

**ELECTRICAL / MECHANICAL / PLUMBING NOTES**

PROVIDE ELECTRICAL SYSTEM GROUNDING PER SECTION 250 OF THE CALIFORNIA ELECTRICAL CODE TYPICAL.

SMOKE DETECTORS IN DWELLING UNITS SHALL BE HARDWIRED AND MOUNTED ON THE CEILING OR WALL AT A POINT CENTRALLY LOCATED IN THE CORRIDOR OR AREA GIVING ACCESS TO EACH SEPARATE SLEEPING AREA. IF THE DWELLING UNIT HAS MORE THAN ONE STORY A DETECTOR SHALL BE INSTALLED ON EACH STORY AND IN ANY BASEMENT IF APPLICABLE. WHEN SLEEPING ROOMS ARE ON AN UPPER LEVEL, A DETECTOR SHALL BE PLACED AT THE CEILING OF THE UPPER LEVEL IN CLOSE PROXIMITY TO THE STAIRWAY. DETECTORS SHALL SOUND AN AUDIBLE ALARM IN ALL SLEEPING AREAS OF THE DWELLING UNIT IN WHICH THEY ARE LOCATED. REFER TO C.E.C.

IN EVERY HABITABLE ROOM, RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN SIX FEET MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE. INCLUDING ANY WALL SPACE TWO FEET OR MORE IN WIDTH AND THE WALL SPACE OCCUPIED BY FIXED PANELS IN EXTERIOR WALLS, BUT EXCLUDING SLIDING PANELS IN EXTERIOR WALLS. THE WALL SPACE AFFORDED BY FIXED ROOM DIVIDERS, SUCH AS FREE-STANDING BAR-TYPE COUNTERS, SHALL BE INCLUDED IN THE SIX FOOT MEASUREMENT. C.E.C.

ATTICS AND ROOF AREAS THAT ARE ACCESSIBLE. THE ELECTRICAL CABLE WITHIN SEVEN (7) FEET OF OPENING SHALL BE PROTECTED. PER C.E.C. 320.25

**CARBON MONOXIDE ALARMS**

(A) SPECIFY THAT CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN THIS DWELLING PER C.R.C. R315

(B) SPECIFY THAT CARBON MONOXIDE ALARMS SHALL BE "LISTED" AS COMPLYING WITH UL2034 AND UL2075 PER C.R.C. R315.3

**RECEPTACLES SHALL,**

(A) NOT BE OVER 6' FROM OPENINGS INCLUDING ANY WALL SPACE 2' OR WIDER.

(B) NOT BE MORE THAN 12' O.C. INCLUDING SLIDING GLASS DOORS.

(C) BE G.F.I. CIRCUITS WHEN INSTALLED WITHIN 6' OF SINKS AND WHEN INSTALLED OUTDOORS PER C.E.C. ARTICLE 210-8(a).

(D) HAVE WATERPROOF COVERS WHEN INSTALLED OUTDOORS.

A 22" x 30" MINIMUM ACCESS TO FURNACE LOCATED IN THE ATTIC IS REQUIRED. IN ADDITION THE OPENING AND PASSAGEWAY MUST BE AS LARGE AS THE LARGEST COMPONENT OF THE APPLIANCE.

A SOLID 24" MIN. WIDE PLATFORM PATH FROM THE ACCESS OPENING TO THE FURNACE, WITH A RECEPTACLE AT THE FAU AND LIGHT, SWITCHED FROM THE ACCESS OPENING. PER C.M.C. 904.11

PROVIDE AN ADDITIONAL WATERTIGHT CORROSION RESISTANT METAL PAN BELOW CONDENSATE PRODUCING EQUIPMENT (IE. FURNACE) INSTALLED IN ATTIC. A SECONDARY DRAIN LINE MUST BE LOCATED AT A POINT WHERE IT CAN BE READILY OBSERVED. PER C.M.C. 310.2

ACCESS DOOR TO THE FURNACE/COOLING EQUIPMENT / COMPARTMENT SHALL BE A MINIMUM OF 24" WIDE AND A MINIMUM OF 30" CLEAR WORKING SPACE (OF A HEIGHT EQUAL TO THAT OF THE EQUIPMENT OR 6.5 FEET) ON THE FIREBOX SIDE.

PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) INSTALLED IN RESIDENTIAL BUILDINGS SHALL COMPLY WITH THE PRESCRIPTIVE REQUIREMENTS OF CGBC SECTION 4.303.1.1 THROUGH 4.303.1.4.4

PLUMBING FIXTURES AND FITTINGS REQUIRED IN CGBC SECTION 4.303.1 SHALL BE INSTALLED IN ACCORDANCE WITH THE C.P.C. AND SHALL MEET THE APPLICABLE REFERENCED STANDARDS.

ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.

HVAC SYSTEM INSTALLERS ARE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS.

SMOKE DETECTORS SHALL BE INTERCONNECTED 110V WITH BATTERY BACKUP, WHICH ARE AUDIBLE IN ALL SLEEPING AREAS AT THE FOLLOWING LOCATIONS:  
(1) ALL BEDROOMS; (2) HALLWAYS LEADING TO BEDROOMS, (4) AT LEAST ONE AT EVERY LEVEL AND (5) FARTHER THAN 3 FEET HORIZONTAL DISTANCE FROM THE BATHROOM DOOR CONTAINING A BATH TUB OR SHOWER. PER C.R.C. R314.3, R314.4, R314.5.

AN ARC-FAULT CIRCUIT INTERRUPTER SHALL PROTECT ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMP BRANCH CIRCUITS SUPPLYING OUTLETS IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS. PER C.E.C. 210.12(A)

TWO SMALL APPLIANCE BRANCH CIRCUITS ARE REQUIRED FOR THE KITCHEN AND ARE LIMITED TO SUPPLYING WALL AND COUNTER SPACE OUTLETS FOR THE KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREAS. NOTE: THESE CIRCUITS CANNOT SERVE OUTSIDE PLUGS, RANGE HOOD, DISPOSALS, DISHWASHERS OR MICROWAVES — ONLY THE REQUIRED COUNTERTOP/WALL OUTLETS INCLUDING THE REFRIGERATOR. PER C.E.C. 210-11(C)(1) AND 210-52 (B)

A DEDICATED 20-AMP CIRCUIT IS REQUIRED TO SERVE THE REQUIRED BATHROOM OUTLETS. THIS CIRCUIT CANNOT SUPPLY ANY OTHER RECEPTACLES, LIGHTS, FANS, ETC. (EXCEPTION-WHERE THE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE PERMITTED TO BE SUPPLIED.) PER C.E.C. 210.52 (C)(3) AND EXCEPTION: CEC210.23(A)(1) AND (A)(2).

A DEDICATED 20-AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY THE LAUNDRY RECEPTACLE OUTLET. PER C.E.C. 210.11(C)(2) AND 210.52(F)

A PRESSURE ABSORBING DEVICE (OR APPROVED MECHANICAL DEVICE), LOCATED AS CLOSE AS POSSIBLE TO QUICK ACTING VALVES, THAT WILL ABSORB HIGH PRESSURES RESULTING FROM THE QUICK CLOSING OF QUICK-ACTING VALVES (I.E., DISHWASHER, WASHING MACHINE, ETC.). PER C.P.C. 609.10

EXHAUST OUTLETS SHALL BE LOCATED A MINIMUM OF 10-FT FROM DOORS, OCCUPIED AREAS AND OPERABLE WINDOWS. PER C.M.C. 407.2.2

NOTES FOR HIGH EFFICACY LIGHTING:  
A. BATHROOM LIGHTING SHOWN ON SHEET A-2, TO HAVE HIGH EFFICACY LIGHTING, OR ARE PROVIDED WITH A MANUAL-ON MOTION SENSOR. IF THE MANUAL-ON MOTION SENSOR IS PROVIDED, IT SHOULD FURTHER BE INDICATED TO TURN-OFF AUTOMATICALLY WHEN NO ONE IS PRESENT AND BE CAPABLE OF BEING TURNED ON MANUALLY WITH A SWITCH. CA ENERGY CODE 150.0(K)2J

B. GARAGE, LAUNDRY ROOM AND/OR UTILITY ROOM LIGHTING SHALL BE HIGH EFFICACY, OR HAVE A MANUAL-ON MOTION SENSOR. IF THE MANUAL-ON MOTION SENSOR IS PROVIDED, IT SHOULD FURTHER BE INDICATED TO TURN-OFF AUTOMATICALLY WHEN NO ONE IS PRESENT AND BE CAPABLE OF BEING TURNED ON MANUALLY WITH A SWITCH. CA ENERGY CODE 150.0(K)2J

C. INDICATE THAT OTHER AREAS IN THE HOME, I.E., BEDROOMS, HALLWAYS, STAIRS, DINING ROOMS, ETC., SHALL HAVE HIGH EFFICACY LIGHTING CONTROLLED BY DIMMERS OR VACANCY SENSOR FOR LIGHTING CONTROL, EXCEPT CLOSETS SMALLER THAN 70 SQUARE FEET AND HALLWAYS. CA ENERGY CODE 150.0(K)1A, 2K AND TABLE 150.0-A

D. OUTDOOR LIGHTING ATTACHED TO THE BUILDING, MUST BE HIGH EFFICACY, OR CONTROLLED BY BOTH MOTION SENSOR AND PHOTO-CONTROL DEVICES. NOTE THAT LIGHTING NOT ATTACHED TO THE BUILDING (I.E., LANDSCAPER LIGHTING) IS EXEMPT. CA ENERGY CODE 150.0(K)3A

**NOTE:**

The shower compartment walls shall be finished with a nonabsorbent surface (e.g., ceramic tile, fiberglass, etc.) over a moisture resistant underlayment (e.g., water resistant gypsum board, green board, etc.) to a height of 6 feet above the floor. WR gyp board shall be permitted on ceilings. WR gyp board shall not be installed over Class I or II vapor retarder in a shower or tub compartment. CRC R307.2 and R702.3.7

**NOTE:**

THE EXHAUST FAN SHALL COMPLY WITH THE MINIMUM EXHAUST RATES PRESCRIBED IN CMC TABLE 403.7

ALL KITCHEN COUNTER RECEPTACLES SHALL ALSO BE AFCI PROTECTED AND TAMPER RESISTANT. PER CEC 210.12(A) AND 406.12

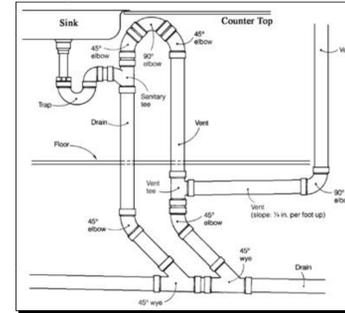
Recessed luminaries with the following features per CA Energy Code 150.0(k)1C:

- a. IC-rated.
- b. Airtight (AT) per ASTM E283.
- c. Sealed with gasket or caulk.
- d. Accessible ballast or drivers from below the ceiling.
- e. Without screw base sockets, and
- f. Light sources compliant with JC8-2016-E.

**NOTE:**

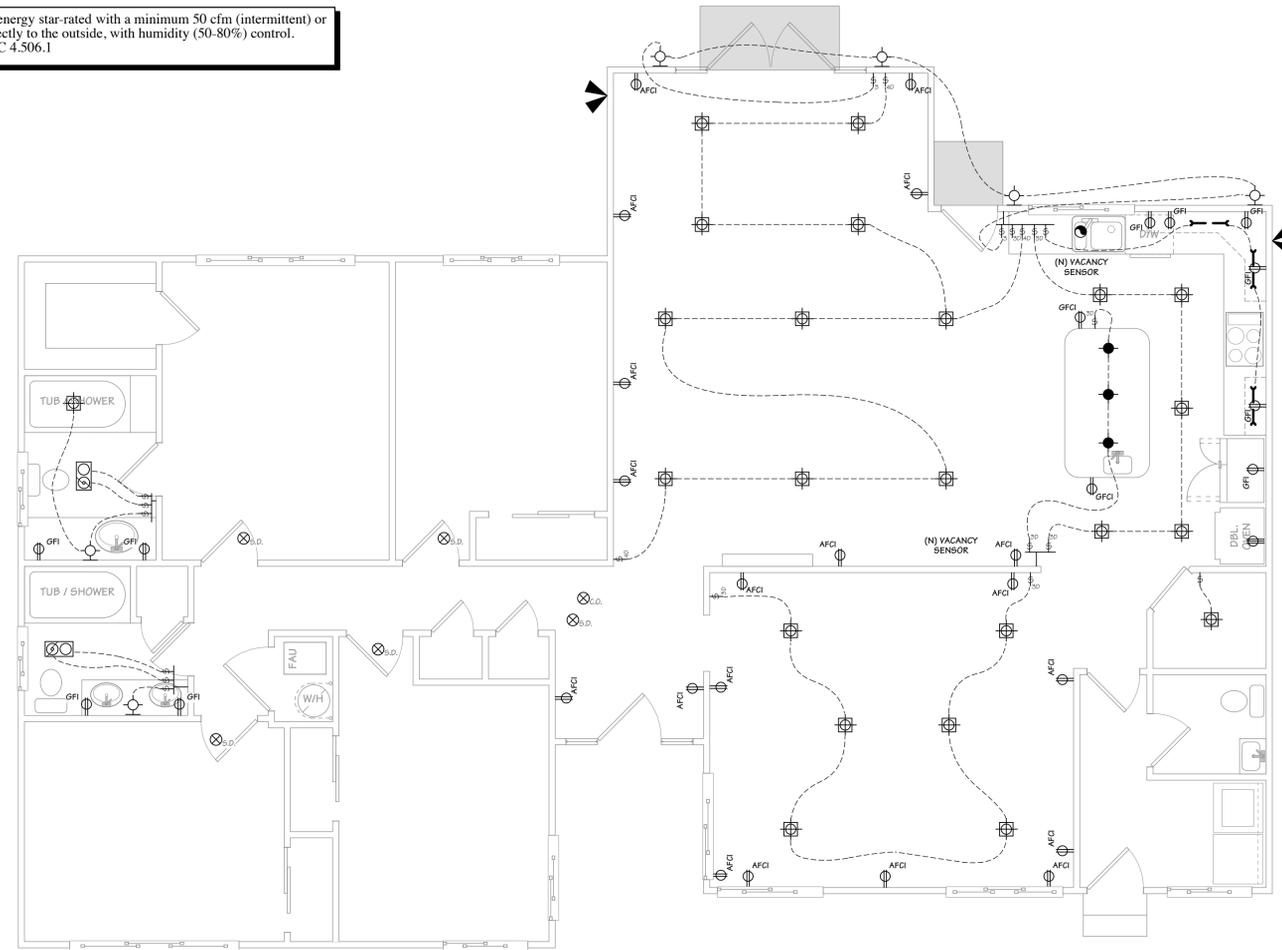
For the plumbing fixtures being replaced, ensure the plans specify the following maximum flow rates (per CALGreen 4.303.1):  
a. Kitchen and utility faucets shall have a maximum flow rate of  $\leq 1.8$  gpm @ 60psi  
b. Showerheads  $\leq 1.8$  gpm @ 80psi  
c. Lavatory faucet  $\leq 1.2$  gpm @ 60psi  
d. Water closet  $\leq 1.28$  gallons per flush

Bathroom exhaust fans shall be energy star-rated with a minimum 50 cfm (intermittent) or 20 cfm (continuous) venting directly to the outside, with humidity (50-80%) control. PER. CRC R303.3.1 and CGBSC 4.506.1



LOOP VENT DETAIL @ ISLAND IN KITCHEN

NOTE: ISLAND COUNTER SPACES. AT LEAST ONE RECEPTACLE SHALL BE INSTALLED AT EACH ISLAND COUNTER SPACE WITH A LONG DIMENSION OF 600 MM (24 IN.) OR GREATER AND A SHORT DIMENSION OF 300 MM (12 IN.) OR GREATER. WHERE A RANGETOP OR SINK IS INSTALLED IN AN ISLAND COUNTER AND THE WIDTH OF THE COUNTER BEHIND THE RANGETOP OR SINK IS LESS THAN 300 MM (12 IN.), THE RANGETOP OR SINK IS CONSIDERED TO DIVIDE THE ISLAND INTO TWO SEPARATE COUNTERTOP SPACES AS DEFINED IN 210.52(C)(4).



**ELEC. /MECH. /PLUMB. PLAN**

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

**ELECTRICAL/MECHANICAL SYMBOL LEGEND**

- LIGHT SWITCH, SINGLE POLE; +48" U.O.N.
- LIGHT SWITCH, 3-WAY; +48" U.O.N.
- LIGHT SWITCH, DIMMABLE; +48" U.O.N.
- LIGHT SWITCH, VACANCY SENSOR; +48" U.O.N.
- CEILING FAN/LIGHT CONTROL
- OUTLET, DUPLEX CONVENIENCE - 20A, 120V; +12" U.O.N.
- OUTLET, SAME AS ABOVE EXCEPT GFI TYPE
- OUTLET, SAME AS ABOVE EXCEPT GFI & WATER PROOF
- OUTLET, ARC-FAULT CIRCUIT INTERRUPTER
- OUTLET, IN CAB FACE, GFI IN KITCHEN
- SWITCHED OUTLET, 1/2 HOT - 20A, 120V; +12" U.O.N.
- OUTLET, FOURPLEX CONVENIENCE - 20A, 120V +12" U.O.N.
- OUTLET, INDIVIDUAL APPLIANCE - 20A, 220V
- UNDER-COUNTER OUTLET
- COUNTER-TOP OUTLET
- FLOOR OUTLET - 20A, 120V
- DOT ADJACENT TO SYMBOL INDICATES MOUNTING ABOVE COUNTER TOP
- PENDANT MOUNTED LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- LOW VOLTAGE RECESSED FIXTURE
- RECESSED CEILING LIGHT FIXTURE
- RECESSED FLOURESCENT CEILING LIGHT FIXTURE
- ACCENT LIGHT
- WALL MOUNTED LIGHT FIXTURE
- WALL SCONCE
- FLUORESCENT FIXTURE, UNDER CAB MNTD. DIRECT WIRE, LENGTH VARIES
- SURFACE MOUNTED FLUORESCENT FIXTURE
- FAN/FLUORESCENT LIGHT
- EXHAUST FAN (CEILING UNIT U.O.N.) (TO PROVIDE MIN. 5 AIR CHANGES/HR. PER UBC 1203.3)
- DISPOSAL
- TELEPHONE OUTLET +12" U.O.N.
- FLOOR MOUNTED TELEPHONE JACK
- TELEVISION HOOKUP
- PUSH BUTTON
- DOORBELL CHIME
- THERMOSTAT
- JUNCTION BOX
- MOTOR CONNECTION
- APPROVED SMOKE DETECTOR - CEILING MOUNTED & WIRED TO MAIN SERVICE WITH BATTERY BACK-UP
- APPROVED CARBON MONOXIDE DETECTOR - CEILING MOUNTED & WIRED TO MAIN SERVICE WITH BATTERY BACK-UP
- GARAGE DOOR OPENER
- GAS OUTLET
- F.G. KEY
- H.B.
- AIR RETURN
- AIR REGISTER AT FLOOR
- AIR REGISTER @ WALL
- AIR REGISTER @ CEIL.
- MOTION / SOLAR FLOOD LIGHT
- CEILING FAN

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**REVISION:**


**ELEC. / MECH. / PLUMB. PLANS PLAN NOTES**

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**JOB NO.**  
24-04

**DATE**  
04/12/2024

**SCALE**  
AS SHOWN

**SHEET**

**A-6**