TOWN OF TRUCKEE
COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING AND SAFETY DIVISION

RESIDENTIAL WINDOW REPLACEMENT BUILDING PERMIT NUMBER:	**STATUS:**

Dear Permit Applicant:

PRIOR TO ISSUE OF THIS PERMIT APPLICATION, REVIEW AND WRITTEN APPROVAL BY THE FOLLOWING TOWN DIVISIONS AND LISTED ALTERNATE AGENCIES ARE REQUIRED.

Please review the table at the bottom of this page. If the status of a Town Division is checked as "Not Approved", a list of conditions for their approval has been attached to this document. Review the conditions, provide appropriate additional documentation and/or revisions to plans to comply with those conditions and return to the Building Division front counter. The Building Division will route the returned documentation to appropriate locations for their review and approval. Once all approvals have been obtained, the permit application will be "Approved" and the applicant will be notified.

If you have questions regarding specific conditions for approval, please direct them to the individual who wrote them. Staff member names and telephone numbers are included with the corresponding comment list from each division.

(It is the intent of the Community Development Department to obtain all Town Division approvals, or attach a list of their conditions for approval, prior to contacting the applicant in regards to the permit status. If however, the status of a Division below is marked as "Not Approved" and no comments have been attached, please contact that division at the number listed to obtain either their written approval or a list of conditions for their approval.)

TOWN DIVISION STATUS IS AS FOLLOWS:

☐ Approved	Date:	☐ Not Approved, see attached	Building and Safety Division (530) 582-7821
☐ Approved	Date:	☐ Not Approved, see attached	Engineering Division (530) 582-7700
☐ Approved	Date:	☐ Not Approved, see attached	Planning Division (530) 582-7700

ALTERNATE AGENCY STATUS IS AS FOLLOWS:

Review and written approval from the following agencies is required as noted.
Please contact them directly for their requirements and forward their approval to the Building and Safety Division.

☐ Approved ☐ Not approved	☐ Not Applicable	Nevada County Environmental Health (530) 470-2787
☐ Approved ☐ Not approved	☐ Not Applicable	Truckee Fire Protection District (530) 582-7850
☐ Approved ☐ Not approved	☐ Not Applicable	Truckee Sanitary District (530) 587-3804
☐ Approved ☐ Not approved	☐ Not Applicable	Truckee Donner Public Utility District (530) 587-3896

Sincerely,

The Town of Truckee

TOWN OF TRUCKEE BUILDING DIVISION
WINDOW CHANGE OUT
PLAN CHECK COMMENT/CORRECTION LIST

10183 Truckee Airport Road Truckee, CA 96161
(530) 582-7821 | cdd@townoftruckee.com

PERMIT NUMBER: APN: SNOWLOAD:
OWNER:
JOB ADDRESS:

TYPE OF CONSTRUCTION: TYPE OF OCCUPANCY:
PROJECT DESCRIPTION:
(Scope of Work)

CHECKED BY: ISSUED BY:

DATE: DATE:

Effective for all permits applied for on or after January 1, 2023, all work shall comply with the 2022 editions of the California Building Code **(C.B.C.)**, California Residential Code **(C.R.C.)**, California Mechanical Code **(C.M.C.)**, California Plumbing Code **(C.P.C.)**, California Electrical Code **(C.E.C.)**, California Energy Code (based upon the 2008 California Energy Efficiency Standards (Effective 01/01/2023), California Green Building Standards Code **(CALGreen)** and Title 15 of the Town Municipal Code (T.M.C.), the 2021 Editions of the Uniform Swimming Pool and Spa Code and Solar Energy Code; the 1997 Editions of the Uniform Housing Code and Uniform Code for the Abatement of Dangerous Buildings.

These corrections and comments shall become part of the plans and shall be on the job site along with the approved plans, engineering, and energy calculations for all inspections. All items noted in this list shall be on the plans and are the responsibility of the architect, engineer, and contractor to see that they are complied with during the construction process.

I do hereby certify that this structure will not be occupied without a Certificate of Occupancy and that I have read these documents and will comply with them and all codes, Town Ordinances and State Laws adopted by the Town of Truckee.

_____
Signature (Owner, Contractor, Agent) Date

BUILDING DIVISION STATUS:

- ☐ ISSUE
- ☐ CORRECTIONS REQUIRED
- ☐ RESUBMIT
- ☐ RECHECK AT COUNTER

GENERAL CODE COMMENT LIST FOR A TYPICAL WINDOW CHANGE OUT PROJECT:

- Applicants are required to comply with current codes regarding lighting, ventilation, safety glazing and (in R-2 or R-3 residential units) guards at openable windows <24" from finished floor
- Applicants are required to meet current codes regarding egress which means the bottom of the clear openings of egress windows will be required to be within 44" of the floor, unless prior approval from the building official has been obtained.
- Rough openings are not allowed to be modified without a detailed plan, approval by the building official and possibly engineering. Operable windows are not allowed to be switched to un-operable without a detailed plan and prior approval from the building official.

The following code items are frequently overlooked during the construction process. Compliance with these requirements is the responsibility of the owner/contractor during the construction process. This list is only a partial list of the codes, ordinances, and state laws used and/or adopted by the Town. Please be aware that the Building Inspectors will be using this list and all codes, ordinances, and state laws to perform their inspections.

Builder's Comments

CORRECTION / CLARIFICATION REQUIRED AND / OR ADDITIONAL COMMENTS

The Town requires a minimum of two inspections, a pre-inspection and a final inspection. A pre-inspection is required prior to demolition or construction. Please call for this inspection when permit has been issued. The final inspection is made when all work is complete and smoke detectors have been installed.

1 *When the value of additions, alterations or repairs exceeds $1000, existing dwellings or sleeping units that have attached garages or fuel-burning appliances shall be provided with a carbon monoxide alarm. (In existing dwelling units a carbon monoxide alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes or there is no access by means of attic, basement or crawl space.). Carbon monoxide alarms shall be installed outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s) and on every level of a dwelling unit including basements. Single and multiple station carbon monoxide alarms shall be listed as complying with the requirements of UL 2034. Carbon monoxide detectors shall be listed as complying with the requirements of UL 2075. Carbon monoxide alarms and carbon monoxide detectors shall be installed in accordance with this code, the current edition of NFPA 720 and manufacturer's specifications. Other carbon monoxide alarm and detection devices as recognized in NFPA 720 are also acceptable. CRC R315.*

2 *In new construction and when additions, alterations or repairs to a Group R occupancy exceed $1000 and a permit is required, or when one or more sleeping rooms are added or created in existing Group R occupancies, smoke detectors shall be installed in accordance with CRC R314.3 (one in every sleeping room; outside each separate sleeping area in the immediate vicinity of the bedroom(s); on each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. (To the extent practicable, alarms shall be hardwired and interconnected with existing). CRC314.4, exc. 3.*

3 Carbon monoxide alarms combined with smoke alarms shall comply with CRC R315, all applicable standards, and requirements for listing and approval by the Office of the State Fire Marshall, for smoke alarms.

4 Address signs and porta-potti shall be on the job site at the time of first inspection L.U.D.C. *(Permanent identification of site address shall be placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4" high with a minimum stroke width of ½". Where access is by means of a private road and the building address cannot be viewed from the public way, a monument , pole or other sign or means shall be used to identify the structure. CRC R319.)*

5 In R-2 or R-3 residential dwelling units, where the opening of an operable window is located more than 72" above the finished grade or other surface below, the lowest part of the clear opening of the window shall be a minimum of 24" above the finished floor surface of the room in which the window is located CRC R312.2.1. Operable sections of windows shall not permit openings that allow passage of a 4 inch diameter sphere where such openings are located within 24 inches of the finished floor. Or provide window fall prevention devices in compliance with ASTM F 2090 or install window opening limiting devices per CRC R312.1.3

6 Glazing in hazardous locations shall be safety glazing. The following shall be considered hazardous locations: Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers; Glazing in any portion of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60" above a standing surface; Glazing within a 24" arc of either vertical edge of a door (in a closed position) and the bottom exposed edge of the glazing is less than 60" above the walking surface; (exception allowed in walls perpendicular to the plane of the door in a closed position, other than the wall towards which the door swings when opened. Glazing in walls enclosing stairway landings or w/I 5' of the bottom of stairways, or within 36" of the top of stairways, where the bottom edge of the glass is < 60" above a walking surface. (Sliding glass doors, which are reversible, are to have

tempered glazing w/I 24" arc of either edge of entire glass enclosure.) Glazing with exposed area of an individual pane greater than 9 square feet and exposed bottom edge less than 18 inches above the floor and exposed top edge greater than 36 inches above the floor and one or more walking surface within 36 inches horizontally of the plan of the glass. CRC R308.4. Show specific windows on plans, which require safety glazing.

7 Natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanisms shall be readily accessible. The minimum openable area to the outdoors shall be 4% of the floor area being ventilated. CBC 1203.4. Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings. The minimum net glazed area shall not be less than 8%of the floor area of the room served. Or by artificial light (adequate to provide average illumination of 10 foot-candles over the area of the room at a height of 30' above the floor level. CBC 1205. Specify size and opening action of all windows on plans to verify compliance with these requirements.

8 Basements and sleeping rooms shall have at least one operable window or door approved for emergency escape and rescue opening. Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 44 inches measured from the floor with a minimum net clear openable area of 5.7 square feet (5.0 square feet allowed if the window or other opening is located with the sill height not more than 44” above or below the finished ground level adjacent to the opening); minimum net clear openable height of 24"; and minimum net clear openable width of 20". CBC1029. Openings shall open directly into
a public way or to a yard or court that opens to a public way.

9 Emergency escape and rescue opening with a finished sill height below the adjacent ground shall be provided with a window well. The minimum horizontal area of the window well shall be 9 s.f. with a minimum dimension of 36" and shall allow the egress opening to be fully opened.CBC 1029.5

10 Note that windows frequently adjoin shear wall panel edges. Removing portions of structural panel sheathing to expose window flanges, may weaken the building lateral force resisting system. Effort should be made to minimize damaging the structural panel. If portions of the structural panel must be cut (for example, the plywood over the trimmer stud), a like number of nails removed should be added to the king stud.

11 All revisions proposed due to remodel/alteration (window change out) shall comply with Mandatory Measures of 2008 Energy Standards and Prescriptive Package requirements.. A copy of CF-1R-ALT (page 2 of 5) and MF-1R forms shall be included as part of submittal documentation. (Copies of forms are attached at the end of this list).

12 (Pages 2 and 3) of the CF-6R-ENV-01 forms shall be included in submittal documentation and shall be completed on site by the window installer. (A copy of this form is attached at the end of this list).

TABLE 151-C COMPONENT PACKAGE D

			Climate Zone															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Insulation minimums[1]	Ceilings		R38	R30	R30	R30	R30	R30	R30	R30	R30	R30	R38	R38	R38	R38	R38	R38
	Walls	Wood-frame walls	R21	R13	R13	R13	R13	R13	R13	R13	R13	R13	R19	R19	R19	R21	R21	R21
		Heavy mass walls	R4.76	R2.44	R2.44	R2.44	R2.44	R2.44	R2.44	R2.44	R2.44	R2.44	R4.76	R4.76	R4.76	R4.76	R4.76	R4.76
		Light mass walls	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Below-grade walls	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R13
	Floors	Slab floor perim.	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	R7
		Raised floors	R19	R19	R19	R19	R19	R19	R19	R19	R19	R19	R19	R19	R19	R19	R19	R19
		Concrete raised floors	R8	R8	R0	R0	R0	R0	R0	R0	R0	R0	R8	R4	R8	R8	R4	R8
Radiant Barrier			NR	REQ	NR	REQ	NR	NR	NR	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	NR
Roofing Products	Low-sloped	Aged Solar Reflectance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.55	NR	0.55	NR
		Thermal Emittance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.75	NR	0.75	NR
	Steep Sloped (less than 5 lb/ft²)	Aged Solar Reflectance	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.20	0.20	0.20	0.20	0.20	0.20	NR
		Thermal Emittance	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.75	0.75	0.75	0.75	0.75	0.75	NR
	Steep Sloped (5 lb/ft² or more)	Aged Solar Reflectance	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
		Thermal Emittance	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Fenestration	Maximum U-factor[2]		0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Maximum Solar Heat Gain Coefficient (SHGC)[3]		NR	0.40	NR	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.35	NR
	Maximum Total Area		20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
	Maximum West Facing Area		NR	5%	NR	5%	NR	NR	5%	5%	5%	5%	5%	5%	5%	5%	5%	NR
THERMAL MASS[4]			NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
SPACE-HEATING [5, 10]	Electric-resistant allowed		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
	If gas, AFUE =		MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
	If heat pump, HSPF[6] =		MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
SPACE-COOLING	SEER =		MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
	If split system, Refrigerant charge measurement or charge indicator display		NR	REQ	NR	NR	NR	NR	NR	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	NR
Central Forced Air Handlers	Cooling Airflow and Watt Draw		NR	NR	NR	NR	NR	NR	NR	NR	NR	REQ	REQ	REQ	REQ	REQ	REQ	NR
	Central Fan Integrated Ventilation System Watt Draw		REQ	REQ	REQ[2]	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
DUCTS	Duct sealing		REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
	Duct Insulation		R-6	R-6	R-6	R-6	R-6	R-4.2	R-4.2	R-4.2	R-6	R-6	R-6	R-6	R-6	R-8	R-8	R-8
WATER-HEATING			System shall meet Section 151(f)8 or Section 151(b)1															

Mandatory Measures Summary

MF-1R

Residential

Site Address:	Enforcement Agency:	Date:

NOTE: Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. More stringent energy measures listed on the Certificate of Compliance (CF-1R, CF-1R-ADD, or CF-1R-ALT Form) shall supersede the items marked with an asterisk (*) below. This Mandatory Measures Summary shall be incorporated into the permit documents and the applicable features shall be considered by all parties as minimum component performance specifications whether they are shown elsewhere in the documents or in this summary. Submit all applicable sections of the MF-1R Form with plans.

DESCRIPTION

Building Envelope Measures:

§116(a)1: Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.

§116(a)4: Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of §10-111(a).

§117: Exterior doors and windows are weather-stripped; all joints and penetrations are caulked and sealed.

§118(a): Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on CF-6R Form.

§118(i): The thermal emittance and solar reflectance values of the cool roofing material meets the requirements of §118(i) when the installation of a Cool Roof is specified on the CF-1R Form.

*§150(a): Minimum R-19 insulation in wood-frame ceiling or equivalent U-factor.

§150(b): Loose fill insulation shall conform with manufacturer's installed design labeled R-Value.

*§150(c): Minimum R-13 insulation in wood-frame wall or equivalent U-factor.

*§150(d): Minimum R-13 insulation in raised wood-frame floor or equivalent U-factor.

§150(f): Air retarding wrap is tested, labeled, and installed according to ASTM E1677-95(2000) when specified on the CF-1R Form.

§150(g): Mandatory Vapor barrier installed in Climate Zones 14 or 16.

§150(l): Water absorption rate for slab edge insulation material alone without facings is no greater than 0.3%; water vapor permeance rate is no greater than 2.0 perm/inch and shall be protected from physical damage and UV light deterioration.

Fireplaces, Decorative Gas Appliances and Gas Log Measures:

§150(e)1A: Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.

§150(e)1B: Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is equipped with a with a readily accessible, operable, and tight-fitting damper and or a combustion-air control device.

§150(e)2: Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.

Space Conditioning, Water Heating and Plumbing System Measures:

§110-§113: HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified by the Energy Commission.

§113(c)5: Water heating recirculation loops serving multiple dwelling units and High-Rise residential occupancies meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §113(c)5.

§115: Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances with an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.

§150(h): Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA.

§150(i): Heating systems are equipped with thermostats that meet the setback requirements of Section 112(c).

§150(j)1A: Storage gas water heaters rated with an Energy Factor no greater than the federal minimal standard are externally wrapped with insulation having an installed thermal resistance of R-12 or greater.

§150(j)1B: Unfired storage tanks, such as storage tanks or backup tanks for solar water-heating system, or other indirect hot water tanks have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.

§150(j)2: First 5 feet of hot and cold water pipes closest to water heater tank, non-recirculating systems, and entire length of recirculating sections of hot water pipes are insulated per Standards Table 150-B.

§150(j)2: Cooling system piping (suction, chilled water, or brine lines),and piping insulated between heating source and indirect hot water tank shall be insulated to Table 150-B and Equation 150-A.

§150(j)2: Pipe insulation for steam hydronic heating systems or hot water systems >15 psi, meets the requirements of Standards Table 123-A.

§150(j)3A: Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.

§150(j)3A: Insulation for chilled water piping and refrigerant suction lines includes a vapor retardant or is enclosed entirely in conditioned space.

Site Address:	Enforcement Agency:	Date:

§150(j)4: Solar water-heating systems and/or collectors are certified by the Solar Rating and Certification Corporation.

Ducts and Fans Measures:

§150(m)1: All air-distribution system ducts and plenums installed, are sealed and insulated to meet the requirements of CMC Sections 601, 602, 603, 604, 605 and Standard 6-5; supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-4.2 or enclosed entirely in conditioned space. Openings shall 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 1/4 inch, the combination of mastic and either mesh or tape shall be used

§150(m)1: Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.

§150(m)2D: Joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.

§150(m)7: Exhaust fan systems have back draft or automatic dampers.

§150(m)8: Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.

§150(m)9: Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material.

§150(m)10: Flexible ducts cannot have porous inner cores.

§150(o): All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2007 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings. Window operation is not a permissible method of providing the Whole Building Ventilation required in Section 4 of that Standard.

Pool and Spa Heating Systems and Equipment Measures:

§114(a): Any pool or spa heating system shall be certified to have: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater; a permanent weatherproof plate or card with operating instructions; and shall not use electric resistance heating or a pilot light.

§114(b)1: Any pool or spa heating equipment shall be installed with at least 36" of pipe between filter and heater, or dedicated suction and return lines, or built-up connections for future solar heating

§114(b)2: Outdoor pools or spas that have a heat pump or gas heater shall have a cover.

§114(b)3: Pools shall 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.

§150(p): Residential pool systems or equipment meet the pump sizing, flow rate, piping, filters, and valve requirements of §150(p).

Residential Lighting Measures:

§150(k)1: High efficacy luminaires or LED Light Engine with Integral Heat Sink has an efficacy that is no lower than the efficacies contained in Table 150-C and is not a low efficacy luminaire as specified by §150(k)2.

§150(k)3: The wattage of permanently installed luminaires shall be determined as specified by §130(d).

§150(k)4: Ballasts for fluorescent lamps rated 13 Watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.

§150(k)5: Permanently installed night lights and night lights integral to a permanently installed luminaire or exhaust fan shall contain only high efficacy lamps meeting the minimum efficacies contained in Table 150-C and shall not contain a line-voltage socket or line-voltage lamp holder; OR shall be rated to consume no more than five watts of power as determined by §130(d), and shall not contain a medium screw-base socket.

§150(k)6: Lighting integral to exhaust fans, in rooms other than kitchens, shall meet the applicable requirements of §150(k).

§150(k)7: All switching devices and controls shall meet the requirements of §150(k)7.

§150(k)8: A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficacy.

EXCEPTION: Up to 50 watts for dwelling units less than or equal to 2,500 ft^2 or 100 watts for dwelling units larger than 2,500 ft^2 may be exempt from the 50% high efficacy requirement when: all low efficacy luminaires in the kitchen are controlled by a manual on occupant sensor, dimmer, energy management system (EMCS), or a multi-scene programmable control system; and all permanently installed luminaries in garages, laundry rooms, closets greater than 70 square feet, and utility rooms are high efficacy and controlled by a manual-on occupant sensor.

§150(k)9: Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated cabinet.

§150(k)10: Permanently installed luminaires in bathrooms, attached and detached garages, laundry rooms, closets and utility rooms shall be high efficacy.

	EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by a manual-on occupant sensor certified to comply with the applicable requirements of §119. EXCEPTION 2: Permanently installed low efficacy luminaires in closets less than 70 square feet are not required to be controlled by a manual-on occupant sensor.
§150(k)11:	Permanently installed luminaires located in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, closets, and utility rooms shall be high efficacy luimnaires. EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided they are controlled by either a dimmer switch that complies with the applicable requirements of §119, or by a manual-on occupant sensor that complies with the applicable requirements of §119. EXCEPTION 2: Lighting in detached storage building less than 1000 square feet located on a residential site is not required to comply with §150(k)11.
§150(k)12:	Luminaires recessed into insulated ceilings shall be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; and have a label that certifies the lumiunaire is airtight with air leakage less then 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; and be sealed with a gasket or caulk between the luminaire housing and ceiling.
§150(k)13:	Luminaires providing outdoor lighting, including lighting for private patios in low-rise residential buildings with four or more dwelling units, entrances, balconies, and porches, which are permanently mounted to a residential building or to other buildings on the same lot shall be high efficacy. EXCEPTION 1: Permanently installed outdoor low efficacy luminaires shall be allowed provided that they are controlled by a manual on/off switch, a motion sensor not having an override or bypass switch that disables the motion sensor, and one of the following controls: a photocontrol not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the astronomical time clock; OR an energy management control system (EMCS) not having an override or bypass switch that allows the luminaire to be always on EXCEPTION 2: Outdoor luminaires used to comply with Exception1 to §150(k)13 may be controlled by a temporary override switch which bypasses the motion sensing function provided that the motion sensor is automatically reactivated within six hours. EXCEPTION 3: Permanently installed luminaires in or around swimming pool, water features, or other location subject to Article 680 of the California Electric Code need not be high efficacy luminaires.
§150(k)14:	Internally illuminated address signs shall comply with Section 148; OR not contain a screw-base socket, and consume no more than five watts of power as determined according to §130(d).
§150(k)15:	Lighting for parking lots and carports with a total of for 8 or more vehicles per site shall comply with the applicable requirements in Sections 130, 132, 134, and 147. Lighting for parking garages for 8 or more vehicles shall comply with the applicable requirements of Sections 130, 131, 134, and 146
§150(k)16:	Permanently installed lighting in the enclosed, non-dwelling spaces of low-rise residential buildings with four or more dwelling units shall be high efficacy luminaires. EXCEPTION: Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by an occupant sensor(s) certified to comply with the applicable requirements of §119.

Prescriptive Certificate of Compliance: Residential	[redacted]
Residential Alterations	[redacted]

Project Name:	Climate Zone #	# of Stories

General Information

Site Address:	Enforcement Agency:	Date:
Building Type ☐ Single Family ☐ Multi Family	Circle the Front Orientation: N, E, S, W, or degrees _____	
Conditioned Floor Area (CFA): _____	Project Type: ☐ Alterations ☐ Envelope ☐ Fenestration ☐ Roof ☐ HVAC Replacement or Change Out ☐ Duct Replacement ☐ Water Heater	

NOTE: This form is not to be used for Newly Constructed Buildings or Additions

Insulation Values For Opaque Surfaces *(for Furring use the Mass and Furring Strips Construction table below)*

Assembly Alteration

☐ **Opening of framed cavity alone** – *Alterations that involve the opening of the framed cavity of a wall, ceiling, or floor must install the mandatory minimum insulation value per §150 for the altered assembly. Fill in Columns A –C and enter mandatory insulation value in Column H.*

☐ **Replacement of entire assembly** – *Replacement of an entire wall, ceiling, or floor assembly requires the installation of Component Package- D insulation values in Table 151-C. Fill in Columns A – J.*

Opaque Surface Details For the furred portioned of Mass Walls see Furring Strips Construction Table below.

A	B	C	D	E	F	G	H	I	J
Proposed [See Note]				Standard	Values From JA4 Table				
Tag/ ID[1]	Assembly Name or Type[2]	Framing Material and Size[2]	Thickness, Spacing, or Other[3]	U-factor[4]	JA4 Table Number[5]	Framed Cavity R-value[6]	Continuous Insulation R-Value[7]	JA4 Assembly Row/Col[8]	Proposed Assembly U-factor[9]

Note: For furred assemblies, accounting for Continuous Insulation R-value, see Page JA4-3 and Equation 4-1. For calculating furred walls use the Mass and Furring Construction table below.

1. *For Tag/ID indicate the identification name that matches the building plans.*
2. *Indicate the Assembly Name or type: Roof/Ceiling, Walls, Floors, Slabs, Crawl Space, Doors and etc...Indicate in column G the Frame material and Size: For Wood, Metal, Metal Buildings, Mass, enter 2x4, 2x6, or etc... see JA4 for other possible frame type assemblies.*
3. *Enter the thickness for mass in inches or Spacing between framing members enter; 16"or 24"OC; or Other for all other assembly description such as Concrete Sandwich Panel, Spandrel Panel, Logs, Straw Bale Panel and etc....*
4. *Based on the Climate Zone; enter the equivalent U-factor found in JA4 Table based on the R-Value from Table 151-B, C, or D*
5. *Enter the Table number that closely resembles the proposed assembly.*
6. *Enter the R-value that is being installed in the wall cavity or between the framing; otherwise, enter "0".*
7. *Enter the Continuous Insulation R-value for the proposed assembly; otherwise, enter "0".*
8. *Enter the row and column of the U-factor value based on Column F Table Number and enter the Assembly U-factor in Column J*
9. *The **Proposed** Assembly U-factor, Column J, must be equal to or less than the **Standard** U-factor in Column E to comply.*

Furring Strips Construction Table for Mass Walls Only

A	B	C	D	E	F	G	H	I	J	K	L	M
Proposed Properties of Masonry and Concrete Walls From Reference Joint Appendix Table 4.3.5, 4.3.6, 4.3.7					Added Interior or Exterior Insulation in Furring Space from Reference Joint Appendix Table 4.3.13							
Mass Thickness[1]	Assembly Name or Type[2]	JA4 Table Number[3]	JA4 -Mass Cell Value[4]	Mass U-Factor[5]	Interior or Exterior of Insulation Layer	Frame Thickness	Frame Type Wood or Metal	Furring Cavity R-value[3]	JA4 -Mass Cell Value[4]	Effective R-value[5]	Final Assembly U-factor[6,7]	Comment

Prescriptive Certificate of Compliance: Residential		
Residential Alterations		
Project Name:	**Climate Zone #**	**# of Stories**

Mass and Furring Strips Construction (footnotes)

1. Indicate the type of assembly to include; Hollow Unit Masonry Walls, Solid Unit Masonry, Solid Concrete Walls, Etc. Additional assemblies can be found Reference Joint Appendix JA4.
2. This is the U-Factor based on the thickness of the assembly in inches.
3. The R-value of the insulation to be added on the interior or exterior of the assembly.
4. The Calculated R-Value is the R-value of the furred out section of the assembly.
5.-6.The Final Assembly is calculated using Equation 4-2 or Equation 4-4of the Reference Joint Appendix JA4. The equation is the inverse of Column D added to Column I. Column K is the inverse from column J.
7. Insert the calculated U-factor value on to the Opaque Surface Details in Column J

FENESTRATION PROPOSED AREAS

☐ **Replacing window alone** – *Replacement windows shall meet the U-Factor and SHGC Value requirements of Component Package D in Table 151-C. The Total Fenestration and West-facing Area requirements are not applicable.*

☐ **Adding 50ft² or less of window area** – *Newly installed windows shall meet the U-Factor and SHGC Value requirements of Component Package D in Table 151-C.*

☐ **Adding more than 50ft² of window area** – *Newly installed windows shall meet the U-Factor and SHGC Value and the Fenestration Area requirements of Component Package D in Table 151-C. Complete the Altered Fenestration Allowed Area Table on Page 2 of the CF-1R-ALT*

Fenestration Type and Frame (Window, Glass Door or Skylight)	Orientation (North, East, South, West)	PropsedArea[1] (ft^2)	Maximum U-factor[2, 3]	Maximum SHGC[2, 3, 4]	NFRC or Default Value[5]

1. Fenestration area is the area of total glazed product (i.e. glass plus frame). Exception: When a door is less than 50% glass, the fenestration area may be the glass area plus a "2 inch frame" around the glass.
2. Enter value from Component Package D Requirements in Table 151-C.
3. Actual fenestration products installed and as indicated in CF-6R-ENV Form shall be equivalent to or have a lower U-factor and/or a lower SHGC value than that specified on the CF-1R ALT Form.
4. Submit a completed WS-3R Form if a reduced SHGC is calculated with exterior shading.
5.If applicable at this stage enter "NFRC" for NFRC Certified windows or are CEC "Default" values found in Table 116-A or B.

ALTERED FENESTRATION ALLOWED AREAS ***(Complete if more than 50ft² of fenestration is added)***

	A	B	C	D	E	F		G
	CFA of Entire Dwelling	Allowed % of CFA[2, 3]	Existing Fenestration Area[4]	Area Removed[5]	Fenestration Area Added[6]	Allowed Area (A x B)		Proposed Area[1, 4] (E-D) + C
Total Fenestration Area[2]-(ft^2)							≥	
West Fenestration Area[1,3] (Required In CZ's 2, 4 & 7 -15)							≥	

1. The Proposed West Fenestration Area includes West-sloping skylight area and any other skylight area with a pitch less than 1:12.
2. Enter 20% when no West orientation restriction or 15% when West fenestration is being installed in Climate Zones 2, 4, & 7-15. Note that the maximum allowed fenestration can only be 5% of the CFA as indicated in Column F. Column G must be equal to or less than Column F.
3. In climate zones 2, 4, 7-15, no more than 5% of the CFA is allowed for west-facing glazing.
4. Existing Fenestration area must be counted toward the maximum allowed 15% or 20% of the whole building and calculated in Column G. The Proposed Area must be less than or equal to Column F.
5. Enter the fenestration removed as part of the alteration if any in column D.
6. Enter the Fenestration area that is being added as part of the alteration.

Prescriptive Certificate of Compliance: Residential		
Residential Alterations		
Project Name:	**Climate Zone #**	**# of Stories**

HERS VERIFICATION SUMMARY *The enforcement agency should pay special attention to the HERS Measures specified in this checklist below. A completed and signed CF-4R Form for all the measures specified shall be submitted to the building inspector before final inspection.*

Duct Sealing & Testing *HERS verification is required for this measure.*

☐ **YES** ☐ **NO** YES: In Climate Zones 2 and 9-16, if more than 40 linear feet of new or replacement ducts are installed in unconditioned space, the ducts are to be sealed per §152(b)1Dii and the newly installed ducts are to be insulated per §151(f)10.

☐ **EXCEPTION: Existing duct systems that are extended, which are constructed, insulated or sealed with asbestos.**

☐ **YES** ☐ **NO** YES: In Climate Zones 2 and 9-16, if the existing space-conditioning system (HVAC equipment and ducting) is replaced, the ducts are to be sealed per §152(b)1Di.

☐ **YES** ☐ **NO** YES: In Climate Zones 2 and 9-16, if the existing HVAC equipment is replaced (including the replacement of the air handler, outdoor condensing unit of a split system, cooling or heating coil, or the furnace heat exchanger) the ducts are to be sealed per §152(b)1E.

☐ **EXCEPTION: Duct systems that are documented to have been previously sealed confirmed through HERS verification in accordance with procedures in the Reference Residential Appendix RA3.**

☐ **EXCEPTION: Duct systems with less than 40 linear feet in unconditioned space.**

☐ **EXCEPTION: Existing duct systems constructed, insulated or sealed with asbestos.**

Refrigerant Charge - Split System *HERS verification is required for this measure.*

☐ **YES** ☐ **NO** YES: In Climate Zones 2 and 8-15, when the existing HVAC equipment is replaced (including the replacement of the air handler, outdoor condensing unit of a split system A/C or heat pump, cooling or heating coil, or the furnace heat exchanger) a refrigerant charge measurement shall be verified per §152(b)1F.

Central Fan Integrated (CFI) Ventilation System and Fan Watt Draw

The ventilation requirements of §150(o) do not apply to existing residential homes.

Ducted Split Systems - Air Conditioners and Heat Pumps: Airflow *HERS verification is required for this measure.*

☐ **YES** ☐ **NO** YES: In Climate Zones 10 through 15, when the existing space-conditioning system (HVAC equipment and ducting) is replaced, the airflow and fan watt draw shall be verified per §152(b)1Ci to meet the requirements of §151(f)7B.

Documentation Author's Declaration Statement

- **I certify that this Certificate of Compliance documentation is accurate and complete.**

Name:	Signature:
Company:	Date:
Address:	If Applicable ☐ CEA or ☐ CEPE (Certification #):
City/State/Zip:	Phone:

Responsible Building Designer's Declaration Statement

- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
- I certify that the energy features and performance specifications for the building design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.
- The building design features identified on this Certificate of Compliance are consistent with the information provided to document this building design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name:	Signature:
Company:	Date:
Address:	License:
City/State/Zip:	Phone:

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300.

INSTALLATION CERTIFICATE		CF-6R-ENV-01
Envelope – Insulation; Roofing; Fenestration		**(Page 1 of 3)**
Site Address:	**Enforcement Agency:**	**Permit Number:**

If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible; alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. All applicable Mandatory Measures with check boxes require to be checked to ensure the mandatory measures have been met.

Description of Insulation

1. RAISED FLOOR

Material:_____ Brand Name:_____

Thickness (inches):_____ Thermal Resistance (R-Value):_____

† §150(d): Minimum R-13 insulation in raised wood-frame floor or equivalent U-factor.

2. SLAB FLOOR/PERIMETER

Material:_____ Brand Name:_____

Thickness (inches):_____ Thermal Resistance (R-Value):_____

Perimeter Insulation Depth (inches): _____

† §150(l): Water absorption rate for the insulation material alone without facings is no greater than 0.3%; water vapor permeance rate is no greater than 2.0 perm/inch and shall be protected from physical damage and UV light deterioration.

3. EXTERIOR WALL

a. Insulation Type (e.x. Batt, Loose Fill, Spray Foam) _____ a. Thermal Resistance (R-Value): _____

b. . Insulation Type (e.x. Batt, Loose Fill, Spray Foam) _____ b. Thermal Resistance (R-Value): _____

Brand: _____

Spray/Loose fill) Installed Actual Thickness (inches):_____ Spray/Loose fill) Contractor's min installed weight/ft² _____lb

Manufacturer's installed weight per square foot to achieve Thermal Resistance (R-Value)

† §150(c): Minimum R-13 insulation in wood-frame wall or equivalent U-factor.

Exterior Foam Sheathing (rigid Insulation)

Material:_____ Brand Name:_____

Thickness (inches) :_____ Thermal Resistance (R-Value) :_____

4. FOUNDATION WALL

Material:_____ Brand Name:_____

Thickness (inches):_____ Thermal Resistance (R-Value):_____

5. CEILING

Batt or Blanket Type: _____ Brand Name: _____

Loose Fill Type: _____ Thermal Resistance (R-Value): _____

Spray Foam Type: _____ Brand Name: _____

Installed Actual Thickness (inches):_____ Contractor's min installed weight/ft² _____lb

Manufacturer's installed weight per square foot to achieve Thermal Resistance (R-Value): †
§150(a): Minimum R-19 insulation in wood-frame ceiling or equivalent U-factor.

6. ATTIC ROOF INSULATION AND/OR ATTIC RADIANT BARRIER

Material: _____ Brand Name: _____
Material: _____ Brand Name: _____
Thickness (inches): _____ Thermal Resistance (R-Value): _____

⑥ §118(a): Insulation installed meets Standards for Insulating Material. † §150(g): Mandatory Vapor barrier installed in Climate Zones 14 or 16.

Description of Roofing Products

CRRC Product ID Number[1]	Manufacturer Information	Brand/Model	Product Type	Roof Area	Roof Slope	Product Weight [2]	Initial Solar Reflectance	Aged Solar Reflectance[4]		Thermal Emittance
								† 3		
								† 3		
								† 3		

1. *The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at ww.coolroofs.org/products/search.php*
2. *The weight in lbs per square feet of the roofing product being installed.*
3. *Check box if the Aged Reflectance is a calculated value using the equation below, footnote 4.*
4. *If the aged reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the initial reflectance value from the directory and use the equation (0.2+0.7($\rho_{initial}$ – 0.2) to obtain a calculated aged value.*

9 † *CHECK APPLICABLE BOX BELOW IF EXEMPT FROM THE ROOFING PRODUCT "COOL ROOF" REQUIREMENT:*

† The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the above Cool Roof criteria.

† Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft^2 is exempted from the above Cool Roof criteria.

To apply Liquid Field Applied Coatings, the coating must be applied with a minimum dry mil thickness of 20 mils across the entire roof surface and meet minimum performance requirements listed in §118(i)3 and Table 118-C. Select the applicable coating

† Aluminum-Pigmented Asphalt Roof Coating	† Cement-Based Roof Coating	† Other _____

9 † CRRC-1 Label Attached to CF-6R
(Note if no CRRC-1 label is available, this compliance method cannot be used and another method is required to meet compliance).

FENESTRATION/GLAZING

Item	Manufacturer/Brand Name (GROUP LIKE RODUCTS)	Product U-factor[1]	Product SHGC[1]	# of Panes	NFRC Certified[1, 2]	Total Quantity of Like Product (*Optional*)	Area ft^2	Add. Exterior Shading Dev. or Overhang	Comments/ Location/ Special Features

Site Address:	Enforcement Agency:	Permit Number:

1									
2									
3									
4									
5									
6									
7.									
8.									

1. Use values from a fenestration product's NFRC Certified Label. For fenestration products without an NFRC label, use the default values from Section 116, Table 116-A and 116-B of the 2008 Energy Efficiency Standards.

2. NFRC Label Certificates shall not be removed until the building inspector has verified the efficiency. Enter Yes or No.

⦿ §116(a)1: Doors and windows between conditioned and unconditioned spaces designed to limit air leakage.

⦿ §116(a)2 and 3: Actual fenestration products installed are equivalent to or have a lower U-factor and/or a lower SHGC than that specified on the Certificate of Compliance (Form CF-1R).

⦿ §116(a)4: Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of §10-111(a)

⦿ §117: Exterior doors and windows weather-stripped; all joints and penetrations caulked and sealed.

DECLARATION STATEMENT

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- **I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or 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 signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy.**

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)		
Responsible Person's Name:		Responsible Person's Signature:
CSLB License:	Date Signed:	Position With Company (Title):

Smoke Alarms and Carbon Monoxide Alarm Installation Declaration

When the valuation of an addition, alteration or repair to a Group R occupancy (residential, single family, duplex, multifamily) exceeds $1,000 and a permit is required, carbon monoxide and smoke alarms shall be installed in accordance with California Residential Code sections R314 and R315 and California Building Code sections 420.4 and 907.2.11.2.

Smoke alarms shall be listed as complying with UL 217 and shall be installed in accordance with the building code and NFPA 72. They shall be located outside of each bedroom or sleeping area, in each room used for sleeping purposes, and on each story including basements. Generally they shall be installed on a ceiling or the wall between four and twelve inches from the ceiling.

Carbon monoxide (CO) alarms shall be installed in dwelling units having fossil fuel burning heaters, appliances, fireplaces or an attached garage. They shall be listed ,as complying with UL 2034 or 2075 and shall be installed in accordance with NFPA 720. CO alarms shall be installed outside of each sleeping area and on every level of the dwelling including basements.

Alarms shall be installed in accordance with their listing. When walls and ceilings are opened or attics are available and wiring is accessible, alarms shall receive their primary power from the building wiring system, shall be interconnected so that when one sounds, they all sound, and shall be provided with battery backup. When the building wiring is not accessible, alarms may be solely battery operated.

Declaration Under Penalty of Perjury

As Owner/Contractor, I/we affirm and declare under the penalty of perjury, under the laws of the State of California by our signature(s) below that smoke and carbon monoxide alarms have been installed in accordance with the code as specified above.

Owner's name (print): _____

Owner's signature: _____ Date: _____

Contractor's name (print): _____ CSLB License:

Contractor's signature: _____ Date: _____

. Project Address: _____ Permit #: _____