An Attached Accessory Dwelling Unit for

Nick & Grace Cavanaugh

845 Sage Drive, Vacaville, CA 95687

Electrical Legend

- Telephone jack
- Cable / Satillite service
- Computer terminal jack-CATVI
- High efficiency flourescent light fixture
- Duplex outlet 1/2 switched
- 110VAC duplex outlet (Ground Fault Interrupter) (GFI)
- 220VAC outlet (220V)
- 110VAC duplex outlet
- Ceiling mounted, 110VAC duplex outlet (Clg.)
- Single pole switch
- 3-way switch
- High efficiency light fixture
- Wall mounted high efficiency light fixture
- High efficiency recessed can light fixture
- Wall mounted high efficiency exterior flood light
- Wall sconce fixture
- Single pole switch dimmer
- Smoke detector - line voltage
- Recessed ceiling + exhaust fan w/ light
- Carbon Monoxide Detector per California Residential Code Section R315
- Ceiling mounted fan w/ high efficiency light fixture

Drawing Legend

(E)	Existing
(N)	New
Typ.	Typical
O.C.	On Center
F.F.E.	Finish Floor Elevation
F.S.E.	Finish Slab Elevation
W/C	Water Closet (Toilet)
Lav.	Lavatory
W/H	Water Heater
D/W	Dishwasher
HVAC	Heating & Air Conditioner
D.F.	Douglas Fir Larch
U.O.N.	Unless Otherwise Noted
℄	Centerline (from centerline)

Shearwall number / Length of shearwall (SW1 8'-0") — Shearwall Marker

Datum point of reference

Building section marker (A 10)

Construction detail marker (1 13)

Existing wall, cabinets, windows, doors, equipment to be removed.

Existing wall to remain.

New wall construction.

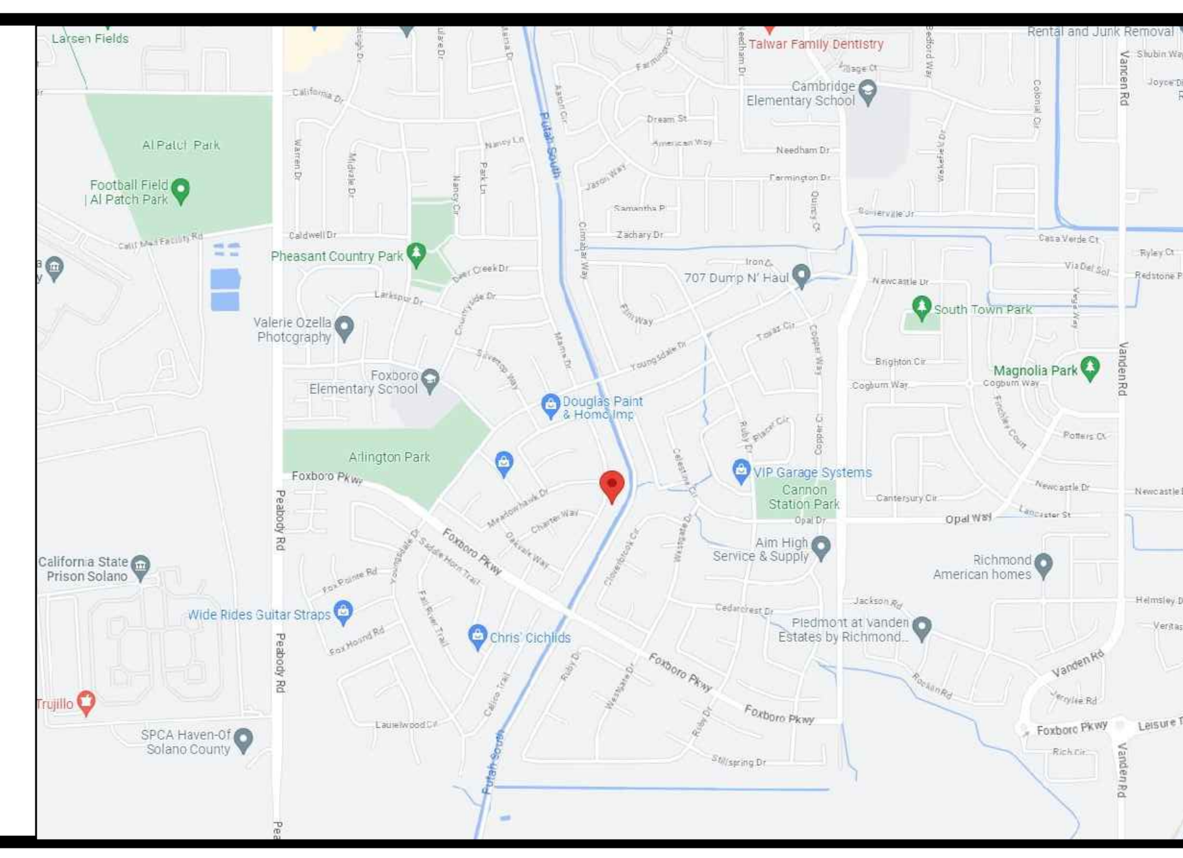
Existing wall line below.

Applicable Building Design Codes:

2022 California Building Code
2022 California Administrative Code
2022 California Residential Code
2022 California Electrical Code
2022 California Mechanical Code
2022 California Plumbing Code
2022 California Energy Code
2022 California Historic Building Code
2022 Fire Code
2022 Existing Building Code
2022 California Green Building Standards Code (CalGreen)
2022 California Referenced Standards Code
1997 Uniform Housing code
1997 Uniform Code for the Abatement of Dangerous Building
2018 International Swimming Pool and Spa
2018 International Property Maintenance Code

Index of Drawings

Site Location



Scope of Project

Addition of (N) attached Accessory Dwelling Unit (ADU)

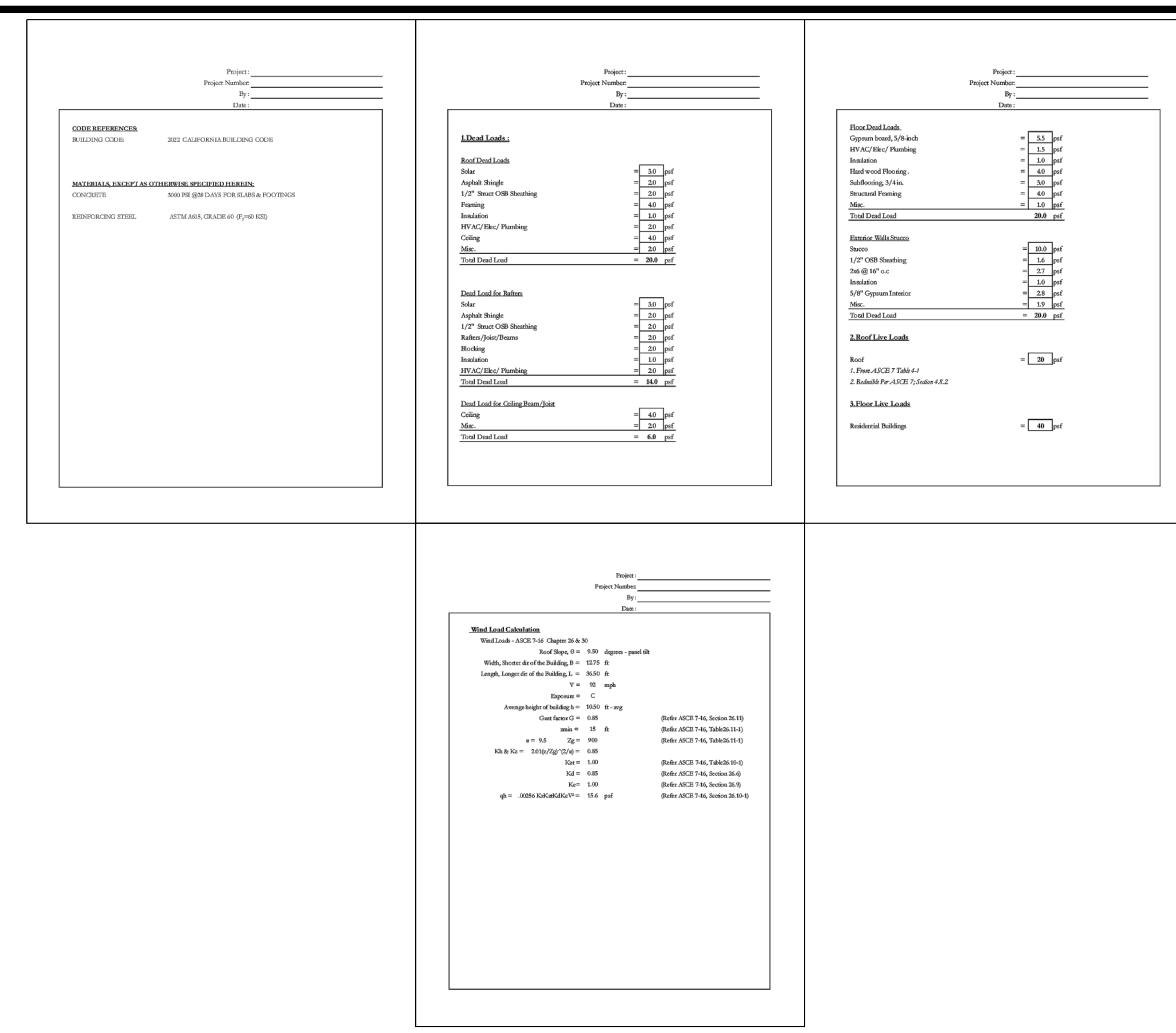
Project Details

(E) 1st Floor Habitable Area: 904 sq. ft. (County Records - unverified)
(E) 2nd Floor Habitable Area: 785 sq. ft. (County Records - unverified)
(E) 2-Car Garage Area: 415 sq. ft. (County Records - unverified)
(E) Porch Area: 51 sq. ft.
(N) ADU Area: 384 sq. ft.
TOTAL HABITABLE AREA: 2,073 sq. ft.

Zoning & Requirements

Building Type of Construction: VB
Occupancy Groups of Dwelling and Garage: R3 & U
Zoned: RLM-4.5 Residential Low/Medium Density
Fire Sprinklers: None Existing / None Required
Jusrisdiction: City of Vacaville, CA

Project Design Data



Project: Project Number: By: Date:

CODE REFERENCES:
BUILDING CODE: 2022 CALIFORNIA BUILDING CODE

MATERIALS, EXCEPT AS OTHERWISE SPECIFIED HEREIN:
CONCRETE 3000 PSI @28 DAYS FOR SLABS & FOOTINGS
REINFORCING STEEL ASTM A615, GRADE 60 (F_y=60 KSI)

1.Dead Loads :

Roof Dead Loads		
Solar	= 3.0	psf
Asphalt Shingle	= 2.0	psf
1/2" Struct OSB Sheathing	= 2.0	psf
Framing	= 4.0	psf
Insulation	= 1.0	psf
HVAC/Elec/ Plumbing	= 2.0	psf
Ceiling	= 4.0	psf
Misc.	= 2.0	psf
Total Dead Load	= 20.0	psf

Dead Load for Rafters		
Solar	= 3.0	psf
Asphalt Shingle	= 2.0	psf
1/2" Struct OSB Sheathing	= 2.0	psf
Rafters/Joist/Beams	= 2.0	psf
Blocking	= 2.0	psf
Insulation	= 1.0	psf
HVAC/Elec/ Plumbing	= 2.0	psf
Total Dead Load	= 14.0	psf

Dead Load for Ceiling Beam/Joist		
Ceiling	= 4.0	psf
Misc.	= 2.0	psf
Total Dead Load	= 6.0	psf

Floor Dead Loads		
Gypsum board, 5/8-inch	= 5.5	psf
HVAC/Elec/ Plumbing	= 1.5	psf
Insulation	= 1.0	psf
Hard wood Flooring .	= 4.0	psf
Subflooring, 3/4 in.	= 3.0	psf
Structural Framing	= 4.0	psf
Misc.	= 1.0	psf
Total Dead Load	20.0	psf

Exterior Walls Stucco		
Stucco	= 10.0	psf
1/2" OSB Sheathing	= 1.6	psf
2x6 @ 16" o.c	= 2.7	psf
Insulation	= 1.0	psf
5/8" Gypsum Interior	= 2.8	psf
Misc.	= 1.9	psf
Total Dead Load	= 20.0	psf

2.Roof Live Loads

Roof = 20 psf
1. From ASCE 7 Table 4-1
2. Reducible Per ASCE 7; Section 4.8.2

3.Floor Live Loads

Residential Buildings = 40 psf

Wind Load Calculation

Wind Loads - ASCE 7-16 Chapter 26 & 30

Roof Slope, θ = 9.50	degrees - panel tilt	
Width, Shorter dir of the Building, B = 12.75	ft	
Length, Longer dir of the Building, L = 36.50	ft	
V = 92	mph	
Exposure = C		
Average height of building h = 10.50	ft - avg	
Gust factor G = 0.85		(Refer ASCE 7-16, Section 26.11)
zmin = 15	ft	(Refer ASCE 7-16, Table26.11-1)
α = 9.5 Zg = 900		(Refer ASCE 7-16, Table26.11-1)
Kh & Kz = 2.01(z/Zg)^(2/α) = 0.85		
Kzt = 1.00		(Refer ASCE 7-16, Table26.10-1)
Kd = 0.85		(Refer ASCE 7-16, Section 26.6)
Ke = 1.00		(Refer ASCE 7-16, Section 26.9)
qh = .00256 KzKztKdKeV² = 15.6	psf	(Refer ASCE 7-16, Section 26.10-1)

General Notes

1. The Engineer of Record is: Praneet Reddy Erusu, P.E., Erusu Consultants, 10880 Wilshire Blvd., Suite 1101, Los Angeles, CA 90024, Email: la@erusuconsultants.com Tel. No. : + 1 310 500 9398.
2. It is the owner's and/or builder's responsibility to know all local building codes and regulations that govern this project.
3. All existing conditions shall be verified prior to beginning construction.
4. No revisions shall be made to these documents without express written consent from the designer & Engineer of Record. Any revisions made without express written consent from the designer & Engineer of Record shall relieve the designer & Engineer of record from any and all responsibility.
4. Provide installation instructions for all listed equipment to field inspector at time of inspection.
5. Landscaping to be done by others after project is complete.
6. Any signature, digital or otherwise, made by the Engineer of Record on these plans shall not be deemed valid for construction unless the signed plans are accompanied by the signed project structural calculations and the signed plans have been approved by the Building Department of local jurisdiction.
7. Owner and Contractor shall confirm with building department of local jurisdiction that no soils issues exist or special soils investigations are appropriate at project site.
8. Engineer of Record does not accept liability for any existing unpermitted work, including any impacts to project due to the effects of such unpermitted work on site. It shall be the sole responsibility of the owner and contractor to verify all existing construction is permitted, approved, and constructed as shown on these plans.
9. No work identified on any plan sheet signed by the Engineer of Record shall represent nor imply confirmation of any offsets or measurements to any property line or adjacent structure. All setbacks and offsets to property lines shall be the sole responsibility of the property owner and it is recommended that a licensed surveyor provide property information.
10. Owner is responsible to confirm project feasibility, including, but not limited to, any project limitations due to setbacks, property lines, or environmental requirements, prior to submittal of project plans.

General Notes

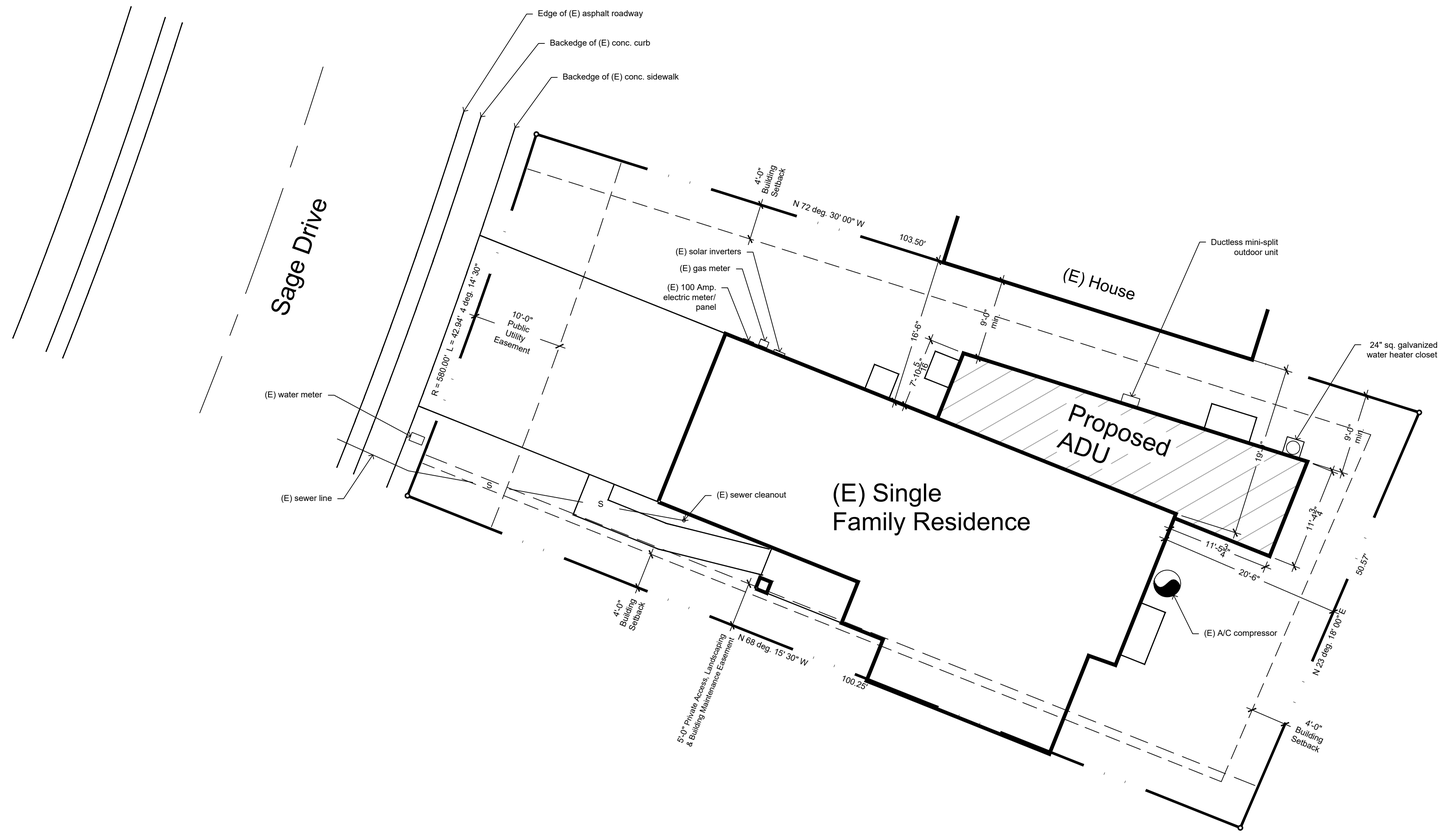
Title Sheet

No.	Revision/Issue	Date

Firm Name and Address
Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address
An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: T
Date: January, 2024	
Scale: Not to Scale	



Site Plan

Zoned: RLM-4.5 Residential Low/Medium Density
A.P.N: 0136-404-310

Scale: 1/8" = 1'-0"

NOTE:
Owner is responsible to confirm project feasibility, including, but not limited to, any project limitations due to setbacks, property lines, or environmental requirements, prior to submission of these project plans.

(E) 1st Floor Habitable Area: 904 sq. ft. (County Records - unverified)
(E) 2nd Floor Habitable Area: 785 sq. ft. (County Records - unverified)
(E) 2-Car Garage Area: 415 sq. ft. (County Records - unverified)
(E) Covered Porch Area: 51 sq. ft.
(N) ADU Area: 384 sq. ft.

TOTAL LOT COVERAGE: 1,754 sq. ft.

Lot Area: 4,742 sq. ft.
% Lot Coverage: 36.99%

General Notes

No.	Revision/Issue	Date

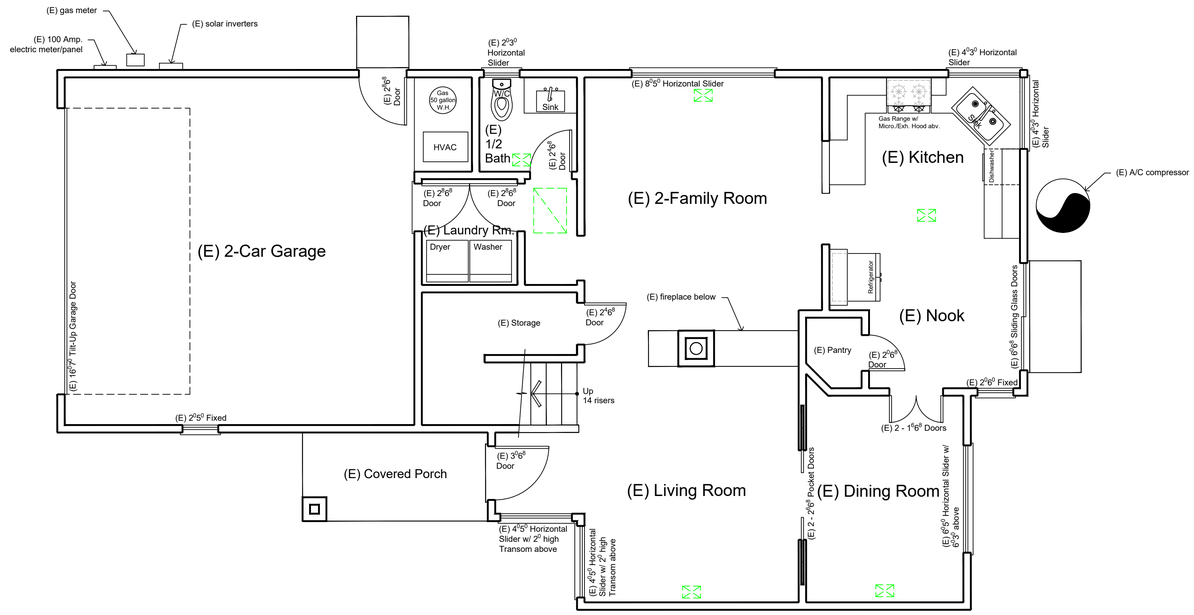
Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address

An Attached Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

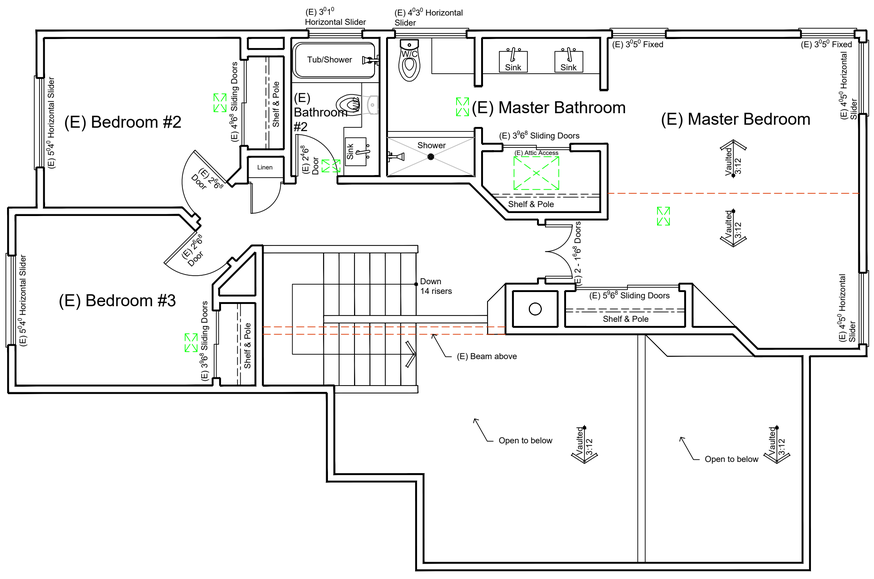
Project	Sheet
Cavanaugh	C1
Date: January, 2024	
Scale: 1/8" = 1'-0"	



(E) 1st Floor Plan (As-Built)

(E) 1st Floor Habitable Area: 904 sq. ft. / (E) 2-Car Garage Area: 415 sq. ft. (County Records - unverified)
(E) Porch Area: 51 sq. ft.

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



(E) 2nd Floor Plan (As-Built)

(E) 2nd Floor Habitable Area: 785 sq. ft. (County Records - unverified)

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

NOTE:
All existing ceilings are 8 ft. unless otherwise noted on these plans.

NOTE:
All existing dimensions were taken in the field from face of wall to face of wall. Wall thickness shown and shall be verified before construction begins.

LEGEND:

- Existing wall, cabinets, windows, doors, equipment to be removed.
- Existing wall to remain.
- New wall construction.
- Existing wall line below.
- New 1 hr. fire/sound resistant wall between ADU & main house, both sides WP3243

General Notes

(E) 1st Floor Plan (As-Built) &
(E) 2nd Floor Plan (As-Built)

No.	Revision/Issue	Date

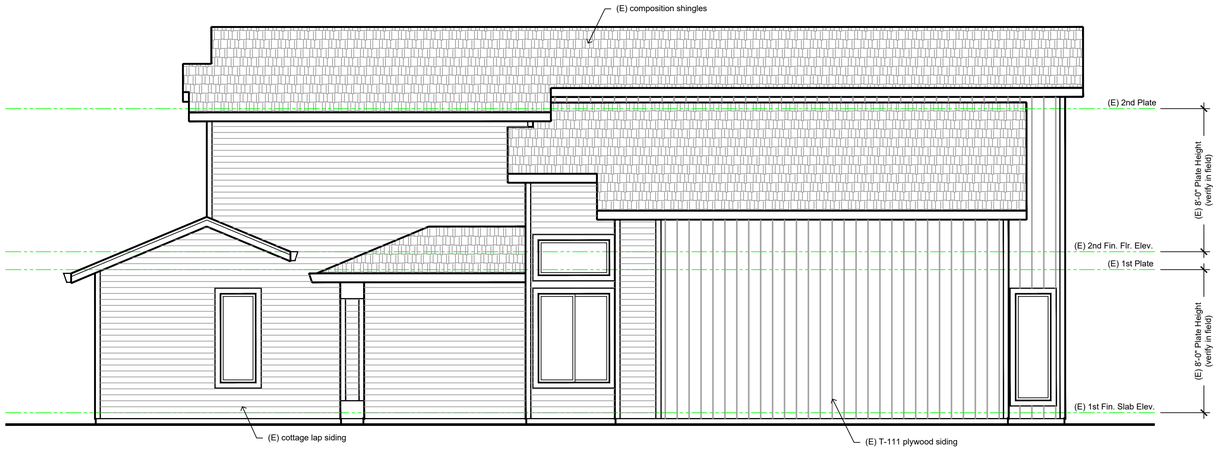
Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address

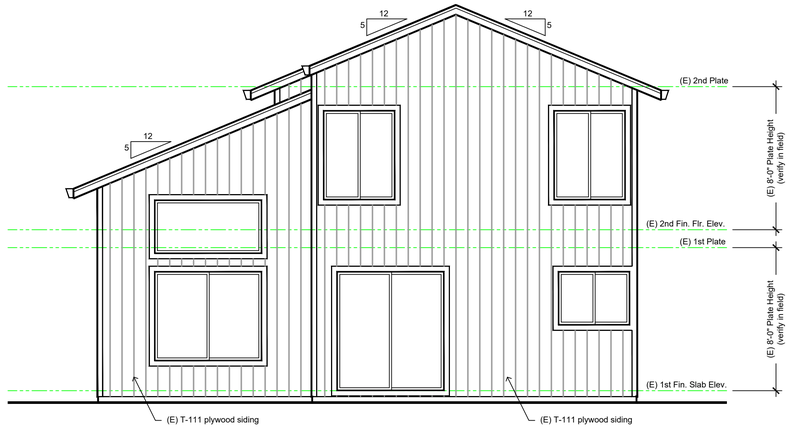
An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: A1
Date: January, 2024	
Scale: 1/4" = 1'-0"	



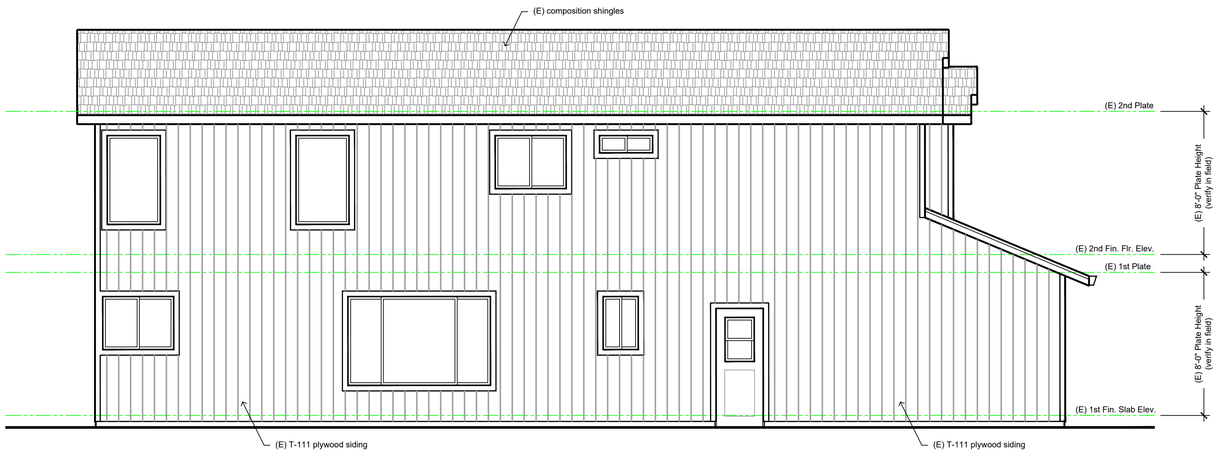
(E) Right Side (South) Elevation (As-Built)

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



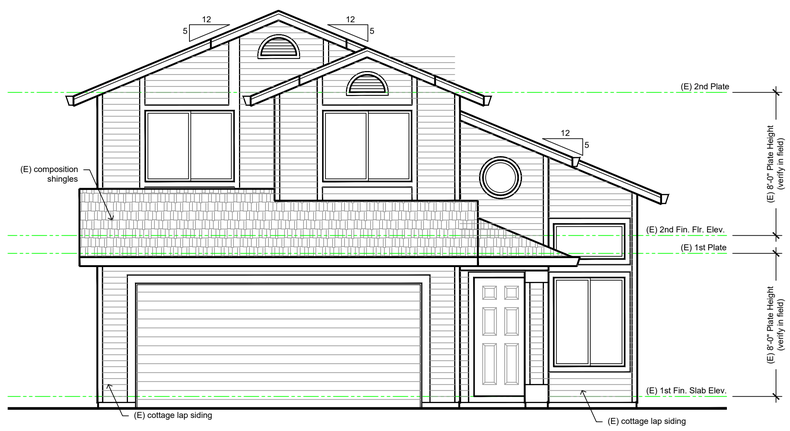
(E) Rear (East) Elevation (As-Built)

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



(E) Left Side (North) Elevation (As-Built)

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



(E) Front (West) Elevation (As-Built)

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

General Notes

(E) Exterior Elevations (As-Builts)

No.	Revision/Issue	Date

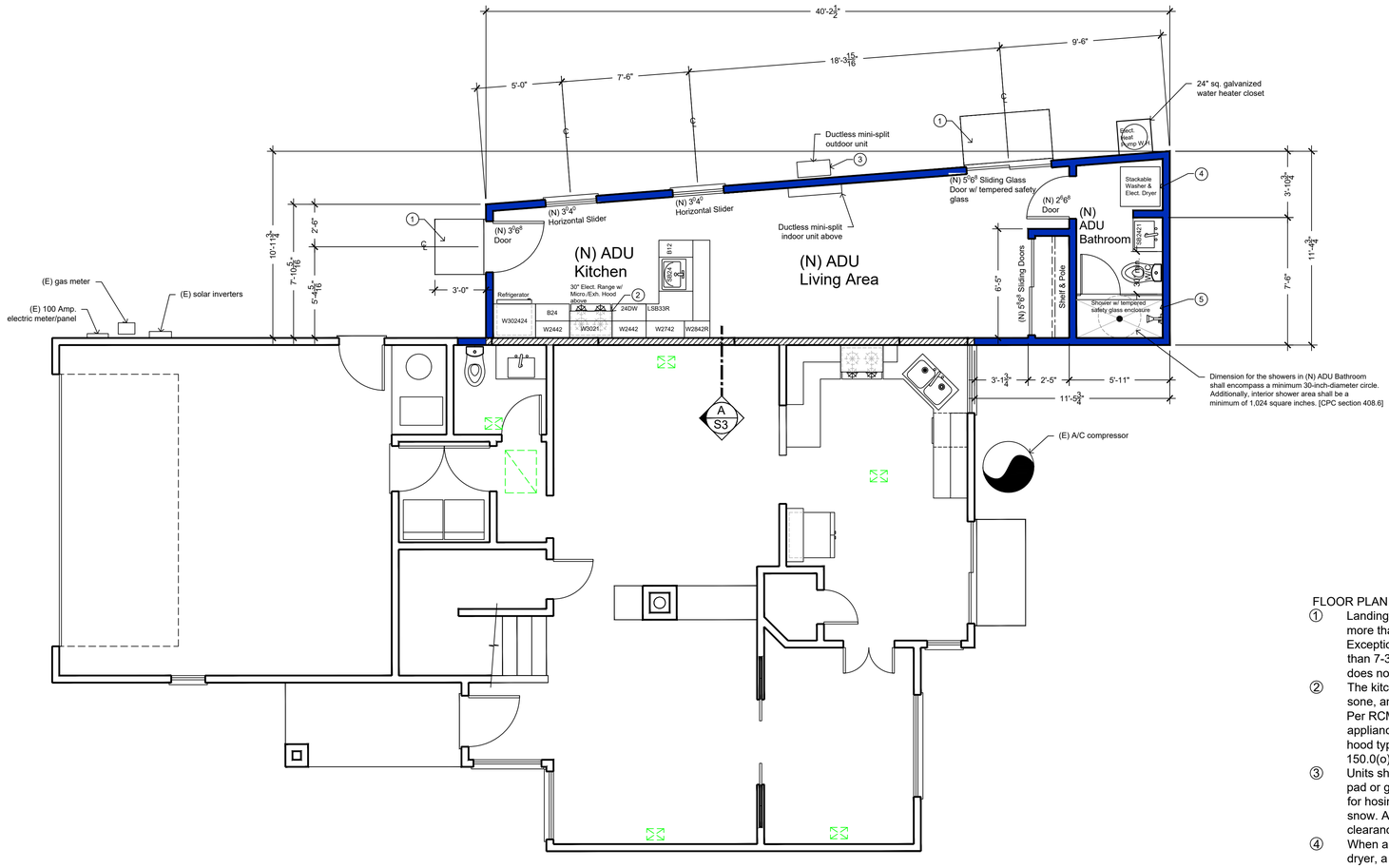
Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address

An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: A2
Date: January, 2024	
Scale: 1/4" = 1'-0"	



Modified 1st Floor Plan

(E) 1st Floor Habitable Area: 904 sq. ft. / (E) 2-Car Garage Area: 415 sq. ft. (County Records - unverified)
(N) ADU Area: 384 sq. ft.

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

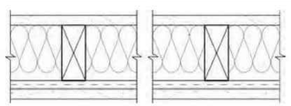
GA FILE NO. WP 3243	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL OR GLASS FIBER INSULATION, WOOD STUDS

Resilient channels 24" o.c. attached at right angles to ONE SIDE of 2 x 4 wood studs 24" o.c. with 1 1/4" Type S drywall screws. One layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway between studs. 3" mineral or glass fiber insulation in stud space.

OPPOSITE SIDE: One layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to studs with 6d cement coated nails, 17/8" long, 0.0915" shank, 15/64" heads, 7" o.c.

Vertical joints staggered 24" on opposite sides. **(LOAD-BEARING)**



Thickness:	5 3/8"
Approx. Weight:	7 psf
Fire Test:	Based on UL R14196, 05NK05371, 2-15-05, UL Design U309
Sound Test:	NRCC TL-93-103, IRC-IR-761, 3/98

20th edition (2012) Fire Resistance Design Manual & Sound Control published by the Gypsum Association

RESIDENTIAL GREEN BUILDING COMMENT:
The replacement of all non-compliant plumbing fixtures is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department.

Non-compliant plumbing fixtures have fixture flow rates exceeding the following:

Water Closets:	1.6 gallons per flush
Showerheads:	2.5 gallons per minute
Kitchen Faucets:	2.2 gallons per minute
Lavatory Faucets:	2.2 gallons per minute

Replacement compliant plumbing fixtures have the following maximum fixture flow rates:

Water Closets:	1.28 gallons per flush
Showerheads:	1.8 gallons per minute
Kitchen Faucets:	1.8 gallons per minute
Lavatory Faucets:	1.2 gallons per minute

FLOOR PLAN NOTES LEGEND:

① Landings or floors at the required egress doors shall not be more than 1-1/2" lower than the top of the threshold. Exception: The exterior landing or floor shall not be more than 7-3/4" below the top of the threshold provided the door does not swing over the landing or floor.

② The kitchen range hood must be HVI rated, limited to 3 sone, and with a min. airflow a specified in ASHRAE 62.2. Per RCM 4.6.4.7, vented range hoods including appliance-range hoods must be 100 cfm, while all other hood types including downdraft must be 300 cfm. [CEnC 150.0(o)2B].

③ Units shall sit level, have an unobstructed gap above the pad or ground, with suitable clearance underneath to allow for hosing, clearing of leaves and dirt, and clearance for snow. Alternately, install with wall brackets, where ground clearance allows.

④ When a room is designed for the installation of a clothes dryer, a minimum opening of 100 sq. inches for makeup air shall be provided in the door or by other approved means. Provide a moisture exhaust duct for the clothes dyer to outside no less than 4-inch in diameter and of metal or approved material with smooth surface, with the 14 feet long or less requirements.

⑤ All shower and tub/shower walls shall have a smooth, hard, nonabsorbent surface (e.g., ceramic tile) over a moisture resistant underlayment (e.g., W.R. gyp) to a height of 72" above the drain inlet per 2019 California Residential Code 307.2.

NOTE:
All existing ceilings are 8 ft. unless otherwise noted on these plans.

NOTE:
All existing dimensions were taken in the field from face of stud to face of stud. Stud thickness shown and shall be verified before construction begins.

LEGEND:

- Existing wall, cabinets, windows, doors, equipment to be removed.
- Existing wall to remain.
- New wall construction.
- Existing wall line below.
- New 1 hr. fire/sound resistant wall between ADU & main house, both sides WP3243

General Notes

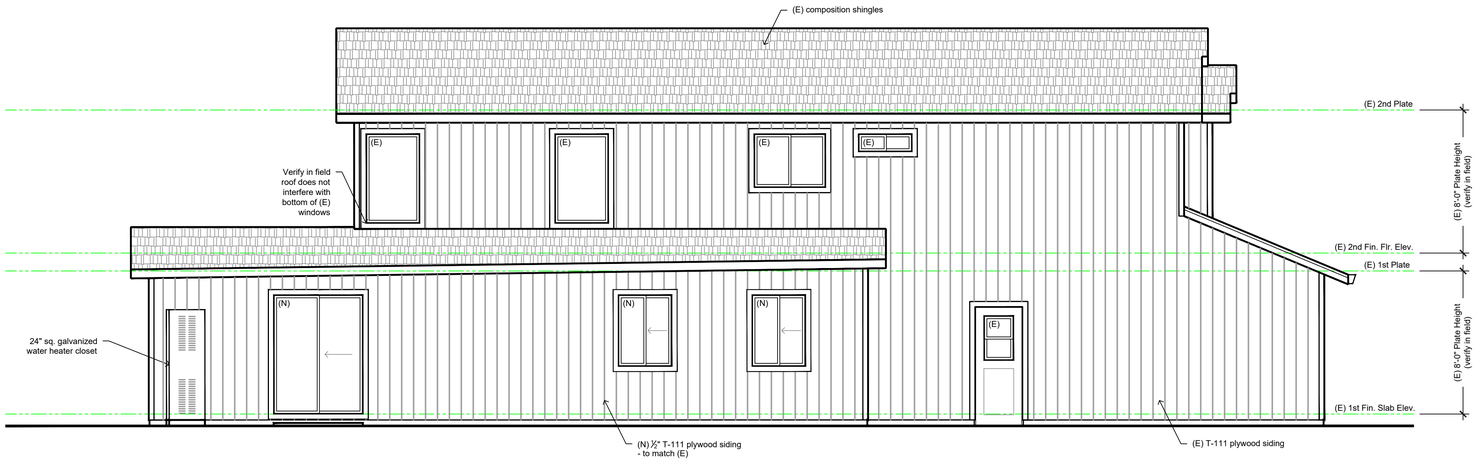
Modified 1st Floor Plan

No.	Revision/Issue	Date

Firm Name and Address
Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

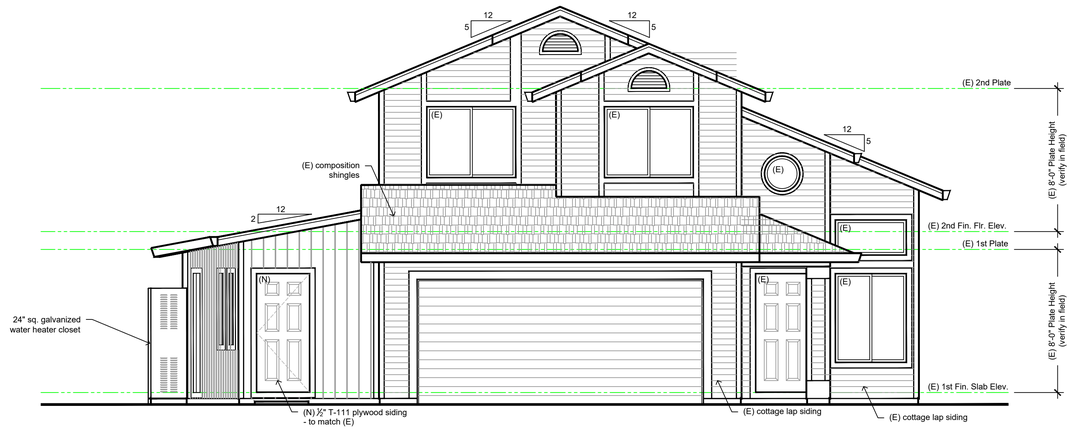
Project Name and Address
An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project	Cavanaugh
Date	January, 2024
Scale	1/4" = 1'-0"
Sheet	A3



Modified Left Side (North) Elevation

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



Modified Front (West) Elevation

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

General Notes

Modified Exterior Elevations

No.	Revision/Issue	Date

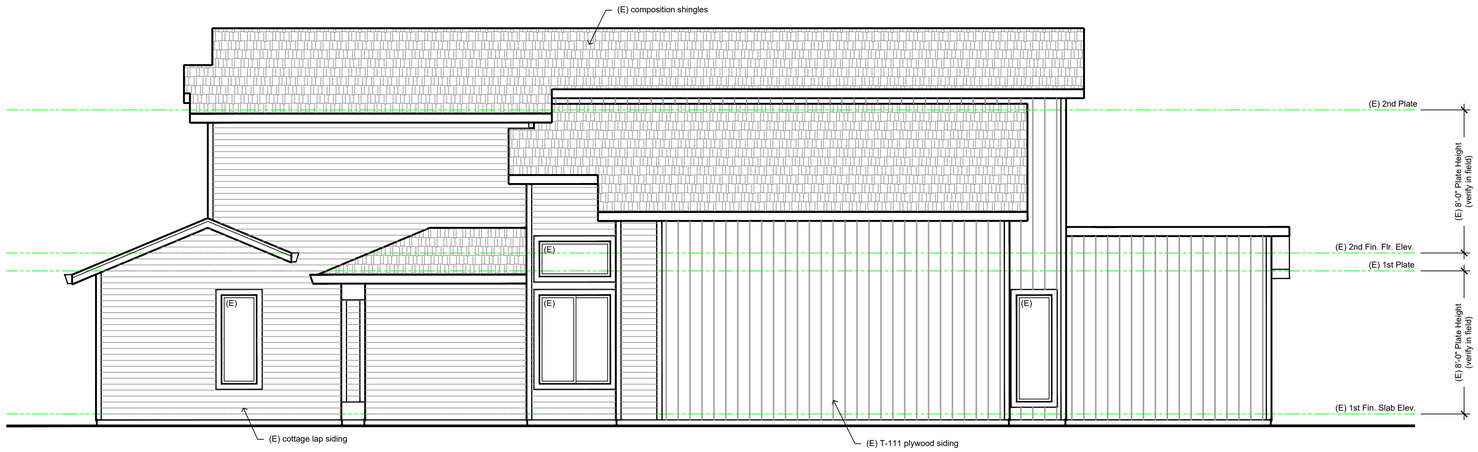
Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address

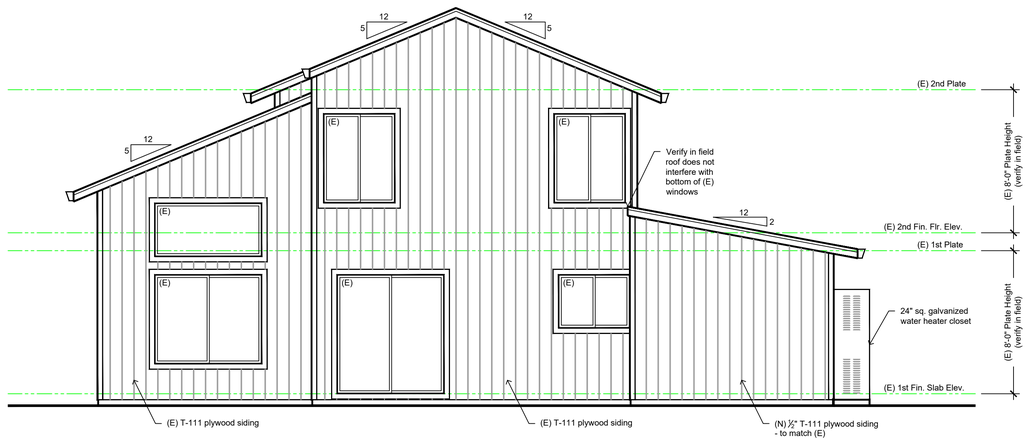
An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: A4
Date: January, 2024	
Scale: 1/4" = 1'-0"	



Modified Right Side (South) Elevation

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



Modified Rear (East) Elevation

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

General Notes

Modified Exterior Elevations

No.	Revision/Issue	Date

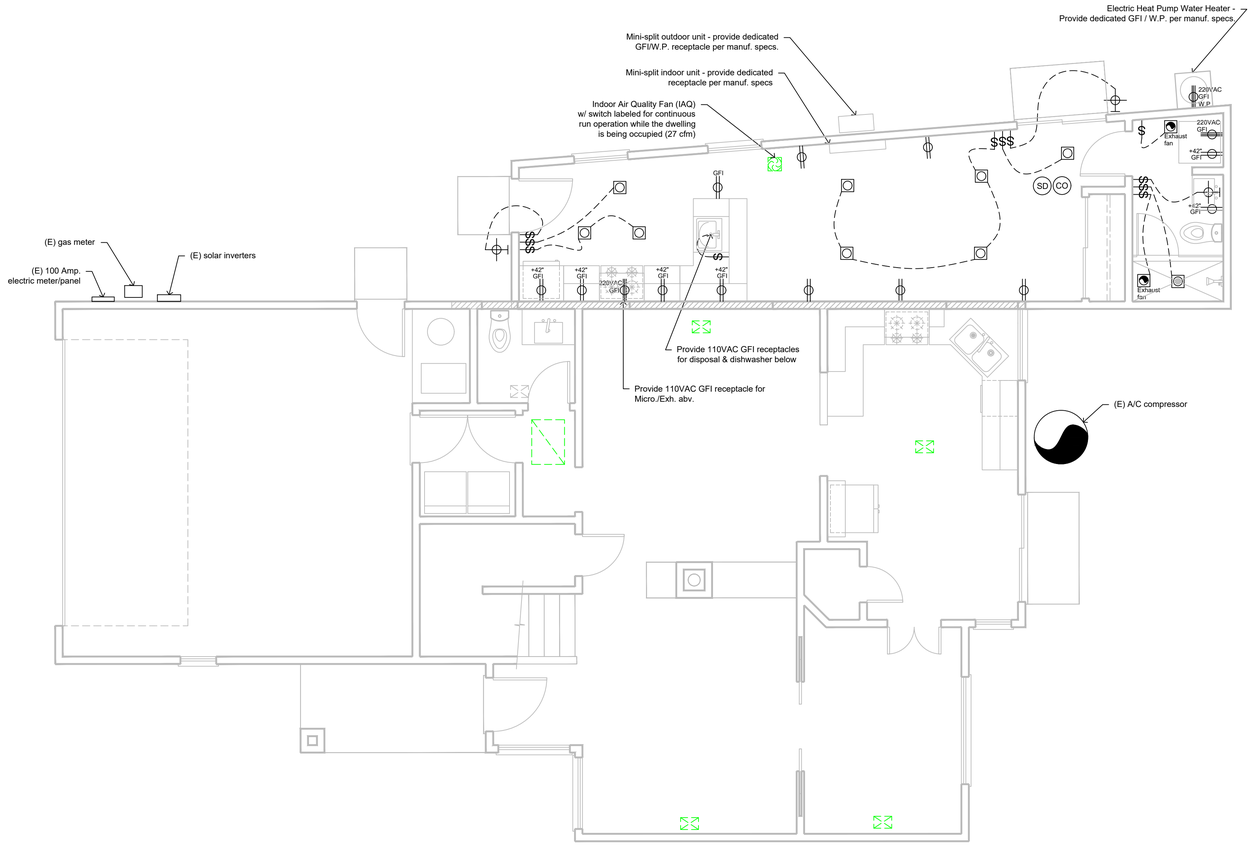
Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address

An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project	Sheet
Cavanaugh	A5
Date: January, 2024	
Scale: 1/4" = 1'-0"	



Modified 1st Floor Electrical Plan

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

ADDITIONAL NOTES:

1. A dedicated 125-volt, 20-amp electrical receptacle that is connected to the electrical panel with a 120/240-volt
   3 conductor, 10 AWG copper branch circuit, within 3 feet from the water heater with no obstructions. In addition, all of the following:
   a. Both ends of the unused conductor shall be labeled with the word "spare" and be electrically isolated; and
   b. A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words "Future 240V Use."

NOTE:
Lights over tubs and showers shall be marked for damp locations or wet locations where subject to shower spray. **[CEC 410.10(D)]** Light fixtures located in tub or shower enclosures shall be labeled "suitable for wet locations." **CEC 410.10(A)**

SMOKE & CARBON MONOXIDE DETECTOR NOTES:

1. All smoke detectors and carbon monoxide alarms shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit per 2022 CRC. Battery operated smoke detectors are permitted for retrofitting in existing construction.
2. Smoke alarms shall not be installed within a 36" horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.
3. Smoke alarms shall not be installed within a 36" horizontal path from the tip of the blade of a ceiling-suspended fan.
4. Smoke alarms & carbon monoxide alarms are hardwired and interconnected.
5. Carbon monoxide alarms shall be listed as complying with the requirements of UL 2034 & carbon monoxide detectors shall be listed as complying with the requirements of UL 2075.
6. Smoke alarms shall be permanently wired with a battery backup and shall be located in each bedroom, outside each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the dwelling. Smoke alarms shall be interconnected.
7. Carbon monoxide alarms shall be located outside of each separate sleeping area in the immediate vicinity of bedroom(s) and on every level of the dwelling.
8. Instantaneous water heaters shall have isolation valves on both the cold-water supply and the hot-water pipe leaving the water heater, and hose bibs or other fittings on each valve for flushing the water heater.

ELECTRICAL NOTES:

1. In the kitchen, pantry, breakfast room, dining room, or similar area of a dwelling unit, the two or more 20-ampere small-appliance branch circuits required by 2022 CEC shall serve all wall and floor receptacle outlets covered by 2022 CEC, all countertop outlets covered by 2022 CEC, and receptacle outlets for refrigeration equipment per 2022 CEC.
2. In dwelling units, at least one receptacle outlet shall be installed in bathrooms within 900mm (3 ft.) of the outside edge of each basin. The receptacle outlet shall be located on a wall or partition that is adjacent to the basin or basin countertop, located on the countertop, or installed on the side or face of the basin cabinet. In no case shall the receptacle be located more than 300mm (12 in.) below the top of the basin. Receptacle outlet assemblies listed for application shall be permitted to be installed in the countertop per 2022 CEC.
3. All 120 Volt, single phase, 15 & 20 Amp branch circuits supplying outlets installed in dwelling unit kitchens, dining rooms, family rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, laundry areas, hallways, & similar rooms shall be protected by a listed arc-fault circuit interrupter, or combination-type, installed to provide protection of the branch circuit per 2022 CEC.
4. All Kitchen countertop and island receptacles shall be GFI protected per 2022 CEC.
5. Provide GFI protection to all 120 volt, 15 & 20 amp receptacles installed outdoors, in bathrooms, in basement, at countertop surfaces and garages (exception: single outlet receptacles in garages utilized for a fixed or stationary appliance per 2022 CEC. Kitchen countertop outlets shall be spaced such that no point along the wall line at the back of the countertop shall be more than 24 inches from an outlet per 2022 CEC.
6. General service outlets shall be located such that no point measured horizontally along the wall line of any wall space is more than 6 feet from a receptacle outlet per 2022 CEC.
7. All 125 Volt, 15 & 20 Amp. receptacles are to be listed as tamper proof receptacles.
8. All ceiling mounted recessed light fixtures shall be insulated contact IC rated per California Energy Code section 150(k)(12).
9. All exterior lighting fixtures shall be high efficacy fixtures or shall have both a motion sensor and a light photo control per California Energy Code section 150(k)(13).
10. All installed luminaires shall be high-efficacy in accordance with Table 150.0-A. In bathrooms, garages, laundry rooms and utility rooms at least one luminaire in each of these spaces shall be controlled by a vacancy sensor. 150 (K) 2J.
11. Luminaires recessed into ceilings shall meet all the following per 150.0(K)1C: Listed for zero clearance insulation, labelled that certifies the luminaire is airtight with a leakage less than 2.0CFM at 75 pascals, sealed with a gasket or caulk, allow replacement and maintenance to be readily accessible from below the ceiling without cutting holes in the ceiling, shall not contain screw base sockets; and shall contain light sources that comply with JA8.
12. All outdoor lighting shall be controlled by a manual ON and OFF switch that does not override to ON and one of the following: controlled by photocell and motion sensor, photo control and automatic switch control, astronomical time clock, or energy management control system. CBEES 150(K)3.
13. All fans and fan light, in all fan/light combinations, in all the bathrooms shall include separate switching per California Energy Code section 150(k)(2B).
14. Bathrooms must be mechanically ventilated per CMC 403.7, Table 4-4, as per R303. All bathroom exhaust fans are to be controlled by a humidity control between a relative humidity range of 50% minimum to 80% maximum per CGC section 4.505.1. Bathrooms with tub/shower areas shall have a fan that has humidistat control indicated on the plan.
15. At least one receptacle shall be installed at each island countertop space with a long dimension of 600 mm (24 in.) or greater & a short dimension of 300 mm (12 in.) or greater per 2022 CEC.
16. An intersystem bonding termination for connection of intersystem bonding conductors required for other systems shall be provided external to enclosures at the service equipment or metering equipment enclosure. The intersystem bonding termination shall consist of a set of terminals with the capacity for connection of not less than three intersystem bonding conductors.
17. Bathroom exhaust fans shall be ENERGY STAR compliant and have a minimum ventilation rate of 50 cfm.
18. Kitchen exhaust hoods shall include a minimum of 100 cfm ventilation rate.
19. Lighting installed in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high efficacy, or shall be controlled by either dimmers or vacancy sensors.
20. A minimum of one 20 Amp branch circuit shall be provided to supply bathroom receptacle outlet(s) and adjacent to within 3' of each sink basin. Provide G.F.C.I. protection to these required bathroom(s) counter top receptacles.
21. All new 120 volt 15 and 20 AMP branch circuits that supply receptacle outlets installed "Kitchens, Family Rooms, Dining Rooms, Living Rooms, Parlors, Libraries, Dens, Bedrooms, Sunrooms"... etc. shall be protected by an Arc-Fault Circuit Interrupter (AFCI) listed to provide protection of the entire branch circuit, including lighting outlets and smoke detectors.

General Notes

Modified 1st Floor Electrical Plan

No.	Revision/Issue	Date

Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

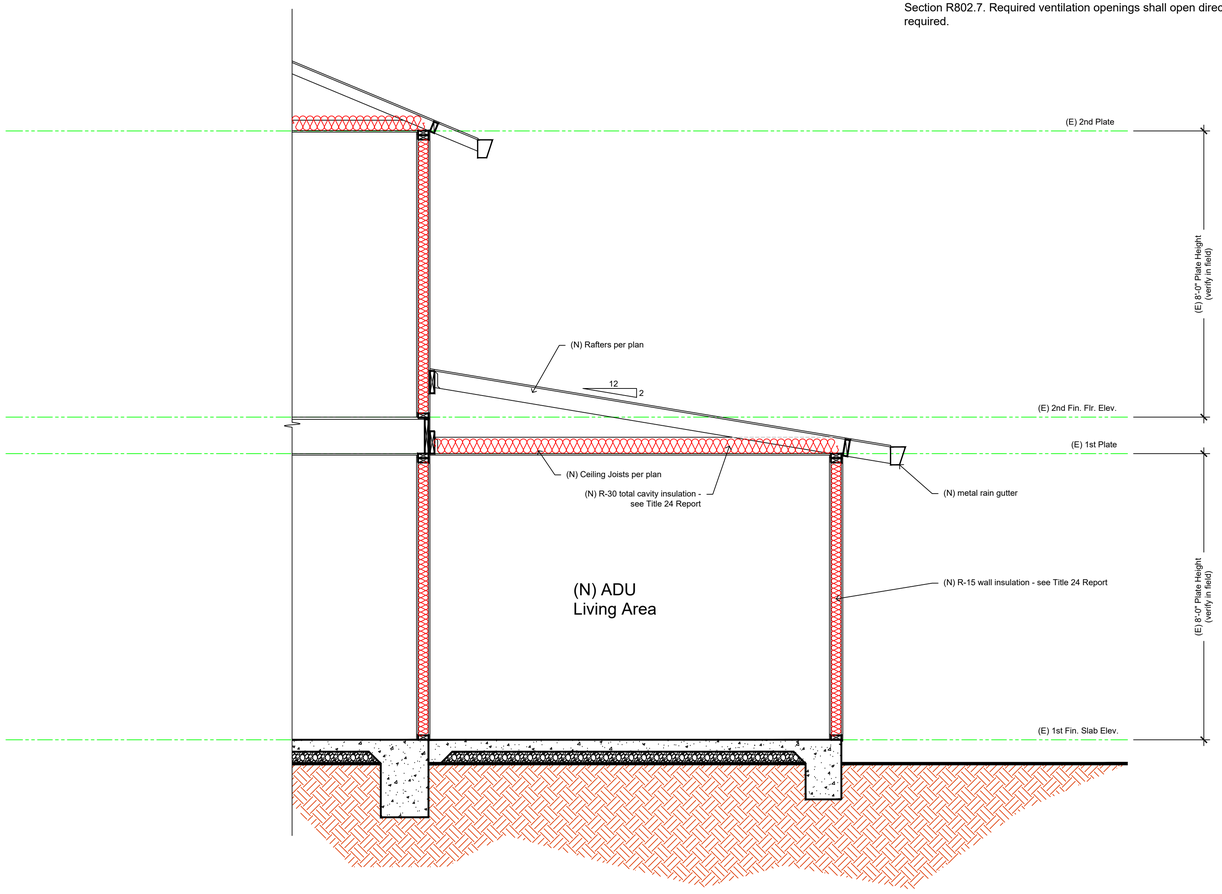
Project Name and Address

An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: E1
Date: January, 2024	
Scale: 1/4" = 1'-0"	

(N) Roof Attic Ventilation Calculation:
Total Area of Attic Space = 384 sq. ft.
Total Attic Ventilation Required = 1/150 x total attic area = 1/150 x 384 sq. ft. = 2.56 sq. ft.
Area of Tapered Low Profile Vent = 72 sq. in. net free area = 0.5 sq. ft. each
No. of Tapered Low Profile Vents required = 6 x 0.5 sq. ft. = 3.00 sq. ft.

Attic Ventilation Notes:
Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air. R806.1 Ventilation required.



Building Section A-A

Scale: 1/2" = 1'-0"

General Notes

Building Section

No.	Revision/Issue	Date

Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address

An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project	Sheet
Cavanaugh	S-5
Date: January, 2024	
Scale: 1/2" = 1'-0"	

FOUNDATIONS NOTES

1. FOUNDATION SHALL BEAR ON FIRM, DRY UNDISTURBED, NATIVE SOIL OR ENGINEERED FILL WITH MINIMUM PENETRATION OF 12".
2. BOTTOM OF ALL FOUNDATIONS SHALL BE LEVEL. CHANGES IN BOTTOM OF FOUNDATION ELEVATION SHALL BE MADE ACCORDING TO STEPPED FOOTING DETAIL.
3. FOUNDATION DEPTHS INDICATED ON PLANS ARE FOR ESTIMATING PURPOSES ONLY. ACTUAL DEPTHS TO BE DETERMINED BY SITE CONDITIONS.
4. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE.
5. ALL BEARING WALLS SUPPORTING A SECOND FLOOR MUST REST ON A CONTINUOUS FOOTING.
6. PROVIDE A TIE ACROSS GIRDER SPLICES.
7. FOUNDATION CRIPPLE WALLS SHALL BE FRAMED WITH STUDS NOT SHORTER THAN 14" OR THEY SHALL BE FRAMED OF SOLID BLOCKING. THE STUDS SHALL BE EQUAL TO THE SIZE OF THE WALL FRAMING ABOVE.
8. WATERPROOF ALL PENETRATIONS THROUGH FOOTING WITH MASTIC SEALER.
9. SLAB-ON GRADE JOINTS: THE LOCATION OF ALL CONSTRUCTION CONTROL AND WEAKENED PLANE JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
10. PROVIDE 18"-INCH X 24"-INCH MINIMUM CRAWL SPACE ACCESS FOR UNDER FLOOR ACCESS.
11. PROVIDE UNDER-FLOOR CROSS VENTILATION EQUAL TO 1 SQUARE FEET FOR EACH 150 SQUARE FEET OF UNDER-FLOOR AREA.
12. PROVIDE A CONCRETE PEDESTAL WITHIN THE CRAWLSPACE PROJECTING A MINIMUM OF 8" INCHES ABOVE THE EXPOSED EARTH FOR EACH WOOD POST. THE BOTTOM OF THE WOOD POST TO BE AT LEASE 1 INCH ABOVE THE CONCRETE OR OTHER PAVING WHERE IT IS EXPOSED TO WATER SPLASH.
13. EXTERIOR CONCRETE PIERS TO PROJECT A MINIMUM OF 8" INCHES ABOVE EXPOSED EARTH.
14. FOUNDATION PLATES OR SILLS SHALL BE BOLTED OR ANCHORED TO THE FOUNDATION WITH NOT LESS THAN ½ IN. DIAMETER STEEL BOLTS OR APPROVED ANCHORS THAT ARE EMBEDDED A MINIMUM OF 7 IN. INTO THE CONCRETE OR MASONRY. EACH BOLT SHALL HAVE A PROPERLY SIZED NUT AND WASHER.
15. THE WASHERS MUST BE A MINIMUM 3X3 SQ. IN. AND .229 IN. THICK. A DIAGONAL SLOT IS ALLOWED OF A WIDTH OF 3/16 IN. LARGER THAN THE BOLT DIAMETER AND A MAXIMUM 1¾ IN. LENGTH, PROVIDED A STANDARD CUT WASHER IS USED BETWEEN THE NUT AND PLATE WASHER.
16. FOOTINGS SHALL BE DESIGNED SO THAT THE ALLOWABLE BEARING CAPACITY OF THE SOIL IS NOT EXCEEDED. WHERE A SPECIFIC DESIGN IS NOT PROVIDED, THE SIZE OF THE CONCRETE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT CALIFORNIA BUILDING CODE. THE MINIMUM DEPTH OF FOOTINGS SHALL BE 12 INCHES BELOW UNDISTURBED GROUND.
17. ON GRADED SITES, THE TOP OF ALL EXTERIOR FOUNDATIONS SHALL EXTEND ABOVE THE ELEVATION OF THE STREET GUTTER AT POINT OF DISCHARGE OR INLET DEVICE A MINIMUM OF 12 IN. PLUS 2 PERCENT PER FOOT (¼ IN. PER LINEAR FT. MEASURED FROM THE GUTTER TO THE EDGE OF THE FOOTING). WHERE A GUTTER IS NOT PRESENT, THE MEASUREMENT SHALL BE TAKEN FROM THE CROWN OF ROAD.
19. THE MINIMUM FOUNDATION WIDTH IS 7½"

PLUMBING NOTES

1. USE NON-REMOVABLE BACKFLOW PREVENTION DEVICES ON ALL EXTERIOR HOSE BIBS
2. MINIMUM SLOPE OF ALL DRAINAGE PIPING TO BE 1/4" INCH PER FOOT
3. SHOWER AND TUB/SHOWER WALLS HAVE A SMOOTH, HARD, NONABSORBENT SURFACE (E.G., CERAMIC TILE) OVER A MOISTURE RESISTANT UNDERLAYMENT (E.G., W.R. GYP) TO A HEIGHT OF 70" INCHES ABOVE THE DRAIN INLET.
4. SHOWERS AND TUB/SHOWERS TO BE PROVIDED WITH PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE CONTROLS. MAXIMUM SETTING SHALL BE 120 DEGREES F.
5. WATER CLOSETS TO BE MAXIMUM 1.28 GALLONS PER FLUSH.
6. APPROVED DISHWASHER AIR GAP FITTING IS REQUIRED.
7. TANKLESS / INSTANT WATER HEATERS - MANUFACTURERS INSTALLATION INSTRUCTIONS SHALL BE PROVIDED TO THE FIELD INSPECTOR AT TIME OF INSPECTION.
8. WATER HEATERS INSTALLED IN A GARAGE (GENERATING A GLOW, SPARK, OR FLAME CAPABLE OF IGNITING FLAMMABLE VAPORS)
   - 8.1. INSURE THE PILOTS, BURNERS OR HEATING ELEMENTS AND SWITCHES ARE AT LEAST 18" INCHES ABOVE GARAGE FLOOR [2022 CBC SECTION 308.1].
   - 8.2. PROVIDE SEISMIC ANCHORAGE OF WATER HEATER TO INCLUDE ANCHORS OR STRAPS AT POINTS WITHIN THE UPPER AND LOWER ONE-THIRD OF IT'S VERTICAL DIMENSION, THE LOWER ANCHOR/STRAP LOCATED TO MAINTAIN A MINIMUM DISTANCE OF 4" INCHES ABOVE THE CONTROLS.
   - 8.3. PROVIDE A WATERTIGHT PAN OF CORROSION RESISTANT MATERIALS INSTALLED BENEATH THE WATER HEATER WITH A MINIMUM OF 3/4" INCH DIAMETER DRAIN TO APPROVED LOCATION.
   - 8.4. WATER HEATER INSTALLED IN AREAS WHERE THEY MAY BE SUBJECTED TO MECHANICAL DAMAGE SHALL BE SUITABLY GUARDED AGAINST SUCH DAMAGE BY BEING INSTALLED BEHIND BARRIERS (E.G., BOLLARD) OR BY BEING ELEVATED OR LOCATED OUT OF THE NORMAL PATH OF A VEHICLE.
9. WATER HEATER RELIEF VALVES LOCATED INSIDE A BUILDING SHALL BE PROVIDED WITH A DRAIN. THE DRAIN SHALL EXTEND FROM THE VALVE TO THE OUTSIDE OF THE BUILDING WITH THE END OF THE PIPE NOT MORE THAN 2' FEET NOR LESS THAN 6" INCHES ABOVE THE GROUND AND POINTING DOWN.
10. WHEN A CLOSET IS DESIGNED FOR THE INSTALLATION OF A CLOTHES DRYER, A MINIMUM OPENING OF 100 SQ. IN. FOR MAKE UP AIR SHALL BE PROVIDED IN THE DOOR OR BY OTHER APPROVED MEANS [2022 CMC SECTION 504.3.2].
11. GAS VENTS WITH LISTED VENT CAPS 12 IN. IN SIZE OR SMALLER SHALL BE PERMITTED TO BE TERMINATED IN ACCORDANCE WITH FIGURE 8-2, PROVIDED THEY ARE LOCATED AT LEAST 8 FT. FROM THE VERTICAL WALL OR SIMILAR OBSTRUCTION. ALL OTHER GAS VENTS SHALL TERMINATE NOT LESS THAN 2 FEET ABOVE THE HIGHEST POINT WHERE THEY PASS THROUGH THE ROOF AND AT LEAST 2 FT. HIGHER THAN ANY PORTION OF A BUILDING WITHIN 10 FT.
12. POTABLE WATER OUTLETS WITH HOSE ATTACHMENTS, OTHER THAN WATER HEATER DRAINS, BOILER DRAINS, AND CLOTHES WASHER CONNECTORS, SHALL BE PROTECTED BY A LISTED NON-REMOVABLE HOSE BIBB TYPE BACKFLOW PREVENTOR OR A LISTED ATMOSPHERIC VACUUM BREAKER.
13. WHERE A FIXTURE COMES IN CONTACT WITH THE WALL OR FLOOR, THE JOINT BETWEEN THE FIXTURE AND THE WALL SHALL BE MADE WATERTIGHT.
14. WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS. AT THE LOWER POINT, A MINIMUM DISTANCE OF 4 IN. SHALL BE MAINTAINED ABOVE THE CONTROLS WITH THE STRAPPING.
15. GAS UTILIZATION EQUIPMENT CONNECTED TO A PIPING SYSTEM SHALL HAVE AN ACCESSIBLE APPROVED MANUAL SHUT OFF VALVE WITH A NON-DISPLACEABLE VALVE MEMBER, OR A LISTED GAS CONVENIENCE OUTLET INSTALLED WITHIN 6 FT. OF THE EQUIPMENT IT SERVES. SHUT OFF VALVES SERVING DECORATIVE GAS APPLIANCES SHALL BE PERMITTED TO BE INSTALLED IN FIREPLACES IF LISTED FOR SUCH USE.

CMU & BRICK NOTES

1. BLOCK UNITS SHALL CONFORM TO ASTM C-90, GRADE N-1 UNITS. COMPRESSIVE STRENGTH OF UNITS TO BE 1000 PSI FOR GROSS AREA AND 2000 PSI FOR NET AREA. F'm= 1500 PSI. MASONRY PRISMS COMPRESSIVE STRENGTH SHALL TEST NOT LESS THAN 1.25 TIMES THE SPECIFIED F'm.
2. MORTAR SHALL BE BY VOLUME: PORTLAND CEMENT = 1 PART -- HYDRATED LIME OR LIME PUTTY = 1/4 TO 1/2 PARTS -- SAND = 2-1/2" TO 3 TIMES COMBINED VOLUME OF CEMENT AND LIME. 2" CUBES SHALL TEST 180 PSI IN 28 DAYS.
3. GROUT SHALL BE BY VOLUME PORTLAND CEMENT = 1 PART -- SAND = 3 PARTS -- LIME = 1/10 PART (OPTIONAL). 2 PARTS PEA GRAVEL MAY BE USED WHERE THE LEAST CLEAR CELL DIMENSION IS 4". NOT MORE THAN 5% OF THE PEA GRAVEL SHALL PASS THROUGH A NO. 8 SIEVE AND 100% SHALL PASS THE 3/8" SIEVE. GROUT SHALL TEST NOT LESS THAN 200 PSI IN 28 DAYS.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 FOR #5 AND LARGER AND GRADE 40 FOR #4 AND SMALLER.
5. LAP ALL BARS 48 TIMES DIAMETER.
6. BEFORE BLOCK IS PLACED ON CONCRETE, THOROUGHLY CLEAN CONCRETE OF ALL LAITANCE AND ALL LOOSE MATERIAL. ROUGHEN AS IN A CONCRETE CONSTRUCTION JOINT.
7. CONCRETE BLOCK MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS. ALL HEAD AND END JOINTS SHALL BE SOLIDLY FILLED WITH MORTAR FOR A DISTANCE OF FROM THE FACE OF THE WALL OR UNIT NOT LESS THAN THE THICKNESS OF THE LONGITUDINAL FACE SHELLS. BOND SHALL BE PROVIDED BY LAPPED SUCCESSIVE COURSES OR BY EQUIVALENT MECHANICAL ANCHORAGE.
8. VERTICAL CELLS SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR UNOBSTRUCTED CONTINUOUS VERTICAL CELL MEASURING NOT LESS THAN 2" x 3".
9. CLEAN OUT OPENINGS SHALL BE PROVIDED AT THE BOTTOMS OF ALL CELLS TO BE FILLED AT EACH LIFT OR POUR OF GROUT WHERE SUCH LIFT OR POUR OF GROUT IS IN EXCESS OF 4'-0" IN HEIGHT. ANY OVERHANGING MORTAR OR OTHER OBSTRUCTIONS OR DEBRIS SHALL BE REMOVED FROM INSIDE OF SUCH CELLS. THE CLEAN OUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING. MECHANICALLY VIBRATE ALL GROUT POURS.
10. VERTICAL REINFORCING SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT TO EXCEED 192 BAR DIAMETERS.
11. THOROUGHLY CLEAN ALL CELLS AND BOND BEAMS OR MORTAR BEFORE GROUTING.
12. ALL CELLS SHALL BE SOLIDLY FILLED WITH GROUT. WHERE INDICATED ON PLANS, ALL GROUTING SHALL BE CONTINUOUSLY OBSERVED BY A QUALIFIED INSPECTOR.
13. WHEN GROUTING IS STOPPED FOR LONGER THAN ONE-HOUR, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR 1-1/2" BELOW THE TOP OF THE UPPERMOST UNIT.
14. EACH VERTICAL BAR IN WALLS SHALL BE 48 DIAMETERS WITH DOWEL OF THE SAME SIZE EXTENDING FROM THE FOUNDATION. CARRY EACH DOWEL TO WITHIN 3" OF THE BOTTOM OF THE FOOTING AND TERMINATE WITH A 90 DEGREE HOOK. DOWELS SHALL BE STRAIGHT AND PLUMB.
15. PLACE ALL HORIZONTAL BARS IN BOND BEAM UNITS. WHEN 2 BARS ARE USED, STAGGER LAPS A MINIMUM OF 5'-0".
16. PROVIDE 2-#5 BARS EACH SIDE OF OPENING AND EACH END OF ALL WALLS, UNLESS NOTED OTHERWISE. BARS SHALL BE FULL HEIGHT OF WALL AT JAMBS AND EXTENDING A MINIMUM OF 2'-0" PAST EDGES OF OPENING AT HEAD AND SILL.
17. ALL EMBEDDED ITEMS (BOLTS, ETC.) SHALL BE SECURED IN PLACE PRIOR TO GROUTING. PROVIDE A MINIMUM OF 1" GROUT AROUND ALL BOLTS IN MASONRY.
18. USE OPEN END BLOCK FOR ALL STACK BOND CONSTRUCTION.

HVAC NOTES

1. ATTIC ACCESS TO BE LARGE ENOUGH TO REMOVE LARGEST PIECE OF EQUIPMENT BUT NOT LESS THAN 22"X30"
2. FASTEN HVAC FAU TO BASEBOARD AS TO PREVENT MOVEMENT IN THE EVENT OF EARTHQUAKE.
3. EQUIPMENT PAD TO BE MIN 3" ABOVE GRADE & DESIGNED TO DRAIN DEFROST WATER.
4. EQUIPMENT DISCONNECT TO BE INSTALLED WITHIN REACH OF CONDENSER AND NOT DIRECTLY BEHIND CONDENSER.
5. USE SMOOTH METAL DUCT FOR DRYER EXHAUST EXTENDING TO OUTSIDE WITH BACK DRAFT DAMPER. THIS DUCT SHALL NOT EXCEED A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14' INCLUDING TWO 90-DEGREE ELBOWS. TWO FEET SHALL BE DEDUCTED FOR EACH 90-DEGREE ELBOW IN EXCESS OF TWO.
6. THE DISTANCE FROM THE PASSAGEWAY ACCESS TO THE FURNACE SHALL NOT EXCEED 20 FEET MEASURED ALONG THE CENTERLINE OF THE PASSAGEWAY.
   - 6.1. THE PASSAGEWAY SHALL BE UNOBSTRUCTED AND SHALL HAVE CONTINUOUS SOLID FLOORING NOT LESS THAN 24" WIDE FROM THE ENTRANCE OPENING TO THE FURNACE.
   - 6.2. A LEVEL WORKING PLATFORM NOT LESS THAN 30" IN DEPTH AND WIDTH SHALL BE PROVIDED IN FRONT OF THE ENTIRE FIRE BOX SIDE OF THE WARM AIR FURNACE.
   - 6.3. IF THE FURNACE TEMPERATURE LIMIT CONTROL, AIR FILTER, FUEL CONTROL VALVE, OR AIR HANDLING UNIT IS NOT SERVICEABLE FROM THE FIRE BOX SIDE OF THE FURNACE, A CONTINOUS FLOOR NOT LESS THAN 24" IN WIDTH SHALL BE PROVIDED FROM THE PLATFORM IN FRONT OF THE FIRE BOX SIDE OF THE FURNACE AND IN FRONT OF THIS EQUIPMENT.
   - 6.4. A PERMANENT ELECTRIC OUTLET AND LIGHTING FIXTURE CONTROLLED BY A SWITCH LOCATED AT THE REQUIRED PASSAGEWAY OPENING SHALL BE PROVIDED AT OR NEAR THE FURNACE.

EXTERIOR WALL COVERINGS

1. ANCHORED MASONRY AND STONEWALL VENEER SHALL NOT EXCEED 5" INCHES IN THICKNESS, SHALL CONFORM TO REQUIREMENTS OF CHAPTER 14, SHALL NOT EXTEND ABOVE THE FIRST FLOOR.
2. EXTERIOR STUCCO:
   (1) 3-COAT, 7/8 - INCH MINIMUM THICK;
   (2) TWO LAYERS OF GRADE D PAPER UNDER STUCCO OVER PLYWOOD SHEATHING
   (3) 26 GAUGE GALVANIZED WEEP SCREED AT FOUNDATION PLATE LINE AT LEAST 4" INCHES ABOVE GRADE (OR 2" INCHES ABOVE CONCRETE OR PAVING).

GENERAL NOTES

1. NOTE THAT WATER-RESISTANT GYPSUM BACKING BOARD SHOULD NOT BE USED IN THE FOLLOWING LOCATIONS:
   - 1.1. OVER A VAPOR RETARDER;
   - 1.2. IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY;
   - 1.3. ON CEILINGS
2. PROVIDE A MINIMUM 36" DEEP LANDING OUTSIDE THE EXTERIOR DOOR, TO BE NOT MORE THAN 7.75" LOWER THAN THRESHOLD FOR THE IN-SWINGING DOOR, AND NOT MORE THAN 0.5" FOR OUT-SWINGING OR SLIDING DOORS.
3. PROVIDE A 22" x 30" MINIMUM ATTIC ACCESS WITH MINIMUM 30" CLEAR HEADROOM.
4. ALL COMPOSITION ROOF INSTALLATIONS REQUIRE A METAL DRIP EDGE.

WOOD FRAMING NOTES

1. PROVIDE APPROVED METAL CONNECTIONS TO THE BASE AND CAPS OF POST.
2. 2x4 STUDS SHALL NOT EXCEED AN UNSUPPORTED HEIGHT OF 10 FEET WITHOUT STRUCTURAL ANALYSIS.
3. ALL EXTERIOR WALLS AND MAIN CROSS-STUD PARTITIONS SHALL BE BRACED EFFECTIVELY AND THOROUGHLY AT EACH END AND AS NEAR AS POSSIBLE EACH 25 LINEAL FEET. THE FIRST STORY OF TWO STORY CONSTRUCTION SHALL HAVE SOLID SHEATHING ON AT LEAST 25% OF THE LINEAR LENGTH OF ALL EXTERIOR WALLS. REFER TO CODE FOR ADDITIONAL REQUIREMENTS.
4. WHERE THE SILL OR TOP PLATE IS CUT FOR PLUMBING, FASTEN A METAL TIE OF NOT LESS THAN 16 GA. THICK x 1.5 INCHES WIDE ACROSS THE OPENING WITH NOT LESS THAN 6 - 16d NAILS.
5. PROVIDE RAFTER TIES WHERE CEILING JOISTS AND RAFTERS NOT PARALLEL.
6. ALL PLYWOOD SHALL CONFORM TO THE U.S. PRODUCT STANDARDS P.S. 1-83 (EXPOSURE 1) AND SHALL BE IDENTIFIED WITH THE A.P.A. GRADE MARK. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX, AND NAILING.
7. LAY ALL STRUCTURAL PLYWOOD ON ROOF AND FLOORS WITH THE FACE GRAIN PERPENDICULAR TO SUPPORTS, U.N.O.
8. BLOCK STRUCTURAL PLYWOOD WITH 2x4 FLAT BLOCKING WHERE NOTED ON ROOF AND FLOOR PLANS AND WITH THE SAME SIZE BLOCKING AS STUDS AT THE WALLS. USE PLY-CLIPS AT MID-SPAN OF UNSUPPORTED ROOF PLYWOOD EDGES AS REQUIRED.
9. ALL PLATES AND SILLS BEARING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR (P.T.D.F.).
10. STUD WALLS ABUTTING A CONCRETE OR MASONRY WALL SHALL BE BOLTED TO THE WALL WITH 1/2" INCH BOLTS AT 24" O.C. THROUGH DOUBLE STUD, U.N.O.
11. SOLID BLOCKING OR CROSS BRIDGING SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 8'-0" FOR ALL 2x JOISTS 12" AND DEEPER.
12. ALL JOISTS SHALL BE HELD IN POSITION AT ALL BEARING POINTS BY BLOCKING OR APPROVED HANGERS.
13. JOISTS UNDER AND PARALLEL TO PARTITIONS SHALL BE DOUBLED AND NAILED TOGETHER.
14. NAILING SHALL BE DONE WITH COMMON WIRE NAILS AND SHALL CONFORM TO THE NAILING SCHEDULE IN THE CURRENT CALIFORNIA BUILDING CODE..
15. ALL BOLTS, NUTS, AND LAG SCREWS USED IN WOOD SHALL CONFORM TO ASTM STANDARD A307 AND SHALL BE LOCATED IN A MEMBER WITH THE FOLLOWING MINIMUM DIMENSIONS, UNLESS DETAILED OTHERWISE:

   BOLT TO END OF MEMBER = 7 DIAMETERS
   BOLT TO EDGE OF MEMBER = 4 DIAMETERS
   ON-CENTER SPACING OF BOLTS IN A ROW = 4 DIAMETERS
   ON-CENTER SPACING BETWEEN BOLT ROWS = 1-1/2 DIAMETERS

16. ALL BOLTS, NUTS, AND LAG SCREWS SHALL BE FITTED WITH STEEL WASHERS WHERE THEY BEAR AGAINST WOOD. ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED UPON INSTALLATION AND RETIGHTENED PRIOR TO CLOSING IN OR COMPLETION OF JOB.
17. HOLES FOR BOLTS IN WOOD SHALL BE BORED TO THE SAME NOMINAL DIAMETER AS THE BOLT PLUS 1/16". HOLES FOR LAG SCREWS SHALL BE BORED TO THE SAME NOMINAL DIAMETER AND DEPTH AS THE SHANK AND THE REST NO LARGER THAN THE ROOT OF THE THREAD.
18. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. SOAP MAY BE USED TO LUBRICATE SCREWS.
19. ALL HANGERS, STRAPS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE SIMPSON STRONG TIE OR I.C.B.O. APPROVED EQUAL.
20. MINIMUM GRADES, WESTERN WOOD PRODUCTS ASSOCIATION GRADING RULES, FOR LUMBER SHALL BE AS FOLLOWS:

STUDS IN BEARING WALLS	DF NO. 2
RAFTERS AND JOISTS	DF NO. 2
BEAMS AND POSTS (4x)	DF NO. 2
BEAMS 6x AND WIDER	DF NO. 1
DIMENSION LUMBER	DF NO. 2
BEAMS AND STRINGERS	DF NO. 1
POSTS AND TIMBER	DF NO. 1
MAX. MOISTURE CONTENT	19%

21. THE RADIANT BARRIER (EXCEPT FOR RADIANT BARRIERS LAMINATED DIRECTLY TO THE ROOF DECK) SHALL BE INSTALLED TO HAVE A MINIMUM GAP OF 3.5 INCHES BETWEEN THE BOTTOM OF THE RADIANT BARRIER AND THE TOP OF ROOF DECKING AND THE TOP SURFACE OF THE RADIANT BARRIER, AND HAVE A MINIMUM OF SIX (6) INCHES (MEASURED HORIZONTALLY) LEFT AT THE PEAK TO ALLOW HOT AIR TO ESCAPE FROM THE AIR SPACE BETWEEN THE ROOF DECKING AND THE TOP SURFACE OF THE RADIANT BARRIER.
22. WHEN INSTALLED IN ENCLOSED RAFTER SPACES WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, A MINIMUM AIR SPACE OF 1" INCH SHALL BE PROVIDED BETWEEN THE RADIANT BARRIER AND THE TOP OF THE CEILING INSULATION, AND VENTILATION SHALL BE PROVIDED FOR EVERY RAFTER SPACE. VENTS SHALL BE PROVIDED AT BOTH THE UPPER AND LOWER ENDS OF THE ENCLOSED RAFTER SPACE.
23. RADIANT BARRIER SHALL BE INSTALLED TO COVER ALL GABLE END WALLS AND OTHER VERTICAL SURFACES IN THE ATTIC.
24. WOOD FRAMING MEMBERS, INCLUDING BUT NOT LIMITED TO SILLS, PLATES, SLEEPERS, POSTS, COLUMNS, WOOD SHEATHING, FURRING STRIPS, GIRDER ENDS, WOOD SIDING, AND LAMINATED TIMBERS THAT ARE IN DIRECT CONTACT WITH CONCRETE OR MASONRY MUST BE FOUNDATION GRADE REDWOOD OR TREATED AND MARKED BY AN APPROVED AGENCY.
25. CUTTING AND NOTCHING OF EXTERIOR WALLS AND BEARING PARTITIONS SHALL NOT BE GREATER THAN 25 PERCENT OF STUD WIDTH. CUTTING OR NOTCHING OF STUDS TO A DEPTH NOT GREATER THAN 40 PERCENT OF WIDTH OF STUD IS PERMITTED IN NONBEARING PARTITIONS SUPPORTING NO LOADS OTHER THAN WEIGHT OF THE PARTITION.
26. A BORED HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED. A BORED HOLE NOT GREATER IN DIAMETER THAN 60 PERCENT OF THE STUD WIDTH IS PERMITTED IN A NON-BEARING PARTITION OR IN A WALL WHERE THE BORED STUD IS DOUBLED PROVIDED NOT MORE THAN TWO SUCH SUCCESSIVE STUDS ARE BORED. A MINIMUM 5/8 INCH OF WOOD IS REQUIRED BETWEEN THE BORED HOLE AND THE EDGE OF THE WOOD. BORED HOLES CANNOT BE LOCATED IN THE SAME VICINITY AS A CUT OR A NOTCH.
27. PROVIDE FIREBLOCKING AND DRAFT STOPPING IN CONCEALED LOCATIONS OF COMBUSTIBLE CONSTRUCTION.
28. DISTANCE FROM THE PASSAGEWAY ACCESS TO ATTIC FURNACE SHALL NOT EXCEED 20 FT. MEASURED ALONG CENTER LINE OF PASSAGEWAY. PASSAGEWAY SHALL BE UNOBSTRUCTED AND SHALL HAVE CONTINUOUS SOLID FLOORING NOT LESS THAN 24 IN. WIDE FROM ENTRANCE OPENING TO FURNACE. A LEVEL WORKING PLATFORM NOT LESS THAN 30 INCHES IN DEPTH AND WIDTH SHALL BE PROVIDED IN FRONT OF ENTIRE FIRE BOX SIDE OF WARM AIR FURNACE. IF THE FURNACE TEMPERATURE LIMIT CONTROL, AIR FILTER, FUEL CONTROL VALVE, VENT COLLAR, OR AIR HANDLING UNIT IS NOT SERVICEABLE FROM FIRE BOX SIDE OF THE FURNACE, A CONTINUOUS FLOOR NOT LESS THAN 24 INCHES IN WIDTH SHALL BE PROVIDED FROM PLATFORM IN FRONT OF FIRE BOX SIDE OF FURNACE TO AND IN FRONT OF THIS EQUIPMENT. A PERMANENT ELECTRIC OUTLET AND LIGHTING FIXTURE CONTROLLED BY A SWITCH LOCATED AT REQUIRED PASSAGEWAY OPENING SHALL BE PROVIDED AT OR NEAR FURNACE.

CONCRETE NOTES

1. MIN. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS FOUNDATIONS AND SLAB = 2500 PSI +/- MAXIMUM AGGREGATE SIZE = FOUNDATIONS = 1-1/2", SLAB = 1" +/- MAXIMUM SLUMP: FOUNDATIONS = 4", SLAB = 3" TO 4".
2. CONSULT QUALIFIED SOILS ENGINEER FOR SPECIAL EXCAVATION AND COMPACTION INSTANCES, ESPECIALLY WHERE FILL MUST SUPPORT STRUCTURE WEIGHT.
3. ALL MINOR FILLS NOT INTENDED TO SUPPORT STRUCTURES SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
4. SLOPE FINISH GRADE AWAY FROM STRUCTURE.
5. PROVIDE 1/2" x 10" ANCHOR BOLTS EMBEDDED AT LEAST 7" IN CONCRETE AT 6 FEET ON CENTER FOR ONE-STORY AND 4' ON CENTER FOR TWO STORY MUD SILLS. PROVIDE AT LEAST TWO BOLTS PER BOARD, WITH ONE BOLT NO FURTHER THAN 12" FROM AN END. USE 3"x3"x.229" PLATE WASHERS ON ALL ANCHOR BOLTS.
6. CONCRETE MIX DESIGN SHALL BE PREPARED BY AN INDEPENDENT LABORATORY AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO MIXING.
7. ADMIXTURE SHALL HAVE THE APPROVAL OF THE ARCHITECT/ENGINEER PRIOR TO THEIR USE. CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
8. CEMENT SHALL CONFORM WITH ASTM C-150, TYPE I OR II.
9. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C-33 FOR NORMAL WEIGHT CONCRETE AND ASTM C330 FOR LIGHTWEIGHT CONCRETE.
10. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60 FOR #5 AND LARGER, AND ASTM A-615, GRADE 40 FOR #4 AND SMALLER, EXCEPT REINFORCING STEEL TO BE WELDED MAY CONFORM TO ASTM A-706.
11. REINFORCING STEEL SHALL BE FABRICATED AND DETAILED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION".
12. WIRE FABRIC SHALL CONFORM TO ASTM A-185.
13. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF THE MAIN BARS AND DEMOTE CLEAR COVERAGE. CONCRETE COVERAGE SHALL BE AS FOLLOWS:

   CONC. DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT SLAB):3"
   CONC. EXPOSED TO GROUND BUT PLACED IN FORMS: 2"
   TIED COLUMNS (MIN BARS): 2"
   BEAMS (TOP BARS): 1.5"
   BEAMS (ALL OTHER MAIN REINFORCING): 2"
   WALLS (EXTERIOR FACE): 1.5"
   WALLS (INTERIOR FACE): 0.75"
   SLABS (ON FORMS): 0.75"
   SLABS (ON GROUND: CLEAR DIMENSION TO TOP OF SLAB): 2"

14. SPLICES IN CONTINUOUS REINFORCEMENT SHALL BE 40 BAR DIAMETERS AND SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART. SPLICE CONTINUOUS BARS IN SPANDRELS, GRADE BEAMS, ETC, AS FOLLOWS: TOP BARS AT MID-SPAN, BOTTOM BARS AT CENTERLINE OF SUPPORT, U.N.O. SPLICES I WWF SHALL BE 1-1/2" MESHES WIDTH.
15. CONSTRUCTION JOINTS SHALL BE MADE ROUGH AND ALL LAITANCE REMOVED FROM THE SURFACE. CONCRETE MAY BE ROUGHENED BY CHIPPING THE ENTIRE SURFACE, SAND BLASTING, OR RAKING THE SURFACE TO PROVIDE 1/4" DEEP DEFORMATIONS.
16. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING ANY CONCRETE.
17. MAXIMUM FREE FALL OF CONCRETE SHALL BE 8'-0".
18. WALL SHALL BE CAST IN HORIZONTAL LAYERS OF 2'-0" MAXIMUM DEPTH.
19. CONCRETE IN WALLS, PIERS, OR COLUMNS SHALL BE SET AT LEAST 2 HOURS BEFORE PLACING CONCRETE IN BEAMS, SPANDRELS, OR SLABS SUPPORTED THERON.
20. HORIZONTAL WALL BARS IN DOUBLE LAYER WALL SHALL BE STAGGERED.
21. DOWEL ALL VERTICAL REINFORCING IN WALLS AND COLUMNS FOR FOUNDATION WITH SAME SIZE BARS.

GLUE LAMINATED BEAM NOTES

1. GLUED LAMINATED BEAMS SHALL MEET THE MOST CURRENT A.I.T.C. DESIGN STANDARDS. SHOP DRAWINGS SHALL CLEARLY INDICATE TYPE AND LENGTH OF TENSION LAMINATIONS AT CANTILEVER BEAMS. THE FOLLOWING COMBINATIONS SHALL BE USED.

   SIMPLE SPAN MEMBERS: 24F-V4
   CANTILEVER AND CONTINUOUS MEMBERS: 24F-V8

2. CAMBER ALL BEAMS ON 2000' RADIUS BETWEEN SUPPORTS (NO CAMBER AT CANTILEVERS) TYPICAL U.N.O.
3. EACH GLUE LAMINATED BEAM SHALL BE STAMPED WITH THE AITC QUALITY CONTROL MARK.
4. EACH GLUE LAMINATED BEAM SHALL BE FABRICATED WITH EXTERIOR GLUE AND SHALL BE ASSUMED TO BE FOR EXTERIOR USE.

FIREPLACES

1. ALL GAS OUTLETS LOCATED IN A BARBECUE OR FIREPLACE SHALL BE CONTROLLED BY AN APPROVED VALVE LOCATED IN THE SAME ROOM AND OUTSIDE THE HEARTH BUT NOT MORE THAN 4' FEET FROM SUCH OUTLETS.
2. CHIMNEYS WILL EXTEND 2' FEET ABOVE ANY POINT OF THE BUILDING OR ROOF WITHIN 10' FEET, BUT NOT LESS THAN 2' FEET ABOVE THE ROOF.
3. FIREPLACE FOOTING SHALL EXTEND A MINIMUM 6" INCHES BEYOND FIREPLACE WALL.
4. MINIMUM 2" INCHES CLEARANCE FROM MASONRY FIREPLACE OR CHIMNEY WALLS AND ADJACENT COMBUSTIBLE MATERIALS.
5. COMBUSTIBLE MATERIAL SHOULD NOT BE PLACED WITHIN 6" INCHES OF THE FIREPLACE OPENING. COMBUSTIBLE MATERIALS WITHIN 12" INCHES OF THE FIREPLACE OPENING SHOULD NOT PROJECT MORE THAN 1/8" INCH FOR EACH 1" INCHES CLEARANCE FROM THE FIREPLACE OPENING.
6. USE NON-COMBUSTIBLE HEARTH SLAB (SHALL BE NOT LESS THAN 4" THICK) WITH NON-COMBUSTIBLE MATERIALS OR REINFORCED TO CARRY ITS OWN WEIGHT AND ALL IMPOSED LOADS SUPPORTS IN FRONT OF FIREPLACE.
7. PROVIDE AN APPROVED SPARK ARRESTER.

FIRE PROTECTION, HEALTH, & SAFETY

1. A FULL ONE-HOUR CONSTRUCTION WALL ASSEMBLY IS REQUIRED ON BOTH SIDES OF THE INTERIOR AND EXTERIOR WALLS OF THE GARAGE AND EXTENDING THROUGH CONCEALED AREAS. A FULL ONE-HOUR CONSTRUCTION (FLOOR/CEILING AND ROOF/CEILING) ASSEMBLY BETWEEN THE FIRST FLOOR GARAGE AND THE SECOND FLOOR OF THE DWELLING AREA. ANY PENETRATIONS THROUGH THE ONE-HOUR FIRE WALL MEMBRANE WILL NEED TO BE FIRE CAULKED WITH AN APPROVED FIRE-STOP SYSTEM. FIRE AND SMOKE DAMPERS IN ALL DUCT OPENINGS OR PENETRATIONS SUCH AS HEATING AND COOLING DUCTS, DRYER'S MOISTURE EXHAUST DUCTS AND EXHAUST FAN DUCTS. A 60-MINUTE RATED DOOR AND FRAME ASSEMBLY BETWEEN THE DWELLING AND THE GARAGE.
2. PROVIDE A ONE-HOUR FIRE RESISTIVE SEPARATION BETWEEN GARAGE AND DWELLING. INCLUDING:
   - 2.1. COMMON WALLS BETWEEN GARAGE AND DWELLING (FROM FLOOR TO ROOF SHEATHING) AND ANY OTHER GARAGE WALLS, IF SUPPORTING A FLOOR OVER THE GARAGE, SHALL HAVE 5/8" TYPE X SHEETROCK INSTALLED ON GARAGE SIDE.
   - 2.2. IF COMMON FLOOR/CEILING BETWEEN GARAGE AND DWELLING UNIT, PROVIDE THE FOLLOWING:
     - 2.2.1. ONE LAYER 5/8" TYPE X SHEETROCK ON GARAGE SIDE IF FLOOR MEMBERS ARE 16" ON CENTER.
     - 2.2.2. TWO LAYERS 5/8" TYPE X SHEETROCK ON GARAGE SIDE IF FLOOR MEMBERS ARE 24" ON CENTER.
     - 2.2.3. ALL STRUCTURAL MEMBERS SUPPORTING LIVING SPACE OVER GARAGE MUST BE ONE-HOUR FIRE RESISTIVE, I.E., POST, BEAMS, GLU-LAM, COLUMNS, ETC.
     - 2.2.4. COLUMNS AND/OR POST SHALL HAVE THEIR ONE-HOUR PROTECTION COVERED BY 1/2" PLYWOOD OR A MINIMUM OF 26 GAUGE METAL 4' FEET UP FROM THE FINISHED FLOOR.
     - 2.2.5. A 1-3/8 INCH MINIMUM SOLID CORE OR 20-MINUTE RATED DOOR WITH SELF-CLOSURE AT THE SEPARATION WALL BETWEEN THE GARAGE AND RESIDENCE REQUIRED.
3. INTERIOR STAIRWAY CONSTRUCTION, WHERE ENCLOSED USABLE SPACE UNDER STAIRS IS PROHIBITED, THE WALLS SHALL BE PROTECTED ON THE ENCLOSED SIDE AS REQUIRED FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION.
4. ALL AIR DUCTS PENETRATING THE SEPARATION WALL OR THE CEILING BETWEEN THE GARAGE AND THE LIVING AREA SHALL BE A MINIMUM OF 26 GA.
5. ALL PIPING MATERIALS PENETRATIONS OF FIRE RESISTANCE RATED WALLS; THE SEPARATION WALL OR THE CEILING BETWEEN THE GARAGE AND THE LIVING AREA SHALL BE PROTECTED.
6. OPERABLE WINDOWS OR DOORS, APPROVED FOR EMERGENCY ESCAPE OR RESCUE, WHICH SHALL OPEN DIRECTLY INTO A PUBLIC STREET, PUBLIC ALLEY, YARD OR EXIT COURT, FOR EVERY SLEEPING ROOM BELOW THE FOURTH STORY. OPENING SHALL COMPLY WITH THE FOLLOWING:
   - 6.1. MAXIMUM FINISHED SILL HEIGHT OF NOT MORE THAN 44" INCHES ABOVE THE FLOOR
   - 6.2. SHALL HAVE A MINIMUM NET CLEAR OPEN ABLE AREA OF 5.7 SQUARE FEET (EXCEPTION: 5 SQ. FT. IS ALLOWABLE FOR GROUND FLOOR EGRESS WINDOWS)
   - 6.3. THE MINIMUM NET CLEAR OPEN ABLE HEIGHT DIMENSION SHALL BE 24" INCHES.
   - 6.4. THE MINIMUM NET CLEAR OPEN ABLE WIDTH DIMENSION SHALL BE 20" INCHES.
7. SMOKE ALARMS AND SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN A 36" HORIZONTAL PATH FROM THE SUPPLY REGISTERS OF A FORCE HEATING & COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW FROM THOSE REGISTERS.
8. IN DWELLING UNITS, SMOKE ALARMS SHALL BE INSTALLED ON THE WALL OR CEILING OF THE AREA IMMEDIATELY OUTSIDE EACH SEPARATE SLEEPING AREA, IN EACH ROOM USED FOR SLEEPING PURPOSES, AND ON EACH STORY WITHIN THE DWELLING. IN DWELLINGS WITH BASEMENTS, AN ALARM SHALL BE INSTALLED ON EACH STORY AND IN THE BASEMENT. IN DWELLINGS WHERE A STORY OR BASEMENT IS SPLIT INTO TWO OR MORE LEVELS AND DOES NOT HAVE AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM NEED ONLY BE INSTALLED ON THE UPPER LEVEL, EXCEPT THAT WHEN THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL, AN ALARM SHALL BE INSTALLED ON EACH LEVEL. WHERE THE CEILING HEIGHT OF A ROOM THAT OPENS ONTO A HALLWAY SERVING A BEDROOM EXCEEDS THE HEIGHT OF THE HALLWAY BY 24 INCHES, SMOKE ALARMS SHALL BE INSTALLED IN THE HALLWAY AND IN THE ADJACENT ROOM. IN NEW CONSTRUCTION THE REQUIRED SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM A COMMERCIAL SOURCE AND HAVE A BATTERY BACKUP. WHERE MORE THAN MORE THAN ONE SMOKE ALARM IS BEING PROVIDED THE ALARMS SHALL BE INTERCONNECTED.
9. ATTIC ACCESS CANNOT BE LOCATED IN A ONE-HOUR FIRE RESISTIVE GARAGE CEILING UNLESS A ONE-HOUR RATED ACCESS DOOR ASSEMBLY IS INSTALLED.
10. USE 5/8-INCH TYPE "X" GYPSUM BOARD AT WALLS AND SOFFITS OF ENCLOSED USABLE SPACE UNDER STAIRS.
11. DOORS AND PANELS OF SHOWER AND BATHTUB ENCLOSURES AND ADJACENT WALL OPENINGS WITHIN 60" INCHES ABOVE A STANDING SURFACE AND DRAIN INLET SHALL BE FULLY TEMPERED, LAMINATED SAFETY GLASS OR APPROVED PLASTIC.
12. SHOWER DOOR OPENING NEEDS TO MAINTAIN A MINIMUM OF TWENTY TWO (22") INCHES UNOBSTRUCTED FOR EGRESS.
13. USE SAFETY (I.E., TEMPERED) GLAZING AT HAZARDOUS LOCATIONS - SUCH AS WINDOWS ADJACENT TO:

    (1) TUBS, SHOWERS, AND TUB/SHOWERS COMBO;
    (2) ADJACENT TO AND WITHIN 24" INCHES OF EITHER EDGE OF DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" INCHES ABOVE THE WALKING SURFACE;
    (3) EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SQ. FT.;
    (4) EXPOSED BOTTOM EDGE LESS THAN 18" INCHES ABOVE THE FLOOR;
    (5) STAIRWAY LANDINGS ETC. IDENTIFY THESE LOCATIONS ON THE PLANS AND SPECIFY SAFETY GLAZING.

14. WHEN ALTERATIONS, REPAIRS, OR ADDITIONS HAVING A VALUE IN EXCESS OF $1,000 ARE MADE, PROVIDE AN APPROVED SMOKE ALARM. THE ALARM MAY BE BATTERY OPERATED. REPAIRS TO THE EXTERIOR SURFACES OF THE DWELLING UNIT ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION OF THE CURRENT CALIFORNIA BUILDING CODE.
15. SINGLE- AND MULTIPLE-STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL 2034. CARBON MONOXIDE DETECTORS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL 2075. CARBON MONOXIDE ALARMS AND CARBON MONOXIDE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE, THE CURRENT EDITION OF NFPA 720 "STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE (CO) DETECTION AND WARNING EQUIPMENT" AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. OTHER CARBON MONOXIDE ALARM AND DETECTION DEVICES AS RECOGNIZED IN NFPA 720 ARE ALSO ACCEPTABLE.
16. CARBON MONOXIDE ALARMS REQUIRED BY SECTIONS R315.1 AND R315.2 SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
    - 16.1. OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S).
    - 16.2. ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS.

ROOF NOTES

1. TOP AND BOTTOM CHORDS SHALL BE DOUGLAS FIR NO. 2 OR BETTER WEB MEMBERS SHALL BE HEM FIR NO. 2 OR BETTER.
2. ALLOWABLE STRESS INCREASE FOR LOAD DURATION SHALL BE 25 PERCENT MAXIMUM.
3. INCREASE FOR ALLOWABLE STRESSES FOR REPETITIVE MEMBERS IS NOT PERMISSIBLE.
4. TRUSS DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER FOR REVIEW PRIOR TO FABRICATION. CALCULATIONS SHALL BE SIGNED BY A CIVIL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
5. EFFECTS OF ECCENTRIC LOADING SHALL BE CONSIDERED IN THE DESIGN FOR ALL JOINTS.
6. CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND WEB BRACING AS REQUIRED BY MANUFACTURER'S DESIGN.
7. BUILT-UP GIRDER TRUSSES:

   a. 3-PLY OR GREATER SHALL HAVE 1/2 INCH BOLTS AT 24" O.C. MAXIMUM THROUGH ALL MEMBERS
   b. 2-PLY MAY BE STITCHED NAILED PER TRUSS MANUFACTURER'S RECOMMENDATIONS.

8. ALL HARDWARE REQUIRED FOR CONNECTING TRUSSES (JACK TO HIP, HIP TO GIRDER, GIRDER TO GIRDER, ETC.) SHALL BE DESIGNED AND DETAILED BY THE TRUSS FABRICATOR. JOIST HANGERS SHALL BE ICBO APPROVED.
9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON TRUSS PROFILES WITH ARCHITECTURAL DRAWINGS AND IN FIELD WITH WALL LAYOUT PRIOR TO FABRICATION.
10. ALL GABLE END TRUSSES SHALL BE STRUCTURAL TRUSSES WITH FILL. THEY SHALL BE DESIGNED TO TRANSFER A MIN. OF 200 PLF (MAX 2000 lb) FROM THE TOP CHORD TO THE BOTTOM CHORD (U.N.O.)
11. TRUSS FABRICATOR SHALL NOT CHANGE THE TRUSS LAYOUT WITHOUT THE APPROVAL OF THE ENGINEER.
12. PROVIDE A GAP BETWEEN THE BOTTOM CHORD OF THE ENGINEERED TRUSSES AND THE TOP OF THE INTERIOR NON-BEARING WALLS. INSTALL SIMPSON STC TRUSS CLIP FOR ALIGNMENT CONTROL.

General Notes

General Notes

No.	Revision/Issue	Date

Firm Name and Address
Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address
An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: GN1
Date: January, 2024	
Scale: Not to Scale	

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.

Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

Exceptions:
1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of *CALGreen*, live/work units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code*, Article 625.

Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the *California Electrical Code*.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.
When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces.

2.When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed.

Notes:

a.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

Notes:

a.Construction documents shall show locations of future EV spaces.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests.

When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Location.
EVCS shall comply with at least one of the following options:

1.The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2.The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3.

4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.
The charging spaces shall be designed to comply with the following:

1.The minimum length of each EV space shall be 18 feet (5486 mm).

2.The minimum width of each EV space shall be 9 feet (2743 mm).

3.One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.2.1.3 Accessible EV spaces.
In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.

4.106.4.2.3 EV space requirements.
1.Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/ or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.

2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code.

4.106.4.2.4 Identification.
The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.2.5 Electric Vehicle Ready Space Signage.
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.
When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.

Notes:

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2.There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code*.

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code*.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations*, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.
11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
12. Information and/or drawings identifying the location of grab bar reinforcements.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

General Notes

2022 California Green Building Standards Code Residential Mandatory Measures, Sheet 1

No.	Revision/Issue	Date

Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address

An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: GN2
Date: January, 2024	
Scale: Not to Scale	

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O^3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and tricloroethylene), except for aerosol products, as specified in Subsection 2 below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]
(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT
(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code*.

4.507 ENVIRONMENTAL COMFORT

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

General Notes

2022 California Green Building Standards Code Residential Mandatory Measures, Sheet 2

No.	Revision/Issue	Date

Firm Name and Address

Professional Drafting & Design Services
Richard R. Espinosa
(916) 872-5138

Project Name and Address
An Accessory Dwelling Unit for;
Nick & Grace Cavanaugh
845 Sage Drive
Vacaville, CA 95687
A.P.N: 0136-404-310

Project: Cavanaugh	Sheet: GN3
Date: January, 2024	
Scale: Not to Scale	