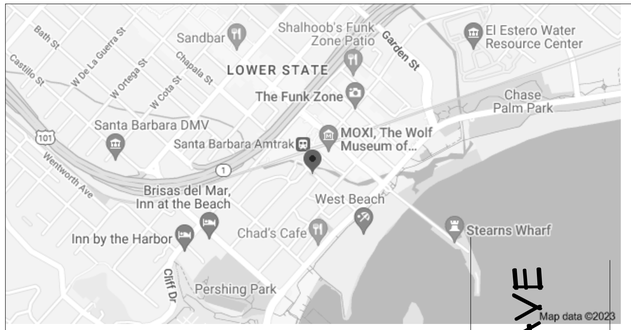


NATOMA AVE

DESIGNER

ESTEBAN SOLIS
PO BOX 4171
VENTURA, CA. 93007
805-636-8173
BUILDINGPERMITCENTER@GMAIL.COM

NOTE 1:THIS PROJECT DOES NOT CONTAIN / REQUIRE A FIRE SPRINKLER SYSTEM.

NOTE TO PLANS EXAMINER: THIS PROJECT IS DESIGNED AS TYPE-V-B PRESCRIPTIVE LIGHT WOOD FRAMING IN CONFORMANCE WITH 2019 CRC.

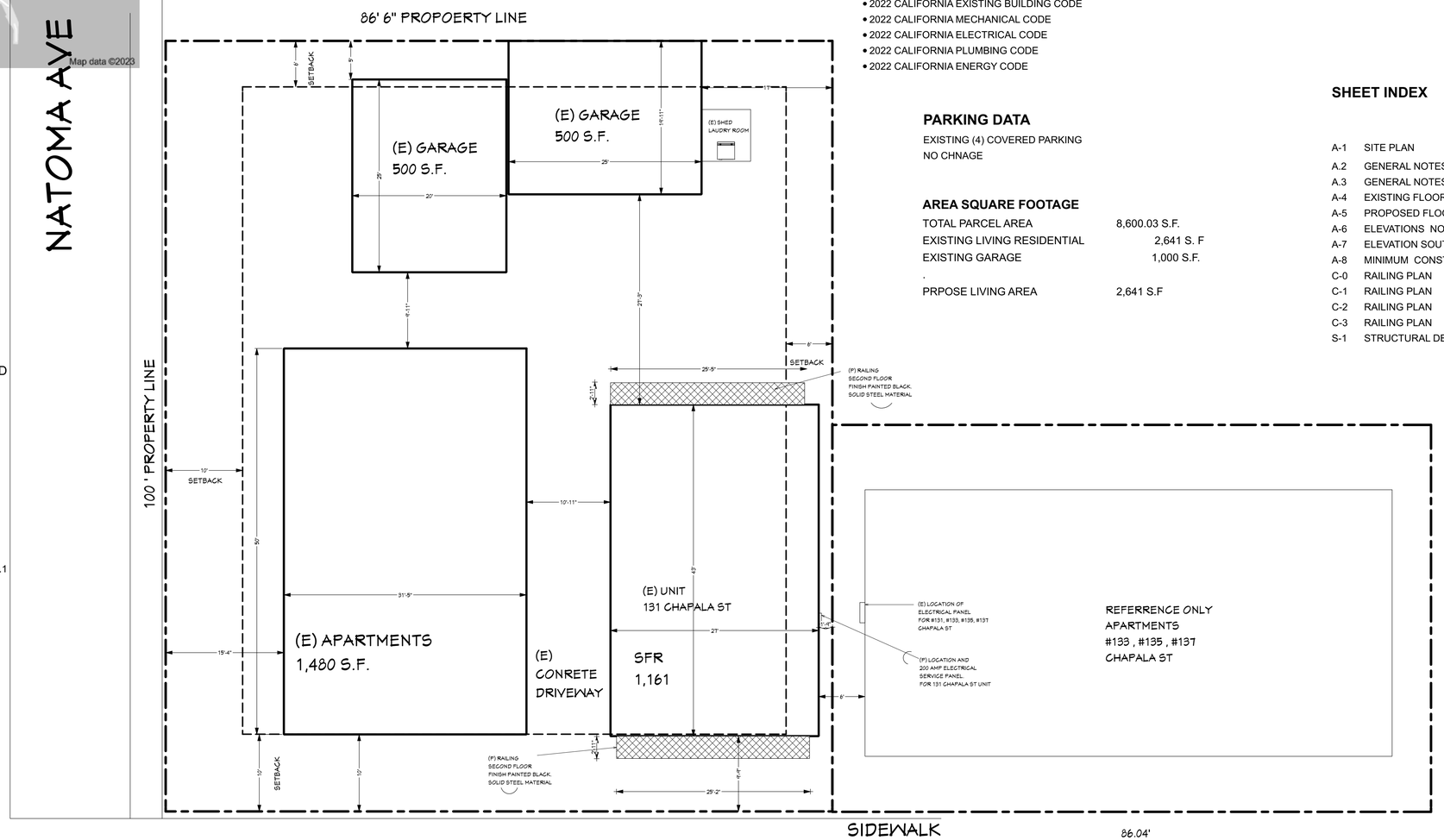
GREEN BUILD OPERATION & MANUAL

AT THE TIME OF FINAL INSPECTION, AN OPERATION & MAINTENANCE MANUAL, COMPACT DISC OR WEB BASED REFERENCE SHALL BE PLACED IN THE BUILDING. THIS MANUAL SHALL INCLUDE ALL OF THE ITEMS LISTED ON CALIFORNIA GREEN STANDARDS CODE SECTION 4.410.1

DRAWING NOTE:

REGARDLESS OF INDICATION CONTAINED IN THESE DRAWINGS, THE CONTRACTOR, BUILDER, HOME OWNER BUILDER SHALL CONFIRM ALL GRADES, DIMENSIONS, AND OTHER REFERENCES, AND SHALL BE RESPONSIBLE FOR THEIR ACCURACY.

ALL ELEVATIONS W/+- NOTIFY THESE ARE BASED OFF OF ROUGH FIELD MEASUREMENTS AND GOOGLE EARTH ELEVATIONS.



CODE COMPLIANCE

THIS PROJECT HAD BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE CITY OF SANTA BARBARA ADOPTED CODE AND ORDINANCE REQUIREMENTS AND THE CONTRACTOR/ BUILDER/OWNER WILL BE RESPONSIBLE FOR ALL CLARIFICATION DEEMED NECESSARY DURING THE CONSTRUCTION PHASES. ALL WORK SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT, MODIFIED EDITIONS OF THE FOLLOWING CODES:

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA RESIDENTIAL CODE
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
- 2022 CALIFORNIA EXISTING BUILDING CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ENERGY CODE

PARKING DATA

EXISTING (4) COVERED PARKING
NO CHNAGE

AREA SQUARE FOOTAGE

TOTAL PARCEL AREA	8,600.03 S.F.
EXISTING LIVING RESIDENTIAL	2,641 S. F
EXISTING GARAGE	1,000 S.F.
.	
PRPOSE LIVING AREA	2,641 S.F

SCOPE OF WORK:

PROPOSE REPLACE EXISTING EXTERIOR RAILING WITH NEW RAILING. SAME LOCATION. PROPOSED RAILING WILL HAVE TWISTED PICKETS (SWIRLS) AND MATCH THE EXISTING RAILING IN COLOR (BLACK)
AND MATERIALS (SOLID STEEL).
PROPOSE TO REINSTALL SHUTTERS TO MATCH EXISTING

SHEET INDEX

GENERAL NOTES 2:

1. CODE / AUTHORITY: ALL CONSTRUCTION SHALL COMPLY WITH ALL AMENDMENTS AS ADOPTED BY THE CITY OF SANTA BARBARA.
2. THE CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS AND DIMENSIONS OF THE PROJECT AND SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCES AND INCONSISTENCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
3. CONTRACTOR SHALL NOTIFY THE DESIGNER ABOUT ANY CONDITIONS REQUIRING A MODIFICATION OR CHANGE BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATE PLACEMENT OF THE BUILDING AND WALLS ON SITE.
5. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR OTHER GENERAL REQUIREMENTS AND COORDINATE WITH ARCHITECTURAL DRAWINGS.
6. CONTRACTOR SHALL NOT SCALE DRAWINGS.

N

SITE PLAN

SCALE: 1/8"-1'-0"

AREA
OF WORK
SECOND FLOOR

PP — (E) POWER POLE - NEAREST TO 131 CHAPALA ST

PROJECT DATA

PROJECT OWNER:	JANA KUHNLE
PROJECT ADDRESS:	102 NATOMA AVE #A (131 CHAPALA ST) SANTA BARBARA, CA. 93101
APN:	033-072-007
USE OF STRUCTURE:	SINGLE FAMILY RESIDENTIAL
ZONE:	R-4 / S-D-3 (HOTEL -MOTEL -MULTIPLE - FAMILY RESIDENCE / COASTAL OVERLAY)
COASTAL LAND USE PLAN:	COMMERCIAL / MEDIUM-HIGH DENSITY RESIDENTIAL (15-27 DU/AC)
AVG. SLOPE:	6% (EST. FROM CITY GIS)
GRADING	0 CY
LOT SIZE:	0.2 ACRES; APPROX. 8,600.03 SQ FT
HIGH FIRE AREA:	NO
ZONING CODE:	TITLE 28
TYPE OF CONSTRUCTION:	V-B
PARKING:	4
FLOOD ZONE:	AE
OCCUPANCY GROUP:	MULTI-FAMILY
YEAR BUILT:	
STORIES:	2

NO.	DESCRIPTION	BY	DATE

DESIGNER: ESTEBAN SOLIS
PO BOX 4171
VENTURA, CA. 93007
805-636-8173
BUILDINGPERMITCENTER@GMAIL.COM

SITE PLAN

OWNER: JANE KUHNLE
102 NATOMA AVE #A (131 CHAPALA ST)
SANTA BARBARA, CA. 93101

DATE:
04-15-2024

SCALE:

SHEET:
A-1

SITE GENERAL CONSTRUCTION NOTES

1. ALL WORK, MATERIALS, METHODS OF CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES AND REGULATIONS AS OUTLINED IN SECTION ON THIS COVER SHEET ENTITLED CODE COMPLIANCE.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT ALL SAFETY LAWS ARE STRICTLY ENFORCED TO MAINTAIN A SAFE CONSTRUCTION SITE. INSTALL TEMPORARY BRACING, SHORING, CAUTION CONES AND WARNING TAPE TO ENSURE THE SAFETY OF THE WORK AND THE WORKERS UNTIL PROJECT IS COMPLETED.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN ALL SUB-CONTRACTORS.
4. THE CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS PRIOR TO BID. ONSITE VERIFICATION OF ALL EXISTING DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SUB-CONTRACTORS.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN ALL UNDERGROUND UTILITIES AND ANY OTHER GOVERNING AGENCIES.
6. GENERAL CONTRACTOR SHALL VERIFY WITH THE OWNERS REQUIREMENTS FOR INSURANCE AND SHALL NAME OWNER, AS ADDITIONAL INSURED WHEN REQUESTED.
7. GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY TO ALL PARTS OF THE CONSTRUCTION PROJECT, EXCEPT WHERE THEY MAY CONFLICT WITH SPECIFIC DETAILS AND NOTES. WHEN CONDITIONS ARE NOT SPECIFICALLY INDICATED AND TYPICAL DETAILS DO NOT APPLY, THE CONTRACTOR SHALL NOTIFY THE DESIGNER IMMEDIATELY.
8. PLYWOOD AT EXTERIOR WALLS SHALL ALIGN WITH FACE OF CONCRETE FOOTING.
9. FINISH FLOOR (FIN.FL.) INDICATES TOP OF STRUCTURAL CONCRETE SLAB OR PLYWOOD DECK.
10. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.

DEMOLITION NOTES

1. PRIOR TO ANY DEMOLITION WORK CONTRACTOR SHALL HAVE ALL MATERIALS TO BE DISTURBED, TESTED FOR HAZARDOUS MATERIALS BY A CERTIFIED/LICENSED CONTRACTOR.
2. DURING THE PROCESS OF DEMOLITION, THE CONTRACTOR SHALL PROPERLY STORE ANY MATERIALS DEEMED SALVAGEABLE FOR REUSE IN NEW BUILDING PROJECT.
3. RECYCLE ANY BUILDING MATERIALS THAT CANNOT BE REUSED IN NEW BUILDING PROJECT.
4. ALL EXISTING FINISHES SHOULD BE PROTECTED IN AREAS ADJACENT TO SURFACES TO BE DEMOLISHED.
5. IN THE CASE, WHERE ADDITIONAL BUILDING ELEMENTS, OTHER THAN SHOWN ON DEMOLITION PLANS, CONTRACTOR SHALL CONTACT DESIGNER FOR REVIEW.
6. REMOVE ALL DASHED WALLS, DOORS, WINDOWS, FIXTURES AS INDICATED ON THE PLANS AND ANY RELATED PLUMBING/ELECTRICAL CONDUITS, OUTLETS AND/OR PIPING/VENTS.
7. PROTECT ANY EXISTING ELECTRICAL CONDUITS, DUCTWORK, EQUIPMENT AND PLUMBING LINES TO BE REUSED.
8. REMOVE EXISTING ELECTRICAL WIRING AND CONDUIT AND PLUMBING SUPPLY AND WASTE LINES THAT CANNOT BE REUSED

GENERAL NOTES 1:

1. CODE / AUTHORITY: ALL CONSTRUCTION SHALL COMPLY WITH ALL AMENDMENTS AS ADOPTED BY THE CITY OF SANTA BARBARA .
2. THE CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS AND DIMENSIONS OF THE PROJECT AND SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCES AND INCONSISTENCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
3. CONTRACTOR SHALL NOTIFY THE DESIGNER ABOUT ANY CONDITIONS REQUIRING A MODIFICATION OR CHANGE BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATE PLACEMENT OF THE BUILDING AND WALLS ON SITE.
5. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR OTHER GENERAL REQUIREMENTS AND COORDINATE WITH ARCHITECTURAL DRAWINGS.
6. CONTRACTOR SHALL NOT SCALE DRAWINGS.

GENERAL NOTES 2

1. ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY TO THE EXISTING SITE. ANY DISCREPANCIES AND UNEXP EXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE DESIGNERS ATTENTION IMMEDIATELY. DO NOT PROCEED WITH THE WORK IN THE AREA OF DISCREPANCIES UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO, HE SHALL BE PROCEEDING AT HIS OWN RISK.
2. OMISSIONS FROM THE DRAWINGS AND SPECIFICATION OR THE MIS-DESCRIPTION OF THE WORK WHICH IS MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWING AND SPECIFICATIONS, OR WHICH IS CUSTOMARILY PERFORMED, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR MIS-DESCRIBED DETAILS OF THE WORK AS IF FULLY AND COMPLETELY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.
3. DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER DRAWINGS SCALE OR PROPORTION. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
4. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE SELECTION OF ALL PLUMBING FIXTURES INCLUDING TOILETS, TUB/ SHOWER, LAVATORIES, SINKS AND ALL APPROPRIATE FAUCETS, TRIM AND DRAINS. THE OWNER SHALL SELECT ALL COLORS FINISH AND OPTIONS.
5. APPROVAL OF PLANS AND SPECIFICATIONS DOES NOT PERMIT THE VIOLATION OF ANY SECTION OF THE BUILDING CODE OR OTHER ORDINANCE OR LAW. CBC 105.4

GENERAL NOTES

30" X 30" ATTIC ACCESS PANEL. FLUSH WITH CEILING.
2. INSULATE (N) EXTERIOR WALLS FROM FLOOR TO ROOF WITH R-13 BATT INSULATION (TYP).
3. A DEDICATED 20 AMP CIRCUIT IS REQUIRED TO SERVE THE REQUIRED BATHROOM RECEPTACLES.
4. GENERAL LIGHT FIXTURES IN THE KITCHEN AND BATHROOM SHALL BE FLUORESCENT LIGHT FIXTURES OR EQUAL.
5. HOSE BIBS AND LAWN SPRINKLERS SYSTEMS SHALL HAVE BACK FLOW PREVENTION DEVICE.
6. LOCATE MANDATORY SIGNAGE FOR CONTINUOUS FAN OPERATION OVER FAN SWITCH.
7. KITCHEN FAN WITH MINIMUM RATE OF 100 CFM IS REQUIRED. MAXIMUM SOUND RATING OF 3 SONES FOR INTERMITTENT OPERATION.
8. LIGHTS IN BATHROOM, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS MUST BE HIGH EFFICACY OR CONTROLLED BY A MANUAL ON MOTION SENSOR.
9. ALL LIGHTS IN ALL HABITABLE ROOMS MUST BE HIGH EFFICACY, CONTROLLED BY A MANUAL ON MOTION SENSOR, OR CONTROLLED BY BY A DIMMER.
10. ALL OUTDOOR LIGHTING ATTACHED TO THE BUILDING MUST BE HIGH EFFICACY, CONTROLLED BY BOTH A MOTION SENSOR AND PHOTOCONTROL.
11. ALL LIGHTS TO MEET 2022 CEC ENERGY STANDARDS.
12. PROVIDE MECHANICAL VENTILATION CAPABLE OF PROVIDING 5 AIR CHANGES PER HOUR IF REQUIRED WHERE OPERABLE WINDOWS ARE NOT PROVIDED IN BATHROOMS AND WATER CLOSET COMPARTMENTS.
13. SUB-PANELS ARE NOT PERMITTED TO BE INSTALLED IN ANY CLOSET OR AREA WHERE A 30" X 36" UNOBSTRUCTED CLEAR CANNOT BE MAINTAINED.
14. TAMPER RESISTANT RECEPTACLES SHALL BE INSTALLED IN ALL AREAS SPECIFIED IN DWELLING PER 210.52 (CEC 406.11).
15. FACTORY BUILT FIREPLACES AND CHIMNEYS SHALL BE LISTED AND INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING AND THE MANUFACTURER'S INSTRUCTIONS.
16. PROVIDE KITCHEN VENTILATION AS REQUIRED UNDER CALIFORNIA ENERGY CODE, THEIR LISTING AND MANUFACTURER'S INSTRUCTIONS.
17. PROVIDE TWO OR MORE 20-AMPERE SMALL APPLIANCE BRANCH CIRCUITS IN KITCHEN, PANTRY, BREAKFAST ROOM OR DINING ROOM.
18. PROVIDE A MINIMUM OF ONE 20-AMPERE BRANCH CIRCUIT FOR LAUNDRY RECEPTACLES.

BEST MANAGEMENT PRACTICES

CONTRACTOR SHALL ADHERE TO THE BEST MANAGEMENT PRACTICES LISTED BELOW WHILE PROJECT IS UNDER CONSTRUCTION:
1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS OR ANY OTHER NATURAL DRAINAGE COURSE.
2. STOCKPILES OF EARTH, STONE, SAND OR OTHER RELATED CONSTRUCTION MATERIALS SHALL BE PROTECTED WITH TARPS TO PREVENT THEM FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WINDS AND WATER.
3. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED SEPARATELY IN APPROVED STORAGE CONTAINERS ON SITE.
4. TRASH AND CONSTRUCTION RELATED WASTE MATERIALS MUST BE DEPOSITED INTO A COVERED STORAGE CONTAINER AND REMOVED WHEN FULL FROM THE CONSTRUCTION SITE.
5. ANY SLOPES DENUDED OF VEGETATION OR HAVING DISTURBED SOIL MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
6. WASH DOWN AREAS MUST BE USED AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT. EXCESS CONCRETE, STUCCO, PLASTER, DRYWALL MUD OR PAINT SHALL NOT BE ALLOWED TO BE WASHED INTO THE PUBLIC RIGHT OF WAY OR ANY OTHER DRAINAGE SYSTEM. WASH DOWN AREAS SHALL ROUTINELY BE CLEANED AND THE WASTES REMANDED TO APPROPRIATE WASTE DISPOSAL CONTAINERS ON A REGULAR BASIS.
7. PROVIDE AT EACH EXIT FROM THE CONSTRUCTION SITE, A DEVICE TO REMOVE SEDIMENTS AND OTHER MATERIAL FROM THE TIRES OF ALL CONSTRUCTION VEHICLES EXITING THE CONSTRUCTION SITE TO PREVENT TRACKING OF THESE MATERIALS INTO THE PUBLIC ROAD WAY.
8. ACCIDENTAL DEPOSITS OF SEDIMENT AND OTHER MATERIAL TRACKED ON TO THE ROADWAY BY CONSTRUCTION TRUCKS LEAVING THE SITE SHALL BE SWEPT UP IMMEDIATELY.
9. CONTRACTOR TO SUBMIT CONSTRUCTION PLANS AND LOCATION OF WASH DOWN AREA, PARKING AND LOCATION OF OTHER CONSTRUCTION FACILITIES.

SMOKE ALARMS:
SHALL BE PLACED A MINIMUM OF 20 FEET HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE UNLESS LISTED FOR THAT USE (EXCEPTIONS: IONIZATION SMOKE ALARMS WITH AN ALARM SILENCING SWITCH OR PHOTOELECTRIC SMOKE ALARMS MAY BE INSTALLED 10 FEET OR GREATER FROM A PERMANENTLY INSTALLED COOKING APPLIANCE; PHOTOELECTRIC SMOKE ALARMS MAY BE INSTALLED 6 FEET OR GREATER FROM A PERMANENTLY INSTALLED COOKING APPLIANCE WHERE THE KITCHEN OR COOKING AREA AND ADJACENT SPACES HAVE NO CLEAR INTERIOR PARTITIONS AND THE 10 FOOT DISTANCE WOULD PROHIBIT THE PLACEMENT OF A SMOKE ALARM OR SMOKE DETECTOR REQUIRED BY OTHER SECTIONS OF THE CODE).
SHALL, WHERE POSSIBLE, NOT BE PLACED WITHIN 3 FEET HORIZONTALLY OF A DOOR TO A BATHROOM THAT CONTAINS A BATHTUB OR A SHOWER.
WHERE STAIRS LEAD TO OTHER OCCUPIED LEVELS, SHALL BE LOCATED SO THAT SMOKE RISING IN THE STAIRWAY CANNOT BE PREVENTED FROM REACHING THE SMOKE ALARM OR SMOKE DETECTOR BY AN INTERVENING DOOR OR OBSTRUCTION. FOR BASEMENTS SHALL BE LOCATED ON THE BASEMENT CEILING NEAR THE ENTRY TO THE STAIRS. FOR TRAY-SHAPED CEILINGS (COFFERED CEILINGS), SHALL BE INSTALLED ON THE HIGHEST PORTION OF THE CEILING OR ON
THE SLOPED PORTION OF THE CEILING WITHIN 12 INCHES VERTICALLY DOWN FROM THE HIGHEST POINT. FOR SLOPED CEILINGS WITH BEAMS RUNNING UP THE SLOPE, SHALL BE PLACED ON THE CEILING BETWEEN BEAMS. FOR SLOPED CEILINGS WITH BEAMS RUNNING PARALLEL TO THE RIDGE OR FOR SLOPED CEILINGS WITH BEAM POCKETS
FORMED BY INTERSECTING BEAMS, SHALL BE LOCATED AT THE BOTTOM OF THE BEAM.
9. WHEN AN ADDITION OR ALTERATION VALUATION EXCEEDS $1,000.00, CARBON MONOXIDE ALARM (WITH BATTERY BACK-UP) AT ALL NEW DWELLING UNITS AND IN SLEEPING UNITS WITHIN WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS OR SLEEPING UNITS THAT HAVE ATTACHED GARAGES (CRC R315.2). UNLESS THE REPAIR OR REMODEL DOES NOT INVOLVE THE REMOVAL OF WALL AND CEILING FINISHES AND THERE IS NO MEANS OF ACCESS BY MEANS OF AN ATTIC, BASEMENT, OR CRAWLSPACE, ALARMS ARE TO BE INTERCONNECTED SUCH THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THAT INDIVIDUAL UNIT. THEY ARE TO BE PROVIDED:
OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S). ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS.

GENERAL NOTES

1. AT EXTERIOR DOORS THAT ARE NOT REQUIRED EXIT DOORS, LANDING SHALL BE NOT MORE THAN 7-¾ IN. BELOW THE TOP OF THE THRESHOLD.
2. SMOKE DETECTOR REQUIREMENTS: IN NEW CONSTRUCTION, THE REQUIRED SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP.
3. VENT DRYER TO THE OUTSIDE WITH A VENT EQUIPPED WITH A BACKDRAFT DAMPER (CMC SEC.504.4)
4. SHOWERS SHALL BE FINISHED TO A HEIGHT OF 72 INCHES ABOVE THE DRAIN INLET.
5. SHOWER COMPARTMENT INTERIOR SHALL HAVE A MINIMUM 1,024 SQ. IN. AND BE CAPABLE OF ENCOMPASSING A 30 INCH CIRCLE.
6. WATER HEATER PRESSURE AND TEMPERATURE RELIEF DRAIN LINE NEEDS TO TERMINATE TO OUTSIDE THE BUILDING. (CPC.SEC. 608.5)
7. STRAP WATER HEATER AT UPPER AND LOWER ⅓ OF VERTICAL HEIGHT. (CPC SEC. 507.2)
8. MAXIMUM WATER USAGE FOR NEW CONSTRUCTION FOR ADDITIONS AND INTERIOR ALTERATIONS WITH PLUMBING WATER SAVING SHOWER HEADS SHALL HAVE A MAXIMUM FLOW OF 1.8 GAL/ MIN.
9. PROVIDE 2X6 STUDS IN PLUMBING WALL AT WATER CLOSET.
10. PROVIDE COMBUSTION AIR OPENING AT TOP AND BOTTOM OF THE COMPARTMENT.
11. PROVIDE A PERMANENTLY ACCESSIBLE 12" SQUARE BATHTUB ACCESS OR INCLUDE A NOTE ON THE PLAN THAT A NON-SLIP JOINT TRAP WILL BE USED. (CPC.SEC. 402.10)
12. THE REQUIRED SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP.
13 BATHROOMS WITH BATHING (TUBS, SHOWERS): PROVIDE AN EXHAUST FAN THAT PROVIDES VENTILATION OF 50 CU.FT./MIN. IN THE BATHROOM. FAN SHALL PROVIDE 20/50 CFM WITH A HUMIDISTAT. (CRC 303.3.1)
14. TAMPER RESISTANT RECEPTACLES (CEC ART. 406.11) RECEPTACLES WITHIN 5-½ FT. OF THE FLOOR ARE TO BE TAMPER RESISTANT RECEPTACLES.
15. AT EXTERIOR DOORS THAT ARE NOT REQUIRED EXIT DOORS LANDING SHALL BE NOT MORE THAN 7-¾ IN. BELOW THE TOP OF THE THRESHOLD.
16. EACH BEDROOM SHALL HAVE A DOOR DIRECTLY TO THE EXTERIOR OR A WINDOW THAT WILL PROVIDE A CLEAR SPACE OPENING OF AT LEAST 5.7 SQUARE FEET IN THE OPEN POSITION, AND A MINIMUM CLEAR OPENING WIDTH OF 20 INCHES AND CLEAR OPENING HEIGHT OF 24 INCHES AND A MAXIMUM SILL HEIGHT OF 44" ABOVE THE FLOOR. SLEEPING ROOMS AT GRADE FLOOR LEVEL MAY HAVE A CLEAR PACE OPENING OF 5 S.F.(CRC SEC. R310.1, 310.2.1, 310.2.2).
17. MATERIALS OTHER THAT STRUCTURAL ELEMENTS USED IN SHOWERS SHALL BE A TYPE NOT ADVERSELY AFFECTED BY MOISTURE. SHOWERS SHALL BE FINISHED TO A HEIGHT OF 72 INCHES ABOVE THE DRAIN INLET.
18. PROVIDE 2 X 6 STUDS IN PLUMBING WALL AT WATER CLOSET TO PREVENT EXCESSIVE NOTCHING OR BORING OF STUDS. (CRC SEC. 602.6)
19. WATER HEATER PRESSURE AND TEMPERATURE RELIEF DRAIN LINE NEEDS TO TERMINATE TO OUTSIDE THE BUILDING. (CPC SEC. 608.5).
20. IF USING A STORAGE TANK WATER HEATER. " STRAP WATER HEATER AT UPPER AND LOWER ⅓ OF VERTICAL HEIGHT." (CPC SEC. 507.2)
21. PROVIDE COMBUSTION AIR OPENING AT TOP AND BOTTOM OF THE COMPARTMENT.

NO.	DESCRIPTION	BY	DATE

DESIGNER: ESTEBAN SOLIS
PO BOX 4171
VENTURA, CA 93007
805-535-8173
EMAIL: BUILDINGPERMITCENTER@GMAIL.COM

GENERAL NOTES

OWNER: JANE KUHNLE
102 NATOMA AVE #A (131 CHAPALA ST)
SANTA BARBARA, CA. 93101

DATE: 03-15-20024

SCALE:

SHEET: A-2

General Notes:

maximum flow rate of 1.2 gallons per minute at 60 psi and shall have a minimum flow rate of 0.8 gallons per minute at 20 psi. [CGBSC 4.303]

6. Kitchen faucets shall have a maximum flow rate of 1.8 gallons per minute at 60 psi. 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. [CGBSC 4.303]

7. 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. (Note: A hand-held shower is to be considered a showerhead for purposes of this provision) [CGBSC 4.303]

Safety Glazing:

1. Provide safety glazing in all fixed and operable panels of swinging, sliding and bi-fold doors. [CRC R308.4]

2. Unless there is an intervening wall or other permanent barrier, provide safety glazing in sidelights or windows adjacent to a door where the bottom edge of sidelight/window is less than 60 inches above the floor or walking surface, and the nearest vertical edge is within a 24" of either side of the door in a closed position or where the glazing on a wall is less than 180 degrees from the plane of the door in a closed position and within 24" of the hinge side of an in-swinging door. [CRC R308.4.2]

3. Unless protected by a horizontal protective railing at 34 inches to 38 inches above finish floor capable of withstanding a horizontal load of 50 pounds per linear foot, provide safety glazing at fixed or operable panels exceeding 9 square feet where the lower edge of the glazing is less than 18 inches above finish floor, the top edge is more than 36 inches above the floor and there are one or more walking surfaces within 36 inches of the glazing. [CRC R308.4.3]

4. Provide safety glazing in glass railings or balusters. Structural glass baluster panels shall be installed with an attached top rail or handrail supported by not less than three glass baluster panels, or shall be otherwise supported to remain in place should one glass baluster panel fail. [CRC R308.4.4]

5. Provide safety glazing in enclosures for or walls facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom edge of the glass is less than 60 inches from the floor and within 5 feet of the water's edge measured horizontally and in a straight line from the water's edge of a bathtub, hot tub, spa, whirlpool or swimming pool or from the edge of a shower, sauna or steam room. [CRC R308.4.5]

6. Provide safety glazing at fixed or operable panels where the bottom edge of glass is less than 36 inches above the plane of the adjacent walking surfaces of stairways and intermediate landings. [CRC R308.4.6]

7. Fixed or operable glass panels adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within a 60 inch horizontal arc less than 180 degrees from the bottom tread nosing shall be provided with safety glazing unless protected by a guard or handrail complying with CRC R312 and the plane of glass is more than 18" from the guard. [CRC R308.4.7]

Attic Access:

1. Provide minimum 22"x 30" access to attics that exceed 30 square feet in area and have a vertical height of 30 inches or greater and shall be located in a hallway or other readily accessible location. Where a FAU or water heater is installed in the attic or under-floor space, the access opening shall be sized to accommodate the largest component of the equipment in such space, and not less than 22"x30". [CRC R807, CMC 304.4]

Electrical Requirements:

1. Electrical panelboards and metal boxes in common wall(s) between garage and dwelling shall be protected from fire for membrane penetrations [CRC R302.6].

2. All non-locking type 125-volt, 15 and 20 ampere receptacles in a dwelling unit shall be listed tamper-resistant receptacles. (Exceptions: (1) receptacles more than 5'-6" above the floor, (2) receptacles part of a luminaire or appliance, (3) a single receptacle or a duplex receptacle for two appliances that are not easily moved and located within dedicated space and are chord-and-plug connected as per CEC 400.10(A)(6), (A)(7) or (A)(8), and (4) non-grounding receptacles used for replacements as permitted in CEC 406.4 (D) (2) (a). [CEC 406.12]

3. All 120-volt, single phase, 15 and 20 ampere branch circuits supplying outlets or devices installed in dwelling unit kitchen, family room, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected by a listed arc-fault/branch circuit interrupter, combination type, a branch/feeder type, a listed supplemental arc protection circuit breaker installed to provide protection of the branch circuit. [CEC 210.12(A)(1) through (6)].

4. Where branch-circuit wiring is modified, replaced or extended in areas specified in CEC 210.12(A), the branch circuit shall be protected by either a listed combination-type AFCI located at the origin of the branch circuit or a listed outlet branch-circuit type AFCI located at the first receptacle of the existing branch circuit. [CEC 210.12 (D)]

5. Electrical receptacle location/spacing shall be provided at wall spaces 2 feet or wider, not more than 6 feet from openings, not more than 12 feet on center. These receptacles are in addition to any receptacle that is part of a luminaire, appliance, controlled by a switch or located within cabinets or cupboards. Note that fixed glazing panels are considered wall space for purposes of this code section. [CEC 210.52(A)(1)(2)].

6. In kitchen, pantries, breakfast rooms, dining rooms and similar areas, countertop and work surface receptacles shall be provided at each section of countertop and work surface 12" or wider. Receptacles are to be spaced such that no point along the wall line is more than 24" measured horizontally from a receptacle outlet in that space. Countertop space shall be considered continuous when the space is 12" or deeper behind a sink, countertop cooking unit or range placed parallel to a wall or 18" or deeper behind a sink, countertop cooking unit or range placed in a corner configuration (the 18" is measured to the inside corner of the wall along a line that is perpendicular to the rear of the sink, countertop cooking unit or range). [CEC 210.52(C)].

7. Provide a minimum of (1) waterproof/GFCI outdoor receptacle at front and rear of structure. All exterior outlets shall be waterproof/GFCI outdoor receptacles. [CEC 210.52 (E)(1)].

8. At least one receptacle outlet, in addition to those required for specific equipment, shall be installed in each basement, in each attached garage, and in each detached garage and/or accessory building with electric power. [CEC 210.52 (G)(1)].

9. In garages at least one receptacle outlet shall be installed for each car space. [CEC 210.52 (G)(1)].

10. At least one 120-volt, 20-amp dedicated branch circuit shall be installed to supply receptacle outlets in attached and detached garages with electric power. [CEC 210.11(C)(4)]

11. At least one receptacle outlet shall be installed in each hallway 10 feet or more in length (hallway length shall be considered the length along the centerline of the hallway without passing through a doorway). [CEC 210.52(H)]

12. Receptacle outlets are required within 3' of the outside edge of each basin and shall be located on the wall or partition adjacent to the basin or in the countertop. Countertop receptacles must be listed for that use. Receptacles are to be GFCI protected. [CEC 210.52]

13. Provide a waterproof/GFCI outdoor receptacle within the perimeter of balconies, decks and porches that are attached to a dwelling unit and are accessible from the inside of the dwelling unit. [CEC 210.52 (E)(3)].

14. Provide a GFIC 15 or 20 amp receptacle at unfinished basement in addition to those specific for equipment. [CEC 210.52(G)]

15. Indicate (1) GFCI/WP outlet within 25 feet of the air conditioning unit and a disconnect switch. [CEC 210.63]

16. Provide separate disconnect means (if panelboard or other disconnecting means are not within sight) for mini-split systems. [CMC 301.4, CEC 430.102, 440.8, 430.87 Ex (1), 430.12, 440.14]

17. All kitchen countertop receptacles are to be GFCI protected. Receptacles within 6 feet from the top inside edge of the bowl of the sink, receptacles within 6 feet of the outside edge of any bathtub or shower stall, and receptacles in laundry areas are to be GFCI protected. [CEC 210.8]

18. All receptacles in bathrooms shall be GFCI protected. [CEC 210.8].

19. Receptacles on undedicated circuits in garage and unfinished basements to be GFCI protected. [CEC 210.8].

20. All receptacles in damp or wet locations (WP) shall be listed weather-resistant type and be GFCI protected. An outlet box hood installed for this purpose shall be listed and identified as "Extra Duty". [CEC 406.9].

Lighting Fixtures - Switching Requirements:

1. Provide a minimum of one wall switch controlled lighting outlet in every habitable room: bathroom, hallways, stairways, attached garages, detached garages with electrical power and every outdoor entrance or exit which provides grade level access. [CEC 210.70].

2. Where one or more lighting outlets are installed at interior stairways, there shall be a wall switch at each floor level. Any landing level that includes an entry way where the stairway between floor levels has six or more risers shall also be provided with a switch. [CEC 210.70]

Smoke Detectors/Carbon Monoxide Alarms:

1. Provide 120 volt hard-wired, interconnected smoke alarms: (with battery back-up) at all new construction per CRC R314.3. They are to be provided:
   - In each sleeping room(s).
   - On the wall or ceiling outside each separate sleeping area in the immediate vicinity of the bedrooms.
   - Minimum of (1) detector in each story including basements and habitable attics (with alarm audible in sleeping rooms).

2. Alterations, repairs and additions to dwelling units shall be provided with smoke alarms. Smoke alarms are required to be installed in existing sleeping rooms and areas providing access to sleeping areas in addition to those required for new construction (CRC R314.6). Unless the repair or remodel does not involve the removal of wall and ceiling finishes and there is no means of access by means of an attic, basement, or crawlspace, alarms are to be interconnected such that activation of one alarm shall activate all of the alarms in that individual unit. They are to be provided:
   - In each sleeping room(s).
   - On the wall or ceiling outside each separate sleeping area in the immediate vicinity of the bedrooms.
   - Minimum of (1) detector in each story including basements and habitable attics (with alarm audible in sleeping rooms).

3. Per CRC R315, provide 120 volt hard-wired, interconnected Carbon Monoxide Alarm (with battery back-up) at all new dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units or sleeping units that have attached garages. Alarms are to be interconnected such that activation of one alarm shall activate all of the alarms in that individual unit. They are to be provided:
   - Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s)
   - On every level of a dwelling unit including basements

4. Alterations, repairs and additions to dwelling units shall be provided with Carbon Monoxide Alarm. Carbon Monoxide Alarm (with battery back-up) are required to be installed in all dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units or sleeping units that have attached garages (CRC R315.2). Unless the repair or remodel does not involve the removal of wall and ceiling finishes and there is no means of access by means of an attic, basement, or crawlspace, alarms are to be interconnected such that activation of one alarm shall activate all of the alarms in that individual unit. They are to be provided:
   - Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s)
   - On every level of a dwelling unit including basements

Electric Vehicle Charging Stations:

1. New one- and two- family dwellings with attached private garages are to comply with Section A4.106.4.1 and Section A4.106.4.1.1 of the California Green Building Standards Code to facilitate future installation and use of EV chargers. For each dwelling unit, install a minimum 1" inside diameter listed raceway to accommodate a dedicated 208/240v branch circuit. Raceway shall originate at main or sub panel and terminate in a listed box in close proximity to the proposed EV charger location. Raceways must be continuous at enclosed, inaccessible, or concealed spaces. Service panel shall provide capacity to install 40 amp minimum dedicated branch circuit and spaces reserved to permit installation of a branch circuit overcurrent device, identify the reserved space and raceway termination for future EV as "EV CAPABLE." [CRC R309.8]

Energy Conservation Requirements:

1. All interior residential lighting is to be high efficacy. Luminaires with integral sources (e.g., LED luminaires) and changeable lamps must be CEC certified as meeting the requirements of JA8.

2. Lighting not automatically classified as high efficacy by the CA Energy Commission (e.g., pin-based fluorescent luminaires, pulse-start halide luminaires, high pressure sodium luminaries) is to have a light source or lamp installed in them at the time of inspection that meets the requirements of Joint Appendix JA8.

3. Recessed down-lighting is to contain light sources that are JA8-certified, shall not contain screw based lamps and shall not contain light sources that are labeled "not for use in enclosed fixtures" or "not for use in recessed fixtures". They shall be listed for zero clearance, have a label that certifies the luminaire as airtight when tested in accordance with ASTM E283 (with the exception of exhaust fan housings) and be readily accessible for ballast or driver maintenance and replacement.

4. Except for closets less than 70 square feet and hallways, all luminaires that are installed with JA8-certified light sources are required to be controlled by either a dimmer or vacancy sensor.

5. The number of electrical boxes located more than 5 feet above finished floor that do not contain a luminaire or other device shall not exceed the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor or fan speed control. [California Energy Code Section 150 (k) 1 (B)]

6. At least one luminaire each bathroom, garage, laundry room, and utility room shall be controlled by a manual on/automatic-off vacancy sensor. [California Energy Code Section 150 (k) 2 (J)]

7. Outdoor lighting permanently mounted to a single family dwelling or other buildings in the same lot shall be high efficacy and must be controlled by an on/off switch that does not override to ON as listed below. Also, the lighting must by one of the following methods:

   i) Controlled by photocell and motion sensor. Controls that override to ON shall not be allowed unless the override automatically reactivates the motion sensor within 6 hours, or

   ii) Controlled by any of the following:

   (1) Photocell and automatic time switch control. Controls that override to ON shall not be allowed unless the override automatically return the photo-control and automatic time switch control to its normal operation within 6 hours, or

   (2) Astronomical time clock. Controls that override to ON shall not be allowed unless the override automatically return the astronomical clock its normal operation within 6 hours and which is programmed to automatically turn the outdoor lighting OFF during daylight hours, or

   (3) Energy management control system which meets all of the following requirements. At a minimum provides the functionality of an astronomical time clock in accordance with Section 110.9 of the standards; meets the Installation Certification requirements in Section 130.4 of the standards; meets the requirements for an EMCS in Section 130.5 of the standards; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours.

8. Water heating systems using gas or propane water heaters to serve individual dwelling units shall include: (1) a dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit within 3 feet of water heater and accessible to the water heater with no obstructions (see additional requirements for the field), (2) a category III or IV vent or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed, (3) a condensate drain that is no more than 2" higher than the base of the installed water heater and allows natural draining without pump assistance, and (4) a gas supply line with a capacity of at least 200,000 Btu/hr. [CEC 150.0(n)(1)(a)]

Plumbing Requirements:

1. Provide a 30" clear width and 24" clear space in front of the water closet. [CPC 402.5]

2. Showers are to have a minimum interior area of 1024 square inches and shall be capable of encompassing a 30 inch circle. [CPC 408.6]

3. Gas sediment traps shall be provided and installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical, before the flex connector for gas Furnaces, Water Heaters and Pool Heaters. [CPC 1212.9]

4. No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwashing machine. Listed air gaps shall be installed with the flood-level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher. [CPC 807.3]

5. CPVC and PEX piping used for domestic purposes shall be flushed as prescribed in CPC 604.1.1 and 604.1.2 and a FLUSH & TAG document shall be provided to the homeowner per CPC 604 at time of final inspection.

6. Shower receptors (pans) shall be tested for watertightness by filling with water to the level of the rough threshold. The test plug shall be so placed that both upper and under sides of the subpan shall be subject to the test at the point where it is clamped to the drain. Roll-in shower receptors (curb-less) shall have a temporary curb built to a minimum height of 2" from the center of the drain for such testing. [CPC 408.7.5]

Mechanical Requirements:

1. Provide minimum 30 inches in depth, width & height of unobstructed working space in front of warm-air furnace. [CMC 304].

2. Provide a 42" high guard where any portion of rooftop equipment is less than 6 feet from the edge of a roof or similar hazard. [CMC 303]

3. Access opening to attic or under floor furnace shall be no more than 20 feet from furnace. [CMC 304.4].

4. Provide protection from damage to furnace or other gas-fired equipment by automobiles, at rear of garage. Pilots, burners, or heating elements shall be 18" minimum above floor. [CMC 305].

5. Condensate line clean-out shall be provided for all primary condensate piping at each condensing appliance. [CMC 310.3.1]

6. Refrigerant access port protection shall be provided with locking-type tamper-resistant caps or in a manner approved by AHJ. [CMC 1105.11 incl. Ex.]

7. Provide air conditioning unit with seismic anchorage on min. 4" concrete slab 3" above grade. [CMC 303.4] Installations over pre-manufactured PVC pads shall be anchored to the grade as approved by AHJ.

8. Provide permanent identification of equipment where more than one heating, cooling, ventilation, or refrigerating system is installed on the roof of a building or within a building, identifying the area or space served by the equipment. [CMC 303.6]

9. Installed air conditioning and heat pump outdoor condensing units shall have a clearance of at least five (5) feet from the outlet of any dryer vent. [CEC 150.0(h)(3)(A)]

10. Kitchens are to be provided with an exhaust fan with an exhaust rate of 100 cfm minimum for intermittent exhaust or 5 air changes per hour if continuous. Kitchen hood systems that vent air to the outside may be used for this purpose. [California Energy Code Section 150(o)]

11. Rooms containing a bathtub, shower, spa, or similar source of moisture are to be provided with an exhaust fan with an exhaust rate of 50 cfm minimum intermittent or 20 cfm continuous, ducted to the exterior of the building. Please indicate this on the floor plan or electrical floor plan. Unless it functions as a component of a whole house ventilation system, it must be controlled by a readily accessible humidistat and shall be Energy Star compliant. [CGBSC 4.506; California Energy Code Section 150(o)]

12. Clothes dryer to be vented outside and equipped with a back draft damper. Vent is to have maximum vertical and horizontal length including (2) 90 degree elbows of 14 feet. A length of 2 feet shall be deducted for each elbow in excess of two. If a dryer booster fan is proposed, please specify compatible fan on plans. [CMC 504.4]

Cal Green Requirements:

1. Mandatory provisions of Chapter 4 of the California Green Building Standards Code apply to new residential buildings, additions or alterations of existing residential buildings where the addition or alteration increases the buildings conditioned area, volume or size. The requirements apply only to and/or within the specific area of the addition or alteration. [CGBSC 301.1.1]

2. An approved County sorting/recycling facility must be utilized for construction waste management to comply with Construction Waste Reduction, Disposal and Recycling provisions of California Green Building Standards Code Section 4.408.1 (minimum 65% non-hazardous materials recycled and/or salvaged for re-use). [CGBSC 4.408]

3. At the time of final inspection, an operation & maintenance manual, compact disc or web based reference shall be placed in the building. This manual shall include all of the items listed on California Green Building Standards Code Section 4.410.1. [CGBSC 4.410]

4. Residences built and available for use on or before January 1, 1994 undergoing alterations and/or additions are to replace all non-compliant plumbing fixtures with water-conserving plumbing fixtures. Non-compliant plumbing fixtures are as follows: (1) any toilet manufactured to use more than 1.6 gallons of water per flush, (2) any urinal manufactured to use more than one gallon of water per flush, (3) showerhead manufactured to have a flow capacity of more than 2.5 gallons of water per minute, (4) any interior faucet that emits more than 2.2 gallons of water per minute. [CGBSC 4.303; California Civil Code Section 1101.1]

5. Water closets, showerheads and lavatory faucets are to be water-conserving type plumbing fixtures and meet the following criteria: (1) the effective flush of water closets shall not exceed 1.28 gallons per flush, (2) showerheads shall have a maximum flow rate of 1.8 gallons per minute at 80 psi, (3) lavatory faucets shall have a

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NO.	DESCRIPTION	BY	DATE

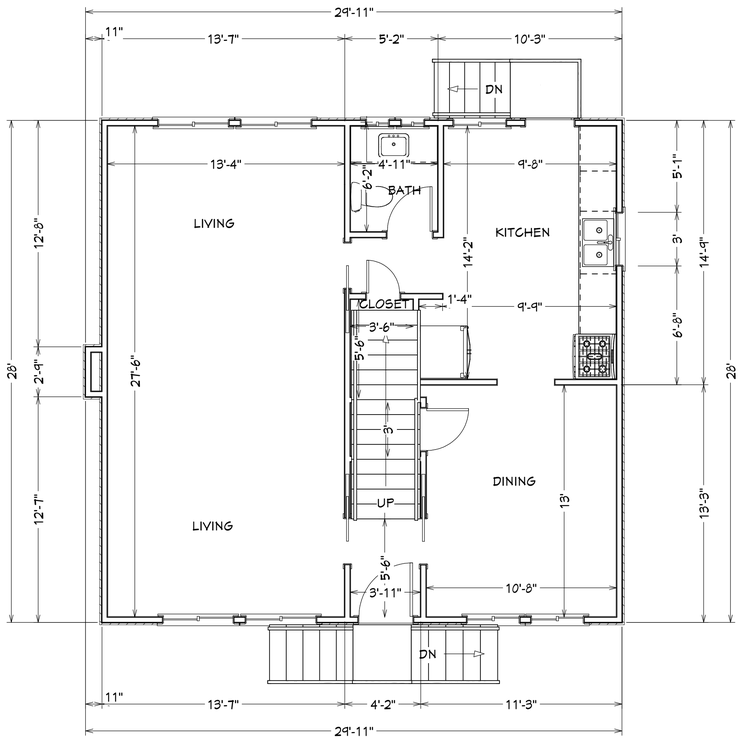
GENERAL NOTES SHEET 2

OWNER: JANE KUHNLE
102 NATOMA AVE #A (131 CHAPALA ST)
SANTA BARBARA, CA. 93101

DATE: 03-15-2024

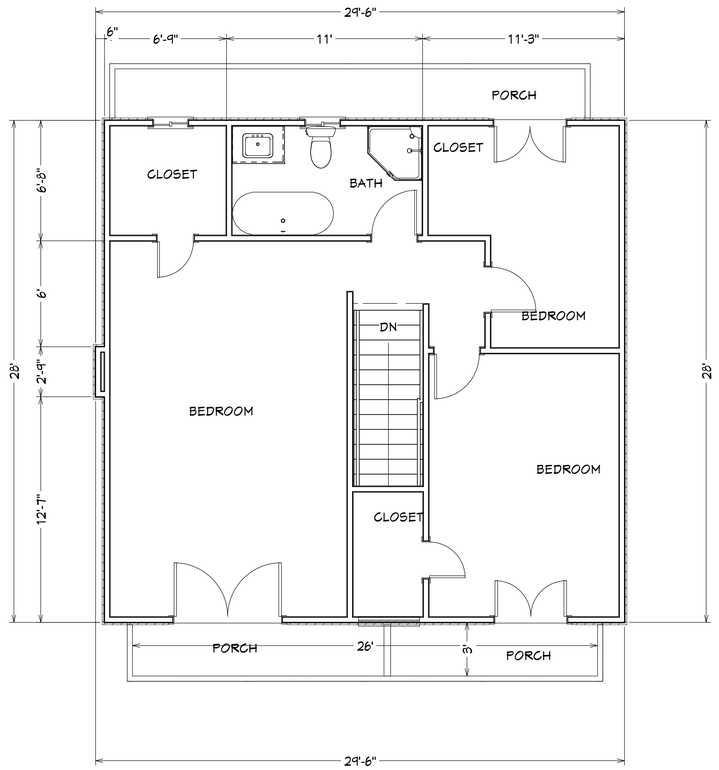
SCALE:

SHEET: A-3



EXISTING FIRST FLOOR PLAN

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



EXISTING SECOND FLOOR PLAN

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

NO.	DESCRIPTION	BY	DATE

DESIGNER: ESTEBAN SOLIS
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EXISTING FLOOR PLAN

OWNER: JANE KUHNLE
102 NATOMA AVE #A (131 CHAPALA ST)
SANTA BARBARA, CA. 93101

DATE: 03-15-2024

SCALE:

SHEET: A-4

WINDOW SCHEDULE

MARK SYMBOL	STATUS	QTY	WIDTH	HEIGHT	R/O	DESCRIPTION	GLAZING TYPE	TEMPERED	EGRESS	U-FACTOR	SHGC	MAT
A	NEW	1	36	36"	37" X 37"	DOUBLE HUNG	DOUBLE PANE WITH LOW-E	YES	NO	0.30	0.23	WOOD
B	NEW	2	16"	24"	17 X 25"	DOUBLE HUNG	DOUBLE PANE WITH LOW-E	YES	NO	0.30	0.23	WOOD

OPENING AT REQUIRED GUARDRAILS FOR STAIRWAY
SHALL NOT ALLOW THE PASSAGE OF A SHERE
4 INCES IN DIAMETER. THE TRIANGULAR OPENING FORMED
BY THE RISER, TREAD, AND BOTTOM ELEMENT
OF A GUARDRAIL AT A STAIR SHALL NOT ALLOW
THE PASSAGE OF SPHERE 6 INCHES IN DIAMETER.
GUARDS ON THE OPEN SIDES OF THE STAIRS
SHALL HAVE OPENING THAT WILL NOT ALLOW
THE PASSAGE OF A SHERE 4 INCHES IN DIAMETER.

GLAZING NOTES

1 NFRC THERMAL PERFORMANCE LABELS SHALL REMAIN ON THE WINDOW AND / OR DOORS UNTIL FINAL INSPECTION

NOTE: SIZE (W X H) OPERATION FRAME MATERIAL FINISH GLASS GLAZING

1 LOCATION OF EMERGENCY ESCAPES OPENINGS INDICATED ON PLANS VIA THE "EGRESS" LABEL ADJACENT TO THE WINDOW WHERE REQUIRED. MINIMUM NET CLEAR OPENING AREA SHALL BE 5.7 SQUARE FEET (OR 5.0 SQUARE FEET FOR GRADE FLOOR OPENINGS). OPENING HEIGHT SHALL BE 24 INCHES MINIMUM CLEAR AND OPENING WIDTH SHALL BE 20 INCHES MINIMUM CLEAR. MAXIMUM OPENING SILL HEIGHT SHALL BE 44 INCHES TO ACTUAL WINDOW OPENING. CRC R310.1

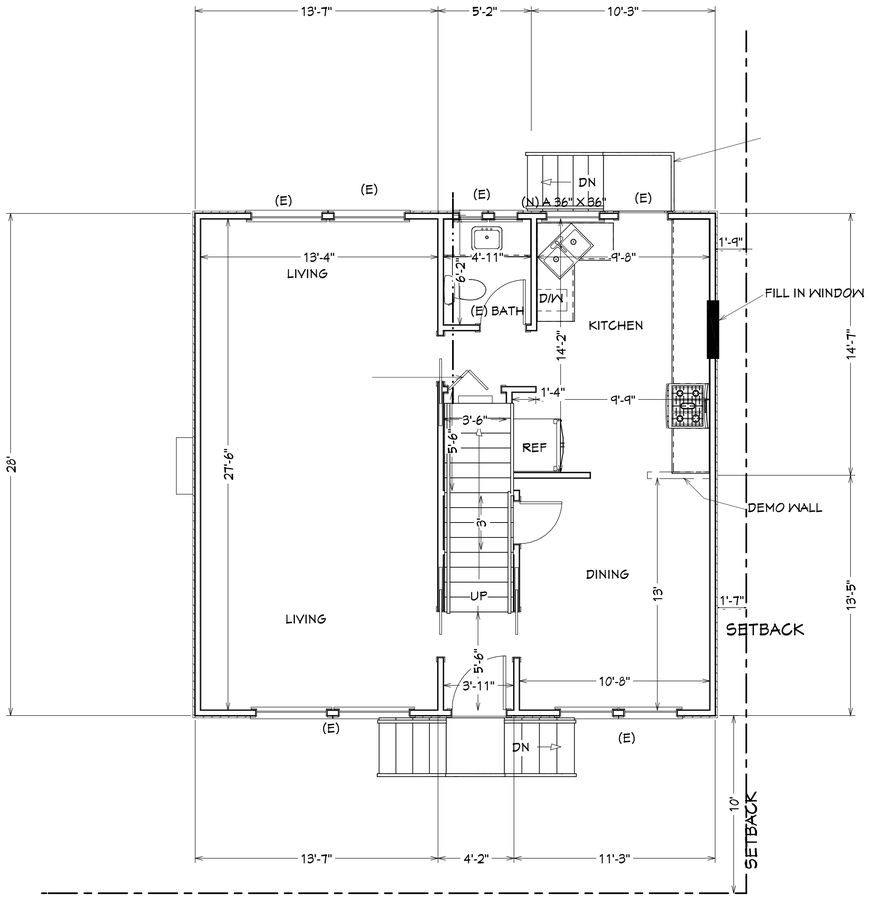
MARK QTY STATUS

DOOR SCHEDULE

NOTE: SIZE (W X H) OPERATION FRAME MATERIAL FINISH ENERGY EFFICIENCY

BEDROOM EMERGENCY EGRESS

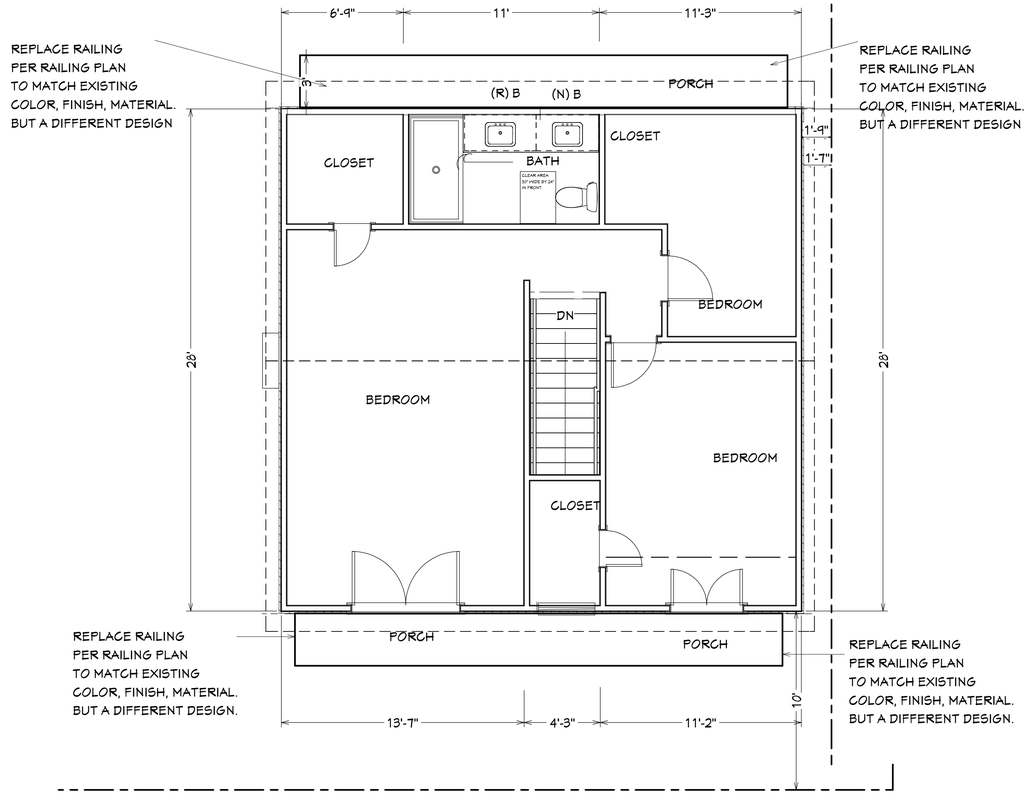
EACH BEDROOM SHALL HAVE A DOOR DIRECTLY TO THE EXTERIOR OR A WINDOW THAT WILL PROVIDE A CLEAR SPACE OPENING OF AT LEAST 5.7 SQUARE FEET IN THE OPEN POSITION, AND A MINIMUM CLEAR OPENING WIDTH OF 20 INCHES AND CLEAR OPENING HEIGHT OF 24 INCHES AND A MAXIMUM SILL HEIGHT OF 44" ABOVE THE FLOOR. SLEEPING ROOMS AT GRADE FLOOR LEVEL MAY HAVE A CLEAR SPACE OPENING OF 5 SQ.FT.



PROPOSED FIRST FLOOR PLAN

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

WINDOWS AND GAURDRAILS WILL
MATCH EXISTING COLOR, FINISH
AND MATERIAL



PROPOSED SECOND FLOOR PLAN

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

NO.	DESCRIPTION	BY	DATE

DESIGNER: ESTEBAN SOLIS
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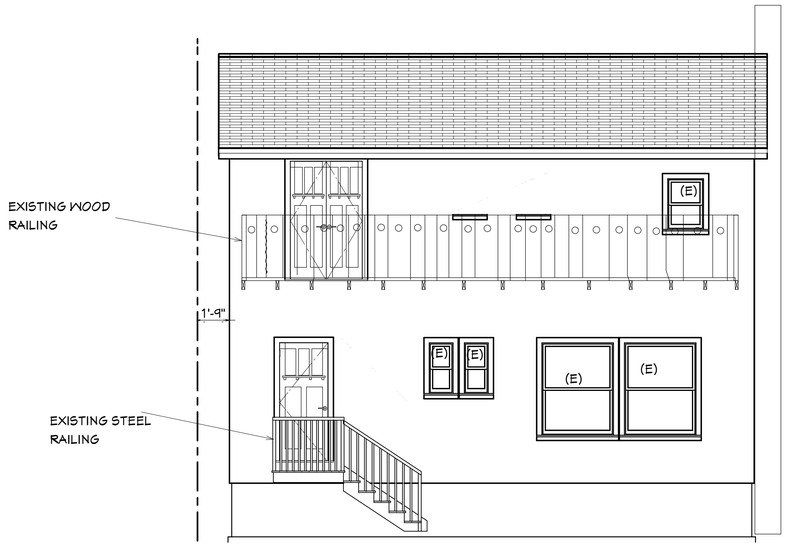
PROPOSED FLOOR PLAN

OWNER: JANE KUHNLE
102 NATOMA AVE #A (131 CHAPALA ST)
SANTA BARBARA, CA. 93101

DATE: 03-15-2024

SCALE:

SHEET: A-5



EXISTING NORTH ELEVATION

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

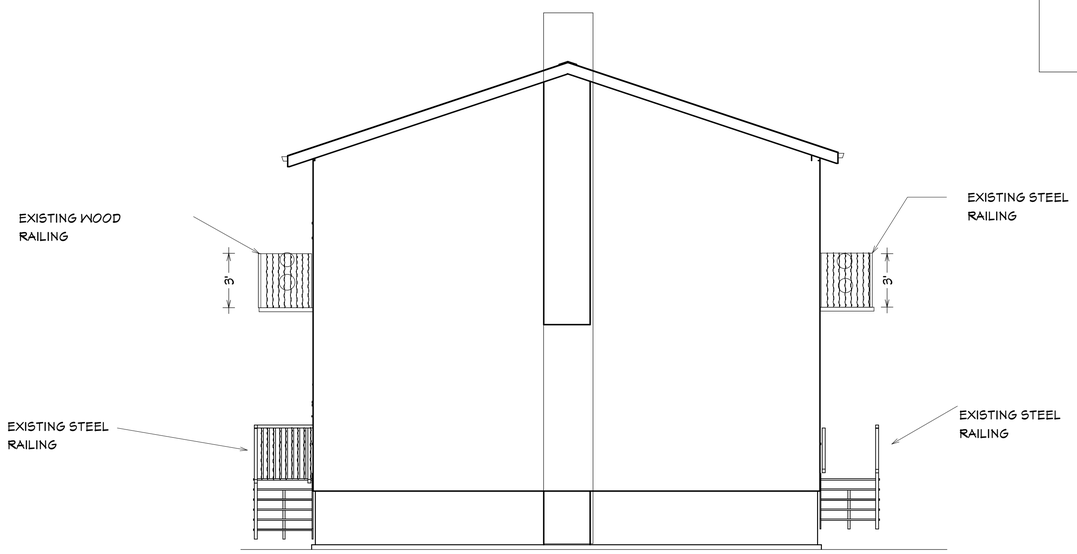
PROPOSED NORTH ELEVATION

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

PROPOSED MATERIAL AND COLOR BOARD

(P) RAILING COLOR FINISH:
BLACK
BY: BENJAMIN MOORE

(P) RAILING MATERIAL:
SOLID STEEL



Elevation 4

EXISTING EAST ELEVATION

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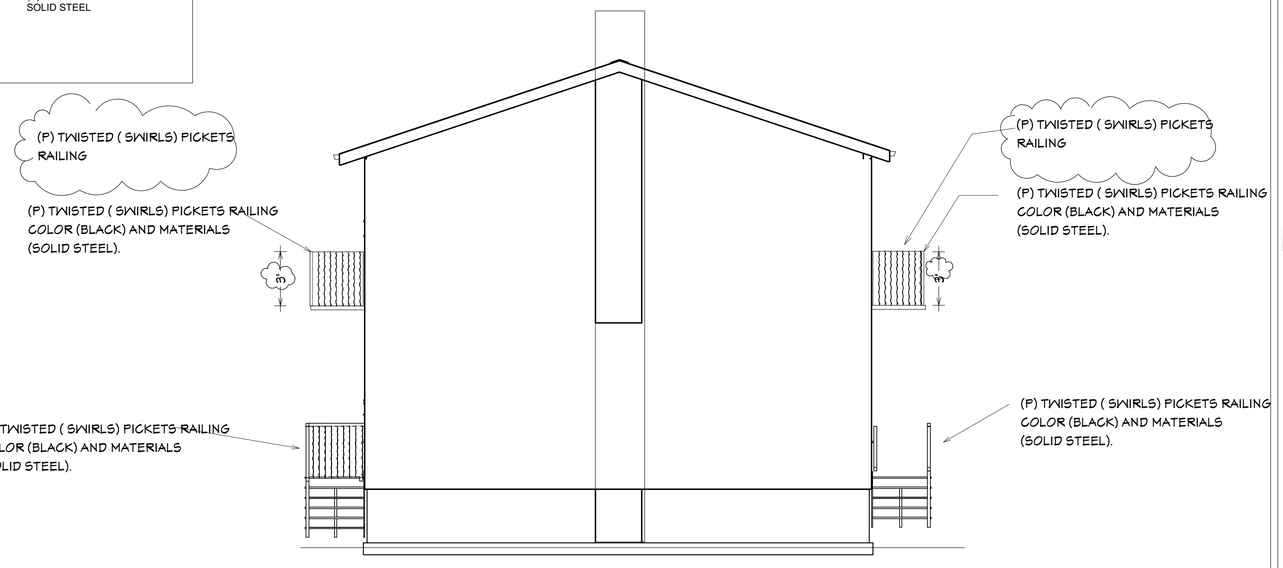

PROPOSED EAST ELEVATION

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

NO.	DESCRIPTION	BY	DATE

DESIGNER: ESTEBAN SOLIS
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ELEVATIONS
NORTH - EAST

OWNER: JANE KUHNLE
131 CHAPALA ST
SANTA BARBARA, CA. 93101

DATE:
04-15-2024

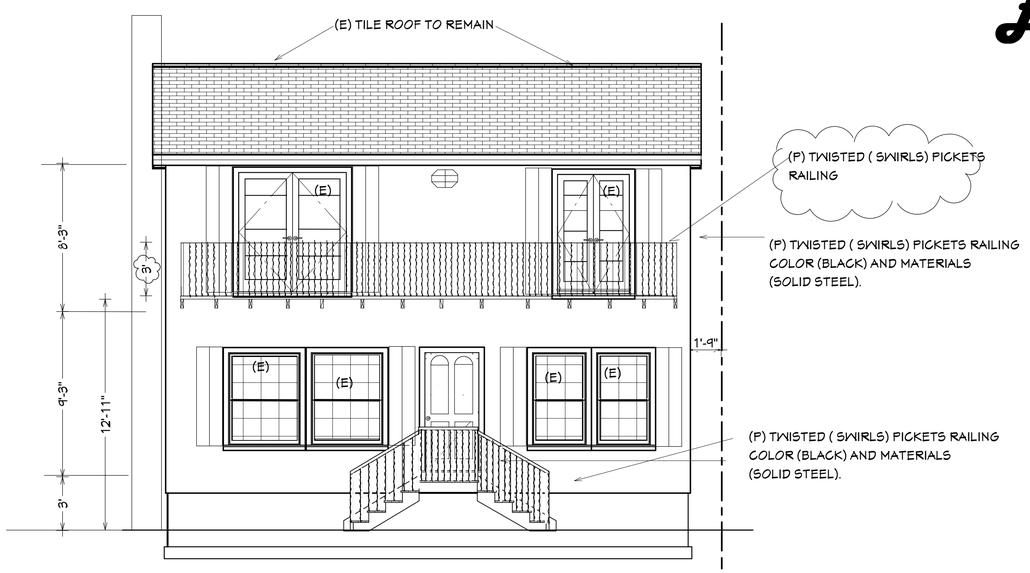
SCALE:

SHEET:

A-6

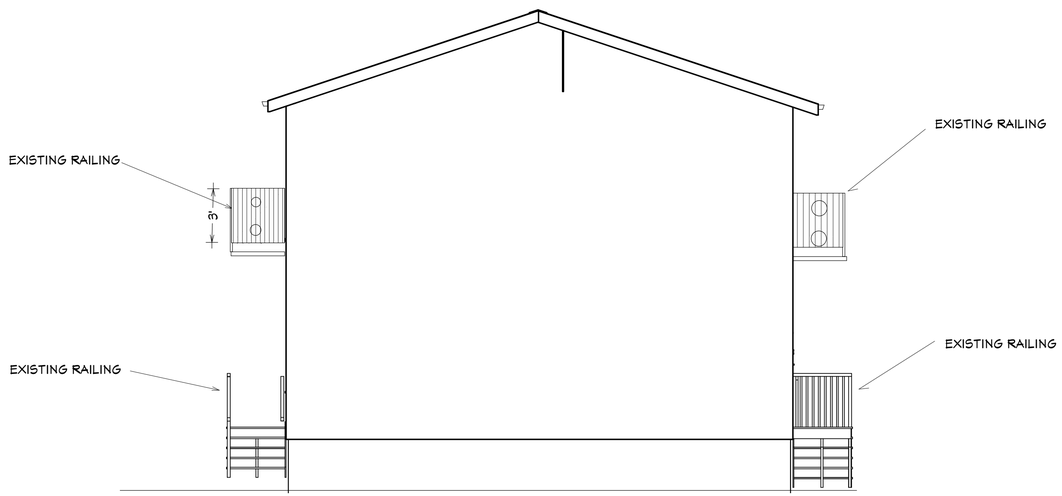
EXISTING SOUTH ELEVATION

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



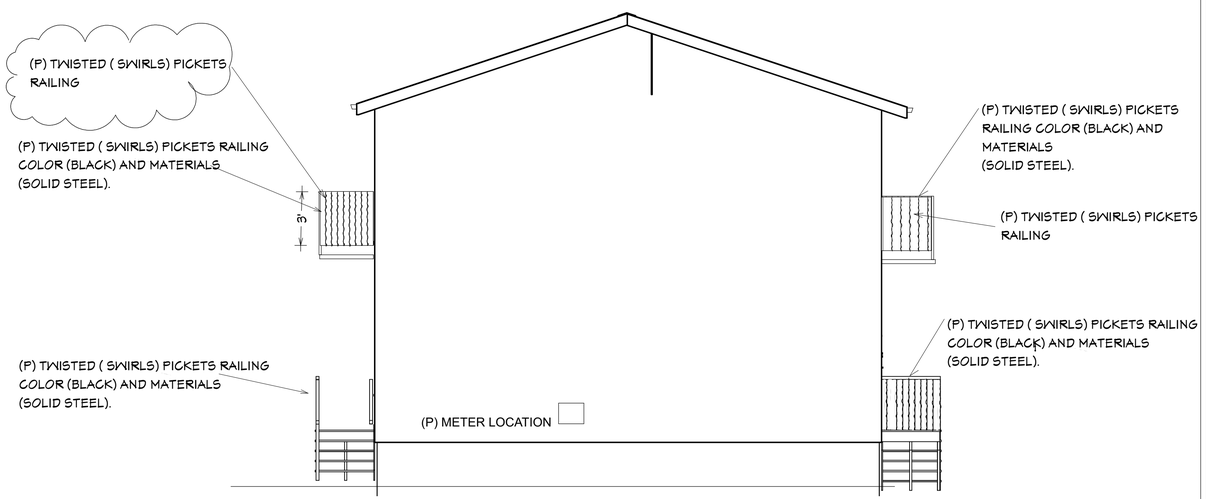
PROPOSED SOUTH ELEVATION

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



EXISTING WEST ELEVATION

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



PROPOSED WEST ELEVATION

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

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NO.	DESCRIPTION	BY	DATE

OWNER: JANE KUHNLE
131 CHAPALA ST
SANTA BARBARA, CA. 93101

ELEVATIONS
SOUTH -WEST

DATE:
04-15-2024

SCALE:

SHEET:
A-7

A. General

Applicable codes. All projects will comply with the following building codes

2022 California Building Code (CBC) and/or California Residential Code (CRC)
2022 California Green Building Standards Code (CalGreen)
2022 California Electrical Code (CEC)
2022 California Mechanical Code (CMC)
2022 California Plumbing Code (CPC)
2022 California Fire Code (CFC)
2022 California Building Energy Efficiency Standards (CBEES)

B. Electrical, Plumbing, and Mechanical

1. **Exterior lighting.** All projects shall comply with lighting ordinance.
2. **GFCI outlets.** Ground Fault Circuit Interrupter (GFCI) outlets are required in bathrooms, at kitchen countertops, at laundry and wet bar sinks, in garages, in crawlspaces, in unfinished basements, and outdoors. (CEC 210.8)
3. **AFCI outlets.** Electrical circuits in bedrooms, living rooms, dining rooms, dens, closets, hallways, or similar rooms must be protected by Arc Fault Circuit Interrupters (AFCI). (CEC 210.12)
4. **Luminaire requirements.** Installed luminaires shall meet the efficacy and fixture requirements of CBEES 150.0(k).
5. **Smoke detectors in building remodels.** Smoke detectors are required in each existing sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms, and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
6. **Carbon monoxide detectors in building remodels.** Carbon monoxide detectors are required outside each separate sleeping area in the immediate vicinity of sleeping rooms and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R315.3)
7. **Water heater seismic strapping.** Minimum two 3/4-inch-by-24-gauge straps required around water heaters, with 1/4-inch-by-3-inch lag bolts attached directly to framing. Straps shall be at points within upper third and lower third of water heater vertical dimension. Lower connection shall occur minimum 4 inches above controls. (CPC 507.2)
8. **Gas appliances in garages.** Water heaters and heating/cooling equipment capable of igniting flammable vapors shall be placed on minimum 18-inch-high platform unless listing report number provided showing ignition-resistant appliance. (CPC 507.13 and CMC 305.1)
9. **Impact protection of appliances.** Water heaters and heating/cooling equipment subject to vehicular impact shall be protected by bollards or an equivalent measure. (CPC 507.13.1 and CMC 305.11)
10. **Water closet clearance.** Minimum 30-inch-wide by 24-inch-deep clearance required at front of water closets. (CPC 402.5)
11. **Shower size.** Shower compartments shall have minimum area of 1024 square inches and be able to encompass a 30-inch-diameter circle. Shower doors shall have a minimum 22-inch unobstructed width. (CPC 408.5 and CPC 408.6)
12. **Fireplace appliances.** Fireplaces with gas appliances are required to have the flue damper permanently fixed in the open position and fireplaces with LPG appliances are to have no 'pit' or 'sump' configurations. (CMC 303.7.1)
13. **Chimney clearance.** Minimum 2-foot chimney clearance required above building within 10-foot horizontally of chimney. The chimney shall extend minimum 3 feet above highest point where chimney passes through roof. (CRC R1003.9)

C. Mechanical Ventilation and Indoor Air Quality (ASHRAE 62.2-2010)

1. **Transfer air.** Ventilation air shall be provided directly from the outdoors and not as transfer air from adjacent dwelling units or other spaces, such as garages, unconditioned crawlspaces, or unconditioned attics. (CBEES 150.0(o))
2. **Instructions and labeling.** Ventilation system controls shall be labeled, and the homeowner shall be provided with instructions on how to operate the system. (CBEES 150.0(o))
3. **Combustion and solid-fuel burning appliances.** Combustion appliances shall be properly vented and air systems shall be designed to prevent back drafting. (CBEES 150.0(o))
4. **Garages.** The wall and openings between occupiable spaces and the garage shall be sealed. HVAC systems that include air handlers or return ducts located in garages shall have total air leakage of no more than 6% of total fan flow when measured at 0.1 in. w.c. using California Title 24 or equivalents. (CBEES 150.0(o))
5. **Minimum filtration.** Mechanical systems supplying air to occupiable space through ductwork shall be provided with a filter having a minimum efficiency of MERV 6 or better. (CBEES 150.0(o))
6. **Air inlets.** Air inlets (not exhaust) shall be located away from known contaminants. (CBEES 150.0(o))
7. **Air moving equipment.** Air moving equipment used to meet either the whole-building ventilation requirement or the local ventilation exhaust requirement shall be rated in terms of airflow and sound. (CBEES 150.0(o))
   - **a.** All continuously operating fans shall be rated at a maximum of 1.0 sone.
   - **b.** Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
   - **c.** Intermittently operated local exhaust fans shall be rated at maximum of 3.0 sone.
   - **d.** Remotely located air-moving equipment (mounted outside of habitable spaces) need not meet sound requirements if at least 4 feet of ductwork between fan and intake grill.

D. Foundation and Underfloor

1. **Foundation reinforcement.** Continuous footings and stem walls shall be provided with a minimum two longitudinal No. 4 bars, one at the top and one at the bottom of the footing. (CRC R403.1.3.3)
2. **Shear wall foundation support.** Shear walls shall be supported by continuous foundations. (CRC 403.1.2)
3. **Concrete slabs-on-grade.** Slabs-on-grade shall be minimum 3-1/2-inches thick. (CRC R506.1)
4. **Vapor retarder.** A 10-mil polyethylene or approved vapor retarder with joints lapped minimum 6 inches shall be placed between a concrete slab-on-grade and the base course or subgrade. (CRC 506.2.3)
5. **Anchor bolts and sills.** Foundation plates or sills shall be bolted or anchored to the foundation or foundation wall per the following (CRC R403.1.6 and CRC R602.11.1):
   - **a.** Minimum 1/2-inch-diameter steel bolts
   - **b.** Bolts embedded at least 7 inches into concrete or masonry
   - **c.** Bolts spaced maximum 6 feet on center
   - **d.** Minimum two bolts per plate/sill piece with one bolt located maximum 12 inches and minimum 7 bolt diameters from each end of each sill plate/piece
   - **e.** Minimum 3-inch by 3-inch by 0.299-inch steel plate washer between sill and nut on each bolt
6. Hold-**downs**. All hold-downs must be tied in place prior to foundation inspection.
7. **Protection of wood against decay.** Naturally durable or preservative-treated wood shall be provided in the following locations (CRC R317.1):
   - **a.** All wood in contact with ground, embedded in concrete in direct contact with ground, or embedded in concrete exposed to weather
   - **b.** Wood joists within 18 inches and wood girders within 12 inches of the exposed ground in crawl spaces shall be of naturally durable or preservative-treated wood
   - **c.** Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative-treated wood
   - **d.** Wood framing, sheathing, and siding on the exterior of the building and having clearance less than 6 inches from the exposed ground or less than 2 inches vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surface exposed to weather
   - **e.** Sills and sleepers on concrete or masonry slab in direct contact with ground unless separated from such slab by impervious moisture barrier
   - **f.** Ends of wood girders entering masonry or concrete walls with clearances less than 1/2 inch on tops, sides, and ends
   - **g.** Wood structural members supporting moisture-permeable floors or roofs exposed to weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier
   - **h.** Wood furring strips or other wood framing members attached directly to interior of exterior concrete or masonry walls below grade except where vapor retarder applied between wall and furring strips or framing members
8. **Underfloor ventilation.** Underfloor areas shall have ventilation openings through foundation walls or exterior walls, with minimum net area of ventilation openings of 1 square foot for each 150 square feet of underfloor area. On such ventilating opening shall be within 3 feet of each corner of the building. (CRC R408.1)
9. **Underfloor access.** Underfloor areas shall be provided with a minimum 18-inch by 24-inch access opening. (CRC R408.4)

E. Wood Framing

1. **Fastener requirements.** The number, size, and spacing of fasteners connecting wood members/elements shall not be less than that set forth in CRC Table R602.3(1). (CRC R502.9, CRC R602.3, and CRC R802.2)
2. **Stud size, height, and spacing.** The size, height, and spacing of studs shall be in accordance with CRC Table R602.3(5). (CRC R602.3.1)

E. Wood Framing (Continued)

3. **Sill plate**. Studs shall have full bearing on nominal 2-inch thick or larger sill plate with width at least equal to stud width. (CRC R602.3.4)
4. **Bearing studs.** Where joists, trusses, or rafters are spaced more than 16 inches on center and the bearing studs below are spaced 24 inches on center, such members shall bear within 5 inches of the studs beneath. (CRC R602.3.3)
5. **Drilling and notching of studs.** Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40% of a single stud width. Any stud may be bored or drilled, provided the diameter of the resulting hole is no more than 60% of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior wall or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive studs bored. (CRC R602.6)
6. **Top plate.** Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall be minimum nominal 2 inches thick and have width at least equal to width of studs. (CRC R602.3.2)
7. **Top plate splices.** Top plate lap splices shall be face-nailed with minimum 8 16d nails on each side of splice. (CRC R602.10.8.1)
8. **Drilling and notching of top plate.** When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling, or notching of the top plate by more than 50% of its width, a galvanized metal tie not less than 0.054-inch thick and 1-1/2-inches wide shall be fastened across and to the plate at each side of the opening with not less than 8 10d nails having a minimum length of 1-1/2 inches at each side or equivalent. The metal tie must extend minimum 6 inches past the opening. (CRC R602.6.1)
9. **Cripple walls.** Foundation cripple walls shall be framed of studs not less in size than the studding above. Cripple walls more than 4 feet in height shall have studs sized as required for an additional story. Cripple walls with stud height less than 14 inches shall be sheathed on at least one side with a wood structural panel fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking. Cripple walls shall be supported on continuous foundations. (CRC R602.9)
10. **Wall bracing.** Buildings shall be braced in accordance with the methods allowed per CRC R602.10.2, CRC R602.10.4, and/or CRC R602.10.5.
11. **Braced wall line spacing.** Spacing between braced wall lines shall not exceed 20 feet or alternate provisions of CRC R602.10.1.3.
12. **Shear wall cumulative length.** The cumulative length of shear walls within each braced wall line shall meet the provisions of CRC Table R602.10.3(1) for wind loads and CRC Table R602.10.3(2) for seismic loads. (CRC R602.10.1.1)
13. **Shear wall spacing.** Shear walls shall be located not more than 25 feet on center. (CRC R602.10.2.2)
14. **Shear wall offset.** Shear walls may be offset out-of-plan not more than 4 feet from the designated braced wall line and not more than 8 feet from any other offset wall considered part of the same braced wall line. (CRC R602.10.1.2)
15. **Shear wall location.** Shear walls shall be located at the ends of each braced wall line or meet the alternate provisions of CRC R602.10.2.2.
16. **Individual shear wall length.** Shear walls shall meet minimum length requirements of CRC R602.10.6.5.1.
17. **Cripple wall bracing**. Cripple walls shall be braced per CRC R602.10.11.
18. **Shear wall and diaphragm nailing**. All shear walls, roof diaphragms, and floor diaphragms shall be nailed to supporting construction per CRC Table R602.3(1). (CRC R604.3)
19. **Shear wall joints.** All vertical joints in shear wall sheathing shall occur over, and be fastened to, common studs. Horizontal joints in shear walls shall occur over, and be fastened to, minimum 1-1/2-inch-thick blocking. (CRC R602.10.10)
20. **Framing over openings.** Headers, double joists, or trusses of adequate size to transfer loads to vertical members shall be provided over window and door openings in load-bearing walls and partitions. (CBC 2304.3.2)
21. **Joists under bearing partitions.** Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, sized to adequately support the load, that are separated to permit the installation of piping or vents shall be full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R502.4)
22. **Joists above or below shear walls.** Where joists are perpendicular to a shear wall above or below, a rim joist, band joist, or blocking shall be provided along the entire length of the shear wall. Where joists are parallel to a shear wall above or below, a rim joist, end joist, or other parallel framing shall be provided directly above and/or below the shear wall. Where a parallel framing member cannot be located directly above and/or below the shear wall, full-depth blocking at 16-inch spacing shall be provided between the parallel framing members to each side of the shear wall. (CRC R602.10.8)
23. **Floor member bearing.** The ends of each floor joist, beam, or girder shall have minimum 1-1/2 inches of bearing on wood or metal and minimum 3 inches of bearing on masonry or concrete except where supported on a 1-inch-by-4-inch ribbon strip and nailed to the adjoining stud or by the use of approved joist hangers. (CRC R502.6)
24. **Floor joist lap.** Floor joists framing opposite sides over a bearing support shall lap minimum 3 inches and shall be nailed together within minimum 3 10d face nails. A wood or metal splice with strength equal to or greater than that provided by the lap is permitted. (CRC R502.6.1)
25. **Floor joist-to-girder support.** Floor joists framing into the side of a wood girder shall be supported by approved framing anchors or on ledger strips minimum nominal 2 inches by 2 inches. (CRC R502.6.2)
26. **Floor joist lateral restraint.** Floor joists shall be supported laterally at ends and each intermediate support by minimum 2-inch full-depth blocking, by attachment to full-depth header, band joist, or rim joist, to an adjoining stud, or shall be otherwise provided with lateral support to prevent rotation. (CRC R502.7)
27. **Floor joist bridging.** Floor joists exceeding nominal 2 inches by 12 inches shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch strip nailed across the bottom of joists perpendicular to joists at maximum 8-foot intervals. (CRC R502.7.1)
28. **Framing of floor openings.** Openings in floor framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the floor joists framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
29. **Girders**. Girders for single-story construction or girders supporting loads from a single floor shall not be less than 4 inches by 6 inches for spans 6 feet or less, provided that girders are spaced not more than 8 feet on center. Other girders shall be designed to support the loads specified in the CBC. Girder end joints shall occur over supports. When a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches of bearing. (CBC 2308.7)
30. **Ridges, hips, and valleys**. Rafters shall be framed to a ridge board or to each other with a gusset plate as a tie. Ridge boards shall be minimum 1-inch nominal thickness and not less in depth than the cut end of the rafter. At all valley and hips, there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point. Where the roof pitch is less than 3:12 slope (25% gradient), structural members that support rafters and ceilings joists, such as ridges, hips, and valleys, shall be designed as beams. (CRC R802.3)
31. **Ceiling joist and rafter connections.** Ceiling joists and rafters shall be nailed to each other per CRC Table R802.5.1(9), and the rafter shall be nailed to the wall top plate per CRC Table R602.3(1). Ceiling joists shall be continuous or securely joined per CRC Table R802.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to rafters. Where ceiling joists are not connected to the rafters at the wall top plate, joists connected higher in the attic shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceilings joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or engineer-designed girder. (CRC R802.3.1)
32. **Ceiling joists lapped.** Ends of ceiling joists shall be lapped minimum 3 inches or butted overbearing partitions or beams and toenailed to the bearing element. Where ceiling joists provide resistance to rafter thrust, lapped joists shall be nailed together per CRC Table R602.3(1) and butted joists shall be tied together in a manner to resist such thrust. (CRC R802.3.2)
33. **Collar ties.** Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space. Collar ties shall be a minimum 1 inch by 4 inches nominal and spaced at maximum 4 feet on center. (CRC R802.3.1)
34. **Purlins.** Purlins installed to reduce the span of rafters shall be sized not less than the required size of the rafters they support. Purlins shall be continuous and shall be supported by 2-inch-by-4-inch nominal braces installed to bearing walls at a minimum 45-degree slope from horizontal. The braces shall be spaced maximum 4 feet on center with a maximum 8-foot unbraced length. (CRC R802.5.1)
35. **Roof/ceiling member bearing.** The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches of bearing on wood or metal and not less than 3 inches of bearing on masonry or concrete. (CRC R802.6)
36. **Roof/ceiling member lateral support.** Roof framing members and ceiling joists with a nominal depth-to-thickness ratio exceeding 5:1 shall be provided with lateral support at points of bearing to prevent rotation. (CRC R802.8)
37. **Roof/ceiling bridging.** Rafters and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch wood strip nailed across the rafters or ceiling joists at maximum 8-foot intervals. (CRC R802.8.1)

E. Wood Framing (Continued)

38. **Framing of roof/ceiling openings.** Openings in roof and ceiling framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the ceiling joist or rafter. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the ceiling joists or rafters framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
39. **Roof framing above shear walls.** Rafters or roof trusses shall be connected to top plates of shear walls with blocking between the rafters or trusses. (CRC R602.10.8)
40. **Roof diaphragm under fill framing.** Roof plywood shall be continuous under California fill framing.
41. **Roof diaphragm at ridges.** Minimum 2-inch nominal blocking required for roof diaphragm nailing at ridges.
42. **Blocking of roof trusses.** Minimum 2-inch nominal blocking required between trusses at ridge lines and at points of bearing at exterior walls.
43. **Truss clearance.** Minimum 1/2-inch clearance required between top plates of interior non-bearing partitions and bottom chords of trusses.
44. **Drilling, cutting, and notching of roof/floor framing.** Notches in solid lumber joists, rafters, blocking, and beams shall not exceed one-sixth the member depth, shall be not longer than one-third the member depth, and shall not be located in the middle one-third of the span. Notches at member ends shall not exceed one-fourth the member depth. The tension side of members 4 inches or greater in nominal thickness shall not be notched except at member ends. The diameter of holes bored or cut into members shall not exceed one-third the member depth. Holes shall not be closer than 2 inches to the top or bottom of the member or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch. (CRC R502.8.1)
45. **Exterior landings, decks, balconies, and stairs.** Such elements shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal. (CRC R311.3)
46. **Fireblocking.** Fireblocking shall be provided in the following locations (CRC R302.11 and CRC R1003.19):
   - **a.** In concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs, as follows:
     - **I.** Vertically at the ceiling and floor levels
     - **II.** Horizontally at intervals not exceeding 10 feet
   - **b.** At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings
   - **c.** In concealed spaces between stair stringers at the top and bottom of the run
   - **d.** At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion
   - **e.** At chimneys and fireplaces per item E.49
   - **f.** Cornices of a two-family dwelling at the line of dwelling-unit separation
47. **Fireblocking materials.** Except as otherwise specified in items E.48 and E.49, fireblocking shall consist of the following materials with the integrity maintained (CRC R302.11.1):
   - **a.** Two-inch nominal lumber
   - **b.** Two thicknesses of one-inch nominal lumber with broken lap joints
   - **c.** One thickness of 23/32-inch wood structural panel with joints backed by 23/32-inch wood structural panel
   - **d.** One thickness of 3/4-inch particleboard with joints backed by 3/4-inch particleboard
   - **e.** 1/2-inch gypsum board
   - **f.** 1/4-inch cement-based millboard
   - **g.** Batts or blankets of mineral or glass fiber of other approved materials installed in such a manner as to be securely retained in place. Batts or blankets of mineral or glass fiber or other approved non-rigid materials shall be permitted for compliance with the 10-foot horizontal fireblocking in walls constructed using parallel rows of studs or staggered studs. Unfaced fiberglass batt insulation used as fireblocking shall fill the entire cross-section of the wall cavity to a minimum height of 16 inches measured vertically. When piping, conduit, or similar obstructions are encountered, the insulation shall be packed tightly around the obstruction. Loose-fill insulation material shall not be used as a fireblock unless specifically tested in the form and manner intended for use to demonstrate its ability to remain in place and to retard the spread of fire and hot gases.
48. **Fireblocking at openings around vents, pipes, ducts, cables, and wires at ceiling and floor level**. Such openings shall be fireblocked with an approved material to resist the free passage of flame and products of combustion. (CRC R302.11)
49. **Fireblocking of chimneys and fireplaces.** All spaces between chimneys and floors and ceilings through which chimneys pass shall be fireblocked with noncombustible material securely fastened in place. The fireblocking of spaces between chimneys and wood joists, beams, or headers shall be self-supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney. (CRC R1003.19)
50. **Draftstopping**. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1000 square feet. Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor/ceiling assemblies under the following circumstances (CRC R302.12):
   - **a.** Ceiling is suspended under the floor framing
   - **b.** Floor framing is constructed of truss-type open-web or perforated members
51. **Draftstopping materials.** Draftstopping shall not be less than 1/2-inch gypsum board, 3/8-inch wood structural panels, or other approved materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise approved by the building official. The integrity of draftstops shall be maintained. (CRC R302.12.1)
52. **Combustible insulation clearance.** Combustible insulation shall be separated minimum 3 inches from recessed luminaires, fan motors, and other heat-producing devices. (CRC R302.14)

F. General Material Specifications

1. **Lumber.** All joists, rafters, beams, and posts 2-inches to 4-inches thick shall be No. 2 grade Douglas Fir-Larch or better. All posts and beams 5 inches and thicker shall be No. 1 grade Douglas Fir-Larch or better. Studs not more than 8 feet long shall be stud-grade Douglas Fir-Larch or better when supporting not more than one floor, roof, and ceiling. Studs longer than 8 feet shall be No. 2 grade Douglas Fir-Larch or better.
2. **Concrete.** Concrete shall have a minimum compressive strength of 2,500 psi at 28 days and shall consist of 1 part cement, 3 parts sand, 4 parts 1-inch maximum size rock, and not more than 7-1/2 gallons of water per sack of cement. (CRC R402.2)
3. **Mortar.** Mortar used in construction of masonry walls, foundation walls, and retaining walls shall conform to ASTM C 270 and shall consist of 1 part portland cement, 2-1/4 to 3 parts sand, and 1/4 to 1/2 part hydrated lime. (CBC 2103.2)
4. **Grout.** Grout shall conform to ASTM C 476 and shall consist of 1 part portland cement, 1/10 part hydrated lime, 2-1/4 to 3 parts sand, and 1 to 2 parts gravel. Grout shall attain a minimum compressive strength of 2,000 psi at 28 days. (CBC 2103.3)
5. **Masonry.** Masonry units shall comply with ASTM C 90 for load-bearing concrete masonry units. (CBC 2103.1)
6. **Reinforcing steel.** Reinforcing steel used in construction of reinforced masonry or concrete structures shall be deformed and comply with ASTM A 615. (CBC 2103.4)
7. **Structural steel.** Steel used as structural shapes such as wide-flange sections, channels, plates, and angles shall comply with ASTM A36. Pipe columns shall comply with ASTM A53. Structural tubes shall comply with ASTM A500, Grade B.
8. **Fasteners for preservative-treated wood.** Fasteners for preservative-treated and fire-retardant-treated wood - including nuts and washers -- shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.1)

   Exception: 1/2-inch diameter or greater steel bolts

   Exception: Fasteners other than nails and timber rivets may be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum

   Exception: Plain carbon steel fasteners acceptable in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment
9. **Fasteners for fire-retardant-treated wood.** Fasteners for fire-retardant-treated wood used in exterior applications or wet or damp locations shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.3)

G. Roofing and Weatherproofing

1. **Roof covering.** All roof covering shall be installed per applicable requirements of CBC 1507. Roof coverings shall be at least Class A rated in accordance with ASTM E 108 or UL 790. (County Building Code 92.1.1505.1)
2. **Roof flashing.** Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction, and around roof openings. Where flashing is of metal, the metal shall be corrosion-resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet). (CRC R903.2.1)
3. Crickets and saddles. A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope. Cricket or saddle covering shall be sheet metal or the same material as the roof covering. (CRC R903.2.2)

G. Roofing and Weatherproofing (Continued)

4. **Water-resistive barrier.** A minimum of one layer of No. 15 asphalt felt shall be attached to studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer minimum 2 inches. Where joints occur, felt shall be lapped minimum 6 inches. The felt shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to maintain a weather-resistant exterior wall envelope. (CRC R703.2)
5. **Wall flashing.** Approved corrosion-resistant flashing shall be applied shingle fashion at the following locations to prevent entry of water into the wall cavity or penetration of water to the building structural framing components (CRC R703.8):
   - **a.** Exterior door and window openings, extending to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage
   - **b.** At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings
   - **c.** Under and at the ends of masonry, wood, or metal copings and sills
   - **d.** Continuously above all projecting wood trim
   - **e.** Where exterior porches, decks, or stairs attach to a wall or floor assembly of wood-frame construction
   - **f.** At wall and roof intersections
   - **g.** At built-in gutters
6. **Damp proofing.** Damp proofing materials for foundation walls enclosing usable space below grade shall be installed on the exterior surface of the wall and shall extend from the top of the footing to finished grade. (CRC R406.1)
7. **Weep screed.** A minimum 0.019-inch (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed with a minimum vertical attachment flange of 3-1/2 inches shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 92. The weep screed shall be placed a minimum 4 inches above the earth or 2 inches above paved areas and shall be of a type allowing trapped water to drain to the exterior of the building. (CRC R703.7.2.1)

H. Grading and soils

1. **Grading permit.** Grading permit required if volume of earth moved exceeds 200 cubic yards or if any cuts or fills exceed 8 feet in height/depth.
2. **Compaction report.** Compaction report required for fill material 12 inches or more in depth. (CBC 1803.5.8)

I. Green Building Standards Code (CALGreen) Requirements

1. Applicability. CalGreen residential mandatory measures shall apply to every newly constructed building or structure and within any addition or alteration increasing a building's conditioned area, volume, or size. (CalGreen 101.3, CalGreen 301.1.1)

   Exception: All residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures per CalGreen 301.1.1 and CalGreen 4.303.1
2. Water conserving plumbing fixtures and fittings. Plumbing fixtures and fittings shall comply with the following per CalGreen 4.303.1:
   - **a.** Water closets: Maximum 1.28 gallons per flush
   - **b.** Urinals: Maximum 0.5 gallons per flush
   - **c.** Single showerheads: Maximum flow rate of 1.8 gallons per minute at 80 psi
   - **d.** Multiple showerheads serving one shower: Maximum combined flow rate of 1.8 gallons per minute at 80 psi
   - **e.** Lavatory faucets: Maximum flow rate of 1.2 gallons per minute at 60 psi, minimum flow rate of 0.8 gallons per minute at 20 psi
   - **f.** Kitchen faucets: Maximum flow rate of 1.5 gallons per minute at 60 psi (County Green Building Code 97.1.4.303.1.4.4)

     Exception: Temporary increase allowed to maximum 2.2 gallons per minute at 60 psi if faucet defaults back to maximum 1.5 gallons per minute at 60 psi
   - **g.** Appliances: At least one qualified ENERGY STAR dishwasher or clothes washer shall be installed in each dwelling unit. (County Green Building Code 97.1.4.303.3)
3. **Outdoor potable water uses in landscape areas.** Residential developments shall comply with local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. (CalGreen 4.304.1)
4. **Joints and openings.** Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate utility and other penetrations must be sealed in compliance with the California Energy Code. (CALGreen 4.406.1)

   Exception: 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 opening with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.
5. **Construction waste reduction, disposal, and recycling.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous 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. (CalGreen 4.408.1)

   Exception: Excavated soil and land-clearing debris.

   Exception: 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
   Construction & Demolition (C&D)

   Exception: 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.
6. **Construction waste management plan.** A construction waste management plan in conformance with Items 1-5 shall be completed and available on the job site. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency. (CalGreen 4.408.2)
   - **a.** 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.
   - **b.** Specify if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
   - **c.** Identify diversion facilities where the construction and demolition waste materials will be taken.
   - **d.** Identify construction methods employed to reduce the amount of construction and demolition waste generated.
   - **e.** Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.
7. **Waste management company.** Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1. (CalGreen 4.408.3)

   Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste company.
8. **Waste stream reduction alternative [LR].** Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the 65 percent construction waste reduction requirement in Section 4.408.1. (CalGreen 4.408.4)

   4.408.4.1 Waste stream reduction alternative. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area shall meet the 65 percent construction waste reduction requirement in Section 4.408.1.
9. **Documentation.** Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1-5, Section 4.408.3, or Section 4.408.4.
10. **Operation and maintenance manual.** Prior to final inspection, a manual, compact disc, web-based reference, or other acceptable media which includes all of the following shall be placed in the building (CALGreen 4.410.1):
    - **a.** Directions to owner or occupant that manual shall remain with the building throughout the life cycle of the structure.
    - **b.** Operation and maintenance instructions for the following:
      - **I.** Equipment and appliances, including water-saving devices and systems, HVAC system, photovoltaic systems, water-heating systems and other major appliances and equipment.
      - **II.** Roof and yard drainage, including gutters and downspouts.
      - **III.** Space conditioning systems, including condensers and air filters.
      - **IV.** Landscape irrigation systems.
      - **V.** Water reuse systems.
    - **c.** Information from local utility, water, and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
    - **d.** Public transportation and/or carpool options available in the area.
    - **e.** 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.
    - **f.** Information about water-conserving landscape and irrigation design and controllers which conserve water.
    - **g.** Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.

I. (CALGreen) Requirements (Continued)

    - **h.** Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
    - **i.** Information about state solar energy and incentive programs available.
    - **j.** A copy of all special inspection verifications required by the enforcing agency or code.
    - **k.** Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
    - **l.** Information and/or drawings identifying the location of grab bar reinforcements.
11. **Covering of duct openings and protection of mechanical equipment during construction.** At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, Sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system. (CALGreen 4.504.1)
12. **Adhesives, sealants, caulks, paints, and coatings pollutant control.** Adhesives (including carpet adhesives), sealants, caulks, paints, and coatings shall comply with VOC limits per CALGreen 4.504.2. Verification of compliance shall be provided at the request of the enforcing agency. (CALGreen 4.504.2.1)
13. **Carpet systems.** All carpet installed in the building interior shall meet the testing and product requirements of one of the following (CALGreen 4.504.3):
    - **a.** Carpet and Rug Institute's Green Label Plus Program (all carpet cushions must meet the requirements of this program).
    - **b.** California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350).
    - **c.** NSF/ANSI 140 at the Gold level.
    - **d.** Scientific Certifications Systems Indoor Advantage™ Gold.
14. **Resilient flooring systems.** At least 80 percent of the floor area receiving resilient flooring shall comply with one of or more of the following (CALGreen 4.504.4):
    - **a.** VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database
    - **b.** Products compliant with CHPS criteria certified under the Greenguard Children & Schools program
    - **c.** Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program
    - **d.** Meet the currently adopted version of California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," (also known as Specification 01350)
15. **Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building 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 CalGreen Table 4.504.5. The following limits are in parts per million (CALGreen 4.504.5):
    - **a.** Hardwood plywood veneer core 0.05
    - **b.** Hardwood plywood composite core 0.05
    - **c.** Particle board 0.09
    - **d.** Medium-density fiberboard (MDF) 0.11
    - **e.** Thin MDF (5/16 inch or less) 0.13
16. **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 (CALGreen 4.505.3):
    - **a.** Moisture content shall be determined with either a probe-type or contact-type moisture meter.
    - **b.** Moisture readings shall be taken at a point 2 feet to 4 feet from the grade stamped end of each piece to be verified.
    - **c.** 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 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.
17. **Bathrooms with a bathtub and/or shower** shall be mechanically ventilated per the following (CalGreen 4.506.1):
    - **a.** Fans shall be ENERGY STAR compliant and ducted to terminate outside building
    - **b.** Unless functioning as a component of a whole-house ventilation system, fans shall have humidity controls capable of adjustment - manually or automatically -- between a relative humidity range of 50% to 80%.
18. **Heating and air-conditioning system design.** Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the following methods (CALGreen 4.507.2):
    - **a.** The heat loss and heat gain are established according to the currently adopted version of ANSI/ACCA 2 Manual J, ASHRAE handbooks, or other equivalent design software or methods.
    - **b.** Duct systems are sized according to the currently adopted version of ANSI/ACCA 1 Manual D, ASHRAE handbooks, or other equivalent design software or methods.
    - **c.** Select heating and cooling equipment according to the currently adopted version of ACCA 36-S Manual S or other equivalent design software or methods.

TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

TABLE R602.3(1)
FASTENING SCHEDULE

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING AND LOCATION
		Roof	
1	Blocking between ceiling joists, rafters or trusses to top plate or other framing below	4-8d box (2½″ × 0.113″); or 3-8d common (2½″ × 0.131″); or 3-10d box (3″ × 0.128″); or 3-3″ × 0.131″ nails	Toe nail
	Blocking between rafters or truss not at the wall top plates, to rafter or truss	2-8d common (2½″ × 0.131″); or 2-3″ × 0.131″ nails	Each end toe nail
		2-16d common (3½″ × 0.162″); or 3-3″ × 0.131″ nails	End nail
	Flat blocking to truss and web filler	16d common (3½″ × 0.162″); or 3″ × 0.131″ nails	6″ o.c. face nail
2	Ceiling joists to top plate	4-8d box (2½″ × 0.113″); or 3-8d common (2½″ × 0.131″); or 3-10d box (3″ × 0.128″); or 3-3″ × 0.131″ nails	Per joist, toe nail
3	Ceiling joist not attached to parallel rafter, laps over partitions [see Section R802.5.2 and Table R802.5.2(1)]	4-10d box (3″ × 0.128″); or 3-16d common (3½″ × 0.162″); or 4-3″ × 0.131″ nails	Face nail
4	Ceiling joist attached to parallel rafter (heel joint) [see Section R802.5.2 and Table R802.5.2(1)]	Table R802.5.2(1)	Face nail
5	Collar tie to rafter, face nail	4-10d box (3″ × 0.128″); or 3-10d common (3″ × 0.148″); or 4-3″ × 0.131″ nails	Face nail each rafter
6	Rafter or roof truss to plate	3-16d box (3½″ × 0.135″); or 3-10d common (3″ × 0.148″); or 4-10d box (3″ × 0.128″); or 4-3″ × 0.131″ nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss[i]
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2″ ridge beam	4-16d box (3½″ × 0.135″); or 3-10d common (3″ × 0.148″); or 4-10d box (3″ × 0.128″); or 4-3″ × 0.131″ nails	Toe nail
		3-16d box (3½″ × 0.135″); or 2-16d common (3½″ × 0.162″); or 3-10d box (3″ × 0.128″); or 3-3″ × 0.131″ nails	End nail
		Wall	
8	Stud to stud (not at braced wall panels)	16d common (3½″ × 0.162″)	24″ o.c. face nail
		10d box (3″ × 0.128″); or 3″ × 0.131″ nails	16″ o.c. face nail
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (3½″ × 0.135″); or 3″ × 0.131″ nails	12″ o.c. face nail
		16d common (3½″ × 0.162″)	16″ o.c. face nail
10	Built-up header (2″ to 2″ header with ½″ spacer)	16d common (3½″ × 0.162″)	16″ o.c. each edge face nail
		16d box (3½″ × 0.135″)	12″ o.c. each edge face nail
11	Continuous header to stud 3½″	5-8d box (2½″ × 0.113″); or 4-8d common (2½″ × 0.131″); or 4-10d box (3″ × 0.128″)	Toe nail
12	Adjacent full-height stud to end of header	4-16d box (3½″× 0.135″); or 3-16d common (3½″ × 0.162″); or 4-10d box (3″ × 0.128″); or 4-3″ × 0.131″ nails	End nail
13	Top plate to top plate	16d common (3½″ × 0.162″)	16″ o.c. face nail
		10d box (3″ × 0.128″); or 3″ × 0.131″ nails	12″ o.c. face nail
14	Double top plate splice	8-16d common (3½″ × 0.162″); or 12-16d box (3½″ × 0.135″); or 12-10d box (3″ × 0.128″); or 12-3″ × 0.131″ nails	Face nail on each side of end joint (minimum 24″ lap splice length each side of end joint)
15	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3½″ × 0.162″)	16″ o.c. face nail
		16d box (3½″ × 0.135″); or 3″ × 0.131″ nails	12″ o.c. face nail
		Roof	
16	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (3½″ × 0.135″); or 2-16d common (3½″ × 0.162″); or 4-3″ × 0.131″ nails	16″ o.c. face nail
17	Top or bottom plate to stud	4-8d box (2½″ × 0.113″); or 3-16d box (3½″ × 0.135″); or 4-8d common (2½″ × 0.131″); or 4-10d box (3″ × 0.128″); or 4-3″ × 0.131″ nails	Toe nail
		3-16d box (3½″ × 0.135″); or 2-16d common (3½″ × 0.162″); or 3-10d box (3″ × 0.128″); or 3-3″ × 0.131″ nails	End nail
18	Top plates, laps at corners and intersections	3-10d box (3″ × 0.128″); or 2-16d common (3½″ × 0.162″); or 3-3″ × 0.131″ nails	Face nail
19	1″ brace to each stud and plate	3-8d box (2½″ × 0.113″); or 2-8d common (2½″ × 0.131″); or 2-10d box (3″ × 0.128″); or 2 staples 1¾″	Face nail
20	1″ × 6″ sheathing to each bearing	3-8d box (2½″ × 0.113″); or 2-8d common (2½″ × 0.131″); or 2-10d box (3″ × 0.128″); or 2 staples, 1″ crown, 16 ga., 1¾″ long	Face nail
21	1″ × 8″ and wider sheathing to each bearing	3-8d box (2½″ × 0.113″); or 3-8d common (2½″ × 0.131″); or 3-10d box (3″ × 0.128″); or 3 staples, 1″ crown, 16 ga., 1¾″ long	Face nail
		Wider than 1″ × 8″ 4-8d box (2½″ × 0.113″); or 3-8d common (2½″ × 0.131″); or 3-10d box (3″ × 0.128″); or 4 staples, 1″ crown, 16 ga., 1¾″ long	
		Floor	
22	Joist to sill, top plate or girder	4-8d box (2½″ × 0.113″); or 3-8d common (2½″ × 0.131″); or 3-10d box (3″ × 0.128″); or 3-3″ × 0.131″ nails	Toe nail
23	Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d box (2½″ × 0.113″)	4″ o.c. toe nail
		8d common (2½″ × 0.131″); or 10d box (3″ × 0.128″); or 3″ × 0.131″ nails	6″ o.c. toe nail
24	1″ × 6″ subfloor or less to each joist	3-8d box (2½″ × 0.113″); or 2-8d common (2½″ × 0.131″); or 3-10d box (3″ × 0.128″); or 2 staples, 1″ crown, 16 ga., 1¾″ long	Face nail
25	2″ subfloor to joist or girder	3-16d box (3½″ × 0.135″); or 2-16d common (3½″ × 0.162″)	Blind and face nail
26	2″ planks (plank & beam—floor & roof)	3-16d box (3½″ × 0.135″); or 2-16d common (3½″ × 0.162″)	At each bearing, face nail
27	Band or rim joist to joist	3-16d common (3½″ × 0.162″); or 4-10 box (3″ × 0.128″); or 4-3″ × 0.131″ nails; or 4-3″ × 14 ga. staples, 7/16″ crown	End nail
28	Built-up girders and beams, 2-inch lumber layers	20d common (4″ × 0.192″); or	Nail each layer as follows: 32″ o.c. at top and bottom and staggered.
		10d box (3″ × 0.128″); or 3″ × 0.131″ nails	24″ o.c. face nail at top and bottom staggered on opposite sides
		And: 2-20d common (4″ × 0.192″); or 3-10d box (3″ × 0.128″); or 3-3″ × 0.131″ nails	Face nail at ends and at each splice
29	Ledger strip supporting joists or rafters	4-16d box (3½″ × 0.135″); or 3-16d common (3½″ × 0.162″); or 4-10d box (3″ × 0.128″); or 4-3″ × 0.131″ nails	At each joist or rafter, face nail
30	Bridging or blocking to joist, rafter or truss	2-10d box (3″ × 0.128″); or 2-8d common (2½″ × 0.131″); or 2-3″ × 0.131″ nails	Each end, toe nail

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING OF FASTENERS: Edges[h] (inches)	SPACING OF FASTENERS: Intermediate supports[c, e] (inches)
		Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing]		
31	⅜″ – ½″	6d common or deformed (2″ × 0.113″× 0.266″ head); or 2⅜″ × 0.113″ × 0.266″ head nail (subfloor, wall)[i]	6	6[f]
		8d common (2½″ × 0.131″) nail (roof); or RSRS-01 (2⅜″ × 0.113″) nail (roof)[b]	6	6[f]
32	19/32″ – ¾″	8d common (2-2½″ × 0.131″) nail (subfloor, wall)	6	12
		8d common (21/2″ × 0.131″) nail (roof); or RSRS-01; (2⅜″ × 0.113″) nail (roof)[b]	6	6[f]
		Deformed 2⅜″ × 0.113″ × 0.266″ head (wall or subfloor)	6	12
33	⅞″ – 1¼″	10d common (3″ × 0.148″) nail; or (2½″ × 0.131 × 0.281″ head) deformed nail	6	12
		Other wall sheathing[g]		
34	½″ structural cellulosic fiberboard sheathing	1½″ × 0.120″ galvanized roofing nail, 7/16″ head diameter; or 1¼″ long 16 ga. staple with 7/16″ or 1″ crown	3	6
35	25/32″ structural cellulosic fiberboard sheathing	1¾″ × 0.120″ galvanized roofing nail, 7/16″ head diameter; or 1¼″ long 16 ga. staple with 7/16″ or 1″ crown	3	6
36	½″ gypsum sheathing[d]	1½″ × 0.120″ galvanized roofing nail, 7/16″ head diameter, or 1¼″long 16 ga.; staple galvanized, 1½″ long; 7/16″ or 1″ crown or 1¼″ screws, Type W or S	7	7
37	⅝″ gypsum sheathing[d]	1¾″ × 0.120″ galvanized roofing nail, 7/16″ head diameter, or 1¼″ long 16 ga.; staple galvanized, 1½″ long; 7/16″ or 1″crown or 1¼″ screws, Type W or S	7	7
		Wood structural panels, combination subfloor underlayment to framing		
38	¾″ and less	Deformed (2″× 0.113″) or Deformed (2″ × 0.120″) nail; or 8d common (2½″ × 0.131″) nail	6	12
39	⅞″ – 1″	8d common (2½″ × 0.131″) nail; or Deformed (2″ × 0.113″); or Deformed (2½″ × 0.120″) nail	6	12
40	1⅛″ – 1¼″	10d common (3″ × 0.148″) nail; or Deformed (2″ × 0.113″);or Deformed (2½″ × 0.120″) nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 ksi = 6.895 MPa.

- **a.** Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections are carbon steel and shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less. Connections using nails and staples of other materials, such as stainless steel, shall be designed by accepted engineering practice or approved under Section R104.11.
- **b.** RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.
- **c.** Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
- **d.** Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.
- **e.** Spacing of fasteners not included in this table shall be based on Table R602.3(2).
- **f.** For wood structural panel roof sheathing attached to gable end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 4 inches on center where the ultimate design wind speed is greater than 130 mph in Exposure B or greater than 110 mph in Exposure C.
- **g.** Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with ASTM C1280 or GA 253. Fiberboard sheathing shall conform to ASTM C208.
- **h.** Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.
- **i.** Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

THERE ARE MINIMUM REQUIREMENTS AND SHALL NOT SUPERSEDE MORE RESTRICTIVE SPECIFICATIONS ON THE PLANS OR AS REQUIRED BY APPLICAL CODE

PDS081 (REV.01/01/2023)

NO.	DESCRIPTION	BY	DATE

DESIGNER: ESTEBAN SOLIS
PO BOX 4171
VENTURA, CA. 93007
805-636-8173
EMAIL: BUILDINGPERMITCENTER@GMAIL.COM

MINIMUM CONSTRUCTION SPECIFICATIONS

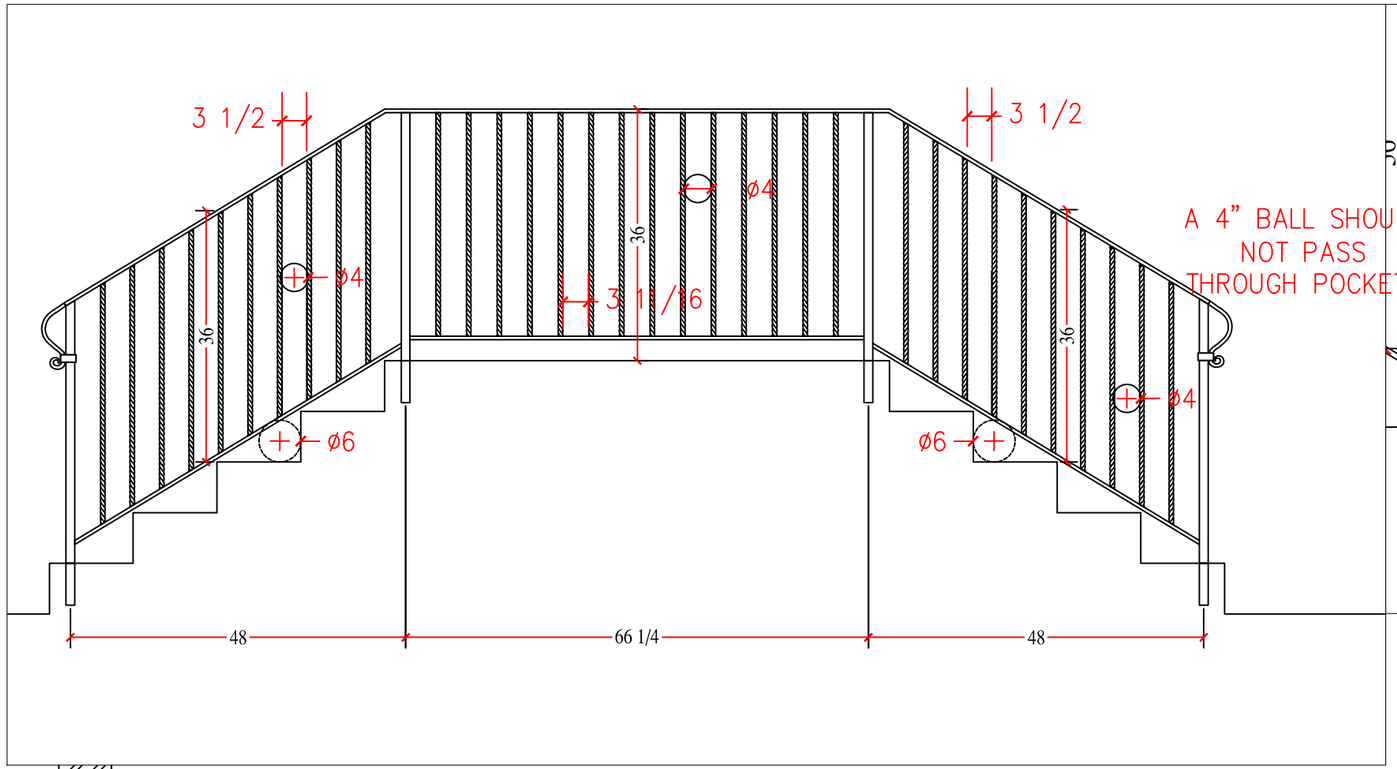
OWNER: JANE KUHNLE
102 NATOMA AVE #A (131 CHAPALA ST)
SANTA BARBARA, CA. 93101

DATE:

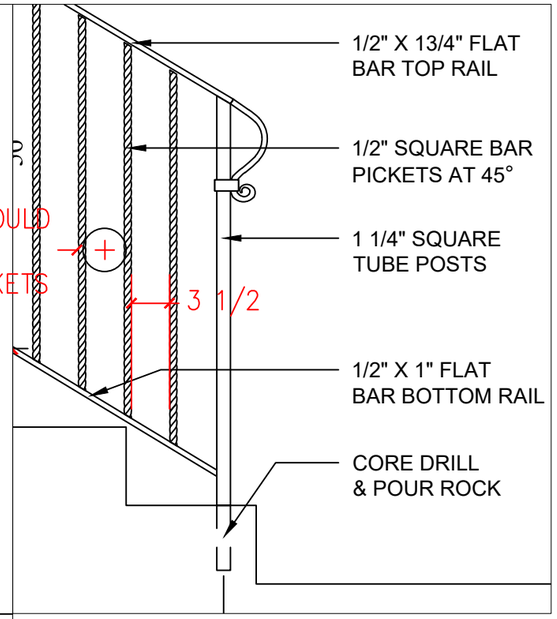
SCALE:

SHEET:

A-8



A 4" BALL SHOULD NOT PASS THROUGH POCKETS



1/2" X 13/4" FLAT BAR TOP RAIL

1/2" SQUARE BAR PICKETS AT 45°

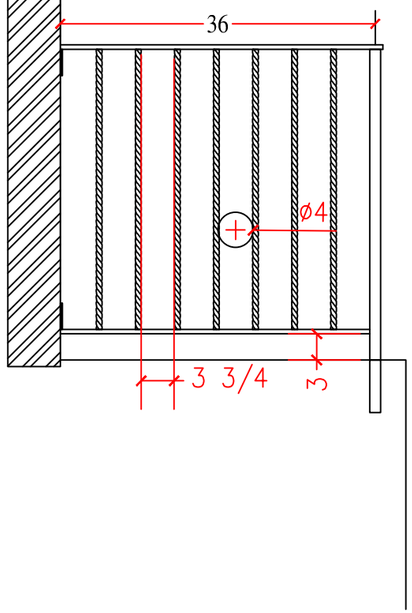
1 1/4" SQUARE TUBE POSTS

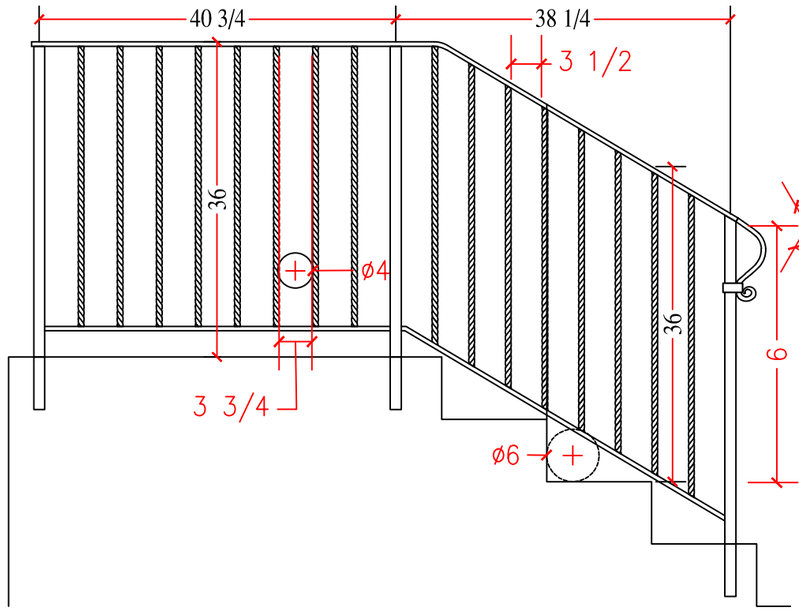
1/2" X 1" FLAT BAR BOTTOM RAIL

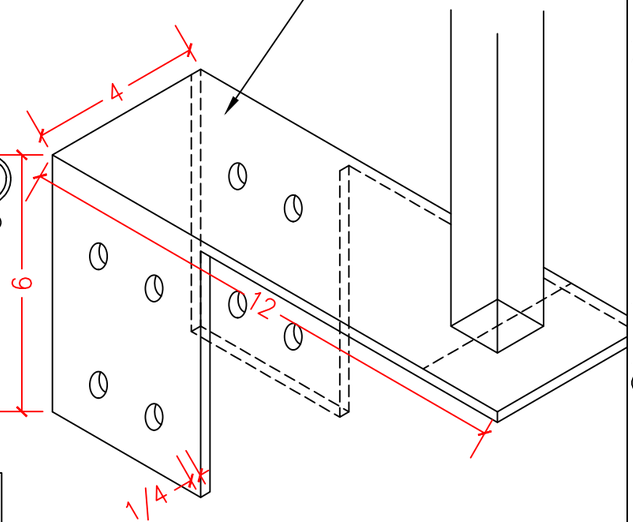
CORE DRILL & POUR ROCK

1 1/4" SQUARE TUBE POSTS

1/4" PLATE SADDLE







CHAPALA
IRON & MANUFACTURING CO. INC.
SINCE 1973

131 CHAPALA STREET
SANTA BARBARA, CA. 93111

RODGER PYLE

REV: 3

Finish: METALIZED & PRIME

Engineer's Review, as Req'd:

Architect's Review, as Req'd:

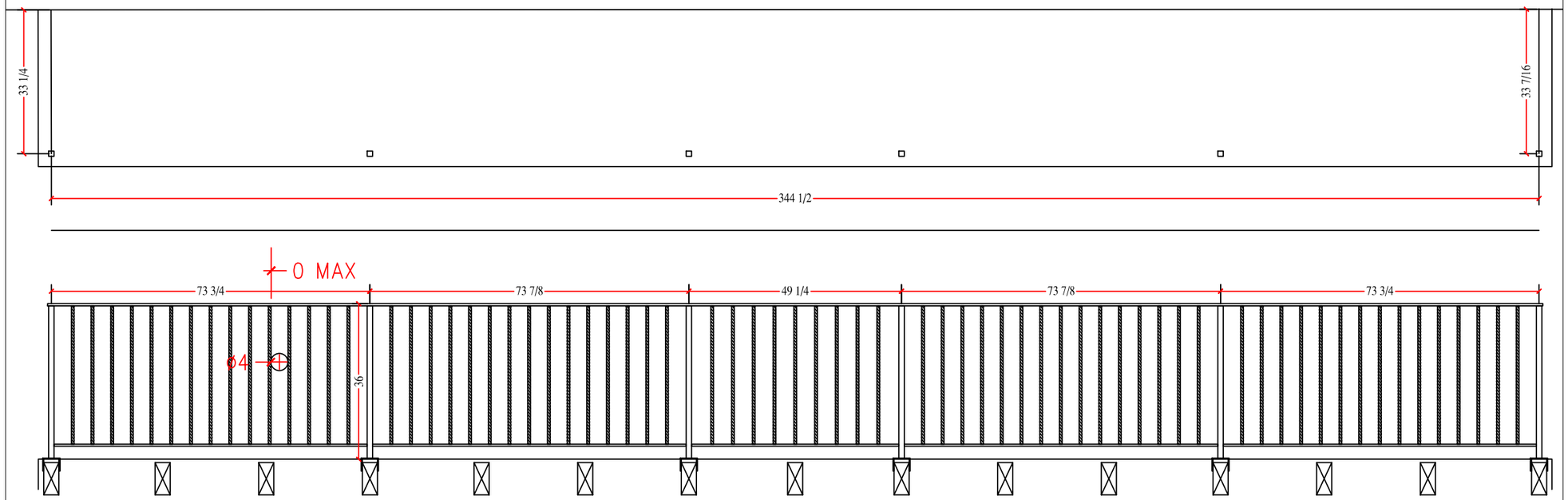
DRAWN BY: FJP
DATE: 07/21/2023

CHKD BY: PD
JOB#: 24171

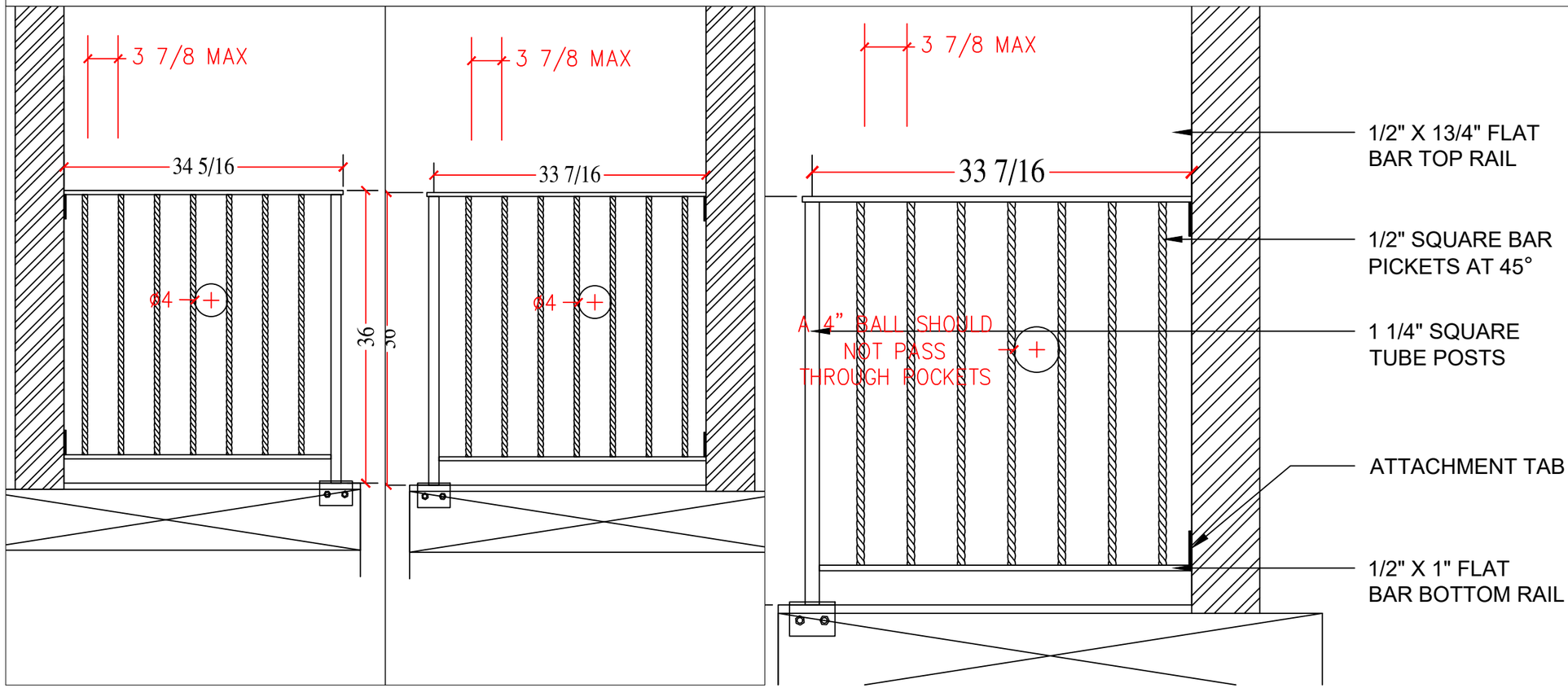
Chapala Iron and Manufacturing Co. Inc.
1301 Callens Rd
Ventura, CA
93003
(T)805.654.9803 (F)805.658.8925
CA LICENSE #795420

C1

Scope of Work & Plan



BACK DECK



CHAPALA
IRON & MANUFACTURING CO. INC.
SINCE
1973

131 CHAPALA STREET
SANTA BARBARA, CA. 93111

RODGER PYLE

REV: 1

Finish: METALIZED & PRIME

Engineer's Review, as Req'd:

Architect's Review, as Req'd:

DRAWN BY: FJP
DATE: 07/21/2023
CHKD BY: PD
JOB#: 24171

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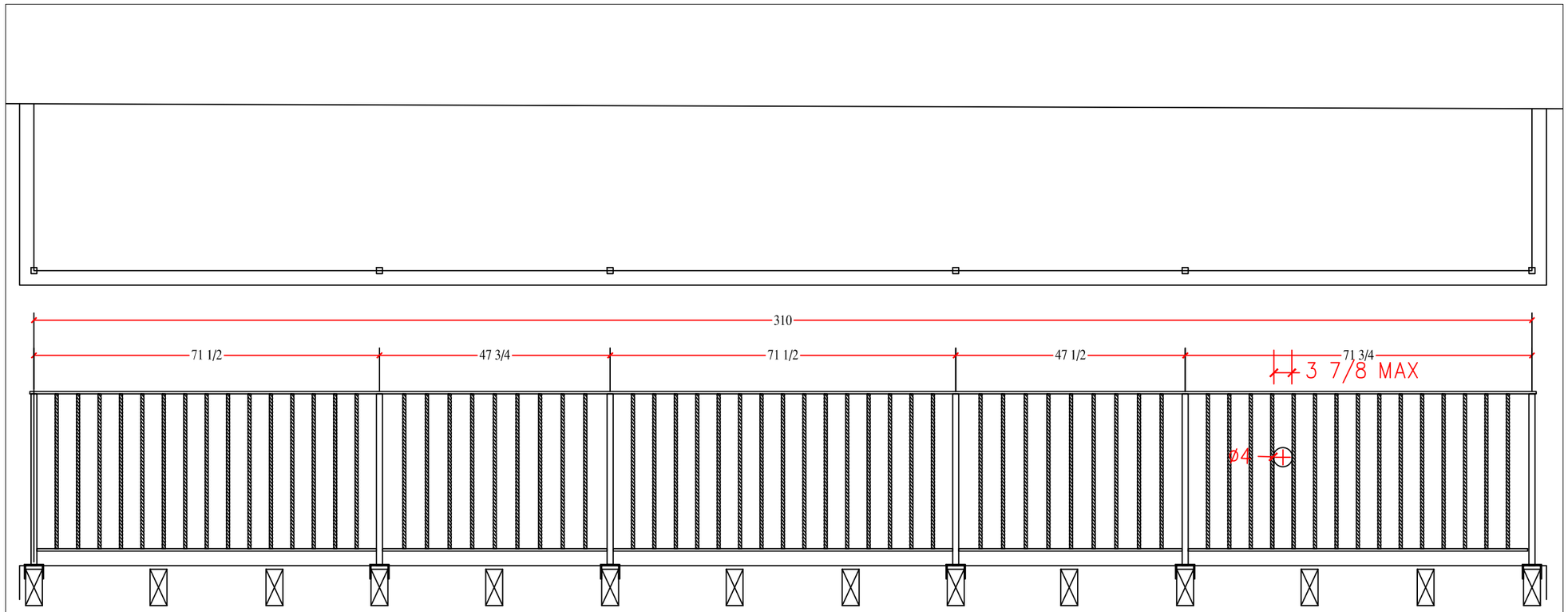
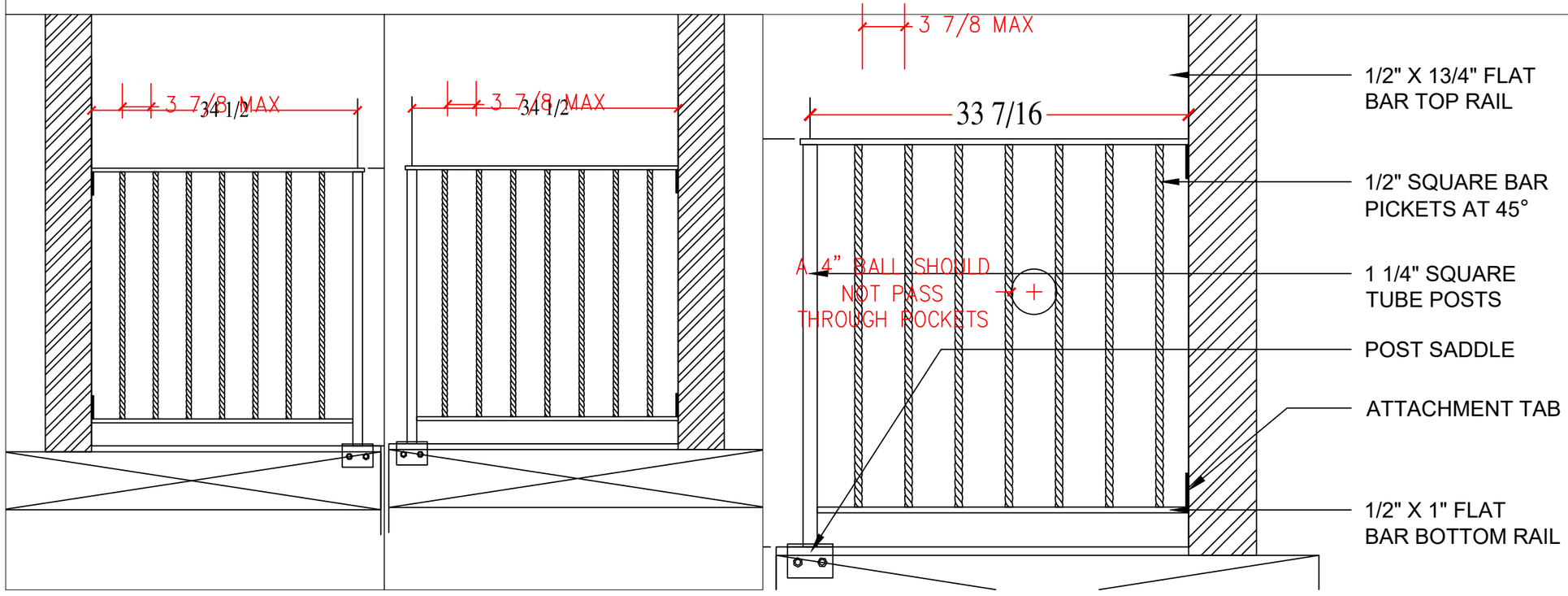
CA LICENSE #795420

C2 Scope of Work & Plan



FRONT DECK



CHAPALA
IRON & MANUFACTURING CO. INC.
SINCE
1973

131 CHAPALA STREET
SANTA BARBARA, CA. 93111

RODGER PYLE

REV: 1

Finish: METALIZED & PRIME

Engineer's Review, as Req'd:

Architect's Review, as Req'd:

DRAWN BY: FJP
DATE: 07/21/2023
CHKD BY: PD
JOB#: 24171

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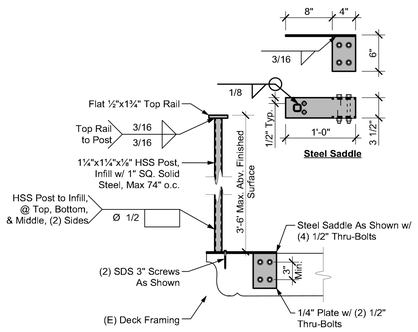
C3 Scope of Work & Plan

Structural Details
Scale: NTS



1 STEEL GUARDRAIL CONNECTION

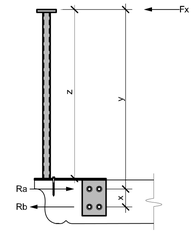
REGISTERED PROFESSIONAL ENGINEER PAUL BALMONT C76732 CIVIL STATE OF CALIFORNIA

Structural Calculations

Deck Railing Calculation

Job: 230449 - Pyle Rail - Chapala Iron

Wood to wood (Through Bolt)
Using Through Bolts.



Input

Post Spacing = 64 in. o.c.

x = 4.5 in.
y = 45 in.
z = 42 in.
V_1 = N/A

Fx = 200 lbs

Calculations

Mmax = Fx*(z)
Mmax = 9000 lb-in.

Ra = Mmax/(x)
Ra = 2000
Rb = 1800

Check bending capacity of HSS1-1/4X1-1/4X1/2 post.

Mn = fy*z/1.67 = 10434 lb-in
10434 >= 9000 Therefore OK

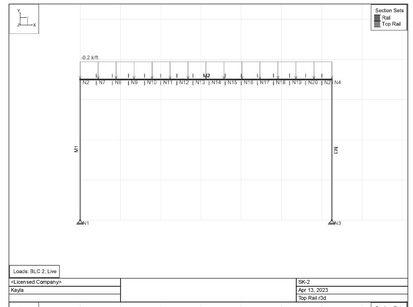
Check bearing capacity of (2) 0.5" bolts on side members.

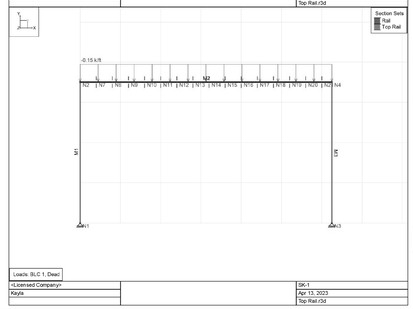
Capacity of (2) bolts on member = 5280 lbs
5280 >= 3000 Therefore OK

REGISTERED PROFESSIONAL ENGINEER PAUL BALMONT C76732 CIVIL STATE OF CALIFORNIA

Structural Calculations

Top Rail Calculation





REGISTERED PROFESSIONAL ENGINEER PAUL BALMONT C76732 CIVIL STATE OF CALIFORNIA

Structural Calculations

Top Rail Calculation

IRISA A NEMETSCHEK COMPANY
Company : <Licensed Company>
Designer : Kayla
Job Number :
Model Name :

REGISTERED PROFESSIONAL ENGINEER PAUL BALMONT C76732 CIVIL STATE OF CALIFORNIA

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach Fr
1	N1	0	0	0	
2	N2	0	3.5	0	
3	N3	6.25	0	0	
4	N4	6.25	3.5	0	
5	N7	0.4	3.5	0	
6	N8	0.8	3.5	0	
7	N9	1.2	3.5	0	
8	N10	1.6	3.5	0	
9	N11	2	3.5	0	
10	N12	2.4	3.5	0	
11	N13	2.8	3.5	0	
12	N14	3.2	3.5	0	
13	N15	3.6	3.5	0	
14	N16	4	3.5	0	
15	N17	4.4	3.5	0	
16	N18	4.8	3.5	0	
17	N19	5.2	3.5	0	
18	N20	5.6	3.5	0	
19	N21	6	3.5	0	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]
1	N20		Reaction	
2	N16		Reaction	
3	N7		Reaction	
4	N8		Reaction	
5	N21		Reaction	
6	N9		Reaction	
7	N10		Reaction	
8	N17		Reaction	
9	N11		Reaction	
10	N12		Reaction	
11	N13		Reaction	
12	N14		Reaction	
13	N15		Reaction	
14	N18		Reaction	
15	N19		Reaction	
16	N2			Reaction
17	N4			Reaction
18	N1	Reaction	Reaction	Reaction
19	N3	Reaction	Reaction	Reaction

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Rail	1-1/4X1-1/4X1/2	Column	Tube	A36 Gr.36	Typical	1.5	0.203	0.203	0.211
2	Top Rail	1/2" Plate	Beam	RECT	A992	Typical	0.875	0.018	0.223	0.06

Member Distributed Loads (BLC 1 : Dead)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M2	Y	-0.15	-0.15	0	%100

Structural Calculations

Top Rail Calculation

IRISA A NEMETSCHEK COMPANY
Company : <Licensed Company>
Designer : Kayla
Job Number :
Model Name :

4/13/2023
9:51:37 AM
Checked By : _____

REGISTERED PROFESSIONAL ENGINEER PAUL BALMONT C76732 CIVIL STATE OF CALIFORNIA

Member Distributed Loads (BLC 2 : Live)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	M2	Y	-0.2	-0.2	0	%100

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M1	1-1/4X1-1/4X1/2	0.003	3.5	5	0.027	3.5	y	5	24.48	48.6	1.308	1.308	1.667	H1-1b*
2	M2	1/2" Plate	0.018	0.391	5	0.005	0.391	z	5	0.732	39.375	0.41	1.217	1	H1-1b
3	M3	1-1/4X1-1/4X1/2	0.002	3.5	5	0.027	3.5	y	5	24.48	48.6	1.308	1.308	1.667	H1-1b*

Envelope Maximum Member Section Forces

	Member		Axial[k]	Loc[ft]	LC	y Shear[k]	Loc[ft]	LC	z Shear[k]	Loc[ft]	LC	Torque[k-ft]	Loc[ft]	LC	y-y Moment[k-ft]	Loc[ft]	LC	z-z Moment[k-ft]	Loc[ft]	LC
1	M1	max	0.084	3.5	5	0	3.5	1	0	3.5	5	0	3.5	5	0	3.5	5	0.002	3.5	5
2		min	0.025	0	1	-0.001	0	5	0	0	1	0	0	1	0	0	1	0	0	1
3	M2	max	0.001	0.391	5	0	6.25	5	0.111	0.391	5	0	6.25	5	0.007	0.391	5	0	6.25	5
4		min	0	3.255	1	0	0	1	-0.096	2.409	5	0	0	1	-0.005	0.195	5	0	0	1
5	M3	max	0.048	3.5	5	0	3.5	1	0	3.5	5	0	3.5	5	0	3.5	5	0	3.5	5
6		min	0.014	0	1	-0.001	0	5	0	0	1	0	0	1	0	0	1	-0.002	0	5

NO.	DESCRIPTION	BY	DATE

DESIGNER: ESTEBAN SOLIS
PO BOX 4171
VENTURA, CA 93007
805-535-8173
BUILDINGPERMITCENTER@GMAIL.COM

STRUCTURAL DETAILS AND CALCULATIONS

OWNER: JANE KUHNLE
131 CHAPALA ST
SANTA BARBARA, CA. 93101

DATE:
04-15-2023

SCALE:

SHEET:
S-1