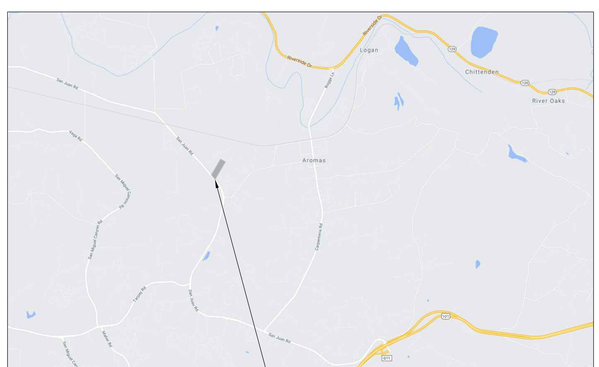
Condition/Mitigation Monitoring Measure: Any tree removal activity that occurs during the typical bird nesting season (February 22-August 1), the County of Monterey shall require that the project applicant retain a County qualified biologist to perform a nest survey in order to determine if any active raptor or migratory bird nests occur within the project site or within 300 feet of proposed tree removal activity. During the typical nesting season, the survey shall be conducted no more than 30 days prior to ground disturbance or tree removal. If nesting birds are found on the project site, an appropriate buffer plan shall be established by the project biologist. (HCD - Planning)

Compliance or Monitoring Action to be Performed: No more than 30 days prior to ground disturbance or tree removal, the Owner/Applicant/Tree Removal Contractor shall submit to HCD -Planning a nest survey prepare by a County qualified biologist to determine if any active raptor or migratory bird nests occur within the project site or immediate vicinity.

LOT D RESIDENCE

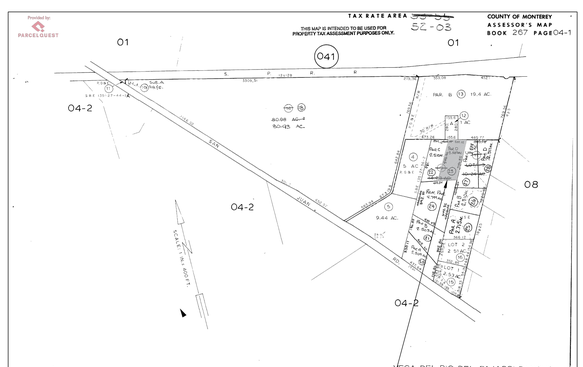
1909 SAN JUAN ROAD,
AROMAS, CA 95004
(APN): 267-041-023
PLN-210142

LOCATION MAP





VICINITY MAP



SCOPE OF WORK:

- NEW CONSTRUCTION OF A SINGLE FAMILY HOUSE WITH A DETACHED GARAGE AND A DETACHED GUEST HOUSE ON A VACANT LOT WITH SITE IMPROVEMENT.

APPLICABLE BUILDING CODES

- 2019 CALIFORNIA BUILDING CODE
- 2019 CALIFORNIA RESIDENTIAL CODE
- 2019 CALIFORNIA ELECTRICAL CODE
- 2019 CALIFORNIA MECHANICAL CODE
- 2019 CALIFORNIA PLUMBING CODE
- 2019 CALIFORNIA ENERGY CODE
- 2019 CALIFORNIA GREEN BUILDING CODE(CALGREEN)
- 2019 CALIFORNIA HISTORICAL BUILDING CODE
- 2019 CALIFORNIA FIRE CODE
- 2019 CALIFORNIA EXISTING BUILDING CODE
- 2019 CALIFORNIA REFERENCED STANDARDS CODE.
- AND ALL STATE OF CALIFORNIA, CITY, COUNTY AND MUNICIPAL CODE.
- ALL WORK SHALL BE IN COMPLIANCE WITH CALIFORNIA BUILDING AND FIRE CODES (2016) AND MONTEREY COUNTY FIRE CODE AMENDMENTS.

PROJECT DATA:

TYPE:	SINGLE FAMILY RESIDENTIAL
CONSTRUCTION TYPE:	WOOD FRAME / V-B
NUMBER OF STORIES:	1
ZONING:	R-1 (10000)
OCCUPANCY GROUP:	R3/U
LOT ACRES:	2.5
LOT AREA:	108,900 SF
MAIN HOUSE FLOOR AREA :	2490 SF
GARAGE:	900 SF
ADU FLOOR AREA:	752 SF

PROJECT DIRECTORY

ARCHITECTURAL DESIGNER
pHd Studio, LLC
TEL: (408) 332-1984
ADDRESS: 2150 OLD MIDDLEFIELD WAY, MOUNTAIN VIEW, CA 94043
EMAIL: PEDRAM@PHD-ARCH.COM
CONTACT:F PEDRAM HAGHIGHI

CLIENT
MR. RAEID FARHAT
TEL: (831) 840 - 3902
EMAIL: RAEID@RAEIDFARHAT.COM

STRUCTURAL ENGINEER
JDN ENGINEERING, INC
TEL: (510) 415-2809
ADDRESS: 4312 ELLEN WAY, UNION CITY, CA 94587

CIVIL ENGINEER
ROPER ENGINEERING
TEL: (831) 724 - 5300
EMAIL: JEFF@ROPERENGINEERING.COM
ADDRESS: 48 MANN AVENUE

ENERGY CONSULTANT
CARSTAIRS ENERGY
TEL: (805) 904-9048
ADDRESS: 2238 BAYVIEW HEIGHTS DRIVE, SUIE E, LOS OSOS, CA 93402

SEPTIC DESIGNER
TALUBAN ENGINEERING, INC.
TEL: (831) 754-0545
EMAIL: TALUBAN@SBCGLOBAL.NET
CONTACT: BELINDA A. TALUBAN, P.E.
ADDRESS: P.O. BOX 292, SALINAS, CA 93902

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CIVIL

C 1	DRIVEWAY PLAN & PROFILE
C 2	GRADING PLAN
C 3	TOPOGRAPHIC SURVEY

SEPTIC

C.1	SEPTIC SYSTEM SITE PLAN

PHD STUDIO, LLC
2150 OLD MIDDLEFIELD WAY,
MOUNTAIN VIEW, CA 94043
t: 408.332.1984
e: pedram@phd-arch.com

LOT D
RESIDENCE

1909
SAN JUAN RD
AROMAS
CA 95004

REV.	DATE	DESCRIPTION
1	06.16.23	PLAN CHECK COMMENTS
3	01.05.25	ARBORIST COMMENTS

PHASE: PERMIT SUBMITTAL

DATE: 09-12-24

COVER SHEET

A0.0

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ABBREVIATIONS:

℄	CENTERLINE
Ø	DIAMETER OR ROUND
∠	ANGLE
ACC.	ACCESSIBLE
ACOUS.	ACOUSTICAL
ADJ.	ADJUSTABLE
AGG.	AGGREGATE
AL.	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
A.P.L.	ASSUMED PROPERTY LINE
A.F.F.	ABOVE FINISH FLOOR
ADD'L	ADDITIONAL
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLKG.	BLOCKING
BM.	BEAM
BOT.	BOTTOM
CAB.	CABINET
C.B.	CATCH BASIN
C.T.	CERAMIC TILE
C.C.T.	CUBICLE CURTAIN TRACK
C.F.C.I.	CONTRACTOR FURNISHED & CONTRACTOR INSTALLED
C.I.	CAST IRON
CLG.	CEILING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
CORR.	CORRIDOR
CTSK.	COUNTERSUNK
C.M.U.	CONCRETE MASONRY
C.D.U.	COMBINATION DISPENSING UNIT
DBL.	DOUBLE
DEPT.	DEPARTMENT
D.F.	DRINKING FOUNTAIN
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
DR.	DOOR
DS.	DOWNSPOUT
DWG.	DRAWING
D.D.	DECK DRAIN
D.F.	DOUGLAS FIR
D.W.	DISH WASHER
(E)	EXISTING
EA.	EACH
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMERG.	EMERGENCY
ENCL.	ENCLOSURE
EQ.	EQUAL
EQPT.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EXP.	EXPANSION
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.C.O.	FLOOR CLEAN OUT
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CAB.
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FL.	FLOOR
FLUOR.	FLUORESCENT
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUDS
F.S.S.	FOLDING SHOWER SEAT
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
F.H.S.	FLAT HEAD SCREW
F.R.	FIRE RETARDANT
GA.	GAGE
GALV.	GALVANIZED
G.S.M.	GALVANIZED SHEET MTL.
G.C.	GENERAL CONTRACTOR
GL.	GLASS
GND.	GROUND
GYP.	GYPSUM
G.W.B.	GYPSUM WALL BOARD
GEN.	GENERAL
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HDWR.	HARDWARE
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
IVT.	INTRAVENOUS TRACK
JAN.	JANITOR
J.T.	JOINT
KIT.	KITCHEN
LAB.	LABORATORY
LAM.	LAMINATE
LAV.	LAVATORY
LT.	LIGHT
MAT.	MATERIAL
MAX.	MAXIMUM
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MTL.	METAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MIR.	MIRROR (FRAMED)
MISC	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
MUL.	MULLION
MG	MEDICAL GAS PANEL
M.B.	MACHINE BOLT
MK	MARKER BOARD
MBH	MOP AND BROOM HOLDER
M.W.	MICROWAVE
(N)	NEW
N.I.C.	NOT IN CONTRACT
NO. or #	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPP.	OPPOSITE
O.F.D.	OVERFLOW DRAIN
O.F.O.I.	OWNER FURNISHED & OWNER INSTALLED
O.F.C.I.	OWNER FURNISHED & CONTRACTOR INSTALLED
PEN.	PENETRATION(S)
PL.	PLATE
P.LAM.	PLASTIC LAMINATE
PLYWD.	PLYWOOD
PR.	PAIR
PTD	PAPER TOWEL DISPENSER
P.A.D.	POWER ACTUATED DEVICE
P.I.P.	POURED-IN-PLACE
P.T.	PRESSURE TREATED
Q.T.	QUARRY TILE
R.	RISER
RAD.	RADIUS
RCLT	RECESSED CEILING LIGHT
R.D.	ROOF DRAIN
REF.	REFERENCE
REFR.	REFRIGERATOR
REINF.	REINFORCED
REQD.	REQUIRED
RESIL.	RESILIENT
R.H.	ROBE HOOK
RM.	ROOM
R.O.	ROUGH OPENING
RT	RESILIENT TILE
RWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
S.C.	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED.	SCHEDULE
SD	SMOKE DETECTOR
SECT.	SECTION
SH.	SHELF
SHWR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
S.J.	SCORE JOINTS
S.M.S.	SHEET METAL SCREW
S.S.D.	SEE STRUCTURAL DRAWINGS
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRL.	STRUCTURAL
SUSP.	SUSPENDED
T.D.	TRENCH DRAIN
TRD.	TREAD
T.B.	TOWEL BAR
T.O.C.	TOP OF CURB/CONCRETE
TEL.	TELEPHONE
TER.	TERRAZZO
T.&G.	TONGUE AND GROOVE
THK.	THICK
TK.BD.	TACKBOARD
T.P.	TOP OF PAVEMENT/ TELEPHONE PANELBOARD
T.P.D.	TOILET PAPER DISPENSER
T.V.	TELEVISION
TYP.	TYPICAL
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
U.N.O.	UNLESS NOTED OTHERWISE
U.O.N.	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VDB	VISUAL DISPLAY BOARD
VERT.	VERTICAL
VEST.	VESTIBULE
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
W/O	WITHOUT
WP.	WATERPROOF
WR	WASTE RECEPTACLE
WT.	WEIGHT

GENERAL NOTES

1. THE EXTERIOR 1 HOUR WALL ASSEMBLY SHALL EXTEND FROM THE FOUNDATION TO ROOF (CRC TABLE R302.1 (1).
2. ANY NEW WINDOWS IN ANY BEDROOM TO PROVIDE THE MINIMUM REQUIRED MEANS OF EMERGENCY ESCAPE AND TO COMPLY WITH CRC R310.2
3. SHOWER AND TUB / SHOWER WALLS TO BE SMOOTH, HARD, NONABSORBENT SURFACE (E.G., CERAMIC TILE OR FIBERGLASS) OVER A MOISTURE RESISTANT UNDERPAYMENT (E.G., CEMENT, FIBER CEMENT, OR GLASS MAT GYPSUM BACKER) TO A HEIGHT OF 72" INCHES ABOVE THE DRAIN INLET. CRC R307.2 AND R702.3.7
4. TERMINATION OF ALL ENVIRONMENTAL AIR DUCTS SHALL BE A MINIMUM OF 3 FEET FROM ANY OPENINGS INTO THE BUILDING (I.E DRYERS, BATH AND UTILITY FANS, ETC) MUST BE 3 FEET AWAY FROM DOORS, WINDOWS, OPENING SKYLIGHTS, OR ATTIC VENTS. CMC 502.2.1
5. FOR GAS BURNING APPLIANCE, PROVIDE COMBUSTION AIR FOR THE DRYER LOCATED IN THE CLOSET. OPENINGS SHALL HAVE A FREE NET AREA OF NOT LESS THAN 1 SQUARE INCH PER 1,000 BTU/H OF THE TOTAL INPUT OF THE APPLIANCE IN THE SPACE, BUT NOT LESS THAN 100 SQUARE INCHES. ONE OPENING SHALL COMMENCE WITHIN 12 INCHES OF THE TOP AND ONE OPENING SHALL COMMENCE 12 INCHES FROM THE BOTTOM OF THE ENCLOSURE. THE DIMENSION OF AIR OPENINGS SHALL NOT BE LESS THAN 3 INCHES INSIDE. CMC 701.5.
6. CLOTHE DRYER EXHAUST DUCTS SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING AND EQUIPPED WITH A BACK-DRAFT . CMC 504.4
7. EXHAUST DUCT TERMINATION IS AS FOLLOWS PER CMC 502.2
   3 FEET FROM OPENINGS INTO THE BUILDING
   3 FEET FROM A PROPERTY LINE
   10 FEET FROM A FORCED AIR INLET
8. COMBINE ROOF PENETRATIONS TO AS FEW AS POSSIBLE.
9. APPLICATIONS FOR WHICH NO PERMIT IS ISSUED WITH 180 DAYS FOLLOWING THE DATE OF APPLICATION SHALL AUTOMATICALLY EXPIRE, PER CRC R105.3.2.
10. EVERY PERMIT ISSUED SHALL BECOME INVALID UNLESS WORK AUTHORIZED IS COMMENCED WITHIN 180 DAYS OR IF THE WORK AUTHORIZED IS SUSPENDED OR ABANDON FOR A PERIOD OF 180 DAYS. A SUCCESSFUL INSPECTION MUST BE OBTAINED WITHIN 180 DAYS. A PERMIT MAY BE EXTENDED IF A WRITTEN REQUEST STATING JUSTIFICATION FOR EXTENSION AND AN EXTENSION FEE IS RECEIVED PRIOR TO EXPIRATION OF THE PERMIT AND GRANTED BY THE BUILDING OFFICIAL. NO MORE THAN ONE EXTENSION MAY BE GRANTED. PERMITS WHICH HAVE BECOME INVALID SHALL PAY A REACTIVATION FEE OF APPROXIMATELY 50% OF THE ORIGINAL PERMIT FEE AMOUNT WHEN THE PERMIT HAS BEEN EXPIRED FOR UP TO 6 MONTHS. WHEN A PERMIT HAS BEEN EXPIRED FOR A PERIOD IN EXCESS OF 1 YEAR, THE REACTIVATION FEE SHALL BE APPROXIMATELY 100% OF THE ORIGINAL PERMIT FEE, PER CRC R105.5
11. ATTIC ACCESS: WITH ATTIC AREAS HAVING AN AREA EXCEEDING 30 SF & CLEAR HEIGHT OF OVER 30", PROVIDE ATTIC ACCESS (22" X 30" OPENING) & (MINIMUM 30" CLEAR HEADROOM) IN ATTIC SPACE SHALL BE PROVIDED AT OR ABOVE THE ACCESS OPENING PER CRC R807.1.
12. BEDROOM EGRESS: SILL HEIGHT NOT GREATER THAN 44" (3'-8") ABOVE FINISH FLOOR PER CRC R 310.1 & CBC 1030.
13. WEEP SCREED / EXTERIOR WALL: PROVIDE WEATHER-RESISTIVE BARRIER FOR STUCCO WALL ASSEMBLY (CRC R703.7.3, R703.7.2, TABLE R702.1(1), CBC TABLE 1405.2 & CBC 2510.6. MINIMUM 7/8" THICK, 3 COATS STUCCO OVER TWO LAYERS OF GRADE D PAPER ARE REQUIRED WHEN OVER WOOD BASE SHEATHING. ALSO, A MINIMUM 26 GAGE CORROSION RESISTANT WEEP SCREED IS REQUIRED BELOW THE STUCCO A MINIMUM OF 4" ABOVE EARTH OR 2" ABOVE PAVED AREA, PER CRC R703.7.2.1.
14. EXTERIOR DOOR LANDINGS: SHOW A 36 INCHES MINIMUM LENGTH LANDING & MAXIMUM 2% SLOPE AT ALL EXTERIOR DOOR LOCATIONS. (CRC R311.3 & CBC 1010.1.6 EXCEPTION)
15. SHOWER: FOR SHOWER AND TUB/SHOWER WALLS TO BE A SMOOTH, HARD, NONABSORBENT SURFACE (I.E., CERAMIC TILE) OVER A MOISTURE RESISTANT UNDERLAYMENT (I.E., CEMENT FIBER OR GLASS MAT GYPSUM BACKER BOARD) TO A HEIGHT OF 6'-0" (72") ABOVE THE FLOOR PER CRC R307.2. 5'-10" (70") ABOVE THE DRAIN INLET PER CBC 1210.2.3.
16. SMOKE ALARM: FOR NEW CONSTRUCTION, SMOKE DETECTORS SHALL BE HARD-WIRED WITH A BATTERY BACKUP PER CRC R314.6.
17. SMOKE ALARM: SHALL BE INSTALLED NOT LESS THAN 3' HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAIN BATHTUB/SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF SMOKE ALARM. (CRC R314.3).
18. CARBON MONOXIDE ALARM: SHALL BE HARD-WIRED WITH A BATTERY BACKUP (SEE CRC R315.5 FOR EXCEPTION).
19. CARBON MONOXIDE ALARM: WHEN MORE THAN ONE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT, THE CARBON MONOXIDE ALARMS SHALL BE INTERCONNECTED IN SUCH MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS PER CRC R315.7.
20. PUBLIC WORKS: PROPERTY OWNERS WHO DO NOT HAVE A MAILBOX WITH THEIR DRIVEWAY SHOULD INSTALL A POST DISPLAYING THE STREET NUMBER THERE TO ASSIST EMERGENCY RESPONSE AGENCIES IN FINDING THEIR PROPERTIES.

GENERAL NOTES (CONT.)

- DIMENSIONS TAKE PRECEDENCE OVER SCALE SHOWN ON DRAWINGS (CONTRACTOR IS NOT TO SCALE DRAWINGS).
- IN THE EVENT THAT AN ACUTE ERROR OR OMISSION MAY EXIST ON THE PLAN IT SHALL BE THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR TO NOTIFY THE ARCHITECT, DESIGNER PRIOR TO THE COMMENCEMENT OF WORK. FAILURE TO DO SUCH, WILL RELIEVE DESIGNER OF RESPONSIBILITY.
- ALL WORKS SHALL BE DONE IN ACCORDANCE WITH THE LATEST CALIFORNIA CODES INCLUDING BUT NOT LIMITED TO BUILDING, ELECTRICAL, ENERGY, FIRE, MECHANICAL & PLUMBING CODE AND LOCAL CODES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATION.
- TYPICAL DETAILS AND NOTES SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.
- DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE SHORING, BRACING, FORMWORK, ETC. AS REQUIRED TO PROTECT LIFE AND PROPERTY.
- ALL EXTERIOR WOOD FRAMING MEMBERS EXPOSED TO WEATHER, I.E. GIRDERS, BEAMS, JOISTS AND POSTS SHALL BE PRESSURE TREATED.
- JOB SITE COPIES OF THE APPROVED BUILDING PLANS, REVISIONS, AND DEFERRED SUBMITTALS SHALL STAY ON-SITE DURING INSPECTIONS.
- MINIMUM OF 65% OF CONSTRUCTION AND DEMOLITION WASTE SHALL BE RECYCLED, REUSED OR SALVAGED FOR LATER USE.
- THE MAX RISE OF ALL EXTERIOR STEPS SHALL BE 7.75" AND THE MINIMUM RUN SHALL BE 10" PER CRC R311.7.5
- ALL UNDERGROUND PIPING SYSTEM SHALL COMPLY WITH THE COUNTY STANDARD FPO-006 AND SHALL REQUIRE PLAN SUBMITTAL AND PERMIT APPROVAL PRIOR TO INSTALLATION.
- A HERS CERTIFICATION IS REQUIRED FOR INDOOR AIR QUALITY FOR BOTH UNITS. DUCTS SEALING IS REQUIRED FOR THE MAIN HOUSE

ELECTRICAL NOTES

1. PROVIDE RECEPTACLE OUTLETS AT THE KITCHEN COUNTER LOCATED SO THAT NO POINT ALONG THE COUNTER WALL IS OVER 24 INCHES FROM A RECEPTACLE. CEC 210.52(C)(1)
2. PER CEC 210.8, SPECIFY GFCI PROTECTION AT THE ELECTRICAL RECEPTACLES IN THE FOLLOWING LOCATIONS:

   ALL OUTDOOR RECEPTACLES.
   SERVING KITCHEN COUNTER TOPS CEC 210.8 (A)(6)
   WITHIN 6 FEET OF A LAUNDRY AND UTILITY
3. PROVIDE ALL BRANCH CIRCUITS THAT SUPPLY OUTLETS INSTALLED IN DWELLING UNIT SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER IN THE FOLLOWING ROOMS PER CEC 210.12(A)

   BEDROOMS
   LIVING ROOMS
   HALLWAYS
   CLOSETS
4. ALL 125 VOLT, 15- AND 20- AMPRE RECEPTACLE OUTLETS SHALL BE LISTED TAMPER RESISTANT RECEPTACLES PER CES 406.12
5. SPECIFY GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTION PER CEC SECTION 210-8 FOR RECEPTACLE OUTLETS LOCATED AT BATHROOMS, OUTDOORS AND WITHIN 6' OF SINK.
6. PROVIDE LIGHTING OUTLETS AT THESE LOCATIONS PER CEC SECTION 210-70: AT HALLWAYS, AND AT THE EXTERIOR SIDE OF OUTDOOR ENTRANCE OR EXIT.
7. SPECIFY ARC-FAULT CIRCUIT INTERRUPTER (AFCI) DEVICE FOR ALL RECEPTACLE OUTLETS IN ALL FAMILY ROOMS, LIVING ROOMS, BEDROOMS, CLOSETS, HALLWAYS, KITCHENS, LAUNDRY AREAS AND SIMILAR ROOMS/AREAS PER CEC 210-12.
8. ALL 125-VOLT, 15- AND 20- AMPERE RECEPTACLE OUTLETS SHALL BE LISTED TAMPER RESISTANT RECEPTACLES PER CEC 406.12.3
9. AT THE KITCHEN, ALL INSTALLED LIGHTING SHALL BE HIGH EFFICACY PER CEC 150.0(K)1A.
10. AT BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS: ALL INSTALLED LIGHTING SHALL BE HIGH EFFICACY AND AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY A VACANCY SENSOR PER CEC 150.0(K)1A AND CEC 150.0(K)2J.
11. AT OUTDOOR LOCATIONS ALL INSTALLED LIGHTING SHALL BE HIGH EFFICACY PER CEC 150.0(K)1A, AND SWITCHING DEVICE CONTROL REQUIREMENT PER CEC 150.0(K)3A
12. AT ALL OTHER INTERIOR ROOMS: ALL INSTALLED LIGHTING SHALL BE HIGH EFFICACY (CEC 150.0(K)1A), AND SWITCHING DEVICE CONTROL REQUIREMENT PER CEC 150.0(K)2.

PLUMBING NOTES

1. NON-COMPLIANT PLUMBING FIXTURES THAT ARE NOT PART OF THE SCOPE OF WORK WILL BE REQUIRED TO COMPLY WITH CODE SECTION CGBC 301.1.1 IN ACCORDANCE WITH CIVIL CODE SECTION 1101.1
2. FAUCETS IN KITCHENS, WET BARS, LAUNDRY SINKS, ETC. SHALL HAVE A WATER FLOW NOT EXCEED 1.8 GALLON PER MINUTE (CPC 407.2.1.1)
3. FAUCETS IN RESIDENTIAL LAVATORY SHALL HAVE A WATER FLOW TO NOT EXCEED 1.2 GALLON PER MINUTE AT 60 PSI (CPC 407.2.1.2)
4. FAUCETS IN PUBLIC USE SHALL HAVE A WATER FLOW NOT EXCEED 0.5 GALLON PER MINUTE AT 60 PSI (CPC 407.2.1.3)
5. METERING FAUCETS SHALL HAVE A WATER FLOW NOT EXCEED 0.2 GALLON PER METERING CYCLE (CPC 407.2.2)
6. SHOWER HEADS SHALL HAVE A WATER FLOW NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI (CPC 408.2)
7. WATER CLOSETS SHALL HAVE AN AVERAGE WATER CONSUMPTION OF NOT MORE THAN 1.28 GALLONS PER FLUSH (CPC 411.2)
8. LAVATORY FAUCETS SHALL HAVE AN AVERAGE WATER CONSUMPTION OF NOT MORE THAN 1.2 CMP AT 60 PSI (CPC 407.2)

LEGEND

NEW WALL	$ WALL SWITCH
DEMO WALL	TELEPHONE OUTLET
EXISTING WALL	TV/CABLE OUTLET
CONCRETE	SMOKE DETECTOR
STUCCO	WATER HEATER
DUPLEX RECEPTACLE OUTLET	FURNACE
GFCI GROUND FAULT CIRCUIT INTERRUPTER	ELECTRICAL MAIN PANEL
WP DUPLEX OUTLET WITH GROUND	ELECTRICAL SUB-PANEL
WALL LIGHT	CMA CARBON MONOXIDE ALARMS
RCLT RECESSED LIGHT	HOSE BIB
HIGH EFFICIENCY LIGHT	ELECTRICAL FAN
	CO CARBON MONOXIDE

PHD STUDIO, LLC
2150 OLD MIDDLEFIELD WAY,
MOUNTAIN VIEW, CA 94043
t: 408.332.1984
e: pedram@phd-arch.com

Preserve

LOT D
RESIDENCE

1909
SAN JUAN RD
AROMAS
CA 95004

REV.	DATE	DESCRIPTION
1	06.16.23	PLAN CHECK COMMENTS

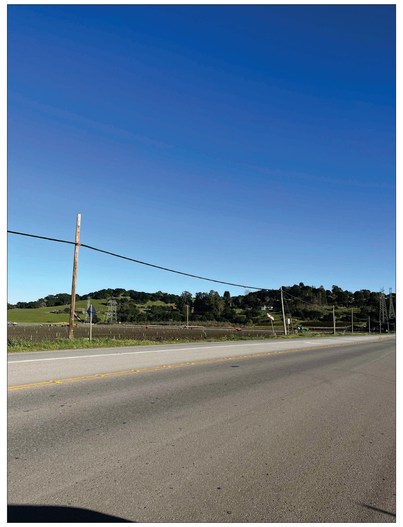
PHASE: PERMIT SUBMITTAL

DATE: 09-12-24

GENERAL NOTES

A0.1

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1 - FROM SAN JUAN ROAD



2 - FROM BOTTOM OF DRIVEWAY





3 - FROM PRIVATE ROAD



4 - FROM SITE LOOKING TOWARD HOUSE



5 - FROM SITE LOOKING SAN JUAN RD

PHD STUDIO
163 SUPERIOR DRIVE, APT. A,
CAMPBELL, CA 95008
t: 408.332.1984
e: pedram@phd-arch.com

LOT D
RESIDENCE

1909
SAN JUAN RD
AROMAS
CA 95004

REV.	DATE	DESCRIPTION

PHASE: PERMIT SUBMITTAL

DATE: 09-12-24

VISUAL IMPACT
ANALYSIS

A0.2

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GENERAL INFORMATION					
01	Project Name	San Juan Road Residence Lot D			
02	Run Title	Title 24 Analysis			
03	Project Location	1901 San Juan Road			
04	City	Aromas	05	Standards Version	2019
06	Zip code	95076	07	Software Version	EnergyPro 8.2
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	90
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	NewConstruction	13	Number of Bedrooms	3
14	Addition Cond. Floor Area (ft^2)	0	15	Number of Stories	1
16	Existing Cond. Floor Area (ft^2)	n/a	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft^2)	2463	19	Glazing Percentage (%)	23.06%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Is Natural Gas Available?	Yes			

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

ENERGY DESIGN RATING				
	Energy Design Ratings		Compliance Margins	
	Efficiency[1] (EDR)	Total[2] (EDR)	Efficiency[1] (EDR)	Total[2] (EDR)
Standard Design	46.2	27.2		
Proposed Design	44.6	25.6	1.6	1.6
RESULT: [3] COMPLIES				

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 2.50 kWdc
- PV System resized to 2.50 kWdc (a factor of 2.503) to achieve 'Standard Design PV' PV scaling

ENERGY USE SUMMARY				
Energy Use (kTDV/ft^2-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	30.38	28.62	1.76	5.8
Space Cooling	0	0	0	
IAQ Ventilation	2.48	2.48	0	0
Water Heating	10.98	9.68	1.3	11.8
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	**43.84**	**40.78**	**3.06**	**7**

REQUIRED PV SYSTEMS - SIMPLIFIED											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
2.5	NA	Standard	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	100

REQUIRED SPECIAL FEATURES
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.
• Indoor air quality, balanced fan • Ducts with high level of insulation • Cool roof • Non-standard duct location (any location other than attic)

HERS FEATURE SUMMARY
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry
Building-level Verifications: • Indoor air quality ventilation • Kitchen range hood Cooling System Verifications: • Minimum Airflow • Fan Efficacy Watts/CFM Heating System Verifications: • -- None -- HVAC Distribution System Verifications: • Duct leakage testing • Ducts located entirely in conditioned space confirmed by duct leakage testing Domestic Hot Water System Verifications: • -- None --

BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
San Juan Road Residence Lot D	2463	1	3	1	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
Living Area	Conditioned	HVAC System1	2463	9.5	DHW Sys 1	N/A

OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
Front Wall	Living Area	R21 Wall	90	Front	561	180	90
Left Wall	Living Area	R21 Wall	180	Left	865	152	90
Rear Wall	Living Area	R21 Wall	270	Back	561	204	90
Right Wall	Living Area	R21 Wall	0	Right	865	67	90

OPAQUE SURFACES - CATHEDRAL CEILINGS										
01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Roof	Living Area	R-30 Roof No Attic	0	Right	2463	0	0	0.63	0.85	Yes

FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Window	Window	Front Wall	Front	90			1	15	0.3	NFRC	0.23	NFRC	Bug Screen
Window 2	Window	Front Wall	Front	90			1	30	0.3	NFRC	0.23	NFRC	Bug Screen
Window 3	Window	Front Wall	Front	90			1	15	0.3	NFRC	0.23	NFRC	Bug Screen
Window 4	Window	Front Wall	Front	90			1	15	0.3	NFRC	0.23	NFRC	Bug Screen
Window 5	Window	Front Wall	Front	90			1	22.5	0.3	NFRC	0.23	NFRC	Bug Screen
Window 6	Window	Front Wall	Front	90			1	25	0.3	NFRC	0.23	NFRC	Bug Screen
Window 7	Window	Front Wall	Front	90			1	22.5	0.3	NFRC	0.23	NFRC	Bug Screen
Window 8	Window	Left Wall	Left	180			1	30	0.3	NFRC	0.23	NFRC	Bug Screen
Window 9	Window	Left Wall	Left	180			1	10	0.3	NFRC	0.23	NFRC	Bug Screen
Window 10	Window	Left Wall	Left	180			1	12	0.3	NFRC	0.23	NFRC	Bug Screen

FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Window 11	Window	Left Wall	Left	180			1	30	0.3	NFRC	0.23	NFRC	Bug Screen
Window 12	Window	Left Wall	Left	180			1	30	0.3	NFRC	0.23	NFRC	Bug Screen
Window - SGD	Window	Left Wall	Left	180			1	40	0.3	NFRC	0.23	NFRC	Bug Screen
Window - SGD 2	Window	Rear Wall	Back	270			1	84	0.3	NFRC	0.23	NFRC	Bug Screen
Window 13	Window	Rear Wall	Back	270			1	18	0.3	NFRC	0.23	NFRC	Bug Screen
French Door	Window	Rear Wall	Back	270			1	42	0.3	NFRC	0.23	NFRC	Bug Screen
Window 14	Window	Rear Wall	Back	270			1	18	0.3	NFRC	0.23	NFRC	Bug Screen
Window 15	Window	Rear Wall	Back	270			1	30	0.3	NFRC	0.23	NFRC	Bug Screen
Window 16	Window	Rear Wall	Back	270			1	12	0.3	NFRC	0.23	NFRC	Bug Screen
Window 17	Window	Right Wall	Right	0			1	30	0.3	NFRC	0.23	NFRC	Bug Screen
Window 18	Window	Right Wall	Right	0			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
Window 19	Window	Right Wall	Right	0			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
French Door 2	Window	Right Wall	Right	0			1	19	0.3	NFRC	0.23	NFRC	Bug Screen
Window 20	Window	Right Wall	Right	0			1	6	0.3	NFRC	0.23	NFRC	Bug Screen

OPAQUE DOORS			
01	02	03	04
Name	Side of Building	Area (ft^2)	U-factor
Door	Front Wall	35	0.2

SLAB FLOORS							
01	02	03	04	05	06	07	08
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab	Living Area	2463	300	none	0	80%	No

OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.069	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco
R-30 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-30	None / None	0.036	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x12 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION			
01	02	03	04
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Not Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS						
01	02	03	04	05	06	07
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a

WATER HEATERS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition
DHW Heater 1	Gas	Consumer Instantaneous	1	0	0.95-UEF	200000-Btu/Hr	0	n/a	n/a	n/a	n/a

WATER HEATING - HERS VERIFICATION							
01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS										
01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	Setback	New	NA	1	1

HVAC - HEATING UNIT TYPES			
01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-95

HVAC - COOLING UNIT TYPES							
01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER/CEER	Efficiency SEER	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	Central split AC	1	11.7	14	Not Zonal	Single Speed	Cooling Component 1-hers-cool

HVAC COOLING - HERS VERIFICATION						
01	02	03	04	05	06	
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge	
Cooling Component 1-hers-cool	Required	350	Not Required	Not Required	Not Required	

HVAC - DISTRIBUTION SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
			Duct Ins. R-value		Duct Location		Surface Area				
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification
Air Distribution System 1	Conditioned space-entirely	Non-Verified	R-8	R-8	Conditioned Zone	Conditioned Zone	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist

HVAC DISTRIBUTION - HERS VERIFICATION								
01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Required	Not Requirec	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS			
01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION		
01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.45

IAQ (INDOOR AIR QUALITY) FANS					
01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness (%)	IAQ Recovery Effectiveness - SREIAQ Recovery Effectiveness - SRE
SFam IAQVentRpt 1-1	100	0.25	Balanced HRV	80	n/a

Carstairs Energy Inc.
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805-904-9048 tille24@yahoo.com
www.carstairsenergy.com

San Juan Residence
1901 San Juan Rd
Aromas CA

CABEC
California Association of Building Energy Consultants
CERTIFIED ENERGY ANALYST
Timothy Carstairs

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2/17/2021
21-02169
DRAWN BY: Timothy Carstairs
SCALE: N/A
SHEET: T24.1

CERTIFICATE OF COMPLIANCE

Project Name: San Juan Road Residence Lot D
Calculation Description: Title 24 Analysis
Calculation Date/Time: 2021-02-16T08:57:47-08:00
Input File Name: San Juan Road Lot D Residence.ribd19x
CF1R-PRF-01E
(Page 1D of 1D)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Timothy Carstairs	*Timothy Carstairs*
Company:	**Signature Date:**
Carstairs Energy Inc.	2021-02-17 09:01:41
Address:	**CEA/HERS Certification Identification (If applicable):**
2238 Bayview Heights Drive, Suite E	116061042
City, State, Zip:	**Phone:**
Los Osos, CA 93402	805-904-9048

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features and specifications listed on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name:	Responsible Designer Signature:
Podram Highgih	*Podram Highgih*
Company:	**Date Signed:**
Perki Studio	2021-02-23 17:50:41
Address:	**License:**
1463 Superior Drive, Apartment A	n/a
City/State/Zip:	**Phone:**
Cempoil, CA 95008	408-332-1984

Digitally signed by CalCERTS. The digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Registration Number: cf1r-prf-01e-0000-0000-000000-0000

CA Building Energy Efficiency Standards - 2019 Residential Compliance

Registration Provider: CalCERTS, Inc.

Registration Date/Time: 2021-02-23 17:50:41

Report Version: 2019.1.300
Schema Version: rev.20200901

Easy to Verify at CalCERTS.com

CalCERTS, Inc.

Report Generated: 2021-02-16 08:58:48

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name	Building Type	Date
San Juan Road Residence Lot D	☑ Single Family ☐ Addition Alone ☐ Multi Family ☐ Existing+ Addition/Alteration	2/17/2021

Project Address	California Energy Climate Zone	Total Cond. Floor Area	Addition	# of Units
1901 San Juan Road Aromas	CA Climate Zone 03	2,463	n/a	1

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features	Status
Wall	Wood Framed	R 21	2,249		New
Door	Opaque Door	R-5	35		New
Roof	Wood Framed Rafter	R 30	2,463	Cool Roof	New
Slab	Unheated Slab-on-Grade	- no insulation	2,463	Perim = 300'	New

FENESTRATION

Total Area: 568 | Glazing Percentage: 23.1 % | New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Front (E)	145.0	0.300	0.23	none	none	N/A	New
Left (S)	152.0	0.300	0.23	none	none	N/A	New
Rear (W)	204.0	0.300	0.23	none	none	N/A	New
Right (N)	67.0	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	95% AFUE	Split Air Conditioner:	14.0 SEER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ducted	Ducted	Conditioned	8.0	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Small Instantaneous Gas	1	0.95	Standard	New

2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply. (01/2020)

Building Envelope Measures:	
§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof o' ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.*
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with all-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed C.58.*
Fireplaces, Decorative Gas Appliances, and Gas Log Measures:	
§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.*
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
Space Conditioning, Water Heating, and Plumbing System Measures:	
§ 110.0-§ 110.3:	**Certification.** Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.*
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.*
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-off temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.*
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)4:	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas, fan-type central furnaces, household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.*
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7; the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter of 3/4 inch and greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j)3:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use". a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natura draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(n)2:	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.*
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.*
§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*

2019 Low-Rise Residential Mandatory Measures Summary

Requirements for Ventilation and Indoor Air Quality:	
§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	**Single Family Detached Dwelling Units.** Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	**Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	**Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G:	**Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa Systems and Equipment Measures:	
§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.*
Lighting Measures:	
§ 110.9:	**Lighting Controls and Components**. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.
§ 150.0(k)1D:	**Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	**Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires**. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.*
§ 150.0(k)2C:	**Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	**Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2G:	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I:	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	**Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.*
§ 150.0(k)2K:	**Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buildings:	
§ 110.10(a)1:	**Single Family Residences.** Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	**Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.*
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric".

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2/17/2021
21-02169
DRAWN BY: Timothy Carstairs
SCALE: N/A
SHEET:
T24.2

GENERAL INFORMATION

01	Project Name	San Juan Road ADU Lot D		
02	Run Title	Title 24 Analysis		
03	Project Location	1901 San Juan Road		
04	City	Aromas	05 Standards Version	2019
06	Zip code	95076	07 Software Version	EnergyPro 8.2
08	Climate Zone	3	09 Front Orientation (deg/ Cardinal)	90
10	Building Type	Single family	11 Number of Dwelling Units	1
12	Project Scope	NewConstruction	13 Number of Bedrooms	1
14	Addition Cond. Floor Area (ft^2)	0	15 Number of Stories	1
16	Existing Cond. Floor Area (ft^2)	n/a	17 Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft^2)	752	19 Glazing Percentage (%)	22.87%
20	ADU Bedroom Count	n/a	21 ADU Conditioned Floor Area	n/a
22	Is Natural Gas Available?	Yes		

COMPLIANCE RESULTS

01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

ENERGY DESIGN RATING

	Energy Design Ratings		Compliance Margins	
	Efficiency[1] (EDR)	Total[2] (EDR)	Efficiency[1] (EDR)	Total[2] (EDR)
Standard Design	49	24.5		
Proposed Design	47.7	23.1	1.3	1.4

RESULT: [3] COMPLIES

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 1.64 kWdc
- PV System resized to 1.64 kWdc (a factor of 1.639) to achieve 'Standard Design PV' PV scaling

ENERGY USE SUMMARY

Energy Use (kTDV/ft^2-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	24.81	23.46	1.35	5.4
Space Cooling	0	0	0	
IAQ Ventilation	8.13	8.13	0	0
Water Heating	26.1	23.22	2.88	11
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	**59.04**	**54.81**	**4.23**	**7.2**

REQUIRED PV SYSTEMS - SIMPLIFIED

01 DC System Size (kWdc)	02 Exception	03 Module Type	04 Array Type	05 Power Electronics	06 CFI	07 Azimuth (deg)	08 Tilt Input	09 Array Angle (deg)	10 Tilt: (x in 12)	11 Inverter Eff. (%)	12 Annual Solar Access (%)
1.64	NA	Standard	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	100

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Indoor air quality, balanced fan
- Ducts with high level of insulation
- Cool roof
- Non-standard duct location (any location other than attic)

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

Building-level Verifications:
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- Minimum Airflow
- Fan Efficacy Watts/CFM

Heating System Verifications:
- -- None --

HVAC Distribution System Verifications:
- Duct leakage testing
- Ducts located entirely in conditioned space confirmed by duct leakage testing

Domestic Hot Water System Verifications:
- -- None --

BUILDING - FEATURES INFORMATION

01 Project Name	02 Conditioned Floor Area (ft^2)	03 Number of Dwelling Units	04 Number of Bedrooms	05 Number of Zones	06 Number of Ventilation Cooling Systems	07 Number of Water Heating Systems
San Juan Road ADU Lot D	752	1	1	1	0	1

ZONE INFORMATION

01 Zone Name	02 Zone Type	03 HVAC System Name	04 Zone Floor Area (ft^2)	05 Avg. Ceiling Height	06 Water Heating System 1	07 Water Heating System 2
Living Area	Conditioned	HVAC System1	752	10	DHW Sys 1	N/A

OPAQUE SURFACES

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Gross Area (ft^2)	07 Window and Door Area (ft2)	08 Tilt (deg)
Front Wall	Living Area	R21 Wall	90	Front	410	124	90
Left Wall	Living Area	R21 Wall	180	Left	180	24	90
Rear Wall	Living Area	R21 Wall	270	Back	410	45	90
Right Wall	Living Area	R21 Wall	0	Right	180	0	90

OPAQUE SURFACES - CATHEDRAL CEILINGS

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Area (ft^2)	07 Skylight Area (ft^2)	08 Roof Rise (x in 12)	09 Roof Reflectance	10 Roof Emittance	11 Cool Roof
Roof	Living Area	R-30 Roof No Attic	0	Right	752	0	4	0.63	0.85	Yes

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Width (ft)	07 Height (ft)	08 Mult.	09 Area (ft^2)	10 U-factor	11 U-factor Source	12 SHGC	13 SHGC Source	14 Exterior Shading
Window	Window	Front Wall	Front	90			1	30	0.3	NFRC	0.23	NFRC	Bug Screen
Window 2	Window	Front Wall	Front	90			1	18	0.3	NFRC	0.23	NFRC	Bug Screen
Window 3	Window	Front Wall	Front	90			1	55	0.3	NFRC	0.23	NFRC	Bug Screen
Window 4	Window	Left Wall	Left	180			1	24	0.3	NFRC	0.23	NFRC	Bug Screen
Window 5	Window	Rear Wall	Back	270			1	25	0.3	NFRC	0.23	NFRC	Bug Screen
Window 6	Window	Rear Wall	Back	270			1	12	0.3	NFRC	0.23	NFRC	Bug Screen
Window 7	Window	Rear Wall	Back	270			1	8	0.3	NFRC	0.23	NFRC	Bug Screen

OPAQUE DOORS

01 Name	02 Side of Building	03 Area (ft^2)	04 U-factor
Door	Front Wall	21	0.2

SLAB FLOORS

01 Name	02 Zone	03 Area (ft^2)	04 Perimeter (ft)	05 Edge Insul. R-value and Depth	06 Edge Insul. R-value and Depth	07 Carpeted Fraction	08 Heated
Slab	Living Area	752	118	none	0	80%	No

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
R21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.069	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco
R-30 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-30	None / None	0.036	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x12 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01 Quality Insulation Installation (QII)	02 High R-value Spray Foam Insulation	03 Building Envelope Air Leakage	04 CFM50
Not Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS

01 Name	02 System Type	03 Distribution Type	04 Water Heater Name (#)	05 Solar Heating System	06 Compact Distribution	07 HERS Verification
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a

WATER HEATERS

01 Name	02 Heating Element Type	03 Tank Type	04 # of Units	05 Tank Vol. (gal)	06 Energy Factor or Efficiency	07 Input Rating or Pilot	08 Tank Insulation R-value (Int/Ext)	09 Standby Loss or Recovery Eff	10 1st Hr. Rating or Flow Rate	11 NEEA Heat Pump Brand or Model	12 Tank Location or Ambient Condition
DHW Heater 1	Gas	Consumer Instantaneous	1	0	0.95-UEF	200000-Btu/Hr	0	n/a	n/a	n/a	n/a

WATER HEATING - HERS VERIFICATION

01 Name	02 Pipe Insulation	03 Parallel Piping	04 Compact Distribution	05 Compact Distribution Type	06 Recirculation Control	07 Central DHW Distribution	08 Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01 Name	02 System Type	03 Heating Unit Name	04 Cooling Unit Name	05 Fan Name	06 Distribution Name	07 Required Thermostat Type	08 Status	09 Verified Existing Condition	10 Heating Equipment Count	11 Cooling Equipment Count
HVAC System1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	Setback	New	NA	1	1

HVAC - HEATING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-95

HVAC - COOLING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Efficiency EER/CEER	05 Efficiency SEER	06 Zonally Controlled	07 Multi-speed Compressor	08 HERS Verification
Cooling Component 1	Central split AC	1	11.7	14	Not Zonal	Single Speed	Cooling Component 1-hers-cool

HVAC COOLING - HERS VERIFICATION

01 Name	02 Verified Airflow	03 Airflow Target	04 Verified EER	05 Verified SEER	06 Verified Refrigerant Charge
Cooling Component 1-hers-cool	Required	350	Not Required	Not Required	Not Required

HVAC - DISTRIBUTION SYSTEMS

01 Name	02 Type	03 Design Type	04 Duct Ins. R-value Supply	05 Duct Ins. R-value Return	06 Duct Location Supply	07 Duct Location Return	08 Surface Area Supply	09 Surface Area Return	10 Bypass Duct	11 Duct Leakage	12 HERS Verification
Air Distribution System 1	Conditioned space-entirely	Non-Verified	R-8	R-8	Conditioned Zone	Conditioned Zone	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist

HVAC DISTRIBUTION - HERS VERIFICATION

01 Name	02 Duct Leakage Verification	03 Duct Leakage Target (%)	04 Verified Duct Location	05 Verified Duct Design	06 Buried Ducts	07 Deeply Buried Ducts	08 Low-leakage Air Handler	09 Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS

01 Name	02 Type	03 Fan Power (Watts/CFM)	04 Name
HVAC Fan 1	HVAC Fan	0.45	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01 Name	02 Verified Fan Watt Draw	03 Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.45

IAQ (INDOOR AIR QUALITY) FANS

01 Dwelling Unit	02 IAQ CFM	03 IAQ Watts/CFM	04 IAQ Fan Type	05 IAQ Recovery Effectiveness (%)	06 IAQ Recovery Effectiveness - SREIAQ Recovery Effectiveness - SRE
SFam IAQVentRpt 1-1	40	0.625	Balanced HRV	90	n/a

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Timothy Carstairs	Documentation Author Signature: *Timothy Carstairs*
Company: Carstairs Energy Inc.	Signature Date: 2021-02-17 09:01:41
Address: 2238 Bayview Heights Drive, Suite E	CEA/ HERS Certification Identification (if applicable): r160610042
City/State/Zip: Los Osos, CA 93402	Phone: 805-904-9048

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Pedram Haghighi	Responsible Designer Signature: *Pedram Haghighi*
Company: pHd Studio	Date Signed: 2021-02-23 17:50:41
Address: 163 Superior Drive, Apartment A	License: na
City/State/Zip: Campell, CA 95008	Phone: 408-332-1984

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

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2/17/2021
21-02169
DRAWN BY: Timothy Carstairs
SCALE: N/A
SHEET: T24.1

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name	Building Type	Date
San Juan Road ADU Lot D	☑ Single Family ☐ Multi Family ☐ Addition Alone ☐ Existing+ Addition/Alteration	2/17/2021
Project Address	**California Energy Climate Zone**	**Total Cond. Floor Area**	**Addition**	**# of Units**
1901 San Juan Road Aromas	CA Climate Zone 03	752	n/a	1

INSULATION

Construction Type	Cavity	Area (ft^2)	Special Features	Status
Wall Wood Framed	R 21	987		New
Door Opaque Door	R-5	21		New
Roof Wood Framed Rafter	R 30	752	Cool Roof	New
Slab Unheated Slab-on-Grade	- no insulation	752	Perim = 118'	New

FENESTRATION

Total Area: 172 | Glazing Percentage: 22.9 % | New/Altered Average U-Factor: 0.30

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Front (E)	103.0	0.300	0.23	none	none	N/A	New
Left (S)	24.0	0.300	0.23	none	none	N/A	New
Rear (W)	45.0	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	95% AFUE	Split Air Conditioner	14.0 SEER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ducted	Ducted	Conditioned	8.0	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Small Instantaneous Gas	1	0.95	Standard	New

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2G:	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I:	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	**Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.
§ 150.0(k)2K:	**Interior Switches and Controls.** Under-cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buildings:	
§ 110.10(a)1:	**Single Family Residences.** Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	**Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric".

2019 Low-Rise Residential Mandatory Measures Summary

*NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply. (01/2020).*

Building Envelope Measures:	
§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior yet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.*
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch, be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl spaces must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(g):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*
Fireplaces, Decorative Gas Appliances, and Gas Log Measures:	
§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.*
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
Space Conditioning, Water Heating, and Plumbing System Measures:	
§ 110.0-§ 110.3:	**Certification.** Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.*
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.*
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.*
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)4:	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.*
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or have insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j)3:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(n)2:	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space and portions of air handling units are not required to be insulated. Connections of metal ducts and the core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.*
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Fie-fabricated duct systems must comply with applicable requirements for: pressuro-sonsitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrior.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.*
§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*

2019 Low-Rise Residential Mandatory Measures Summary

Requirements for Ventilation and Indoor Air Quality:	
§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	**Single Family Detached Dwelling Units.** Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	**Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	**Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G:	**Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa Systems and Equipment Measures:	
§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.*
Lighting Measures:	
§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.
§ 150.0(k)1D:	**Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	**Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.*
§ 150.0(k)2C:	**Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	**Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

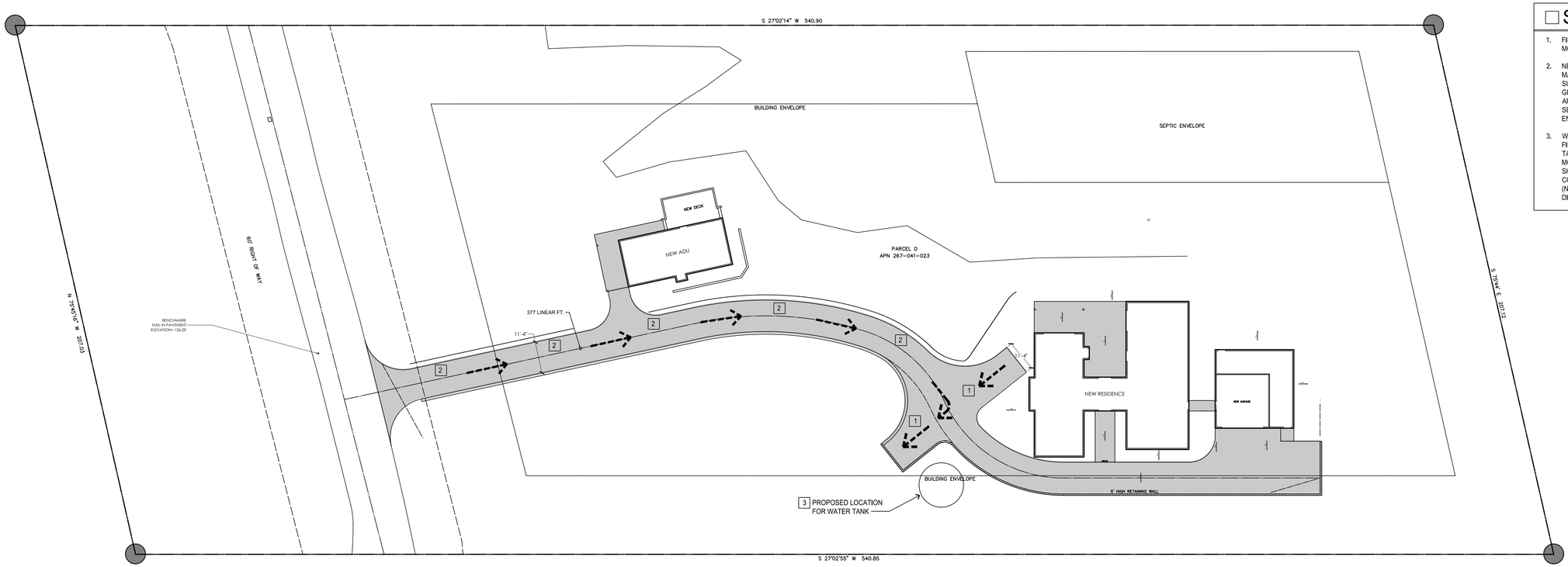
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805-904-9048 tille24@yahoo.com
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2

FIRE APPARATUS PLAN

SCALE: 1/20" = 1'-0"



1

SITE PLAN

SCALE: 1/20" = 1'-0"

SHEET NOTES

1. FIRE APPARATUS HAMMERHEAD PER COUNTY OF MONTEREY STANDARD REQUIREMENTS.
2. NEW 11'-4" WIDE FIRE TRUCK PATHWAY. THE MATERIAL SHALL BE AN ALL-WEATHER DRIVING SURFACE OF CONCRETE, ASPHALT OR COMPACTED GRAVEL THAT CAN WITHSTAND THE WEIGHT OF APPARATUS WEIGHING 22 TONS. THE PAVING SECTION SHALL BE DESIGNED BY A LICENSED ENGINEER.
3. WATER TANK TO COMPLY WITH NFPA, & CALIFORNIA FIRE CODE & MONTEREY COUNTY FIRE CODE WATER TANK SHALL BE A MIN. OF GALLONS REQUIRED BY MONTEREY COUNTY FIRE CODE REQ. WATER TANK SHALL COME WITH FIRE HOSE CONNECTION RIENTED CORRECTLY FOR EASY ACCESS FOR FIRE TRUCK. (NOTE: WATER TANK PLANS / PERMITS SHALL BE DIFFERED SUBMITTAL TO FIRE DISTRICT).

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LOT D
RESIDENCE

1909
SAN JUAN RD
AROMAS
CA 95004

REV.	DATE	DESCRIPTION
1	06.16.23	PLAN CHECK COMMENTS

PHASE: PERMIT SUBMITTAL

DATE: 09-12-24

SITE PLAN

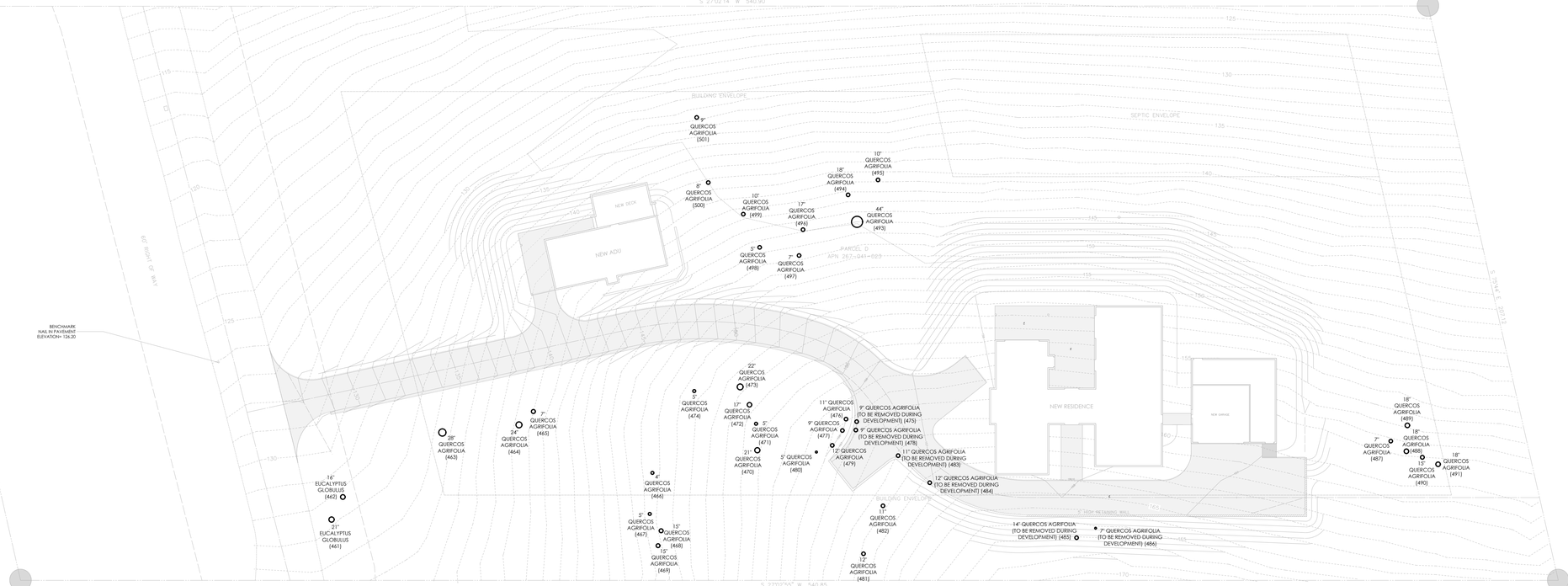
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TREE SCHEDULE

Tree Species	ID #	Diameter in Inches	Condition 0=Dead 1-2=Poor 3-4=Fair 5=Excellent	Suitable for Preservation
Eucalyptus globulus	461	21	3 - Fair	Yes
Eucalyptus globulus	462	16	3 - Fair	Yes
Quercus agrifolia	463	28	3 - Fair	Yes
Quercus agrifolia	464	24	3 - Fair	Yes
Quercus agrifolia	465	7	3 - Fair	Yes
Quercus agrifolia	466	4	3 - Fair	Yes
Quercus agrifolia	467	5	3 - Fair	Yes
Quercus agrifolia	468	15	3 - Fair	Yes
Quercus agrifolia	469	15	3 - Fair	Yes
Quercus agrifolia	470	21	3 - Fair	Yes
Quercus agrifolia	471	5	3 - Fair	Yes
Quercus agrifolia	472	17	3 - Fair	Yes
Quercus agrifolia	473	22	3 - Fair	Yes
Quercus agrifolia	474	5	3 - Fair	Yes
Quercus agrifolia	475	9	3 - Fair	No, within development
Quercus agrifolia	476	11	3 - Fair	Yes
Quercus agrifolia	477	9	3 - Fair	Yes
Quercus agrifolia	478	9	3 - Fair	No, within development
Quercus agrifolia	479	12	3 - Fair	Yes
Quercus agrifolia	480	5	3 - Fair	Yes
Quercus agrifolia	481	12,11,11	3 - Fair	Yes
Quercus agrifolia	482	11	3 - Fair	Yes

Tree Species	ID #	Diameter In Inches	Condition 0=Dead 1-2=Poor 3-4=Fair 5=Excellent	Suitable for Preservation
Quercus agrifolia	483	11	Fair	No, within development
Quercus agrifolia	484	12	Fair	No, within development
Quercus agrifolia	485	14	Fair	No, within development
Quercus agrifolia	486	7	Fair	No, within development
Quercus agrifolia	487	7	Fair	Yes
Quercus agrifolia	488	18	Fair	Yes
Quercus agrifolia	489	18	Fair	Yes
Quercus agrifolia	490	15	Fair	Yes
Quercus agrifolia	491	18	Fair	Yes
No inventory this number	492			
Quercus agrifolia	493	44	Fair	Yes
Quercus agrifolia	494	18	Fair	Yes
Quercus agrifolia	495	10	Fair	Yes
Quercus agrifolia	496	17	Fair	Yes
Quercus agrifolia	497	7	Fair	Yes
Quercus agrifolia	498	5	Fair	Yes
Quercus agrifolia	499	10	Fair	Yes
Quercus agrifolia	500	8	Fair	Yes
Quercus agrifolia	501	9	Fair	Yes



1 SITE PLAN - TREES

SCALE: 1/20" = 1'-0"

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2	01.05.25	ARBORIST COMMENTS

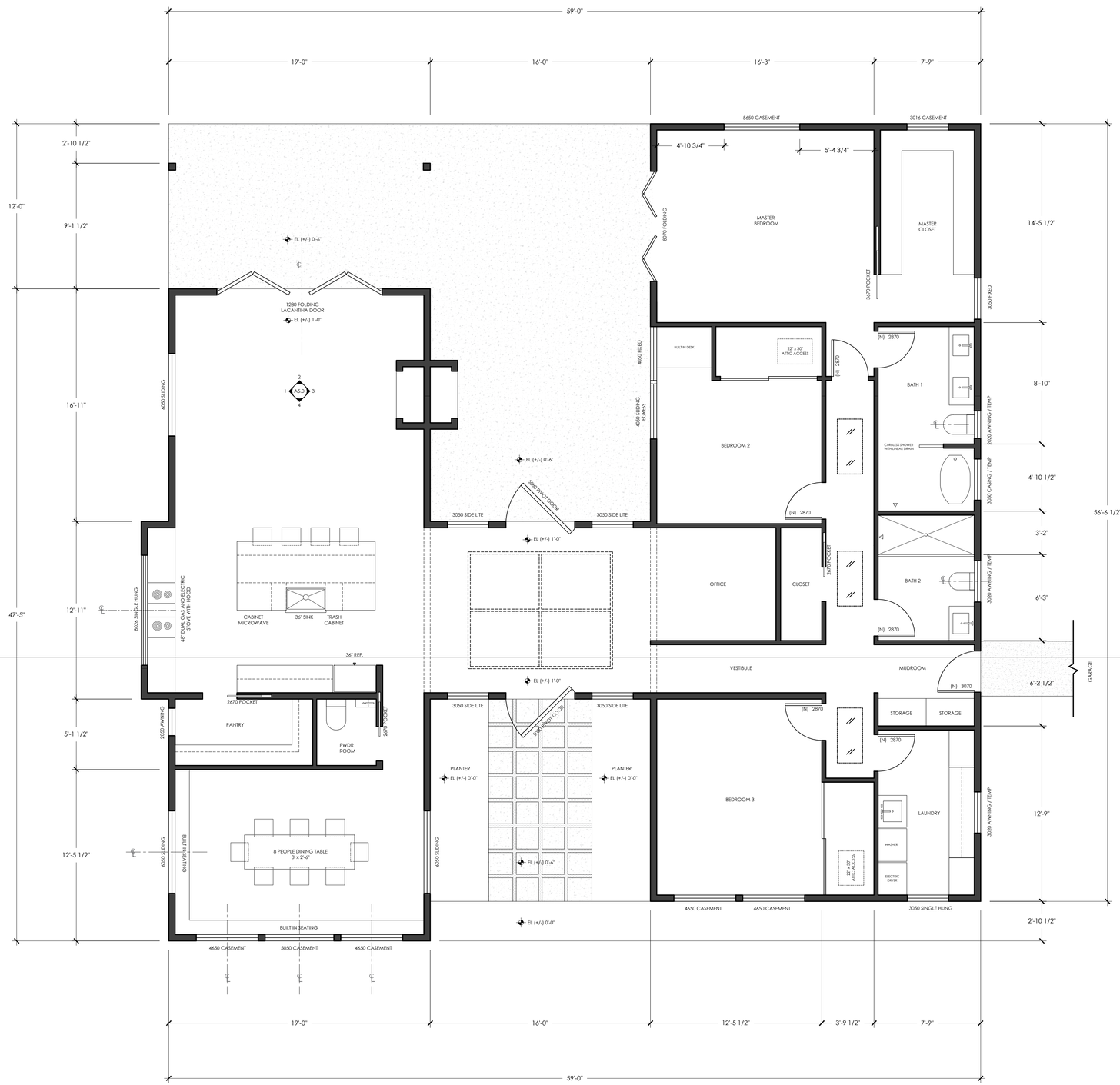
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SITE PLAN - TREE LOCATIONS

A1.1

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MAIN HOUSE FLOOR PLAN

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

0' 4' 8'

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MAIN HOUSE
FLOOR PLAN

A2.0

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GENERAL NOTE(S):

a. CONTRACTOR TO ASSURE ENTIRE RESIDENCE SMOKE DETECTORS AND CARBON MONOXIDE SENSORS ARE IN COMPLIANCE WITH 2019 CALIFORNIA BUILDING CODE, CALIFORNIA RESIDENTIAL CODE, AND THE CALIFORNIA FIRE CODE.
   - SMOKE DETECTORS CRC R-314.3 AND CRC R-314.4
   - CARBON MONOXIDE SENSORS CRC R-315.2 AND CRC R-315.4

MAIN HOUSE REFLECTED CEILING PLAN

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

0' 4' 8'

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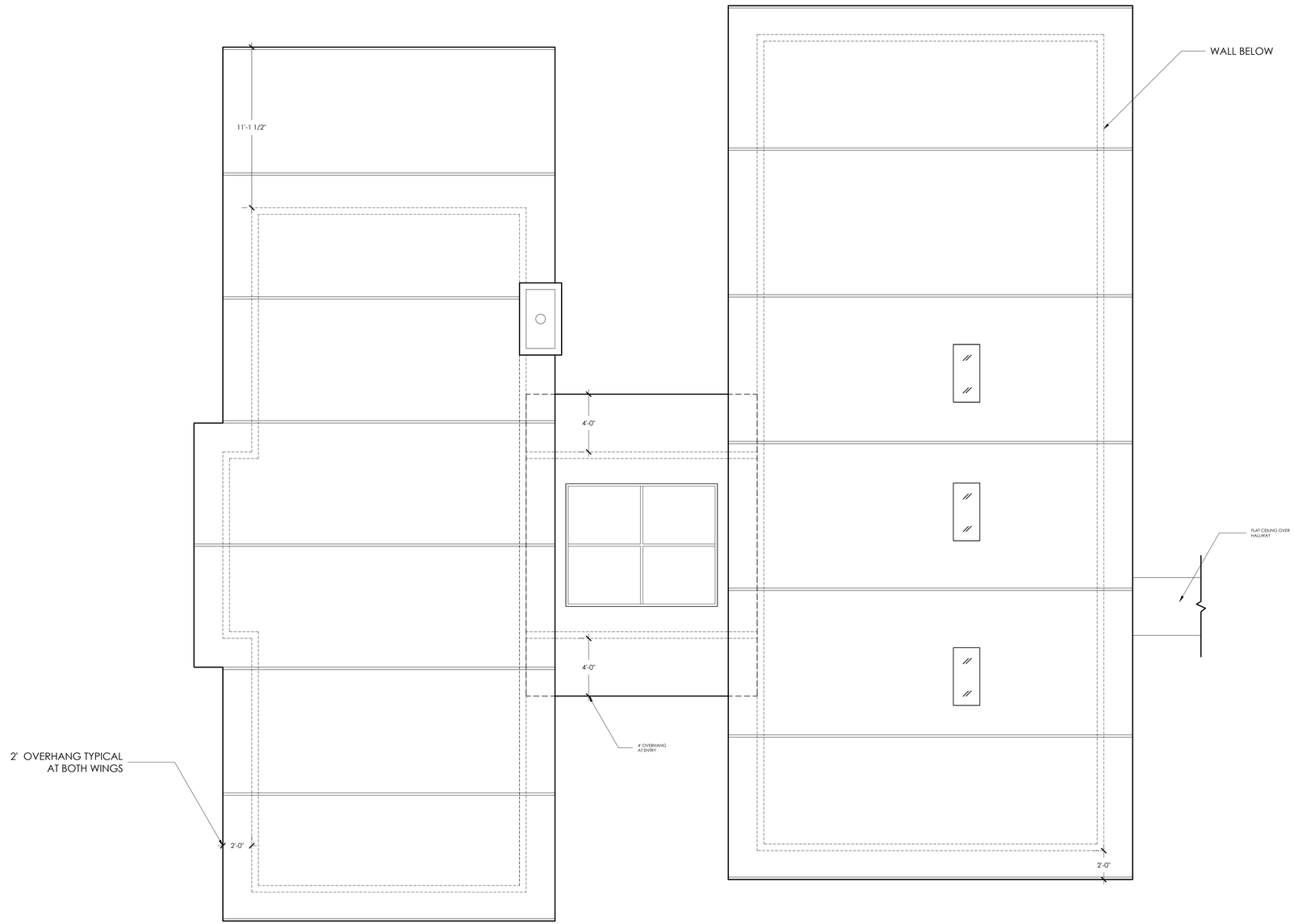
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MAIN HOUSE
RCP

A2.1

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GENERAL NOTE(S):

ROOF CLASS SHALL BE A MINIMUM OF CLASS B; NO EXCEPTIONS.

MAIN HOUSE ROOF PLAN

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

0' 4' 8'

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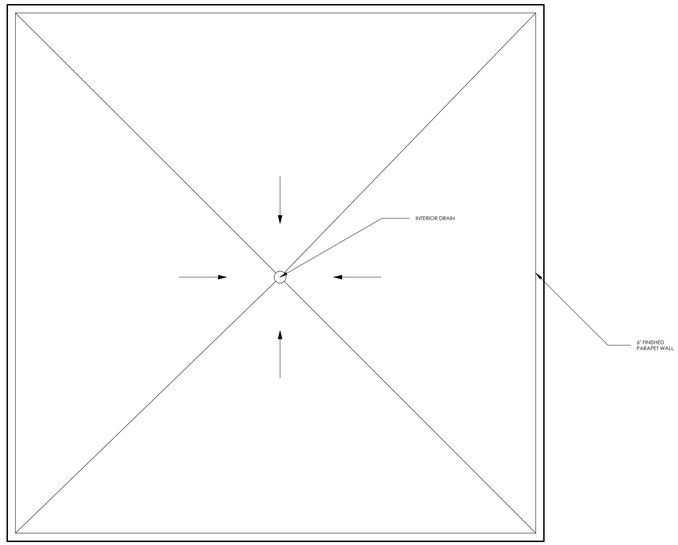
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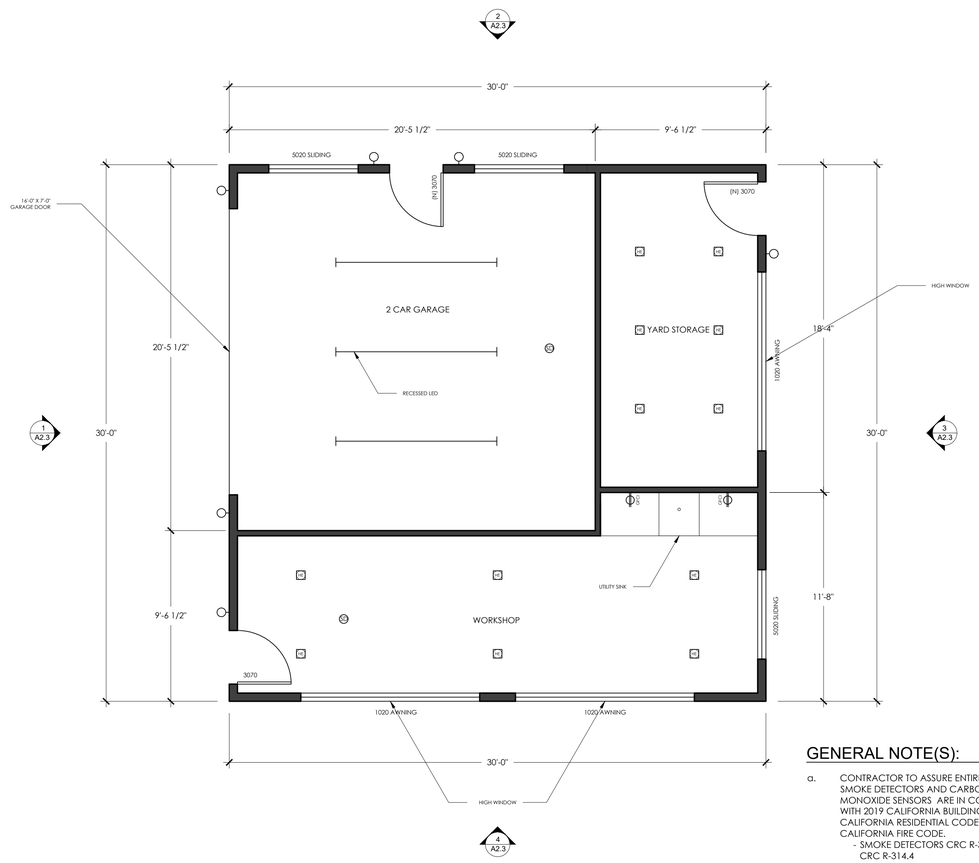
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MAIN HOUSE
ROOF PLAN

A2.2

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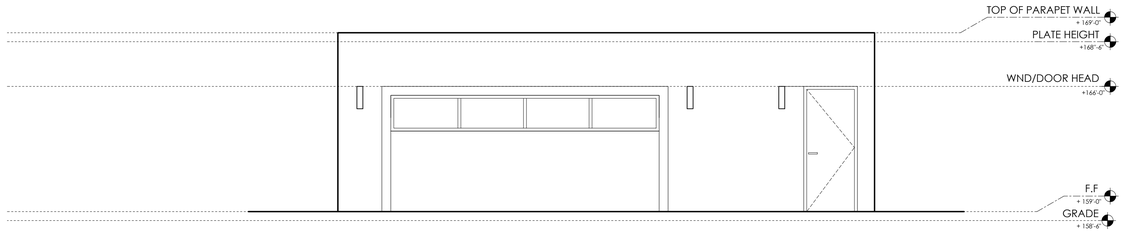


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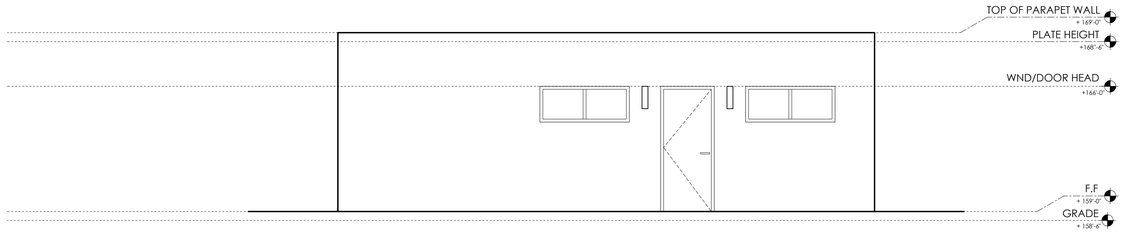
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   - CARBON MONOXIDE SENSORS CRC R-315.2 AND CRC R-315.4

GARAGE FLOOR PLAN + ELEVATIONS

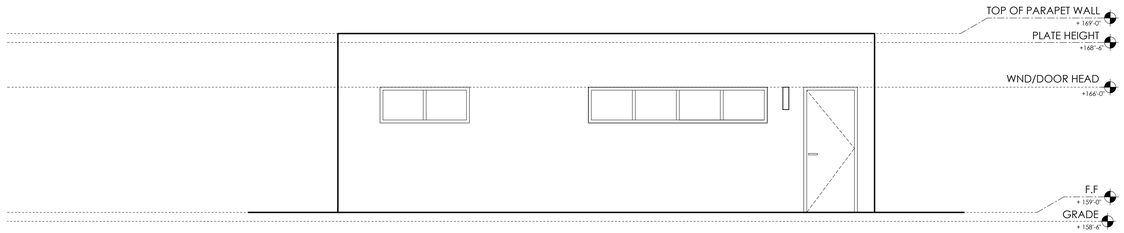
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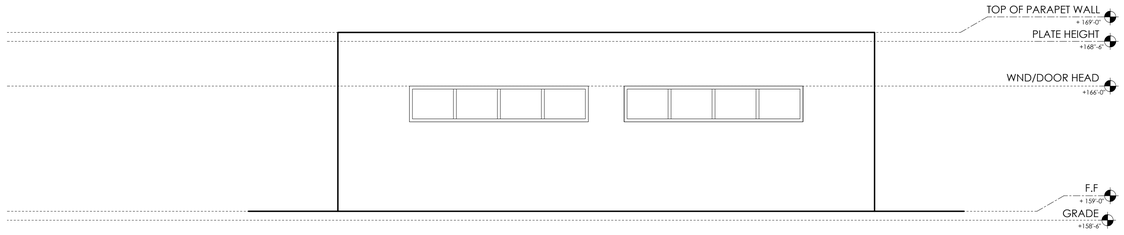
(1) WEST ELEVATION



(2) NORTH ELEVATION



(3) EAST ELEVATION



(4) SOUTH ELEVATION

0' 4' 8'

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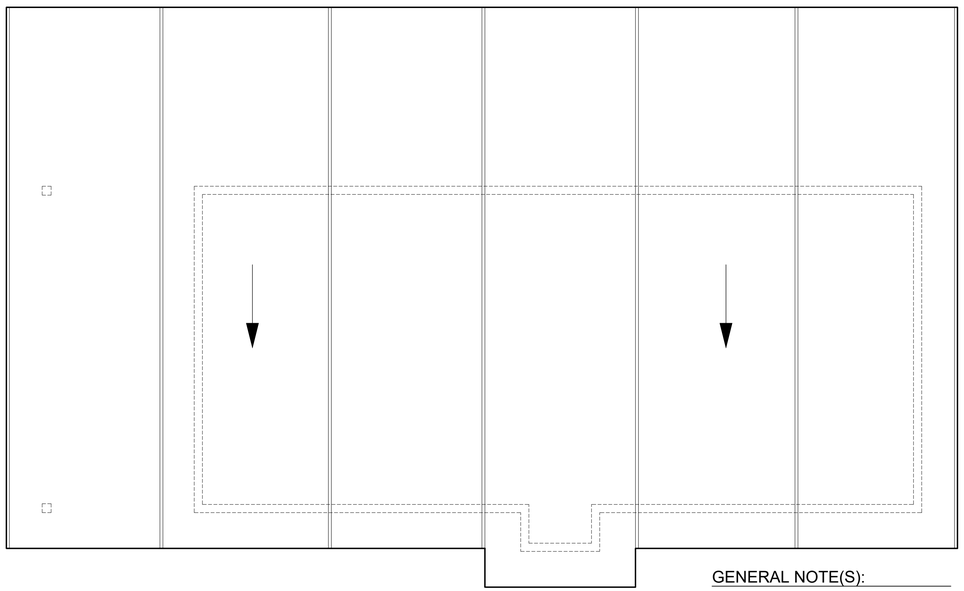
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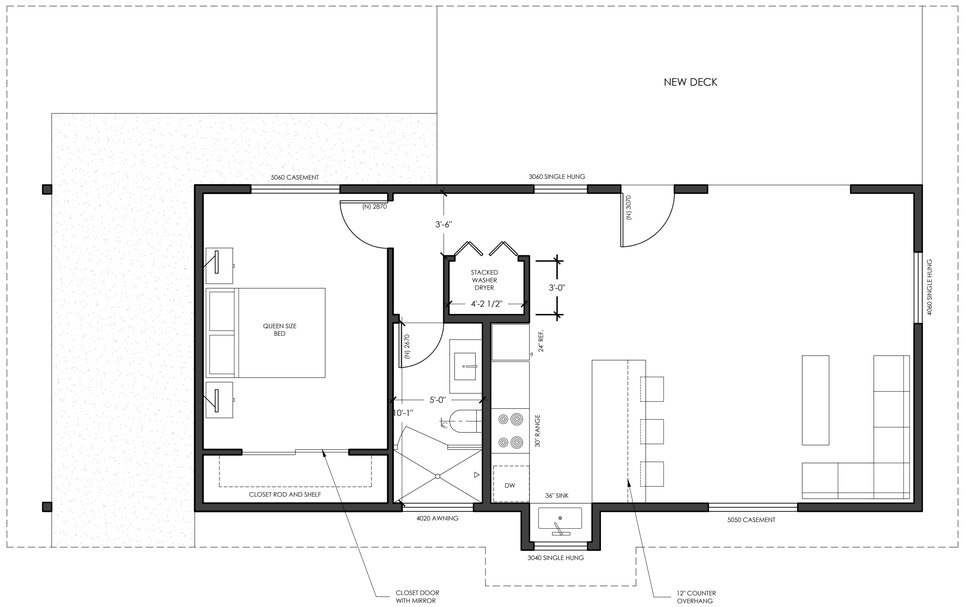
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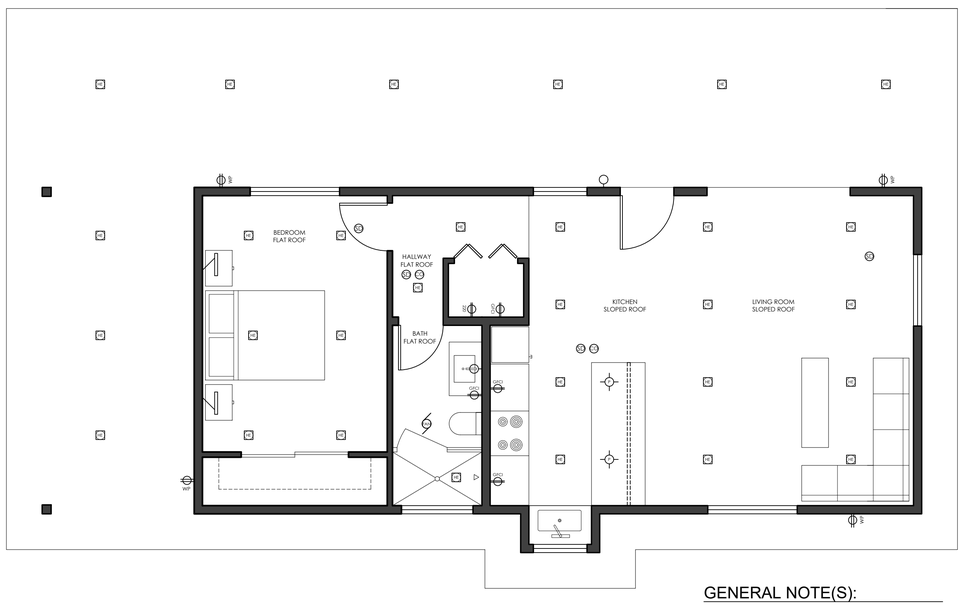
GARAGE PLAN
AND ELEVATIONS

A2.3

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GENERAL NOTE(S):

ROOF CLASS SHALL BE A MINIMUM OF CLASS B: NO EXCEPTIONS.

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   - CARBON MONOXIDE SENSORS CRC R-315.2 AND CRC R-315.4

ADU FLOOR PLAN RCP AND ROOF PLAN

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

0' 4' 8'

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CA 95004

REV.	DATE	DESCRIPTION
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PHASE: PERMIT SUBMITTAL

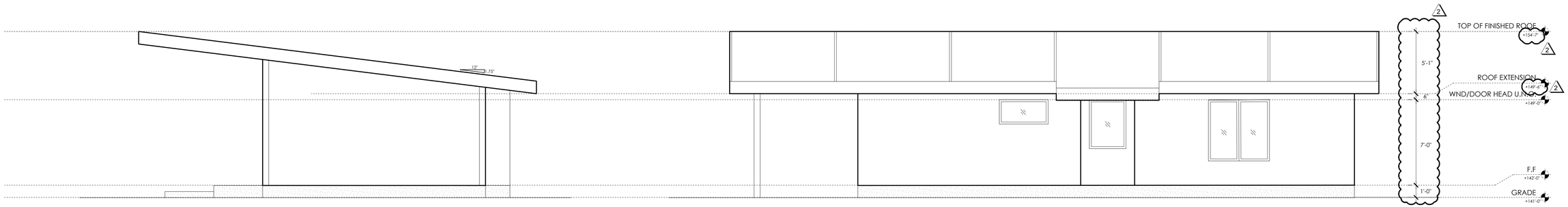
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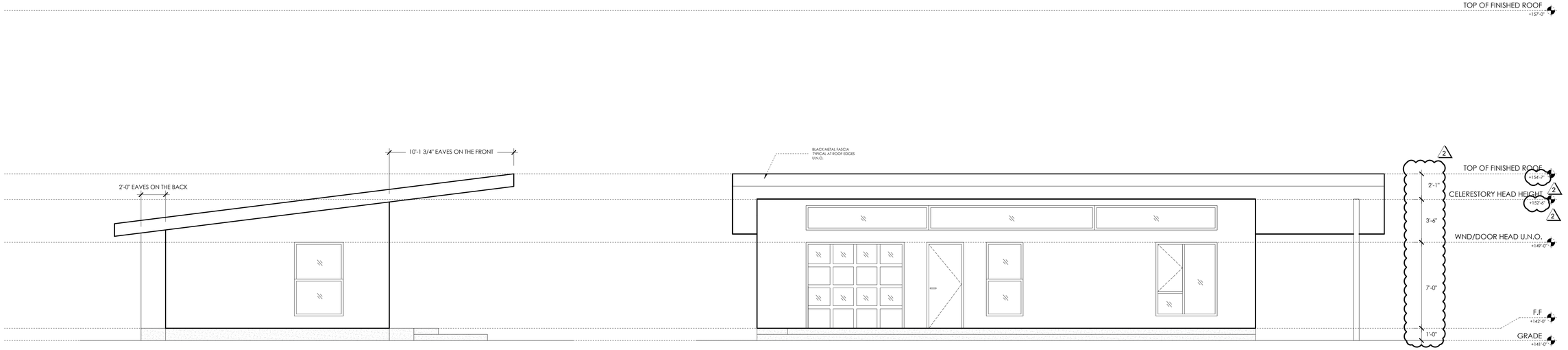
ADU FLOOR PLAN
RCP AND ROOF
PLAN

A2.4

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t: 408.332.1984
e: pedram@phd-arch.com





ADU ELEVATIONS

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

0' 4' 8'

LOT D
RESIDENCE

1909
SAN JUAN RD
AROMAS
CA 95004

REV.	DATE	DESCRIPTION
1	06.16.23	PLAN CHECK COMMENTS
2	05.19.24	PLAN CHECK COMMENTS

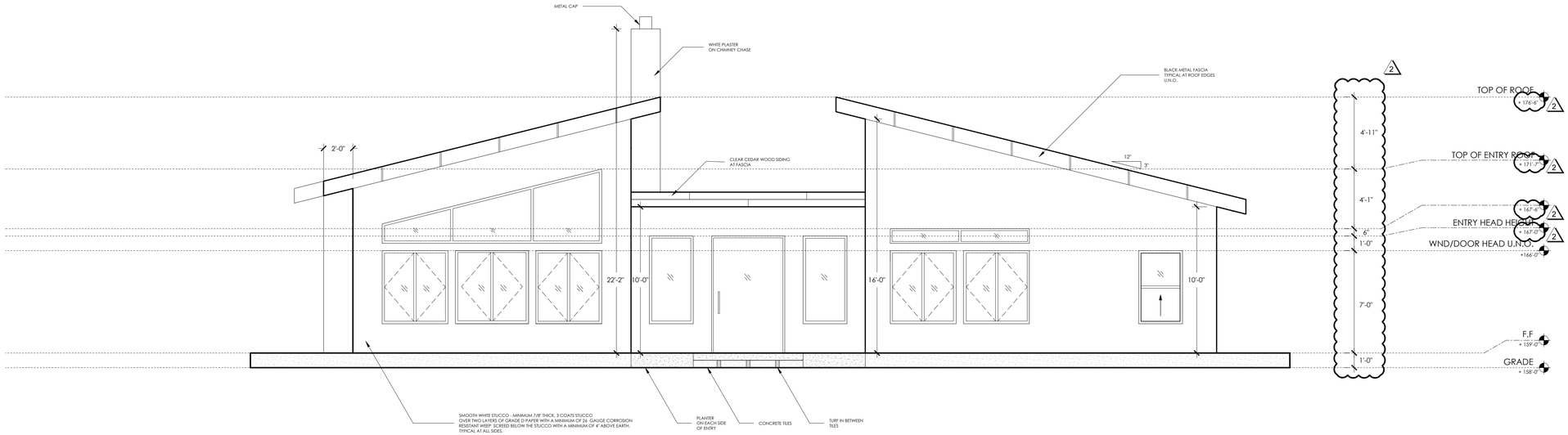
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DATE: 09-12-24

ADU ELEVATION

A2.5

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FRONT VIEW



BACK VIEW

ELEVATIONS

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

0' 4' 8'

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LOT A
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REV.	DATE	DESCRIPTION
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2	05.19.24	PLAN CHECK COMMENTS

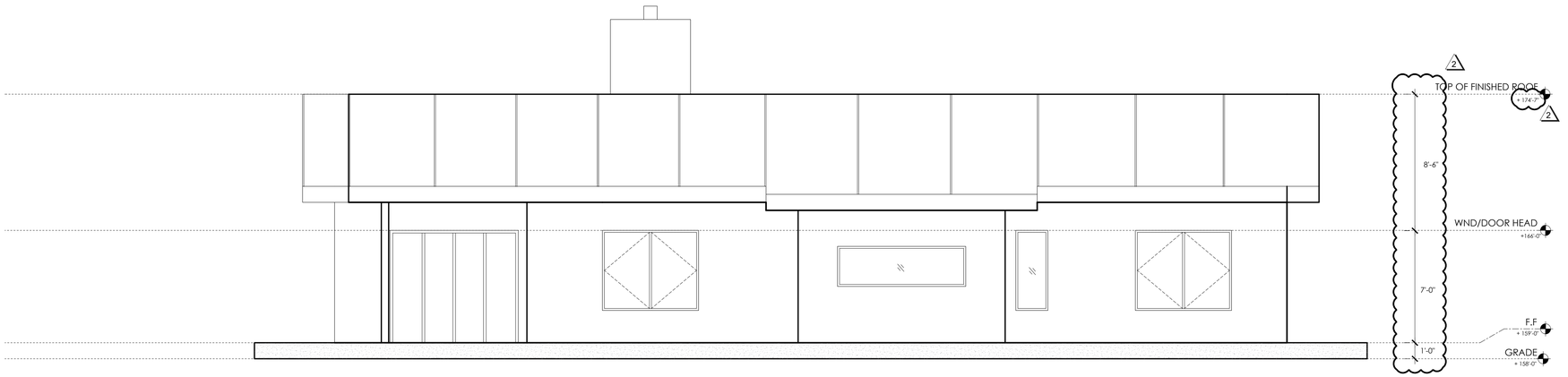
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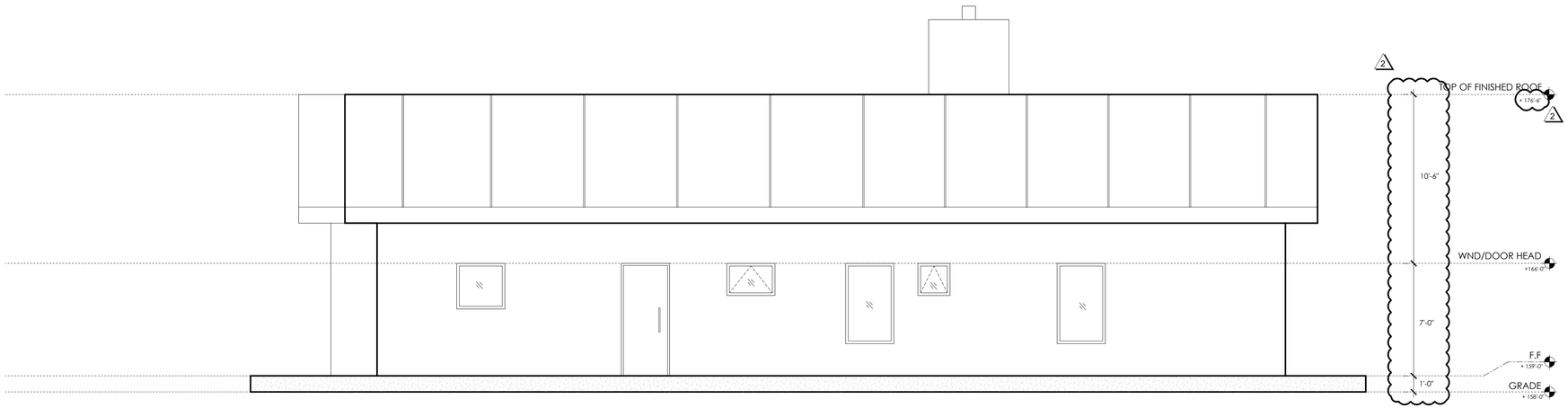
DATE: 09-12-24

MAIN HOUSE
ELEVATIONS

A3.0

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ELEVATIONS

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

0' 4' 8'

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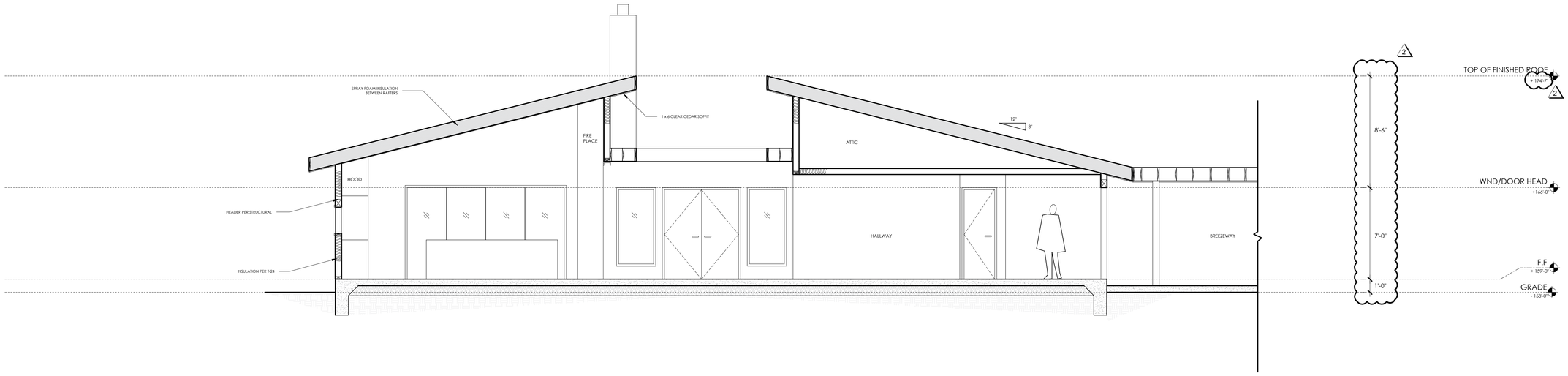
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MAIN HOUSE
ELEVATIONS

A3.1

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(1) SECTION

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

0' 4' 8'

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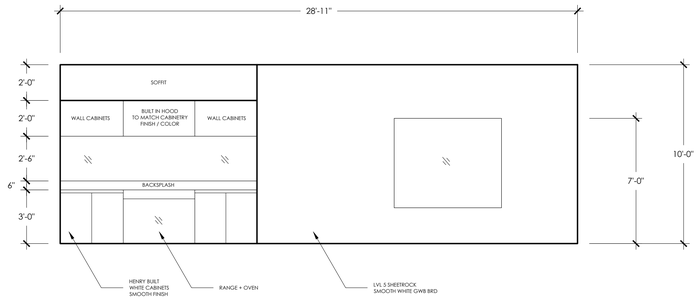
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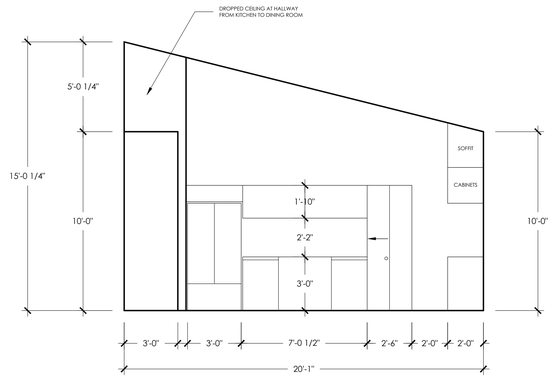
SECTIONS

A4.0

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1 INTERIOR ELEVATION - KITCHEN / LIVING



4 INTERIOR ELEVATION - KITCHEN

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LOT A
RESIDENCE

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SAN JUAN RD
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CA 95076

REV.	DATE	DESCRIPTION

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DATE: 09-12-24

INTERIOR DETAILS

A5.0

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CBC TABLE 2304.10.1 FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
ROOF		
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (2½" x 0.131") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (2½" x 0.131") or 2-3"x0.131" nails or 2-3" 14 gage staples	Each end, toenail
	2-16d common (3½" x 0.162") or 3-3"x0.131" nails or 3-3" 14 gage staples	Each nail
Flat blocking to truss and web filler	16d common (3½" x 0.162") @ 6" o.c. or 3"x0.131" nails @ 6" o.c. or 3"x14 gage staples @ 6" o.c.	Face nail
2. Ceiling joists to top plate	3-8d common (2½" x 0.131") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	Each joist, toenail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (3½" x 0.162") or 4-10d box (3"x0.128") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown	Face nail
4. Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5. Collar tie to rafter	3-10d common (3" x 0.148") or 4-10d box (3"x0.128") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown	Face nail
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10d common (3" x 0.148") or 3-16d box (3½"x0.135") or 4-10d box (3"x0.128") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown	Toenail[c]
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d box (3½"x0.162") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	End nail
	3-10d common (3½" x 0.148") or 3-16d box (3½"x0.135") or 4-10d box (3"x0.128") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown	Toenail
WALL		
8. Stud to stud (not at braced wall panels)	16d common (3½"x0.162") or	24" o.c. face nail
	10d box (3" x 0.128") or 3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail
9. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common (3½"x0.162") or	16" o.c. face nail
	16d box (3½"x0.135") or	12" o.c. face nail
	3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	12" o.c. face nail
10. Built-up header (2" to 2" header)	16d common (3½"x0.162") or	16" o.c. each edge, face nail
	16d box (3½"x0.135")	12" o.c. each edge, face nail
11. Continuous header to stud	4-8d common (2½" x 0.131") or 4-10d box (3"x0.128")	Toenail
12. Top plate to top plate	10d box (3" x 0.128") or 3"x0.131" nails or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
13. Top plate to top plate, at end joints	4-16d common (3½"x0.162") or 12-10d box (3"x0.128") or 12-3"x0.131" nails or 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint
14. Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d box (3½"x0.135") or 3"x0.131" nails or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common (3½"x0.162") or 3-16d box (3"x0.135") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16. Stud to top or bottom plate	4-8d common (2½" x 0.131") or 4-10d box (3"x0.128") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown or	Toenail
	2-16d common (3½" x 0.162") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	End nail
17. Top or bottom plate to stud	2-16d common (3½"x0.162") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	End nail
18. Top plates, laps at corners and intersections	2-16d common (3½"x0.162") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	Face nail
19. 1"brace to each stud and plate	2-8d common (2½" x 0.131") or 2-10d box (3"x0.128") or 2-3"x0.131" nails or 2-3" 14 gage staples, 7/16" crown	Face nail
20. 1"x6" sheathing to each bearing	2-8d common (2½" x 0.131") or 2-10d box (3"x0.128")	Face nail
21. 1"x8" and wider sheathing to each bearing	3-8d common (2½" x 0.131") or 3-10d box (3"x0.128")	Face nail
FLOOR		
22. Joist to sill, top plate, or girder	3-8d common (2½" x 0.131") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	Toenail
23. Rim joist, band joist, or blocking to top plate, sill or other framing below	8d common (2½" x 0.131") or 10d box (3"x0.128") 3"x0.131" nails or 3" 14 gage staples, 7/16" crown	6" o.c. toe nail
24. 1"x6" subfloor or less to each joist	2-8d common (2½" x 0.131") or 2-10d box (3"x0.128")	Face nail
25. 2" subfloor to joist or girder	2-16d common (3½" x 0.162")	Face nail
26. 2" planks (plank & beam - floor & roof)	2-16d common (3½" x 0.162")	Each bearing, face nail
26. 2" planks (plank & beam - floor & roof)	2-16d common (3½" x 0.162")	Each bearing, face nail
27. Built-up girders and beams, 2" lumber layers	20d common (4"x0.192")	32" o.c., face nail at top and bottom staggered on opposite sides
	10d box (3"x0.128") or 3"x0.131" nails or 3" 14 gage staples, 7/16" crown	24" o.c., face nail at top and bottom staggered on opposite sides
	And: 2-20d common (4" x 0.192") or 3-10d box (3"x0.128") or 3-3"x0.131" nails or 3-3" 14 gage staples, 7/16" crown	Ends and at each splice, face nail
28. Ledger strip supporting joists or rafters	3-16d common (3½" x 0.162") or 4-10d box (3"x0.128") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown	Each joist or rafter, face nail
29. Joist to band joist or rim joist	3-16d common (3½" x 0.162") or 4-10d box (3"x0.128") or 4-3"x0.131" nails or 4-3" 14 gage staples, 7/16" crown	End nail
30. Bridging or blocking to joist, rafter or truss	2-8d common (2½" x 0.131") or 2-10d box (3"x0.128") or 2-3"x0.131" nails or 2-3" 14 gage staples, 7/16" crown	Each end, toe nail
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLE BOARD WALL SHEATHING TO FRAMING[c]		
		EDGES (inches) / INTERMEDIATE SUPPORTS (inches)
31. 3/8" - 1/2"	6d common or deformed (2" x 0.113") (subfloor and wall)	6 / 12
	8d box or deformed (2½" x 0.113") (roof)	6 / 12
	2⅜" x 0.113" nail) (subfloor and wall)	6 / 12
	1¾" 16 gage staple, 7/16" crown (subfloor and wall)	4 / 8
	2⅜"x0.113" nail (roof)	4 / 8
	1¾" 16 gage staple, 7/16" crown (roof)	3 / 6
32. 19/32" - 3/4"	8d common (2½" x 0.113") or 6d deformed (2"x0.113")	6 / 12
	2⅜"x0.113" nail or 2" 16 gage staple, 7/16" crown	4 / 8
33. 7/8" - 1¼"	10d common (3" x 0.148") or 8d deformed (2½"x0.131")	6 / 12
OTHER EXTERIOR WALL SHEATHING		
34. ½" fiberboard sheathing[b]	1½" galvanized roofing nail (7/16" head diameter) or 1¾" 16 gage staple with 7/16" or 1" crown	3 / 6
35. 25/32" fiberboard sheathing[b]	1¾" galvanized roofing nail (7/16" head diameter) or 1½" 16 gage staple with 7/16" or 1" crown	3 / 6
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING		
36. ¾" and less	8d common (2½" x 0.131") or 6d deformed (2"x0.113)	6 / 12
37. 7/8" - 1"	8d common (2½" x 0.131") or 8d deformed (2½"x0.113)	6 / 12
38. 1⅛" - 1¼"	10d common (3" x 0.148") or 8d deformed (2½"x0.113)	6 / 12
PANEL SIDING TO FRAMING		
39. ½" or less	6d corrosion-resistant siding (1⅞"x0.106") or 6d corrosion-resistant casing (2"x0.099")	6 / 12
40. 5/8"	8d corrosion-resistant siding (2⅜"x0.128") or 8d corrosion-resistant casing (2½"x0.113")	6 / 12
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLE BOARD WALL SHEATHING TO FRAMING[c]		
41. ¼"	4d casing (1½"x0.080") or 4d finish (1½"x0.072")	6 / 12
42. 3/8"	6d casing (2"x0.099") or 6d finish (Panel supports at 24 inches)	6 / 12

STRUCTURAL SPECIFICATIONS

GENERAL

These notes are general and apply to the entire project except where there are specific indications to the contrary.

Construction shall meet the requirements of the latest edition of the 2019 California Building Code. The above shall govern except where other applicable codes or the following notes are more restrictive.

Structures have been designed for operational loads on completed structures. During construction, structures and parts of the structures shall be protected and/or supported by bracing and shoring wherever excessive loading may occur.

The contractor alone is responsible for job site safety. Site review of the construction by the Architect and/or Engineer, if any, is to determine conformance with the plans and specifications. It does not encompass safety procedures or operations.

It is the responsibility of the Contractor and Subcontractor to notify the Owner and the Architect and/or Engineer of any conditions to be found in the field to be different from those shown on the plans, or of errors or omissions on the plans, which might affect the completion of the project.

Lay out all structural work by referring to dimensions and elevation notes on the architectural plans. Do not scale structural drawings. Work details dimensions form the controlling surface points and actual material dimensions.

Larger scale details take precedence over smaller scale details.

Verify type and size of metal work against appropriate member size before ordering hardware.

Hardware notes is Simpson "Strong Tie". Hardware of similar construction and equal ICC values is acceptable.

For hardware use the maximum size bolts and nails specified in manufacturer's catalog. Nail all holes. Use special short-length nails supplied by manufacturer where common nails will exceed the width of the framing member.

In case of conflict between structural and architectural plans, details, and/or specifications, the more restrictive condition shall apply and notify applicable parties.

CONCRETE

All concrete work shall conform to the requirements of the latest edition of the ACI building Code (ACI-318) and the California Building Code (CBC). Detailing, fabrication, and erection of reinforcing bars shall be in accordance with the latest edition of the Manual of Standard Practices (ACI-315).

Aggregate for the concrete mix shall conform to ASTM-C33. Cement shall conform to ASTM-C150, Type I or II.

Concrete shall have an ultimate compressive strength of 2500 psi (28 day strength) with a 4" slump (tolerance 1").

Reinforcing steel shall be deformed bars (ASTM A615) Grade 40, except that No. 5 or larger bars shall be Grade 60. Welded wire fabric shall be per ASTM 185.

Reinforcing steel in grade beams shall be securely fastened in place horizontally and vertically prior to pouring.

Lap bars 48 diameters at splices. Hook bars 24 diameters at corners.

Bend down top bars at ends of grade beams, such as at garage doors.

Provide a minimum of two anchor bolts per sill piece, with one within 12" of each end.

Concrete floor shall be screeded, wood floated and then given a steel trowel finish.

Provide foundation vents equal in area to 1/150 of underfloor area. Locate vents on opposing sides where possible

WOOD

Unless otherwise noted, framing lumber shall be graded as follows:
Framing lumber (rafters, joists, purlins, etc.): DF No.2
Beams and headers: DF. No. 1
Studs: Stud grade
Foundation sills: Pressure-treated (DF)
Exposed decking: California Redwood No.1

All Plywood shall be CDX OR OSB U.O.N. Minimum thickness shall be ½" on roof, ¾" T & G on floor and ½" on walls (where noted). Use panel clips at unsupported edges of built-up roofs. Minimum span of plywood sheathing in each direction shall not be less than 24".

Glu-lam beams shall be Grade 24F-V4, standard camber (AITC-103) U.O.N. Provide compliance certificate to building Department. Glu-lam beams shall have metal hardware connections to posts (BC post cap minimum).

All new framing lumber shall have 19% maximum moisture content at time of installation and fabrication.

Wall and floor framing shall not be enclosed when the framing member exceeds 19 percent moisture content. [CGBSC 4.505.3]

FRAMING

All framing shall conform to chapter 23 of the 2019 California Building Code. Nailing shall be per CBC Table 2304.10.1. All nails and hardware exposed to the weather shall be galvanized. Nails shall be common wire nails U.O.N.

All bolts for wood connections shall be conform to ASTM A307 with heavy hex heads. Malleable iron washer shall be used at all places where the bolt head or nut would otherwise bear or be in contact with the wood surface. Bolt holes in wood members shall not be drilled more than 1/16" larger than the bolt diameter.

Balloon frame all walls with sloping ceilings or with raised ceilings. Maximum stud height for 2x4 stud is 10'-0" and for 2x6 stud 14'-0". Provide fire blocking such that maximum concealed space is 10'-0".

Block under all perpendicular partitions. Double joists (min.) under all parallel partitions.

Bolt multiple joists together with ½" machine bolts at 24" o.c. Alternate bolts between the upper 1/4 and lower 1/4 of the joist depth. Nail double joists with 16d nails at 12" o.c. (similar pattern). Nail double or multiple studs with 16d at 12" o.c. (similar pattern).

Provide lateral support at ends of joist and rafters by blocking, rim joists or hangers. Block between joists and rafters over all supports.

Microlam (LVL) floor joist or beam shall have grade 1.9 DF/LP/WH
Fb=2600 psi, Fv=285 psi, MOE=1.9x10^6 psi, ICC ESR-1387

Parallam (PSL) beam shall have grade 2.0 DF/SP/WH/YP OR YP/RM
Fb=2900 psi, Fv=290 psi, MOE=2.0x10^6 psi, ICC ESR-1387

Anthony Power beam (APB) beam shall have grade 3.0
Fb=3000 psi, Fv=300 psi, MOE=2.1x10^6 psi, ICC ESR-1104

All wood members in contact with concrete or masonry foundation surface shall be pressure treated with a preservative.

Solid sawn members in floors shall be placed with crowns and any major knots upward.

Posts shall be continuous from beam or header to floor or sill below. Provide at least a double stud at all bearing points under beams.

All headers 4x12 U.O.N.

Lap top plates 48". Nail with 16d nails.

Maximum allowable notch is 7/8" in 2x4 studs and 1-3/8" in 2x6 studs. Maximum allowable bored hole is 1-3/8" in 2x4 studs and 2-1/8" in 2x6 studs with at lease 5/8" clear to the edge of the stud.

Use 1x6 collar ties at 48" o.c. wherever possible. Collar ties shall be placed as low as feasible.

Provide A35 anchor from rafter to top plate at 48" o.c. U.O.N.

Unless otherwise noted, stagger all plywood joints in floor and roof sheathing and lay face grain perpendicular to supports. Minimum nailing for roof sheathing shall be 8d common at 6" along support edges and 12" field. Nail perimeter of diaphragm with 8d common at 4" o.c. Minimum nailing for floor sheathing shall be 10d common at 6" o.c. along supported edges and 10" field. Nail perimeter of diaphragm with 10d common at 4" o.c.

Vertical plywood sheathing shall be blocked at all edges and shall be extended from top plate to sill of wall. Where possible, butt vertical sheathing on floor joists or blocking, leaving 3/8" gap for shrinkage. Vertical sheathing shall continue to the foundation sill if required on first floor walls. Minimum nailing is 8d at 6" edges and 12" field.

Where plywood shear walls are interrupted by floor, provide adequate shear transfer from sole plate to blocking or joist below and from the blocking to the top plate of a wall continuation below, if any, by providing 16d common nails at the same spacing as the shear wall edge nailing U.O.N. Add 2x nailers or metal anchors as necessary.

Minimum gypsum board nailing is 5d Parkerhead nail (6d for 5/8" board) at 7" o.c. edges and field.

Holdowns are attached to 4x studs at the ends of shear walls and extend to either 4x studs or framing below or to the foundation bolts (see detail for size). Nail all double studs at holdowns together with 16d nails at 8" o.c. Where cripple walls occurs below the lower floor, install an MST172 strap holdown from the shear wall to a 4x cripple stud and a foundation holdown from the 4x cripple stud to the foundation, or bolt directly to the foundation bolt using threaded rod. The contractor shall carefully review holdown bolt embedment requirements in the Simpson Strong-Tie catalog.

Where solid sawn wood members are framed into glu-lam members in floors, the tops of these members shall be held 3/8" above glu-lams.

Cantilever deck joists shall be notched with hand tools to avoid overcutting.

Fasteners for pressure-preservative treated and fire-retardant treated wood shall be of hot-dipped zinc coated galvanized, stainless steel, silicon bronze or copper. CBC 2304.9.5

Top plate splices, see detail 1/S0.2 for splice requirements.

SOILS

All flatworks and finish grades should be sloped at a minimum 2% gradient (5% gradient for the first 10 feet) away from the foundations and structures toward an adequate discharge point to provide rapid removal of surface and runoff water.

SOILS ENGINEER:
Soil Survey Group, Inc.
Job No. 7794 Dated: April 2, 2021
Phone No. 831-757-2172

SPECIAL INSPECTION SCHEDULE

☒ Wood shear walls, including nailing, bolting, anchoring where the fastener spacing of the sheathing is 4" o.c. or less.
perform by engineer of record

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

For SI: 1 inch = 25.4

a. Nails spaced at 6 inches at intermediate supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.

A & B	ABOVE AND BELOW	MEZZ.	MEZZANINE
A.A.	ATTIC ACCESS	MFG.	MANUFACTURING
A.B.	ANCHOR BOLTS	M.I.	MALLEABLE IRON
ABV	ABOVE	MIN	MINIMUM
ADJ	ADJACENT	MTD.	MOUNTED
A.F.F.	ABOVE FINISH FLOOR	(N)	NEW
A.P.A.	AMERICAN PLYWOOD ASSO.	N	NORTH
ARCH	ARCHITECTURAL	N/A	NOT APPLICABLE
B.F.E.	BASE FLOOD ELEVATION	NAIL'G	NAILING
B.F.W.	BALLOON FRAMED WALL	N.E.	NORTHEAST
BLDG.	BUILDING	N.T.S.	NOT TO SCALE
BLK'G	BLOCKING	N.W.	NORTHWEST
BM.	BEAM	O.C.	ON CENTER
BN.	BOUNDARY NAILING	O.H.	OPPOSITE HAND
BOTT	BOTTOM	OPEN'G	OPENING
BRG	BEARING	OPT.	OPTIONAL
C	CAMBER	O.S.B.	OREGON STRAND BOARD
C.A.	CRAWL SPACE ACCESS	PC'S	PIECES
CANT.	CANTILEVER	P.E.N.	PLYWOOD EDGE NAILING
C.J.	CEILING JOIST	PERIM.	PERIMETER
CLG	CEILING	PFA	POST FROM ABOVE
CTR	CENTER	P.H.	PLATE HEIGHT
CLR	CLEARANCE	PLT.	PLATE
CONC	CONCRETE	PLC'S	PLACES
C.M.U.	CONC. MASONARY UNIT	PLY'D	PLYWOOD
CONN	CONNECT, CONNECTION	P.T	PRESSURE TREATED
CONST	CONSTRUCTION	(R)	REMODEL
CONT	CONTINUOUS	RAF.	RAFTERS
CS'K	COUNTERSINK	RDWD.	REDWOOD
C.T.	COLLAR TIE	REQ'D	REQUIRED
DBL.	DOUBLE	REQ'T	REQUIREMENT
DET	DETAIL	RET.	RETAINING
D.F.	DOUGLAS FIR	RF.	ROOF
DIA	DIAGONAL	S	SOUTH
DIAPH	DIAPHRAGM	SFA	STRAP FROM ABOVE
DIM	DIMENSION	S.A.D.	SEE ARCH. DRW'GS
DIR	DIRECTION	S.G.E.	STRUCTURAL GABLE END
D.R.	DOOR	S.B.	STRONG BACK
D.F.	DOOR FRAME	SCH.	SCHEDULE
DWG	DRAWING	S.E.	SOUTHEAST
E	EAST	SEC.	SECTION
EA	EACH	SIM.	SIMILAR
E.F.	EACH FACE	SHT.	SHEET
ELEV	ELEVATION	SHT'G	SHEATHING
EMB	EMBEDMENT	SIMP.	SIMPSON COMPANY
E.N.	EDGE NAILING	S.L.	SKYLIGHT
EQ.	EQUAL	SPC'G	SPACING
E/S	EACH SIDE	SPECS	SPECIFICATIONS
E.W.	EACH WAY	SQ.	SQUARE
E.W.E.F.	EACH WAY EACH FACE	S.S.D.	SEE STR. DRW'GS
EXP	EXPANSION	S.T.	SUN TUNNEL
EX.	EXISTING	STL	STEEL
F.F.	FINISH FLOOR	STR.	STRUCTURAL
F.H.	FULL HEIGHT	S.W.	SOUTHWEST
F.H.O.B.	FULL HEIGHT OF BLDG.	S.W.S.	SHEAR WALL SCHEDULE
F.W.O.B.	FULL WIDTH OF BLDG.	S.W.T.	SHEAR WALL TYPE
FIN	FINISH	T&B	TOP AND BOTTOM
FL.	FLUSH	T&G	TONGUE AND GROOVE
FLR	FLOOR	T.B.F.V.	TO BE FIELD VERIFIED
F.J.	FLOOR JOIST	T.D.	TIEDOWN OR HOLDOWN
F.L.O.M.	FULL LENGTH OF MEMBER	T.D.S.	TIEDOWN SCHEDULE
F.N.	FACE NAILED	T.N.	TOE NAIL
F.O.S.	FACE OF STUDS	T.O.	TOP OF
F.O.C.	FACE OF CONCRETE	T.O.C.	TOP OF CONCRETE
FNDN.	FOUNDATION	T.O.S.F.	TOP OF SUB-FLOOR
F.P.	FIREPLACE	T.O.W	TOP OF WALL
FRAM'G	FRAMING	TOT	TOTAL
FT.	FEET	T.P.	TOP PLATE
FTG.	FOOTING	TYP.	TYPICAL
GALV.	GALVANIZED	U.N.O.	UNLESS NOTED OTHERWISE
GAR.	GARAGE	U.O.N.	UNLESS OTHERWISE NOTED
GEN.	GENERAL	V.I.F.	VERIFY IN FIELD
G.L.B.	GLU-LAM BEAM	W	WEST
GR.	GRADE	WDW	WINDOW
H.D.	HOLDOWN	W.F.	STEEL WIDE FLANGE
HDR.	HEADER	W.W.F.	WELDED WIRE FABRIC
HT.	HEIGHT	W/	WITH
INFO.	INFORMATION	W/O	WITHOUT
INT.	INTERIOR	@	AT
J.H.	JOIST HANGER		FEET
JNT	JOINT	"	INCHES
JST	JOIST	||	PARALLEL
K.P.	KING POST	⊥	PERPENDICULAR
LOC.	LOCATION	&	AND
MANU.	MANUFACTURER	Φ	DIAMETER
MAT'L	MATERIAL	CL	CENTER LINE
MAX.	MAXIMUM	U	HANGER
M.B.	MACHINE BOLT	L	STEEL ANGLE

PROJECT SEISMIC DESIGN DATA

A. SEISMIC IMPORTANCE FACTOR, I =1.0 AND OCCUPANCY CATEGORY = II
B. SITE COORDINATES: 36.8875° NORTH, -121.6623° WEST
C. MAPPED SPECTRAL RESPONSE ACCELERATIONS, Ss =2.179 AND S_1 =0.889
D. SITE CLASS = D
E. SPECTRAL RESPONSE COEFFICIENTS, S_{DS} =1.74 AND S_{D1} =1.01
F. SEISMIC DESIGN CATEGORY = E
G. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S) = WOOD PANEL SHEAR WALL
H. SEISMIC RESPONSE COEFFICIENTS(S) Cs =0.348
I. RESPONSE MODIFICATION FACTOR(S) R = 6.5
J. ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE
K. REDUNDANCY FACTOR Rho=1.3 AND OVER STRENGTH FACTOR=2.5

PROJECT WIND DESIGN DATA

A. BASIC WIND SPEED (3-SECOND GUST) MILES PER HOUR = 110 (Vu STRENGTH)
B. WIND IMPORTANCE FACTOR, I =1.0 AND OCCUPANCY CATEGORY = II
C. WIND EXPOSURE = C
D. INTERNAL PRESSURE COEFFICIENT, GC_{pi} = 0.18
E. DESIGN WIND PRESSURE = 19.25 PSF @ HT.= 15 FT. & 19.47 PSF @ HT.=16 FT.

PROJECT ROOF, CEILING, FLOOR, AND WALL LOADS

ROOF LIVE LOAD= 20 PSF, ROOF DEAD LOAD= 14 PSF
CEILING LIVE LOAD= 5 PSF, CEILING DEAD LOAD= 2 PSF
FLOOR LIVE LOAD= 40 PSF, FLOOR DEAD LOAD= 10 PSF OR 20 PSF
EXTERIOR WALLS DEAD LOAD=17 PSF, INTERIOR WALLS DEAD LOAD= 10 PSF

BAR SIZES OF REINFORCEMENT FOR REINFORCED CONCRETE

IMPERIAL BAR SIZE	METRIC SIZE	NOMINAL DIAMETER (in)	NOMINAL DIAMETER (mm)	NOMINAL AREA (in²)	NOMINAL AREA (mm²)
#3	#10	0.375=3/8	9.525	0.11	71
#4	#13	0.500=4/8	12.7	0.20	129
#5	#16	0.625=5/8	15.875	0.31	200
#6	#19	0.750=6/8	19.05	0.44	284
#7	#22	0.875=7/8	22.225	0.60	387
#8	#25	1.00=8/8	25.4	0.79	509
#9	#29	1.128	28.65	1.00	645
#10	#32	1.270	32.26	1.27	819

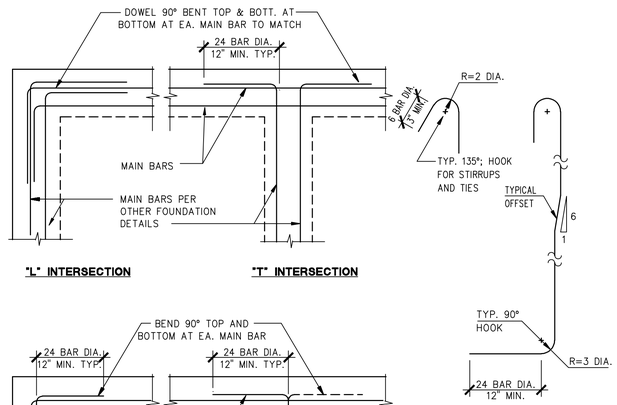
REGISTERED PROFESSIONAL ENGINEER
JOSEPH D. NGUYEN
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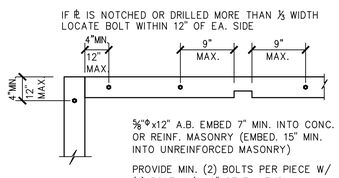
REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D
SHEET NO:	S0.1
OF . SHEETS	



HORIZONTAL SPLICE SCHED.		
BAR SIZE	BAR DIA.	48 DIA.
#3	0.375"	1'-6"
#4	0.5"	2'-0"
#5	0.625"	2'-6"
#6	0.75"	3'-0"
#7	0.875"	3'-6"

7 — TYP. HORIZONTAL CONCRETE REINFORCEMENT



⅝"ϕx12" A.B. EMBED 7" MIN. INTO CONC. OR REINF. MASONRY (EMBED. 15" MIN. INTO UNREINFORCED MASONRY)

PROVIDE MIN. (2) BOLTS PER PIECE W/ (1) BOLT W/IN 9" OF EA. END.

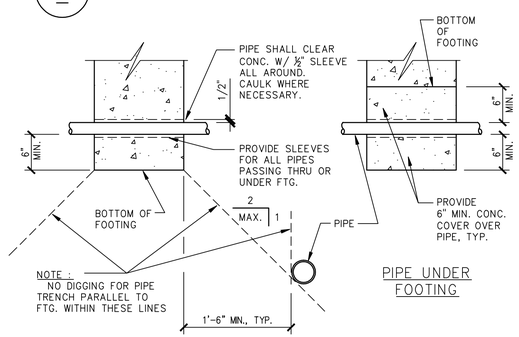
SPACE A.B.'s AT 48" O.C. FOR ONE STORY AND 48" O.C. AT TWO STORY BUILDING AREAS.

A NUT AND 3"x3"x¼" STL. PLATE WASHER ON EA. BOLT

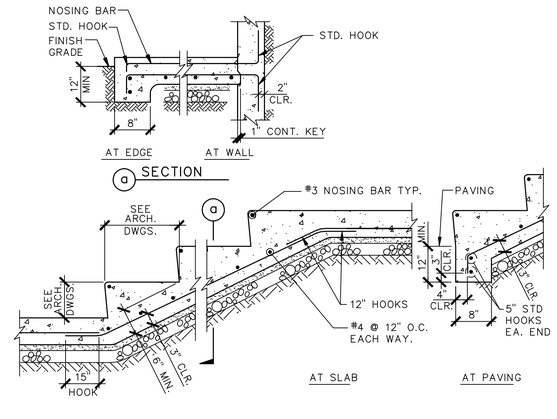
MUDSILL SHALL BE 3x P.T.D.F. No. 1 (U.O.N.)

EDGE OF THE SILL PLATE WASHER SHALL BE LOCATED ½" MAXIMUM FROM THE FACE OF THE WALL SHEATHING PER ANSI/AF&PA SDPWS-2008 SECTION 4.4.1.6.2.A

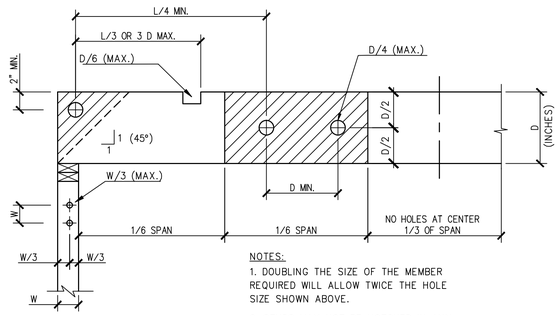
8 — SILL PLATE DETAIL



9 — PIPE THRU FTG. AND PARALLEL TO FTG.



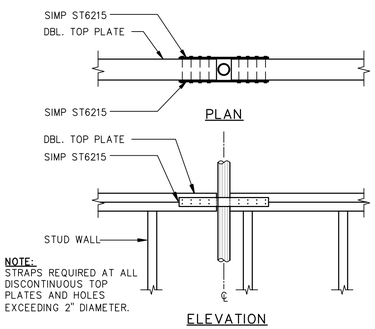
4 — SLAB ON GRADE



NOTES:

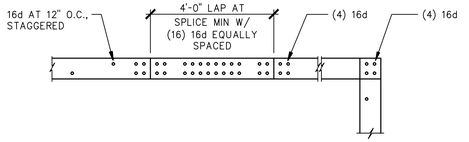
1. DOUBLING THE SIZE OF THE MEMBER REQUIRED WILL ALLOW TWICE THE HOLE SIZE SHOWN ABOVE.
2. STUDS MAY NOT BE NOTCHED IN ANY CASE.

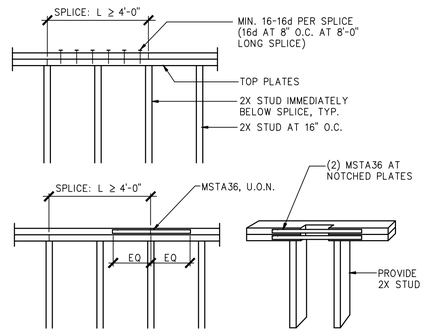
5 — HOLES & NOTCHES AT JOIST & STUD



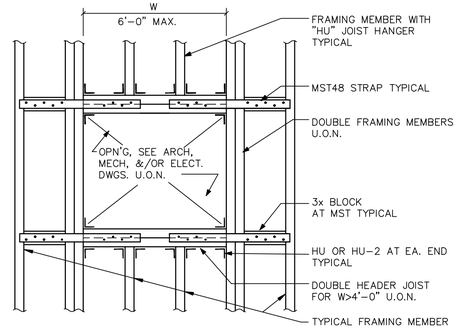
NOTE: STRAPS REQUIRED AT ALL DISCONTINUOUS TOP PLATES AND HOLES EXCEEDING 2" DIAMETER.

6 — TYPICAL TOP PLATE STRAPS



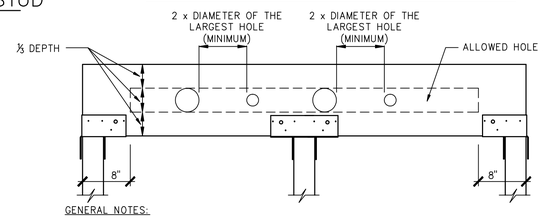


1 — TYPICAL TOP PLATE SPLICE



2 — OPENING IN FRAME AROUND HORIZ. DIAPHRAGM SEE PLAN FOR LOCATION

1.55E TIMBERSTRAND® LSL HEADERS AND BEAMS



HEADER DEPTH	MAXIMUM ROUND HOLE SIZE
9¼"-9½"	3"
11¼"-11⅞"	3⅝"
14" TO 16"	4⅝"

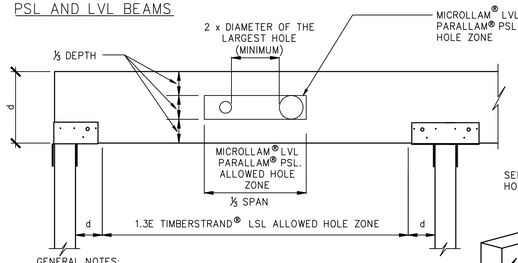
GENERAL NOTES:

No rectangular holes

No holes in headers or beams in plank orientation

SEE ILLUSTRATION FOR ALLOWED HOLE ZONE

PSL AND LVL BEAMS



BEAM DEPTH	MAXIMUM ROUND HOLE SIZE
4⅜"	1"
5½"	1¾"
7¼" TO 20"	2"

SEE ILLUSTRATION FOR ALLOWED HOLE ZONE

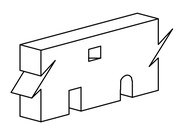
GENERAL NOTES:

Allowed hole zone suitable for uniformly loaded headers and beams only.

No rectangular holes

No holes in cantilevers.

No holes in headers or beams in plank orientation



DO NOT cut, notch, or drill holes in headers except as indicated in the illustrations and tables above.

3 — ALLOWABLE HOLES

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LOT "D"
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AROMAS, CA. 95076

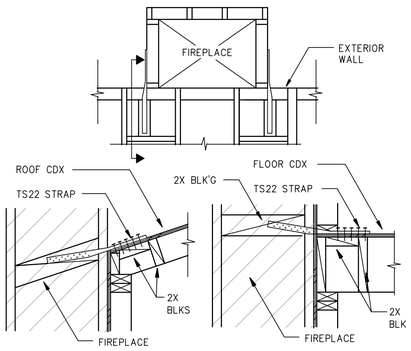
REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D

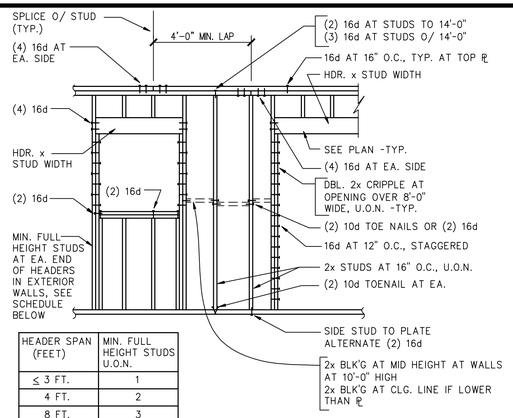
SHEET NO:

S0.2

OF . SHEETS

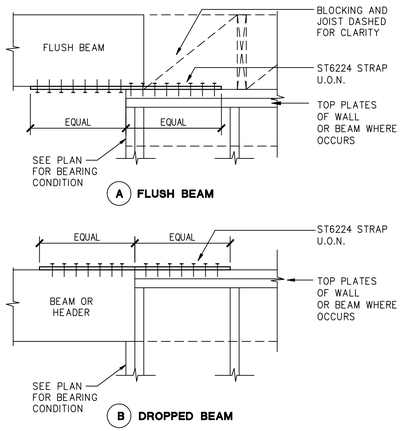


10 — TYPICAL METALTIE FOR WOOD FRAME CHIMNEY

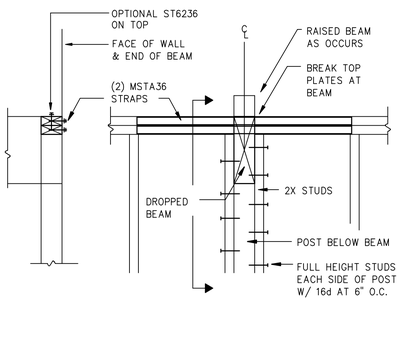


HEADER SPAN (FEET)	MIN. FULL HEIGHT STUDS U.O.N.
≤ 3 FT.	1
4 FT.	2
8 FT.	3
12 FT.	5
16 FT.	6

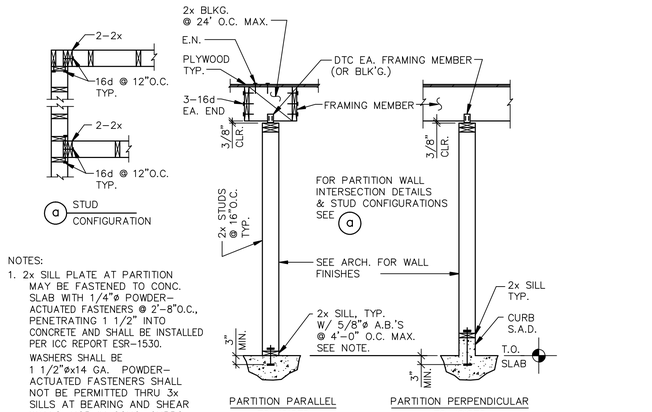
7 — TYPICAL STUD WALL DETAIL



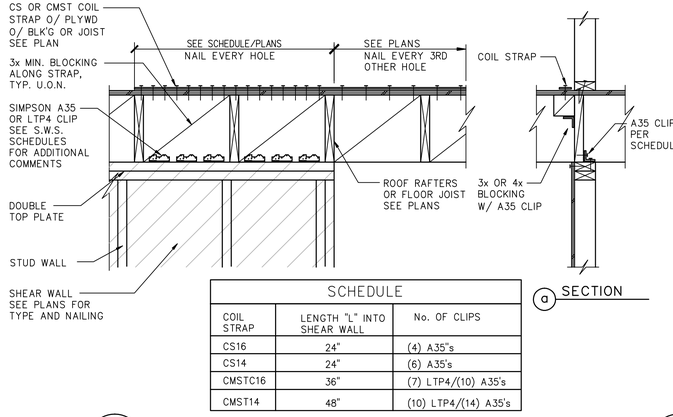
8 — TYPICAL SHEAR COLLECTOR STRAP



9 — TYPICAL TOP PLATE SPLICE AT BEAM CONNECTION

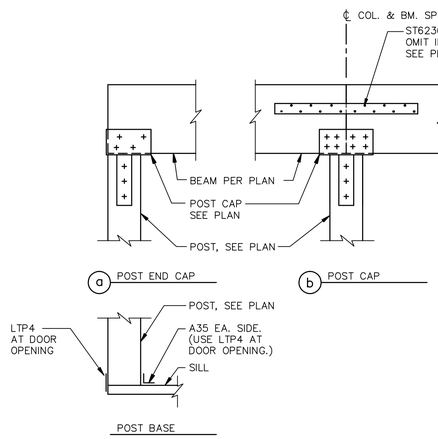


4 — NON-STRUCTURAL PARTITION

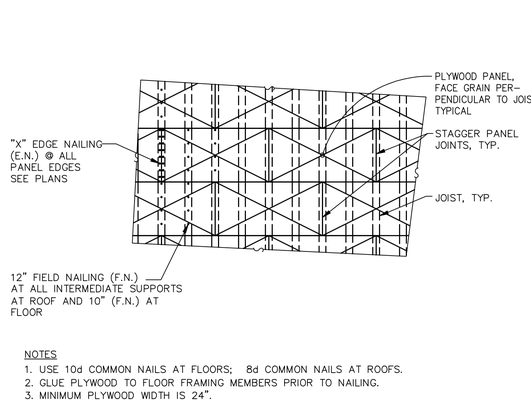


SCHEDULE		
COIL STRAP	LENGTH "L" INTO SHEAR WALL	No. OF CLIPS
CS16	24"	(4) A35's
CS14	24"	(6) A35's
CMSTC16	36"	(7) LTP4/(10) A35's
CMST14	48"	(10) LTP4/(14) A35's

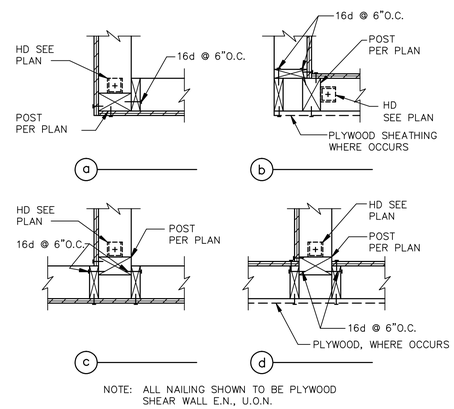
5 — TYPICAL COIL STRAP DRAG CONNECTION AT ROOF



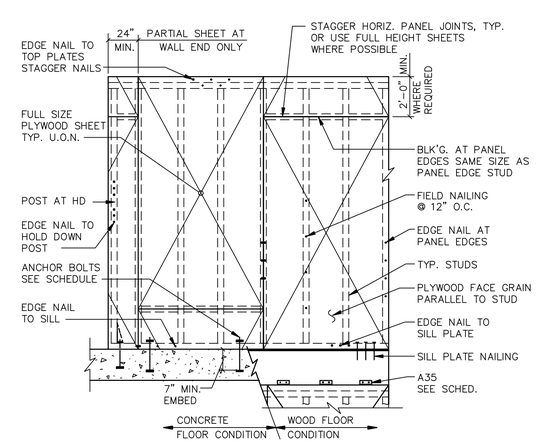
6 — BEAM AND POST CONNECTION



1 — PLYWOOD SHEATHING AT ROOF AND FLOORS UNBLOCKED



2 — SHEAR WALL INTERSECTIONS



3 — SHEAR WALL FRAMING ELEVATION

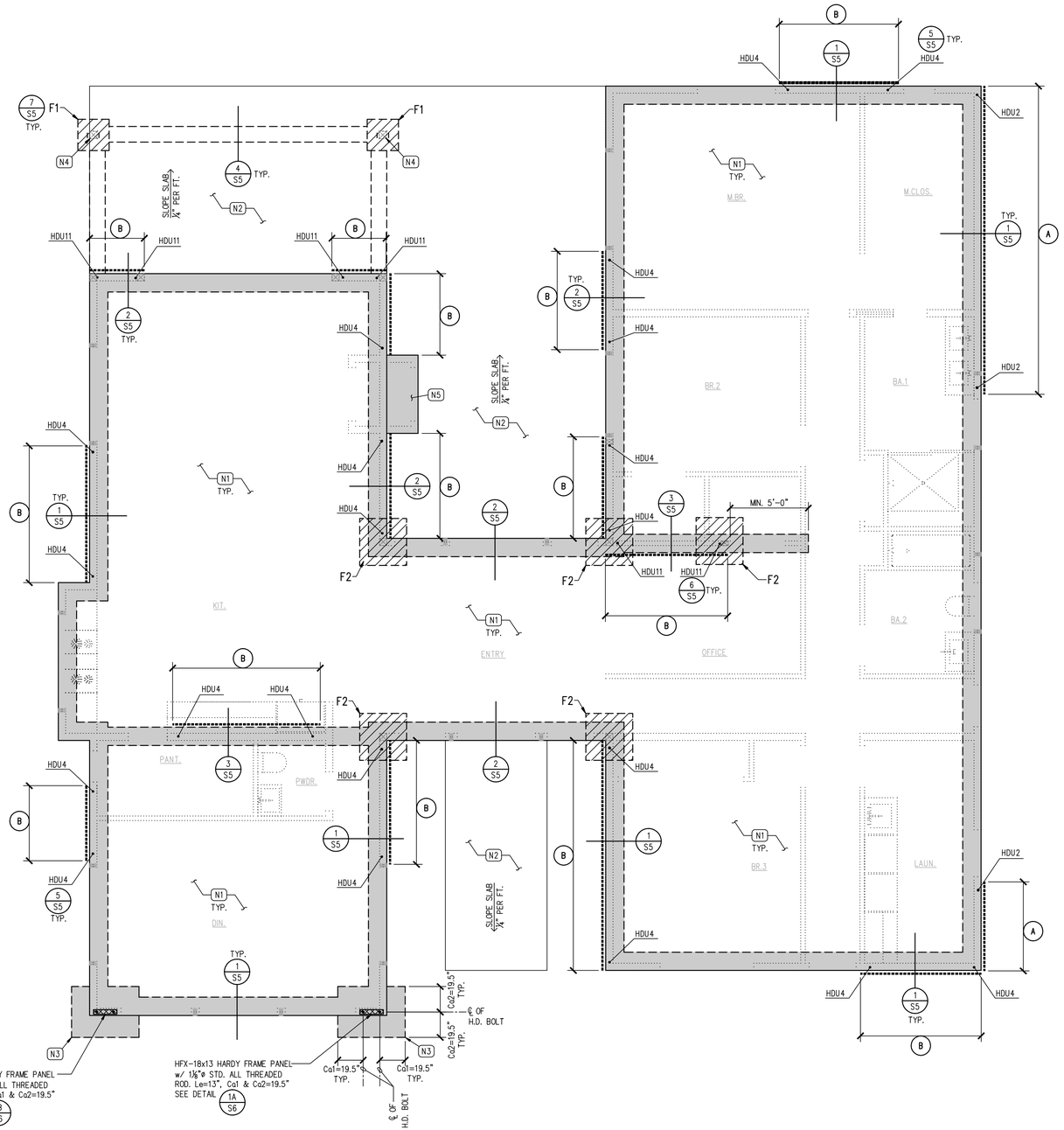
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LOT "D"
1901 SAN JUAN RD.
AROMAS, CA. 95076

REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D
SHEET NO:	S0.3
OF .	SHEETS



MAIN HOUSE FOUNDATION PLAN

SCALE 1/4" = 1'-0"

LEGEND AND NOTES

14" WIDE BY 18" DEEP CONTINUOUS FOOTING WITH 4-NO. 4 BARS 2-TOP AND 2-BOTTOM

DENOTES CONCRETE SPREAD FOOTING SEE PLAN & SCHEDULE FOR SIZES AND REINF.

DENOTES 4x OR 6x POST, SEE FRAMING PLAN

HARDY FRAME ICC ESR-2089. SEE PLAN FOR LOCATION AND MODEL. SEE DETAIL 1/S6

HDU — DENOTES SIMPSON HDU HOLDOWNS, ANCHOR INTO (N) FOOTING : SEE DETAIL 5/S5 OR 6/S5

DENOTES SHEAR WALL LOCATION ABOVE SEE FRAMING PLAN SHEET S2 FOR INFO.

DENOTES WALL FROM ABOVE

CONCRETE PAD SCHEDULE:

F1 — 24"x24"x18" DEEP SPREAD FTG. w/ 3-NO. 4 BARS EACH WAY

F2 — 36"x36"x18" DEEP SPREAD FTG. w/ 4-NO. 4 BARS EACH WAY

ANCHOR BOLT SCHEDULE:

NEW FOOTING : USE 3x P.T.D.F. SILL WITH 5/8"ø x12" A.B.'S (GALV.) AT 48" O.C. (MIN. 2 BOLTS PER SILL) (USE 3"x3"x1/4" STEEL PLATE WASHERS (GALV.) TYPICAL, (U.O.N.)

A — 5/8"ø x12" A.B.'S (GALV.) AT 32" O.C. THIS AREA (MIN. 2 BOLTS PER SILL) (USE 3"x3"x1/4" STEEL PLATE WASHERS (GALV.)

B — 5/8"ø x12" A.B.'S (GALV.) AT 16" O.C. THIS AREA (MIN. 2 BOLTS PER SILL) (USE 3"x3"x1/4" STEEL PLATE WASHERS (GALV.)

FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. CBC 2304.9.5

SPECIAL INSPECTION SCHEDULE:

☒ WOOD SHEAR WALLS, INCLUDING NAILING, BOLTING, ANCHORING WHERE THE FASTENER SPACING OF THE SHEATHING IS 4" O.C. OR LESS. PERFORM BY ENGINEER OF RECORD

SOILS ENGINEER: SOIL SURVEYS GROUP, INC.
JOB No. 7794 DATED: ARPIL 2, 2021
PHONE No. 831-757-2172

1. SOIL ENGINEER SHALL REVIEW THE PROJECT PLANS PRIOR TO CONSTRUCTION.

OBSERVATION AND TEST (AS NECESSARY) THE EARTHWORK AND FOUNDATION PHASES OF CONSTRUCTION IN ORDER TO:

A. CONFIRM THAT SUBSURFACE CONDITIONS EXPOSED DURING CONSTRUCTION ARE SUBSTANTIALLY THE SAME AS THOSE INTERPOLATED FROM THE LIMITED SUBSURFACE EXPLORATION, ON WHICH THE ANALYSIS AND DESIGN WERE BASED.

B. OBSERVE COMPLIANCE WITH THE GEOTECHNICAL DESIGN CONCEPTS, SPECIFICATIONS AND RECOMMENDATIONS.

C. ALLOW DESIGN CHANGES IN THE EVENT THAT SUBSURFACE CONDITIONS DIFFER FROM THOSE ANTICIPATED.

ALL EARTHWORK AND SITE DRAINAGE, INCLUDING SUBGRADE PREPARATION BENEATH SLABS-ON-GRADE, PLACEMENT AND COMPACTION OF ENGINEERED FILL BENEATH SLABS-ON-GRADE, AND INSTALLATION OF SURFACE DRAINAGE SYSTEMS SHOULD BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL LETTER REPORT PREPARED BY SOIL SURVEY GROUP, INC., DATED APRIL 2, 2021. SOIL SURVEY GROUP, INC. SHOULD BE PROVIDED AT LEAST 48 HOURS ADVANCE NOTIFICATION OF ANY EARTH WORK OPERATIONS AND SHOULD BE PRESENT TO OBSERVE AND / OR TEST AS NECESSARY THE EARTHWORK AND FOUNDATION INSTALLATION PHASES OF THE PROJECT.

PLAN NOTE LEGEND:

- (N1) 5" THICK CONC. SLAB w/ NO.4 BAR @16"o.c. EA WAY o/ 2" SAND o/ MOISTOP o/ 4" OF 3/4"ø CRUSHED ROCK.
- (N2) 5" THICK CONC. SLAB w/ NO.4 BAR @16"o.c. EA WAY o/ 4" OF 3/4"ø CRUSHED ROCK.
- (N3) WIDEN FOOTING UNDER HARDY FRAME PANEL w/ NO. 4 BAR AT 12" O.C. EACH WAY TOP & BOTT.
- (N4) POST ABOVE w/ SIMP. CBSQ66 BASE
- (N5) 18" DEEP CONC. FTG. UNDER FIREPLACE w/ NO. 4 BAR @ 16" O.C. EACH WAY TOP & BOTT.

NOTE:
ALL INDICATED DIMENSION SHALL TAKE PRECEDENCE OVER ANY SCALE MEASUREMENTS. DO NOT SCALE DRAWINGS.
REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND VENTILATION.

REGISTERED PROFESSIONAL ENGINEER — JOSEPH D. NGUYEN — No. 70821 — Exp.6-30-23 — CIVIL — STATE OF CALIFORNIA

JDN ENGINEERING, INC.
RESIDENTIAL STRUCTURAL DESIGN
P.O. Box 1382 Ph. 510-415-2809
Union City, CA. 94587
Website: JDNengineeringinc.com
Email: Joe@JDNengineeringinc.com

LOT "D"
1901 SAN JUAN RD.
AROMAS, CA. 95076

REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D

SHEET NO:

S1

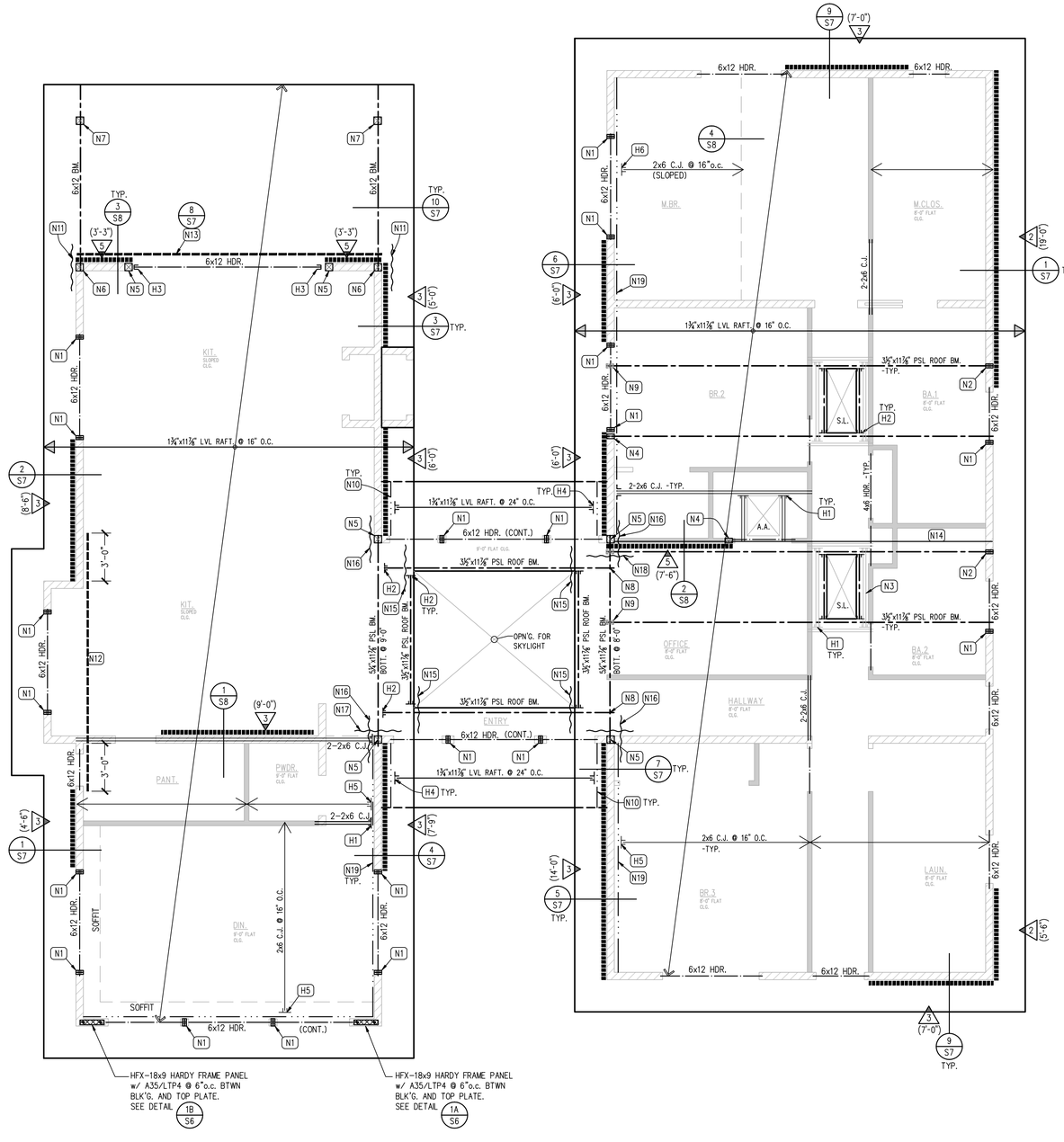
OF . SHEETS

PLAN NOTE LEGEND:

N1	2-2x6 TRIMMER STUDS
N2	2-2x6 STUDS
N3	2-2x6 CEILING JOIST AROUND SKYLIGHT WELL
N4	4x6 POST
N5	6x6 POST
N6	6x6 POST w/ ECCQ CAP
N7	6x6 POST w/ CCQ CAP
N8	SIMP. LPCZ CAP
N9	2-2x6 KING STUDS
N10	1¾"x11⅞" LVL W/ 4-16d AT EA. STUD
N11	SIMPSON ST6236 COLLECTOR STRAP BEAM TO DOUBLE TOP PLATE
N12	SIMP. CS14 COLLECTOR COIL STRAP OVER ROOF PLYWOOD OVER 2x RAFT. OVER 2x4 FLAT BLK. (ALIGN OVER SHEAR WALL)
N13	SIMP. CMSTC16 COLLECTOR COIL STRAP OVER SHEARWALL PLYWOOD OVER HEADER OVER 4x6 BLOCKING
N14	ALIGN 1¾"x11⅞" LVL RAFT. o/ SHEARWALL w/ B.N.
N15	SIMPSON ST6236 COLLECTOR STRAP OVER ROOF PLYWOOD OVER BEAM OVER 3x BLOCKING BETWEEN RAFTER BAY
N16	SIMPSON ST6236 COLLECTOR STRAP BEAM TO WALL w/ 3x BLOCKING BETWEEN STUD BAY
N17	SIMPSON ST6236 COLLECTOR STRAP DBL CEILING JOIST TO DBL TOP PLATE
N18	SIMPSON ST6236 COLLECTOR STRAP HEADER TO DBL TOP PLATE
N19	2x8 D.F.® 2 OR BETTER LEDGER w/ 3-16d AT EA. STUD

PLAN HANGER LEGEND:

H1	SIMPSON U26-2 HGR.
H2	SIMPSON HU412 HGR.
H3	SIMPSON HUC612 HGR.
H4	SIMPSON IUS1.81/11.88 HGR.
H5	SIMPSON U26 HGR.
H6	SIMPSON LSU26 HGR.



MAIN HOUSE
ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

LEGEND AND NOTES

- ROOF RAFTERS : 1¾"x11⅞" LVL AT 16" O.C., TYP. (U.O.N.) MICROLAM LAMINATED VENEER LUMBER (LVL) E=1.9 x 10^6 PSI
- CEILING JOIST : 2x6 D.F. No. 2 AT 16" O.C. (MAX. SPAN 14'-0")
- HEADERS: 4" WALL - 4x12 D.F. NO.1 OR BETTER, TYP. (U.O.N.) 6" WALL - 6x12 D.F. NO.1 OR BETTER, TYP. (U.O.N.)
- HARDY FRAME ICC ESR-2089. SEE PLAN FOR LOCATION AND MODEL. SEE DETAIL 1/S6
- DENOTES FLUSH OR DROP BEAMS: (SEE FRAMING PLAN FOR SIZES & LOCATION) -DIMENSIONAL LUMBER: D.F. No. 1, TYP. (U.O.N.) -STRUCTURAL COMPOSITE LUMBER: ICC No. ESR 1387 PARALLAM PARALLEL STRAND LUMBER (PSL) E=2.0 x 10^6 PSI
- LEDGER 1¾"x11⅞" LVL W/ 4-16d EA. STUD, TYP. (U.O.N.)
- DENOTES SIMPSON COIL STRAP (COLLECTOR) SEE PLANS FOR TYPES AND SIZES
- HIPS, VALLEYS, RIDGE BOARD: 2x D.F. NO. 1 OR BETTER, U.O.N.
- DENOTES 4x OR 6x POST, SEE PLAN
- DENOTES ST6236 COLLECTOR STRAP BEAM TO BEAM OR BEAM TO TOP PLATE TYP. U.O.N. SEE PLAN FOR SIZE AND LOCATION
- DENOTES 4x OR 6x KING POST, SEE PLAN
- DENOTES DOUBLE RAFTERS OR JOIST -TYP. (U.O.N.)
- DENOTES 2x4 DFN. 2 OR BETTER STUD AT 16" O.C.
- DENOTES 2x6 DFN. 2 OR BETTER STUD AT 16" O.C.
- (X'-X") DENOTES MINIMUM SHEARWALL LENGTH. SEE SHEARWALL SCHEDULE AT THIS SHEET.

ROOF MATERIAL WEIGHT SHALL NOT EXCEED 7 PSF. AND 3:12 ROOF PITCH, S.A.D.

BUILD-UP OVER FLAT ROOF AREA TO PROVIDE ADEQUATE DRAINAGE.

SPECIAL INSPECTION SCHEDULE:

☒ WOOD SHEAR WALLS, INCLUDING NAILING, BOLTING, ANCHORING WHERE THE FASTENER SPACING OF THE SHEATHING IS 4" O.C. OR LESS. PERFORM BY ENGINEER OF RECORD

SHEAR WALL SCHEDULE

DENOTES SHEAR WALL. SEE PLAN FOR LOCATION

SHEAR WALL	PANEL NAILING AND MATERIALS	SILL PLATE NAILING (FLOOR)	SIMPSON A35 BETWEEN BLK'G OR RIM MEMBER & TOP PLATE
1	1/2" CDX PLYWD. W/8d @ 6" O.C. EDGES & 12" O.C. FIELD	16d @ 6" O.C.	A35 @ 24" O.C.
2	1/2" CDX PLYWD. W/8d @ 4" O.C. EDGES & 12" O.C. FIELD	16d @ 4" O.C.	A35 @ 18" O.C.
3 *	1/2" CDX PLYWD. W/8d @ 3" O.C. EDGES & 12" O.C. FIELD	½"ø x5" LAG @ 6" O.C.	A35 @ 16" O.C.
4 *	1/2" CDX PLYWD. W/8d @ 2" O.C. EDGES & 12" O.C. FIELD	½"ø x5" LAG @ 4" O.C.	A35 @ 12" O.C.
5 *	1/2" STRUCT. I PLYWD. W/10d @ 2" O.C. EDGES & 12" O.C. FIELD	½"ø x5" LAG @ 2" O.C.	A35 @ 8" O.C.

* REQUIRED 3x STUD/BLK'G. AT ABUTTING PLYWOOD PANEL JOINT

HORIZONTAL DIAPHRAGMS

ROOF: 1/2" CDX PLYWOOD WITH 8d COMMON NAILS @ 4" O.C. BOUNDARY, 6" O.C. EDGES, AND 12" O.C. FIELD. (UNBLOCKED UNLESS OTHERWISE NOTED ON PLANS)

SHEAR WALL NOTES

1. ALTERNATE TO CDX PLYWOOD, USE ORIENTED STRANDED BOARD (OSB).
2. ALL SHEARWALL NAILING SHALL BE COMMON NAILS.
3. ALL EXTERIOR WALLS SHALL HAVE 1/2" CDX PLYWOOD WITH SHEAR 1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
4. ALL EXTERIOR AND INTERIOR CRIPPLE WALLS SHALL HAVE 1/2" CDX PLYWOOD WITH SHEAR 1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
5. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED 2" O.C.
6. WHERE PANELS ARE APPLIED ON BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBER SHALL BE 3" NOMINAL OR THICKER AND NAILS ON EACH SIDE SHALL BE STAGGERED.

NOTE:
ALL INDICATED DIMENSION SHALL TAKE PRECEDENCE OVER ANY SCALE MEASUREMENTS. DO NOT SCALE DRAWINGS.
REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND VENTILATION.

REGISTERED PROFESSIONAL ENGINEER
JOSEPH D. NGUYEN
No. 70821
Exp.6-30-23
CIVIL
STATE OF CALIFORNIA

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LOT "D"
1901 SAN JUAN RD.
AROMAS, CA. 95076

REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D

SHEET NO:
S2
OF . SHEETS

SHEAR WALL SCHEDULE

▬▬▬ DENOTES SHEAR WALL. SEE PLAN FOR LOCATION

SHEAR WALL	PANEL NAILING AND MATERIALS	SILL PLATE NAILING (FLOOR)	SIMPSON A35 BETWEEN BLK'G OR RIM MEMBER & TOP PLATE
△1	1/2" CDX PLYWD. W/8d @ 6" O.C. EDGES & 12" O.C. FIELD	16d @ 6" O.C.	A35 @ 24" O.C.
△2	1/2" CDX PLYWD. W/8d @ 4" O.C. EDGES & 12" O.C. FIELD	16d @ 4" O.C.	A35 @ 18" O.C.
△3 *	1/2" CDX PLYWD. W/8d @ 3" O.C. EDGES & 12" O.C. FIELD	⅞"Ø x5" LAG @ 6" O.C.	A35 @ 16" O.C.
△4 *	1/2" CDX PLYWD. W/8d @ 2" O.C. EDGES & 12" O.C. FIELD	⅞"Ø x5" LAG @ 4" O.C.	A35 @ 12" O.C.
△5 *	1/2" STRUCT. I PLYWD. W/10d @ 2" O.C. EDGES & 12" O.C. FIELD	⅞"Ø x5" LAG @ 2" O.C.	A35 @ 8" O.C.

* REQUIRED 3x STUD/BLK'G. AT ABUTTING PLYWOOD PANEL JOINT

HORIZONTAL DIAPHRAGMS

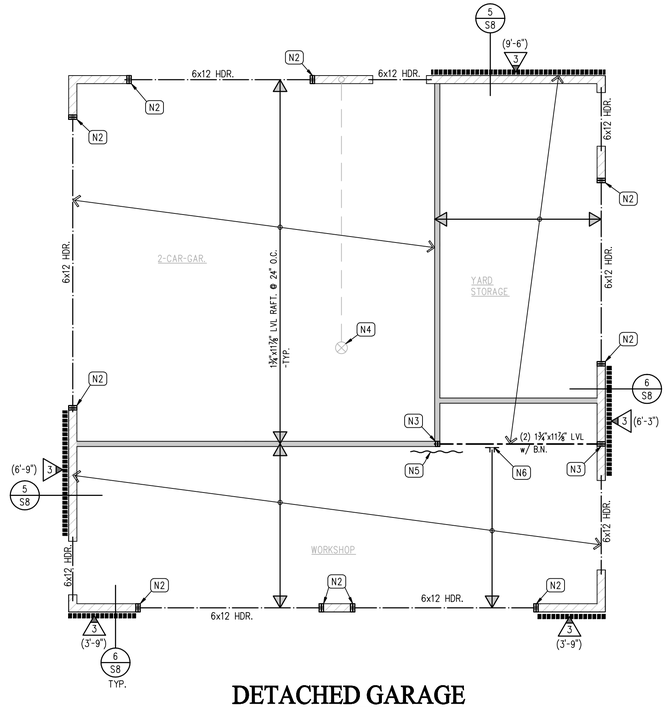
ROOF: 1/2" CDX PLYWOOD WITH 8d COMMON NAILS @ 4" O.C. BOUNDARY, 6" O.C. EDGES, AND 12" O.C. FIELD. (UNBLOCKED UNLESS OTHERWISE NOTED ON PLANS)

SHEAR WALL NOTES

1. ALTERNATE TO CDX PLYWOOD, USE ORIENTED STRANDED BOARD (OSB).
2. ALL SHEARWALL NAILING SHALL BE COMMON NAILS.
3. ALL EXTERIOR WALLS SHALL HAVE 1/2" CDX PLYWOOD WITH SHEAR △1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
4. ALL EXTERIOR AND INTERIOR CRIPPLE WALLS SHALL HAVE 1/2" CDX PLYWOOD WITH SHEAR △1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
5. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED 2" O.C.
6. WHERE PANELS ARE APPLIED ON BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBER SHALL BE 3" NOMINAL OR THICKER AND NAILS ON EACH SIDE SHALL BE STAGGERED.

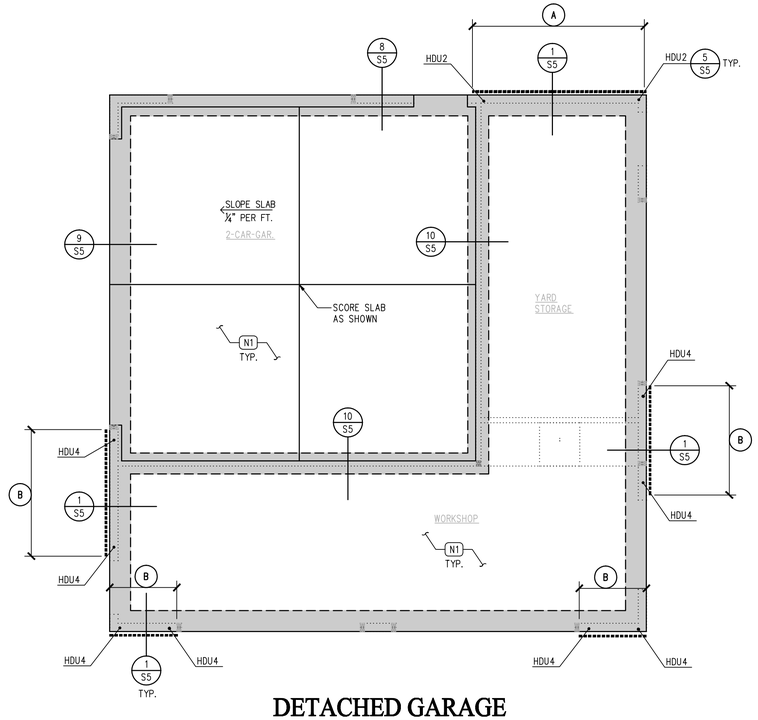
PLAN NOTE LEGEND:

- (N1) 5" THICK CONC. SLAB w/ NO.4 BAR @16"o.c. EA WAY o/ 2" SAND o/ MOISTOP o/ 4" OF ¾"Ø CRUSHED ROCK.
- (N2) 2-2x6 TRIMMER STUDS
- (N3) 2-2x6 STUDS
- (N4) ROOF DRAIN LINE BETWEEN RAFTER BAY
- (N5) SIMPSON ST6236 COLLECTOR STRAP BEAM TO DOUBLE TOP PLATE
- (N6) SIMPSON IUS1.81/11.88 HGR.



DETACHED GARAGE ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"



DETACHED GARAGE FOUNDATION PLAN

SCALE 1/4" = 1'-0"

ROOF FRAMING LEGEND AND NOTES

- ROOF RAFTERS : 1¾"x11⅞" LVL AT 24" O.C., TYP. (U.O.N.) MICROLAM LAMINATED VEENEER LUMBER (LVL) E=1.9 x 10^6 PSI
- HEADERS: 4" WALL - 4x12 D.F. NO.1 OR BETTER, TYP. (U.O.N.) 6" WALL - 6x12 D.F. NO.1 OR BETTER, TYP. (U.O.N.)
- DENOTES FLUSH OR DROP BEAMS: (SEE FRAMING PLAN FOR SIZES & LOCATION) -DIMENSIONAL LUMBER: D.F. No. 1, TYP. (U.O.N.) -STRUCTURAL COMPOSITE LUMBER: ICC No. ESR 1387 MICROLAM LAMINATED VEENEER LUMBER (LVL) E=1.9 x 10^6 PSI
- ⊠ DENOTES 4x OR 6x POST, SEE PLAN
- DENOTES ST6236 COLLECTOR STRAP BEAM TO BEAM OR BEAM TO TOP PLATE TYP. U.O.N. SEE PLAN FOR SIZE AND LOCATION
- ⊠ DENOTES 4x OR 6x KING POST, SEE PLAN
- DENOTES 2x4 DFN. 2 OR BETTER STUD AT 16" O.C.
- DENOTES 2x6 DFN. 2 OR BETTER STUD AT 16" O.C.
- (X'-X") DENOTES MINIMUM SHEARWALL LENGTH. SEE SHEARWALL SCHEDULE AT THIS SHEET.

ROOF MATERIAL WEIGHT SHALL NOT EXCEED 7 PSF.
BUILD-UP OVER FLAT ROOF AREA TO PROVIDE ADEQUATE DRAINAGE.

SPECIAL INSPECTION SCHEDULE:

☒ WOOD SHEAR WALLS, INCLUDING NAILING, BOLTING, ANCHORING WHERE THE FASTENER SPACING OF THE SHEATHING IS 4" O.C. OR LESS. PERFORM BY ENGINEER OF RECORD

FOUNDATION LEGEND AND NOTES

- 14" WIDE BY 18" DEEP CONTINUOUS FOOTING WITH 4-NO. 4 BARS 2-TOP AND 2-BOTTOM
- ⊠ DENOTES 4x OR 6x POST, SEE FRAMING PLAN
- HDU DENOTES SIMPSON HDU HOLDOWNS, ANCHOR INTO (N) FOOTING : SEE DETAIL 5/S5
- ▬▬▬ DENOTES SHEAR WALL LOCATION ABOVE SEE FRAMING PLAN SHEET S2 FOR INFO.
- ····· DENOTES WALL FROM ABOVE

CONCRETE PAD SCHEDULE:

- F1 24"x24"x18" DEEP SPREAD FTG. w/ 3-NO. 4 BARS EACH WAY

ANCHOR BOLT SCHEDULE:

NEW FOOTING : USE 3x P.T.D.F. SILL WITH ⅝"Ø x12" A.B.'S (GALV.) AT 48" O.C. (MIN. 2 BOLTS PER SILL) (USE 3"x3"x¼" STEEL PLATE WASHERS (GALV.) TYPICAL, (U.O.N.)

- A ⅝"Ø x12" A.B.'S (GALV.) AT 32" O.C. THIS AREA (MIN. 2 BOLTS PER SILL) (USE 3"x3"x¼" STEEL PLATE WASHERS (GALV.)
- B ⅝"Ø x12" A.B.'S (GALV.) AT 16" O.C. THIS AREA (MIN. 2 BOLTS PER SILL) (USE 3"x3"x¼" STEEL PLATE WASHERS (GALV.)

FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. CBC 2304.9.5

SOILS ENGINEER: SOIL SURVEYS GROUP, INC.
JOB No. 7794 DATED: ARPIL 2, 2021
PHONE No. 831-757-2172

1. SOIL ENGINEER SHALL REVIEW THE PROJECT PLANS PRIOR TO CONSTRUCTION.

OBSERVATION AND TEST (AS NECESSARY) THE EARTHWORK AND FOUNDATION PHASES OF CONSTRUCTION IN ORDER TO:

A. CONFIRM THAT SUBSURFACE CONDITIONS EXPOSED DURING CONSTRUCTION ARE SUBSTANTIALLY THE SAME AS THOSE INTERPOLATED FROM THE LIMITED SUBSURFACE EXPLORATION, ON WHICH THE ANALYSIS AND DESIGN WERE BASED.

B. OBSERVE COMPLIANCE WITH THE GEOTECHNICAL DESIGN CONCEPTS, SPECIFICATIONS AND RECOMMENDATIONS.

C. ALLOW DESIGN CHANGES IN THE EVENT THAT SUBSURFACE CONDITIONS DIFFER FROM THOSE ANTICIPATED.

ALL EARTHWORK AND SITE DRAINAGE, INCLUDING SUBGRADE PREPARATION BENEATH SLABS-ON-GRADE, PLACEMENT AND COMPACTION OF ENGINEERED FILL BENEATH SLABS-ON-GRADE, AND INSTALLATION OF SURFACE DRAINAGE SYSTEMS SHOULD BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL LETTER REPORT PREPARED BY SOIL SURVEY GROUP, INC., DATED APRIL 2, 2021. SOIL SURVEY GROUP, INC. SHOULD BE PROVIDED AT LEAST 48 HOURS ADVANCE NOTIFICATION OF ANY EARTH WORK OPERATIONS AND SHOULD BE PRESENT TO OBSERVE AND / OR TEST AS NECESSARY THE EARTHWORK AND FOUNDATION INSTALLATION PHASES OF THE PROJECT.

NOTE:
ALL INDICATED DIMENSION SHALL TAKE PRECEDENCE OVER ANY SCALE MEASUREMENTS. DO NOT SCALE DRAWINGS.
REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND VENTILATION.

REGISTERED PROFESSIONAL ENGINEER
JOSEPH D. NGUYEN
No. 70821
Exp.6-30-23
CIVIL
STATE OF CALIFORNIA

JDN ENGINEERING, INC.
RESIDENTIAL STRUCTURAL DESIGN
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LOT "D"
1901 SAN JUAN RD.
AROMAS, CA. 95076

REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D
SHEET NO:	S3
OF .	SHEETS

SHEAR WALL SCHEDULE

DENOTES SHEAR WALL. SEE PLAN FOR LOCATION

SHEAR WALL	PANEL NAILING AND MATERIALS	SILL PLATE NAILING (FLOOR)	SIMPSON A35 BETWEEN BLK'G OR RIM MEMBER & TOP PLATE
1	1/2" CDX PLYWD. W/8d @ 6" O.C. EDGES & 12" O.C. FIELD	16d @ 6" O.C.	A35 @ 24" O.C.
2	1/2" CDX PLYWD. W/8d @ 4" O.C. EDGES & 12" O.C. FIELD	16d @ 4" O.C.	A35 @ 18" O.C.
3 *	1/2" CDX PLYWD. W/8d @ 3" O.C. EDGES & 12" O.C. FIELD	1/2"ø x5" LAG @ 6" O.C.	A35 @ 16" O.C.
4 *	1/2" CDX PLYWD. W/8d @ 2" O.C. EDGES & 12" O.C. FIELD	1/2"ø x5" LAG @ 4" O.C.	A35 @ 12" O.C.
5 *	1/2" STRUCT. I PLYWD. W/10d @ 2" O.C. EDGES & 12" O.C. FIELD	1/2"ø x5" LAG @ 2" O.C.	A35 @ 8" O.C.

* REQUIRED 3x STUD/BLK'G. AT ABUTTING PLYWOOD PANEL JOINT

HORIZONTAL DIAPHRAGMS

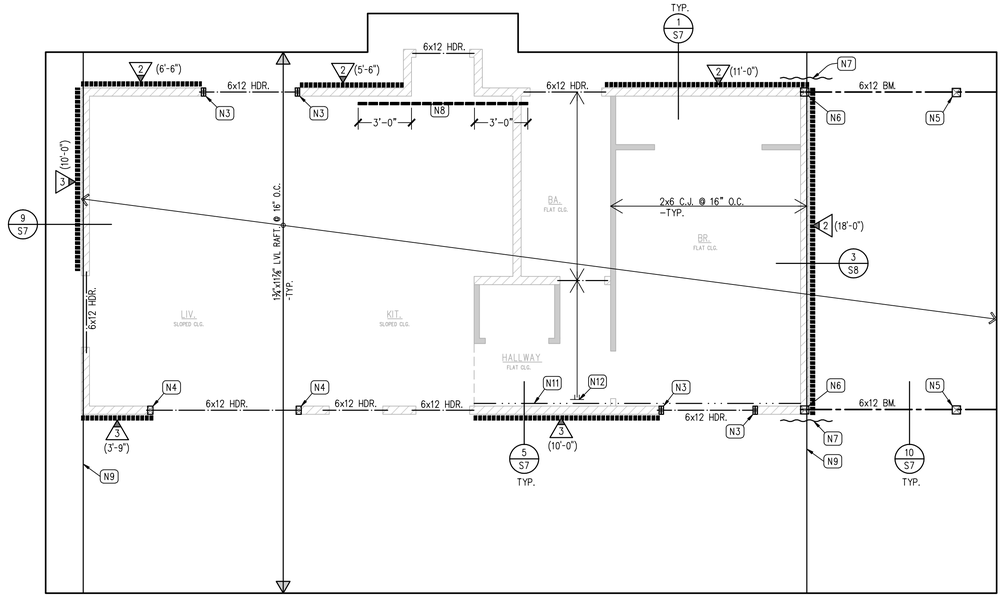
ROOF: 1/2" CDX PLYWOOD WITH 8d COMMON NAILS @ 4" O.C. BOUNDARY, 6" O.C. EDGES, AND 12" O.C. FIELD. (UNBLOCKED UNLESS OTHERWISE NOTED ON PLANS)

SHEAR WALL NOTES

1. ALTERNATE TO CDX PLYWOOD, USE ORIENTED STRANDED BOARD (OSB).
2. ALL SHEARWALL NAILING SHALL BE COMMON NAILS.
3. ALL EXTERIOR WALLS SHALL HAVE 1/2" CDX PLYWOOD WITH SHEAR 1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
4. ALL EXTERIOR AND INTERIOR CRIPPLE WALLS SHALL HAVE 1/2" CDX PLYWOOD WITH SHEAR 1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
5. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED 2" O.C.
6. WHERE PANELS ARE APPLIED ON BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBER SHALL BE 3" NOMINAL OR THICKER AND NAILS ON EACH SIDE SHALL BE STAGGERED.

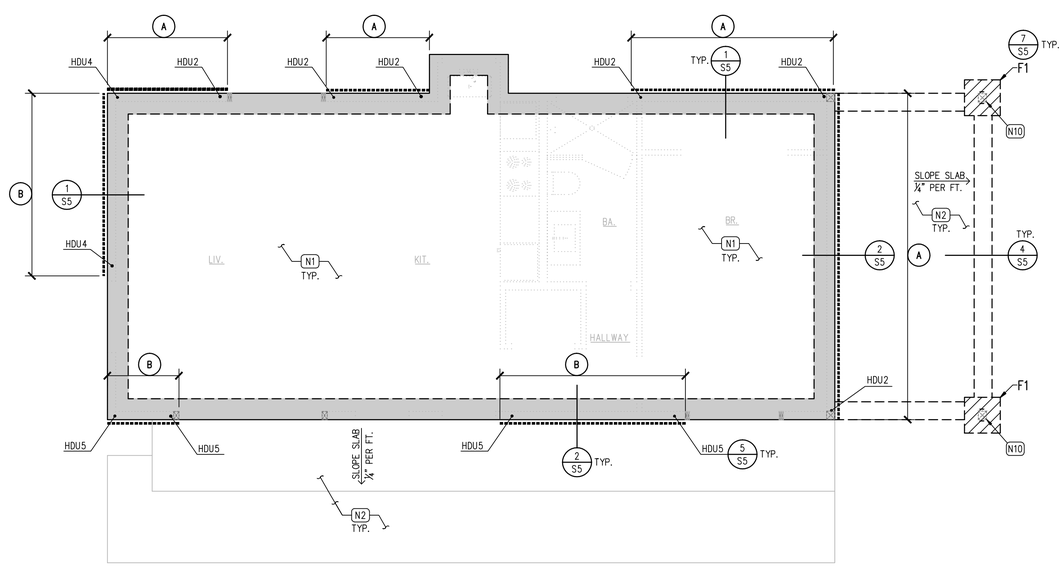
PLAN NOTE LEGEND:

- N1 5" THICK CONC. SLAB w/ NO.4 BAR @16"o.c. EA WAY o/ 2" SAND o/ MOISTOP o/ 4" OF 3/4"ø CRUSHED ROCK.
- N2 5" THICK CONC. SLAB w/ NO.4 BAR @16"o.c. EA WAY o/ 4" OF 3/4"ø CRUSHED ROCK.
- N3 2-2x6 TRIMMER STUDS
- N4 4x6 POST w/ LCE OR EPCZ CAP
- N5 6x6 P.T.DF. POST w/ CCQ CAP
- N6 6x6 POST w/ ECCQ CAP
- N7 SIMPSON ST6236 COLLECTOR STRAP BEAM TO DOUBLE TOP PLATE
- N8 SIMP. CS14 COLLECTOR COIL STRAP OVER ROOF PLYWOOD OVER 2x RAFT. OVER 2x4 FLAT BLK. (ALIGN OVER SHEAR WALL)
- N9 ALIGN 1 3/4"x11 7/8" LVL RAFT. o/ SHEARWALL w/ B.N.
- N10 POST ABOVE w/ CBSQ66 BASE
- N11 2x8 D.F.® 2 OR BETTER LEDGER w/ 3-16d AT EA. STUD
- N12 SIMP. U26 HGR.



DETACHED ADU
ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"



DETACHED ADU
FOUNDATION PLAN

SCALE 1/4" = 1'-0"

ROOF FRAMING LEGEND AND NOTES

- ROOF RAFTERS : 1 3/4"x11 7/8" LVL AT 16" O.C., TYP. (U.O.N.) MICROLAM LAMINATED VENEER LUMBER (LVL) E=1.9 x 10^6 PSI
- CEILING JOIST : 2x6 D.F. No. 2 AT 16" O.C. (MAX. SPAN 14'-0")
- HEADERS: 4" WALL - 4x12 D.F. NO.1 OR BETTER, TYP. (U.O.N.) 6" WALL - 6x12 D.F. NO.1 OR BETTER, TYP. (U.O.N.)
- DENOTES 4x OR 6x POST, SEE PLAN
- DENOTES ST6236 COLLECTOR STRAP BEAM TO BEAM OR BEAM TO TOP PLATE TYP. U.O.N. SEE PLAN FOR SIZE AND LOCATION
- DENOTES 4x OR 6x KING POST, SEE PLAN
- DENOTES 2x4 DFN. 2 OR BETTER STUD AT 16" O.C.
- DENOTES 2x6 DFN. 2 OR BETTER STUD AT 16" O.C.
- (X'-X") DENOTES MINIMUM SHEARWALL LENGTH. SEE SHEARWALL SCHEDULE AT THIS SHEET.

ROOF MATERIAL WEIGHT SHALL NOT EXCEED 7 PSF. AND 3:12 ROOF PITCH, S.A.D.

SPECIAL INSPECTION SCHEDULE:

☒ WOOD SHEAR WALLS, INCLUDING NAILING, BOLTING, ANCHORING WHERE THE FASTENER SPACING OF THE SHEATHING IS 4" O.C. OR LESS. PERFORM BY ENGINEER OF RECORD

FOUNDATION LEGEND AND NOTES

- 14" WIDE BY 18" DEEP CONTINUOUS FOOTING WITH 4-NO. 4 BARS 2-TOP AND 2-BOTTOM
- DENOTES 4x OR 6x POST, SEE FRAMING PLAN
- HDU DENOTES SIMPSON HDU HOLDOWNS, ANCHOR INTO (N) FOOTING : SEE DETAIL 5 S5
- DENOTES SHEAR WALL LOCATION ABOVE SEE FRAMING PLAN SHEET S2 FOR INFO.
- DENOTES WALL FROM ABOVE

CONCRETE PAD SCHEDULE:

F1 24"x24"x18" DEEP SPREAD FTG. w/ 3-NO. 4 BARS EACH WAY

ANCHOR BOLT SCHEDULE:

NEW FOOTING : USE 3x P.T.D.F. SILL WITH 5/8"ø x12" A.B.'S (GALV.) AT 48" O.C. (MIN. 2 BOLTS PER SILL) (USE 3"x3"x1/4" STEEL PLATE WASHERS (GALV.) TYPICAL, (U.O.N.)

A 5/8"ø x12" A.B.'S (GALV.) AT 32" O.C. THIS AREA (MIN. 2 BOLTS PER SILL) (USE 3"x3"x1/4" STEEL PLATE WASHERS (GALV.)

B 5/8"ø x12" A.B.'S (GALV.) AT 16" O.C. THIS AREA (MIN. 2 BOLTS PER SILL) (USE 3"x3"x1/4" STEEL PLATE WASHERS (GALV.)

FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. CBC 2304.9.5

SOILS ENGINEER: SOIL SURVEYS GROUP, INC.
JOB No. 7794 DATED: ARPIL 2, 2021
PHONE No. 831-757-2172

1. SOIL ENGINEER SHALL REVIEW THE PROJECT PLANS PRIOR TO CONSTRUCTION.

OBSERVATION AND TEST (AS NECESSARY) THE EARTHWORK AND FOUNDATION PHASES OF CONSTRUCTION IN ORDER TO:

A. CONFIRM THAT SUBSURFACE CONDITIONS EXPOSED DURING CONSTRUCTION ARE SUBSTANTIALLY THE SAME AS THOSE INTERPOLATED FROM THE LIMITED SUBSURFACE EXPLORATION, ON WHICH THE ANALYSIS AND DESIGN WERE BASED.

B. OBSERVE COMPLIANCE WITH THE GEOTECHNICAL DESIGN CONCEPTS, SPECIFICATIONS AND RECOMMENDATIONS.

C. ALLOW DESIGN CHANGES IN THE EVENT THAT SUBSURFACE CONDITIONS DIFFER FROM THOSE ANTICIPATED.

ALL EARTHWORK AND SITE DRAINAGE, INCLUDING SUBGRADE PREPARATION BENEATH SLABS-ON-GRADE, PLACEMENT AND COMPACTION OF ENGINEERED FILL BENEATH SLABS-ON-GRADE, AND INSTALLATION OF SURFACE DRAINAGE SYSTEMS SHOULD BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL LETTER REPORT PREPARED BY SOIL SURVEY GROUP, INC., DATED APRIL 2, 2021. SOIL SURVEY GROUP, INC. SHOULD BE PROVIDED AT LEAST 48 HOURS ADVANCE NOTIFICATION OF ANY EARTH WORK OPERATIONS AND SHOULD BE PRESENT TO OBSERVE AND / OR TEST AS NECESSARY THE EARTHWORK AND FOUNDATION INSTALLATION PHASES OF THE PROJECT.

NOTE:
ALL INDICATED DIMENSION SHALL TAKE PRECEDENCE OVER ANY SCALE MEASUREMENTS. DO NOT SCALE DRAWINGS.
REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND VENTILATION.

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REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D

SHEET NO:

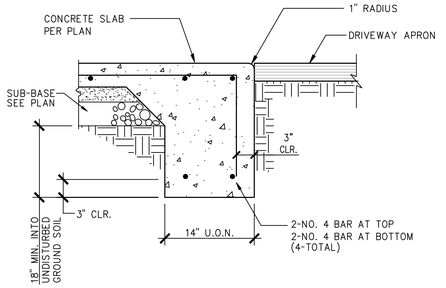
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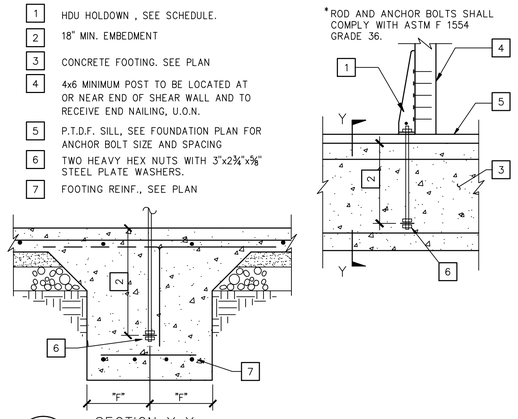
HOLDOWN SCHEDULE			
HOLDOWN	NO. OF SIMPSON S.D.S. ¼"x2½" WOOD SCREWS	*ANCHOR DIA. SIMP. "PAB"	"F"
HDU11	30	1" DIA. (SIMP. PAB8)	16½" MIN.

1. HDU HOLDOWN , SEE SCHEDULE.
2. 18" MIN. EMBEDMENT
3. CONCRETE FOOTING. SEE PLAN
4. 4x6 MINIMUM POST TO BE LOCATED AT OR NEAR END OF SHEAR WALL AND TO RECEIVE END NAILING, U.O.N.
5. P.T.D.F. SILL, SEE FOUNDATION PLAN FOR ANCHOR BOLT SIZE AND SPACING
6. TWO HEAVY HEX NUTS WITH 3"x2¾"x⅜" STEEL PLATE WASHERS.
7. FOOTING REINF., SEE PLAN

*ROD AND ANCHOR BOLTS SHALL COMPLY WITH ASTM F 1554 GRADE 36.

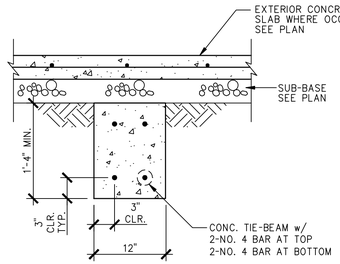


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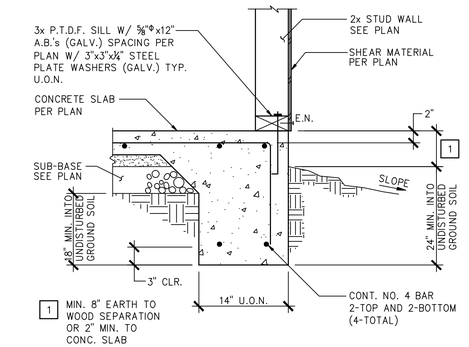


SECTION Y-Y

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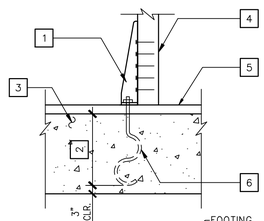
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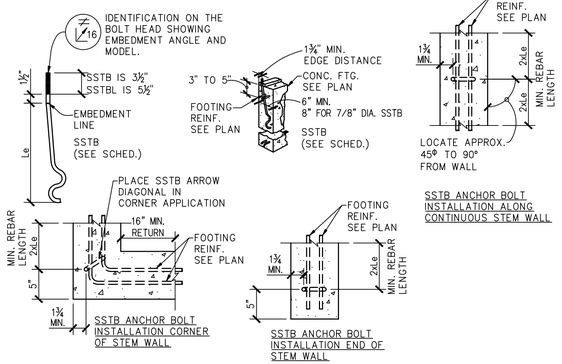
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HOLDOWN SCHEDULE					
HOLDOWN	NO. OF SIMPSON S.D.S. ¼"x2½" WOOD SCREWS	*ANCHOR DIA.	SSTB TYPE ICC ESR-2611	MIN. ANCHOR EMBED. Le	MIN. STEM WALL WIDTH (in.)
HDU2	6	⅝"	SSTB20	16⅜"	8
HDU4	10	⅝"	SSTB20	16⅜"	8
HDU5	14	⅝"	SSTB24	20⅜"	8
HDU8	20	⅞"	SSTB28	24⅞"	8

1. HDU HOLDOWN , SEE SCHEDULE FOR SCREWS TO POST
2. EMBEDMENT PER SCHEDULE
3. CONCRETE FOOTING SEE PLAN
4. 4x4 MINIMUM POST TO BE LOCATED AT OR NEAR END OF SHEAR WALL AND TO RECEIVE END NAILING, U.O.N.
5. P.T.D.F. SILL, SEE FOUNDATION PLAN FOR ANCHOR BOLT SIZE AND SPACING
6. SIMPSON SSTB ANCHORS FOR HOLDOWNS, SEE SCHEDULE FOR EMBEDMENT LENGTH AND BOLT SIZE

*ROD AND ANCHOR BOLTS SHALL COMPLY WITH ASTM F 1554 GRADE 36.





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3

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JOB NO:	AROMAS LOT D
SHEET NO:	S5
OF .	SHEETS

HARDY FRAME

DESCRIPTION:

THE HARDY FRAME IS A LIGHT GAUGE, HIGH STRENGTH, COLD FORMED STEEL FRAME DESIGNED TO RESIST LATERAL SEISMIC AND WIND LOADS IN WOOD OR STEEL FRAMED STRUCTURES. IT HAS BEEN DESIGNED AS A REPLACEMENT FOR PLYWOOD SHEAR WALLS AND HOLD DOWN ANCHORS.

CONFIGURATIONS

THE HARDY FRAME COMES IN TWO BASIC CONFIGURATIONS:

1. DIAGONAL BRACED FRAME - AVAILABLE IN WIDTHS OF 32", 48", 64", AND 80"
2. PANEL FRAME - 12" OR 18" WIDE, ONE PIECE C-CHANNEL, DESIGNED FOR USE AT SIDES OF GARAGE DOORS AND OTHER NARROW WALL SECTIONS.

BOTH MODELS COME IN STANDARD, NOMINAL HEIGHTS OF 8 FEET AND 9 FEET. CUSTOM HEIGHTS ARE AVAILABLE.
IN THE MODEL DESIGNATION THE FIRST NUMBER REFERS TO THE OVERALL WIDTH, IN INCHES, THE LAST NUMBER REFERS TO NOMINAL HEIGHT, IN FEET. (I.E.: 12x8, 18x9, 24x10, 32x10).
THE ACTUAL HEIGHT IS THE STANDARD STUD HEIGHT FOR CALIFORNIA, 8 = 92-1/4", 9 = 104-1/4", ETC. NOTE: STANDARD STUD HEIGHTS VARY BETWEEN STATES.

INSTALLATION

THE HARDY FRAMES ARE INSTALLED WITHIN A STUD WALL, BETWEEN THE SILL PLATE AND THE TOP PLATE.

THE HARDY FRAMES CAN BE STACKED OR STAGGERED IN MULTI-STORY APPLICATIONS.

CONNECTIONS TO CONCRETE ARE MADE BY ANCHOR BOLTS, PRE-SET USING A HARDY TEMPLATE AND DESIGNED TO RESIST THE APPLIED SHEAR AND TENSION. THE TOP IS SECURED TO CONTINUOUS TOP PLATES WHICH ACT AS A DRAG STRUT, DELIVERING THE LOAD TO THE HARDY FRAME. IN MULTI-STORY CONSTRUCTION, THE UPPER FRAMES ARE CONNECTED AT THE BOTTOM BY WOOD SCREWS (SDS 1/4x 3).

DESIGN CODES

INTERNATIONAL BUILDING CODE 2019 EDITION AND 2019 CBC.

MATERIAL

COLD-FORMED STEEL: ASTM A-653 SQ GRADE 50 CLASS 1 Fy=50 KSI.
ANCHOR BOLTS: ASTM A-307 BOLTS OR ASTM A36 THREADED RODS.
PLATE WASHERS: ASTM A36.

IDENTIFICATION

THE FRAMES AND PANELS ARE IDENTIFIED BY LABELS BEARING THE NAME AND ADDRESS OF HARDY INDUSTRIES INC., VENTURA, CALIFORNIA; THE PRODUCT NAME AND AND MODEL NUMBER (HARDY FRAME XXXX OR HARDY PANEL XXXX); THE EVALUATION REPORT NUMBER (ESR-2089); THE FABRICATOR'S NAME (INDUSTRIAL STRUCTURES OR NORTH STAR COMPANY, INC.) AND THE NAME OF THE QUALITY CONTROL AGENCY (RAMTECH LABORATORIES).

HARDY FRAME(R) INSTALLATION

STEP 1: CONCRETE PREPARATION

A) CONCRETE CONTRACTOR SHOULD USE HARDY FRAME TEMPLATES TO ACCURATELY PLACE EMBED BOLTS AND HARDY FRAME BOLT BRACES TO PREVENT SWAY.
B) ATTACH SINGLE USE (HFT) OR REUSABLE (RHFT) TEMPLATES TO A FORMBOARD AT LOCATIONS SPECIFIED ON PLANS. BOLT BRACES CONNECT AT THE EMBED END OF THE HOLD DOWN BOLTS.
C) AT INTERIOR FOOTINGS TEMPLATES MAY BE SECURED IN PLACE USING STAKES.
D) FOOTING DESIGN, EMBED DEPTHS AND BOLT EDGE/END DISTANCES ARE PER THE DESIGNER OF RECORD.
E) DETERMINE IF THE HARDY FRAME WILL BE INSTALLED ON CONCRETE OR A MUDSILL AND REFER TO DETAILS FOR RECOMMENDED HEIGHT OF BOLT ABOVE FINISH CONCRETE

STEP 2: FIRST FLOOR INSTALLATION ON CONCRETE

A) INSTALLATION OF A MOISTURE BARRIER SUCH AS MOISTOP OR 15# FELT IS RECOMMENDED UNDER THE FRAME. B) SET THE HARDY FRAME OVER THE EMBED BOLTS.
C) PLACE ROUND (CUT) WASHERS AND NUTS ON ALL BOLTS. TIGHTEN NUTS UNTIL FRAME IS PLUMB AND LEVEL. D) AFTER FRAMING AND PLUMB & LINE ARE COMPLETE, PLACE A 2X FILLER ABOVE THE FRAME TO MAKE UP THE HEIGHT DIFFERENCE CREATED BY ELIMINATING THE SILL PLATE, AND CONNECT WITH 1/4"X4-1/2" SCREWS THROUGH THE TOP OF THE FRAME, THROUGH THE FILLER AND INTO THE DOUBLE TOP PLATES OR HEADER ABOVE.

HARDY FRAME PANELS SCHEDULE - ESR-2089

MODEL[2] NUMBER	HEIGHT (INCHES)	WIDTH (INCHES)	DEPTH (INCHES)	HOLD DOWN[2] BOLT Φ (IN)	SCREW[3, 4] QTY. AT TOP	SCREW QTY. AT BOTTOM (ON RAISED OR UPPER FLOOR ONLY)[3, 4, 5]
HFX-12x9	104¼	12	3½	1-1/8 STD	6	6
HFX-18x9	104¼	18	3½	1-1/8 STD	10	10
HFX-18x10	116¼	18	3½	1-1/8 STD	10	10
HFX-18x11	128¼	18	3½	1-1/8 STD	10	10
HFX-18x13	152¼	18	3½	1-1/8 STD	10	10
HFX-24x10	116¼	24	3½	1-1/8 STD	14	14
HFX-24x11	128¼	24	3½	1-1/8 STD	14	14

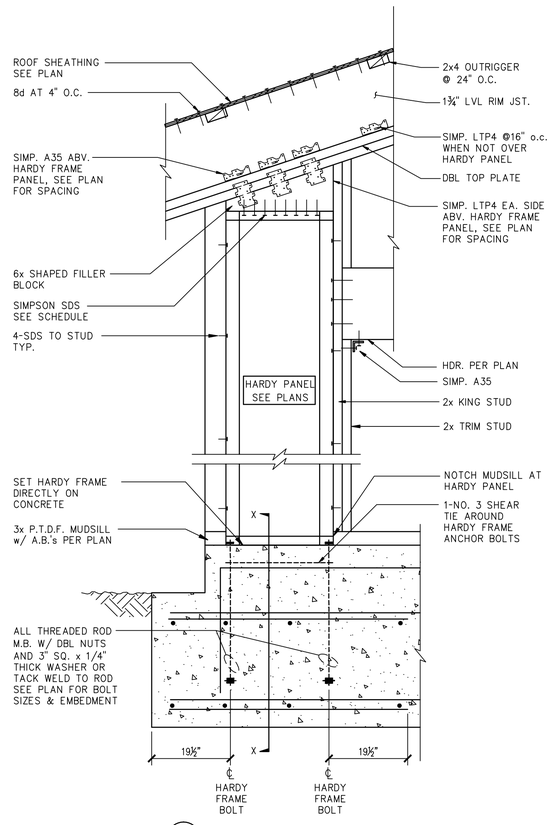
1) INSTALLATION ON FOUNDATIONS INCLUDES CONCRETE, MASONRY, OR NUT AND WASHER WITH 5,000 PSI MINIMUM COMPRESSIVE STRENGTH NON-SHRINK GROUT INSTALLED IN ACCORDANCE WITH SECTION 3.7.5 OF THIS REPORT.

2) STD INDICATES BOLTS COMPLYING WITH ASTM F 1554 GRADE 36. HS INDICATES BOLTS COMPLYING WITH A HIGH STRENGTH STEEL SPECIFICATION, WHICH MUST HAVE ADEQUATE ASD CAPACITY TO RESIST THE TABULATED UPLIFT.

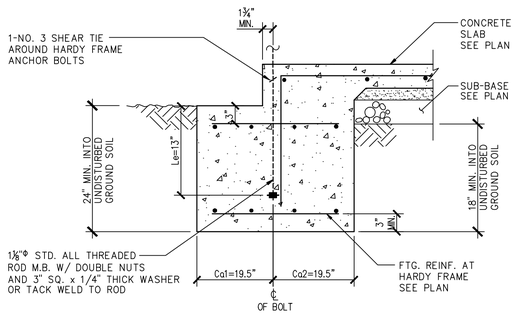
3) SCREWS ARE ¼" DIAMETER BY 3" LONG WOOD SCREWS MUST HAVE A MINIMUM ALLOWABLE DESIGN VALUE OF 311 LBS. (EXCLUDING ANY DURATION OF LOAD STRESS INCREASE) BASED ON A 0.105" (NO. 12 GAGE) THICK STEEL TO WOOD (SPECIFIC GRAVITY OF 0.5 OR GREATER) CONNECTION. COMPLYING SCREWS ARE HARDY FRAME HFS-SERIES OR EQUAL.

4) MINIMUM WOOD SCREW LENGTH IS 3" FOR THE TOP AND 4½" FOR THE BOTTOM CONNECTION. WHEN INSTALLING A 2x FILLER (WOOD WITH A MINIMUM SPECIFIC GRAVITY OF 0.50) AT THE TOP THE MINIMUM SCREW LENGTH IS 4½".

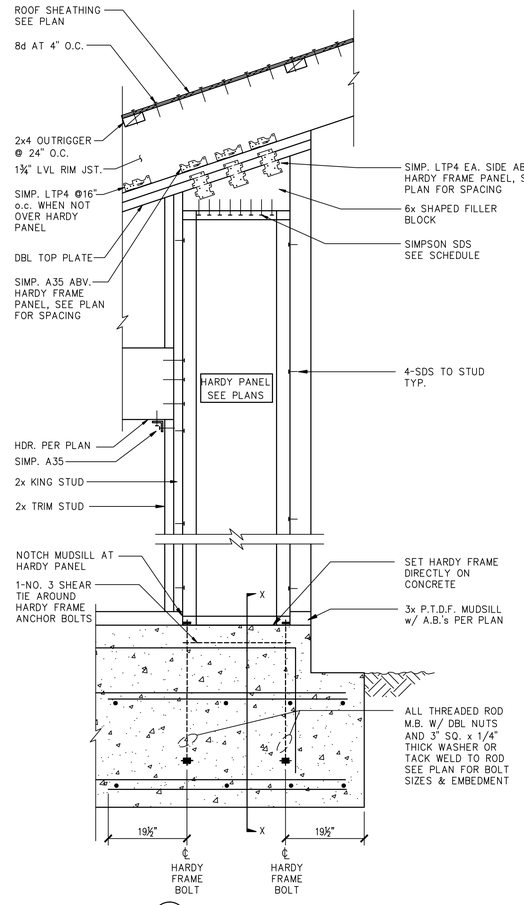
5) RAISED FLOOR ASSUMES 2 BY WOOD SILL PLATE, ENGINEERED WOOD PRODUCT RIM, AND HARDY FRAME BEARING PLATE INSTALLED BELOW PANEL. UPPER FLOOR ASSUMES TWO 2 BY TOP WOOD PLATES IN WALL BELOW, ENGINEERED WOOD PRODUCT RIM, AND HARDY FRAME BEARING PLATE INSTALLED BELOW PANEL.



B



SECTION X-X



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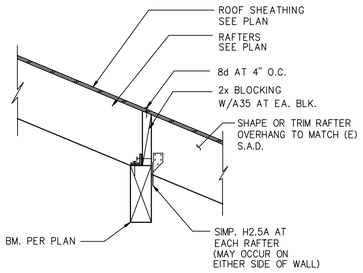
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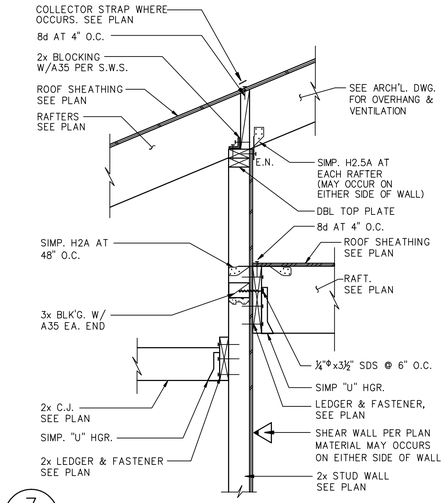
LOT "D"
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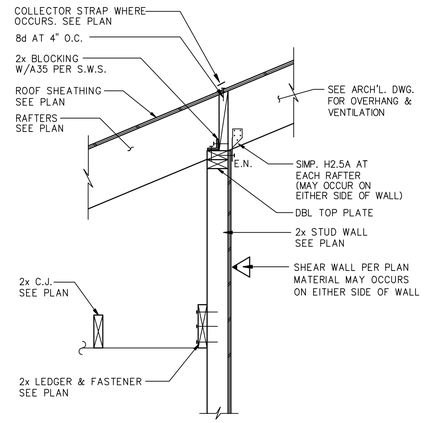
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SHEET NO:	S6
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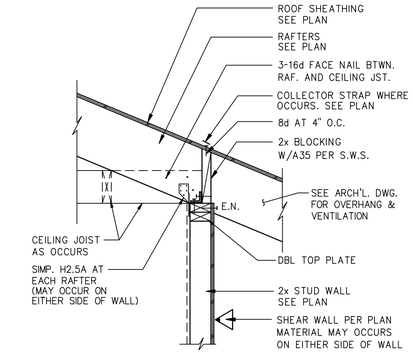
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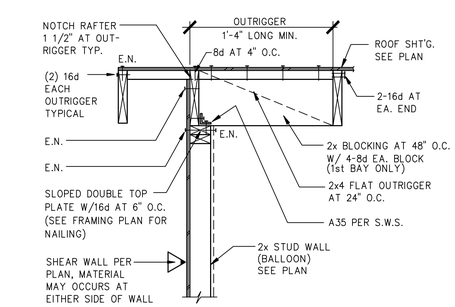
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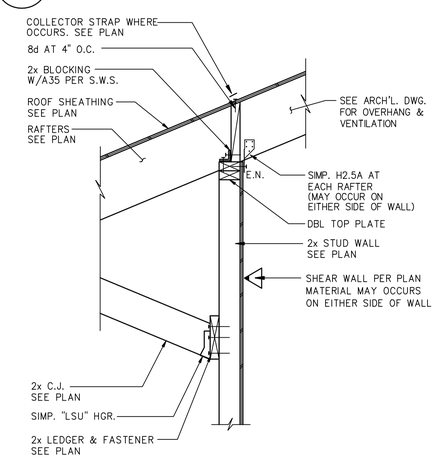
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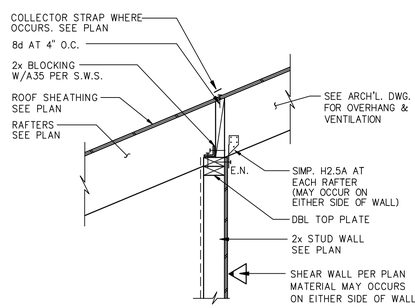


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3

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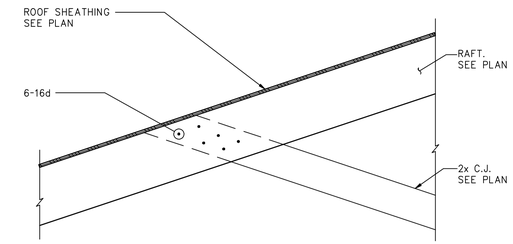
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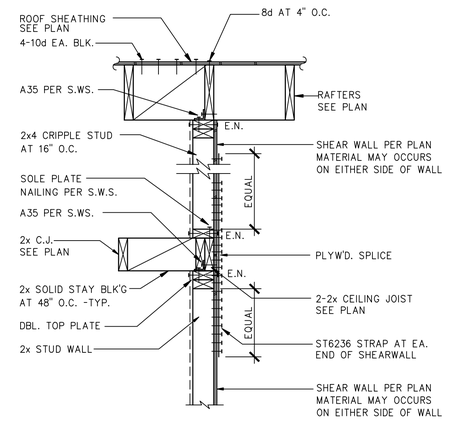
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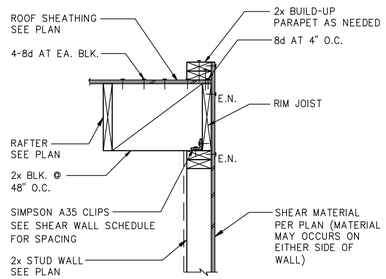
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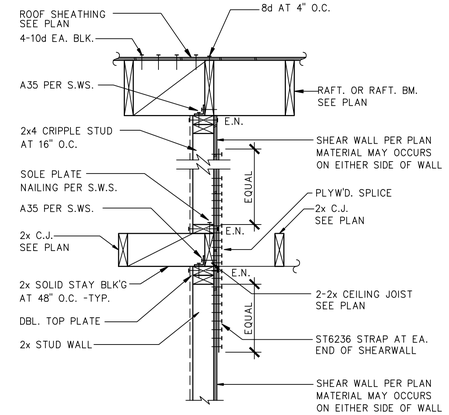


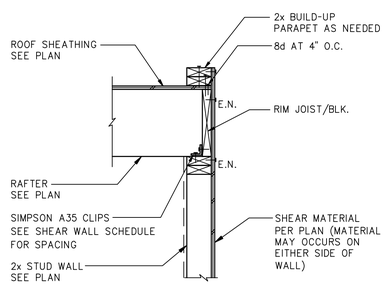
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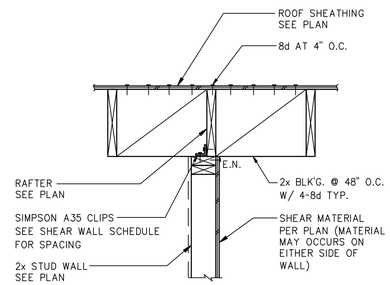


11 — 8 — 5 — 2





12 — 9 — 6 — 3



REGISTERED PROFESSIONAL ENGINEER
JOSEPH D. NGUYEN
No. 70821
Exp.6-30-23
CIVIL
STATE OF CALIFORNIA

JDN ENGINEERING, INC.
RESIDENTIAL STRUCTURAL DESIGN
P.O. Box 1382 Ph. 510-415-2809
Union City, CA. 94587
Website: JDNengineeringinc.com
Email: Joe@JDNengineeringinc.com

LOT "D"
1901 SAN JUAN RD.
AROMAS, CA. 95076

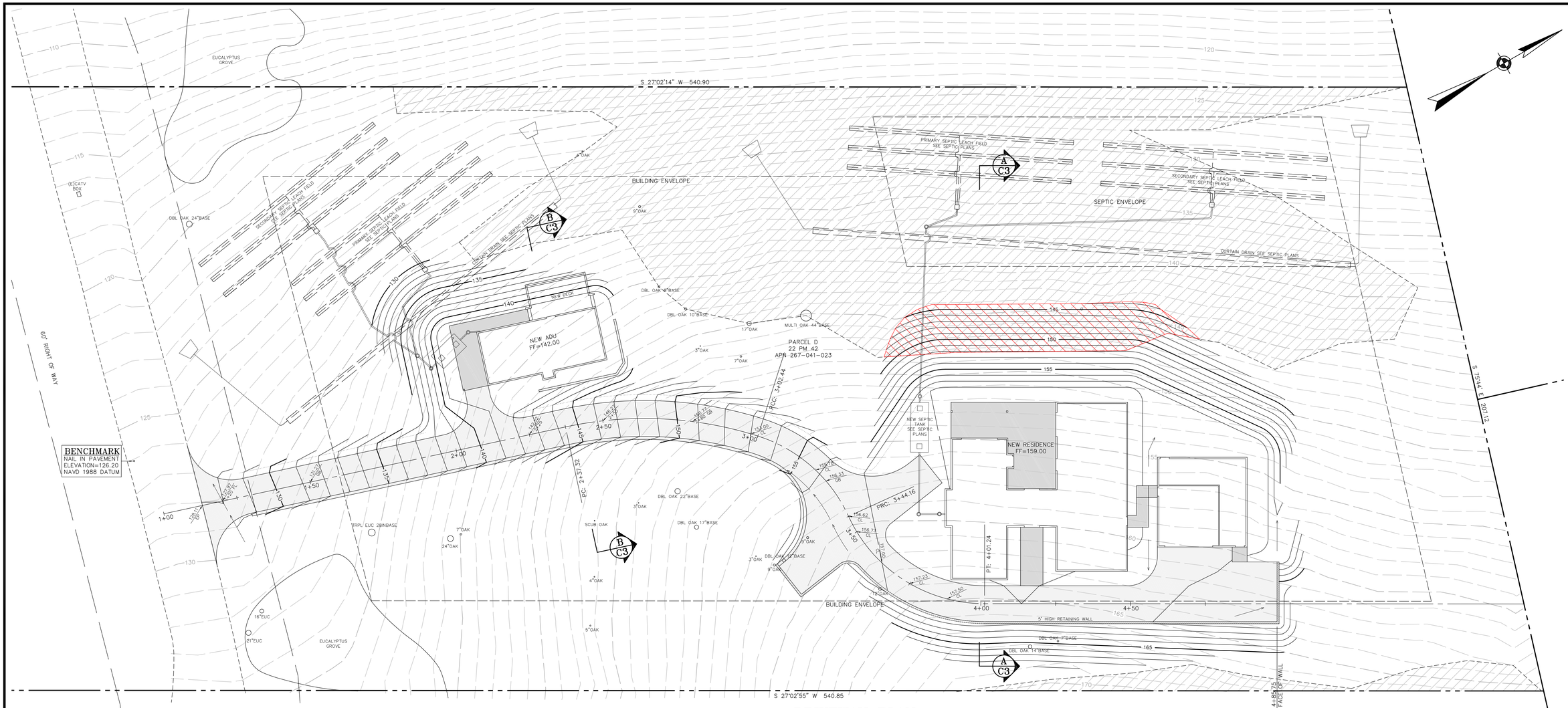
REVISIONS	BY

DRAWN:	JN
CHECKED:	JN
DATE:	4-1-2021
SCALE:	AS NOTED
JOB NO:	AROMAS LOT D

SHEET NO:

S8

OF . SHEETS

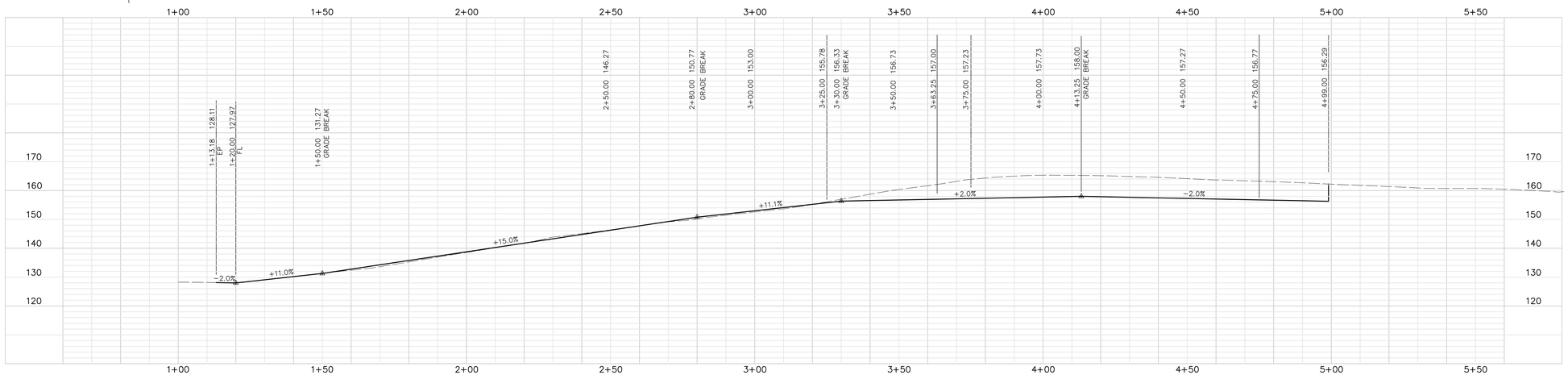


DRIVEWAY PLAN

SCALE: 1"=16'

0 10 20 40 FEET

(E)JP



DRIVEWAY PROFILE

SCALE: 1"=20' HORZ & VERT

TOPOGRAPHIC MAPPING BASED UPON A FIELD SURVEY BY DATED 2-16-21, NAVD 1988 DATUM
BOUNDARY LINES COMPILED FROM RECORD INFORMATION
THIS IS NOT A BOUNDARY SURVEY

LEGEND

- NEW CONCRETE
- NEW ASPHALT CONCRETE
- AREA OVER 25% SLOPE
- GRADING AREA OVER 25% SLOPE
- 14 EXISTING CONTOUR
- 15 FINISH CONTOUR
- +14.79 EXISTING GRADE
- 14.50 EP FINISH GRADE
- FLOWLINE
- X FENCE
- PROPERTY LINE
- NEW RETAINING WALL

ESTIMATED EARTHWORK

STRIPPINGS :	250 ± C.Y.
EXCAVATION :	950 ± C.Y.
FILL :	950 ± C.Y.

IMPERVIOUS SURFACES

NEW BUILDINGS :	4152 SF
NEW ASPHALT :	6024 SF
NEW CONCRETE :	1193 SF
TOTAL :	11503 SF

25% SLOPES

TOTAL PARCEL AREA	: 109,205 SF
TOTAL AREA > 25% SLOPE	: 22,162 SF
TOTAL GRADING AREA	: 24,413 SF
> 25% SLOPE W/IN GRADING LIMITS	: 1,442 SF
GRADING IN AREA > 25% SLOPE	: 5.9%

ROPER ENGINEERING
CIVIL ENGINEERING & LAND SURVEYING
48 MANN AVENUE CORRALITOS, CA 95076
(831) 724-5300 jeff@roperengineering.com

REGISTERED PROFESSIONAL ENGINEER JEFFREY A. ROPER No. 41081 CIVIL STATE OF CALIFORNIA

UNLESS SIGNED BY THE ENGINEER, THIS PLAN IS FOR REFERENCE ONLY. THE SIGNED PLAN IS THE ONLY PLAN TO BE USED FOR CONSTRUCTION.

NEW RESIDENCE FOR CARLOS CORNEJO

1909 SAN JUAN ROAD ROYAL OAKS APN 267-041-023

DRIVEWAY PLAN & PROFILE

SCALE:	AS NOTED
DESIGNED BY:	JR
DRAWN BY:	JR
DATE:	SEPT. 10, 2021
REVISED:	SEPT. 12, 2024
JOB NO.:	21007
SHEET	C1
OF	3 SHEETS

SEPTIC ENVELOPE

NEW SEPTIC TANK SEE SEPTIC PLANS

NEW RESIDENCE
FF=159.00
PAD=158.17

NEW WORKSHOP
FF=158.00
PAD=157.17

NEW GARAGE
FF SLOPES

BUILDING ENVELOPE

5' HIGH RETAINING WALL

L OAK 8"BASE
DBL OAK 10"BASE
17"OAK
MULTI OAK 44"BASE
3"OAK
7"OAK
DBL OAK 22"BASE
DBL OAK 17"BASE
9"OAK
DBL OAK 12"BASE
12"OAK
DBL OAK 7"BASE
DBL OAK 14"BASE

PC: 3+12.44
PRC: 3+44.16
PT: 4+01.24
4+00
4+50
4+85.75 FACE OF WALL

GRADING PLAN

SCALE: 1"=8'

0 5 10 20
FEET

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JEFF A. ROPER
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CIVIL
STATE OF CALIFORNIA

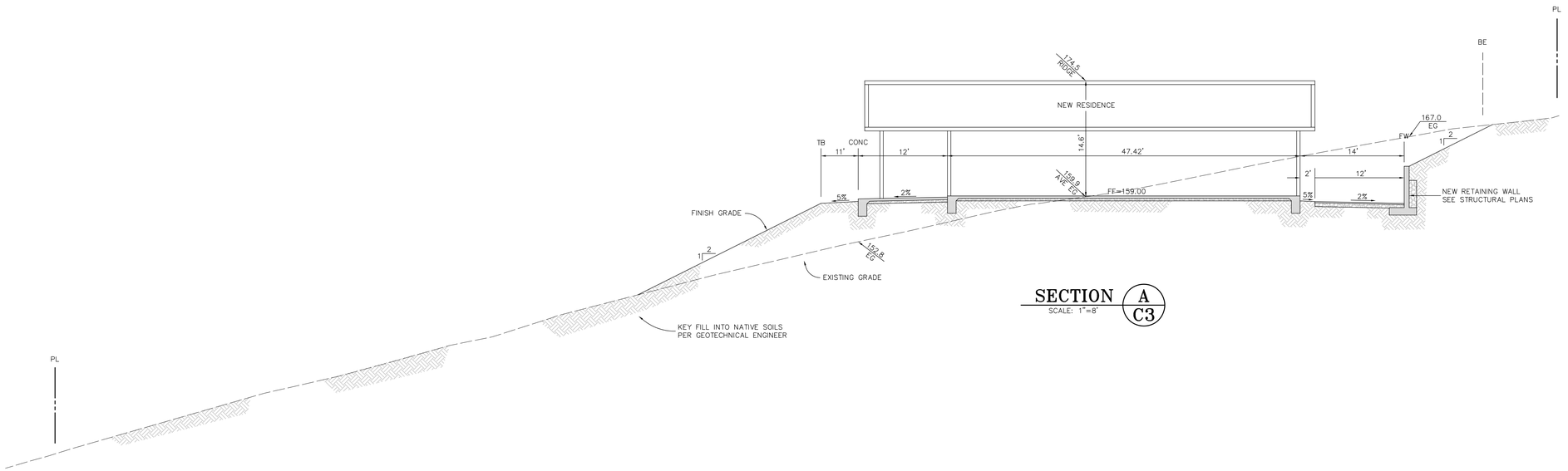
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NEW RESIDENCE FOR
CARLOS CORNEJO
1909 SAN JUAN ROAD ROYAL OAKS APN 267-041-023

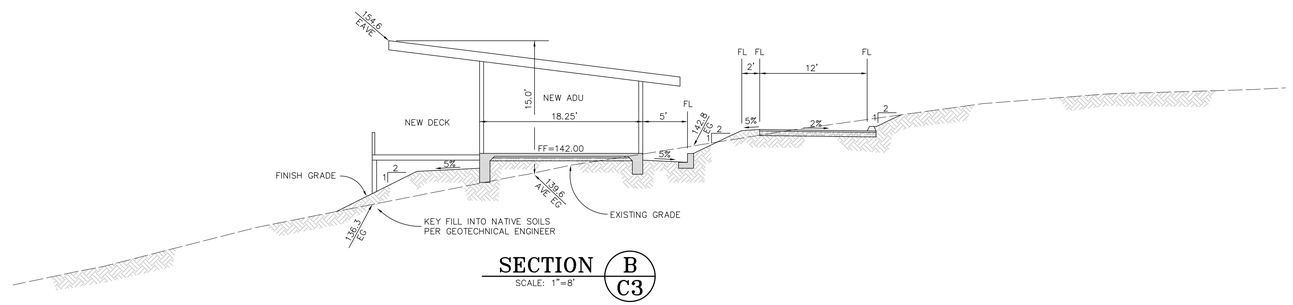
GRADING PLAN

SCALE:	AS NOTED
DESIGNED BY:	JR
DRAWN BY:	JR
DATE:	SEPT. 10, 2021
REVISED:	SEPT. 12, 2024
JOB NO.:	21007

SHEET
C2
OF 3 SHEETS



SECTION A / C3
SCALE: 1"=8'



SECTION B / C3
SCALE: 1"=8'

GRADING NOTES

1. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE, VERIFICATION IS THE RESPONSIBILITY OF THE CONTRACTOR. PRIOR TO EXCAVATION, CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES. CALL 811 TO HAVE UTILITIES LOCATED AND MARKED.
2. VEGETATION, ROOTS AND DELETERIOUS MATERIALS SHALL BE REMOVED FROM AREA TO BE GRADED PRIOR TO GRADING.
3. CUT SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL IN NATIVE MATERIAL AS DETERMINED BY THE ENGINEER.
4. FILL SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
5. FILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION UNLESS OTHERWISE NOTED. SEE GEOTECHNICAL INVESTIGATION FOR FURTHER SPECIFICATIONS.
6. AFTER GRADING, SPREAD TOPSOIL FROM STRIPPINGS ON SLOPES AND LANDSCAPED AREAS 3" TO 6" DEEP.
7. BETWEEN OCTOBER 15 AND APRIL 15, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. DURING CONSTRUCTION SUCH PROTECTION MAY CONSIST OF MULCHING AND/OR PLANTING OF NATIVE VEGETATION OF ADEQUATE DENSITY. BEFORE COMPLETION OF THE PROJECT, ANY EXPOSED SOIL ON DISTURBED SLOPES SHALL BE PERMANENTLY PROTECTED FROM EROSION.
8. CUT AND FILL SLOPES SHALL BE PLANTED WITH ANNUAL RYE GRASS (40 LBS/ACRE) AND MULCHED WITH COMPOST.
9. CONCRETE IN DRIVEWAYS SHALL HAVE A COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS.
10. THE UPPER 6 INCHES OF SUBGRADE IN DRIVEWAY AREAS SHALL BE COMPACTED TO 95% RELATIVE COMPACTION. SEE GEOTECHNICAL INVESTIGATION FOR FURTHER SPECIFICATIONS.
11. AGGREGATE BASE SHALL BE CLASS 2 IN CONFORMANCE WITH SECTION 26 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
12. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
13. THE GEOTECHNICAL INVESTIGATION PREPARED BY SOIL SURVEYS GROUP INC. FOR SHAWKI DEYN PROPERTIES LLC DATED APRIL 2, 2021 JOB #7794 SHALL BE STRICTLY ADHERED TO DURING THE GRADING AND CONSTRUCTION OF THIS PROJECT.

REGISTERED PROFESSIONAL ENGINEER
JEFFREY A. ROPER
No. 41081
CIVIL
STATE OF CALIFORNIA

UNLESS SIGNED BY THE ENGINEER, THIS PLAN IS FOR REFERENCE ONLY. THE SIGNED PLAN IS THE ONLY PLAN TO BE USED FOR CONSTRUCTION.

ROPER ENGINEERING
CIVIL ENGINEERING & LAND SURVEYING
48 MANN AVENUE CORRALITOS, CA 95076
(831) 724-5300 jeff@roperengineering.com

NEW RESIDENCE FOR
CARLOS CORNEJO
1909 SAN JUAN ROAD ROYAL OAKS APN 267-041-023

SECTIONS & NOTES

SCALE:	AS NOTED
DESIGNED BY:	JR
DRAWN BY:	JR
DATE:	SEPT. 10, 2021
REVISED:	SEPT. 12, 2024
JOB NO.:	21007
SHEET	C3
OF	3 SHEETS



VICINITY MAP

NOT TO SCALE

PROJECT INFORMATION

PROPERTY OWNER:	CARLOS CORNEJO 231 MONTCLAIR LANE SALINAS, CA 93906
JURISDICTION:	COUNTY OF MONTEREY
ASSESSORS PARCEL NO:	267-041-023-000
DESCRIPTION:	1901 SAN JUAN ROAD (LOT D), AROMAS, CALIFORNIA

SEPTIC NOTES:

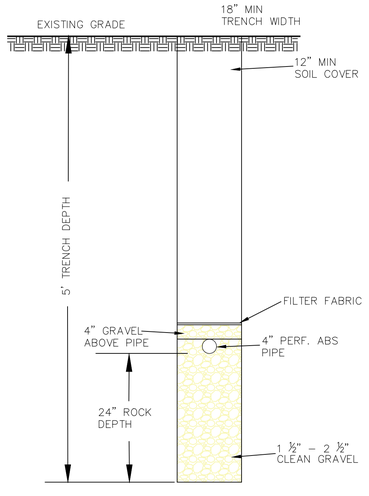
1. THE ON-SITE WASTEWATER TREATMENT SYSTEM SHALL BE INSTALLED IN COMPLIANCE WITH THE MONTEREY COUNTY LAMP FOR OWTS FOR NEW CONSTRUCTION.

2. THE CONTRACTOR SHALL INSTALL THE PRIMARY AND SECONDARY LEACH FIELDS. DIVERTER VALVES, DISTRIBUTION BOXES, ETC. AT THE INITIAL INSTALLATION OF THE SEPTIC SYSTEM.

3. THE INSTALLATION OF THE SEPTIC TANK AND LEACH FIELDS SHALL BE INSPECTED AND APPROVED BY THE MONTEREY COUNTY HEALTH DEPARTMENTS PRIOR TO COVERING OR PLACEMENT OF THE DRAIN ROCK.

4. THE SEPTIC TANK SHALL BE EQUIPPED WITH AN EFFLUENT FILTER.

5. NOT ALL UNDERGROUND UTILITIES WERE LOCATED. UNDERGROUND UTILITY LOCATIONS SHOULD BE OBTAINED FROM THE LOCAL UTILITY COMPANIES, PUBLIC OR PRIVATE AND/OR PROPERTY OWNERS.



A LEACH FIELD DETAIL

NOT TO SCALE

BASIS OF SEPTIC DESIGN:

1. THE SEPTIC SYSTEM IS DESIGNED TO COMPLY WITH THE MONTEREY COUNTY LAMP FOR OWTS. THE PARCEL IS LOCATED IN A GROUNDWATER RECHARGE AREA. THE PARCEL IS 2.50 ACRES. THE TOTAL ALLOWABLE NITROGEN LOADING IS 100.0 GRAMS. THE PROPOSED DEVELOPMENT IS 60 GRAMS (40 GRAMS FOR THE RESIDENCE AND 20 GRAMS FOR THE ADU)

2. THE SYSTEM WILL SERVE A 3 BEDROOM HOME AND A 1 BEDROOM ADU. THE MAIN HOUSE WILL BE DESIGNED AS A 3 BEDROOM RESIDENCE AND THE ADU AS A 1 BEDROOM RESIDENCE. THE HOUSE SEPTIC TANK WILL BE 2,000 GALLONS TO ALLOW FOR A GARBAGE GRINDER AND THE ADU SEPTIC TANK WILL BE 1,500 GALLONS TO ALLOW FOR A GARBAGE GRINDER. THE ESTIMATED DAILY WASTEWATER GENERATION IS 750 GALLONS PER DAY (450 GPD FOR THE RESIDENCE AND 300 GPD FOR THE ADU)

3. PER THE SITE PERCOLATION INVESTIGATION REPORT BY GRICE ENGINEERING, INC., DATED APRIL 2001, JOB# 3847-01.03, THE PERCOLATION RATES FOR THE PARCEL ARE AS FOLLOWS:

BORING	DEPTH(FT)	RATE(MPI)
B-2	10.0	29.13
B-3	23.52	55.20
B-4	22.45	15.93
B-19	9.13	55.79

PERCOLATION RATES PER SOIL SURVEYS GROUP, INC. REPORT DATED AUGUST 4, 2022, JOB #7794-1. THE PERCOLATION RATES ARE AS FOLLOWS:

BORING	DEPTH(FT)	RATE(MPI)
P-1	5.03	166.67
P-2	5.10	50.00
P-3	2.90	62.50
P-4	5.16	50.00
P-5	3.00	22.73
P-6	5.03	31.25

4. BASED ON TABLE 5-4, SOIL APPLICATION RATES (AS DETERMINED FROM STANDARDIZED PERCOLATION RATES),

THE MAXIMUM SOIL APPLICATION RATE FOR THE MAIN RESIDENCE IS 0.3 GALLONS PER DAY PER SQUARE FOOT. BASED ON THE PERCOLATION RATE FOR BORING P-2. THE DEPTH IS CORRECT AND LOCATING THE DISPERSAL AREA UPHILL FROM THE P-2 BORING LOCATION WILL PROVIDE FOR HIGHER PERCOLATION RATES. THE SOIL GRADES TO MORE GRANULAR AND LESS CLAY AND SILTY PARTICLES UPHILL FROM BORING P-2.

THE MAXIMUM SOIL APPLICATION RATE FOR THE ADU IS 0.4 GALLONS PER DAY PER SQUARE FOOT. BASED ON THE PERCOLATION RATE FOR BORINGS P-4 AND P-6. THE AVERAGE OF THE TWO BORINGS IS 40.26 MPI.

5. THE ESTIMATED DAILY WASTEWATER GENERATION IS 450 GALLONS FOR THE HOUSE. 450 / 0.3 = 1500 SF. 1500 SF / 4 SF/FT = 375 LINEAL FEET.
PRIMARY FIELD: 4 SF/FT X 376 LF (4X94) = 1504 SF > 1500 SF REQUIRED
SECONDARY FIELD: 4 SF/FT X 376 LF (4X94) = 1504 SF > 1500 SF REQUIRED

THE ESTIMATED DAILY WASTEWATER GENERATION IS 300 GALLONS FOR THE ADU.
300 / 0.4 = 750 SF. 750 SF / 4 SF/FT = 187.5 LINEAL FEET
PRIMARY FIELD: 4 SF/FT X 188 LF (2X94) = 752 SF > 750 SF REQUIRED
SECONDARY FIELD; 4 SF/FT X 188 LF (2X94) = 752 SF > 750 SF REQUIRED.

6. THE LEACH FIELDS SHALL HAVE AT MINIMUM OF 12 INCHES OF SOIL COVER.

7. THE LEACH FIELDS SHALL NOT BE COVERED BY AN IMPERMEABLE SURFACE, SUCH AS PAVING, CONCRETE SLABS, PLASTIC SHEETING OR ANY OTHER MATERIAL THAT PREVENTS OXYGEN TRANSFER TO THE SOIL UNLESS SUPPLEMENTAL TREATMENT IS INCORPORATED INTO THE SEPTIC SYSTEM.

8. TO FACILITATE FUTURE INSPECTIONS OF THE LEACH FIELDS, TRACER WIRE SHALL BE LAID ALONG THE LENGTH OF THE DISTRIBUTION PIPE AND INSPECTION PORTS ARE TO BE INSTALLED AT THE END OF EACH TRENCH.

9. THE LEACH FIELDS SHALL NOT BE DEEPER THAN FIVE FEET.

10. THE SEPTIC TANK SHALL BE WATER TIGHT AND CONSTRUCTED OF DURABLE, CORROSION RESISTANT MATERIALS AND MUST CONFORM TO IAPMO, NSF OR ASTM STANDARDS. THE TANK SHALL BE INSTALLED NO DEEPER THAN SIX INCHES BELOW FINISH GRADE UNLESS FITTED WITH WATERTIGHT RISERS. THE OWNERS SHALL MAINTAIN ACCESS OPENINGS SO THAT THE TANK IS READILY ACCESSIBLE FOR OBSERVATIONS, MAINTENANCE AND PUMPING.

GENERAL / GRADING NOTES

1. SURFACE WATER WILL DRAIN AWAY FROM EACH STRUCTURE ON THE LOT.
2. INSTALL SEDIMENT LOGS AROUND CONSTRUCTION AREA TO KEEP DEBRIS ON PROPERTY.
3. PLACE GRAVEL BAGS AROUND NEARBY, DOWN-STREAM OF STORM INLET(S) DURING CONSTRUCTION.
4. DURING CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN THE COUNTY RIGHT-OF-WAY (STREET/SIDEWALK) FREE FROM DEBRIS AND DIRT.
5. ALL GRADING SHALL COMPLY WITH THE COUNTY OF MONTEREY GRADING ORDINANCE.
6. SITE TOPOGRAPHY AND SURVEY PROVIDED BY ROPER ENGINEERING, 48 MANN AVENUE, CORRALITOS, CA 95076-1114.



SEPTIC PLAN

SCALE: 1" = 20'0"

TALUBAN ENGINEERING, INC.
103 CHURCH STREET
SALINAS, CALIFORNIA 93901
P.O. BOX 292, SALINAS, CALIFORNIA, 93902
taluban@sbcglobal.net

REVISIONS
1 03.02.23 BT
2 03.11.23 BT

REGISTERED PROFESSIONAL ENGINEER
BENJAMIN A. TALUBAN
No. 44217
Exp. 6/30/23
CIVIL
STATE OF CALIFORNIA

SEPTIC SYSTEM SITE PLAN

NEW RESIDENTIAL DEVELOPMENT
1901 SAN JUAN ROAD
AROMAS, CALIFORNIA 95004

DATE: 08/15/21
SCALE: AS SHOWN
DRAWN: BT
JOB: 20-049
APN: VARIES
SHEET C.1
OF SHEETS

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