

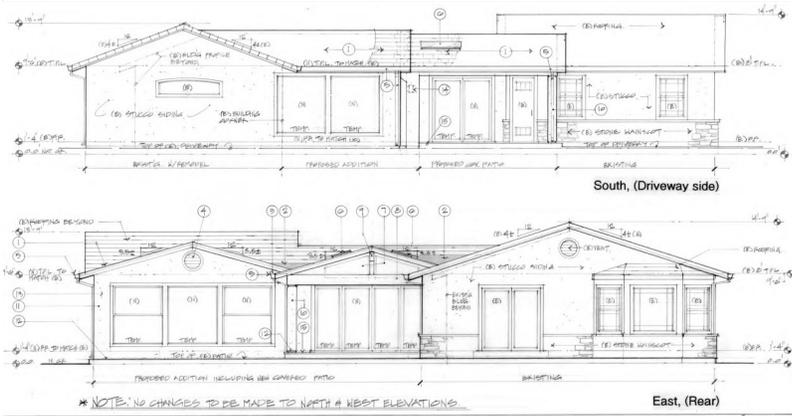
## Location of Proposed Project





City of Campbell  
70 North First Street  
Campbell, CA 95008 -1423

## Project Image



# Courtesy Notice

Dear Campbell Resident,

May 24, 2024

We are notifying you that the Planning Division of the Community Development Department of the City of Campbell has received an application for the following project:

**Project Address:** 710 Emory Avenue

**Zoning | Area Plan:** R-1-10 | STANP

**Neighborhood Association(s):** N/A

**Council District:** 1

**File No.:** PLN-2024-78

**APN:** 404-27-004

**Applicant:** Kristen Frank

**Property Owner:** Rich and Connie Paris

**Application Type:** Administrative Site and Architectural Review Permit

**Project Planner:** Nishant Seoni, Contract Associate Planner

**Email Contact:** nishants@campbellca.gov

**Project Description:**

To allow the remodel of an existing 2,482 square foot single family home, including removal of 2 rooms and replacement with 537 square feet of new rooms and addition of 214 square foot covered porch.

If you would like to find out more information regarding the proposed project, please view the project plans using the QR code below or contact the Project Planner. The City will send you another notice before the City makes a decision regarding approval of the project.

Before a decision is reached you will receive a formal notice providing another opportunity for public comment.



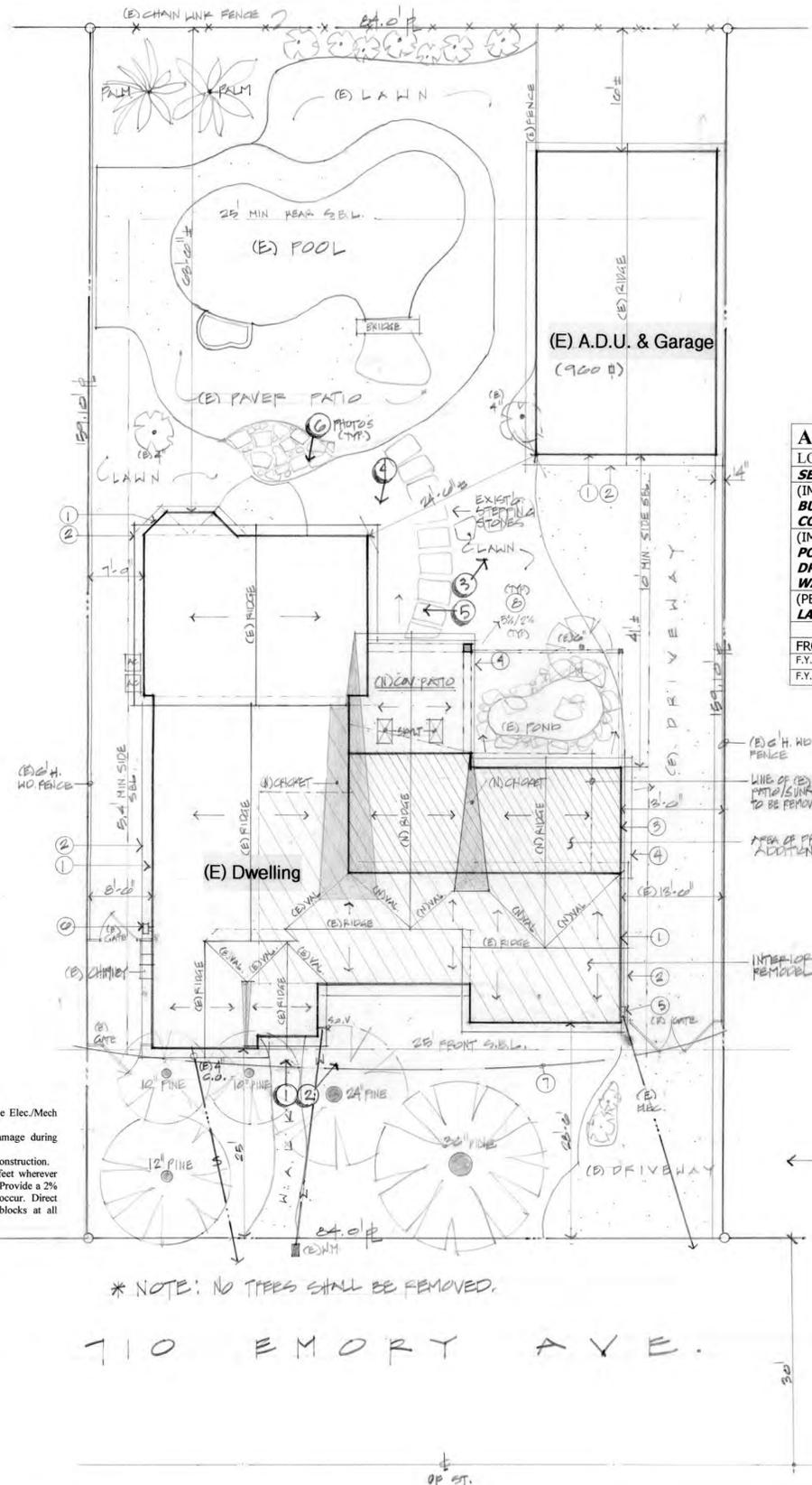
- City of Campbell -  
Community Development Department  
70 N. First Street, Campbell CA 95008  
(408)866-2140 | [planning@campbellca.gov](mailto:planning@campbellca.gov)

**Note:** Applications may change after initial application submittal. To view the project plans, please scan the QR code.

\*\*Asistencia en Español disponible,  
Simplemente marque (408) 866-2140 y pida traducción en Español



**NOTE:**  
Automatic irrigation system's controllers installed at the time of final inspection shall be weather based.  
Conform to 2022 CGBSC MWEL0 requirements.



AREA TABLE		
LOT SIZE: 13,068 S.F.		
SECTION (IMPERVIOUS)	SQ. FOOTAGE	PERCENTAGE
BUILDING COVERAGE	4,137	32%
(IMPERVIOUS) POOL, PATIOS, DRIVEWAY, WALKS	4,165	32%
(PERVIOUS) LANDSCAPING	4,766	36%
FRONT YARD	2,453	
F.Y. Landscaping	1,831	75% of F.Y.
F.Y. Hardscaping	622	25% of F.Y.

**SITE PLAN NOTES**

- SYMB. DESCRIPTION**
- Line of existing building, (Typ.)
  - Line of existing roof, (Typ.)
  - Line of new building, (Typ.)
  - Line of new roof, (Typ.)
  - Existing electrical panel and meter. Upgrade as needed. See Elec./Mech Plan.
  - Existing Gas meter. Protect the meter and lines from damage during construction.
  - Provide 8" fiber rolls, (Waddles) during the entire duration of construction.
  - Provide 5% slope away from the building for the first ten feet wherever pervious surfaces occur then maintain a 2% slope thereafter. Provide a 2% slope away from the building where impervious surfaces occur. Direct drainage away from adjacent properties. Provide splash blocks at all downspouts.

\* NOTE: NO TREES SHALL BE REMOVED.

710 EMORY AVE.



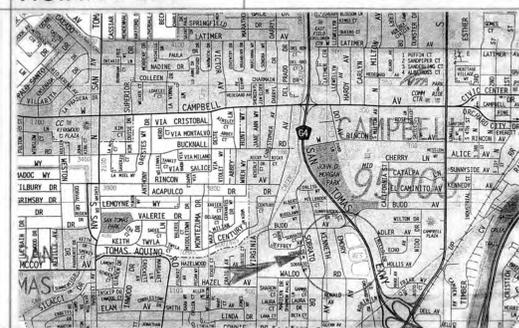
CITY STAMP

SCOPE OF WORK

VICINITY MAP

- An addition and interior remodel to the existing dwelling to include:
- Remodel to the existing Foyer, Living Room, Family Room, Kitchen, Bedroom #3 & Main Bathroom.
  - Relocation of the Laundry Room and 1/2 Bathroom within the existing building footprint.
  - Removal of the existing Sunroom and Garden Room in order to add a new Formal Dining Room and Game Room connected to the Kitchen and Family Room.
  - Addition of a new Covered Patio structure connected to the Dining Room.

Construction Hours are limited to 8 AM to 5 PM Monday through Friday and 9 AM to 4 PM Saturday. No construction on Sundays and holidays



CITY STAMP

CONSULTANTS

**FRI ENERGY CONSULTANTS**  
TITLE 24 CONSULTANT  
21 N. HARRISON AVENUE  
CAMPBELL, CA 95008  
(408) 866-1620  
FAX: (408) 866-6832  
EMAIL: title24@ix.netcom.com

**CPL CONSULTING ENGINEERS**  
PROFESSIONAL ENGINEER  
1561 HACK AVENUE  
CAMPBELL, CA 95008  
(408) 394-1461  
EMAIL: clavond@sbcglobal.net

PROJECT DATA

A.P.N.	404-27-004
ZONING	R-1-10
OCCUPANCY	R-3/U
BUILDING TYPE	VB
LEGAL OWNER: Rich & Connie Paris	
FIRE SPRINKLERS	NO
A. PARCEL SIZE	.31 AC @ 13,068 s. f.
B. EXISTING DETACHED GARAGE/A.D.U.	960 s. f.
C. EXISTING LIVING AREA	2,482 s. f.
D. PROPOSED ADDITION	537 s. f.
E. TOTAL LIVING AREA	3,019 s. f.
F. PROPOSED COVERED PATIO STRUCTURE	214 s. f.
G. INTERIOR REMODELED AREA	Approx. 900 s. f.
BUILDING COVERAGE, (B+E+F)	31.9% @ 4,137 s. f.
REAR YARD AREA	Approx. 6,050 s. f.

WASTE MANAGEMENT

A MINIMUM OF 75% OF THE NON-HAZARDOUS CONSTRUCTION & DEMOLITION WASTEGENERATED AT THE SITE SHALL BE DIVERTED TO AN OFFSITE RECYCLE, DIVERSION, OR SALVAGE FACILITY PER CGC 4.408

DRAWING INDEX

A1	SITE PLAN, NOTES, DATA
EM1	BEST MANAGEMENT PRACTICES
CG1	CAL GREEN MANDATORY MEASURES CHECKLIST
CG2	CAL GREEN MANDATORY MEASURES CHECKLIST, V.O.C. TABLES
T24	TITLE 24 ENERGY COMPLIANCE
T24	TITLE 24 ENERGY COMPLIANCE
A2	"AS BUILT" FLOOR PLAN
A3	PROPOSED FLOOR PLAN, NOTES, WALL LEGEND, DOOR & WINDOW SCHEDULES
A4	PROPOSED EXTERIOR ELEVATIONS, NOTES, ARCHITECTURAL DETAILS
A5	BUILDING SECTIONS, NOTES
EM1	ELECTRICAL/MECHANICAL PLAN, NOTES, LEGEND
S1	FOUNDATION PLAN, CRAWL SPACE VENTILATION CALCULATIONS, NOTES
S2	ROOF FRAMING PLAN, ATTIC VENTILATION CALCULATIONS, NOTES
SD1	STRUCTURAL NOTES
SD2	FOUNDATION DETAILS
S3	FRAMING DETAILS, SHEARWALL SCHEDULE, MISC. SCHEDULES
SD4	MISC. FRAMING DETAILS
SD5	MISC. FRAMING & FOUNDATION DETAILS

COMMON ABBREVIATIONS

ABBREVIATION	DESCRIPTION
C.	Center Line
Cab.	Cabinet
Cant.	Cantilever
D.	Dryer
D.S.	Down Spout
D.W.	Dish Washer
(E)	Existing
EQ.	Equal
F.A.U.	Forced Air Unit
FIN.	Finish
F.F.	Finish Floor
FLU.	Fluorescent
G.F.I.	Ground Fault Interrupter
LAV.	Lavatory
L.T.	Laundry Tub
MIN.	Minimum
(N)	New
N.T.S.	Not To Scale
O.C.	On Center
P. & S.	Pole and Shelf
QTY.	Quantity
REF.	Refrigerator
R.A.G.	Return Air Grille
(R)	Relocate
REQ.	Required
SIM.	Similar
S.	Sink
S.F.	Square Feet
SYM.	Symbol
TEMP.	Tempered
T.B.D.	To Be Determined
T.O.S.	Top Of Slab
T.P.L.	Top Plate Line
(TYP.)	Typical
U.O.N.	Unless Otherwise Noted
W/C	Water Closet
W.	Washer
W/H	Water Heater
W/P	Weather Proof
W/S	Weather Strip
WD.	Wood

GENERAL NOTES

- All new construction work; Architectural, Mechanical, Electrical, Fire protection, Etc., shall conform to the 2022 C.R.C., and any other local codes.
- Field verify all dimensions and conditions prior to commencing work. Report any discrepancies Hayes & Associates immediately before proceeding with work.
- All dimensions are taken from face of stud to face of stud, (F.O.S.), unless otherwise noted on plans.
- Written dimensions shall take precedence over scaled dimensions. Do not scale drawings.
- All sleeping rooms must meet the emergency egress requirements in Chapter 2, Section 202 and Chapter 3, Section 310.1 - 310.4, 2022 C.R.C.
- Sleeping rooms must conform to Section 310.1-310.4, 2022 C.R.C.
  - Maximum window net clear opening height of 44" from finished floor.
  - Minimum net clear opening width of 20", minimum net clear opening height of 24", and a minimum net area of 5.7 square feet for total opening.
- All tub and shower enclosures and plastic materials shall be an approved shatterproof material. Section R308, 2022 C.R.C.
- Staircase design shall comply with Chapter 3, Section R311.7, 2022 C.R.C.
- Attic ventilation shall not be less than 1/150 of the total area of the attic or per Chapter 8, Section 806 of the 2022 C.R.C.
- Installation of roofing material shall comply with Chapter 9, Section R905, 2022 C.R.C.
- All exterior wall coverings shall conform to Chapter 7, Section R703 of the 2022 C.R.C.
- Building paper is required behind all sheetrock at all water splash areas.
- Metal flashing shall comply with Chapter 7, Sections R703.4, R703.8 and Chapter 9, Section R903.2, R905 of the 2022 C.R.C.
- Provide insulation blocks at all eave vents.
- Glass shall comply with Section R308 of the 2022 C.R.C. Federal Glazing Regulations.
- Hayes & Associates are not responsible for deviation from the plans during construction by the owner or his/her contractor, or any other individual.

**APPLICABLE CODES:**

THE 2022 CALIFORNIA BUILDING CODE (CBC), 2022 CALIFORNIA RESIDENTIAL CODE (CRC), 2022 CA MECHANICAL CODE (CMC), 2022 CA PLUMBING CODE (CPC), 2022 CA ELECTRICAL CODE (CEC), 2022 CAL ENERGY CODE (CEC), AND 2022 "CAL GREEN" BUILDING STANDARDS CODE (CALGreen).

REVISIONS	BY

**DENNIS HAYES & ASSOCIATES**

CREATIVE CUSTOM RESIDENTIAL DESIGN SOLUTIONS  
17105 St. Brendan Loop  
Morgan Hill  
CA 95037  
(408)377-0788  
ds\_hayes@aht.net



THE PARIS RESIDENCE  
710 Emory Ave.  
Campbell, CA 95008

DRAWN	DATE
CHECKED	4.22.2024
	SCALE
	AS NOTED
	JOB NO.
	SHEET
	<b>A1</b>
OF	SHEETS

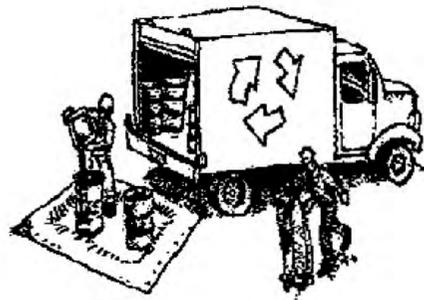
SITE PLAN

1/8" = 1'-0"

# Construction Best Management Practices (BMPs)

Construction projects are required to implement year-round stormwater BMPs.

## Materials & Waste Management



### Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or when they are not in use.
- ❑ Use (but don't overuse) reclaimed water for dust control.
- ❑ Ensure dust control water doesn't leave site or discharge to storm drains.

### Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with City, County, State and Federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and do not use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

### Waste Management

- ❑ Cover and maintain dumpsters. Check frequently for leaks. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. A plastic liner is recommended to prevent leaks. Never clean out a dumpster by hosing it down on the construction site.
- ❑ Place portable toilets away from storm drains. Make sure they are in good working order. Check frequently for leaks.
- ❑ Dispose of all wastes and demolition debris properly. Recycle materials and wastes that can be recycled, including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and cleared vegetation.
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.
- ❑ Keep site free of litter (e.g. lunch items, cigarette butts).
- ❑ Prevent litter from uncovered loads by covering loads that are being transported to and from site.

### Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

## Equipment Management & Spill Control



### Maintenance and Parking

- ❑ Designate an area of the construction site, well away from streams or storm drain inlets and fitted with appropriate BMPs, for auto and equipment parking, and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment, and do not use diesel oil to lubricate equipment or parts onsite.

### Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Maintain all vehicles and heavy equipment. Inspect frequently for and repair leaks. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up leaks, drips and other spills immediately and dispose of cleanup materials properly.
- ❑ Use dry cleanup methods whenever possible (absorbent materials, cat litter and/or rags).
- ❑ Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills to the appropriate local spill response agencies immediately. If the spill poses a significant hazard to human health and safety, property or the environment, you must report it to the State Office of Emergency Services. (800) 852-7550 (24 hours).

## Earthmoving



### Grading and Earthwork

- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, plant temporary vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, drainage courses and streams by installing and maintaining appropriate BMPs (i.e. silt fences, gravel bags, fiber rolls, temporary swales, etc.).
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

### Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.
- ❑ If the above conditions are observed, document any signs of potential contamination and clearly mark them so they are not disturbed by construction activities.

### Landscaping

- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

## Concrete Management and Dewatering



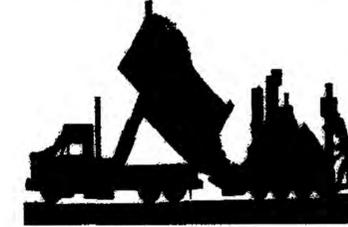
### Concrete Management

- ❑ Store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Store materials off the ground, on pallets. Protect dry materials from wind.
- ❑ Wash down exposed aggregate concrete only when the wash water can (1) flow onto a dirt area; (2) drain onto a bermed surface from which it can be pumped and disposed of properly; or (3) block any storm drain inlets and vacuum washwater from the gutter. If possible, sweep first.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area onsite, where the water will flow into a temporary waste pit, and make sure wash water does not leach into the underlying soil. (See CASQA Construction BMP Handbook for properly designed concrete washouts.)

### Dewatering

- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible, send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer, call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

## Paving/Asphalt Work



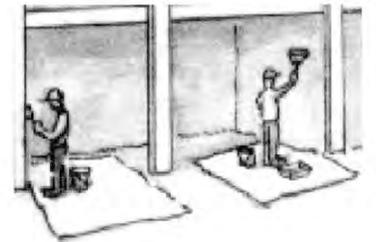
### Paving

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- ❑ Collect and recycle or properly dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.

### Sawcutting & Asphalt/Concrete Removal

- ❑ Protect storm drain inlets during saw cutting.
- ❑ If saw cut slurry enters a catch basin, clean it up immediately.
- ❑ Shovel or vacuum saw cut slurry deposits and remove from the site. When making saw cuts, use as little water as possible. Sweep up, and properly dispose of all residues.

## Painting & Paint Removal



### Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Sweep up or collect paint chips and dust from non-hazardous dry stripping and sand blasting into plastic drop cloths and dispose of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.



**Santa Clara Valley  
Urban Runoff  
Pollution Prevention Program**

**Storm drain polluters may be liable for fines of up to \$10,000 per day!**

# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Y = YES APPLICABLE  
N/A = NOT APPLICABLE  
RESPON. PARTY = RESPONSIBLE PARTY (i.e. ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y	N/A	RESPON. PARTY	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL	Y	N/A	RESPON. PARTY	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL	Y	N/A	RESPON. PARTY	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL	Y	N/A	RESPON. PARTY	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL
			<p><b>301.1 SCOPE.</b> 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.</p> <p><b>301.1.1 Additions and alterations. [HCD]</b> 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.</p> <p>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.</p> <p><b>Note:</b> 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.</p> <p><b>Note:</b> 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.</p> <p><b>301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD]</b> 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.</p> <p><b>SECTION 302 MIXED OCCUPANCY BUILDINGS</b></p> <p><b>302.1 MIXED OCCUPANCY BUILDINGS.</b> In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy. Exceptions:</p> <ol style="list-style-type: none"> <li>[HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.</li> <li>[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.</li> </ol> <p><b>DIVISION 4.1 PLANNING AND DESIGN</b></p> <p><b>ABBREVIATION DEFINITIONS:</b></p> <ul style="list-style-type: none"> <li>HCD Department of Housing and Community Development</li> <li>BSC California Building Standards Commission</li> <li>DSA-SS Division of the State Architect, Structural Safety</li> <li>OSHPD Office of Statewide Health Planning and Development</li> <li>LR Low Rise</li> <li>HR High Rise</li> <li>AA Additions and Alterations</li> <li>N New</li> </ul> <p><b>CHAPTER 4 RESIDENTIAL MANDATORY MEASURES</b></p> <p><b>SECTION 4.102 DEFINITIONS</b></p> <p><b>4.102.1 DEFINITIONS</b> The following terms are defined in Chapter 2 (and are included here for reference)</p> <p><b>FRENCH DRAIN.</b> 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.</p> <p><b>WATTLES.</b> 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.</p> <p><b>4.106 SITE DEVELOPMENT</b></p> <p><b>4.106.1 GENERAL.</b> 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.</p> <p><b>4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION.</b> 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.</p> <ol style="list-style-type: none"> <li>Retention basins of sufficient size shall be utilized to retain storm water on the site.</li> <li>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.</li> <li>Compliance with a lawfully enacted storm water management ordinance.</li> </ol> <p><b>Note:</b> 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: <a href="https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html">https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html</a>)</p> <p><b>4.106.3 GRADING AND PAVING.</b> 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:</p> <ol style="list-style-type: none"> <li>Swales</li> <li>Water collection and disposal systems</li> <li>French drains</li> <li>Water retention gardens</li> <li>Other water measures which keep surface water away from buildings and aid in groundwater recharge.</li> </ol> <p><b>Exception:</b> Additions and alterations not altering the drainage path.</p> <p><b>4.106.4 Electric vehicle (EV) charging for new construction.</b> 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.</p> <p><b>Exceptions:</b></p> <ol style="list-style-type: none"> <li>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: <ol style="list-style-type: none"> <li>Where there is no local utility power supply or the local utility is unable to supply adequate power.</li> <li>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.</li> </ol> </li> <li>Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.</li> </ol> <p><b>4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages.</b> 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.</p> <p><b>Exception:</b> 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.</p> <p><b>4.106.4.1.1 Identification.</b> 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".</p>				<p><b>4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.</b> 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.</p> <p><b>4.106.4.2.1 Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.</b> The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.</p> <p><b>1.EV Capable.</b> 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.</p> <p>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.</p> <p><b>Exceptions:</b></p> <ol style="list-style-type: none"> <li>When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces.</li> <li>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.</li> </ol> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.</li> <li>There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.</li> </ol> <p><b>2.EV Ready.</b> 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.</p> <p><b>Exception:</b> Areas of parking facilities served by parking lifts.</p> <p><b>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.</b> The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.</p> <p><b>1.EV Capable.</b> 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.</p> <p>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.</p> <p><b>Exception:</b> 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.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Construction documents shall show locations of future EV spaces.</li> <li>There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.</li> </ol> <p><b>2.EV Ready.</b> 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.</p> <p><b>Exception:</b> Areas of parking facilities served by parking lifts.</p> <p><b>3.EV Chargers.</b> 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.</p> <p>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.</p> <p><b>4.106.4.2.2.1 Electric vehicle charging stations (EVCS).</b> Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1. <b>Exception:</b> 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.</p> <p><b>4.106.4.2.2.1.1 Location.</b> EVCS shall comply with at least one of the following options:</p> <ol style="list-style-type: none"> <li>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.</li> <li>The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.</li> </ol> <p><b>Exception:</b> 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.</p> <p><b>4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.</b> The charging spaces shall be designed to comply with the following:</p> <ol style="list-style-type: none"> <li>The minimum length of each EV space shall be 18 feet (5486 mm).</li> <li>The minimum width of each EV space shall be 9 feet (2743 mm).</li> <li>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).</li> </ol> <p>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.</p> <p><b>4.106.4.2.2.1.3 Accessible EV spaces.</b> 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 and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.</p> <p><b>4.106.4.2.3 EV space requirements.</b></p> <ol style="list-style-type: none"> <li>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, enclosure or chagent 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.</li> <li>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.</li> </ol> <p><b>Exception:</b> 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.</p>				<p><b>4.106.4.2.4 Identification.</b> 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.</p> <p><b>4.106.4.2.5 Electric Vehicle Ready Space Signage</b> 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).</p> <p><b>4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.</b> 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.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.</li> <li>There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.</li> </ol> <p><b>DIVISION 4.2 ENERGY EFFICIENCY</b></p> <p><b>4.201 GENERAL</b></p> <p><b>4.201.1 SCOPE.</b> For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.</p> <p><b>DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION</b></p> <p><b>4.303 INDOOR WATER USE</b></p> <p><b>4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS.</b> 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 4.303.1.4.</p> <p><b>Note:</b> 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.</p> <p><b>4.303.1.1 Water Closets.</b> 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.</p> <p><b>Note:</b> The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.</p> <p><b>4.303.1.2 Urinals.</b> 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.</p> <p><b>4.303.1.3 Showerheads.</b></p> <p><b>4.303.1.3.1 Single Showerhead.</b> 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.</p> <p><b>4.303.1.3.2 Multiple showerheads serving one shower.</b> 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.</p> <p><b>Note:</b> A hand-held shower shall be considered a showerhead.</p> <p><b>4.303.1.4 Faucets.</b></p> <p><b>4.303.1.4.1 Residential Lavatory Faucets.</b> 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.</p> <p><b>4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas.</b> 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.</p> <p><b>4.303.1.4.3 Metering Faucets.</b> Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.</p> <p><b>4.303.1.4.4 Kitchen Faucets.</b> 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.</p> <p><b>Note:</b> Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.</p> <p><b>4.303.1.4.5 Pre-rinse spray valves.</b> 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 (g)(7) and shall be equipped with an integral automatic shutoff.</p> <p><b>FOR REFERENCE ONLY:</b> 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).</p>				<p><b>4.304 OUTDOOR WATER USE</b></p> <p><b>4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.</b> 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.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>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: <a href="https://www.water.ca.gov/">https://www.water.ca.gov/</a></li> </ol> <p><b>DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</b></p> <p><b>4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE</b></p> <p><b>4.406.1 RODENT PROOFING.</b> Annular spaces around pipes, electric cables, conduits or other openings in sole/bohem 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.</p> <p><b>4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</b></p> <p><b>4.408.1 CONSTRUCTION WASTE MANAGEMENT.</b> 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.</p> <p><b>Exceptions:</b></p> <ol style="list-style-type: none"> <li>Excavated soil and land-clearing debris.</li> <li>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.</li> <li>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.</li> </ol> <p><b>4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN.</b> 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.</p> <ol style="list-style-type: none"> <li>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.</li> <li>Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).</li> <li>Identify diversion facilities where the construction and demolition waste material collected will be taken.</li> <li>Identify construction methods employed to reduce the amount of construction and demolition waste generated.</li> <li>Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.</li> </ol> <p><b>4.408.3 WASTE MANAGEMENT COMPANY.</b> 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.</p> <p><b>Note:</b> The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.</p> <p><b>4.408.4 WASTE STREAM REDUCTION ALTERNATIVE (LR).</b> 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.</p> <p><b>4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE.</b> 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.</p> <p><b>4.408.5 DOCUMENTATION.</b> 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.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at <a href="http://www.hcd.ca.gov/CALGreen.html">www.hcd.ca.gov/CALGreen.html</a> may be used to assist in documenting compliance with this section.</li> <li>Mixed construction and demolition debris (C &amp; D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).</li> </ol> <p><b>4.410 BUILDING MAINTENANCE AND OPERATION</b></p> <p><b>4.410.1 OPERATION AND MAINTENANCE MANUAL.</b> 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:</p> <ol style="list-style-type: none"> <li>Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.</li> <li>Operation and maintenance instructions for the following: <ol style="list-style-type: none"> <li>Equipment and appliances, including water-saving devices and systems, HVAC systems, painting, grading around the building, etc.</li> <li>Roof and yard drainage, including gutters and downspouts.</li> <li>Space conditioning systems, including condensers and air filters.</li> <li>Landscape irrigation systems.</li> <li>Water reuse systems.</li> </ol> </li> <li>Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.</li> <li>Public transportation and/or carpool options available in the area.</li> <li>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.</li> <li>Information about water-conserving landscape and irrigation design and controllers which conserve water.</li> <li>Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.</li> <li>Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.</li> <li>Information about state solar energy and incentive programs available.</li> <li>A copy of all special inspections verifications required by the enforcing agency or this code.</li> <li>Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.</li> <li>Information and/or drawings identifying the location of grab bar reinforcements.</li> </ol> <p><b>4.410.2 RECYCLING BY OCCUPANTS.</b> Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible space(s) that serves all buildings on the site and are identified for depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.</p> <p><b>Exception:</b> Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.</p>
			<p><b>4.106.4.2.4 Identification.</b> 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".</p>				<p><b>4.304 OUTDOOR WATER USE</b></p> <p><b>4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.</b> 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.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>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: <a href="https://www.water.ca.gov/">https://www.water.ca.gov/</a></li> </ol> <p><b>DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</b></p> <p><b>4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE</b></p> <p><b>4.406.1 RODENT PROOFING.</b> Annular spaces around pipes, electric cables, conduits or other openings in sole/bohem 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.</p> <p><b>4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</b></p> <p><b>4.408.1 CONSTRUCTION WASTE MANAGEMENT.</b> 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.</p> <p><b>Exceptions:</b></p> <ol style="list-style-type: none"> <li>Excavated soil and land-clearing debris.</li> <li>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.</li> <li>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.</li> </ol> <p><b>4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN.</b> 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.</p> <ol style="list-style-type: none"> <li>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.</li> <li>Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).</li> <li>Identify diversion facilities where the construction and demolition waste material collected will be taken.</li> <li>Identify construction methods employed to reduce the amount of construction and demolition waste generated.</li> <li>Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.</li> </ol> <p><b>4.408.3 WASTE MANAGEMENT COMPANY.</b> 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.</p> <p><b>Note:</b> The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.</p> <p><b>4.408.4 WASTE STREAM REDUCTION ALTERNATIVE (LR).</b> 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.</p> <p><b>4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE.</b> 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.</p> <p><b>4.408.5 DOCUMENTATION.</b> 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.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at <a href="http://www.hcd.ca.gov/CALGreen.html">www.hcd.ca.gov/CALGreen.html</a> may be used to assist in documenting compliance with this section.</li> <li>Mixed construction and demolition debris (C &amp; D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).</li> </ol> <p><b>4.410 BUILDING MAINTENANCE AND OPERATION</b></p> <p><b>4.410.1 OPERATION AND MAINTENANCE MANUAL.</b> 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:</p> <ol style="list-style-type: none"> <li>Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.</li> <li>Operation and maintenance instructions for the following: <ol style="list-style-type: none"> <li>Equipment and appliances, including water-saving devices and systems, HVAC systems, painting, grading around the building, etc.</li> <li>Roof and yard drainage, including gutters and downspouts.</li> <li>Space conditioning systems, including condensers and air filters.</li> <li>Landscape irrigation systems.</li> <li>Water reuse systems.</li> </ol> </li> <li>Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.</li> <li>Public transportation and/or carpool options available in the area.</li> <li>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.</li> <li>Information about water-conserving landscape and irrigation design and controllers which conserve water.</li> <li>Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.</li> <li>Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.</li> <li>Information about state solar energy and incentive programs available.</li> <li>A copy of all special inspections verifications required by the enforcing agency or this code.</li> <li>Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.</li> <li>Information and/or drawings identifying the location of grab bar reinforcements.</li> </ol> <p><b>4.410.2 RECYCLING BY OCCUPANTS.</b> Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible space(s) that serves all buildings on the site and are identified for depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.</p> <p><b>Exception:</b> Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.</p>								
			<p><b>4.106.4.2.5 Electric Vehicle Ready Space Signage</b> 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).</p> <p><b>4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.</b> 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.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.</li> <li>There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.</li> </ol> <p><b>DIVISION 4.2 ENERGY EFFICIENCY</b></p> <p><b>4.201 GENERAL</b></p> <p><b>4.201.1 SCOPE.</b> For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.</p> <p><b>DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION</b></p> <p><b>4.303 INDOOR WATER USE</b></p> <p><b>4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS.</b> 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 4.303.1.4.</p> <p><b>Note:</b> 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.</p> <p><b>4.303.1.1 Water Closets.</b> 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.</p> <p><b>Note:</b> The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.</p> <p><b>4.303.1.2 Urinals.</b> 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.</p> <p><b>4.303.1.3 Showerheads.</b></p> <p><b>4.303.1.3.1 Single Showerhead.</b> 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.</p> <p><b>4.303.1.3.2 Multiple showerheads serving one shower.</b> 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.</p> <p><b>Note:</b> A hand-held shower shall be considered a showerhead.</p> <p><b>4.303.1.4 Faucets.</b></p> <p><b>4.303.1.4.1 Residential Lavatory Faucets.</b> 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.</p> <p><b>4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas.</b> 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.</p> <p><b>4.303.1.4.3 Metering Faucets.</b> Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.</p> <p><b>4.303.1.4.4 Kitchen Faucets.</b> 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.</p> <p><b>Note:</b> Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.</p> <p><b>4.303.1.4.5 Pre-rinse spray valves.</b> 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 (g)(7) and shall be equipped with an integral automatic shutoff.</p> <p><b>FOR REFERENCE ONLY:</b> 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).</p>				<p><b>4.304 OUTDOOR WATER USE</b></p> <p><b>4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.</b> 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.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>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: <a href="https://www.water.ca.gov/">https://www.water.ca.gov/</a></li> </ol> <p><b>DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</b></p> <p><b>4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE</b></p> <p><b>4.406.1 RODENT PROOFING.</b> Annular spaces around pipes, electric cables, conduits or other openings in sole/bohem 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.</p> <p><b>4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</b></p> <p><b>4.408.1 CONSTRUCTION WASTE MANAGEMENT.</b> 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.</p> <p><b>Exceptions:</b></p> <ol style="list-style-type: none"> <li>Excavated soil and land-clearing debris.</li> <li>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.</li> <li>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.</li> </ol> <p><b>4.4</b></p>								

# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

Y N/A RESPON PARTY  
 YES NOT APPLICABLE  
 RESPONSIBLE PARTY (i.e. ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

**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<sub>3</sub>/g ROG.  
 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(b).

**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:

- 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 trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
- 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(a)(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:

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

TABLE 4.504.1 - ADHESIVE VOC LIMIT <sub>1,2</sub>	
(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
<b>SPECIALTY APPLICATIONS</b>	
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
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
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
<b>SEALANT PRIMERS</b>	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS <sub>1,2</sub>	
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
<b>SPECIALTY COATINGS</b>	
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	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 FINISH 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	
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 <sub>2</sub>	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/CCDCPP/DEOD/CEHLB/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/CCDCPP/DEOD/CEHLB/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.  
<https://www.cdph.ca.gov/Programs/CCDCPP/DEOD/CEHLB/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:

- Product certifications and specifications.
- Chain of custody certifications.
- Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
- 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.
- 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:

- 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 curing, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
- Other equivalent methods approved by the enforcing agency.
- 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:

- 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.
- 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.
- 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:

- Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
- Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
  - 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.
  - A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in).

**Notes:**

- For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
- 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:

- 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.
- Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
- 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:

- State certified apprenticeship programs.
- Public utility training programs.
- Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
- Programs sponsored by manufacturing organizations.
- 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:

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

**Notes:**

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

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GENERAL INFORMATION	
01	Project Name: Paris Residence
02	Run Title: Title 24 Analysis
03	Project Location: 710 Emory Ave
04	City: Campbell
05	Standards Version: 2022
06	Zip code: 95008
07	Software Version: EnergyPro 9.2
08	Climate Zone: 4
09	Front Orientation (deg/ Cardinal): 270
10	Building Type: Single family
11	Number of Dwelling Units: 1
12	Project Scope: Addition and/or Alteration
13	Number of Bedrooms: 4
14	Addition Cond. Floor Area (ft²): 157
15	Number of Stories: 1
16	Existing Cond. Floor Area (ft²): 2456
17	Fenestration Average U-factor: 0.3
18	Total Cond. Floor Area (ft²): 2613
19	Glaazing Percentage (%): 20.05%
20	ADU Bedroom Count: n/a
21	ADU Conditioned Floor Area: n/a
22	Fuel Type: Natural gas
23	No Dwelling Unit: No

**COMPLIANCE RESULTS**

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

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ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (kBtu/ft²-yr)	Standard Design TDV Energy (kBtu/ft²-yr)	Proposed Design Source Energy (kBtu/ft²-yr)	Proposed Design TDV Energy (kBtu/ft²-yr)	Compliance Margin (kBtu/ft²-yr)	Compliance Margin (EREI)
Space Heating	0	49.12	0	43.43	0	5.69
Space Cooling	0	52.18	0	58.83	0	-6.65
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	15.31	0	14.17	0	1.14
Self Utilization/Freeability Credit	0	0	0	0	0	0
Efficiency Compliance Total	0	116.61	0	116.43	0	0.18
Photovoltaics	0	0	0	0	0	0
Battery	0	0	0	0	0	0
Flexibility	0	0	0	0	0	0
Indoor Lighting	0	6.4	0	6.4	0	0
Appl & Cooking	0	17.59	0	17.59	0	0
Plug Loads	0	22.16	0	22.16	0	0
Outdoor Lighting	0	1.65	0	1.65	0	0
TOTAL COMPLIANCE	0	164.41	0	164.23	0	0.18

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ENERGY USE INTENSITY				
Standard Design (kBtu/ft²-yr)	24.69	23.18	1.51	6.12
Proposed Design (kBtu/ft²-yr)	24.69	23.18	1.51	6.12
Compliance Margin (kBtu/ft²-yr)				
Margin Percentage				
Gross EAU <sup>1</sup>	24.69	23.18	1.51	6.12
Net EAU <sup>2</sup>	24.69	23.18	1.51	6.12

**REQUIRED SPECIAL FEATURES**  
 The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.  
 \* Window overhangs and/or fins

**HERS FEATURE SUMMARY**  
 The following is a summary of the features that must be field-verified by a certified HERS Rater in a report for improving the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CEQA and CLM are required to be completed in the HERS Report.

- Kitchen range hood
- Duct leakage testing

**BUILDING - FEATURES INFORMATION**

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Paris Residence	2613	1	4	2	0	1

**ZONE INFORMATION**

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
1st Floor	Conditioned	New FAU/ E AC1	2456	8	DHW Sys 1	Existing/Unchanged
1st Floor Addition	Conditioned	New FAU/ E AC1	537	8	DHW Sys 1	New

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OPAQUE SURFACES										
01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Area (ft²)	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Front Wall	1st Floor	R-0 Wall	270	Front	556	148	90	none	Existing	No
Left Wall	1st Floor	R-0 Wall	0	Left	540	56	90	none	Existing	No
Rear Wall	1st Floor	R-0 Wall	90	Back	238	80	90	none	Existing	No
Right Wall	1st Floor	R-0 Wall	180	Right	466	72	90	none	Existing	No
Rear Wall 2	1st Floor Addition	R-15 Wall	90	Back	358.8	190	90	none	New	n/a
Right Wall 2	1st Floor Addition	R-15 Wall	180	Right	142.5	60	90	Extension	New	n/a
Interior Surface	1st Floor-1st Floor Addition	R-0 Wall	n/a	n/a	0	0	n/a	n/a	Existing	No
Roof	1st Floor	R-19 Roof Attic	n/a	n/a	3102	n/a	n/a	n/a	Existing	No
Roof 2	1st Floor Addition	R-38 Roof Attic	n/a	n/a	312	n/a	n/a	n/a	New	n/a
Raised Floor	1st Floor	R-0 Floor Crawlspace	n/a	n/a	1687	n/a	n/a	n/a	Existing	No
Raised Floor 2	1st Floor Addition	R-19 Floor Crawlspace	n/a	n/a	537	n/a	n/a	n/a	New	n/a

**OPAQUE SURFACES - CATHEDRAL CEILING**

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Zone	Construction	Area (ft²)	Orientation	Roof Rise (ft/12)	Roof Area (ft²)	Roof Entrance	Roof Eave	Cool Roof	Status	Verified Existing Condition	Existing Construction	
Unvented Roof	1st Floor	R-19 Roof No Attic	0	Left	354	0	4	0.1	0.55	No	Existing	No	
Unvented Roof 2	1st Floor Addition	R-38 Roof No Attic	270	Front	225	0	3.5	0.1	0.85	No	New	n/a	

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FENESTRATION / GLAZING															
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Area (ft²)	U-factor	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition					
Attic 1st Floor	Window	Attic Roof/1st Floor Addition	Vertical	4	0.1	0.85	No	No	Existing	No					
Attic 1st Floor Addition	Window	Attic Roof/1st Floor Addition	Vertical	3.5	0.1	0.85	No	No	New	n/a					

**OVERHANGS AND FINES**

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
Window	Depth	Dist Up	Left Extent	Right Extent	Flap Ht	Depth	Dist Up	Dist L	Dist R	Dist U	Dist D	Dist S	Dist W	Status	Verified Existing Condition	Existing Construction
SGD 2	10	0.1	10	10	0	0	0	0	0	0	0	0	0	New	NA	NA

**SLAB FLOORS**

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
Slab	1st Floor	769	64.67	none	0	80%	No	Existing	No

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OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total U-factor	Interior / Exterior Continuity R-value	U-factor	Assembly Layers
R-0 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Exterior Finish: 3 Coat Stucco
R-19 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x8 @ 16 in. O. C.	R-19	None / None	0.054	Roofing: Light roof (Asphalt Shingles) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: R-19 / 2x4 Inside Finish: Gypsum Board
R-30 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-30	None / None	0.036	Roofing: Light roof (Asphalt Shingles) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: R-30 / 2x12 Inside Finish: Gypsum Board
R-0 Wall 1	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Attic Roof/1st Floor	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light roof (Asphalt Shingles) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x4
Attic Roof/1st Floor Addition	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light roof (Asphalt Shingles) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x4

**BUILDING ENVELOPE - HERS VERIFICATION**

01	02	03	04	05
Quality Insulation Installation (QI)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	N/A	n/a	n/a

**WATER HEATING SYSTEMS**

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (ft)	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)	New	NA	NA

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HVAC DISTRIBUTION - HERS VERIFICATION								
01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	10.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

**HVAC - FAN SYSTEMS**

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

**HVAC FAN SYSTEMS - HERS VERIFICATION**

01	02	03
Name	Verified Fan Watt Draw	Required Fan Energy (Watts/CFM)
HVAC Fan 1-hers-fan	Not Required	0

**HERS RATER VERIFICATION OF EXISTING CONDITIONS**

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Design Type	Duct Ins. R-value	Duct Location	Supply Return	Supply Return	Supply Return	Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution System	New Ducts > 25 ft	
Air Distribution System 1	Unconditioned attic	Non-Verified	R-6	R-6	Attic	Attic	n/a	No Bypass Duct	Sealed and Tested	As per Distribution System 1-hers-dist	Existing + New	No	Yes		

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**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I, the undersigned, certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Nicholas Bignardi  
 Signature Date: 2024-04-17 08:48:21  
 Company: FRI Energy Consultants, LLC.  
 Address: 5770 Hillfield Boulevard #15  
 San Jose, CA 95123  
 Phone: 408-866-1620

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I, the undersigned, certify that this Certificate of Compliance documentation is accurate and complete.

Responsible Person Name: Dennis Hayes  
 Signature Date: 2024-04-17 08:48:50  
 Company: Hayes & Associates  
 Address: 17105 St Brandon Loop  
 Morgan Hill, CA 95037  
 Phone: 408-377-0788

Registration Number: 224-P010047788A-000-000-000000-0000  
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WATER HEATERS														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Standby Loss or Recovery Eff	1st Ht. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition	
DHW Heater 1	Gas	Consumer instantaneous	1	0	UEF	0.9	Btu/hr	20000	0	n/a	n/a	New	n/a	

**WATER HEATING - HERS VERIFICATION**

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution Type	Reactivation Control	Shower Drain Water Heat Recovery	
DHW Sys 1 - U2	Not Required	Not Required	Not Required	Not Required	Not Required	

**SPACE CONDITIONING SYSTEMS**

01	02	03	04	05	06	07</
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**2022 Single-Family Residential Mandatory Requirements Summary**

*NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. (04/2022)*

**Building Envelope:**

- Air Leakage, Manufactured fenestration, exterior doors, and exterior pet doors** must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AIAA/WDMA/CSA 1011.5.2/444-2011.
- Labeling** Fenestration products and exterior doors must have a label meeting the requirements of § 110.11(a).
- Field fabricated exterior doors and fenestration products** must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6.A, 110.6.B, or J4.5 for exterior doors. They must be caulked and/or weatherstripped.
- Air Leakage, All joints, penetrations, and other openings** in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weatherstripped.
- Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
- Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
- Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per § 110.113 when the installation of a cool roof is specified on the CEIR.
- Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
- Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 5-16 area-weighted average U-factor not exceeding U-0.154. Ceiling and rafter roofs minimum R-22 insulation in wood frame ceiling, or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access door must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
- Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
- Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Cripple non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1.4 or 1.7.
- Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.
- Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
- Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(g).
- Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
- Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45, or area-weighted average U-factor of fenestration must not exceed 0.45.

**Fireplaces, Decorative Gas Appliances, and Gas Log:**

- Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
- Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
- Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and light-tight damper or combustion-air control device.
- Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.

**Space Conditioning, Water Heating, and Plumbing Systems:**

- Certification.** Heating, ventilation, air and conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
- HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2.A through Table 110.2.N.
- Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone, and in which the cut-on temperature for compression heating is higher than the cut-off temperature for supplementary heating.
- Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
- Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
- Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

**2022 Single-Family Residential Mandatory Requirements Summary**

- Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas, fan-type central furnaces, household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour), and pool and spa heaters.
- Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume, the SHACNA Residential Comfort System Installation Standards Manual, or the ACCA Manual J using design conditions specified in § 150.0(h)(2).
- Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any duct.
- Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
- Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 809.11 of the California Plumbing Code.
- Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by § 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation below grade must be installed in a waterproof and non-crushable casing or sleeve.
- Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5 x 2.5 x 7' suitable for the future installation of a hot pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2' higher than the base of the water heater.
- Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

**Ducts and Fans:**

- Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
- CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-005-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located interior in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 1/2". If mastic or tape is used, Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed.
- Factory-fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tapes are used in combination with mastic and draw bands.
- Field-fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastic, sealants, and other requirements specified for duct construction.
- Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
- Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
- Protection of Insulation.** Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or padded with a water retardant and solar radiation-resistant coating.
- Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
- Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct ventilation to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
- Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch in size per Equation 150.0.A. Clear-fiber pressure drop and labeling must meet the requirements in § 150.0(h)(12). Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter.

**2022 Single-Family Residential Mandatory Requirements Summary**

- Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≥ 0.45 watts per CFM for gas furnaces, air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≥ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.\*

**Ventilation and Indoor Air Quality:**

- Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(i)(1).
- Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per § 150.0(i)(1). A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and/or controlled per § 150.0(i)(1)(B)(i)(v). CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with § 150.0(i)(1).
- Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and Townhouses.** Single-family detached dwelling units and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(i)(1)(A).
- Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of § 150.0(i)(1)(C) enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting § 150.0(i)(1)(C)(iv). Airflow must be measured by the installer per § 150.0(i)(1)(v), and rated for sound per § 150.0(i)(1)(vi).
- Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(i)(1)(C) must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/splices per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 § 7.2 at no less than the minimum airflow rate required by § 150.0(i)(1).
- Field Verification and Diagnostic Testing.** Whole-Dwelling Unit Ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per § 150.0(i)(1)(G).

**Pool and Spa Systems and Equipment:**

- Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAECS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.
- Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
- Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
- Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be left or programmed to run only during off-peak electric demand periods.
- Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
- Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.

**Lighting:**

- Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.
- Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0.A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting integral to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
- Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JAB.\*
- Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
- Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JAB elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
- Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
- Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(i).

**2022 Single-Family Residential Mandatory Requirements Summary**

- Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JAB.\*
- Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JAB elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
- Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0.A or to be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
- Interior Switches and Controls.** All forward phase out dimmers used with LED light sources must comply with NEMA SSL 7A.
- Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.\*
- Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
- Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(i).
- Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
- Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(i)(2).
- Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
- Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase out dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
- Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
- Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
- Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
- Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

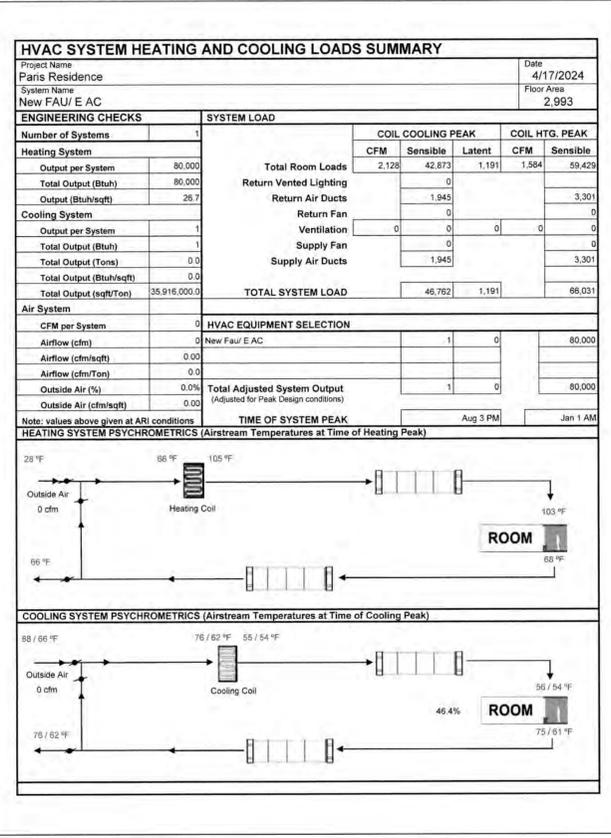
**Solar Readiness:**

- Single-Family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)(e).
- Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 01 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet.\*
- Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
- Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
- Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.\*
- Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof load and roof live load must be clearly indicated on the construction documents.
- Interconnection Pathways.** The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system. Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
- Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
- Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

**2022 Single-Family Residential Mandatory Requirements Summary**

- Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(i); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
- Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
- Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
- Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

\*Exceptions may apply.



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PARIS RESIDENCE  
 710 EMORY AVENUE  
 CAMPBELL, CA 95008

REVISIONS	BY

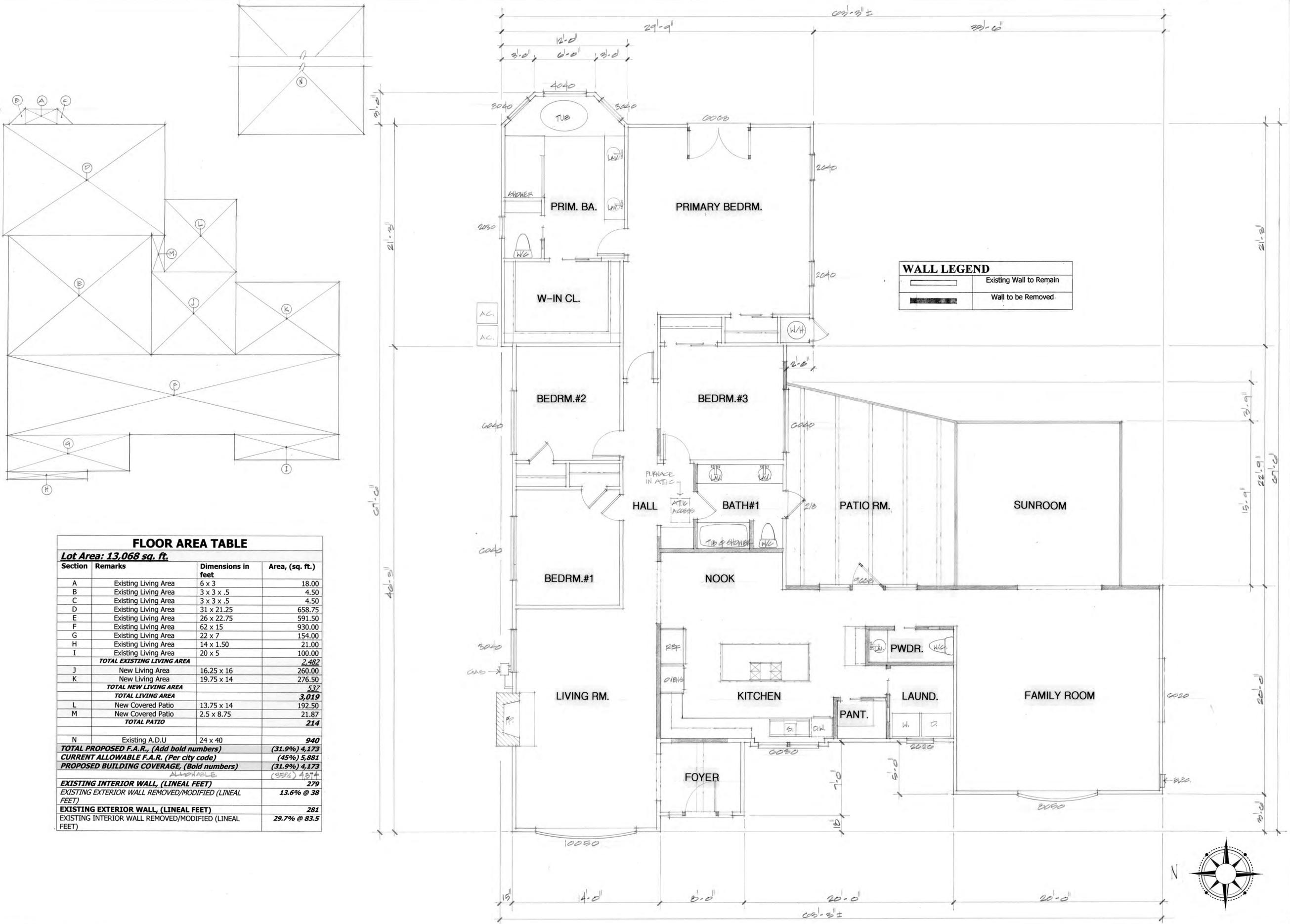
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These drawings are the exclusive property of Dennis Hayes & Associates and shall be used solely for the purpose of this project on this site. Any use other than the project for which it is intended is strictly prohibited without the written consent of Dennis Hayes & Associates.



THE PARIS RES.  
 710 Emory Ave.  
 Campbell, CA 95008

DRAWN D.H.
CHECKED
DATE 4.23.2024
SCALE AS NOTED
JOB NO.
SHEET
<b>A2</b>
OF SHEETS



**WALL LEGEND**

	Existing Wall to Remain
	Wall to be Removed

**FLOOR AREA TABLE**  
**Lot Area: 13,068 sq. ft.**

Section	Remarks	Dimensions in feet	Area, (sq. ft.)
A	Existing Living Area	6 x 3	18.00
B	Existing Living Area	3 x 3 x .5	4.50
C	Existing Living Area	3 x 3 x .5	4.50
D	Existing Living Area	31 x 21.25	658.75
E	Existing Living Area	26 x 22.75	591.50
F	Existing Living Area	62 x 15	930.00
G	Existing Living Area	22 x 7	154.00
H	Existing Living Area	14 x 1.50	21.00
I	Existing Living Area	20 x 5	100.00
<b>TOTAL EXISTING LIVING AREA</b>			<b>2,482</b>
J	New Living Area	16.25 x 16	260.00
K	New Living Area	19.75 x 14	276.50
<b>TOTAL NEW LIVING AREA</b>			<b>537</b>
<b>TOTAL LIVING AREA</b>			<b>3,019</b>
L	New Covered Patio	13.75 x 14	192.50
M	New Covered Patio	2.5 x 8.75	21.87
<b>TOTAL PATIO</b>			<b>214</b>
N	Existing A.D.U	24 x 40	940
<b>TOTAL PROPOSED F.A.R., (Add bold numbers)</b>			<b>(31.9%) 4,173</b>
<b>CURRENT ALLOWABLE F.A.R. (Per city code)</b>			<b>(45%) 5,881</b>
<b>PROPOSED BUILDING COVERAGE, (Bold numbers)</b>			<b>(31.9%) 4,173</b>
<b>ALLOWABLE BUILDING COVERAGE</b>			<b>(58.1%) 4,894</b>
<b>EXISTING INTERIOR WALL, (LINEAL FEET)</b>			<b>279</b>
<b>EXISTING EXTERIOR WALL REMOVED/MODIFIED (LINEAL FEET)</b>			<b>13.6% @ 38</b>
<b>EXISTING EXTERIOR WALL, (LINEAL FEET)</b>			<b>281</b>
<b>EXISTING INTERIOR WALL REMOVED/MODIFIED (LINEAL FEET)</b>			<b>29.7% @ 83.5</b>

"AS BUILT" FLOOR PLAN

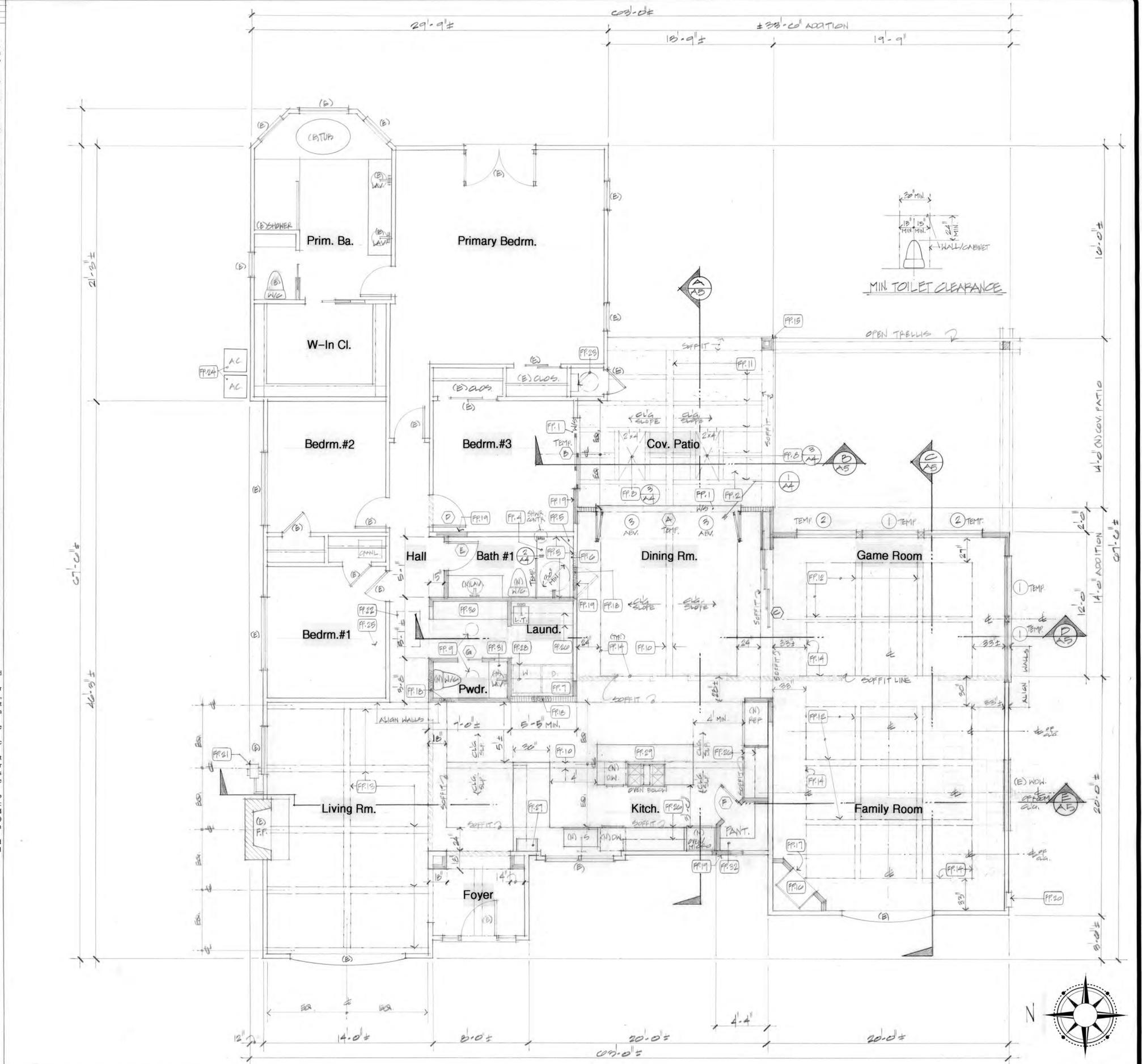


1/4" = 1'-0"

# FLOOR PLAN NOTES

- GENERAL**
- FP.1 Provide weather-strip and hardwood or metal threshold at all exterior door openings, (Typ.), U.O.N.
- FP.2 Provide a 36" minimum deep landing at all exterior doorways, (Typ.), U.O.N. The landing surface shall be slip resistant. The landing surface shall not be lower than 7.75" from the top of the threshold if the door opens inward and no more than 1-1/2" below threshold if the door opens outward. See Details for additional information. All landings shall be slip resistant and slope away from the building at 2%.
- FP.3 Provide stone, marble, or tile finish per owner selection at the new shower and tub stalls. Place finish material over 3/8" wonder board, 1/2" waterproof gypsum board, and #15 felt paper. The finish material shall extend to the ceiling or 78" min. above drain. All glass shall be tempered safety glass. The glass shall have "invisible" joints. See details for additional information.
- New Shower: 35" x 60" = 2,100 sq. in.*
- A 30" min radius shall fit in all showers.**
- NOTE: All shower walls shall have smooth, hard, non-absorbent surface over a moisture resistant underlayment to a height of 72" minimum above the drain.**
- FP.4 The owner shall select tile/finish design throughout the tub and shower compartments. The owner shall select all fixtures, soap dishes, shelves, etc.
- FP.5 Consult the owner regarding the installation of a shower seat in the new shower. The owner shall determine the seat height.
- FP.6 Provide a linear drain at the new shower stall as shown. See Shower Detail for additional information.
- FP.7 Verify/provide a dryer vent to the building exterior as shown. Dryer vents shall not be located closer than 3 feet from any opening in the building. Vent ducts shall not be longer than 14 feet or have more than two 90 degree turns. The ducts shall have a smooth interior surface. Provide a 4" diameter exhaust duct with a back draft damper.
- FP.8 Provide new skylight per plan. See the plan for skylight size. The skylight shall be a fixed skylight by "Velux" or an approved equal. I.C.B.O. #ER-0199. See Skylight Detail for additional information. Adjust skylight location as needed due to roof framing members, i.e., valleys/ships.
- FP.9 Provide a 14" diameter sun-tunnel as shown. I.C.B.O. #NER-216.
- FP.10 Wrap ceiling ridge beam at the Dining Room & Kitchen with 1/2" gyp. board. Bullnose edge. Tape, texture, and paint as specified by the owner. Alternate: Wrap in finishing lumber and paint/stain per owner selection.
- FP.11 Exposed ceiling beams/rattlers at the new covered patio. Consult the owner regarding stain or paint.
- FP.12 Provide recessed tray ceiling at the existing Family Room and new Game Room. Provide faux beams per the plan. Install in accordance with faux beam manufacturer's specifications. See Sections.
- FP.13 Provide faux beams at the existing Living Room per the plan. Install in accordance with faux beam manufacturer's specifications. See Sections.
- FP.14 Line of ceiling soffit. See Building Sections.
- FP.15 New 12" square column at covered patio. Cover with stucco. See Building Sections.
- FP.16 Provide a new pre-fab metal direct vent fireplace by "Heat-N-Glow" or an approved equal. The owner shall select the model. U.L. LVT1.MH2394. Provide tight fitting tempered glass doors and combustion air at ceiling line. Install in accordance with the manufacturer's instructions. **NOTE: Any installed gas fireplace shall be a direct vent sealed-combustion type. Any installed wood stove or pellet stove shall comply with the 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. Wood stoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.**
- FP.17 The fireplace finish shall be selected by the owner. See fireplace manufacturer clearances for combustible materials prior to ordering and applying finish. Owner shall determine if a hearth or mantle will be used.
- FP.18 Provide R-15 insulation in all walls surrounding the 1/2 bath, all common walls adjacent the Laundry Room and Bathroom #1.
- DEMOLITION/REPAIR WORK**
- NOTE: Remove all existing Kitchen & Bathroom cabinets and appliances and provide new cabinets and appliances per plan. Cap-off existing utility connections and relocate as if needed.**
- Remove existing Sunroom and patio Rooms**
- FP.19 Remove the existing door, window, or feature as shown. Provide new interior and exterior wall backing, waterproofing and finish as required to match existing/new exterior finish and new or existing interior finish. Provide two layers of Grade "D" building paper on exterior walls. Patch and repair floors, ceilings and roof as required.
- ACCESSES AND UTILITIES**
- FP.20 The Electrical panel and meter shall remain in its current location.
- FP.21 The gas meter is located outside the Living Room as shown. Protect the meter from damage during construction.
- FP.22 The existing attic access shall be re-located in the Hall to the bedrooms due to the remodel work. Consult the owner if an alternate location is preferred. Attic access shall be a minimum of 22" x 30" in dimension. Consult owner regarding any special access.
- FP.23 The water heater is in the closet as shown adjacent the new Covered Patio. Replace the water heater. See Elec./Mech. Plan.
- FP.24 The existing A.C. Units are located outside the Master Bath/closets and shall remain.
- FP.25 The furnace is in the attic space above the Hallway and shall remain. See Elec./Mech. Plan for additional information.
- CABINETS, SHELVES, OFFICE SYSTEMS & ORGANIZERS**
- Pre-measure on site prior to building or ordering cabinets to insure proper/required clearances and electrical/mechanical & plumbing connections. The builder shall determine all heights, depths, widths, features, styles, materials, hardware, and finishes. The cabinet maker shall provide shop drawings as needed. The builder shall select all appliances.**
- FP.26 Provide upper and lower cabinets as shown.
- FP.27 Provide open shelving/cabinet on counter at Kitchen as shown.
- FP.28 Provide a countertop over the washer and dryer with an upper cabinet. Consult the owner.
- FP.29 Provide a one surface island at the Kitchen as shown. Consult the owner regarding island dimensions. (Suggested: 3'-6" x 8'-0")
- FP.30 Provide full height linen storage at the Laundry area as shown.
- FP.31 Provide a new vanity cabinet at Bathroom #1 and the new 1/2 Bath as shown.
- FP.32 Provide an organization system at the new Walk-In Pantry. Install in accordance with the manufacturer's specifications.

- ADDITIONAL NOTES**
- The owner shall select all floor, wall and ceiling finishes and paint manf. and colors.
  - The owner shall select all wood moldings and wood trim work.
  - The owner shall select all appliances and plumbing fixtures and fittings.
  - The owner shall select all doors, windows and door and window hardware.
  - The owner shall select all electrical fixtures, switches, and plates.
  - The owner shall select cabinet designs, types, and finishes. Cabinet maker shall provide shop drawings as needed.
  - Minimum ceiling heights shall be at least 7'-0" from finished floor surface.
  - All passage doors shall be at least 22" wide on the accessible floor of the dwelling.
- CAL GREEN MANDATORY MEASURES**
- A) All adhesives, sealants, caulks, paints, coatings, and aerosol paint containers must remain on the site for field verification by the building inspector.
  - B) Prior to final inspection, a letter signed by the general contractor OR the owner/builder (for any owner/builder projects) must be provided to the City/Town Building Official certifying that all adhesives, sealants, caulks, paints, coatings, aerosol paints, aerosol coatings, carpet systems, (including carpeting, cushion and adhesive), resilient flooring systems and composite wood products installed in this project are within the emission limits specified in CGBSC Section 4.504.
  - Prior to enclosing the wall and floor framing, confirmation must be provided to the Building Inspector showing the framing members do not exceed 19% moisture content per CGBSC Section 4.505.3
  - Architectural paints and coatings, adhesives, caulks, and sealants shall comply with the Volatile Organic Compound (VOC) limits listed in Tables 4.504.1 - 4.504.3
  - Carpet: All carpet installed in the building interior to meet the requirements of one of the following: (1) Carpet and Rug Institute's Green Label Plus Program, (2) California Department of Public Health Standard Method for testing of VOC's (Specification 01350), (3) NSF/ANSI 140 at the Gold level, or (4) Scientific Certifications System Indoor Advantage Gold. All carpet cushions shall meet the requirements of the Carpet and Rug Institute Green Label program. All carpet adhesive to meet CAL Green Table 4.504.1 limits.
  - Resilient Flooring: Where resilient flooring (cork, linoleum, sheet vinyl, rubber, etc.) is installed > or equal to 80% of floor area receiving resilient flooring shall comply with the VOC-emission limits of one of the following: (1) Collaborative for High Performance Schools (CHPS) High Performance Products Database, (2) Greenguard Children & Schools certification, (3) Resilient Floor Covering Institute (RFCI) Floor Score certification, or (4) meet California Dept. of Public Health, "Standard Method for the Testing and Evaluation of VOC's (Specification 01350)."
  - Composite Wood: New non-structural hardwood plywood, particle board and medium density fiber board composite wood products used in the interior or exterior of the building shall meet California Air Resources Board formaldehyde limits ("CARB Phase"). See Table 4.504.1



PROPOSED FLOOR PLAN

WALL LEGEND	
	(E) 2x4 wood studs at 16" o.c., (Typ.), U.O.N.
	(N) 2x4 wood studs at 16" o.c., (Typ.), U.O.N.
	(E) stud wall to be removed
	2x6 wood studs at 16" o.c., (Typ.), U.O.N.
(E)	Existing
(N)	New
(Typ.)	Typical
U.O.N.	Unless Otherwise Noted
T.B.D.	To Be Determined

REVISIONS	BY

**DENNIS HAYES & ASSOCIATES**

CREATIVE CUSTOM RESIDENTIAL DESIGN SOLUTIONS

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CA 95037

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These drawings are the exclusive property of Dennis Hayes & Associates and shall be used solely for the purpose of this project on this site. Any use other than the project for which it is intended is strictly prohibited without the written consent of Dennis Hayes & Associates.

MEMBER

**AIBD**

AMERICAN INSTITUTE OF BUILDING DESIGN

THE PARIS RES.  
710 Emory Ave.  
Campbell, CA 95008

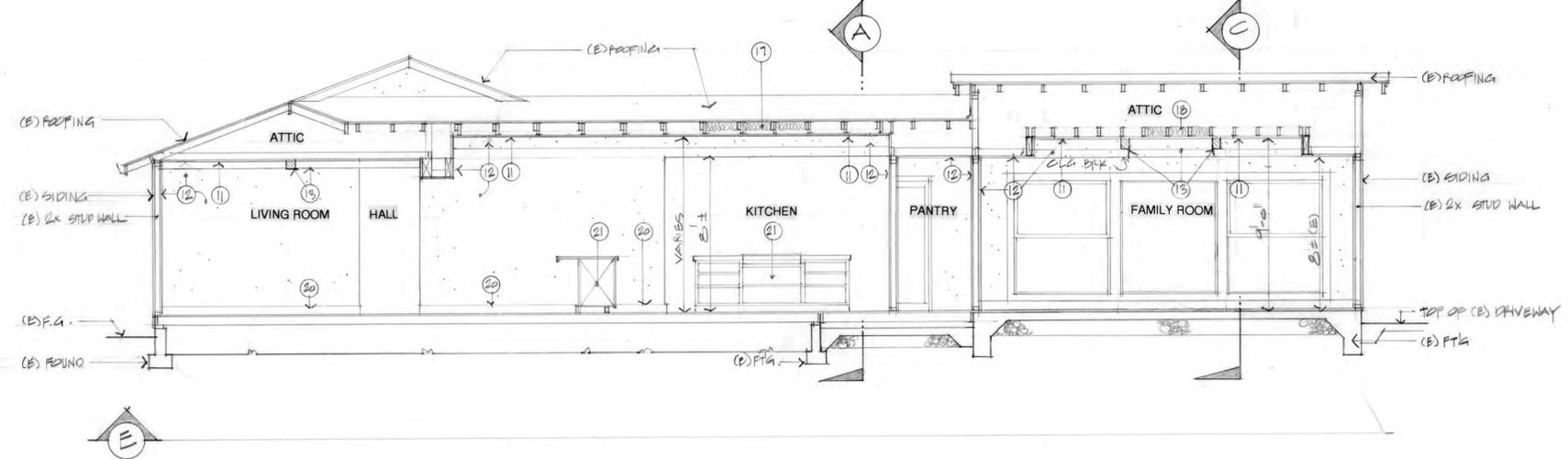
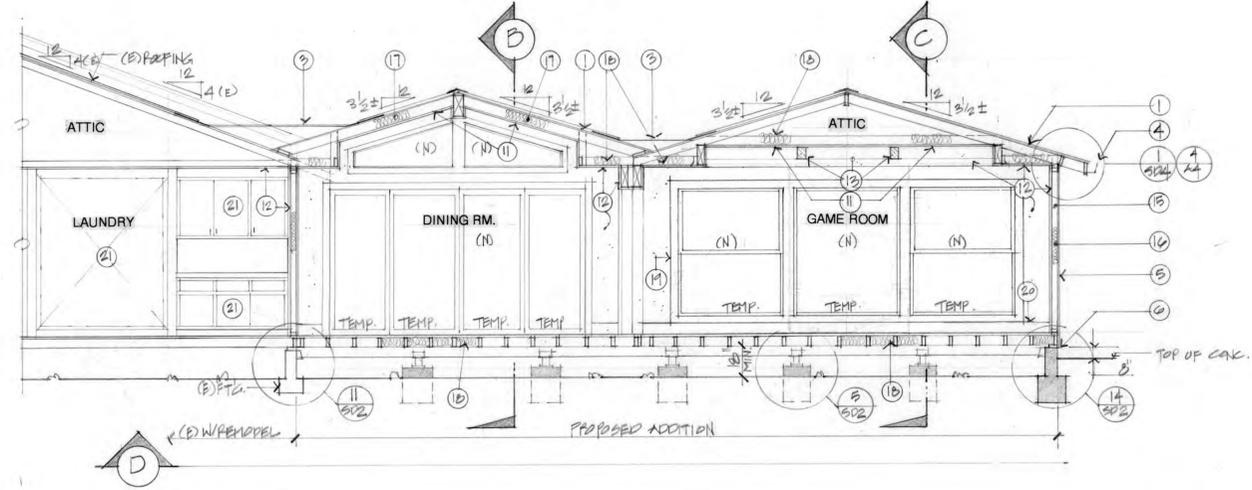
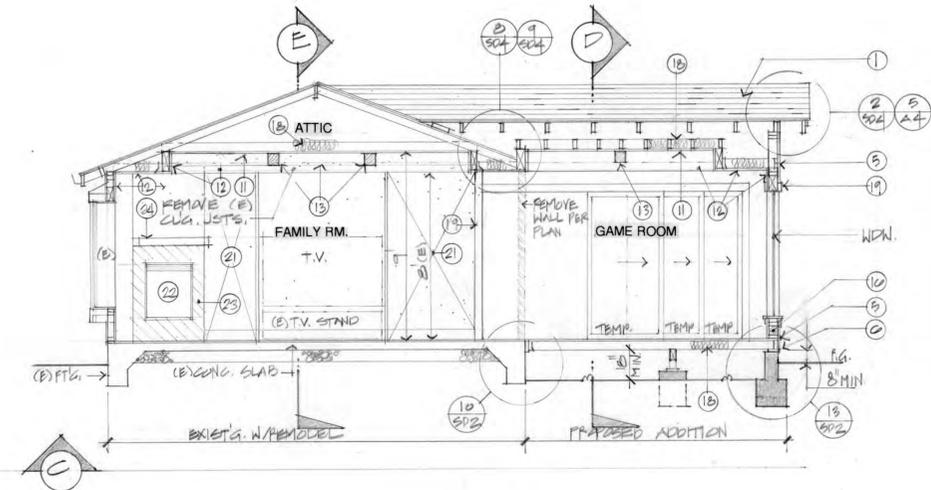
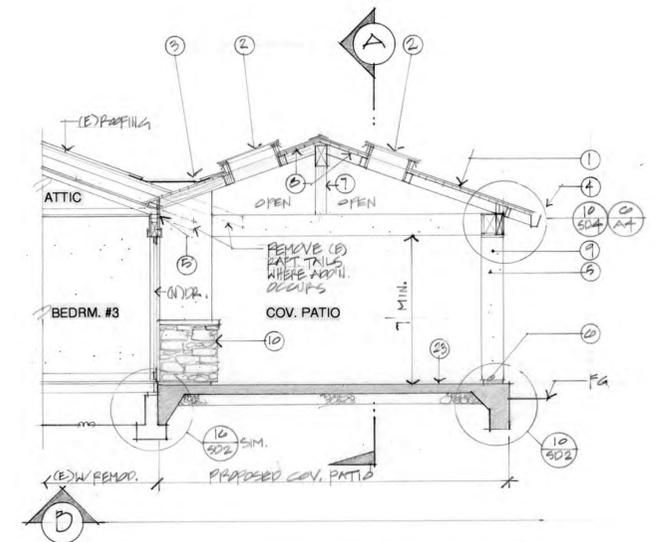
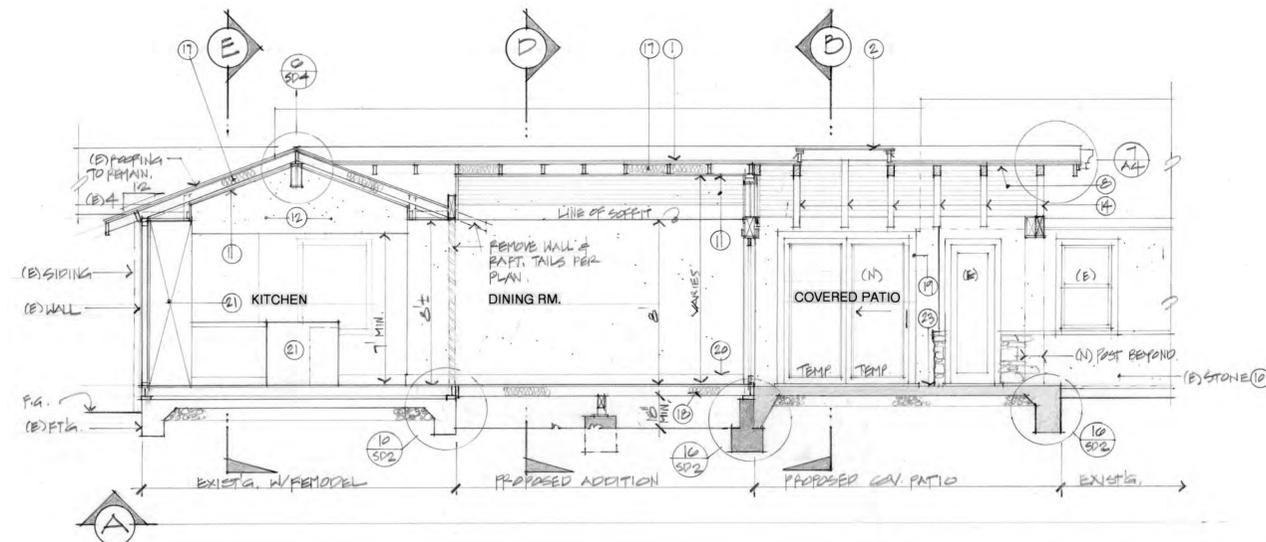
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CHECKED: [Signature]

DATE: 4-25-2024  
SCALE: AS NOTED  
JOB NO.: [Blank]

SHEET: **A3**

OF SHEETS: [Blank]





**BUILDING SECTION NOTES**

1. Provide tile, Class "C" minimum fire rated roofing over 30# underlayment for roof slope of 12:4 or more and 2-layers of 15-pound under-layment for less than 12:4 roof slope. Apply over cdx plywood, (Typ.), U.O.N. 40 year or better. Match existing roofing.
2. Provide non-flare skylight. See Plan.
3. Provide a sheet-metal cricket. See Roof Framing Plan and Exterior Elevations.
4. Provide continuous seamless gutters as needed. See Exterior Elevations for additional information.
5. Provide 3-coat stucco siding over self-furring wire lath and two layers of Grade "D" building paper, (Typ.), U.O.N. Stucco texture. Match existing stucco texture.
6. Provide a continuous stucco weep screed at base of stucco siding, (Typ.), U.O.N. The weep screed shall be 26 gauge set at the foundation plate line at least 4 inches above grade or 2 inches above concrete or paving.
7. Post at upper patio opening. Finish as desired.
8. Provide 2x6 T&G wood decking at the new Covered patio ceiling. The owner shall select the type of wood and finish.
9. Column per plan. Box column. See Floor Plan dimension.
10. Patch/repair/re-use stone as needed due to remodel work being performed.
11. Provide 1x6 T&G wood decking for the new ceilings. The owner shall select the type of wood and finish.
12. Provide 1/2" gypsum board at walls and ceilings (Typ.), U.O.N. The owner shall determine the surface texture and paint colors. Provide 1/2" waterproof green-board a minimum of 70" above the floor at all water splash areas. See Reflected Ceiling Plan for additional information.
13. Provide faux ceiling beams. See Floor Plan and Reflected Ceiling Plan. Owner shall select.
14. 4x Patio beam/rafters. Stain or paint per the owner's specification.
15. Provide 2x4 minimum wood studs at 16" o.c., (Typ.) U.O.N. add areas of addition. See Floor Plan for all wall sizes.
16. Provide R-15 minimum insulation for all new exterior walls of the dwelling, (Typ.) U.O.N. See Floor Plan for additional area requiring insulation. Consult the owner for other walls to be insulated.
17. Provide closed-cell polyurethane insulation at unvented cathedral rafter spaces - R-30. Apply to the underside of the roof rafters. Refer to the Title 24 CFR requirements.
18. Provide attic insulation per the Title 24 requirements. Provide radiant barrier as/if required by Title 24 Report. Provide R-19 minimum insulation at new under-floor spaces, (Typ.), U.O.N. Verify with Title 24 Energy compliance data. Consult with owner regarding the installation of R-19 insulation under existing floors.
19. Provide wood door/window casings per the owner's selection, (Typ.) throughout the addition & remodeled areas. See exterior Elevations for additional information.
20. Provide a baseboard as shown, (Typ.). Finish as desired. The owner shall select the baseboard.
21. Cabinets. Pre-measure after wall, floor and ceiling framing have been completed prior to building the cabinets. The cabinet maker shall provide shop drawings as needed.
22. New gas fireplace. See Floor Plan and Elec./Mech. Plan.
23. Provide non-combustible material around fireplace opening per the fireplace manufacturer specifications.
24. Consult the owner regarding the installation of a fireplace hearth.
25. Provide a slip resistant surface at Porches, Patios, and landings. Consult with the owner. The surface shall slope away from the building 2%.

REVISIONS	BY

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THE PARIS RES.  
 710 Emory Ave.  
 Campbell, CA 95008

DRAWN	DSH
CHECKED	
DATE	4.26.2024
SCALE	AS NOTED
JOB NO.	
SHEET	A5
OF SHEETS	

**GENERAL REQUIREMENTS**

- ELECTRICAL/MECHANICAL NOTES**
- Field verify all existing service ampere and service breakers before starting work and update as required.
  - All work shall be in accordance with the 2022 California Electrical Code and all other local codes.
  - Set all receptacles at 12" above finished floor unless otherwise noted. (U.O.N.)
  - Receptacles in Kitchen, Bathrooms, Garage, and exterior of dwelling to have Ground Fault Interrupters, (G.F.I.).
  - Exhaust fans shall have damper control.
  - Ducts are to be constructed, installed, and insulated per the 2022 California Plumbing Code. Where ducts penetrate unconditioned areas, i.e. Garage, wrap with 1" thick, minimum fiber blanket insulation.
  - Final locations of all mechanical and electrical equipment, panel boards, meters, fixtures, etc., shall be approved by the designer, (typ.), U.O.N.

**PLUMBING NOTES**

- Before starting work verify locations, elevations and sizes of all piping and equipment requiring plumbing connections.
- Provide all hot water pipes with insulation.
- See electrical/mechanical drawing(s) for exact placement and quantity of all fixtures.
- Combine all vents where possible.
- Extend all vents 6" minimum above roof line.
- Install clean-outs in accordance with the 2022 California Plumbing Code and all other local requirements.
- Provide 26Ga. G.I. roof jacks as required.
- All new water closets shall be 1.28 gallon/flush maximum.
- Provide backflow preventers at all water faucets.
- Per Civil Code section 1101.4, for any single residential property building addition, alteration or improvement will require (E) non-compliant plumbing fixtures to be replaced with the following water conserving plumbing fixtures: (SB407)
  - Water Closets with maximum 1.28gal/flush
  - Showers with maximum flow rate of 1.8 GPM @ 80 psi (gal/min.)
  - Lavatory faucets with maximum flow rate of 1.2 GPM @ 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.
  - Kitchen faucets with maximum flow rate of 1.8 GPM @ 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.

**Shower Valves & Faucets, (2022 California Plumbing Code)**

- Showers and Tub/Shower combinations shall be provided with individual pressure balance or thermostatic mixing control valves.
- The maximum mixed water setting shall be 120 degrees Fahrenheit.
- The water heater thermostat shall not be considered as suitable for meeting this requirement.
- New shower heads shall have a maximum flow of 1.8 GPM at 80 psi and faucets shall have a maximum flow of 1.2 GPM at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 GPM at 20 psi.
- The maximum flow rate of Kitchen faucets shall not exceed 1.8 GPM per minute and 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 GPM at 60 psi and must default to a maximum flow rate of 1.8 GPM at 60 psi.
- Multiple showerheads serving one shower: When a shower is served by more than one showerhead, the combined flow rate of all 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 allow only one shower outlet to be in operation at a time.

**ADDITIONAL NOTES**

- Provide pressure absorbing devices or approved mechanical devices, located as close as possible to quick acting valves that will absorb high pressures resulting from the quick-closing of quick-acting valves. Provide water hammer protection at the washing machine and dishwasher.
- Two small appliance branch circuits are required for the Kitchen and are limited to supplying wall and counter space outlets for the Kitchen, Pantry, Breakfast Room, Dining Room, or similar areas. Kitchen/Dining Room shall have (2) 20 amp, dedicated branch circuits. Note: These circuits cannot serve outside plugs, range hood, disposals, dishwashers or microwaves - only the required counter/wall outlets including the refrigerator.
- Outlets at each Kitchen & Dining area counter space wider than 12" shall be spaced such that no point along the counter wall is over 24" from a receptacle.
- A dedicated 20Amp. Circuit is required to serve the required bathroom outlets. The circuit cannot supply any other receptacles, lights, fans, etc. (Exception: Where the circuit supplies a single bathroom, outlets for other equipment within the same bathroom shall be permitted to be supplied.)
- Provide a dedicated 30-amp. dedicated branch circuit to supply the Dryer at the Laundry receptacle outlet. Provide 220 v outlet.

**MANDATORY MEASURES**

- The contractor shall provide a copy of the operation manual for all appliances, fixtures, etc., to the building occupant or owner addressing items #1-10 in Section 4.10.1 of the 2022 Cal Green Requirements prior to final inspection.
- Ensure that duct systems are sized, designed and equipment is selected per Section 4.507.2, #1-#3 of the 2022 Cal Green Requirements. H.V.A.C. system installers must be trained and certified in the proper installation of HVAC systems.
- Covering of duct openings and 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 components opening shall be covered with tape, plastic, sheetrock or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris, which may enter the system. Section 4.504.1 of the Cal Green requirements.
- Bathroom exhaust fans must be Energy Star compliant, must be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control. Humidity controls shall be capable of manual or automatic adjustment between a relative humidity range of less than 50% to a maximum of 80%.
- All plumbing fixtures and fittings shall meet the standards referenced in Table 1701.1 of the 2022 California Plumbing Code.
- All outdoor lighting shall be high efficacy lighting on automated controls.

**TABLE 150.0-A CLASSIFICATION OF HIGH EFFICACY LIGHT SOURCES**

**High Efficacy Light Sources:**  
Luminaires installed with only the lighting technologies in this table shall be classified as high efficacy

COLUMN A: Dedicated High Efficacy Fixtures	COLUMN B: JAS Light Sources
Light sources in this column other than those installed in ceiling recessed downlight luminaires are classified as high efficacy and are not required to comply with Reference Joint Appendix JAS	Light sources in this column shall be certified to the Commission as High Efficacy Light Sources in accordance with Reference Joint Appendix JAS and be marked as meeting JAS
1. Pin Based linear or compact fluorescent light sources using electronic ballasts.	8. All light sources in ceiling recessed downlight luminaires. Note that ceiling recessed downlight luminaires shall not have screw bases regardless of lamp type as described in Section 150.0(b) IC.
2. Pulse-start metal halide	9. GU-24 sockets containing LED light sources
3. High pressure sodium	10. Any light source not otherwise listed in this table and certified to the Commission as complying with Joint Appendix 8.
4. GU-24 sockets containing light sources other than LED's. - a, b	
5. Luminaires with hardwired high frequency generator and induction lamp.	
6. Inseparable SSL luminaires that are installed outdoors.	
7. Inseparable SSL luminaires containing colored light sources that are installed to provide decorative lighting.	

Notes:  
a. GU-24 sockets containing light sources such as compact fluorescent lamps and induction lamps.  
b. California Title 20 Section 1605(k)(3) does not allow incandescent sources to have a GU-24 base.

**ELEC./MECH. PLAN NOTES**

**GENERAL NOTES - MANDATORY MEASURES**

- Lighting, Indoor & Outdoor:**
  - Lighting Efficacy: All lights must either be Dedicated High Efficacy Fixtures or contain JAS High Efficacy Light Sources marked JAS-2022 or JAS-2022-E. See Table 150.0-A
  - Recessed Lights shall not have screw base sockets; must have IC/Al label; shall be sealed with a gasket or caulk between the luminaire housing and ceiling; shall contain JAS-2022 light source or JAS-2022-E if enclosed.
  - Enclosed luminaires: Light sources not marked JAS-2022-E shall not be installed in enclosed luminaires.
  - Provide a schedule of all JAS-2022 lamps to be included in the Operations Manual. (Energy Code 10-103(b)).
- Lighting Controls:**
  - Exhaust fans shall be switched separately from lighting systems.
  - In Bathrooms, Garages, laundry rooms and utility rooms, at least one light shall be controlled by a vacancy sensor.
  - Dimmers or vacancy sensors shall control all lights required to have light sources compliant with JAS, except in closets <70 sq. ft. and in hallways.
  - Undercabinet lighting shall be switched separately from other lighting. (Energy Code 150.0(k)(2))
  - Outdoor lighting shall meet manual and automated control requirements of Energy Code Section 150.0(k) 3.

**PLAN NOTES:**

- Provide dedicated high efficacy light fixtures at all pantries, closets and storage areas.
- All lights in bathrooms shall be high efficacy luminaires, (i.e. pin-based CFL; pulse-start MH, HPS, GU-24sockets other than LED's or LED luminaires with integral source, etc.)
- At least one fixture in each bathroom shall be controlled by a vacancy sensor.
- Per Civil Code Section 1101.4, for any single residential property building addition, alteration or improvement will require (E) non-compliant plumbing fixtures to be replaced with the following water conserving plumbing fixtures: (SB407)
  - Water closets with a maximum 1.28gal/flush
  - Showers with a maximum flow rate of 1.8 GPM @ 80 psi (gal/min.)
  - Lavatory faucets with maximum flow rate of 1.2 GPM @ 60 psi
  - Kitchen faucets with a maximum flow rate of 1.8 GPM @ 60 psi

**The owner shall complete the self-verification form for the final field inspection.**

- Recessed Lights shall not have screw base sockets; must have IC/Al label; shall be sealed with a gasket or caulk between the luminaire housing and ceiling; shall contain JAS-2022 light source or JAS-2022-E if enclosed.
- Provide track lighting or suspended pendant lighting over the kitchen island. Owner shall select.
- All light fixtures at tub and shower compartments shall be wet location approved fixtures.
- Outdoor lighting shall be high efficacy lighting and include a manual on/off switch and shall meet manual and automated control requirements of Energy Code Section 150.0(k) 3. Provide a photo control and automatic time switch control.

**EM.8 Provide an integrated air-switch for the new garbage disposal. The owner shall determine the trim finish.**

**EM.9 Provide a water feed to the new refrigerator as shown. See Refrigerator manufacturer specifications for exact location of the water feed.**

**EM.10 Provide a gas bib for the gas cooktop, fireplace and clothes dryer.**

**EM.11 Provide under-cabinet outlet strips no more than 20" above the counter surface at the Kitchen as shown. The outlet strips shall be equipped with GFI outlets and meet the minimum outlet spacing requirements, CEC Sec. 210.52(c) (1).**

**EM.12 The microwave oven shall be placed in the oven cabinet or alternate location selected by the owner. Consult the owner for exact placement. Provide the necessary 220V outlet accordingly.**

**EM.13 Provide a down-draft exhaust system integrated with the cooktop. Exhaust to the building exterior. Consult the owner for exact model. Install in accordance with the manufacturer's specifications.**

**EM.14 1. Provide an exhaust capable of five air exchanges per hour at Bathroom #1, 1/2 Bath and Laundry Room.**

**EM.15 2. The mechanical ventilation system shall be provided with a minimum of 50-cu. ft. per minute (for intermittent ventilation), or 25 cu-ft. per minute for continuous ventilation. The ventilation air from this space shall be exhausted directly to the building exterior.**

**EM.16 3. All bathrooms shall be equipped with Energy Star bathroom fans on a timer or humidistat. CGBCS 4.506.1**

**EM.17 Provide a dryer vent to the building exterior as shown. The dryer vent shall not be located closer than 3 feet from any opening in the building. The vent ducts shall not be longer than 14 feet or have more than two 90 degree turns. The ducts shall have a smooth interior surface. Provide a 4" diameter exhaust duct with a back draft damper.**

**EM.18 Provide shower controls at the showers as selected by the owner at the Master Bathroom. Consult the owner for shower control locations at all other bathrooms.**

**EM.19 All hose bibs shall be equipped with a backflow preventer. The Shut Off Valve, (S.O.V.) is located on the front wall of the Living Room.**

**EM.20 Provide a linear drain at all new showers as shown. See shower detail.**

**EM.21 a. All branch circuits that supply 125-volt, single phase, 15 and 20 ampere receptacle outlets installed in dwelling unit Kitchens, Family Rooms, Dining Rooms, Living Rooms, Parlors, Libraries, Dens, Bedrooms, Sunrooms, Recreation Rooms, Closets, Hallways garage, basement, outdoor area or similar rooms or areas shall be arc-fault circuit interrupter (AFCI) protected per CEC 210.12(B).**

**EM.22 b. All 125-volt, 15- and 20-ampere receptacle outlets shall be listed tamper resistant receptacles per CEC 406.11**

**EM.23 Provide a T.V. outlet and adjacent power outlet, "J" box, etc. per the TV requirements. Consult owner for exact height and location along the wall. Consult owner for complete list of rooms to have TV outlets.**

**EM.24 Provide a direct vent gas fireplace. Fireplace by "Heat N' Glow" or an approved equal. The owner shall select a model. ANSI: Z21.50-2019. Provide direct ventilation through side wall, install in accordance with the manufacturer's specifications. Provide non-combustible materials around fireplace as/required by the fireplace manufacturer. Install in accordance with the fireplace manufacturer.**

**EM.25 Provide combustion air at ceiling line.**

**EM.26 Provide a flush mounted GFI outlet at the Game Room floor. Consult the owner for exact location in the floor.**

**EM.27 Replace the existing furnace with a new horizontal F.A.U. in the attic space above the Living Room or alternate location selected by the owner. Locate within 20" of the opening for servicing. Verify/Provide a 24" wide solid flooring access way to the unit. Set unit on a 3/4" min. plywood platform screwed into the ceiling joists. Secure the F.A.U. to the platform with approved equipment anchors per CMC, Sec. 908. The builder shall verify adequate working space and clearance is provided around the F.A.U. per CMC, Sec. 908. The space shall be a 30"x30" working platform or grade surface in front of the service side of the appliance. Provide an incandescent light and switch nearby. Provide a 120-volt receptacle outlet near the unit. Provide comb. air per CMC, Sec.702. The H.V.A.C. contractor and the owner shall make final determination on types of ducts and locations of ducts and supply/return grilles. Provide a permanent outlet at the F.A.U.**

**EM.28 Remove the existing standard water heater and provide a new tankless water heater located in the existing closet at the new Covered Patio as shown or an alternate location approved by the owner.**

**EM.29 The existing A.C. Units are located outside the Primary Bedroom Walk-In Closet as shown.**

**EM.25 Verify/Provide a smoke detector and carbon monoxide alarm at all sleeping rooms and halls leading to the sleeping rooms. The detectors and alarms shall be located within the highest 12 inches of the ceiling. All detectors and alarms shall be hard-wired with a battery back-up. The alarms can be combined as one unit in each specified space.**

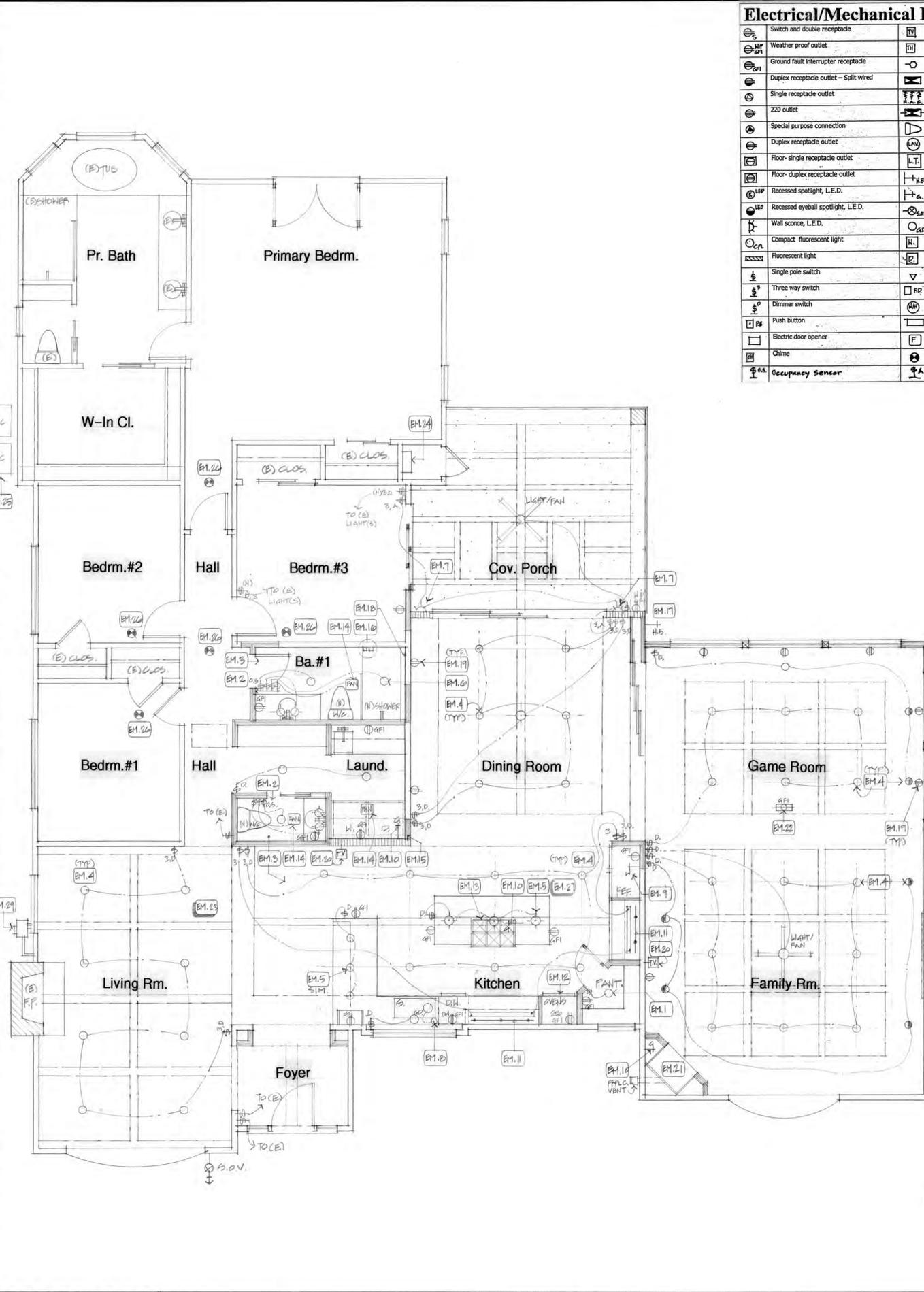
**EM.27 Relocate the existing sub-panel located near the existing Pantry & 1/2 Bath. The owner shall determine the new location for the sub-panel.**

**EM.28 The electrical panel and meter is located at the West wall of the dwelling as shown. Verify/Provide a 200 amp, minimum service. The builder shall make final determination on location of all new sub-panels.**

**EM.29 The gas meter is located at the North wall of the dwelling as shown. Protect the meter from damage during construction.**

**ADDITIONAL NOTES**

- The owner shall select all appliances and plumbing fixtures and fittings.
- The owner shall select all electrical fixtures, lights, switches and plates.
- Provide pressure absorbing devices or approved mechanical devices, located as close as possible to quick acting valves that will absorb high pressures resulting from the quick-closing of quick-acting valves.
- Provide two 20 amp. circuits for the Kitchen. These are limited to supplying wall and counter space outlets for the Kitchen, Pantry, Breakfast Room, Dining Room, or similar areas. Note: These circuits cannot serve outside plugs, range hood, disposals, dishwashers, or microwaves - only the required counter/wall outlets including the refrigerator.
- The owner shall install any surround sound audio systems and computer wiring at his/her discretion.
- Consult the owner regarding any additional interior lighting such as wall sconces, cove lighting, etc.
- Consult the owner regarding additional attic space lighting and switching.
- Consult the owner regarding additional yard or deck lighting switches and outlets.



**Electrical/Mechanical Legend**

Switch and double receptacle	Television outlet
Weather proof outlet	Thermostat
Ground fault interrupter receptacle	Intercom speaker
Duplex receptacle outlet - Split wired	Supply air register, (S.A.)
Single receptacle outlet	Return air grille, (R.A.G.)
220 outlet	Supply air register wall or toe kick mount
Special purpose connection	Water closet
Duplex receptacle outlet	Lavatory, (Sink)
Floor-single receptacle outlet	Laundry tray
Floor-duplex receptacle outlet	Hose Bib
Recessed spotlight, L.E.D.	Gas bib
Recessed eyeball spotlight, L.E.D.	Shut-off valve
Wall sconce, L.E.D.	Garbage disposal
Compact fluorescent light	Washing machine
Fluorescent light	Clothes dryer
Single pole switch	Vacuum
Three way switch	Floor drain
Dimmer switch	Water heater
Push button	Tankless water heater
Electric door opener	Ceiling exhaust fan
Chime	Smoke detector & Carbon monoxide alarm
Occupancy Sensor	Automated

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Campbell, CA 95008

DRAWN	EM1
CHECKED	
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SHEET	EM1
OF	SHEETS

- A) All adhesives, sealants, caulks, paints, coatings, and aerosol paint containers must remain on site for field verification by the Building Inspector.

B) Prior to the final inspection, a letter signed by the general contractor OR the owner/builder (for any owner/builder projects) must be provided to the local city/county Building Official certifying that all adhesives, sealants, caulks, paints, coatings, aerosol coatings, carpet systems, (including carpeting, cushion and adhesive), resilient flooring systems and composite wood products installed in this project are within the emission limits specified in CGBCS Section 4.504.
- Prior to enclosing the wall and floor framing, confirmation must be provided to the Building Inspector showing the framing members do not exceed 19% moisture content per CGBCS Section 4.505.3

## FOUNDATION VENTILATION

UNDERFLOOR AREAS SHALL BE VENTILATED BY OPENINGS IN EXTERIOR FOUNDATION WALLS. SUCH OPENINGS SHALL HAVE A NET AREA OF NOT LESS THAN 1 SQ. FT. PER 150 SQ. FT. OF UNDERFLOOR AREA. THE VENTS SHALL BE COVERED WITH CORROSION RESISTANT WIRE MESH WITH OPENINGS OF NOT LESS THAN 1/4" PER CRC, R408.1.

\*Ventilation openings shall be placed to provide cross-ventilation of the underfloor space as much as possible.

\*\* Foundation vents shall not be installed in shear walls that are 4' or less in width.

Vents by "Vulcan Vent" or approved equal. Product #VFS614FF 6" x 14", UPC: 89964602109

NEW UNDERFLOOR AREA: 537 /150 = REQUIRED NET OPEN AREA FOR FOUNDATION VENTILATION.

REQUIRED NET AREA 3.58 SQ. FT. = REQUIRED NET AREA OF VENTS.  
 3.58 SQ. FT. = 10.52 VENTS REQUIRED, PROVIDE 11 VENTS  
 (TYP.) VENT SIZE: 6" X 16" = 34 SQ. FT./VENT, NVEA

### ENHANCED DURABILITY & REDUCED MAINTENANCE. (4.406):

Joints and openings: Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.

ALL NEW FLOORS SHALL BE SHEATHED WITH 3/4" CDX T&G PLYWOOD AND NAIL W/ 10d @ 6" o.c., 12" o.c. IN FIELD.

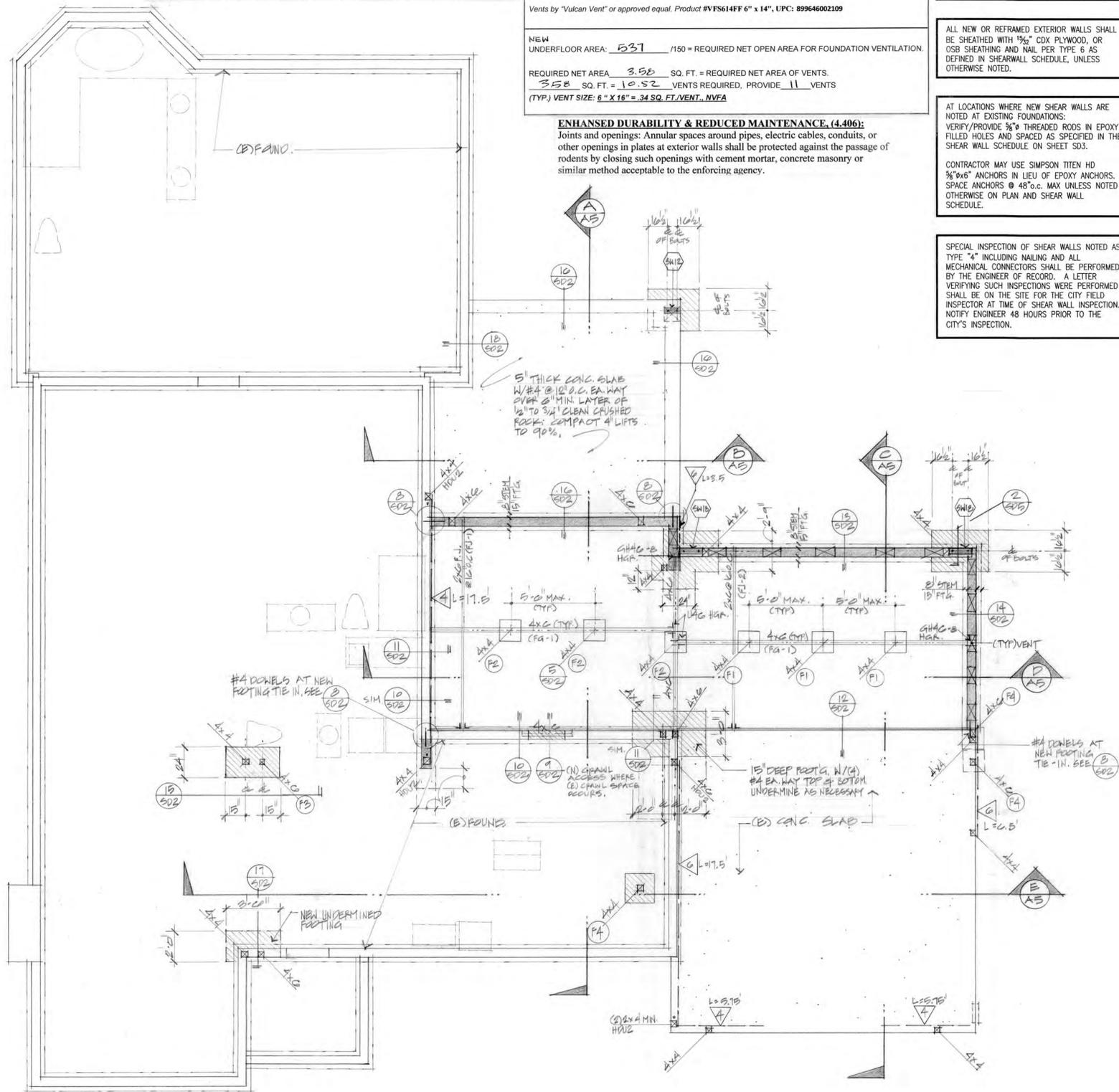
WALLS WITH SHEAR WALL DESIGNATIONS SHALL BE SHEATHED WITH 5/8" CDX PLYWOOD, OR OSB SHEATHING AND NAIL PER TYPE INDICATED ON PLAN AND DEFINED IN SHEARWALL SCHEDULE.

ALL NEW OR REFRAMED EXTERIOR WALLS SHALL BE SHEATHED WITH 5/8" CDX PLYWOOD, OR OSB SHEATHING AND NAIL PER TYPE 6 AS DEFINED IN SHEARWALL SCHEDULE, UNLESS OTHERWISE NOTED.

AT LOCATIONS WHERE NEW SHEAR WALLS ARE NOTED AT EXISTING FOUNDATIONS: VERIFY/PROVIDE 3/8" THREADED RODS IN EPOXY FILLED HOLES AND SPACED AS SPECIFIED IN THE SHEAR WALL SCHEDULE ON SHEET SD3.

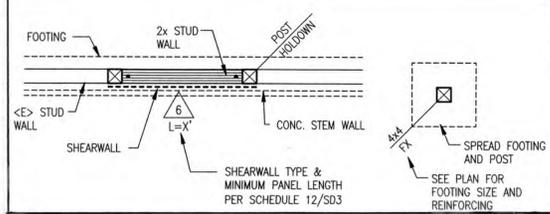
CONTRACTOR MAY USE SIMPSON TITEN HD 5/8"x6" ANCHORS IN LIEU OF EPOXY ANCHORS. SPACE ANCHORS @ 48" o.c. MAX UNLESS NOTED OTHERWISE ON PLAN AND SHEAR WALL SCHEDULE.

SPECIAL INSPECTION OF SHEAR WALLS NOTED AS TYPE "4" INCLUDING NAILING AND ALL MECHANICAL CONNECTORS SHALL BE PERFORMED BY THE ENGINEER OF RECORD. A LETTER VERIFYING SUCH INSPECTIONS WERE PERFORMED SHALL BE ON THE SITE FOR THE CITY FIELD INSPECTOR AT TIME OF SHEAR WALL INSPECTION. NOTIFY ENGINEER 48 HOURS PRIOR TO THE CITY'S INSPECTION.



- (F1) 1'-3"sq. x 12" DEEP CONC. FTG W/ (2) #4 EACH WAY AT BOTTOM, TYP.
- (F2) 1'-6"sq. x 12" DEEP CONC. FTG W/ (2) #4 EACH WAY AT BOTTOM, TYP.
- (F3) 3'-6"min. x 2'-0" x 12" DEEP CONC. FTG. SEE DETAIL 15/SD2 FOR REINFG
- (F4) 2'-0"sq. x 12" DEEP CONC. FTG W/ (3) #4 EACH WAY AT BOTTOM, TYP.

### LEGEND



## FOUNDATION PLAN

REVISIONS	BY

## DENNIS HAYES & ASSOCIATES

CREATIVE CUSTOM RESIDENTIAL DESIGN SOLUTIONS

17105 St. Brendan Loop  
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 CA 95037

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THE PARIS RES.  
 710 Emory Ave.  
 Campbell, CA 95008

DRAWN	1/24
CHECKED	
DATE	4-28-2004
SCALE	AS NOTED
JOB NO.	
SHEET	
<b>S1</b>	
OF	SHEETS



GENERAL

- ALL CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE 2022 CALIFORNIA BUILDING CODE (CBC).
- ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER OR ENGINEER FOR DIRECTION PRIOR TO PROCEEDING.
- DETAILS OF CONSTRUCTION ARE TYPICAL, UNLESS NOTED OTHERWISE, AND SHALL APPLY AT ALL LOCATIONS OF SIMILAR CONSTRUCTION. TYPICAL DETAILS ARE NOT CUT AT EVERY APPLICABLE LOCATION ON THE PLANS.
- DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION.
- SHORING, TEMPORARY BRACING AND OTHER METHODS AND MEANS OF CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR, AND IS NOT INCLUDED IN THE SCOPE OF THE STRUCTURAL DRAWINGS.
- THE FOLLOWING NOTES ARE FOR GENERAL MATERIAL GRADES AND PROCEDURES. SEE REMAINDER OF DRAWINGS FOR COMPLETE REQUIREMENTS. ITEMS NOTED IN PLANS, SECTIONS AND DETAILS TAKE PRECEDENCE OVER GENERAL NOTES.
- LOADS:
  - LIVE LOADS:
    - ROOF = 20psf
    - FLOOR = 40psf
  - WIND LOADS:
    - V<sub>ult</sub> = 110mph
    - V<sub>sud</sub> = 85mph
    - RISK CATEGORY = II
    - EXPOSURE = B
  - SEISMIC DESIGN REQUIREMENTS:
    - RISK CATEGORY = II
    - IMPORTANCE FACTOR, I<sub>e</sub> = 1
    - S<sub>s</sub> = 1.986 SITE CLASS D
    - S<sub>1</sub> = 0.701 SEISMIC DESIGN CATEGORY: D
    - S<sub>0.5</sub> = 1.57
    - R=6.5 (BEARING WALL SYSTEM, LIGHT FRAMED WALLS WITH STRUCTURAL PANELS)
    - SEISMIC RESPONSE COEFFICIENT, C<sub>s</sub> = 0.242
  - GEOTECHNICAL REQUIREMENTS:
    - DESIGN BEARING, Q = 1500psf (CBC TABLE 1806.2)

STRUCTURAL ABBREVIATIONS

A.B.	ANCHOR BOLT	I.D.	INSIDE DIAMETER
ADJ	ADJACENT	IN	INCH
APPROX	APPROXIMATE	INT	INTERIOR
ARCH	ARCHITECTURAL	LAM	LAMINATE
BLDG	BUILDING	LBS	POUNDS
BLK	BLOCK	KSI	KIPS PER SQ. IN.
BLKG	BLOCKING	MAX	MAXIMUM
B.N.	BOUNDARY NAILING	M.B.	MACHINE BOLT
BOT	BOTTOM	MECH	MECHANICAL
BP	BASEPLATE	MFR	MANUFACTURER
BRG	BEARING	MIN	MINIMUM
B.S.	BOTH SIDES	MISC	MISCELLANEOUS
C TO C	CENTER TO CENTER	N.S.	NEAR SIDE
C.B.	CARRIAGE BOLT	N.I.C.	NOT IN CONTRACT
CJ	CONTROL JOINT OR CONSTRUCTION JOINT	N.O.	NUMBER
C.I.	CAST IRON	NTS	NOT TO SCALE
CL	CENTERLINE	O.C.	ON CENTER
CLG	CEILING	O.D.	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	OPP	OPPOSITE
COL	COLUMN	PL	STEEL PLATE
CONC	CONCRETE	P.P.	PARTIAL PENETRATION
CONT	CONTINUOUS	PLYWD	PLYWOOD
C.P.	COMPLETE PENETRATION	PSF	POUNDS PER SQ. FT.
CTR	CENTER	PSI	POUNDS PER SQ. IN.
CTSK	COUNTERSINK	RAD	RADIUS
DBL	DOUBLE	REIN	REINFORCING
DIA OR Ø	DIAMETER	REQD	REQUIRED
DIAG	DIAGONAL	REV	REVISION
DD	DOT	R.O.	ROUGH OPENING
DWG	DRAWING	RWD	REDWOOD
EA	EACH	S.A.D	SEE ARCH'L DRAWINGS
E.F.	EACH FACE	S.M.D.	SEE MECH'L DRAWINGS
ELEC	ELECTRICAL	S.L.D.	SEE LANDSCAPE DRAWINGS
ELEV	ELEVATION	S.F.	SQUARE FEET
E.N.	EDGE NAILING	SIM	SIMILAR
EQ	EQUAL	SPEC	SPECIFICATION
E.W.	EACH WAY	SQ	SQUARE
EXIST OR <E>	EXISTING	STD	STANDARD
EXTER	EXTERIOR	STGRD	STAGGERED
F.D.	FLOOR DRAIN	STIFF	STIFFENER
FHWS	FLAT HEAD WOOD SCREW	SYM	SYMMETRICAL
FIN	FINISH	T&G	TONGUE & GROOVE
F.O.B.	FACE OF BLOCK	THRD	THREADED
F.O.C.	FACE OF CONCRETE	T.O.C.	TOP OF CONCRETE
F.O.F.	FACE OF FINISH	T.O.F.	TOP OF FRAMING
F.O.S.	FACE OF STUD	TS	TUBE STEEL
F.P.	FULL PENETRATION	TYP	TYPICAL
F.S.	FAR SIDE	U.O.N.	UNLESS OTHERWISE NOTED
FT	FOOT OR FEET	VERT	VERTICAL
FTG	FOOTING	W/	WITH
GA	GAGE	W/O	WITHOUT
GALV	GALVANIZED	WT	WEIGHT OR STEEL WT SECTION
G.I.	GALVANIZED IRON	WWF	WELDED WIRE FABRIC
GLB	GLUE-LAMINATED BEAM		
GYP.BD.	GYP-SUM BOARD		
HDR	HEADER		
HORIZ	HORIZONTAL		
HR	HOUR		
H.S.	HIGH STRENGTH		
H.S.B.	HIGH STRENGTH BOLT		

CONCRETE & FOUNDATIONS

- ALL CONCRETE WORK SHALL CONFORM TO CURRENT ACI STANDARD 318 AND ASTM C94, SPECIFICATION FOR READY-MIX CONCRETE. CEMENT SHALL BE PORTLAND CEMENT TYPE II. CALCIUM CHLORIDE SHALL NOT BE USED.
- CONCRETE MIX PROPERTIES SHALL BE AS FOLLOWS:
  - SLABS-ON-GRADE:
    - 28-DAY COMP. STRENGTH: 2500 PSI
    - MAX. AGGREGATE SIZE: 3/4"
    - MAX. SLUMP: 4"
    - DENSITY: 150 PCF
  - FOOTINGS & GRADE BEAMS:
    - 28-DAY COMP. STRENGTH: 2500 PSI
    - MAX. AGGREGATE SIZE: 1-1/2"
    - MAX. SLUMP: 4"
    - DENSITY: 150 PCF
  - NON-STRUCTURAL CONCRETE WALKS ON GRADE:
    - 28-DAY COMP. STRENGTH: 2500 PSI
    - MAX. AGGREGATE SIZE: 3/4"
    - MAX. SLUMP: 5"
    - DENSITY: 150 PCF
- STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615-40 FOR #4 AND SMALLER BARS, ASTM A615-60 FOR #5 AND LARGER BARS. ALL BARS BENT IN FIELD SHALL BE GRADE 40.
- REINFORCING STEEL SHALL BE CONTINUOUS WHERE POSSIBLE. SPLICE WITH CONTACT LAP-SPLICES. STAGGER ALL SPLICES. SPLICE LENGTHS SHALL BE 50 BAR-DIAMETERS MINIMUM. WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL SQUARES, BUT NOT LESS THAN 12".
- EXTEND HORIZONTAL BARS IN FOUNDATIONS AND WALLS INTO INTERSECTING FOUNDATIONS AND WALLS WITH BEND AND 30 BAR DIAMETER EXTENSION.
- WELDING OF REINFORCING SHALL NOT BE ALLOWED.
- THE MINIMUM THICKNESS OF CONCRETE SLAB IS 4". CONCRETE SLABS ON GRADE WHICH WILL HAVE A FLOOR COVERING REQUIRE A MINIMUM OF 4" OF GRAVEL UNDER A MINIMUM 10MIL POLYETHYLENE MOISTURE BARRIER.
- FOUNDATIONS SUPPORTED ON FILL REQUIRE A SATISFACTORY SOIL INVESTIGATION REPORT FOR COMPACTION AND PLACEMENT OF FILL. NINETY-FIVE PERCENT MINIMUM COMPACTION IS REQUIRED.
- FOOTINGS ON SLOPES OF MORE THAN 1:10 SHALL BE STEPPED SUCH THAT THE BOTTOM OF THE FOOTING AND TOP OF THE STEM WALL ARE LEVEL.
- MAINTAIN THE FOLLOWING MINIMUM CONCRETE COVER FOR REBAR:
  - WHERE CONC. IS PLACED AGAINST EARTH = 3"
  - WHERE CONCRETE IS FORMED AND EXPOSED TO EARTH OR WEATHER = 2"
  - WHERE CONCRETE IS NOT EXPOSED TO EARTH OR WEATHER = 1-1/2"
  - SLABS ON GRADE = 3/4"
- WHERE SIDES OF FOUNDATIONS (FOOTINGS, GRADE BEAMS OR WALLS) ARE CAST AGAINST EARTH WITHOUT FORMS, FOUNDATION SHALL BE WIDENED 1/2" AT EACH SUCH SURFACE.
- FOUNDATIONS SUPPORTING WOOD SHALL EXTEND AT LEAST 8" ABOVE THE ADJACENT FINISHED GRADE.
- UNLESS NOTED OTHERWISE, ANCHOR BOLTS EMBEDDED IN CONCRETE SHALL CONFORM TO ASTM A307 OR A36.
- ANCHOR BOLTS ARE TO BE A MINIMUM OF 5/8"Ø AND EXTEND AT LEAST 7" INTO THE FIRST POUR OF CONCRETE FOUNDATIONS. ANCHOR BOLTS ARE TO BE SPACED A MAXIMUM OF 4 FEET APART OR AS SPECIFIED ON THE PLANS. A MINIMUM OF TWO BOLTS ARE REQUIRED IN EACH PIECE OF SILL PLATE AS WELL AS ONE BOLT WITHIN 6 TO 9 INCHES OF EACH END. PROVIDE 3" SQUARE x 0.229" THICK PLATE WASHERS AT EACH ANCHOR BOLT.
- ANCHOR BOLT PROJECTION SHALL BE ADEQUATE FOR FULL ENGAGEMENT OF PLATES, WASHERS, NUTS, ETC. AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO PLACEMENT OF CONCRETE OR GROUT. ANCHOR BOLTS SHALL BE FIRMLY SECURED TO FORMS TO PREVENT THEIR MOVEMENT DURING CONCRETE PLACEMENT. WET-SETTING OF ANCHOR BOLTS IS NOT ALLOWED.
- PLATES, SILLS, SLEEPERS AND LEDGERS IN CONTACT WITH CONCRETE NEED TO BE FOUNDATION GRADE OR PRESSURE TREATED WOOD.
- ALL WOOD NOT PRESSURE TREATED OR DECAY RESISTANT MUST BE AT LEAST 18" ABOVE EXPOSED SOIL. FLOOR GIRDERS MAY BE LOCATED 12" MINIMUM FROM EXPOSED SOIL.
- WEATHER EXPOSED WOOD POSTS LOCATED ON CONCRETE FLOORS NEED TO BE MOUNTED ON METAL PEDESTALS 1" ABOVE THE CONCRETE FLOOR AND 8" ABOVE THE ADJACENT GROUND. CONCRETE PIERS SHALL EXTEND 8" ABOVE THE GROUND. THESE REQUIREMENTS ARE NOT NECESSARY IF PRESSURE TREATED OR DECAY RESISTANT WOOD IS USED.
- NOTIFY ENGINEER AT LEAST 48 HOURS BEFORE ANY CONCRETE IS TO BE PLACED OR FORMS CLOSED TO ALLOW FOR HIS OBSERVATION OF EXCAVATIONS AND REINFORCING PLACEMENT.
- ALL ANCHOR BOLTS, FRAMING CLIPS AND CONNECTORS, INCLUDING NAILS AND WOOD SCREWS SHALL BE HOT-DIPPED GALVANIZED WHEN IN CONTACT WITH PRESSURE TREATED WOOD.

EPOXY ANCHORS or DOWELS

- ALL THREADED RODS AND REBAR DOWELS INSTALLED IN HARDENED CONCRETE WITH "EPOXY" OR "ADHESIVE" SHALL USE SIMPSON SET-XP HIGH STRENGTH EPOXY (ESR-2508). OTHER ANCHORS MAY BE USED ONLY WHEN ICBO REPORT FOR SUCH IS SUBMITTED TO AND APPROVED BY ENGINEER.
- "EPOXY/ADHESIVE" ANCHORS SHALL BE INSTALLED ONLY WHERE SPECIFIED ON DRAWINGS, AND SHALL NOT BE USED IN LIEU OF CAST-IN-PLACE ANCHOR BOLTS WITHOUT APPROVAL.
- ANCHORS SHALL BE INSTALLED ONLY IN CURED CONCRETE OF 28 DAY AGE OR MORE.
- HOLES SHALL BE DRILLED 1/8" TO 1/4" LARGER IN DIAMETER THAN ROD OR BAR OUTER DIAMETER, AS SPECIFIED IN ICBO REPORT.
- BARS/RODS SHALL HAVE EMBEDMENT NOT LESS THAN TEN (10) NOMINAL BAR/ROD DIAMETERS, OR AS OTHERWISE SPECIFIED IN DETAILS.
- INSTALL USING MANUFACTURER'S EQUIPMENT, PER MANUFACTURER'S RECOMMENDATIONS. INSTALLER SHALL HAVE ON SITE A COPY OF MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- OBSERVATION OF RETROFIT EPOXIED ANCHOR BOLTS INTO EXISTING CONCRETE SHALL BE PERFORMED BY THE ENGINEER OF RECORD. A LETTER VERIFYING SUCH OBSERVATIONS WERE PERFORMED SHALL BE ON THE SITE FOR THE CITY FIELD INSPECTOR AT TIME OF SHEAR WALL INSPECTION. NOTIFY ENGINEER 48 HOURS PRIOR TO INSTALLATION OF EPOXIED ANCHORS.

STRUCTURAL STEEL

- ALL STEEL AND MISC. IRON SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH A.I.S.C. SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- STEEL MATERIAL SHALL BE AS FOLLOWS:
  - SHAPES AND PLATES: ASTM A572 UNLESS NOTED OTHERWISE
  - RECTANGULAR TUBES (TS OR HSS): ASTM A500 GRADE B, F<sub>y</sub>=46 KSI
  - MACHINE BOLTS (M.B.): ASTM A307
  - THREADED RODS: ASTM A307 OR A36 (MAY BE THREADED FOR ENTIRE LENGTH)
- UNLESS NOTED OTHERWISE, ANCHOR BOLTS, MACHINE BOLTS AND THREADED ANCHOR RODS THROUGH STEEL AND EMBEDDED IN CONCRETE SHALL CONFORM TO ASTM A307 OR A36. ANCHOR BOLTS/RODS SHALL HAVE A STANDARD BOLT HEAD OR TIGHTENED DOUBLE NUTS. THREADED RODS SHALL HAVE TIGHTENED DOUBLE NUTS AT END. J-BOLT ANCHOR BOLTS ARE ALLOWED ONLY AT SOLE PLATES OF NON-BEARING, NON-SHEAR WALLS. ANCHOR BOLT PROJECTION SHALL BE ADEQUATE FOR FULL ENGAGEMENT OF PLATES, WASHERS, NUTS, ETC. AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO PLACEMENT OF CONCRETE.
- ALL WELDING ON STRUCTURAL STEEL SHALL CONFORM WITH AWS D1.1 CODE AND SHALL BE PRE-QUALIFIED WELDS CONFORMING TO AWS D1.1. UNLESS SPECIFICALLY INDICATED AS FIELD WELDING, ALL WELDS MAY BE PERFORMED IN SHOP OR FIELD.
- WELDING PROCEDURE SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER AND THE TEST AND INSPECTION AGENCY FOR REVIEW AND APPROVAL PRIOR TO START OF FABRICATION.
- MINIMUM SPACING OF ALL BOLTS, 7/8"Ø AND SMALLER IN STEEL SHALL BE 3" O.C. AND THE MINIMUM EDGE DISTANCE FROM CENTERLINE OF HOLE TO EDGE OF PLATE OR MEMBER SHALL BE 1-1/2". UNLESS NOTED OTHERWISE ON DRAWINGS. WHERE BOLTS ARE INSTALLED THROUGH FLANGES OF "W" OR SIMILAR SHAPES, THE BOLT GAGE SHALL BE AS RECOMMENDED BY AISC.
- HOLES FOR BOLTS IN STEEL SHALL BE 1/16" MAXIMUM LARGER IN DIAMETER THAN BOLTS. HOLES FOR ANCHOR BOLTS SHALL NOT BE MORE THAN 5/16" LARGER FOR A.B.'S UP TO 1", AND NOT MORE THAN 1/2" LARGER FOR A.B.'S OVER 1" Ø. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES IS NOT ALLOWED, WHETHER IN FIELD OR SHOP.
- ALL COMPLETE AND FULL PENETRATION GROOVE WELDS (DESIGNATED BY "C.P." OR "F.P.") SHALL USE BACK-UP PLATES UNLESS NOTED OTHERWISE. ALL PARTIAL-PENETRATION WELDS (DESIGNATED BY "P.P.") SHALL HAVE LARGEST EFFECTIVE THROAT ALLOWED BY AWS. GROOVE WELDS NOT NOTED WITH "C.P.", "F.P." OR "P.P." SHALL BE COMPLETE PENETRATION WELDS.

COMPOSITE SOLID LUMBER

- COMPOSITE SOLID MEMBERS (LVL, PSL, LVL, ETC.): TYPES SPECIFIED ARE AS MANUFACTURED BY TRUS JOIST MACMILLAN. DEPTH TO MATCH ADJACENT I-JOISTS.
- BEAMS DESIGNATED AS PSL SHALL HAVE A MINIMUM MODULUS OF ELASTICITY OF 2000 KSI.
- BEAMS DESIGNATED AS LVL SHALL HAVE A MINIMUM MODULUS OF ELASTICITY OF 1800 KSI.

WOOD

- ALL WOOD FRAMING SHALL CONFORM TO THE CALIFORNIA BUILDING CODE, CHAPTER 23.
- ALL FRAMING LUMBER, UNLESS SPECIFIED OTHERWISE ON DRAWINGS, SHALL BE DOUGLAS FIR-LARCH, WITH STRESS GRADES AS FOLLOWS:
  - 2x ROOF RAFTERS AND JOISTS: NO. 1
  - 2x FLOOR JOISTS: NO. 1
  - 4x HEADERS AND BEAMS: NO. 1
  - 6x BEAMS AND HEADERS: NO. 1
- ANCHORS SHALL BE INSTALLED ONLY IN CURED CONCRETE OF 28 DAY AGE OR MORE.
- HOLES SHALL BE DRILLED 1/8" TO 1/4" LARGER IN DIAMETER THAN ROD OR BAR OUTER DIAMETER, AS SPECIFIED IN ICBO REPORT.
- BARS/RODS SHALL HAVE EMBEDMENT NOT LESS THAN TEN (10) NOMINAL BAR/ROD DIAMETERS, OR AS OTHERWISE SPECIFIED IN DETAILS.
- INSTALL USING MANUFACTURER'S EQUIPMENT, PER MANUFACTURER'S RECOMMENDATIONS. INSTALLER SHALL HAVE ON SITE A COPY OF MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- OBSERVATION OF RETROFIT EPOXIED ANCHOR BOLTS INTO EXISTING CONCRETE SHALL BE PERFORMED BY THE ENGINEER OF RECORD. A LETTER VERIFYING SUCH OBSERVATIONS WERE PERFORMED SHALL BE ON THE SITE FOR THE CITY FIELD INSPECTOR AT TIME OF SHEAR WALL INSPECTION. NOTIFY ENGINEER 48 HOURS PRIOR TO INSTALLATION OF EPOXIED ANCHORS.
- ALL NAILS SHALL BE COMMON WIRE TYPE. ALL NAILS EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED. WHERE NAILS TEND TO SPLIT FRAMING, HOLES SHALL BE PRE-BORED.
- UNLESS SPECIFIED OTHERWISE, BOLTS AND THREADED RODS THROUGH WOOD MEMBERS SHALL CONFORM TO ASTM A307 OR A36.
- ALL BOLT HOLES IN WOOD SHALL BE DRILLED 1/2" OVERSIZE. THE LENGTH OF THE THREADED PORTION SHALL BE SUCH THAT THE THREADES DO NOT BEAR AGAINST THE WOOD. ANCHOR BOLT HOLES IN SHEAR WALL SOLE PLATES SHALL NOT BE MORE THAN 1/2" LARGER IN DIAMETER THAN A.B. OVERSIZE HOLES WILL NOT BE ALLOWED.
- UNLESS SPECIFIED OTHERWISE, HEAVY CUT STEEL WASHERS SHALL BE PROVIDED BETWEEN BOLT HEADS/NUTS AND WOOD.
- AT STUD WALL SOLE PLATES ANCHORED WITH ANCHOR BOLTS, PROVIDE 3" SQ. x 1/2" PLATE WASHER ON ALL ANCHOR BOLTS BETWEEN NUT AND WOOD.
- ALL WOOD STUD WALLS SHALL BE OF 2x STUDS @ 16" o.c. UNLESS NOTED OTHERWISE. PROVIDE SOLID 2x STUD-WIDTH BLOCKING @ 8'-0" o.c. VERTICALLY. ALL WALLS SHALL HAVE DOUBLE TOP PLATES. WALL PLATES SHALL OCCUR ONLY WHERE WALL IS INTERSECTED BY ROOF, CEILING OR FLOOR FRAMING.
- ALL SOLE PLATES FOR EXTERIOR, BEARING AND SHEAR WALLS SHALL BE ANCHORED TO THE FOUNDATION WITH 3/8" x 11" ANCHOR BOLTS @ 4'-0" o.c. UNLESS NOTED OTHERWISE. SEE SHEAR WALL SCHEDULE FOR ANCHORAGE AT SHEAR WALLS. THERE SHALL BE A MINIMUM OF (2) A.B.'S PER PIECE, AND AN A.B. 6 TO 9 INCHES FROM EACH END. WHERE PLATE IS NOTCHED MORE THAN ONE-THIRD ITS DEPTH, PROVIDE AN ANCHOR BOLT ON EACH SIDE, 6 TO 9 INCHES FROM NOTCH.
- FRAME OPENINGS IN NON-BEARING WALLS WITH SOLID FULL-STUD-WIDTH HEADER AND TRIMMERS. UNLESS NOTED OTHERWISE ON DRAWINGS, THE MINIMUM NOMINAL HEADER DEPTHS SHALL BE:
  - OPENING WIDTH UP TO 6'-0": 6" DEEP HEADER
  - OPENING WIDTH UP TO 8'-0": 8" DEEP HEADER
  - OPENING WIDTH UP TO 10'-0": 10" DEEP HEADER
- NAILS THROUGH PLYWOOD SHEATHING SHALL BE 3/8" FROM PLYWOOD EDGES. ALL NAILS THAT SPLIT OR MISS FRAMING SHALL BE REMOVED AND RENAILED.
- MINIMUM DIMENSION OF ANY PIECE OF PLYWOOD SHALL BE 24".
- PLYWOOD ROOF SHEATHING SHALL BE PLACED WITH FACE GRAIN PERPENDICULAR TO THE JOISTS. PROVIDE PLY-CLIPS AT ALL UNBLOCKED EDGES MIDWAY BETWEEN JOISTS, FOR ALL JOIST SPACING OF 18" AND LARGER.
- PLYWOOD WALL SHEATHING MAY BE PLACED WITH FACE GRAIN PARALLEL OR PERPENDICULAR TO STUDS. ALL EDGES SHALL BE BLOCKED AND NAILED. HORIZONTAL PANEL EDGES SHALL BE STAGGERED VERTICALLY NOT LESS THAN 16".
- DESIGNATIONS FOR HOLDOWNS, SHEET METAL JOIST HANGERS, FRAMING CLIPS, STRAPS, ETC. ARE FOR PRODUCTS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. PRODUCTS BY OTHER MANUFACTURERS MAY BE USED ONLY WITH ENGINEER'S APPROVAL, AND SHALL BE OF SAME CONFIGURATION AND CAPACITY AS SPECIFIED SIMPSON PRODUCT. ALL ITEMS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS, WITH ALL SPECIFIED FASTENERS OF RECOMMENDED TYPE AND SIZE. JOIST AND BEAM HANGERS SHALL BE OF RECOMMENDED DEPTH FOR MEMBER SUPPORTED. SLOPING JOISTS, RAFTERS & BEAMS SHALL BE NOTCHED TO PROVIDE FULL AND LEVEL BEARING SURFACE IN HANGERS. SLOPED HANGERS SHALL NOT BE USED EXCEPT WHERE SPECIFICALLY CALLED FOR ON DRAWINGS.
- TYPICAL NAILING, UNLESS NOTED OTHERWISE:
  - 2" DECKING TO BEARING: (1) 16d BLIND AND FACE NAIL TO EA. SUPPORT.
  - JOIST TO BEARING: (3) 10d TOENAIL.
  - RAFTER TO PLATE: (3) 10d TOENAIL.
  - JOIST SPLICE OVER PARTITION: (3) 16d FACE NAIL EACH LAP.
  - CEILING JOIST TO PLATES: (3) 16d.
  - CEILING JOIST TO PLATES: (3) 8d TOENAIL.
  - DOUBLE JOIST: 10d @ 16" o.c. STAGGERED.
  - 3 OR MORE MULTIPLE JOISTS: 1/2"Ø M.B. @ 16" o.c. STAGGERED.
  - SOLID BLKG. AT JOIST SUPPORTS: (2) 10d TOENAILS TO JOISTS, (4) 10d TOENAILS

TESTING AND SPECIAL INSPECTIONS

- GENERAL
  - ALL INSPECTIONS SHALL CONFORM TO APPLICABLE REQUIREMENTS OF CALIFORNIA BUILDING CODE SECTION 1701.
  - TEST AND INSPECTION AGENCY SHALL BE PAID FOR BY THE OWNER.
  - COPIES OF ALL REPORTS SHALL BE SUBMITTED TO DESIGNER, ENGINEER AND BUILDING DEPARTMENT.
- FOUNDATIONS AND SLABS ON GRADE:
  - NOTIFY ENGINEER 48 HOURS BEFORE CONCRETE IS TO BE PLACED OR FORMS CLOSED TO ALLOW FOR OBSERVATION OF EXCAVATIONS AND REINFORCING PLACEMENT.
  - DESIGN OF FOUNDATIONS IS BASED ON CONCRETE STRENGTH OF 2500 PSI. NO FOUNDATION CONTINUOUS INSPECTION IS REQUIRED.
- THREADED RODS AND REBAR SET WITH EPOXY IN CONCRETE:
  - ALL ADHESIVE ANCHOR SYSTEMS USED SHALL HAVE ICBO APPROVAL.
  - SPECIAL INSPECTION OF RODS INSTALLED IN EPOXY IS REQUIRED FOR ALL HOLDOWN ANCHORS.
- WELDING OF STRUCTURAL STEEL:
  - VERIFY CERTIFICATION OF WELDERS AT START OF WORK.
  - PROVIDE CONTINUOUS INSPECTION OF ALL WELDS PERFORMED IN FIELD.
  - PROVIDE PERIODIC INSPECTION OF ALL FILLET WELDS 5/16" AND SMALLER.
- WOOD SHEAR WALLS WHERE NAILING IS 4" o.c. OR LESS:
  - VERIFY TYPE AND GRADE MATCHES ENGINEER'S SPECIFICATION.
  - VERIFY NAIL SIZE AND SPACING.
  - VERIFY NOTED MECHANICAL ANCHORS AND CONNECTIONS HAVE BEEN INSTALLED PER THE APPROVED CONSTRUCTION DRAWINGS.

FRAMING NOTES

- CONTRACTOR SHALL REVIEW ALL TYPICAL FRAMING DETAILS PRIOR TO STARTING ANY FRAMING WORK.
- BEAM TO POST CONNECTIONS SHALL BE PROPERLY ALIGNED AND CONNECTED WITH BC BRACKETS, U.O.N.
- WHERE PARTITION WALLS ARE PARALLEL TO THE FRAMING BELOW, DOUBLE JOISTS SHALL BE PROVIDED BELOW THE PARTITION. WHERE PARTITIONS ARE PERPENDICULAR, 2x BLOCKING SHALL BE PROVIDED BETWEEN EACH JOIST.
- POSTS SHALL BEAR FULLY IN A TIGHT FIT CONDITION WITH THE SUPPORTING MEMBER BELOW.
- PROVIDE DOUBLE 2x POST BELOW ALL BEAM ENDS U.O.N. ON PLAN.
- EXTEND ALL ROOF PLYWOOD BELOW CALIF. FRAMED AREAS AND EDGE NAIL TO BEAM OR PERIMETER WALL BLOCKING.
- NAIL SHEAR MATERIAL WITH TWO ROWS OF EDGE NAILING TO ALL HOLDOWN POSTS WHERE HOLDOWN ANCHORS OR STRAPS OCCUR.
- AT ALL POSTS, PROVIDE A POST OF IDENTICAL SIZE (U.O.N. ON PLAN) IN FLOOR AND WALL BELOW.
- LOCATE ALL FLUSH BEAMS DIRECTLY BELOW ON BEARING WALLS OR POST IN FLOOR ABOVE.
- NAIL FLOOR PLYWOOD WITH EDGE NAILING TO ALL FLUSH BEAMS, JOISTS OR BLOCKING IN LINE WITH OR OVER EXTERIOR WALLS OR SHEAR WALLS.
- ALL EXTERIOR POSTS ARE TO BE SUPPORTED ON A RAISED CONCRETE CURB PER TYPICAL FOUNDATION DETAILS.
- PROVIDE SOLID 2x BLOCKING BETWEEN JOISTS OVER ALL BEARING WALLS AND BEAMS. ATTACH TO BEAM OR WALL BELOW WITH (3) 16d PER BLOCK, U.O.N. EDGE NAIL PLYWOOD TO BLOCKING.
- DO NOT OVERDRIVE NAILS INTO JOISTS. IF NAIL GUN IS USED, GUN SHOULD BE ADJUSTED TO OVERDRIVE NAIL. NAILS THEN SHALL BE HAND DRIVEN SO THAT THE HEAD OF THE NAIL IS FLUSH WITH THE FACE OF THE PLYWOOD.
- AT NAILED CONNECTIONS, CARE IS TO BE TAKEN DURING CONSTRUCTION TO ENSURE THAT SPLITTING OF WOOD DOES NOT OCCUR. ANY SPLIT MEMBERS SHALL BE REMOVED AND REPLACED, USING A METHOD OF ATTACHING THE SPECIFIED CONNECTORS IN A WAY TO PREVENT SPLITTING.
- ALL SPECIFIED BLOCKING IS TO BE INSTALLED TIGHT BETWEEN ADJACENT MEMBERS.
- WALL, WINDOW, DOOR AND OPENING LOCATIONS SHOWN ON FRAMING PLANS ARE FOR REFERENCE ONLY. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS.
- CALIFORNIA FRAMING NOTED ON PLAN SHALL BE FRAMED WITH 2x6 @ 24" o.c., 2x SUPPORT RIDGE, HIP AND VALLEYS WITH 2x KICKER @ 48" o.c. TO FRAMING BELOW, U.O.N.
- RAFTERS SHALL BE FRAMED DIRECTLY OPPOSITE EACH OTHER AT RIDGES, VALLEYS AND HIPS. ALL RIDGE BOARDS, VALLEY AND HIP FRAMING MEMBERS SHALL BE AT LEAST 2" THICK (NOMINAL). IN NO CASE SHALL THE DEPTH BE LESS THAN THE CUT OF THE END OF THE RAFTER.
- WHERE APPLICABLE, RAFTERS SHALL BE NAILED TO ADJACENT PARALLEL CEILING JOIST TO FORM A CONTINUOUS TIE BETWEEN EXTERIOR WALLS. WHERE CEILING JOISTS ARE NOT PARALLEL, RAFTERS SHALL BE TIED BY A 1x4 (MIN.) CROSS TIE. THE CROSS TIES SHALL BE SPACED NOT MORE THAN 4'-0" O.C.
- JOISTS SHALL BE SUPPORTED LATERALLY BY SOLID BLOCKING OR HANGERS AT EACH END AND AT EACH SUPPORT. SOLID BLOCKING SHALL NOT BE LESS THAN 2" THICK (NOMINAL) AND THE FULL DEPTH OF THE JOISTS.
- THE ENDS OF JOISTS, BEAMS AND GIRDERS SHALL HAVE A MINIMUM OF 1-3/2" OF BEARING ON WOOD OR METAL AND 3" OF BEARING ON CONCRETE.
- WOOD JOISTS AND FLOORS LOCATED CLOSER THAN 18" OR WOOD GIRDERS LOCATED CLOSER THAN 12" TO EXPOSED GROUND SHALL BE PRESSURE TREATED WOOD.
- PROVIDE FIRE BLOCKING AT FLOORS, CEILINGS AND MID-HEIGHT OF WALLS OVER 10'-0" IN HEIGHT.

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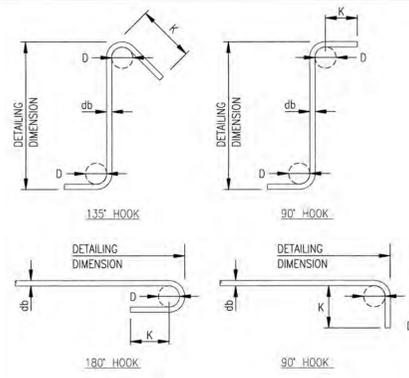
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SHEET CONTENTS:  
GENERAL NOTES

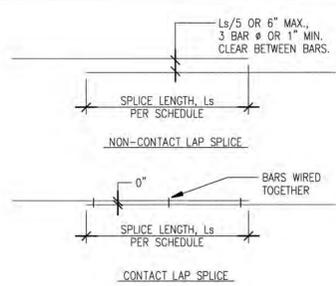
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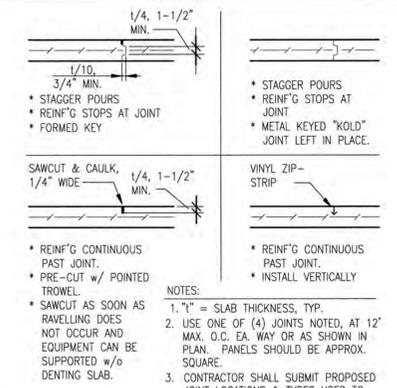
STANDARD HOOKS			
BAR SIZE	"d" IN	180° HOOKS	90° HOOKS
#3	2-1/4"	2-1/2"	6"
#4	3"	2-1/2"	8"
#5	3-3/4"	2-1/2"	10"

STIRRUP AND TIE HOOKS			
BAR SIZE	"d" IN	135° HOOKS	90° HOOKS
#3	1-1/2"	4"	4"
#4	2"	4-1/2"	4-1/2"
#5	2-1/2"	5-1/2"	6"

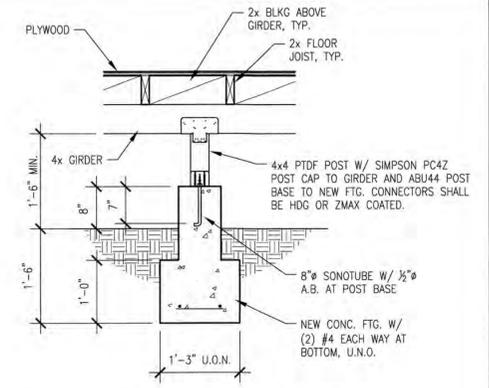


BAR SIZE	REBAR LAP SPLICE LENGTHS (Ls)	
	HARD ROCK (REG. WT.) CONCRETE TYP., U.N.O.	GROUTED TOP BARS MASONRY (CMU)
#3	15"	20"
#4	18"	24"
#5	20"	25"

- NOTES:
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS, IN SAME POUR AS BARS (AS IN DEEP BEAM OR FOOTING POURS, ETC.).
  - STAGGER LAPS IN SUCCESSIVE PARALLEL BARS IN SLABS AND WALLS A DISTANCE EQUAL TO THE REQUIRED LAP SPLICE LENGTH, BUT NOT LESS THAN 24" (ALONG LENGTH OF BARS).
  - ALL LAP SPLICES SHALL BE CONTACT OR NON-CONTACT TYPE, AS SHOWN.
  - INCREASE SCHEDULED LAP LENGTHS BY 30% WHEN IN LIGHT WEIGHT CONCRETE.



- STAGGER POURS
  - REINFG STOPS AT JOINT
  - METAL KEYED "KOLD" JOINT LEFT IN PLACE.
  - VINYL ZIP-STRIP
  - REINFG CONTINUOUS PAST JOINT.
  - INSTALL VERTICALLY
- NOTES:
- "t" = SLAB THICKNESS, TYP.
  - USE ONE OF (4) JOINTS NOTED, AT 12" MAX. O.C. EA. WAY OR AS SHOWN IN PLAN. PANELS SHOULD BE APPROX. SQUARE.
  - CONTRACTOR SHALL SUBMIT PROPOSED JOINT LOCATIONS & TYPES USED TO ARCHITECT PRIOR TO PLACING FORMS.



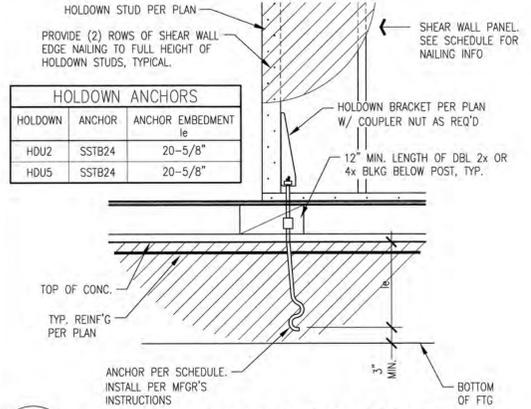
5 ISOLATED SPREAD FOOTING SCALE: 3/4" = 1'-0"

1 TYPICAL HOOKS & BENDS IN REBAR NO SCALE

3 TYPICAL REBAR LAP/SPLICE SCALE: 3/4" = 1'-0"

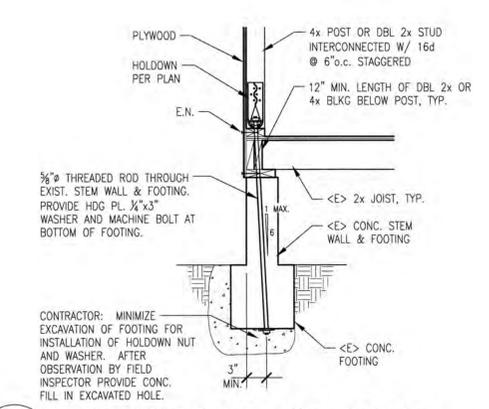
4 TYP. CONC. CONTROL JOINTS SCALE: 3/4" = 1'-0"

5 ISOLATED SPREAD FOOTING SCALE: 3/4" = 1'-0"

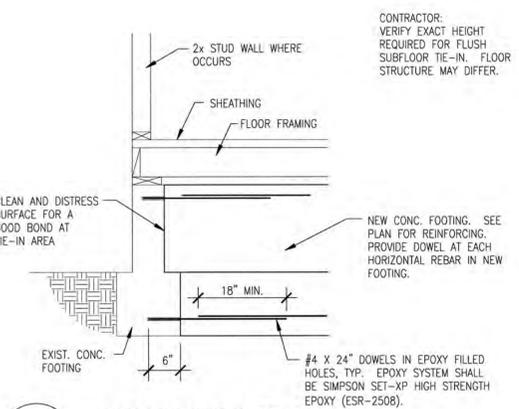


HOLDOWN	ANCHOR	ANCHOR EMBEDMENT
HOU2	SSTB24	20-5/8"
HOU5	SSTB24	20-5/8"

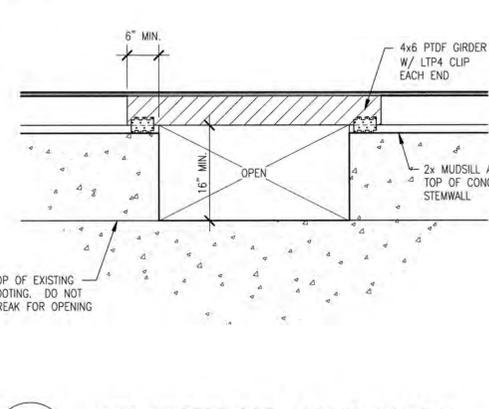
6 TYP. HOLDOWN AT NEW FOOTING SCALE: 3/4" = 1'-0"



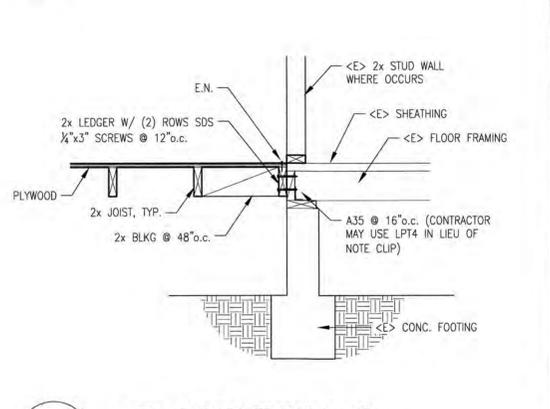
7 TYP. HOLDOWN AT EXIST. FOOTING SCALE: 3/4" = 1'-0"



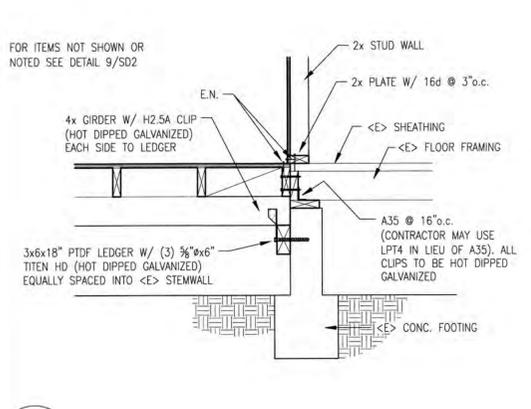
8 NEW FOOTING TIE-IN SCALE: 3/4" = 1'-0"



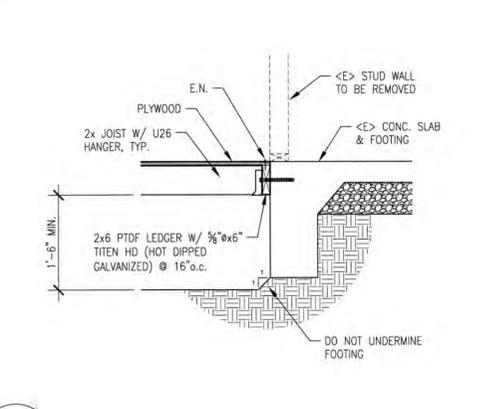
9 TYP. UNDERFLOOR ACCESS FRAMING SCALE: 3/4" = 1'-0"



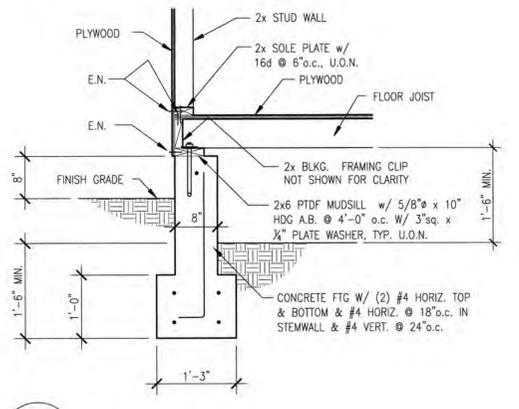
10 NEW FLOOR FRAMING AT EXIST. FOUNDATION SCALE: 3/4" = 1'-0"



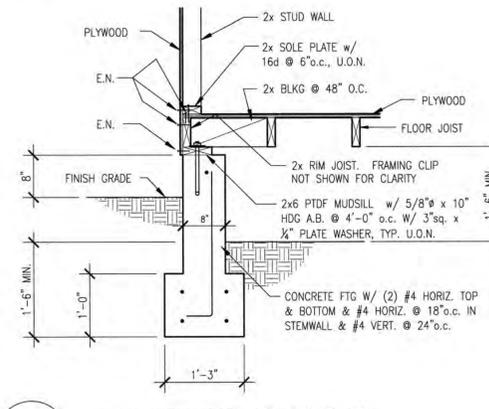
11 NEW FLOOR GIRDER AT EXIST. FOUNDATION SCALE: 3/4" = 1'-0"



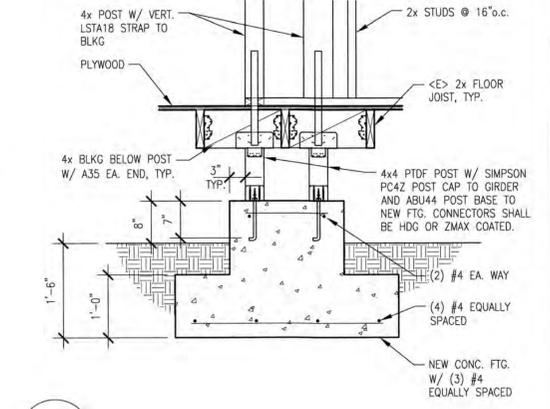
12 NEW FLOOR FRAMING AT EXIST. SLAB ON GRADE SCALE: 3/4" = 1'-0"



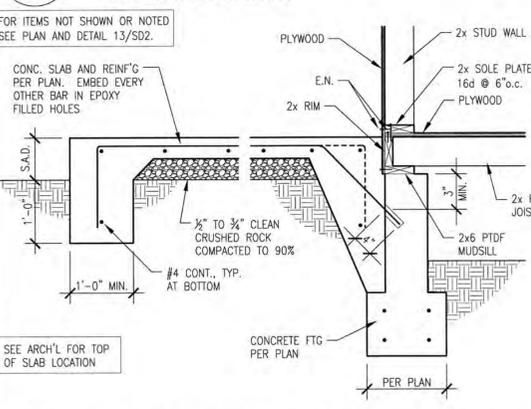
13 TYP. EXTERIOR FOOTING W/ PERPENDICULAR JOISTS SCALE: 3/4" = 1'-0"



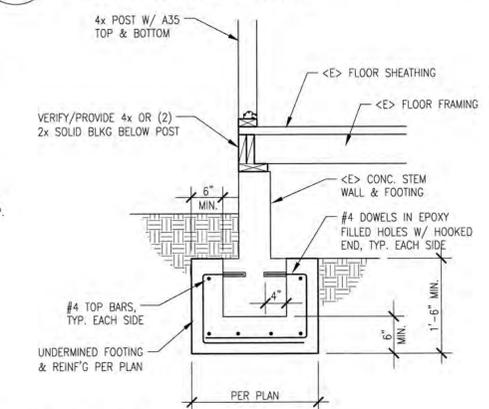
14 TYP. EXTERIOR FOOTING W/ PARALLEL JOISTS SCALE: 3/4" = 1'-0"



15 NEW CONC. PATIO SLAB & FOOTING SCALE: 3/4" = 1'-0"



16 NEW CONC. PATIO SLAB & FOOTING SCALE: 3/4" = 1'-0"



17 TYP. UNDERMINED FOOTING SCALE: 3/4" = 1'-0"



18 TYP. UNDERMINED FOOTING SCALE: 3/4" = 1'-0"



19 TYP. UNDERMINED FOOTING SCALE: 3/4" = 1'-0"



20 TYP. UNDERMINED FOOTING SCALE: 3/4" = 1'-0"

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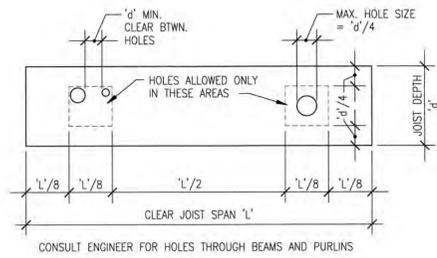
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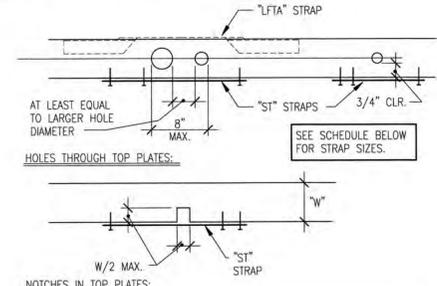
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**1** TYP. HOLES THROUGH JOISTS & RAFTERS  
SCALE: 1" = 1'-0"



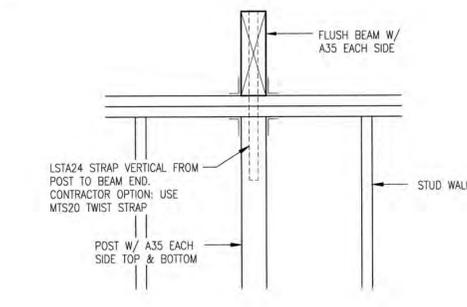
**2** ALLOWABLE HOLES AND NOTCHES IN WOOD STUDS  
SCALE: 1" = 1'-0"

MARK	PLYWD TYPE	EDGE NAIL SPACING	MUDSILL PLATE & A.B.	WALL SOLE PLATE	FRAMING CLIPS
6	CDX	6"	2x W/ 5/8" @ 48" O.C.	2x W/ 16d @ 6" O.C.	A35 @ 16"
4	CDX	4"	2x W/ 5/8" @ 32" O.C.	2x W/ 16d @ 3" O.C.	A35 @ 12"
3	CDX	3"	3x W/ 5/8" @ 24" O.C.	3x W/ 16d @ 2-1/2" O.C.	A35 @ 10"

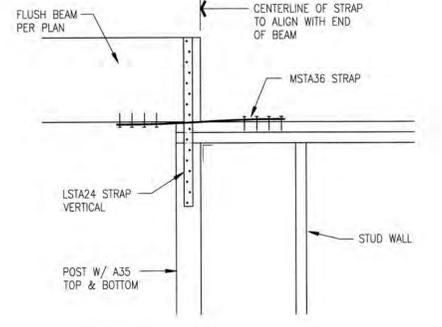
TYPE	MODEL	WALL ANCHORS	FASTENERS (TOP OF WALL)
SW12	SIMPSON WSWH12x7	(2) SIMPSON WSWH-AB1x30	WSWH-TP12 CONNECTOR W/ (14) SWS16150, (2) SDS 1/4"x6" FASTENERS & (2) SIMPSON PORTAL STRAPS

- GENERAL NOTES FOR ALL SHEAR WALL PANELS:**
- PLYWOOD SHALL BE 15/32" OR 1/2" THICK. NAILS SHALL BE 8d COMMON WIRE NAILS.
  - ANCHOR BOLTS SHALL BE 5/8" x 10" LONG. HOLES FOR A.B.'S IN PLATES SHALL BE NO MORE THAN 1/8" LARGER THAN A.B. DIAMETER.
  - FIELD NAILING SHALL BE 8d @ 12" O.C.
  - STUDS OR BLOCKING SHALL BE PROVIDED AT ALL PLYWOOD JOINTS.
  - NAILS SHALL BE STAGGERED AT ALL ADJOINING PANEL EDGES.
  - WALL PLYWOOD SHALL EXTEND TO ROOF.
  - PLYWOOD SHALL BE OF 4'x8' SHEETS, EXCEPT AT BOUNDARIES, WHERE THE MINIMUM DIM. OF ANY PIECE OF PLYWOOD SHALL BE 24". HORIZONTAL JOINTS SHALL BE STAGGERED.
  - PROVIDE (2) ROW OF SPECIFIED EDGE NAILING TO FULL LENGTH OF ALL STUDS/POSTS WITH HOLD-DOWNS OR STRAPS ATTACHED THEREON.
  - ANY WALL PLYWOOD SHEATHING SHOWN ON DRAWINGS WITHOUT A SPECIFIC SHEAR WALL DESIGNATION SHALL BE OF TYPE, THICKNESS AND NAILING AS PER SHEAR WALL TYPE.
  - CONTRACTOR MAY USE EITHER OSB IN LIEU OF SPECIFIED PLYWOOD. NAILS AND SPACING TO REMAIN AS SPECIFIED.
  - WHERE MUDSILLS OCCUR AT EXIST. CONCRETE, USE 5/8" THREADED ROD WITH 5" MIN EMBED INTO EXISTING CONCRETE AND SET WITH SIMPSON 'SET-XP' EPOXY.
  - AT WALL PLATES ANCHORED WITH ANCHOR BOLTS, PROVIDE 3" SQ. x 1/4" PLATE WASHER ON ALL ANCHOR BOLTS BETWEEN NUT AND WOOD.
  - SEE SIMPSON DETAIL SHEETS WSWH1 & WSWH2 FOR STRONGWALL CONNECTIONS AND SPECIFICATIONS.

**11** TYP. REINFORCING OF TOP PLATES  
NO SCALE



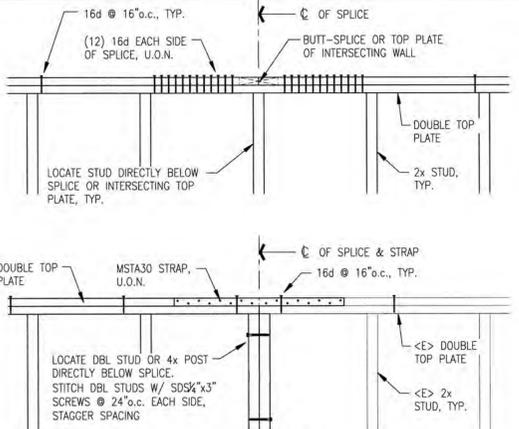
**12** SHEAR WALL SCHEDULE  
NO SCALE



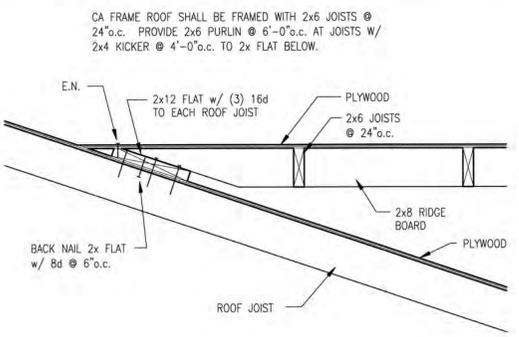
**16** TYP. FLUSH BEAM PERPENDICULAR TO WALL  
SCALE: 1" = 1'-0"



**17** TYP. FLUSH BEAM PARALLEL TO WALL  
SCALE: 1" = 1'-0"



**3** TYP. TOP PLATE SPLICE TO EXIST. TOP PLATE  
SCALE: 1" = 1'-0"

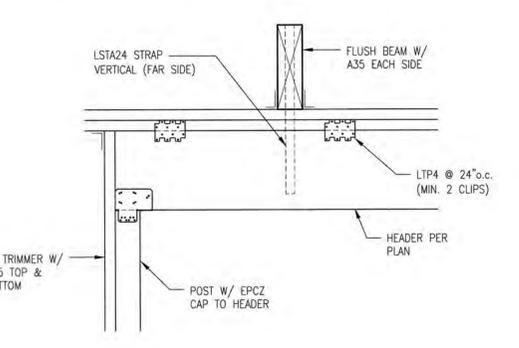


**8** TYP. CALIFORNIA FRAMING  
SCALE: 1" = 1'-0"

CLEAR SPAN UP TO:	JOISTS	SPACING
14'-0"	2x6 NO. 2	16" o.c.
18'-0"	2x8 NO. 2	16" o.c.

- NOTES:**
- WHERE NOT SPECIFIED OTHERWISE ON STRUCTURAL DRAWINGS, CEILING JOISTS SHALL BE PER ABOVE SCHEDULE.
  - CEILING JOISTS SHALL NOT BE USED WHERE STORAGE OR USABLE FLOOR AREAS OCCUR ABOVE CEILING.
  - CONNECTIONS PER CBC TABLE 2304.9.1

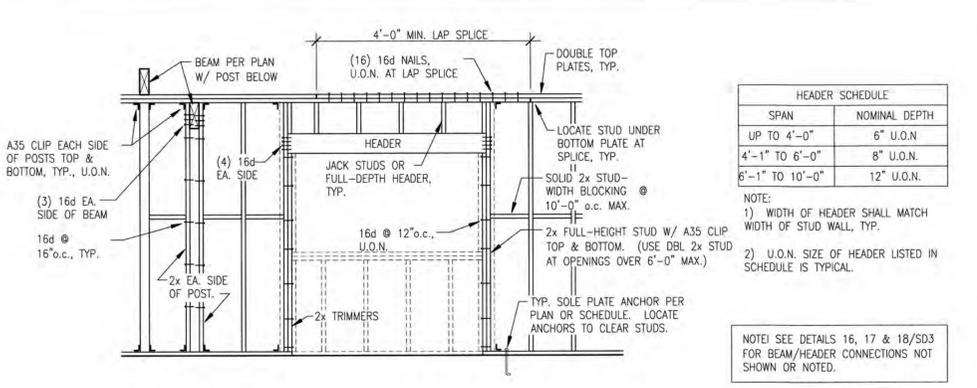
**13** TYP. CEILING FRAMING AND CONNECTIONS  
SCALE: 1" = 1'-0"



**18** TYP. FLUSH BEAM TO DROPPED HEADER IN WALL  
SCALE: 1" = 1'-0"



**4** TYPICAL FRAMED WALL OPENING  
SCALE: 3/8" = 1'-0"



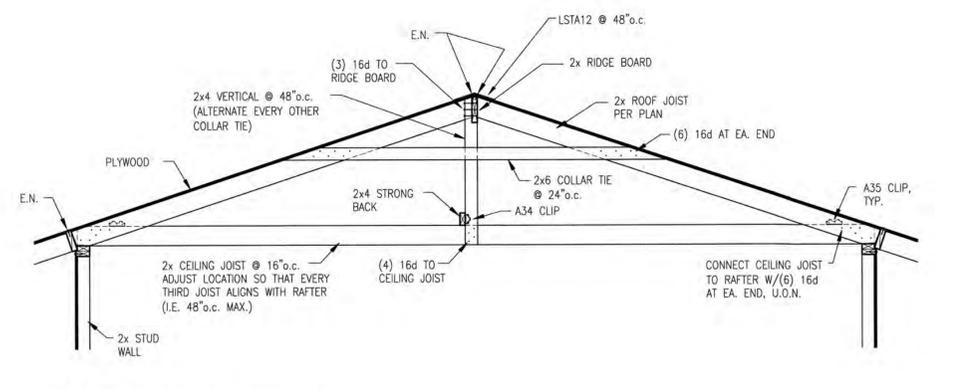
**HEADER SCHEDULE**

SPAN	NOMINAL DEPTH
UP TO 4'-0"	6" U.O.N.
4'-1" TO 6'-0"	8" U.O.N.
6'-1" TO 10'-0"	12" U.O.N.

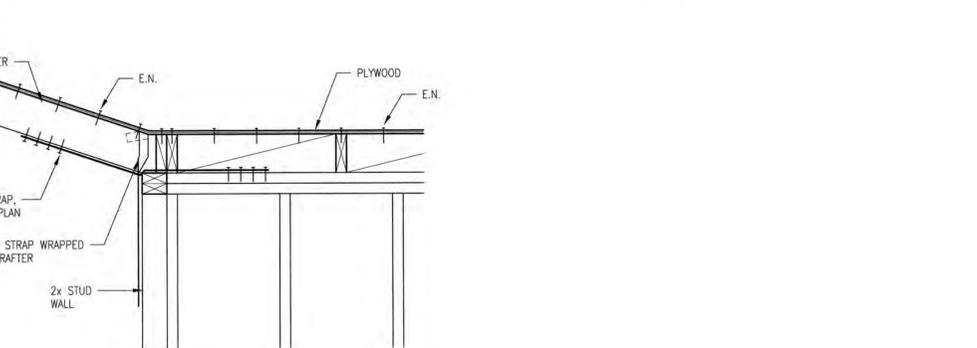
**NOTE:**  
1) WIDTH OF HEADER SHALL MATCH WIDTH OF STUD WALL, TYP.  
2) U.O.N. SIZE OF HEADER LISTED IN SCHEDULE IS TYPICAL.

**NOTE:** SEE DETAILS 16, 17 & 18/SD3 FOR BEAM/HEADER CONNECTIONS NOT SHOWN OR NOTED.

**9** TYP. CONVENTIONAL ROOF FRAMING  
SCALE: 1/2" = 1'-0"



**14** TYP. STRAPPING AROUND OPENING IN SHEAR WALL  
SCALE: 1/2" = 1'-0"



**19** TYP. COLLECTOR STRAP TO RAFTER  
SCALE: 1" = 1'-0"



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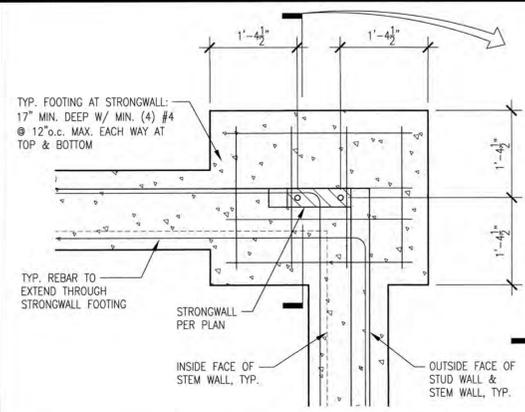
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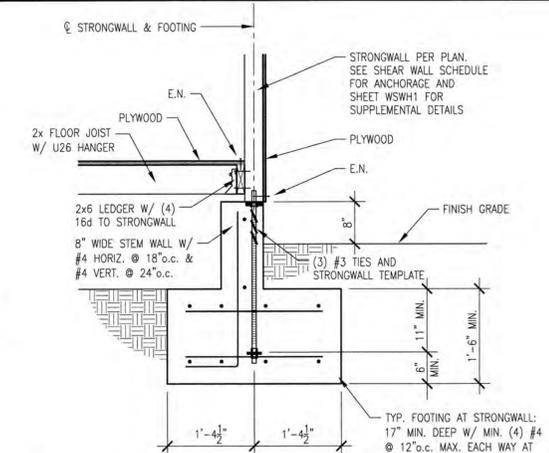
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GENERAL FRAMING DETAILS  
DATE: 01/31/2024  
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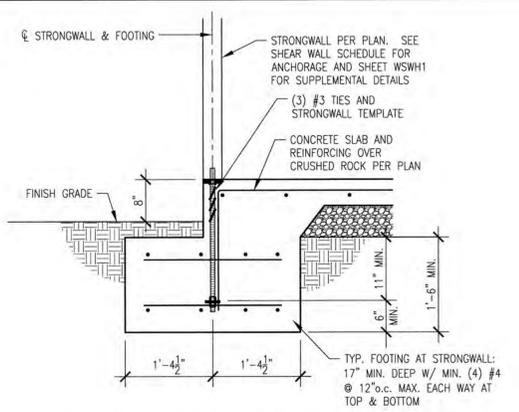




1 FOOTING LAYOUT AT STRONGWALL  
SCALE: 3/4" = 1'-0"



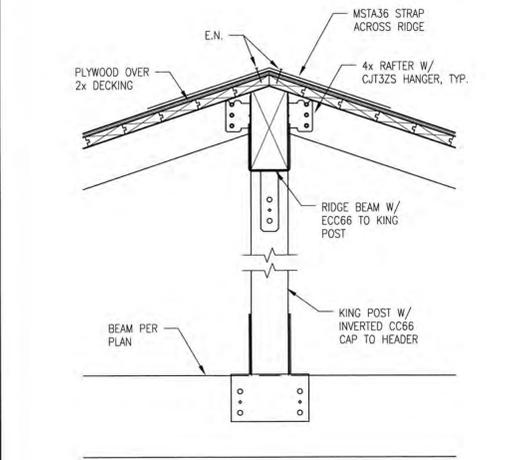
2 STRONGWALL FOOTING AT RAISED FLOOR  
SCALE: 3/4" = 1'-0"



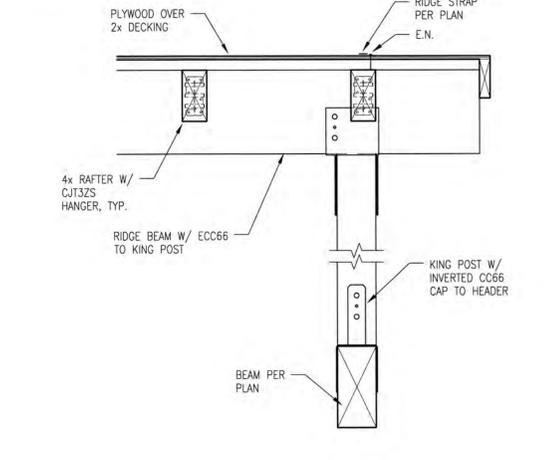
3 STRONGWALL FOOTING AT CONCRETE PATIO  
SCALE: 3/4" = 1'-0"

4 SCALE: 1" = 1'-0"

5 SCALE: 1" = 1'-0"



6 PATIO RIDGE & KING POST  
SCALE: 1" = 1'-0"



7 PATIO RIDGE & KING POST  
SCALE: 1" = 1'-0"

8 SCALE: 3/4" = 1'-0"

9 SCALE: 1" = 1'-0"

10 SCALE: 1" = 1'-0"

16 SCALE: 1" = 1'-0"

17 SCALE: 1" = 1'-0"

18 SCALE: 1" = 1'-0"

19 SCALE: 1" = 1'-0"

20 SCALE: 1" = 1'-0"

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SHEET CONTENTS: FOUNDATION & FRAMING DETAILS

DATE: 01/31/2024  
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SHEET NO. **SD5**  
OF 5 SHEETS