

NOTE:

GC TO MAINTAIN ADJOINING STREETS FREE AND CLEAN OF PROJECT DIRT, MUD, MATERIAL AND DEBRIS DURING CONSTRUCTION PERIOD, AND MAINTAIN FIRE TRUCK ACCESS TO OTHER PROPERTIES.

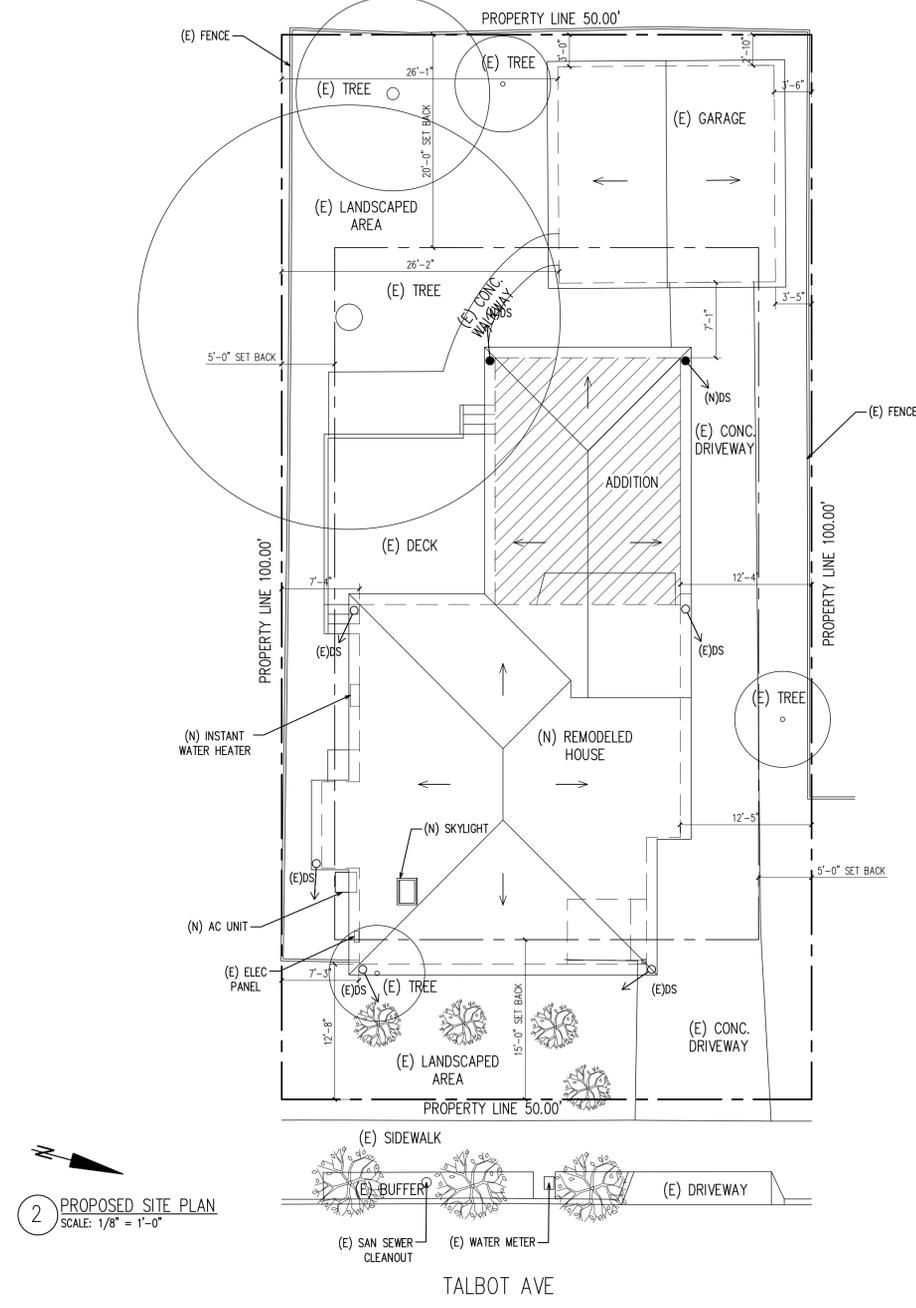
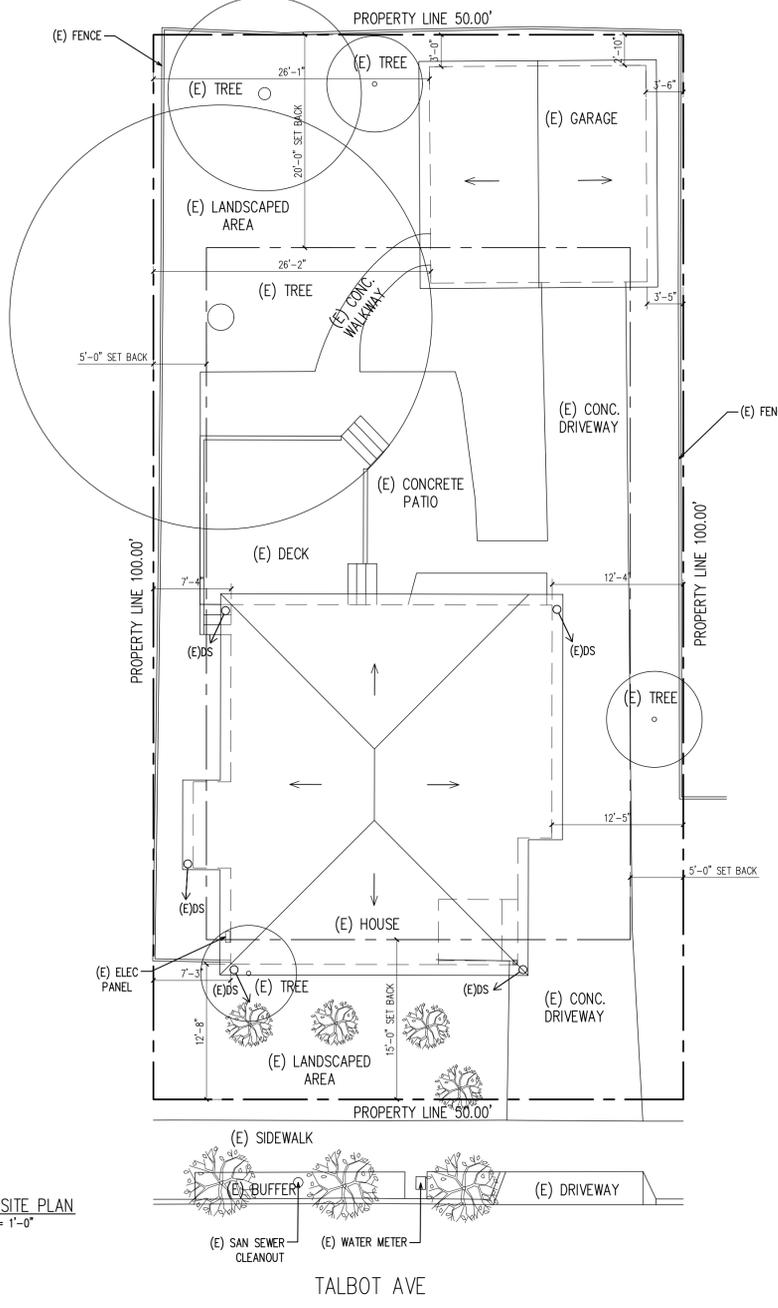
GC TO INSTALL STRAW WATTLE AS NEEDED DURING CONSTRUCTION TO PREVENT RUNOFFS ON ADJACENT SITES, AND PUBLIC RIGHT OF WAY.

(E) DS TO REMAIN, INSTALL (N) SPLASH PAN AS NEEDED.

(N) DS TO CONNECT TO (E) DRAIN SYSTEM W/ 4" PVC AS NEEDED, OR TO STOP ABOVE A SPLASH PAN.

ALL NEW ROOF DRAINAGE WILL BE DIRECTED TO LANDSCAPED AREAS TO THE EXTENT FEASIBLE AND NOT ONTO ADJACENT PROPERTIES.

WHEN NEW FOUNDATIONS ARE NEEDED FOR THE PROJECT, AT THE TIME OF FOUNDATION INSPECTION WHEN REQUIRED BY CITY INSPECTOR OR PART OF PERMITTING APPROVAL REQUIREMENTS, CORNER STAKES OR OFFSET STAKES MUST BE ESTABLISHED BY A LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA AND VERIFIED BY THE FIELD INSPECTOR TO ENSURE THAT NEW STRUCTURE CONSTRUCTION IS LOCATED IN ACCORDANCE WITH THE APPROVED PLANS, AND DOES NOT ENCROACH IN THE SETBACK.



GENERAL SYMBOLS

	ALL DIMENSIONS
	(E) WALL
	REMOVED WALL
	(N) WALL
	SHEAR WALL

APPLICABLE CODES & STANDARDS

CITY / COUNTY CODES AND ORDINANCES
 CALIFORNIA BUILDING CODE 2019
 CALIFORNIA RESIDENTIAL CODE 2019
 CALIFORNIA PLUMBING CODE 2019
 CALIFORNIA MECHANICAL CODE 2019
 CALIFORNIA ELECTRICAL CODE 2019
 CALIFORNIA GREEN BUILDING CODE 2019
 CALIFORNIA ENERGY CODE 2019
 CALIFORNIA FIRE CODE 2019
 2019 EDITION OF THE TITLE 24 STANDARDS

ARCHITECT:

NAME ROMAIN CURTIS
 ARCHITECT #C35019
 ANURA DESIGN
 6680 ALHAMBRA AVE, #193
 MARTINEZ, CA 94553
 phone: 510.612.0345
 romain@anuradesign.com

OWNER:

ARTHUR CHANG
 718 TALBOT AVE
 ALBANY

PROJECT DATA

OCCUPANCY:	R-3 / U
CONSTRUCTION TYPE:	VB
FIRE SPRINKLERS:	NO
STORIES:	1
APN:	66-2809-7
FLOOD ZONE:	X
ZONING:	R-1
NET SITE AREA:	5,000
(E) 1ST FLOOR:	968 SF
(E) GARAGE:	398 SF
(E) ENTRY PORCH:	30 SF
(E) DECK:	250 SF
(E) FOOT PRINT:	1,646 SF
(E) TOTAL CONDITIONED SPACE:	968 SF
(E) LOT COVERAGE:	32.92%
(E) FAR:	19.36%
(N) ADDITION:	405 SF
(N) DECK:	258 SF
(N) TOTAL CONDITIONED SPACE:	1,373 SF
(N) TOTAL FOOT PRINT:	2,059 SF
(N) LOT COVERAGE:	41.18%
(N) FAR:	27.46%

SCOPE OF WORK

405 SF BEDROOM AND BATHROOM ADDITION
 INTERIOR REMODEL INCLUDING THE KITCHEN
 AND TWO BEDROOMS

NO CHANGE TO LANDSCAPING
 NO CHANGE TO PARKING
 NO CHANGE TO DRAINAGE

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SUR	TOPOGRAPHIC SURVEY

NOTES:

- ALL PERMITS EXCEEDING \$1,000.00 IN VALUATION SHALL REQUIRE INSTALLATION OF APPROVED SMOKE AND CARBON MONOXIDE DETECTORS WITHIN THE DWELLING.
- ALL PERMITS EXCEEDING \$10,000.00 IN VALUATION SHALL REQUIRE THE INSTALLATION OF AN APPROVED AUTOMATIC GAS SHUT-OFF DEVICE ON THE CUSTOMER OWNED PIPING AT THE UTILITY METER.
- VF & INSTALL A MOTION SENSITIVE AUTOMATIC GAS SHUTOFF VALVE ON GAS METER WHEN REQUIRED.
- BUILDING ADDRESS NUMBERS MUST BE A MINIMUM OF 4 INCHES IN HEIGHT OR 3 INCHES IN HEIGHT AND SELF-ILLUMINATED.
- CARBON MONOXIDE ALARM AND DETECTOR SHALL BE INSTALLED IN ACCORDANCE W/ THE MANUFACTURER'S INSTRUCTIONS, NFPA 720 INSTALLATION STANDARDS AND CRC.
- ALL SMOKE ALARMS SHALL BE 110V CONNECTED TO THE BUILDING WIRING (W/ BATTERY BACKUP INCLUDING LOW BATTERY WARNING FEATURE)
- ALL SMOKE ALARMS TO BE INTERCONNECTED.

REVISIONS

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OWNER:

ARTHUR CHANG
 718 TALBOT AVE
 ALBANY

**ADDITION/ REMODEL
 718 TALBOT AVE,
 ALBANY, CA 94706**

**SITE PLAN
 PROJECT DATA**

DRAWN BY
CA008

CHECKED BY
CA007

ISSUE DATE
09/14/2022

SCALE
1/8"=1'-0"

ANURA JOB NO
CA2207-0002

SHEET

VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.

CONTRACTOR'S NOTES:

- CONTRACTOR SHALL BE FULLY INSURED AND LICENSED IN THE STATE WHERE WORK IS TAKING PLACE.
- THE CONTRACTOR SHALL NOT ORDER MATERIALS NOR SCHEDULE THE WORK UNTIL ALL PLAN DIMENSIONS, SPECIFICATIONS, NOTES, HAVE BEEN VERIFIED IN FIELD.
- DRAWINGS, SHOP DRAWINGS AND EXISTING CONDITIONS ARE VERIFIED IN THE FIELD BY THE GENERAL CONTRACTOR. THE GC SHALL INFORM THE ARCHITECT OF ANY CONFLICTS IN WRITING BEFORE CONSTRUCTION COMMENCES. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS BEST AS PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY.
- IT IS THE RESPONSIBILITY OF THE GC TO NOTIFY THE OWNER AND THE ARCHITECT OF RECORD OF ANY CONDITION FOUND IN THE FIELD TO BE DIFFERENT FROM THOSE SHOWN ON THE PLANS OR SHOP DRAWINGS AND OF NOTED CONFLICTS FOUND ON THE PLANS OR SHOW ON DRAWINGS THAT MAY AFFECT THE COMPLETION OF THE PROJECT, BEFORE SUCH WORK COMMENCES.

- THE GC SHALL REVIEW AND COMPARE THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, PLUMBING, MECHANICAL, CIVIL, AND ELECTRICAL DRAWINGS, AS PROVIDED IN PERMIT SET.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD PRIOR TO POURING CONCRETE; ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OF RECORD BEFORE PROCEEDING WITH WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING AND NEW PROPERTIES OF THE OWNER OR ADJOINING PROPERTIES. THE CONTRACTOR SHALL NOT UNDERMINE FOUNDATIONS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES AND SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PROGRAMS AND PROCEDURES DURING CONSTRUCTION, INCLUDED BUT NOT LIMITED TO POLLUTION PREVENTION PLAN.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND IMPLEMENT SHORING SYSTEM PRIOR TO THE

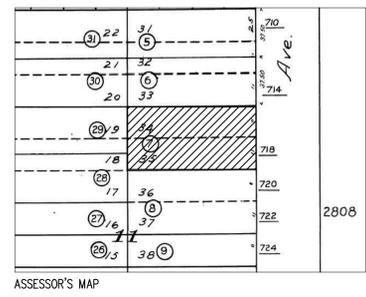
BEGINNING OF CONSTRUCTION.

- WHEN A CONFLICT EXISTS ON THE PLANS AND SPECIFICATIONS, DETAIL NOTES AND DRAWINGS SHALL GOVERN AND WRITTEN DIMENSIONS SHALL GOVERN OVER SCALED MEASUREMENTS.
- UNLESS SHOWN OTHERWISE, DETAILS SHOWN ON TYPICAL DETAIL SHEETS SHALL BE USED WHEREVER APPLICABLE. SPECIFIC DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER TYPICAL ARCHITECTURAL DETAILS. SPECIFIC NOTES ON STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER NOTES SHOWN IN GENERAL NOTES.
- MANUFACTURERS' NOTES AND SPECIFICATIONS SHALL APPLY WHEN PER CODE.
- DO NOT SCALE DRAWINGS.
- GC IS RESPONSIBLE FOR LOCATING AND AVOIDING UTILITIES. CALL USA NORTH AT 1-800-227-2600.
- VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.
- THE ISSUANCE OF A BUILDING PERMIT SHALL NOT BE CONSTRUED AS A GUARANTEE THAT ALL OF CODE

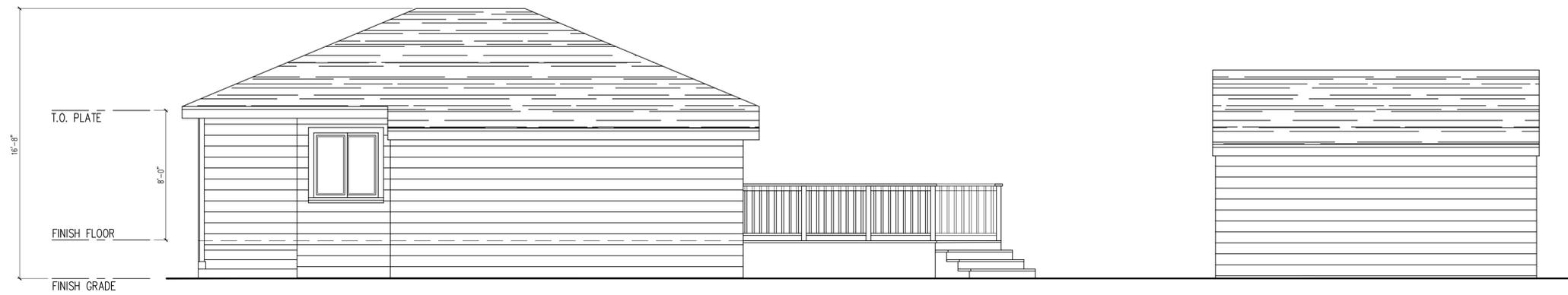
REQUIREMENTS ARE REFLECTED IN THE DOCUMENT. THE GENERAL CONTRACTOR FOR THE PROJECT SHALL BE ULTIMATELY RESPONSIBLE FOR INSURING THAT THE FINISHED BUILT COMPLIES WITH ALL LOCAL, STATES AND FEDERAL REGULATIONS, LAWS AND CODE REQUIREMENTS.

- WHEN MANUFACTURED ROOF TRUSSES ARE INSTALLED, GC TO PROVIDE TRUSSES CALCS SIGNED BY LICENSED PROFESSIONAL FOR APPROVAL BY CITY OR COUNTY. CALCS TO BE REVIEWED AND APPROVED BY ENGINEER OF RECORD PRIOR TO BE SUBMITTED TO THE BUILDING OFFICIAL.
- THE CITY/COUNTY BUILDING OFFICIAL AND/OR FIRE MARSHALL WILL REVIEW THE SCOPE OF WORK AND DETERMINE IF THE EXISTING BUILDING WILL NEED TO BE REQUIRED TO BE RETROFITTED WITH FIRE SUPPRESSION SPRINKLERS. GC TO CONTACT FIRE DEPARTMENT FOR VERIFICATION, AND UPGRADE WATER METER, LINES AS NECESSARY. IF REQUIRED, FIRE SPRINKLER SYSTEM TO BE ON DEFERRED PERMIT AND SUBMITTED BY THE GC.
- GC TO READ, BE FAMILIAR AND FOLLOW ALL STANDARD PROVISIONS, CONSTRUCTION GUIDE LINES AND REQUIREMENTS OF LISTED, CURRENTLY APPLICABLE CODES AND ORDINANCE.

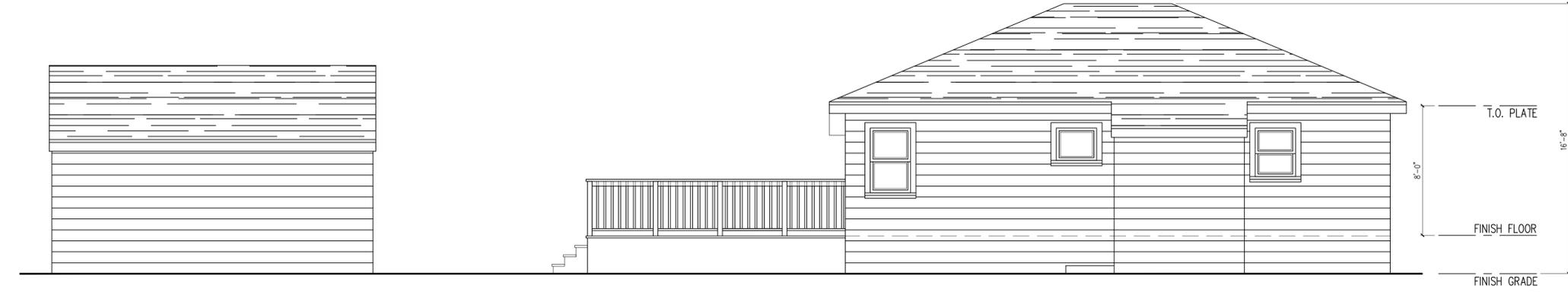
718 TALBOT AVE, ALBANY, CA 94706



DEMOLITION NOTES:
 VERIFY IN THE FIELD THAT THE INTERIOR WALLS BEING REMOVED ARE
 NON-BEARING, NON-BRACED, AND NON-SHEARED WALLS. OTHERWISE,
 NOTIFY THE ARCHITECT OR ENGINEER OF RECORD FOR FURTHER ACTION
 AND BEFORE REMOVING THE WALL(S).



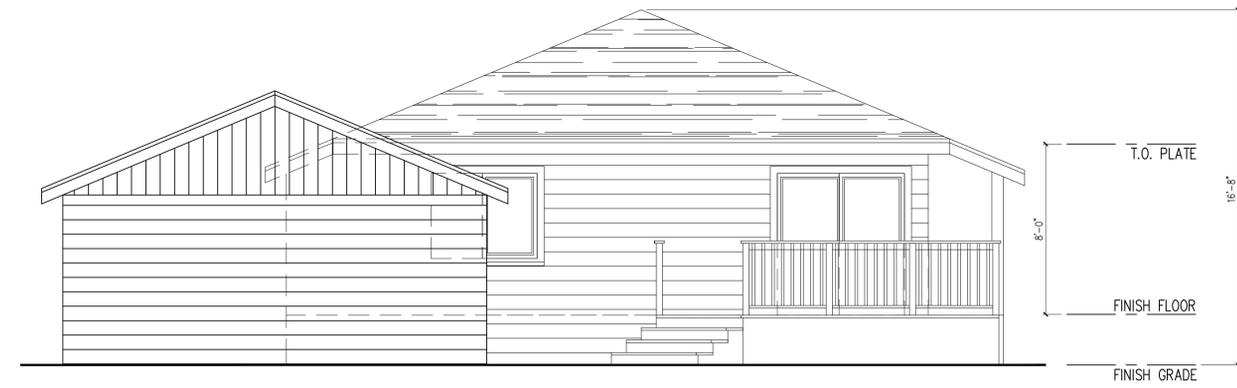
2 EXISTING SIDE ELEVATION
 SCALE: 1/4" = 1'-0"



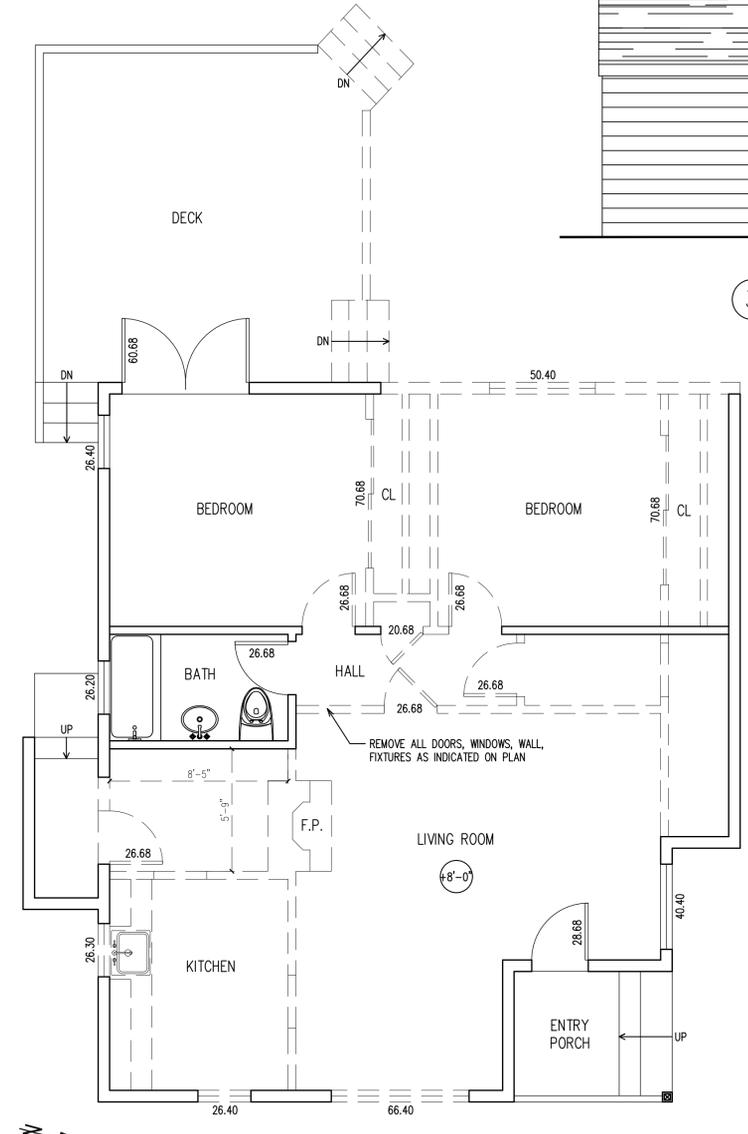
3 EXISTING SIDE ELEVATION
 SCALE: 1/4" = 1'-0"



4 EXISTING FRONT ELEVATION
 SCALE: 1/4" = 1'-0"



5 EXISTING REAR ELEVATION
 SCALE: 1/4" = 1'-0"



1 EXISTING FLOOR PLAN
 SCALE: 1/4" = 1'-0"

REVISIONS

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ROMAIN CURTIS
 ARCHITECT #C35019
 6680 ALHAMBRA AVE, #193
 MARTINEZ, CA 94553
 phone: 510.612.0345
 roman@anuradesign.com

ADDITION/ REMODEL
 718 TALBOT AVE,
 ALBANY, CA 94706

EXISTING/
 DEMOLITION PLAN &
 ELEVATIONS

DRAWN BY
 CA008
 CHECKED BY
 CA007
 ISSUE DATE
 09/14/2022
 SCALE
 1/4" = 1'-0"
 ANURA JOB NO
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 SHEET

A-2



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ARCHITECT #C35019
6680 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

ADDITION/ REMODEL
718 TALBOT AVE,
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PROPOSED
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CLASS A OR B FIRE RETARDANT ROOF COVERING TO BE PROVIDED FOR THE NEW ROOFS (CRC R902.1). - TYP. COMPOSITE SHINGLE ROOFING WITH SLOPES EQUIVALENT TO 4:12 SHALL BE PROVIDED W/ DOUBLE UNDERLAYMENT. CRC R905.2.2



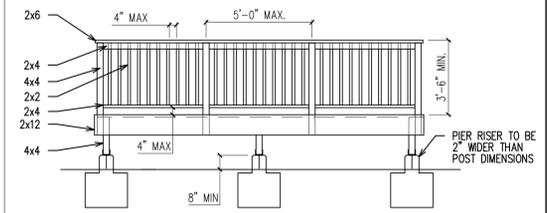
1 PROPOSED FRONT ELEVATION
SCALE: 1/4" = 1'-0"



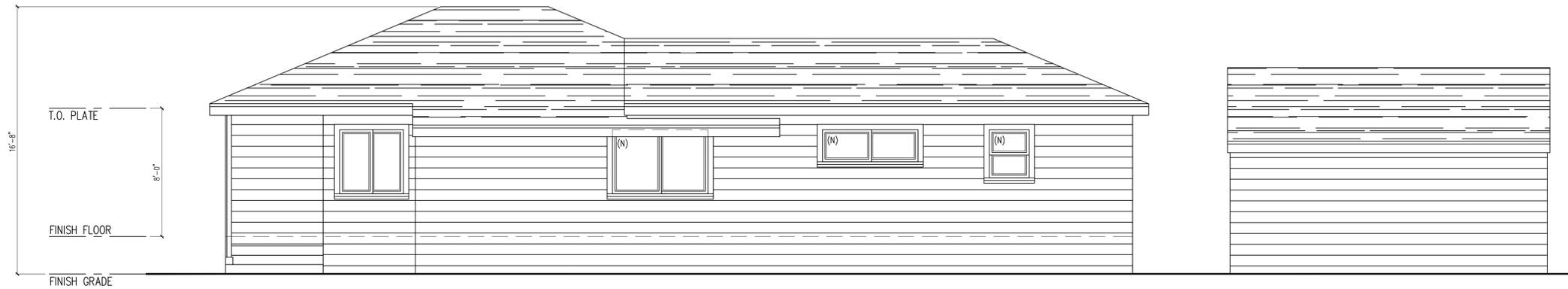
2 PROPOSED REAR ELEVATION
SCALE: 1/4" = 1'-0"

(N) SIDING/TRIMS TO MATCH (E)

DECK FRAMING NOTES:
DECK FRAMING (E.G., JOISTS, BEAMS, POSTS, DECKING) SHALL BE OF APPROVED NATURALLY DURABLE OR PRESSURE TREATED WOOD - RW OR PT - SSD FOR FRAMING DETAILS



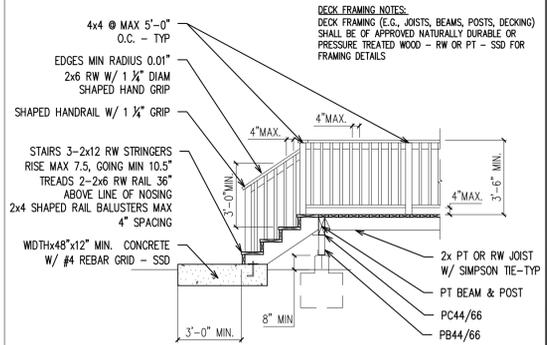
DECK ELEVATION - TYP.
SCALE: 1/4" = 1'



3 PROPOSED SIDE ELEVATION
SCALE: 1/4" = 1'-0"

ROOF VENT CALCULATION:
ROOF AREA TO BE VENTED= 1,373 SF
1,373 / 150 = 9.16 SF OF VENT NEEDED
EAVE VENT:
VULCAN (VE5522) VENT 5.5X22 WITH NET FREE VENTILATION AREA OF 75 SQ IN PER VENT. (0.52 SF)
14 PROVIDED = 7.28 SF
EYEBROW VENT:
VULCAN (VDLR419) 4X19 DORMER LP. WITH NET FREE VENTILATION AREA OF 52 SQ IN PER VENT (0.36 SF)
10 PROVIDED = 3.6 SF
TOTAL VENT PROVIDED = 10.88 SF
ANY EXISTING VENTS BLOCKED BY THE ADDITION SHALL BE REPLACED IN KIND AT THE NEW STRUCTURE.

CRAWL SPACE VENT CALCULATION:
CRAWL SPACE AREA= 1,373 SF
1,373 / 150 = 9.16 SF OF VENT NEEDED
CRAWLSPACE VENT:
GALVANIZED STEEL 2 WAY REVERSIBLE VENT BY GIBRALTAR BUILDING PRODUCTS (#TW146-1/8) 14X6, WITH NET FREE VENTILATION AREA OF 71 SQ IN PER VENT (0.49 SF)
20 PROVIDED = 9.8 SF
ANY EXISTING VENTS BLOCKED BY THE ADDITION SHALL BE REPLACED IN KIND AT THE NEW STRUCTURE.
VENTS TO BE W/ 1/3" OF CORNERS BUT NOT IN SHEAR WALLS UNLESS REINFORCED"



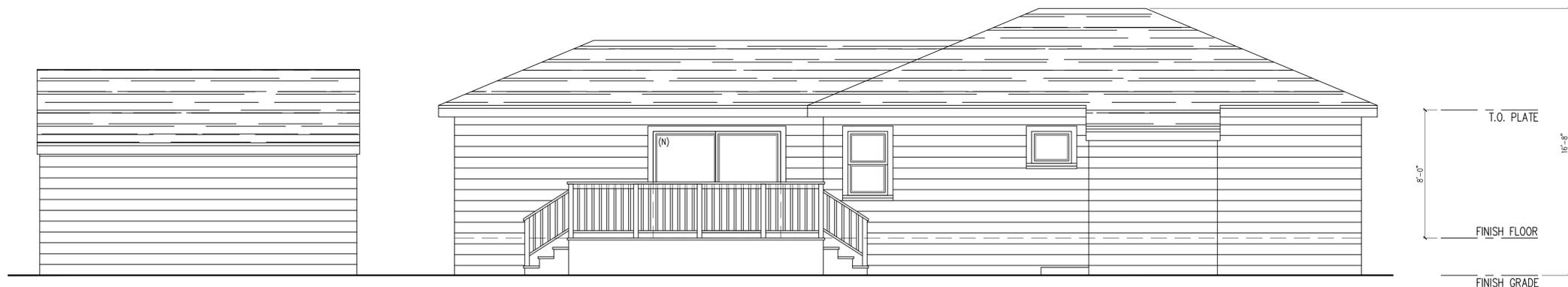
NOTE:
FOR ACTUAL HEIGHT AND NUMBER OF STEPS
SEE FLOOR PLAN

DECK & STAIR SECTION - TYP.
SCALE: 1/4" = 1'

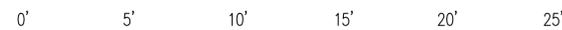
STAIRS:
EXTERIOR STAIRS TO BE 3-2x12 RW OR PT STRINGERS OR #4 BAR REINFORCED CONCRETE. INTERIOR STAIRS TO BE DF, CONCRETE OR STEEL. - SSD FOR FRAMING DETAILS.
RISE MAX 7.5, GOING MIN 10.5"
RAIL 36" ABOVE LINE OF NOSING - SHAPED RAIL
BALUSTERS MAX 4" SPACING
THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8".
NOSING NOT LESS THAN 3/4" BUT NO MORE THAN 1-1/4" SHALL BE PROVIDED ON STAIRWAY W/ SOLID RISERS IF THE TREAD DEPTH IS LESS THAN 11"
OPEN RISER PERMITTED, PROVIDED THAT OPENING BETWEEN TREADS DOES NOT PERMIT THE PASSAGE OF A 4" DIAM. SPHERE.
HANDRAIL ON BOTH SIDES OF STAIRS.
TOP OF HANDRAIL TO BE BETWEEN 34" AND 38" ABOVE THE TREAD NOSING.
HAND RAIL TO BE GRIPABLE AS DEFINE BY CODE.
HANDRAIL SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAIL ADJACENT TO A WALL SHALL HAVE OF NOT LESS THAN 1-1/2" BETWEEN THE WALL AND THE HANDRAIL.
DECK / BALCONY GUARD RAIL:
3'-6" HIGH MIN / 4x4 RW POSTS MAX 5'-0" O.C. / 2x6 RW TOP RAIL - SSD FOR FRAMING DETAILS
2x2 RW BALUSTERS - MAX 4" GAP (HORIZONTAL AND VERTICAL)
ALL (N) DECKING MATERIAL WITHIN 5'-0" OF PROPERTY LINE TO BE FIRE RETARDANT TREATED 1 H MIN ALTERNATE: METAL POST AND STEEL CABLE.
GUARD RAIL AND HANDRAIL SHALL BE CAPABLE OF WITHSTAND A SINGLE CONCENTRATED LOAD OF 200 LBS APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP OF THE RAIL.
BALUSTER SHALL BE CAPABLE TO WITHSTAND A HORIZONTALLY APPLIED 50 LBS LOAD ON AN AREA EQUAL TO 1 SQ FT.
GRIPABLE HANDRAIL:
HANDRAILS ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS.
HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2" INCH BETWEEN THE WALL AND THE HANDRAILS. GUARDRAIL CAPABLE TO WITHSTAND A SINGLE CONCENTRATED LOAD OF 200 LBS APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP OF THE RAIL.
CONCRETE LANDING:
NO MORE THAN 2% SLOP
REINFORCE CONCRETE #4 BAR EAST WEST 3" COVER MIN. AT LANDING STAR WIDTH +12"x36" MIN X12" MIN
ANY DECK MATERIAL LOCATED BETWEEN 0' AND 5' FROM THE PROPERTY LINE TO BE EXTERIOR FIRE RETARDANT TREATED WOOD.

DECK FRAMING NOTES:
DECK FRAMING (E.G., JOISTS, BEAMS, POSTS, DECKING) SHALL BE OF APPROVED NATURALLY DURABLE OR PRESSURE TREATED WOOD.
PORCH FRAMING NOTES:
PORCH FRAMING (E.G., JOISTS, BEAMS, POSTS, DECKING) SHALL BE OF APPROVED NATURALLY DURABLE OR PT WOOD.

DECK & STAIR NOTES - TYP.
SCALE: N/A



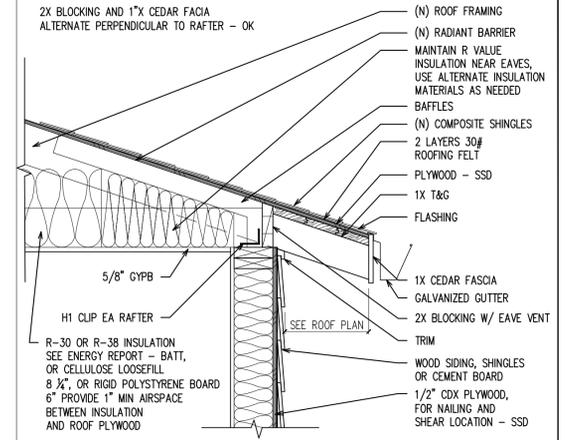
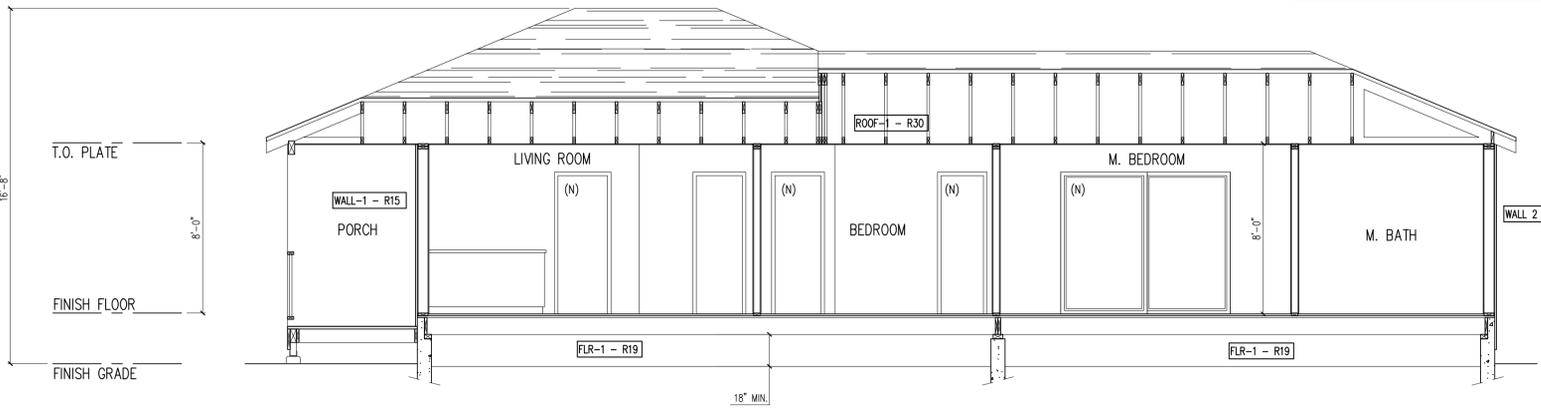
4 PROPOSED SIDE ELEVATION
SCALE: 1/4" = 1'-0"



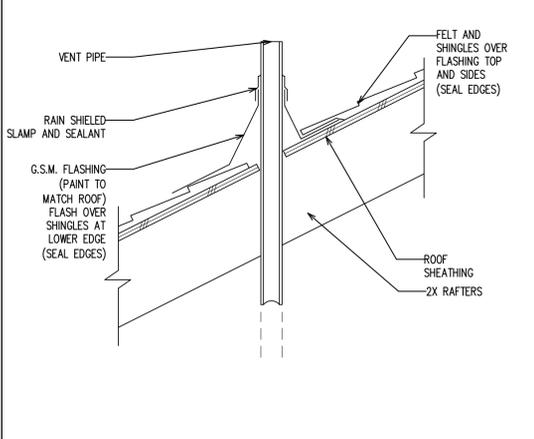
VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.



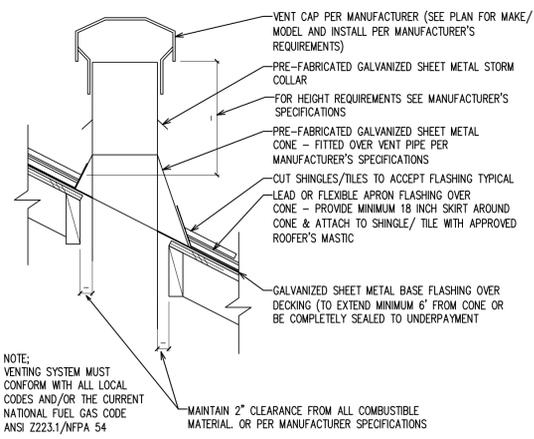
1 PROPOSED SECTION A
SCALE: 1/4" = 1'-0"



ROOF EAVE DETAIL
SCALE: 1" = 1'-0"



TYPICAL ROOF PENETRATION
SCALE: N/A

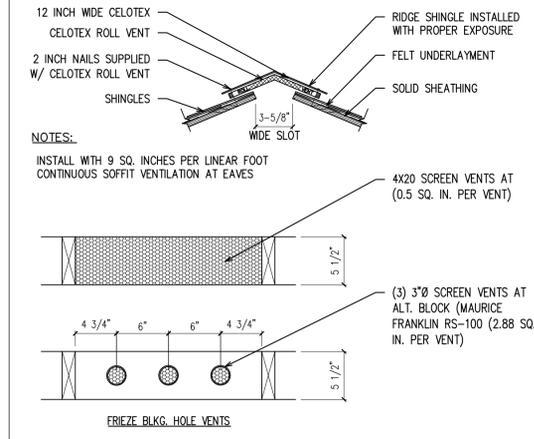


GAS B-VENT PENETRATION AT ROOF
SCALE: N/A

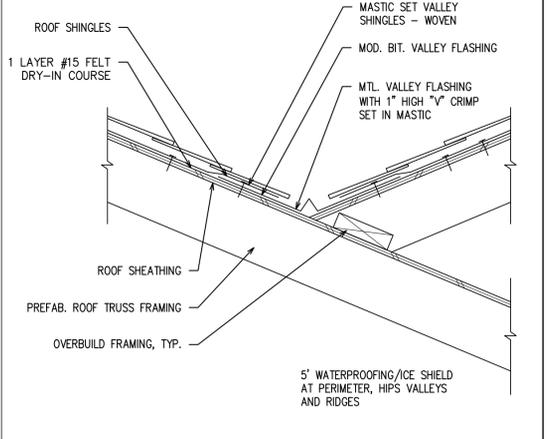
AIR BARRIER
ATTIC RADIANT BARRIER

PHYSICAL PROPERTIES	TEST	VALUE
FIRE RATING	ASTM E84-09	CLASS 1 / CLASS A
EMISSIVITY	ASTM C1371-04A	0.04
REFLECTIVITY	-	0.96
WATER VAPOR TRANSMISSION	ASTM E96-05	13.9 PERMS
CORROSIVENESS	ASTM D3310-00	PASSES
BLEEDING AND DELAMINATION	ASTM C1313-05	NO BLEEDING OR DELAMINATION
PLIABILITY	ASTM C1313-05	NO CRACKING
GROWTH OF FUNGI	ASTM C1313-08	DOES NOT PROMOTE GROWTH
TENSILE STRENGTH	ASTM D2261	LENGTH: 27.34 LBS WIDTH: 13.31 LBS

ATTIC RADIANT BARRIER
SCALE: N/A



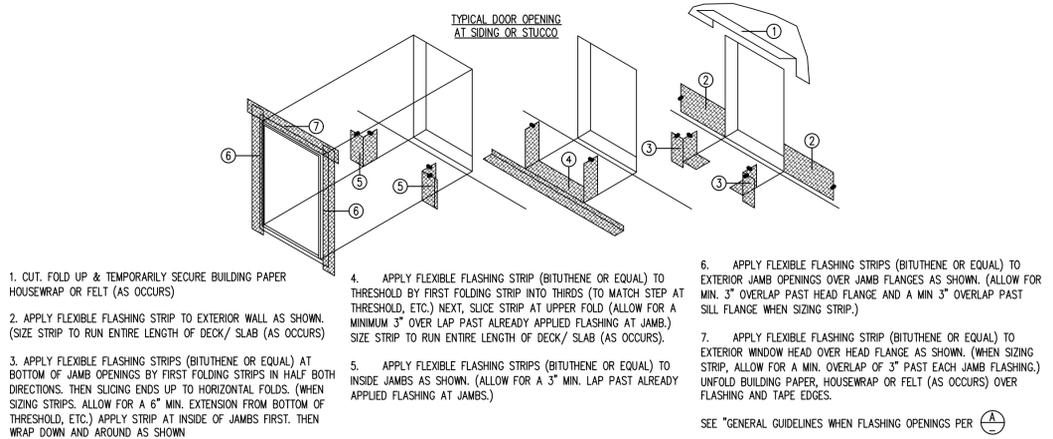
VENTS DETAIL
SCALE: N/A



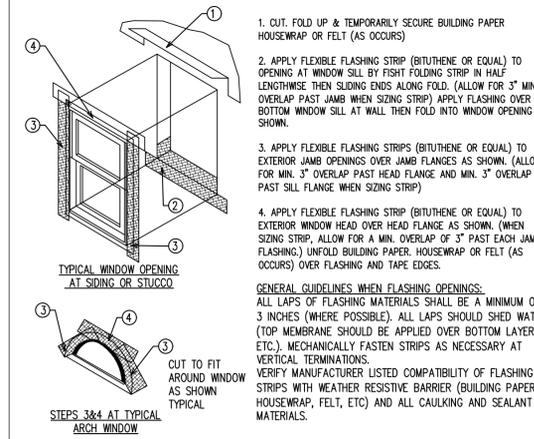
VALLEY DETAIL
SCALE: 1-1/2" = 1'-0"

-FASTEN WINDOW TO WALL PER MANUFACTURE
-ADHESION TO OSD CAN BE A PROBLEM IF IT IS EVEN SLIGHTLY DAMP OR DUSTY.- PRIME OSB OR PLYWOOD SHEATHING PRIOR TO SASM INSTALLATION WITH #100 VOC PRIMER BY PROTECTO-WRAP. SEE SHEET A6.5b FOR SPECIFICATIONS.
-SASM (SELF-ADHEARING FLASHING STRIP)- PW 100/40 AIR/ VAPOR BARRIER BY PROTECTO- WRAP. SEE SHEET A6.5b FOR SPECIFICATIONS. USE ROLLER AT ALL TIMES TO INSTALL SASM.
-SILL PAN SHALL BE COPPER OR STAINLESS STEEL AND PROVIDE SLOPE TO DRAIN TO EXTERIOR OF STRUCTURE.
-SEALANTS: PERMATHANE SM 71108 BY SCHUEC- MOREHEAD. CLEAN ALL METAL FLASHING OF OIL, DIRT PRIOR TO INSTALLATION OF SEALANTS.-SHIMS SHALL BE MADE OF HIGH COMPRESSION PLASTIC OR HARDWOOD.
-ALL MATERIALS SUCH AS, BUT NOT LIMITED TO, COATINGS, FLASHING AND SEALANTS THAT COME INTO CONTACT WITH EACH OTHER SHALL EXHIBIT CHEMICAL COMPATIBILITY AND ADHESION FOR THE INTENDED PURPOSE.
-ON THE INTERIOR SIDE, APPLY BACKER ROD AND A CONTINUOUS INTERIOR PERIMETER BEAD OF SEALANT, OR AEROSOL FOAM SEALANT WITHOUT BACKER ROD. THIS EFFECTIVELY FORMS A BACK DAM TO PREVENT WATER INTRUSION INTO THE INTERIOR.
-AFTER INSTALLATION, RECHECK THE SEAL BETWEEN THE SILL OF THE WINDOW AND THE UPTURNED LEG OF THE SILL PAN AND RESEAL AS NEEDED.
-NAIL THE WINDOW SIDE AND TOP FINIS FROM THE CENTER TO EDGE EVERY OTHER HOLE ON LARGER WINDOWS, ADD A SINGLE NAIL AT THE CENTER OF THE BOTTOM FIN WITH A SEALANT RING AT THE BACK OF THE FIN AT THE NAIL.
-C.B.C. 1405.3 CALLS FOR FLASHING OF ALL EXTERIOR OPENINGS EXPOSED TO WEATHER TO MAKE THEM WEATHER PROOF. SINCE C.B.C. DOES NOT OUTLINE PROCEDURES FOR WINDOW FLASHING, TECHNIQUES SHOWN HERE ARE RECOMMENDED. USE "MOISTOP" FLASHING BY FORTIFIBER CORP., OR EQUAL WHENEVER POSSIBLE FOR FLASHING MATERIAL. CAULK BACK OF THE WINDOW FRAMES BEFORE SETTING. USE WINDOWS THAT ARE WATERIGHT.
-26.GA. G.I. FLASHING REQUIRED AS SHOWN IN OTHER WINDOW DETAILS TO BE INSTALLED BY SHEET METAL CONTRACTOR.
-LINE WIRE, WHEN USED AS BACKING TO SUPPORT WATER- RESISTANT BUILDING PAPER OR FELT - BENEATH LATH FOR STUCCO SHOULD BE INSTALLED ACCORDING TO INDUSTRY STANDARDS ARE PRACTICE.
-NO ATTACHMENT DEVICE NOR THE WIRE BACKING SHOULD COVER OR PENETRATE FLASHING MATERIAL.
-PERIPHERAL FLASHING AT ALL EDGES OF WALL OPENING MUST COVER WIRE BACKING.

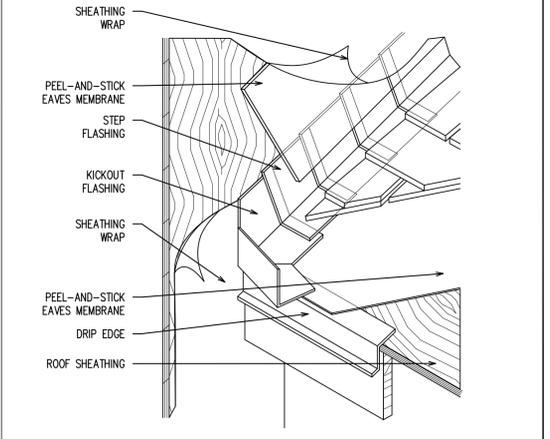
WINDOWS AND DOORS FLASHING NOTES:
N/A



FLASHING AT DOOR OPENINGS
SCALE: N/A



FLASHING AT WINDOW OPENINGS
SCALE: N/A



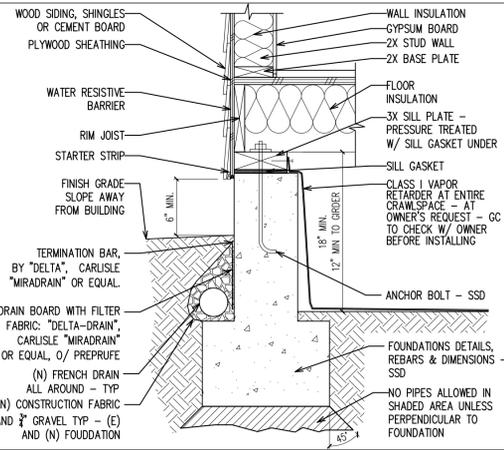
STEP FLASHING
SCALE: N/A

- THE CONTRACTOR SHALL CAREFULLY INSPECT ALL EXCAVATION WORK FOR COMPLIANCE TO REQUIREMENTS OF THE PREVAILING BUILDING CODE. SHOULD ANY CONDITIONS APPEAR QUESTIONABLE DUE TO EXCESSIVE DAMPNESS, GRANULAR COMPOSITION, SLUFFING, SOFTNESS OR OTHER DEFECT, THE CONTRACTOR SHALL CONTACT THE ENGINEER.
-ALL INFORMATION PERTAINING TO THE SITE SHALL BE AND SHALL REMAIN THE OWNERS RESPONSIBILITY. THIS INFORMATION SHALL INCLUDE LEGAL DESCRIPTION, DEED RESTRICTIONS, EASEMENTS, AND POSITION OF EXISTING IMPROVEMENTS, SOILS REPORT AND ALL RELATED DATA. THESE DOCUMENTS HAVE BEEN PREPARED FOR THE INFORMATION AVAILABLE TO THE DESIGNER.
-IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL SUBCONTRACTORS TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS INDICATED ON THE DRAWINGS AND MAKE KNOWN ANY DISCREPANCIES PRIOR TO COMMENCING THEIR WORK.
-ALL DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALED DIMENSIONS.
-PROVIDE UNDER FLOOR VENTING OF (1) SQUARE INCH FOR EVERY 150 SQUARE FEET OF UNDER FLOOR AREA. VENT LOCATIONS SHALL PROVIDE CROSS VENTILATION
-PROVIDE MINIMUM 18" X 24" ACCESS TO ALL UNDER FLOOR AREAS. ACCESS TO ALL MECHANICAL OR PLUMBING EQUIPMENT SHALL BE SUFFICIENTLY SIZED FOR REMOVAL OF THE UNIT.
-ALL NAILS OR OTHER FASTENERS INSTALLED IN PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED OR EQUAL.
-THE TOP OF FOUNDATIONS SHALL BE LEVEL. THE BOTTOM OF FOUNDATIONS SHALL NOT SLOPE MORE THAN 1:10. FOUNDATIONS SHALL BE STEPPED WHERE NECESSARY IN ORDER TO MEET THESE REQUIREMENTS
-CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THEN 2500 POUNDS PER SQUARE INCH UNLESS OTHERWISE NOTED - SSD
-NO ALUMINUM SHALL BE IN CONTACT WITH CONCRETE.
-ALL PIPES IN CONCRETE SHALL BE SLEEVED OR WRAPPED
-NO PIPES ALLOWED IN SHADED AREA UNLESS PERPENDICULAR TO FOUNDATION

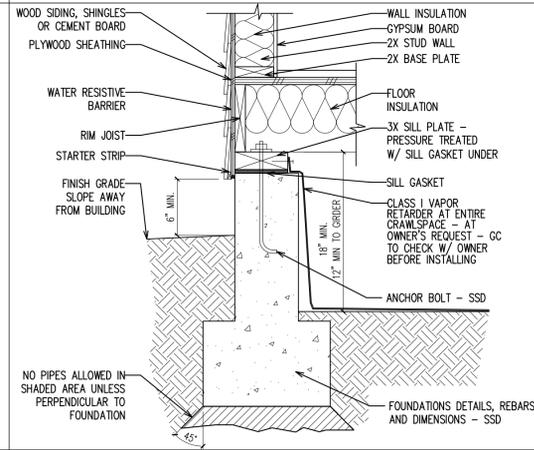
NOTES:
N/A

1. ALL FRAMING LUMBER TO BE D.F. #2 OR BETTER. 2X STUDS TO BE D.F. STUD OR BETTER.
2. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
3. ALL FRAME WALLS SUBJECT TO WATER SPLASH TO HAVE APPROVED WATERPROOF PAPER.
4. BLOCKING REQUIRED BETWEEN JOISTS AT BEARING PARTITIONS.
5. PROVIDE DOUBLE STUDS AT BOTH ENDS OF OPENINGS.
6. ALL EXTERIOR SIDING TO BE MIN. 5/8" UNLESS OVER SHEATHING. ALL EXTERIOR JOINTS SHALL CENTER OVER FRAMING MEMBERS W/ CONTINUOUS WOOD BATTING OR JOINTS TO BE WATER PROOFED. NAIL ALL SIDING W/ GALVANIZED NAILS.
7. ALL EXTERIOR WALLS TO HAVE TYVEC OR EQUAL MEMBRANE OVER STRUCTURAL SHEATHING AND/OR STUDS.
8. ALL NAILED CONNECTIONS SHALL COMPLY WITH TABLE 2304.9.1 OF THE CALIFORNIA BUILDING CODE, UNLESS OTHERWISE NOTED.
9. ALL FRAMING HARDWARE SHALL BE "STRONG-TIE" AS MANUFACTURED BY SIMPSON CORPORATION. I.C.B.O. APPROVED ALTERNATIVE HARDWARE MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ARCHITECT/ENGINEER.
10. ALL FRAMING HARDWARE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE STAINLESS STEEL, ZMAX OR BATCH POST HOT DIP GALVANIZED. ALL FASTENERS SHALL BE STAINLESS STEEL, BATCH POST HOT DIP GALVANIZED OR MECHANICALLY GALVANIZED. STAINLESS STEEL CONNECTORS AND FASTENERS ARE PREFERRED IN EXTERIOR LOCATIONS.
11. WALL STUDS SHALL BE CONTINUOUS FROM BOTTOM PLATE TO POINT OF LATERAL SUPPORT AT ROOF, FLOOR, OR CEILING INTERSECTION.
12. ALL CEILING HARDWARE (HANGERS, STRAPS) FASTENERS ARE REQUIRED TO BE OF THE SAME MATERIAL OR EQUAL, O/ PREPRUFEE
13. TYPICAL HEADER SIZE = 4x8 DF#2 UNLESS OTHERWISE NOTED.

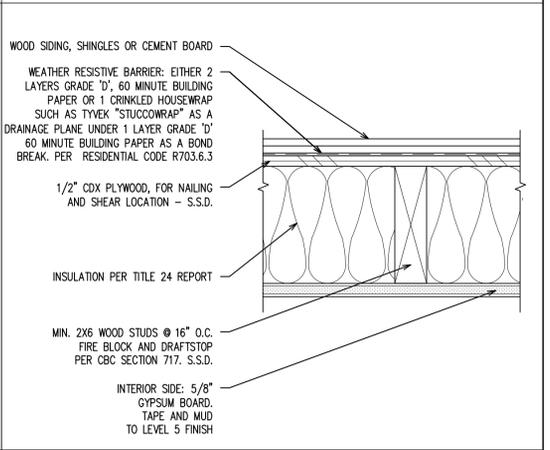
NOTES:
N/A



TYP. SPREAD FOOTING W/ FRENCH DRAIN
SCALE: 1" = 1'-0"



TYP. SPREAD FOOTING
SCALE: 1" = 1'-0"



EXTERIOR SIDING FINISH WALL - GYPSUM BOARD INTERIOR
SCALE: 3" = 1'

anura
design

REVISIONS

- 1
- 2
- 3
- 4
- 5



ROMAIN CURTIS
ARCHITECT #C35019
6880 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

ADDITION/ REMODEL
718 TALBOT AVE,
ALBANY, CA 94706

PROPOSED
SECTION & DETAILS

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
09/14/2022
SCALE
1/4"=1'-0"
ANURA JOB NO
CA2207-0002
SHEET

A-5

1. NOTES AND SPECIFICATIONS

2. Light, Ventilation, Room Dimensions

2.1 Required window area for light shall be not less than 8 percent of the floor area of the room served; the minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated. The glazed area need not be operable for ventilation when a whole-house ventilation system is installed. (R303.1)

2.2 Every sleeping room and any basement must have at least one openable window or door approved for shall have a minimum net area of 5.0 square feet. The minimum net vertical opening dimension shall be 24". The emergency rescue with a minimum net clear opening of 5.7 square feet, except the windows at the grade floor minimum net clear opening width dimension shall be 20". The bottom of the clear opening shall be no more than 44" from the floor. (R 310.1)

2.3 Bathrooms, water closet compartments and similar rooms shall have window at least 3 sq. feet in area, half of which must be openable, or mechanical ventilation must be provided. (R303.3)

2.4 Each bathroom containing a bathing facility shall be mechanically ventilated for the purposes of humidity control. (R303.3.1)

2.5 Provide ventilation for products of combustion to outside air. (CMC 802.0)

2.6 Attic ventilation: 1/150 of attic area. If 40% – 50% of the vents are no more than 3 feet below the ridge or highest point of the roof area; then the ratio may be reduced to 1/300. (R806.2) Unvented attics may be allowed if meeting the requirements of R806.5.

2.7 Enclosed rafter spaces shall have a minimum 1" space between the insulation and roof sheathing and at the location of all eave and cornice vents. (R806.3)

2.8 Underfloor space shall have a ventilation opening area of 1/150 square feet of underfloor area. If a Class I vapor retarder is used the ratio may be reduced to 1/1500. One opening shall be placed within 3 feet of each building corner. Openings shall be covered with a covering having openings no greater than 1/4". (R408.2)

2.9 Heating system is required to maintain 68 degrees at 3 feet above floor level and 2 feet from exterior walls in all habitable room. (R303.9)

2.10 Air infiltration, insulation, space heating, space cooling, water heating, etc shall meet CA Energy Commission Standards.

2.11 All habitable rooms except kitchens shall be at least 70 square feet in area and shall have a width of at least 7 feet. In addition there shall be at least one room with a minimum of 120 square feet in each dwelling. Minimum ceiling height shall be 7 feet. See CRC for exceptions. (R304/R305)

3. DOORS, STAIRWAYS AND LANDINGS (INCLUDING DECKS)

3.1. Required egress door shall be side hinged and have a minimum net clear width of 32" and a minimum height of 78". (R311.2)

3.2 There shall be a landing at each side of all doors not more than 1 1/2" lower than the threshold at the required egress door, and not more than 7 3/4" for other exterior doors. The landing shall be at least as wide as the door served and 36" minimum length measured in the direction of travel. A landing is not required at doors other than the required egress door where a stairway of two or fewer risers is located on the exterior of the door, and the door does not swing over the stairway. (R311.3)

3.3 Stairway rise shall be 4" min and 7.75" max. Run shall be 10" min. Headroom shall be 80" minimum. Width shall be 36" minimum. Handrails shall provide graspability and be 34"-38" above tread nosing with openings less than 4 3/8" clear, except openings formed by the riser, tread, and bottom rail of the guard may be 6" maximum diameter. (R 311.7 & R312.1.3 ex. 1 & 2)

3.4 Enclosed useable space under interior stairs shall be finished with 1/2" min. type X gypsum board (R302.7)

3.5 Fireblocking is required in concealed spaces between stair stringers at the top and bottom of the run. (R302.11)

3.6 There shall be a floor or landing at the top and bottom of each stairway. Width and length of landings shall be not less than the width of the stairway served. A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs. (R311.7.6)

3.7 Guards shall be located along open sided walking surfaces, including stairs, ramps, landings, and decks, that are more than 30" above the floor or grade, measured at any point within 36" horizontally. Required guards shall be not less than 42" above the adjacent walking surface. Except that handrails may be considered as guards at stairways. Openings in guards shall not exceed 4". (R312)

3.8 Exterior deck support posts shall be cross braced in two directions for lateral stability.

3.9 For posts over 30" in height provide mechanical connection at post base.

3.10 Provide detail at junction of exterior decking, wall and interior floor framing. Show elevations, flashing, and anchorage. Deck framing shall be positively attached to building framing at a minimum of 2 locations within 24" of each end of the deck with hold-down tension devices having an allowable design capacity of not less than 1500 pounds each, or at a minimum of 4 locations with hold-down tension devices of not less than 750 pounds allowable design capacity. (R507.2.4)

3.11. Deck framing and support posts to be of preservative treated or naturally durable lumber. (R317.1) Hardware and fasteners shall be hot-dipped galvanized, stainless steel, silicon bronze, or copper. (R317.3.1)

4. WEATHER AND CORROSION DAMAGE PREVENTION MEASURES

4.1. Naturally durable wood or preservative treated wood, per AWWA U1, shall be required in the following locations (R317.1):

- A. Wood joists and girders closer than 18" or 12", respectively, to the exposed ground.
- B. Wood framing members that rest on concrete or masonry and are less than 8" from the exposed ground.
- C. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated by an impervious moisture barrier.
- D. Wood siding, sheathing and wall framing on the exterior of the building having a clearance of less than 6" from the ground or less than 2" from a horizontal concrete surface.
- E. All wood in contact with the ground.
- F. All wood embedded in concrete that is in direct contact with the ground or exposed to weather and that supports structures intended for human occupancy.

4.2. Exposed glu-lams shall be preservative treated, applied by the manufacturer, or made from naturally durable wood.

4.3. Weatherproofing of exterior surfaces above and below grade is required. (R406 & R703)

4.4. Concrete slabs shall be separated from earth by a minimum 6-mil vapor retarder, with edges lapped a minimum of 6". This may be omitted if the space above is not heated and is not likely to become heated in the future. (R506.2.3)

4.5. A capillary break shall be installed when concrete slab-on-ground floors are required to have a vapor retarder. This capillary break shall be a 4" thick base of 1/2" or larger clean aggregate with a vapor retarder in direct contact with concrete. The concrete mix design shall address bleeding, shrinkage, and curling, in accordance with ACI 302.2R-06. As an alternative the slab design may be prepared by a licensed design professional. (CalGreen 4.505.2.1)

4.6. The ground adjacent to the foundation shall be sloped so that the grade shall fall a minimum of 6" within the first 10'. Impervious surfaces may be sloped at 2% minimum. (R401.3)

4.7. All fasteners used for attachment of siding shall be corrosion-resistant. (R703.3.2)

4.8. Corrosion resistant flashings shall be provided at openings and intersections/attachments. (R703.4)

4.9. All roof areas of buildings shall be provided with gutters or roof drains. Provide adequate roof slope for drainage (1/4" per foot, min.) or submit deflection and ponding calculations. Primary roof drains shall be designed based on a 60 minute storm with a 100 year return period, per Table D of the CPC. Secondary roof drains shall be provided not less than 2" above the roof surface. (CPC 1101.12)

5. GARAGE & CARPORT

5.1. Common wall between garage and dwelling shall have 1/2" gypsum board applied on the garage side. Garage ceiling with habitable space above shall have 5/8" type X gyp board applied to the ceiling. Carports with no enclosed uses above do not need protection. (R302.6)

5.2. No openings may be provided between a garage and a sleeping room. Other openings shall be equipped with solid wood or steel doors 1 3/8" in thickness and shall be self-closing and self-latching. (R302.5.1)

5.3. Garage and carport floor surfaces shall be of approved noncombustible material. Asphaltic surfaces shall be permitted at ground level in carport. (R309.1 & R309.2)

5.4. Appliances and receptacles installed in garages and carports generating a glow, spark, or flame shall be located 18" min. above the floor unless listed as flammable vapor ignition resistant. Provide protective bollard or other impact barrier or located out of the normal path for vehicles. (CMC 305.1)

6. ELECTRICAL

6.1. Do not install electrical panels larger than 16 square inches in rated fire walls. Garage to dwelling unit separation is not a rated fire wall. (R302.4.2) Never install electrical panels in closet. Maintain a clearance of 36" in front of the panels. (CEC 110.26)

6.2. Provide a minimum of one 20 Amp receptacle in areas designated for laundry equipment. (CEC 210.52F)

6.3. Kitchens and dining areas must have a minimum of two 20 Amp circuits. Kitchen counter outlets must be installed in every counter space 12" or wider, not greater than 4" o.c. and within 24" of the end of any counter space. (CEC 210.52)

6.4. GFCI outlets are required for all kitchen receptacles that are designed to serve countertop surfaces, in bathrooms, in underfloor spaces at or below grade level, in exterior outlets, in laundry areas, and in all garage outlets not dedicated to a single device or appliance. (CEC 210.8) All dwellings must have at least one exterior outlet at the front and the back of the dwelling. (CEC 210.52E)

6.5. Receptacles must be installed at 12" o.c. maximum in walls. Walls longer than 2 feet and halls longer than 10' must have a receptacle. A receptacle must be provided within 3' of bathroom sinks. (CEC 210.52)

6.6. Bond all metal gas and water pipes to ground. All ground clamps must be accessible and of an approved type. (CEC 250.104)

6.7. Furnaces installed in attics and crawl spaces must have an access platform (catwalk in attics), light, light switch, and receptacle in the space. (CMC 904.10)

6.8. New dwellings must have a 120V powered smoke alarm in every sleeping room, outside each sleeping room, on every story of the dwelling, including basements and habitable attics, but not including crawl spaces or uninhabitable attics. (R314.3)

6.9. When more than one smoke alarm or carbon monoxide alarm is required the alarm devices shall be interconnected. If the proposed scope of work does not result in the removal of wall and ceiling finishes exposing areas requiring installation, in buildings built prior to January 1, 2011, devices may be battery operated. (R314.4 & R315.7)

6.10. When alterations, repairs, or additions require a permit or sleeping rooms are added or created, smoke alarms shall be installed where required in new dwellings. (R314.2.2)

6.11. For new construction and work in an existing dwelling, where an addition is made to an existing dwelling or a fuel-burning appliance is added, carbon monoxide alarms shall be installed in sleeping rooms within which fuel-burning appliances are installed, outside of each sleeping area, and on each occupiable level. Carbon monoxide alarms are not required in dwellings where there is no fuel-fired appliance or attached garage. (R315.1 & R315.2)

6.12. All 120-volt 15 and 20 amp branch circuits in dwelling units except those in bathrooms, unfinished basements, garages and outdoors shall have AFCI protection. (CEC 210.12)

6.13. Receptacles on 120-volt 15 and 20 amp circuits shall be tamper resistant. Except when located more than 5' above the floor or when part of a luminaire or appliance, (CEC 406.12)

7. MISCELLANEOUS LIFE-SAFETY

7.1. Provide pressure relief valve with drain to outside for water heater. (CPC 608.3) Provide seismic strapping or anchorage resisting overturning of water heater. (CPC 507.2, CRC R301.2.2.3.7)

7.2. Liquefied petroleum gas (LPG) appliances shall not be installed in a pit, basement or similar location, LPG appliances shall not be installed in an above grade underfloor space or basement unless such location is provide with an approved means for removal of unburned gas. (CMC 303.7.1)

7.3. Provide combustion air for all gas fired appliances. (CMC Chapter 7)

7.4. Fuel burning water heater is not allowed in bedroom or bathroom unless direct vent type or complying with CPC 504.1.

7.5. Vent clothes dryer to outside of building (not to underfloor area). Vent length shall be 14' maximum and the vent diameter shall not be less than 4". (CMC 504.4.2)

7.6. Water closet shall be located in a space not less than 30" in width with 24" minimum clearance in front. (CPC 402.5)

7.7. Showers and tubs with showers require a non-absorbent surface up to 72" above the floor. (R307.2). Provide curtain rod or approved enclosure material.

7.8. Provide backflow preventers on all hose bibs. (CPC 603.5.7)

7.9. Safety glazing shall be required within 24" of a door edge or within 36" of a stairway, landing or ramp when the bottom edge of the glazing is less than 60" from the floor or walking surface. (R308.4.2 & R308.4.3)

7.10. Safety glazing is required in all fixed and operable panels of swinging, sliding and bi-fold doors. (R308.4.1)

7.11. Safety glazing is required in enclosures and walls facing hot tubs, saunas, steam rooms, showers and tubs where the bottom edge of the glazing is less than 60" from any standing or walking surface. (R308.4.5)

7.12. Wood burning appliances shall be EPA phase II certified in the Northern Sonoma County Air Pollution Control District. In the Bay Area Air Quality Management District wood burning appliances are not allowed. (Sonoma County Ordinance)

7.13. Provide 18" x 24" foundation access within 5' of all plumbing cleanouts. (R408.4; CPC 707.9)

7.14. Fireblocking shall be provided in concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs; vertically at floor and ceiling levels, horizontally at intervals not to exceed 10'. (R302.11)

7.15. Show minimum 22" x 30" passageway opening to attic. (CMC 304.4; R807.1) In attics in which an appliance is installed, an opening and passageway at least as large as the largest component of the appliance shall be required. (CMC 903.2.3)

7.16. Roof construction and covering shall comply with R905 and local ordinance. All roofing shall be of Class A fire resistive material, supported by solid sheathing (Chapter 7 Sonoma County Code).

7.17. Storage use or placement of a fuel burning appliance in an underfloor area may trigger the requirement for a 1/2 inch gypsum wallboard or 5/8 inch wood panel membrane on the underside of the floor framing member. See Section R302.13 of the CRC for exceptions.

8. FOUNDATIONS AND CONCRETE

8.1. Concrete shall be 2500 psi minimum for foundation and retaining walls (including stem walls), garage floor slabs, and porches or steps exposed to weather and 2500 psi minimum for all other concrete. (R402.2; Table R402.2; R608.5.1.5) unless otherwise note on structural drawings and calculations.

8.2. Conventional Residential Foundation Requirements (R404.1.4.2; Table R403.1(1))

No. of stories	Thickness of stem wall concrete *	Width of footing	Thickness of footing	Depth below undisturbed ground surface
1	6.0"	12"	6"	12"
2	6.0"	15"	6"	12"

* Foundation walls exceeding 4'6" shall be minimum 7.5" thick.

8.3. Horizontal reinforcing at footing and stem wall: one number 4 rebar within top 12" of stem wall and one number 4 rebar 3-4 inches from bottom of footing (R403.1.3.1)

8.4. When the stem wall and footing are not poured monolithically a number 4 rebar shall be installed vertically at not more than 4' o.c. The vertical bar shall extend to 3' clear from the bottom of the footing, have a standard hook, and extend a minimum of 14 inches into the stem wall. (R403.1.3.1)

8.5. Stepped footings shall be used when slope of footing bottom is greater than 10:1 (H:V). Step footing detail shall be shown on building elevations and foundation plan. (R403.1.5)

8.6. Concrete slabs shall be 3.5" thick minimum. (R506.1)

8.7. Provide adequate setbacks from slopes greater than 33% gradient equal to half the height of the slope (need not exceed 15 feet) for an adjacent ascending slope surface, and one third the height of the slope (need not exceed 40 feet) for an adjacent descending slope surface. If these setbacks cannot be met a geotechnical report justifying soil characteristics and suitability of the proposed building site shall be provided. (R403.1.7)

8.8. Anchor bolts shall be minimum 1/2" x 10" placed at 6" o.c. maximum. Embed bolts 7" min. Locate end bolts neither less than 3.5" nor more than 12" from ends of sill members. (R403.1.6) Provide 3" x 3" x 0.229" plate washers on each bolt. (R602.11.1)

9. FLOORS

9.1. Floor joist size, spacing and grade shall conform to Table R502.3.1; or shall be designed by a licensed professional.

9.2. Joists under and parallel to bearing partitions shall be doubled. (R502.4)

9.3. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls or partitions more than the joist depth. (R502.4)

9.4. Girders for single-story construction or supporting one floor shall be 4" x 6" for spans 6' or less, with girders spaced at 8' o.c. For other sizes and spans see Table R602.7 (1, 2, & 3).

9.5. Nail spacing for floor plywood sheathing: 6" o.c. at edges, 12" o.c. in field (unless closer nailing is specified). Table R602.3(1)

9.6. Provide detail of connection of floor girder at foundation wall.

9.7. Solid block all joists at ends and intermediate supports with full-depth solid blocking not less than 2" nominal thickness. (R502.7)

9.8. At floor openings where header joist span exceeds 4' show double trimmer joists and headers. Approved hangers shall be used for the header joist to trimmer joist connections when the header joist span exceeds 6'. (R502.10)

10. WALLS

10.1. Show stud size, height, grade and spacing. (Table R602.3(5)) Exterior and interior studs shall be continuous floor to roof unless braced at ceiling.

10.2. Balloon frame gable end walls or provide softwall bracing detail.

10.3. Minimum header sizes shall be according to Table R602.7(1,2,8,3).

10.4. Double top plates shall have a minimum lap of 24". Nail with eight 16d common nails on each side of the joint, unless additional nailing is specified. Plates at intersections with bearing walls and corners shall also be overlapped. (Table R602.3)

10.5. Sole plate to joist or blocking shall be 16d common nails at 16" o.c. and 2-16d common nails at 16" at braced wall panels. (Table R602.3 item 14)

10.6. Foundation cripple walls shall be framed of studs not less in size than the studs of the wall above. Cripple walls exceeding 4' in height shall be framed of studs as required for an additional story. Cripple walls shall be sheathed per R602.10.9 & R602.10.9.1. Cripple walls less than 14" in height shall be continuously sheathed or constructed of solid blocking. (R602.9)

10.7. Minimum wood structural panel sheathing nailing: 6" o.c. at edges and 12" o.c. in field. (Table R602.3) Nailing shall be inspected prior to covering.

10.8. Provide one layer of No. 15 asphalt felt or other approved material under exterior siding. Material shall have upper layer lapped 2" min over lower layer with 6" min laps at joints. (R703.2) Provide 2 layers of Grade D paper, or equivalent, between wood sheathing and stucco lath. (R703.7.3)

10.9. Braced wall lines shall be sized and configured in accordance with section R602.10 in its entirety. Provide and label a layout of all braced wall lines complete with required values for wind and seismic for the specified wall type.

10.10. Spacing of braced wall lines shall not exceed 25' (interior & exterior) unless length of required bracing, per Table R602.10.3(3) is adjusted in accordance with Table R602.10.3(4). (R602.10.1.3)

11. ROOF

11.1. Show roof rafters and ceiling joists. Spans shall be per Tables R802.4(1) & (2) for ceiling joists and Tables R802.5.1(1) & (2) for rafters. Include the size, spacing and grade of all members.

11.2. Nail rafters to adjacent parallel ceiling joists. Where not parallel, use rafter ties at 4' o.c. max. (R802.3.1) Connect ties per Table R802.5.1(9). Rafter ties shall use adjustment factor in footnote h, for the height above supporting wall and the location of the connection must be in lower third of attic space.

11.3. Where ceiling joists or rafter ties are not provided trusses shall be used or engineering shall be provided. (R802.3.1 & R802.10)

11.4. Solid block all rafters and trusses at exterior walls. (R802.8) Nail blocking to top plate with (3) 8d toe nails per block or provide clips.

11.5. For roofs shallower than 3:12 ridges, hips and valleys shall require engineering. (R802.2)

11.6. Wood structural panel sheathing when designed to be permanently exposed in outdoor applications, shall be of an exterior exposure durability. Wood structural panel roof sheathing exposed to the underside may be identified as Exposure 1. (R803.2) Minimum nailing per Table R602.3(1) is 6" at edges and 12" in the field, 8d common, box or casing. Nail panels to blocking between rafters.

12. GREEN BUILDING AND ENERGY

12.1. New construction and additions/alterations increasing a building's conditioned floor area shall comply with applicable provisions of CalGreen. (CalGreen 301.1) Mandatory provisions shall apply only to the specific area of the addition or alteration. (CalGreen 301.1.1)

12.2. The Residential California Green Building Checklist shall be filled out and all mandatory and elective features selected shall be identified with adequate notations and details on the proposed project plans. An approved 3rd party CALGreen special inspector shall review the proposed checklist and project plans and provide verification that all applicable mandatory and elective elements identified in the checklist have been adequately incorporated into the proposed project plans and details. The field verification of the required CALGreen elements shall also be achieved by the 3rd party CALGreen special inspector during the construction and inspection process.

12.3. Residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. (CalGreen 301.1.1)

12.4. Energy code documentation shall be provided for any additions and alterations to the conditioned envelope, space-conditioning systems, or lighting systems. Energy code documentation shall be registered with the California Energy Commission prior to permit issuance. (California Energy Code Section 100(b))

13. FIRE RESISTANT CONSTRUCTION

13.1. New structures and remodels and additions to existing structures shall meet the requirements of the PRMD Planning Division, based on parcel specific zoning, use, and setback requirements.

13.2. Exterior walls within 5' (or 3' when the structure is equipped with an automatic fire sprinkler system) of an adjacent property line (or an assumed property line between structures) shall be 1 hour rated.

13.3. The exposed underside of projections from exterior walls from 2' to less than 5' from an adjacent property line, or from 2' to less than 3' when the structure is equipped with an automatic fire sprinkler system, shall be 1 hour rated. Exterior wall projections less than 2' from an adjacent property line are not allowed.

13.4. When a parcel is located in a State Responsibility Area (SRA) all new construction shall comply with the applicable fire resistant construction requirements of CRC Section R337. Accessory Group U occupancy structures located at least 50' from an applicable building and additions and remodels to structures originally constructed prior to July 1, 2008 are exempt from these requirements.

13.5. Structures which are subject to Fire Safe Standards and located in the SRA on parcels 1 acre and larger shall have a minimum 1 hour rating at exterior walls and the underside of exterior projections within 10 feet from an adjacent property line.

13.6. Dwellings units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating. Fire-resistance rated floor/ceiling assemblies shall extend to the exterior walls, and the supporting construction shall have an equal or greater fire-resistance rating. Wall assemblies shall extend from the foundation to the underside of the roof sheathing, although wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8" Type X gypsum board, an attic draft stop is provided above and along the wall assembly separating the dwellings, and the structural framing supporting the ceiling is protected by not less than 1/2" gypsum board or equivalent. (R302.3)

TURN OVER REQUIREMENTS:

1. THE G.C. SHALL COMPLETE ALL REQUIRED INSPECTIONS BY CONSTRUCTION COMPLETION DATE AND WILL FURNISH THE OWNER WITH THE CERTIFICATE OF OCCUPANCY OR/AND A NOTICE OF COMPLETE FINAL INSPECTION. IN ADDITION, THE G.C. SHALL PROVIDE A LIST OF THE NAMES, ADDRESSES AND TELEPHONE NUMBERS OF ALL SUBCONTRACTORS, AND PROOF THAT ALL PAYMENT TO SUB CONTRACTORS HAVE BEEN MADE.
2. THE G.C. SHALL TURN OVER ALL KEYS TO THE OWNER.
3. UPON COMPLETION OF THE WORK, THE G.C. SHALL PROVIDE FOR A FINAL CLEANING TO BE PERFORMED BY A PROFESSIONAL CLEANING SERVICE. THE ENTIRE STRUCTURE SHALL BE THOROUGHLY CLEANED BEFORE TURNING THE PROPERTY OVER TO OWNER.
4. SUPERINTENDENT MUST REMAIN ON JOB SITE THROUGH COMPLETION OF THE PUNCH LIST.
5. UPON COMPLETION OF WORK, THE G.C. WILL DEMONSTRATE THE OPERATION OF ALL SYSTEMS TO THE OWNER. THIS INCLUDES ELECTRICAL, MECHANICAL, PLUMBING, SOUND, SECURITY, AND THE OPERATION OF DOORS AND WINDOWS.
6. THE GC SHALL COORDINATE A WALK THROUGH WITH THE OWNER'S REPRESENTATIVE AND OBTAIN A SIGNATURE INDICATING COMPLETION AND ACCEPTANCE. SIGNED DOCUMENT SHALL BE SUBMITTED AS PART OF THE THE PROJECT CLOSEOUT PACKAGE.
7. THE G.C. SHALL REVIEW ALL DOCUMENTS, FIELD VERIFY ALL DRAWING DIMENSIONS, INSPECT EXISTING FIELD CONDITIONS AND CONFIRM THAT THE WORK CAN BE BUILT AS SHOWN IN THE CONSTRUCTION DRAWINGS.
8. ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS DRAWINGS, THE CONTRACT DOCUMENT DRAWINGS AND THE FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD FOR CLARIFICATION BEFORE PROCEEDING WITH WORK.
9. THE G.C. SHALL, IN THE WORK OF ALL TRADES, PERFORM ALL CUTTING, PATCHING RESTORING, REPAIRING AND THE LIKE, NECESSARY TO COMPLETE THE WORK AND RESTORE ANY DAMAGED SURFACES RESULTING FROM THE WORK TO THEIR ORIGINAL CONDITION. ALL ROOF PATCHING SHALL RETURN AFFECTED AREA TO A "LIKE NEW" CONDITION. PRIOR TO PATCHING THE G.C. SHALL VERIFY ANY ROOF WARRANTIES WITH THE LANDLORD.
10. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL TRASH
11. PERMITS FOR FIRE SPRINKLER SYSTEM, FIRE ALARM, SIGNAGE, OR ANY OTHER PERMITS REQUIRED BY LOCAL AUTHORITIES SHALL BE OBTAINED UNDER SEPARATE APPLICATIONS.
12. DURING THE CONSTRUCTION PHASE, THE GENERAL CONTRACTOR SHALL PROVIDE A PORTABLE FIRE EXTINGUISHER, WITH A UL LABEL AND RATING OF NOT LESS THAN 2-A, TO BE LOCATED WITHIN A 75 FT. TRAVEL DISTANCE OF ALL PORTIONS OF THE PREMISES.
13. A 44 IN. CLEAR EXIT AISLE THROUGH ROOMS TO EXIT DOORS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
14. FIRE DAMPERS SHALL BE PROVIDED BY THE MECHANICAL SUBCONTRACTOR WHERE DUCTS PENETRATE FIRE-RATED WALLS, FLOORS OR CEILING ASSEMBLIES.
15. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE SOILS REPORT PREPARED FOR THIS PROJECT AND APPROVED BY THE BUILDING DEPARTMENT ENGINEER.
16. TEMPORARY EROSION CONTROL MEASURES SHALL BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION AS IDENTIFIED ON THE EROSION CONTROL PLAN. MAINTENANCE OF ONSITE DRAINAGE AND EROSION CONTROL FACILITIES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULES.
18. THE CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DOCUMENTS.
19. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS IN CASE OF WILLFUL OR CARELESS DESTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATIONS. RESETTling OF MARKERS SHALL BE PERFORMED UNDER THE DIRECTION OF A CALIFORNIA LICENSED PROFESSIONAL LAND SURVEYOR.
20. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ANY CONSTRUCTION DEBRIS AND MUD TRACKED ONTO EXISTING ROADWAYS. THE CONTRACTOR SHALL REPAIR ANY EXCAVATION OR PAVEMENT FAILURES CAUSED BY THE CONSTRUCTION.
21. ALL DAMAGED EXISTING CURB, GUTTER, AND SIDEWALK SHALL BE REPAIRED PRIOR TO ACCEPTANCE OF COMPLETED IMPROVEMENTS.
22. THE TYPE, SIZE, LOCATION AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE CONSTRUCTION DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK PRIOR TO COMMENCING ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE OF ANY UNKNOWN UNDERGROUND UTILITIES.
23. THE CONTRACTOR SHALL MAINTAIN ONE (1) SET OF "REDLINED" PRINTS OF THE CONSTRUCTION PLANS. THE "REDLINED" PRINTS SHALL BE KEPT CURRENT TO ACCURATELY REPRESENT THE DIMENSIONS AND LOCATIONS OF ALL WORK PERFORMED BY THE CONTRACTOR.
24. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED LOT STAKING AND CONSTRUCTION STAKING. THE CONTRACTOR SHALL COORDINATE THROUGH THE OWNER'S DESIGNATED REPRESENTATIVE TO ASSURE THAT THE SURVEYOR IS GIVEN ADEQUATE NOTICE AND INSTRUCTION IN ORDER TO COMPLETE THE SURVEY REQUIREMENTS FOR THE VARIOUS PH

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES

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Chapter 3
Green Building
Section 301 General
301.1 Scope
Buildings shall be designed to include the **green building** measures specified as mandatory in the application checklists contained in this code. **Voluntary green building** measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

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

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

Section 302 Mixed Occupancy Buildings
302.1 Mixed occupancy buildings
In mixed occupancy buildings, each portion of a building shall comply with the specific **green building** measures applicable to each specific occupancy.

Chapter 4
Residential Mandatory Measures
DIVISION 4.1 - PLANNING AND DESIGN
Section 4.106 Site Development

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

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

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

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

- Swales
- Water leccation and disposal systems
- French drains
- Water retention gardens
- Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction
New construction shall comply with Section 4.106.4.1, 4.106.4.2, or 4.106.4.3, to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code*, Article 625.

Exceptions:

- On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
 - Where there is no commercial power supply.
 - Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than \$400.00 per dwelling unit.
 - Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

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

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

DIVISION 4.2 - ENERGY EFFICIENCY
4.201.1 Scope
For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 - WATER EFFICIENCY AND CONSERVATION
4.301.1 Scope
The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

Section 4.303 Indoor Water Use

4.303.1 Water conserving plumbing fixtures and fittings
Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with Sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.1.4.

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

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

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

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

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

4.303.1.3.2 Multiple showerheads serving one shower
When a shower is served by more than one showerhead, the combined flow rate of all 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 shall be considered a showerhead.

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

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

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

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

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

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

Section 4.304 Outdoor Water Use

4.304.1 Outdoor potable water use in landscape areas
Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

Notes:

- The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code of Regulations*, Title 23, Chapter 2.7, Division 2.

Section 4.305 Water Reuse Systems

4.305.1 Recycled water supply systems
Newly constructed residential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, may be required to have recycled water supply systems installed, allowing the use of recycled water for residential landscape irrigation systems. See Chapter 15 of the *California Plumbing Code*.

DIVISION 4.4 - MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

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

Section 4.408 Construction Waste Reduction, Disposal and Recycling

4.408.1 Construction waste management
Recycle and/or salvage for reuse a minimum of 65 percent of the 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.

Exceptions:

- Excavated soil and land-clearing debris.
- 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.
- The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

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

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

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

4.408.4 Waste stream reduction alternative [LR]
Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the minimum 65 percent construction waste reduction requirement in Section 4.408.1.

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

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

Section 4.410 Building Maintenance and Operation

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

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

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

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.

DIVISION 4.5 - ENVIRONMENTAL QUALITY

Section 4.503 Fireplaces

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

Section 4.504 Pollutant Control

4.504.1 Covering of duct openings and protection of mechanical equipment during construction
At the time of rough installation, during storage on the construction site and until final start-up of the heating, cooling and ventilation 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 water, dust and debris, which may enter the system.

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TABLE 4.504.1 - ADHESIVE VOC LIMIT 1, 2.

Less Water and Less Exempt Compounds in Grams per Liter	
ARCHITECTURAL APPLICATIONS	VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50

SPECIALTY APPLICATIONS

PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250

SUBSTRATE SPECIFIC APPLICATIONS

Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168.

4.504.2 Finish material pollutant control
Finish materials shall comply with this section.

TABLE 4.504.2 SEALANT VOC LIMIT

Less Water and Less Exempt Compounds in Grams per Liter	
SEALANTS	VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420

SEALANT PRIMERS

Architectural	
- Nonporous	250
- Porous	775
Modified bituminous	500
Marine deck	760
Other	750

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

- Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
- Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 ounces) shall comply with state-wide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

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

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

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

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

4.504.3 Carpet systems
All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

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

4.504.3.1 Carpet systems
All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

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

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

4.504.3.3 Carpet cushion
All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

4.504.3.4 Resilient flooring systems
Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall comply with one or more of the following:

- Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
- Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
- Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
- Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350).

4.504.3.5 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 Table 4.504.5.

TABLE 4.504.5 - FORMALDEHYDE LIMITS 1.

Maximum Formaldehyde Emissions in Parts per Million	
PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard 2	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E1333. For additional information, see *California Code of Regulations*, Title 17, Sections 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness of 5/16 inch (8 mm).

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TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS 2, 3.

Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds	
COATING CATEGORY	VOC LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat-high gloss coatings	150

SPECIALTY COATINGS

Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	150
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings 1	120
Magnesium cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
- Clear	730
- Opaque	550
Specialty primers, sealers and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinsh coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

4.504.3.1 Carpet cushion
All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

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

4.504.3.3 Carpet cushion
All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

4.504.3.4 Resilient flooring systems
Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall comply with one or more of the following:

- Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
- Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
- Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
- Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350).

4.504.3.5 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 Table 4.504.5.

TABLE 4.504.5 - FORMALDEHYDE LIMITS 1.

Maximum Formaldehyde Emissions in Parts per Million	
PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard 2	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E1333. For additional information, see *California Code of Regulations*, Title 17, Sections 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness of 5/16 inch (8 mm).

INSPECTOR SIGNOFF

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

- Product certifications and specifications.
- Chain of custody certifications.
- Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
- Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 35, and Canadian CSA O121, CSA O151, CSA O153 and CSA O325 standards.
- Other methods acceptable to the enforcing agency.

Section 4.505 Interior Moisture Control

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

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

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

- A 4-inch-thick (101.6 mm) base of 1/2 inch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and

REVISIONS

1
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ROMAIN CURTIS
ARCHITECT #C35019
6680 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

ADDITION/ REMODEL
718 TALBOT AVE,
ALBANY, CA 94706

MANDATORY
MEASURES

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
09/14/2022
SCALE
N/A
ANURA JOB NO
CA2207-0002
SHEET

GN-3

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply.(Original 08/2019)

BUILDING ENVELOPE MEASURES:

§ 110.6(A)1: AIR LEAKAGE. MANUFACTURED FENESTRATION, EXTERIOR DOORS, AND EXTERIOR PET DOORS MUST LIMIT AIR LEAKAGE TO 0.3 CFM PER SQUARE FOOT OR LESS WHEN TESTED PER NFRC-400, ASTM E283 OR AAMA/WOMA/CSA 101/1.5.2/A440-2011.*

§ 110.6(A)5: LABELING. FENESTRATION PRODUCTS AND EXTERIOR DOORS MUST HAVE A LABEL MEETING THE REQUIREMENTS OF SECTION 10-111(A).

§ 110.6(B): FIELD FABRICATED EXTERIOR DOORS AND FENESTRATION PRODUCTS MUST USE U-FACTORS AND SOLAR HEAT GAIN COEFFICIENT (SHGC) VALUES FROM TABLES110.6-A, 110.6-B, OR JA4.5 FOR EXTERIOR DOORS. THEY MUST BE CAULKED AND/OR WEATHER STRIPPED.*

§ 110.7: AIR LEAKAGE. ALL JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE MUST BE CAULKED, GASKETED, OR WEATHER STRIPPED.

§ 110.8(A): INSULATION CERTIFICATION BY MANUFACTURERS. INSULATION MUST BE CERTIFIED BY THE DEPARTMENT OF CONSUMER AFFAIRS, BUREAU OF HOUSEHOLD GOODS AND SERVICES (BHGS).

§ 110.8(G): INSULATION REQUIREMENTS FOR HEATED SLAB FLOORS. HEATED SLAB FLOORS MUST BE INSULATED PER THE REQUIREMENTS OF SECTION 110.8(G).

§ 110.8(I): ROOFING PRODUCTS SOLAR REFLECTANCE AND THERMAL EMITTANCE. THE THERMAL EMITTANCE AND AGED SOLAR REFLECTANCE VALUES OF THE ROOFING MATERIAL MUST MEET THE REQUIREMENTS OF § 110.8(I) AND BE LABELED PER §10-113 WHEN THE INSTALLATION OF A COOL ROOF IS SPECIFIED ON THE CFIR.

§ 110.8(J): RADIANT BARRIER. WHEN REQUIRED, RADIANT BARRIERS MUST HAVE AN EMITTANCE OF 0.05 OR LESS AND BE CERTIFIED TO THE DEPARTMENT OF CONSUMER AFFAIRS.

§ 150.0(A): CEILING AND RAFTER ROOF INSULATION. MINIMUM R-22 INSULATION IN WOOD-FRAME CEILING; OR THE WEIGHTED AVERAGE U-FACTOR MUST NOT EXCEED 0.043. MINIMUM R-19 OR WEIGHTED AVERAGE U-FACTOR OF 0.054 OR LESS IN A RAFTER ROOF ALTERATION. ATTIC ACCESS DOORS MUST HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS MUST BE GASKETED TO PREVENT AIR LEAKAGE. INSULATION MUST BE INSTALLED IN DIRECT CONTACT WITH A CONTINUOUS ROOF OR CEILING WHICH IS SEALED TO LIMIT INFILTRATION AND EXFILTRATION AS SPECIFIED IN § 110.7, INCLUDING BUT NOT LIMITED TO PLACING INSULATION EITHER ABOVE OR BELOW THE ROOF DECK OR ON TOP OF A DRYWALL CEILING.*

§ 150.0(B): LOOSE-FILL INSULATION. LOOSE FILL INSULATION MUST MEET THE MANUFACTURER'S REQUIRED DENSITY FOR THE LABELED R-VALUE.

§ 150.0(C): WALL INSULATION. MINIMUM R-13 INSULATION IN 2X4 INCH WOOD FRAMING WALL OR HAVE A U-FACTOR OF 0.102 OR LESS, OR R-20 IN 2X6 INCH WOOD FRAMING OR HAVE A U-FACTOR OF 0.071 OR LESS. (R-19 IN 2X6 OR U-FACTOR OF 0.074 OR LESS). OPAQUE NON-FRAMED ASSEMBLIES MUST HAVE AN OVERALL ASSEMBLY U-FACTOR NOT EXCEEDING 0.102, EQUIVALENT TO AN INSTALLED VALUE OF R-13 IN A WOOD FRAMED ASSEMBLY. MASONRY WALLS MUST MEET TABLE 150.1-A OR B.*

§ 150.0(D): RAISED-FLOOR INSULATION. MINIMUM R-19 INSULATION IN RAISED WOOD FRAMED FLOOR OR 0.037 MAXIMUM U-FACTOR.*

§ 150.0(F): SLAB EDGE INSULATION. SLAB EDGE INSULATION MUST MEET ALL OF THE FOLLOWING: HAVE A WATER ABSORPTION RATE, FOR THE INSULATION MATERIAL ALONE WITHOUT FACINGS NO GREATER THAN 0.3%; HAVE A WATER VAPOR PERMEANCE NO GREATER THAN 2.0 PERM PER INCH; BE PROTECTED FROM PHYSICAL DAMAGE AND UV LIGHT DEGRADATION; AND, WHEN INSTALLED AS PART OF A HEATED SLAB FLOOR, MEET THE REQUIREMENTS OF § 110.8(G).

§ 150.0(G)1: VAPOR RETARDER. IN CLIMATE ZONES 1 THROUGH 16, THE EARTH FLOOR OF UNVENTED CRAWL SPACE MUST BE COVERED WITH A CLASS 1 OR CLASS II VAPOR RETARDER. THIS REQUIREMENT ALSO APPLIES TO CONTROLLED VENTILATION CRAWL SPACE FOR BUILDINGS COMPLYING WITH THE EXCEPTION TO § 150.0(D).

§ 150.0(G)2: VAPOR RETARDER. IN CLIMATE ZONES 14 AND 16, A CLASS I OR CLASS II VAPOR RETARDER MUST BE INSTALLED ON THE CONDITIONED SPACE SIDE OF ALL INSULATION IN ALL EXTERIOR WALLS, VENTED ATTICS, AND UNVENTED ATTICS WITH AIR-PERMEABLE INSULATION.

§ 150.0(G): FENESTRATION PRODUCTS. FENESTRATION, INCLUDING SKYLIGHTS, SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE OR OUTDOORS MUST HAVE A MAXIMUM U-FACTOR OF 0.58; OR THE WEIGHTED AVERAGE U-FACTOR OF ALL FENESTRATION MUST NOT EXCEED 0.58.*

FIREPLACES, DECORATIVE GAS APPLIANCES, AND GAS LOG MEASURES:

§ 110.5(E) PILOT LIGHT. C ONTINUOUSLY BURNING PILOT LIGHTS ARE NOT ALLOWED FOR INDOOR AND OUTDOOR FIREPLACES.

§ 150.0(E)1: CLOSABLE DOORS. MASONRY OR FACTORY-BUILT FIREPLACES MUST HAVE A CLOSABLE METAL OR GLASS DOOR COVERING THE ENTIRE OPENING OF THE FIREBOX.

§ 150.0(E)2: COMBUSTION INTAKE. MASONRY OR FACTORY-BUILT FIREPLACES MUST HAVE A COMBUSTION OUTSIDE AIR INTAKE, WHICH IS AT LEAST SIX SQUARE INCHES IN AREA AND IS EQUIPPED WITH A READILY ACCESSIBLE, OPERABLE, AND TIGHT-FITTING DAMPER OR COMBUSTION-AIR CONTROL DEVICE.*

§ 150.0(E)3: FLUE DAMPER. MASONRY OR FACTORY-BUILT FIREPLACES MUST HAVE A FLUE DAMPER WITH A READILY ACCESSIBLE CONTROL.*

SPACE CONDITIONING, WATER HEATING, AND PLUMBING SYSTEM MEASURES:

§ 110.0-§ 110.3: CERTIFICATION. HEATING, VENTILATION AND AIR CONDITIONING (HVAC) EQUIPMENT, WATER HEATERS, SHOWERHEADS, FAUCETS, AND ALL OTHER REGULATED APPLIANCES MUST BE CERTIFIED BY THE MANUFACTURER TO THE ENERGY COMMISSION.*

§ 110.2(A): HVAC EFFICIENCY. EQUIPMENT MUST MEET THE APPLICABLE EFFICIENCY REQUIREMENTS IN TABLE 110.2-A THROUGH TABLE 110.2-K.*

§ 110.2(B): CONTROLS FOR HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS. HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS MUST HAVE CONTROLS THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE; AND IN WHICH THE CUT-ON TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-ON TEMPERATURE FOR SUPPLEMENTARY HEATING, AND THE CUT-OFF TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-OFF TEMPERATURE FOR SUPPLEMENTARY HEATING.*

§ 110.2(C): THERMOSTATS. ALL HEATING OR COOLING SYSTEMS NOT CONTROLLED BY A CENTRAL ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MUST HAVE A SETBACK THERMOSTAT.*

§ 110.3(C)4: WATER HEATING RECIRCULATION LOOPS SERVING MULTIPLE DWELLING UNITS. WATER HEATING RECIRCULATION LOOPS SERVING MULTIPLE DWELLING UNITS MUST MEET THE AIR LELEASE VALVE, BACKFLOW PREVENTION, PUMP PRIMING, PUMP ISOLATION VALVE, AND RECIRCULATION LOOP CONNECTION REQUIREMENTS OF § 110.3(C)4.

§ 110.3(C)6: ISOLATION VALVES. INSTANTANEOUS WATER HEATERS WITH AN INPUT RATING GREATER THAN 6.8 KBTU PER HOUR (2 KW) MUST HAVE ISOLATION VALVES WITH HOSE BIBBS OR OTHER FITTINGS ON BOTH COLD AND HOT WATER LINES TO ALLOW FOR FLUSHING THE WATER HEATER WHEN THE VALVES ARE CLOSED.

§ 110.5: PILOT LIGHTS, CONTINUOUSLY BURNING PILOT LIGHTS ARE PROHIBITED FOR NATURAL GAS; FAN-TYPE CENTRAL FURNACES; HOUSEHOLD COOKING APPLIANCES (APPL-ANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION WITH PILOT LIGHTS THAT CONSUME LESS THAN 150 BTU/HR ARE EXEMPT); AND POOL AND SPA HEATERS.*

§ 150.0(H): BUILDING COOLING AND HEATING LOADS. HEATING AND/OR COOLING LOADS ARE CALCULATED IN ACCORDANCE WITH THE ASHRAE HANDBOOK, EQUIPMENT VOLUME, APPLICATIONS VOLUME, AND FUNDAMENTALS VOLUME; THE SMACNA RESIDENTIAL COMFORT SYSTEM INSTALLATION STANDARDS MANUAL; OR THE ACCA MANUAL J USING DESIGN CONDITIONS SPECIFIED IN § 150.0(H)2.

§ 150.0(H)3A: CLEARANCES. AIR CONDITIONER AND HEAT PUMP OUTDOOR CONDENSING UNITS MUST HAVE A CLEARANCE OF AT LEAST 5 FEET FROM THE OUTLET OF ANY DRYER VENT.

§ 150.0(H)3B: LIQUID LINE DRIER. AIR CONDITIONER SAND HEAT PUMP SYSTEMS MUST BE EQUIPPED WITH LIQUID LINE FILTER DRIERS IF REQUIRED, AS SPECIFIED BY THE MANUFACTURER'S INSTRUCTIONS.

§ 150.0(J)1: STORAGE TANK INSULATION. UNFIRED HOT WATER TANKS, SUCH AS STORAGE TANKS AND BACKUP STORAGE TANKS FOR SOLAR WATER-HEATING SYSTEMS, MUST HAVE A MINIMUM OF R-12 EXTERNAL INSULATION OR R-16 INTERNAL INSULATION WHERE THE INTERNAL INSULATION R-VALUE IS INDICATED ON THE EXTERIOR OF THE TANK.

§ 150.0(J)2A: WATER PIPING, SOLAR WATER-HEATING SYSTEM PIPING, AND SPACE CONDITIONING SYSTEM LINE INSULATION. ALL DOMESTIC HOT WATER PIPING MUST BE INSULATED AS SPECIFIED IN SECTION 609.11 OF THE CALIFORNIA PLUMBING CODE. IN ADDITION, THE FOLLOWING PIPING CONDITIONS MUST HAVE A MINIMUM INSULATION WALL THICKNESS OF 1 INCH OR A MINIMUM INSULATION R-VALUE OF 7.7: THE FIRST 6 FEET OF COLD WATER PIPES FROM THE STORAGE TANK; ALL HOT WATER PIPING WITH A NOMINAL DIAMETER EQUAL TO OR GREATER THAN 3/4 INCH AND LESS THAN 1 INCH; ALL HOT WATER PIPING WITH A NOMINAL DIAMETER LESS THAN 3/4 INCH THAT IS: ASSOCIATED WITH A DOMESTIC HOT WATER RECIRCULATION SYSTEM, FROM THE HEATING SOURCE TO STORAGE TANK OR BETWEEN TANKS, BURIED BELOW GRADE,AND FROM THE HEATING SOURCE TO KITCHEN FIXTURES.*

§ 150.0(J)3: INSULATION PROTECTION. PIPING INSULATION MUST BE PROTECTED FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND AS REQUIRED BY SECTION 120.3(B). INSULATION EXPOSED TO WEATHER MUST BE WATER RETARDANT AND PROTECTED FROM UV LIGHT (NO ADHESIVE TAPES). INSULATION COVERING CHILLED WATER PIPING AND REFRIGERANT SUCTION PIPING LOCATED OUTSIDE THE CONDITIONED SPACE MUST INCLUDE, OR BE PROTECTED BY, A CLASS I OR CLASS II VAPOR RETARDER. PIPE INSULATION BURIED BELOW GRADE MUST BE INSTALLED IN A WATERPROOF AND NON-CRUSHABLE CASING OR SLEEVE.

§ 150.0(N)1: GAS OR PROPANE WATER HEATING SYSTEMS. SYSTEMS USING GAS OR PROPANE WATER HEATERS TO SERVE INDIVIDUAL DWELLING UNITS MUST I CLUDE ALL OF THE FOLLOWING: 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 FROM THE WATER HEATER WITHOUT OBSTRUCTION. BOTH ENDS OF THE UNUSED CONDUCTOR MUST BE LABELED WITH THE WORD "SPARE" AND BE ELECTRICALLY ISOLATED. HAVE A RESERVED SINGLE POLE CIRCUIT BREAKER SPACE IN THE ELECTRICAL PANEL ADJACENT TO THE CIRCUIT BREAKER FOR THE BRANCH CIRCUIT AND LABELED WITH THE WORDS "FUTURE 240V USE", A CATEGORY II, I OR I N VENT, OR A TYPE B VENT WITH STRAIGHT PIPE BETWEEN THE OUTSIDE TERMINATION AND THE SPACE WHERE THE WATER HEATER IS INSTALLED; A CONDENSATE DRAIN THAT IS NO MORE THAN 2 INCHES HIGHER THAN THE BASE OF THE WATER HEATER, AND ALLOWS NATURAL DRAINING WITHOUT PUMP ASSISTANCE; AND A GAS SUPPLY LINE WITH A CAPACITY OF AT LEAST 200,000 BTU PER HOUR.

§ 150.0(N)2: RECIRCULATING LOOPS. RECIRCULATING LOOPS SERVING MULTIPLE DWELLING UNITS MUST MEET THE REQUIREMENTS OF § 110.3(C)5.

§ 150.0(N)3: SOLAR WATER-HEATING SYSTEMS. SOLAR WATER-HEATING SYSTEMS AND COLLECTORS MUST BE CERTIFIED AND RATED BY THE SOLAR RATING AND CERTIFICATION CORPORATION (SRC), THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, RESEARCH AND TESTING (IAPMO R&T), OR BY A LISTING AGENCY THAT IS APPROVED BY THE EXECUTIVE DIRECTOR.

DUCTS AND FANS MEASURES:

§ 110.8(D)3: DUCTS. INSULATION INSTALLED ON AN EXISTING SPACE-CONDITIONING DUCT MUST COMPLY WITH CALIFORNIA MECHANICAL CODE (CMC) SECTION 604.0. IF A CONTRACTOR INSTALLS THE INSULATION, THE CONTRACTOR MUST CERTIFY TO THE CUSTOMER IN WRITING, THAT THE INSULATION MEETS THIS REQUIREMENT.

§ 150.0(M)1: CMC COMPLIANCE. ALL AIR-DISTRIBUTION SYSTEM DUCTS AND PLENUMS MUST MEET THE REQUIREMENTS OF THE CMC SECTION 601.0, 602.0, 603.0, 604.0, 605.0 AND ANS/SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE 3RD EDITION. PORTIONS OF SUPPLY-AIR AND RETURN-AIR DUCTS AND PLENUMS MUST BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-6.0 OR A MINIMUM INSTALLED LEVEL OF R-4.2 WHEN DUCTS ARE ENTIRELY IN CONDITIONED SPACE AS CONFIRMED THROUGH FIELD VERIFICATION AND DIAGNOSTIC TESTING (RA3.1.4.3.8). PORTIONS OF THE DUCT SYSTEM COMPLETELY EXPOSED AND SURROUNDED BY DIRECTLY CONDITIONED SPACE ARE NOT REQUIRED TO BE INSULATED. CONNECTIONS OF METAL DUCTS AND INNER CORE OF FLEXIBLE DUCTS MUST BE MECHANICALLY FASTENED. OPENINGS MUST BE SEALED WITH MASTIC, TAPE, OR OTHER DUCT-CLOSURE SYSTEM THAT MEETS THE APPLICABLE REQUIREMENTS OF UL 181, UL 181A, OR UL 181B OR AEROSOL SEALANT THAT MEETS THE REQUIREMENTS OF UL 723. IF MASTIC OR TAPE IS USED TO SEAL OPENINGS GREATER THAN ¼ INCH, THE COMBINATION OF MASTIC AND EITHER MESH OR TAPE MUST BE USED. BUILDING CAVITIES, SUPPORT PLATFORMS FOR AIR HANDLERS, AND PLENUMS DESIGNED OR CONSTRUCTED WITH MATERIALS OTHER THAN SEALED SHEET METAL, DUCT BOARD OR FLEXIBLE DUCT MUST NOT BE USED TO CONVEY CONDITIONED AIR. BUILDING CAVITIES AND SUPPORT PLATFORMS MAY CONTAIN DUCTS, DUCTS INSTALLED IN CAVITIES AND SUPPORT PLATFORMS MUST NOT BE COMPRESSED TO CAUSE REDUCTIONS IN THE CROSS-SECTIONAL AREA.*

§ 150.0(M)2: FACTORY-FABRICATED DUCT SYSTEMS. FACTORY-FABRICATED DUCT SYSTEMS MUST COMPLY WITH APPLICABLE REQUIREMENTS FOR DUCT CONSTRUCTION, CONNECTIONS, AND CLOSURES; JOINTS AND SEAMS OF DUCT SYSTEMS AND THEIR COMPONENTS MUST NOT BE SEALED WITH CLOTH BACK RUBBER ADHESIVE DUCT TAPES UNLESS SUCH TAPE IS USED IN COMBINATION WITH MASTIC AND DRAW BANDS.

§ 150.0(M)3: FIELD-FABRICATED DUCT SYSTEMS. FIELD-FABRICATED DUCT SYSTEMS MUST COMPLY WITH APPLICABLE REQUIREMENTS FOR: PRESSURE-SENSITIVE TAPES, MASTICS, SEALANTS, AND OTHER REQUIREMENTS SPECIFIED FOR DUCT CONSTRUCTION.

§ 150.0(M)7: BACK DRAFT DAMPER. FAN SYSTEMS THAT EXCHANGE AIR BETWEEN THE CONDITIONED SPACE AND OUTDOORS MUST HAVE BACK DRAFT OR AUTOMATIC DAMPERS.

§ 150.0(M)8: GRAVITY VENTILATION DAMPERS. GRAVITY VENTILATING SYSTEMS SERVING CONDITIONED SPACE MUST HAVE EITHER AUTOMATIC OR READILY ACCESSIBLE, MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT COMBUSTION INLET AND OUTLET AIR OPENINGS AND ELEVATOR SHAFT VENTS.

§ 150.0(M)9: PROTECTION OF INSULATION. INSULATION MUST BE PROTECTED FROM DAMAGE, SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND. INSULATION EXPOSED TO WEATHER MUST BE SUITABLE FOR OUTDOOR SERVICE. FOR EXAMPLE, PROTECTED BY ALUMINUM, SHEET METAL, PAINTED CANVAS, OR PLASTIC COVER. CELLULAR FOAM INSULATION MUST BE PROTECTED AS ABOVE OR PAINTED WITH A COATING THAT IS WATER RETARDANT AND PROVIDES SHIELDING FROM SOLAR RADIATION

§ 150.0(M)10: POROUS INNER CORE FLEX DUCT. POROUS INNER CORE FLEX DUCTS MUST HAVE A NON-POROUS LAYER BETWEEN THE INNER CORE AND OUTER VAPOR BARRIER.

§ 150.0(M)11: DUCT SYSTEM SEALING AND LEAKAGE TEST. WHEN SPACE CONDITIONING SYSTEMS USE FORCED AIR DUCT SYSTEMS TO SUPPLY CONDITIONED AIR TO AN OCCUPABLE SPACE, THE DUCTS MUST BE SEALED AND DUCT LEAKAGE TESTED, AS CONFIRMED THROUGH FIELD VERIFICATION AND DIAGNOSTIC TESTING, IN ACCORDANCE WITH § 150.0(M)11 AND REFERENCE RESIDENTIAL APPENDIX RA3.

§ 150.0(M)12: AIR FILTRATION. SPACE CONDITIONING SYSTEMS WITH DUCTS EXCEEDING 10 FEET AND THE SUPPLY SIDE OF VENTILATION SYSTEMS MUST HAVE MERV 13 OR EQUIVALENT FILTERS. FILTERS FOR SPACE CONDITIONING SYSTEMS MUST HAVE A 2 INCH DEPTH OR CAN BE 1 INCH IF SIZED PER EQUATION 150.0-A. PRESSURE DROPS AND LABELING MUST MEET THE REQUIREMENTS IN §150.0(M)12. FILTERS MUST BE ACCESSIBLE FOR REGULAR SERVICE.*

§ 150.0(M)13: SPACE CONDITIONING SYSTEM AIRFLOW RATE AND FAN EFFICACY. SPACE CONDITIONING SYSTEMS THAT USE DUCTS TO SUPPLY COOLING MUST HAVE A HOLE FOR THE PLACEMENT OF A STATIC PRESSURE PROBE, OR A PERMANENTLY INSTALLED STATIC PRESSURE PROBE IN THE SUPPLY PLENUM. AIRFLOW MUST BE ≥ 350 CFM PER TON OF NOMINAL COOLING CAPACITY, AND AN AIR-HANDLING UNIT FAN EFFICACY ≤ 0.45 WATTS PER CFM FOR GAS FURNACE AIR HANDLERS AND ≤ 0.58 WATTS PER CFM FOR ALL OTHERS. SMALL DUCT HIGH VELOCITY SYSTEMS MUST PROVIDE AN AIRFLOW ≥ 250 CFM PER TON OF NOMINAL COOLING CAPACITY, AND AN AIR-HANDLING UNIT FAN EFFICACY ≤ 0.62 WATTS PER CFM. FIELD VERIFICATION TESTING IS REQUIRED IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.3.*

REQUIREMENTS FOR VENTILATION AND INDOOR AIR QUALITY:

§ 150.0(O)1: REQUIREMENTS FOR VENTILATION AND INDOOR AIR QUALITY. ALL DWELLING UNITS MUST MEET THE REQUIREMENTS OFASHRAE STANDARD 62.2, VENTILATION AND ACCEPTABLE INDOOR AIR QUALITY IN RESIDENTIAL BUILDINGS SUBJECT TO THE AMENDMENTS SPECIFIED IN § 150.0(O)1.

§ 150.0(O)1C: SINGLE FAMILY DETACHED DWELLING UNITS, SINGLE FAMILY DETACHED DWELLING UNITS, AND ATTACHED DWELLING UNITS NOT SHARING CEILINGS OR FLOORS WITH OTHER DWELLING UNITS, OCCUPABLE SPACES, PUBLIC GARAGES, OR COMMERCIAL SPACES MUST HAVE MECHANICAL VENTILATION AIRFLOW PROVIDED AT RATES DETERMINED BY ASHRAE 62.2 SECTIONS 4.1.1 AND 4.1.2 AND AS SPECIFIED IN § 150.0(O)1C.

§ 150.0(O)1E: MULTIFAMILY ATTACHED DWELLING UNITS. MULTIFAMILY ATTACHED DWELLING UNITS MUST HAVE MECHANICAL VENTILATION AIRFLOW PROVIDED AT RATES IN ACCORDANCE WITH EQUATION 150.0-B AND MUST BE EITHER A BALANCED SYSTEM OR CONTINUOUS SUPPLY OR CONTINUOUS EXHAUST SYSTEM. IF A BALANCED SYSTEM IS NOT USED, ALL UNITS IN THE BUILDING MUST USE THE SAME SYSTEM TYPE AND THE DWELLING-UNIT ENVELOPE LEAKAGE MUST BE ≤ 0.3 CFM AT 50 PA (0.2 INCH WATER) PER SQUARE FOOT OF DWELLING UNIT ENVELOPE SURFACE AREA AND VERIFIED IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.8.

§ 150.0(O)1F: MULTIFAMILY BUILDING CENTRAL VENTILATION SYSTEMS. CENTRAL VENTILATION SYSTEMS THAT SERVE MULTIPLE DWELLING UNITS MUST BE BALANCED TO PROVIDE VENTILATION AIRFLOW FOR EACH DWELLING UNIT SERVED AT A RATE EQUAL TO OR GREATER THAN THE RATE SPECIFIED BY EQUATION 150.0-B. ALL UNIT AIR FLOWS MUST BE WITHIN 20% OF THE UNIT WITH THE LOWEST AIRFLOW RATE AS IT RELATES TO THE INDIVIDUAL UNITS MINIMUM REQUIRED AIRFLOW RATE NEEDED FOR COMPLIANCE.

§ 150.0(O)1G: KITCHEN RANGE HOODS. KITCHEN RANGE HOODS MUST BE RATED FOR SOUND IN ACCORDANCE WITH SECTION 7.2 OF ASHRAE 62.2.

§ 150.0(O)2: FIELD VERIFICATION AND DIAGNOSTIC TESTING. DWELLING UNIT VENTILATION AIRFLOW MUST BE VERIFIED IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.7. KITCHEN RANGE HOODS MUST BE VERIFIED IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.7.4.3 TO CONFIRM IT IS RATED BY HWI TO COMPLY WITH THE AIRFLOW RATES AND SOUND REQUIREMENTS AS SPECIFIED IN SECTION 5 AND 7.2 OF ASHRAE 62.2.

POOL AND SPA SYSTEMS AND EQUIPMENT MEASURES:

§110.4(A): CERTIFICATION BY MANUFACTURERS. ANY POOL OR SPA HEATING SYSTEM OR EQUIPMENT MUST BE CERTIFIED TO HAVE ALL OF THE FOLLOWING: A THERMAL EFFICIENCY THAT COMPLIES WITH THE APPLIANCE EFFICIENCY REGULATIONS; AN ON-OFF SWITCH MOUNTED OUTSIDE OF THE HEATER THAT ALLOWS SHUTTING OFF THE HEATER WITHOUT ADJUSTING THE THERMOSTAT SETTING; A PERMANENT WEATHERPROOF PLATE OR CARD WITH OPERATING INSTRUCTIONS; AND MUST NOT USE ELECTRIC RESISTANCE HEATING.*

§ 110.4(B)1: PIPING. ANY POOL OR SPA HEATING SYSTEM OR EQUIPMENT MUST BE INSTALLED WITH AT LEAST 36 INCHES OF PIPE BETWEEN THE FILTER AND THE HEATER, OR DEDICATED SUCTION AND RETURN LINES, OR BUILT-IN OR BUILT-UP CONNECTIONS TO ALLOW FOR FUTURE SOLAR HEATING.

§ 110.4(B)2: COVERS. OUTDOOR POOLS OR SPAS THAT HAVE A HEAT PUMP OR GAS HEATER MUST HAVE A COVER.

§ 110.4(B)3: DIRECTIONAL INLETS AND TIME SWITCHES FOR POOLS. POOLS MUST HAVE DIRECTIONAL INLETS THAT ADEQUATELY MIX THE POOL WATER, AND A TIME SWITCH THAT WILL ALLOW ALL PUMPS TO BE SET OR PROGRAMMED TO RUN ONLY DURING OFF-PEAK ELECTRIC DEMAND PERIODS.

§ 110.5: PILOT LIGHT. NATURAL GAS POOL AND SPA HEATERS MUST NOT HAVE A CONTINUOUSLY BURNING PILOT LIGHT.

§ 150.0(P): POOL SYSTEMS AND EQUIPMENT INSTALLATION. RESIDENTIAL POOL SYSTEMS OR EQUIPMENT MUST MEET THE SPECIFIED REQUIREMENTS FOR PUMP SIZING, FLOW RATE, PIPING, FILTERS, AND VALVES.*

LIGHTING MEASURES:

§ 110.9: LIGHTING CONTROLS AND COMPONENTS. ALL LIGHTING CONTROL DEVICES AND SYSTEMS, BALLASTS, AND LUMINAIRES MUST MEET THE APPLICABLE REQUIREMENTS OF § 110.9.*

§ 150.0(K)1A: LUMINAIRE EFFICACY. ALL INSTALLED LUMINAIRES MUST MEET THE REQUIREMENTS IN TABLE 150.0-A.

§ 150.0(K)1B: BLANK ELECTRICAL BOXES. THE NUMBER OF ELECTRICAL BOXES THAT ARE MORE THAN 5 FEET ABOVE THE FINISHED FLOOR AND DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE MUST BE NO GREATER THAN THE NUMBER OF BEDROOMS. THESE ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR CONTROL, OR FAN SPEED CONTROL.

§ 150.0(K)1C: RECESSED DOWN LIGHT LUMINAIRES IN CEILINGS. LUMINAIRES RECESSED INTO CEILINGS MUST MEET ALL OF THE REQUIREMENTS FOR: INSULATION CONTACT (IC) LABELING; AIR LEAKAGE; SEALING; MAINTENANCE; AND SOCKET AND LIGHT SOURCE AS DESCRIBED IN § 150.0(K)1C.

§ 150.0(K)1D: ELECTRONIC BALLASTS FOR FLUORESCENT LAMPS. BALLASTS FOR FLUORESCENT LAMPS RATED 13 WATTS OR GREATER MUST BE ELECTRONIC AND MUST HAVE AN OUTPUT FREQUENCY NO LESS THAN 20 KHZ.

§ 150.0(K)1E: NIGHT LIGHTS, STEP LIGHTS, AND PATH LIGHTS. NIGHT LIGHTS, STEP LIGHTS AND PATH LIGHTS ARE NOT REQUIRED TO COMPLY WITH TABLE 150.0-A OR BE CONTROLLED BY VACANCY SENSORS PROVIDED THEY ARE RATED TO CONSUME NO MORE THAN 5 WATTS OF POWER AND EMIT NO MORE THAN 150 LUMENS.

§ 150.0(K)1F: LIGHTING INTEGRAL TO EXHAUST FANS. LIGHTING INTEGRAL TO EXHAUST FANS (EXCEPT WHEN INSTALLED BY THE MANUFACTURER IN KITCHEN EXHAUST HOODS) MUST MEET THE APPLICABLE REQUIREMENTS OF § 150.0(K).*

§ 150.0(K)1G: SCREW BASED LUMINAIRES. SCREW BASED LUMINAIRES MUST CONTAIN LAMPS THAT COMPLY WITH REFERENCE JOINT APPENDIX JA8.*

§ 150.0(K)1H: LIGHT SOURCES IN ENCLOSED OR RECESSED LUMINAIRES. LAMPS AND OTHER SEPARABLE LIGHT SOURCES THAT ARE NOT COMPLIANT WITH THE JA8 ELEVATED TEMPERATURE REQUIREMENTS, INCLUDING MARKING REQUIREMENTS, MUST NOT BE INSTALLED IN ENCLOSED OR RECESSED LUMINAIRES.

§ 150.0(K)1I: LIGHT SOURCES IN DRAWERS, CABINETS, AND LINEN CLOSETS. LIGHT SOURCES INTERNAL TO DRAWERS, CABINETS OR LINEN CLOSETS ARE NOT REQUIRED TO COMPLY WITH TABLE 150.0-A OR BE CONTROLLED BY VACANCY SENSORS PROVIDED THAT THEY ARE RATED TO CONSUME NO MORE THAN 5 WATTS OF POWER, EMIT NO MORE THAN 150 LUMENS, AND ARE EQUIPPED WITH CONTROLS THAT AUTOMATICALLY TURN THE LIGHTING OFF WHEN THE DRAWER, CABINET OR LINEN CLOSET IS CLOSED.

§ 150.0(K)2A: INTERIOR SWITCHES AND CONTROLS. ALL FORWARD PHASE CUT DIMMERS USED WITH LED LIGHT SOURCES MUST COMPLY WITH NEMA SSL 7A.

§ 150.0(K)2B: INTERIOR SWITCHES AND CONTROLS. EXHAUST FANS MUST BE CONTROLLED SEPARATELY FROM LIGHTING SYSTEMS.*

§ 150.0(K)2C: INTERIOR SWITCHES AND CONTROLS. LIGHTING MUST HAVE READILY ACCESSIBLE WALL-MOUNTED CONTROLS THAT ALLOW THE LIGHTING TO BE MANUALLY TURNED ON AND OFF.*

§ 150.0(K)2D: INTERIOR SWITCHES AND CONTROLS. CONTROLS AND EQUIPMENT MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

§ 150.0(K)2E: INTERIOR SWITCHES AND CONTROLS. CONTROLS MUST NOT BYPASS A DIMMER, OCCUPANT SENSOR, OR VACANCY SENSOR FUNCTION IF THE CONTROL IS INSTALLED TO COMPLY WITH § 150.0(K).

§ 150.0(K)2F: INTERIOR SWITCHES AND CONTROLS. LIGHTING CONTROLS MUST COMPLY WITH THE APPLICABLE REQUIREMENTS OF § 110.9.

§ 150.0(K)2G: INTERIOR SWITCHES AND CONTROLS. AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MAY BE USED TO COMPLY WITH CONTROL REQUIREMENTS IF IT: PROVIDES FUNCTIONALITY OF THE SPECIFIED CONTROL ACCORDING TO § 110.9; MEETS THE INSTALLATION CERTIFICATE REQUIREMENTS OF § 130.4; MEETS THE EMCS REQUIREMENTS OF § 130.0(E); AND MEETS ALL OTHER REQUIREMENTS IN § 150.0(K)2.

§ 150.0(K)2H: INTERIOR SWITCHES AND CONTROLS. A MULTI SCENE PROGRAMMABLE CONTROLLER MAY BE USED TO COMPLY WITH DIMMER REQUIREMENTS IN § 150.0(K) IF IT PROVIDES THE FUNCTIONALITY OF A DIMMER ACCORDING TO § 110.9, AND COMPLIES WITH ALL OTHER APPLICABLE REQUIREMENTS IN § 150.0(K)2.

§ 150.0(K)2I: INTERIOR SWITCHES AND CONTROLS. IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES MUST BE CONTROLLED BY AN OCCUPANT SENSOR OR A VACANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY. IF AN OCCUPANT SENSOR IS INSTALLED, IT MUST BE INITIALLY CONFIGURED TO MANUAL-ON OPERATION USING THE MANUAL CONTROL REQUIRED UNDER SECTION 150.0(K)2C.

§ 150.0(K)2J: INTERIOR SWITCHES AND CONTROLS. LUMINAIRES THAT ARE OR CONTAIN LIGHT SOURCES THAT MEET REFERENCE JOINT APPENDIX JA8 REQUIREMENTS FOR DIMMING, AND THAT ARE NOT CONTROLLED BY OCCUPANCY OR VACANCY SENSORS, MUST HAVE DIMMING CONTROLS.*

§ 150.0(K)2K: INTERIOR SWITCHES AND CONTROLS. UNDER CABINET LIGHTING MUST BE CONTROLLED SEPARATELY FROM CEILING-INSTALLED LIGHTING SYSTEMS.

§ 150.0(K)3A: RESIDENTIAL OUTDOOR LIGHTING. FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS, OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING, OR TO OTHER BUILDINGS ON THE SAME LOT, MUST MEET THE REQUIREMENT IN ITEM § 150.0(K)3AII (ON AND OFF SWITCH) AND THE REQUIREMENTS IN EITHER § 150.0(K)3AIII (PHOTOCELL AND EITHER A MOTION SENSOR OR AUTOMATIC TIME SWITCH CONTROL) OR § 150.0(K)3AIII (ASTRONOMICAL TIME CLOCK), OR AN EMCS.

§ 150.0(K)3B: RESIDENTIAL OUTDOOR LIGHTING. FOR LOW-RISE RESIDENTIAL BUILDINGS WITH FOUR OR MORE DWELLING UNITS, OUTDOOR LIGHTING FOR PRIVATE PATIOS, ENTRANCES, BALCONIES, AND PORCHES; AND RESIDENTIAL PARKING LOTS AND CARPORTS WITH LESS THAN EIGHT VEHICLES PER SITE MUST COMPLY WITH EITHER SECTION 150.0(K)3A OR WITH THE APPLICABLE REQUIREMENTS IN SECTIONS 110.9, 130.0, 130.2, 130.4, 140.7 AND 141.0.

§ 150.0(K)3C: RESIDENTIAL OUTDOOR LIGHTING. FOR LOW-RISE RESIDENTIAL BUILDINGS WITH FOUR OR MORE DWELLING UNITS, ANY OUTDOOR LIGHTING FOR RESIDENTIAL PARKING LOTS OR CARPORTS WITH A TOTAL OF EIGHT OR MORE VEHICLES PER SITE AND ANY OUTDOOR LIGHTING NOT REGULATED BY SECTION 150.0(K)3B OR SECTION 150.0(K)3D MUST COMPLY WITH THE APPLICABLE REQUIREMENTS IN SECTIONS 110.9, 130.0, 130.2, 130.4, 140.7 AND 141.0.

§ 150.0(K)4: INTERNALLY ILLUMINATED ADDRESS SIGNS. INTERNALLY ILLUMINATED ADDRESS SIGNS MUST COMPLY WITH § 140.8; OR MUST CONSUME NO MORE THAN 5 WATTS OF POWER AS DETERMINED ACCORDING TO § 130.0(C).

REVISIONS

- 1
2
3
4
5



ROMAIN CURTIS
ARCHITECT #C35019
6680 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

ADDITION/REMODEL
718 TALBOT AVE,
ALBANY, CA 94706

CALGREEN
FORMS

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
09/14/2022
SCALE
N/A
ANURA JOB NO
CA2207-0002
SHEET

2019 CALGREEN RESIDENTIAL VOLUNTARY MEASURES

PROJECT ADDRESS: 718 TALBOT AVE, ALBANY, CA 94706
PROJECT DESCRIPTION: ADDITION/REMODEL

SECTION 1 - DESIGN VERIFICATION
COMPLETE ALL LINES OF SECTION 1 - DESIGN VERIFICATION AND SUBMIT THE COMPLETE CHECKLIST (COLUMNS 1 AND 2) WITH THE PLANS AND BUILDING PERMIT APPLICATION TO THE BUILDING DIVISION.

OWNER SIGNATURE
OWNER NAME (PLEASE PRINT): R. Curtis
DATE: 08/14/2022
DESIGN PROFESSIONAL'S SIGNATURE: ROMAIN CURTIS

SIGNATURE OF LISTED CALGREEN INSPECTOR
SIGNATURE OF LISTED CALGREEN INSPECTOR'S NAME (PLEASE PRINT)
CALGREEN INSPECTOR'S E-MAIL ADDRESS

SECTION 2 - IMPLEMENTATION VERIFICATION
COMPLETE, SIGN AND SUBMIT THE COMPLETED CHECKLIST, INCLUDING COLUMN 3, TOGETHER WITH ALL ORIGINAL SIGNATURES ON SECTION 2 - IMPLEMENTATION VERIFICATION TO THE BUILDING DEPARTMENT PRIOR TO BUILDING DIVISION FINAL INSPECTION.

I HAVE INSPECTED THE WORK, HAVE RECEIVED SUFFICIENT DOCUMENTATION TO VERIFY AND CERTIFY THAT THE PROJECT IDENTIFIED ABOVE WAS CONSTRUCTED IN ACCORDANCE WITH THIS GREEN BUILDING CHECKLIST AND IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH ON THE 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE AS AMENDED BY THE LOCAL JURISDICTION.

DIVISION A4.6 - TIER 1 AND TIER 2-continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.

RESIDENTIAL VOLUNTARY MEASURES

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST-continued

Table with columns: FEATURE OR MEASURE, APPLICANT TO SELECT ELECTIVE MEASURES, VERIFICATION ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD, and a grid for Tier 1 and Tier 2 compliance.



ROMAIN CURTIS
ARCHITECT #C35019
6680 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management

Non-Hazardous Materials

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

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

Waste Management

- Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- Check waste disposal containers frequently for leaks and to make sure they are not overflowing. Never hose down a dumpster on the construction site.
- Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

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

Equipment Management & Spill Control

Maintenance and Parking

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

Spill Prevention and Control

- Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- Clean up spills or leaks immediately and dispose of cleanup materials properly.
- Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving

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

Contaminated Soils

- If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
 - Unusual soil conditions, discoloration, or odor.
 - Abandoned underground tanks.
 - Abandoned wells
 - Buried barrels, debris, or trash.

Paving/Asphalt Work

- Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application

- Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Dewatering

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

Painting & Paint Removal

Painting Cleanup and Removal

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

Landscaping

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

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

ADDITION/REMODEL
718 TALBOT AVE,
ALBANY, CA 94706

POLLUTION
PREVENTION PLAN

DRAWN BY

CA008

CHECKED BY

CA007

ISSUE DATE

09/14/2022

SCALE

N/A

ANURA JOB NO

CA2207-0002

SHEET

GN-5

CERTIFICATE OF COMPLIANCE											CF1R-ALT-01-E
Prescriptive Residential Alterations											(Page 1 of 7)
Project Name: 718 TALBOT AVE, ALBANY- ALT - 718 Talbot Avenue											Date Prepared: 2022-07-21
A. General Information											
01	Project Name	718 TALBOT AVE, ALBANY- ALT			02	Date Prepared	2022-07-21				
03	Project Location	718 Talbot Avenue			04	Building Front Orientation (deg)	135				
05	CA City	Albany			06	Number of Altered Dwelling Units	1				
07	Zip Code	94706			08	Fuel Type	Natural gas				
09	Climate Zone	3			10	Total Conditioned Floor Area (ft ²)	968				
11	Building Type	Single family			12	Slab Area (ft ²)	0				
13	Project Scope	Insulation Adding Fenestration/Glazing less than or equal to 75 ft ² Windows Replacing Fenestration/Glazing less than or equal to 75 ft ² Windows Water heating Kitchen Range Hood Installation (new or replacement)			14	Exceptions to Minimum Ages Solar Reflectance and Minimum Thermal Emittance of SHG	n/a				
Note: If Kitchen Range Hood Installation (new or replacement) is selected in A13, HERS verification and a CF2R/SMCH32 is required.											
B. Building Insulation Details - Framed (Section 150.2(b)1)											
01	02	03	04	05	Proposed			Required		Comments	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference			
								Table	Cell		
Note: Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to ASTM Standard C272.											
C. Building Insulation Details - Non-Framed											
This section does not apply to this project.											
D. Opaque Surface Details - Mass Walls (Section 150.1(c).1)											
This section does not apply to this project.											
E. Roof Replacement (Section 150.2(b)1H)											
This section does not apply to this project.											
Registration Number: 222-A0101440338-000-000-0000000-0000											Registration Date/Time: 2022-07-21 09:31:27
CA Building Energy Efficiency Standards - 2019 Residential Compliance											Report Version: 2019.1.006
Schema Version: rev 20210501											Report Generated: 2022-07-21 09:31:15

CERTIFICATE OF COMPLIANCE											CF1R-ALT-01-E		
Prescriptive Residential Alterations											(Page 4 of 7)		
19	Maximum Allowed West Facing Fenestration Area	48.4											
20	Compliance Statement	n/a											
21	Proposed Fenestration U-factor (Windows)	0.3											
22	Required Fenestration U-factor (Windows)	0.30											
23	Compliance Statement	Design complies with the maximum allowed fenestration U-value											
24	Proposed Fenestration SHGC (Windows)	0.23											
25	Required Fenestration SHGC (Windows)	n/a											
26	Compliance Statement	n/a											
27	Proposed Fenestration U-factor (Skylights)	n/a											
28	Required Fenestration U-factor (Skylights)	0.30											
29	Compliance Statement	n/a											
30	Proposed Fenestration SHGC (Skylights)	n/a											
31	Required Fenestration SHGC (Skylights)	0.23											
32	Compliance Statement	n/a											
H. Fenestration Proposed Areas and Efficiencies - Replace (Section 150.2(b)1B)													
Note: Doors with greater than or equal to 25 percent glazed area are considered glazed doors and are treated as fenestration products.													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, or E	Area Removed (ft ²)	Area Added (ft ²)	Net Added Area (ft ²)	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03
WIN 5	Operable window	Non-metal	None	East	10	7.5	-2.5	0.3	NFRC	0.23	NFRC	None	n/a
15	Net Added West-facing Fenestration Area	0											
Registration Number: 222-A0101440338-000-000-0000000-0000											Registration Date/Time: 2022-07-21 09:31:27		
CA Building Energy Efficiency Standards - 2019 Residential Compliance											Report Version: 2019.1.006		
Schema Version: rev 20210501											Report Generated: 2022-07-21 09:31:15		

CERTIFICATE OF COMPLIANCE											CF1R-ALT-01-E
Prescriptive Residential Alterations											(Page 7 of 7)
Documentation Author's Declaration Statement											
1. I certify that this Certificate of Compliance documentation is accurate and complete.											
Documentation Author Name: Romain Curtis						Documentation Author Signature: 					
Company: anura design						Signature Date: 2022-07-21 09:31:26					
Address: 6680 Alhambra Avenue #193						CEA/HERS Certification Identification (if applicable):					
City/State/Zip: Martinez AZ 94553						Phone: 602-403-8322					
Responsible Person's Declaration statement											
I certify the following under penalty of perjury, under the laws of the State of California:											
<ol style="list-style-type: none"> The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 											
Responsible Designer Name: Romain Curtis						Responsible Designer Signature: 					
Company: anura design						Date Signed: 2022-07-21 09:31:27					
Address: 6680 Alhambra Avenue #193						License: C35019					
City/State/Zip: Martinez AZ 94553						Phone: 602-403-8322					
Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the											
Registration Number: 222-A0101440338-000-000-0000000-0000											Registration Date/Time: 2022-07-21 09:31:27
CA Building Energy Efficiency Standards - 2019 Residential Compliance											Report Version: 2019.1.006
Schema Version: rev 20210501											Report Generated: 2022-07-21 09:31:15

CERTIFICATE OF COMPLIANCE											CF1R-ALT-01-E
Prescriptive Residential Alterations											(Page 2 of 7)
B. Building Insulation Details - Framed (Section 150.2(b)1)											
01	02	03	04	05	Proposed			Required		Comments	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference			
								Table	Cell		
Note: Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to ASTM Standard C272.											
C. Building Insulation Details - Non-Framed											
This section does not apply to this project.											
D. Opaque Surface Details - Mass Walls (Section 150.1(c).1)											
This section does not apply to this project.											
E. Roof Replacement (Section 150.2(b)1H)											
This section does not apply to this project.											
Registration Number: 222-A0101440338-000-000-0000000-0000											Registration Date/Time: 2022-07-21 09:31:27
CA Building Energy Efficiency Standards - 2019 Residential Compliance											Report Version: 2019.1.006
Schema Version: rev 20210501											Report Generated: 2022-07-21 09:31:15

CERTIFICATE OF COMPLIANCE											CF1R-ALT-01-E
Prescriptive Residential Alterations											(Page 5 of 7)
16	Is Net Added Fenestration Area <= zero for west-facing fenestration?	Yes									
17	Net Added Fenestration Area (all orientations)	-2.5									
18	Is Net Added Fenestration Area <= zero for all orientations?	Yes									
19	Proposed Fenestration U-factor (Windows)	0.3									
20	Required Fenestration U-factor (Windows)	0.40									
21	Compliance Statement	Design complies with the maximum allowed fenestration U-value									
22	Proposed Fenestration SHGC (Windows)	0.23									
23	Required Fenestration SHGC (Windows)	n/a									
24	Compliance Statement	Design complies with the maximum allowed fenestration SHGC									
25	Proposed Fenestration U-factor (Skylights)	n/a									
26	Required Fenestration U-factor (Skylights)	0.55									
27	Compliance Statement	n/a									
28	Proposed Fenestration SHGC (Skylights)	n/a									
29	Required Fenestration SHGC (Skylights)	0.30									
30	Compliance Statement	n/a									
I. Space Conditioning (SC) Systems - Heating/Cooling - Single Family Dwelling (Section 150.2(b).											
This section does not apply to this project.											
Registration Number: 222-A0101440338-000-000-0000000-0000											Registration Date/Time: 2022-07-21 09:31:27
CA Building Energy Efficiency Standards - 2019 Residential Compliance											Report Version: 2019.1.006
Schema Version: rev 20210501											Report Generated: 2022-07-21 09:31:15

CERTIFICATE OF COMPLIANCE											CF1R-ALT-01-E		
Prescriptive Residential Alterations											(Page 3 of 7)		
F. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(b)1)													
01	02	03	04	05		06		07		Comments			
Alteration Type	Maximum Allowed Fenestration Area For All Orientations (ft ²)	Maximum Allowed West-Facing Fenestration Area Only (ft ²)	Existing Fenestration Area For All Orientations (ft ²)	Existing West-Facing Fenestration Area (ft ²)	Maximum Allowed U-factor (Windows)	Maximum Allowed U-factor (Skylights)	Maximum Allowed SHGC (Windows)	Maximum Allowed SHGC (Skylights)					
Adding Fenestration/ Glazing less than or equal to 75 ft ² Windows	193.6	48.4	134	60	0.30	0.30	n/a	0.23					
Replacing Fenestration/ Glazing less than or equal to 75 ft ² Windows	n/a	n/a	134	60	0.40	0.30	n/a	0.23					
G. Fenestration Proposed Areas and Efficiencies - Add (Section 150.2(b)1A)													
Note: Doors with greater than or equal to 25 percent glazed area are considered glazed doors and are treated as fenestration products.													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, or E	Number of Panes	Proposed Fenestration Area N, S, E (ft ²)	Proposed West Facing Fenestration Area (ft ²)	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03
WIN 4	Operable window	Non-metal	None	North	Double pane	24	n/a	0.3	NFRC	0.23	NFRC	None	n/a
15	Existing + Proposed Fenestration Area	n/a											
16	Maximum Allowed Fenestration Area	193.6											
17	Compliance Statement	n/a											
18	Existing + Proposed West-Facing Fenestration Area	n/a											
Registration Number: 222-A0101440338-000-000-0000000-0000											Registration Date/Time: 2022-07-21 09:31:27		
CA Building Energy Efficiency Standards - 2019 Residential Compliance											Report Version: 2019.1.006		
Schema Version: rev 20210501											Report Generated: 2022-07-21 09:31:15		

CERTIFICATE OF COMPLIANCE											CF1R-ALT-01-E
Prescriptive Residential Alterations											(Page 6 of 7)
J. Water Heating Systems (Section 150.2(b)1H)											
List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating. List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating.											
01	Is natural gas connected to the existing water heater?										Yes
02	03	04	05	06	07	08					
Water Heating System ID or Name	Water Heating System Type	System Option (from)	Water Heater Type	Volume	Fuel Type						
WHS 1	Domestic Hot Water (DHW)	1	Consumer Instantaneous	55	Natural Gas	1					
Options: Single Family & Multifamily with Individual Water Heaters 1. Gas or propane water heating system. 2. For Climate Zones 1 through 15, a single heat pump water heater, storage tank shall not be located outdoors and placed on a non-compressible, rigid insulated surface with a minimum thermal resistance of R-10. 3. For Climate Zones 1 through 15, a single Tier 3 heater as rated by Northwest Energy Efficiency Alliance (NEEA) 4. If no natural gas is connected to the existing water heater location, a consumer electric water heater											
K. Multifamily Space Conditioning Systems And Water Heating Systems											
This section does not apply to this project.											
Registration Number: 222-A0101440338-000-000-0000000-0000											Registration Date/Time: 2022-07-21 09:31:27
CA Building Energy Efficiency Standards - 2019 Residential Compliance											Report Version: 2019.1.006
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ROMAIN CURTIS
ARCHITECT #C35019
6680 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

ADDITION/ REMODEL
718 TALBOT AVE,
ALBANY, CA 94706

TITLE 24 FORMS

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
09/14/2022
SCALE
N/A
ANURA JOB NO
CA2207-0002
SHEET

CERTIFICATE OF COMPLIANCE										CF1R-ALT-02-E
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)										(Page 1 of 3)
Project Name: 718 TALBOT AVE, ALBANY- ADDITION ALT-02					Date Prepared: 2022-07-21					
A. General Information CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be documented, use one CF1R-ALT-02 document for each dwelling unit.										
01	Project Name	718 TALBOT AVE, ALBANY- ADDITION ALT-02	02	Date Prepared	2022-07-21					
03	Project Location	718 Talbot Avenue	04	Building Type	Single family					
05	CA City	Albany	06	Dwelling Unit Name	718 TALBOT AVE, ALBANY- ADDITION ALT-02					
07	Zip Code	94706	08	Dwelling Unit Conditioned Floor Area (ft ²)	405					
09	Climate Zone	3	10	Number of Space Conditioning (SC) Systems in this Dwelling Unit:	1					
B. Space Conditioning (SC) System Information										
01	02	03	04	05	06	07	08	09	10	
SC System ID or Name	SC System Location or Area Served	CFA served by this SC System (ft ²)	Is the SC system a ducted system?	Installing a refrigerant containing component?	Installing new SC system components?	Installing more than 40 feet of ducts?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type	
AC UNIT 1	ADDITION	405	No	Yes	Yes	No	No	Yes	Entirely new or complete replacement space conditioning system	
C. Extension of Existing Duct System, Greater Than 40 Feet (Section 150.2(b)(1)(D)(ib)) This section does not apply to this project.										
Registration Number: 222-D010144035A-A020018					Registration Date/Time: 2022-07-21 09:33:05			HERS Provider: CalCERTS		
CA Building Energy Efficiency Standards - 2019 Residential Compliance					Report Version: 2019.1.006			Report Generated: 2022-07-21 09:32:52		
					Schema Version: rev 20210501					

CERTIFICATE OF COMPLIANCE												CF1R-ALT-02-E
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)												(Page 2 of 3)
D. Altered Space Conditioning System (Sections 150.2(b)(1)(D)(ia) and 150.2(b)(1)(E) and F) This section does not apply to this project.												
E. Entirely New or Complete Replacement Duct System, with or without Equipment Changeout (Sections 150.2(b)(1)(D)(ia) and 150.2(b)(1)(E), F) This section does not apply to this project.												
F. Entirely New or Complete Replacement Space Conditioning System (Section 150.2(b)(1)(C))												
01	02	03	04	05	06	07	08	09	10	11	12	
System ID/ Name	SC System Description of Area Served	Heating System Type	Altered Heating Component	Heating Efficiency Type	Heating Minimum Efficiency Value	Cooling System Type	Altered Cooling Component	Cooling Efficiency Type	Cooling Minimum Efficiency Value	Required Thermostat Type	New Duct R-Value	
AC UNIT 1	ADDITION	Central gas furnace	All new heating components	AFUE	80	Central split AC	All new cooling components	SEER	14	SetbackTherm ostat	n/a	
Required Documentation: CF2R-MCH-01-E - Space Conditioning Systems - Duct insulation requirement for the new portions of supply-air and return-air ducts or plenums: R6 (CZ 1-10, 12 and 13) and R8 (CZ 11 and 14-16) CF2R and CF3R-MCH-20-H Duct Leakage Test required - Leakage rate compliance: <= 5% CF2R and CF3R-MCH-22 Fan Efficiency CF2R and CF3R-MCH-23 Airflow Rate Verification - Compliance: Fan Efficacy <= 0.58 W/cfm for non-gas furnaces and 0.45 W/cfm for gas furnaces and System Airflow >= 350 cfm per ton. - Alternative Compliance: CF2R and CF3R-MCH-28 Return Duct Design verification is an alternative to MCH-22 and MCH-23 verification. CF2R and CF3R-MCH-25-H Refrigerant Charge verification required when refrigerant containing components are installed or altered (applicable in CZ 2, 8-15). Exceptions: Heating-only systems are exempt from the 0.58 W per cfm and 350 cfm per ton requirements. Note: An "entirely new or replacement duct system" means at least 75% of the duct system is new duct material, and up to 25% may consist of reused parts from the dwelling unit's existing duct system (e.g., registers, grilles, boots, air handler, coil, plenums, duct material) if the reused parts are accessible and can be sealed to prevent leakage.												
Registration Number: 222-D010144035A-A020018					Registration Date/Time: 2022-07-21 09:33:05			HERS Provider: CalCERTS				
CA Building Energy Efficiency Standards - 2019 Residential Compliance					Report Version: 2019.1.006			Report Generated: 2022-07-21 09:32:52				
					Schema Version: rev 20210501							

CERTIFICATE OF COMPLIANCE		CF1R-ALT-02-E
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)		(Page 3 of 3)
Documentation Author's Declaration Statement 1. I certify that this Certificate of Compliance documentation is accurate and complete.		
Documentation Author Name: Curtis, Roman	Documentation Author Signature: 	
Company: anura design	Signature Date: 2022-07-21 09:33:05	
Address: 6680 Alhambra Avenue #193	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip: Martinez AZ 94553	Phone: 602-403-8322	
Responsible Person's Declaration statement I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. 5. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.		
Responsible Designer Name: Curtis, Roman	Responsible Designer Signature: 	
Company: anura design	Date Signed: 2022-07-21 09:33:05	
Address: 6680 Alhambra Avenue #193	License: C35019	
City/State/Zip: Martinez AZ 94553	Phone: 602-403-8322	
Easy to Verify at CalCERTS.com 		
Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.		
Registration Number: 222-D010144035A-A020018 Registration Date/Time: 2022-07-21 09:33:05 HERS Provider: CalCERTS CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.006 Report Generated: 2022-07-21 09:32:52 Schema Version: rev 20210501		

- REVISIONS
- 1
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 - 5



ROMAIN CURTIS
ARCHITECT #C-35019
6680 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

ADDITION/ REMODEL
 718 TALBOT AVE,
 ALBANY, CA 94706

TITLE 24 FORMS

DRAWN BY
CA008
 CHECKED BY
CA007
 ISSUE DATE
09/14/2022
 SCALE
N/A
 ANURA JOB NO
CA2207-0002
 SHEET

CERTIFICATE OF COMPLIANCE CF1R-ADD-01-E
Prescriptive Residential Additions (Page 1 of 7)
Project Name: 718 TALBOT AVE, ALBANY - ADDITION - Date Prepared: 2022-07-21
A. General Information
01 Project Name: 718 TALBOT AVE, ALBANY - ADDITION
02 Date Prepared: 2022-07-21
03 Project Location: 718 Talbot Avenue
04 Building Front Orientation (deg): 195
05 CA City: Albany
06 Number of Dwelling Units with Additions: 1
07 Zip Code: 94706
08 Fuel Type: Natural gas
09 Climate Zone: 3
10 Total Conditioned Floor Area (ft²) (Addition): 405
11 Building Type: Single family
12 Slab Area (ft²): 0
13 Project Scope: Addition 400 ft² to 700 ft² fenestration
Space cooling system
Space heating system

Table with 11 columns (01-11) for Opaque Surface Details - Framed Walls/ Framed Floors/ Concrete Raised Floors (Section 150.2(a)). Includes columns for Tag/ID, Assembly Type, Frame Type, Frame Depth, Frame Spacing, Cavity R-value, Continuous Insulation R-value, U-Factor, Appendix JA4 Reference, U-Factor from Table 150.1-A or B, and Comments.

Registration Number: 222-D010144035B-000-000-0000000-0000
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CERTIFICATE OF COMPLIANCE CF1R-ADD-01-E
Prescriptive Residential Additions (Page 4 of 7)
H. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(a))
Table with 10 columns (01-10) for Fenestration/Glazing Allowed Areas and Efficiencies. Includes columns for Addition Type, Maximum Allowed Fenestration Area, Maximum Allowed West-Facing Fenestration Area, Maximum Allowed U-factor, Maximum Allowed SHGC, Maximum Allowed SHGC (Skylights), and Comments.

Table with 14 columns (01-14) for Fenestration Proposed Areas and Efficiencies. Includes columns for Tag/ID, Fenestration Type, Frame Type, Dynamic Glazing, Orientation, Number of Panes, Proposed Fenestration Area, Proposed West-Facing Fenestration Area, Proposed U-factor, Proposed SHGC, Proposed SHGC Source, Exterior Shading Device, and Combined SHGC from CF1R-ENV-03.

Registration Number: 222-D010144035B-000-000-0000000-0000
Registration Date/Time: 2022-07-21 09:34:43
HERS Provider: CalCERTS
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Schema Version: rev 20191201
Report Generated: 2022-07-21 09:34:15

CERTIFICATE OF COMPLIANCE CF1R-ADD-01-E
Prescriptive Residential Additions (Page 7 of 7)
Documentation Author's Declaration Statement
I certify that this Certificate of Compliance documentation is accurate and complete.
Documentation Author Name: Romain Curtis
Documentation Author Signature: [Signature]
Company: anura design
Address: 6680 Alhambra Avenue #193
City/State/Zip: Martinez AZ 94553
Responsible Person's Declaration statement
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.
Responsible Designer Name: Romain Curtis
Responsible Designer Signature: [Signature]
Date Signed: 2022-07-21 09:34:43
Company: anura design
Address: 6680 Alhambra Avenue #193
City/State/Zip: Martinez AZ 94553
License: C35019
Phone: 602-403-8322

Registration Number: 222-D010144035B-000-000-0000000-0000
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CERTIFICATE OF COMPLIANCE CF1R-ADD-01-E
Prescriptive Residential Additions (Page 2 of 7)
B. Opaque Surface Details - Framed Walls/ Framed Floors/ Concrete Raised Floors (Section 150.2(a))
Table with 11 columns (01-11) for Opaque Surface Details - Framed Walls/ Framed Floors/ Concrete Raised Floors (Section 150.2(a)). Includes columns for Tag/ID, Assembly Type, Frame Type, Frame Depth, Frame Spacing, Cavity R-value, Continuous Insulation R-value, U-Factor, Appendix JA4 Reference, U-Factor from Table 150.1-A or B, and Comments.

Table with 11 columns (01-11) for Opaque Surface Details - Non-framed (Section 150.1(c)) and Opaque Surface Details - Mass Walls (Section 150.1(c)(1B)). Includes columns for Tag/ID, Exception, Roof Pitch, Method of Compliance, Product Type, CRRC Product ID Number, Initial Solar Reflectance, Aged Solar Reflectance, Thermal Emittance, SRI (optional), Aged Solar Reflectance, Thermal Emittance, and SRI (optional).

Registration Number: 222-D010144035B-000-000-0000000-0000
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CERTIFICATE OF COMPLIANCE CF1R-ADD-01-E
Prescriptive Residential Additions (Page 5 of 7)
Table with 2 columns (20-21) for Compliance Statement and Proposed Fenestration U-factor (Windows).
20 Compliance Statement: Design complies with the total allowed west-facing fenestration area
21 Proposed Fenestration U-factor (Windows): 0.3
22 Required Fenestration U-factor (Windows): 0.3
23 Compliance Statement: Design complies with the total allowed fenestration area
24 Proposed Fenestration SHGC (Windows): 0.23
25 Required Fenestration SHGC (Windows): n/a
26 Compliance Statement: Design complies with the maximum allowed fenestration SHGC
27 Proposed Fenestration U-factor (Skylights): n/a
28 Required Fenestration U-factor (Skylights): 0.30
29 Compliance Statement: n/a
30 Proposed Fenestration SHGC (Skylights): n/a
31 Required Fenestration SHGC (Skylights): 0.23
32 Compliance Statement: n/a

J. Opaque Swinging Doors to Exterior
This section does not apply to this project.
K. Space Conditioning (SC) Systems - Heating/ Cooling - Single Family Dwelling (Section 150.2(b) or (Section 150.1(c)(7))
Table with 3 columns (01-03) for Space Conditioning (SC) Systems - Heating/ Cooling - Single Family Dwelling (Section 150.2(b) or (Section 150.1(c)(7)). Includes columns for Dwelling Unit Name, Dwelling Unit Total CFA = Sum of Existing + Addition (ft²), and Comments.

Registration Number: 222-D010144035B-000-000-0000000-0000
Registration Date/Time: 2022-07-21 09:34:43
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CERTIFICATE OF COMPLIANCE CF1R-ADD-01-E
Prescriptive Residential Additions (Page 3 of 7)
F. Radiant Barrier (Section 150.1(c)(2))
Table with 2 columns (01-02) for Radiant Barrier (Section 150.1(c)(2)). Includes columns for Radiant Barrier installed below the roof deck and on all gable end walls, and Comments.

G. Roofing Products (Cool Roof) (Section 150.1(c)(11))
Table with 13 columns (01-13) for Roofing Products (Cool Roof) (Section 150.1(c)(11)). Includes columns for Tag/ID, Exception, Roof Pitch, Method of Compliance, Product Type, CRRC Product ID Number, Initial Solar Reflectance, Aged Solar Reflectance, Thermal Emittance, SRI (optional), Aged Solar Reflectance, Thermal Emittance, and SRI (optional).

Registration Number: 222-D010144035B-000-000-0000000-0000
Registration Date/Time: 2022-07-21 09:34:43
HERS Provider: CalCERTS
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CERTIFICATE OF COMPLIANCE CF1R-ADD-01-E
Prescriptive Residential Additions (Page 6 of 7)
N. IAQ Fan Information
This section does not apply to this project.

Registration Number: 222-D010144035B-000-000-0000000-0000
Registration Date/Time: 2022-07-21 09:34:43
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ROMAIN CURTIS
ARCHITECT #C-35019
6680 ALHAMBRA AVE, #193
MARTINEZ, CA 94553
phone: 510.612.0345
roman@anuradesign.com

ADDITION/ REMODEL
718 TALBOT AVE,
ALBANY, CA 94706

TITLE 24 FORMS

DRAWN BY: CA008
CHECKED BY: CA007
ISSUE DATE: 09/14/2022
SCALE: N/A
ANURA JOB NO: CA2207-0002
SHEET