

California Energy Star Homes Program

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING CF-4R		
Project Address		Builder Name
Builder Contact	Telephone	Plan Number
HERS Rater	Telephone	Sample Group Number
Certifying Signature	Date	Sample House Number
Firm	HERS Provider	
Street Address:	City/State/Zip:	

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

HERS RATER COMPLIANCE STATEMENT

The house was: Tested Approved as part of sample testing, but was not tested

As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with all applicable requirements of the "High Quality Insulation Installation and Thermal Bypass Checklist" procedures as specified by the California Energy Star Homes Program and as checked on this form. Note that to PASS and receive compliance credit, NONE of the BOXES below may be checked "No" and the first three boxes also must be checked. Check "NA" only if the item is not part of the design of the building (i.e., single story buildings do not have rim joists or there may be no recessed can lights installed, etc.).

REQUIREMENTS FOR CALIFORNIA ENERGY STAR HOMES HIGH QUALITY INSULATION INSTALLATION AND THERMAL BYPASS CHECKLIST PROCEDURES

- All items (including both insulation quality and thermal bypass checklist) must be checked.
- For energy savings credit the building is wood frame construction with wall stud cavities, ceilings, and roof assemblies insulated with mineral fiber or cellulose insulation in low-rise residential buildings.
- Description of insulation, (CF-6R, formerly IC-1) signed by the installer stating: insulation manufacturer's name, material identification, installed R-values, and for loose-fill insulation: minimum weight per square foot and minimum inches.
- Installation Certificate, (CF-6R) signed by the installer certifying that the installation meets all applicable requirements as specified in the High Quality Insulation Installation Procedures (ACM, Appendix RH)

<input checked="" type="checkbox"/> FLOOR			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	All floor joist cavity insulation installed to uniformly fit the cavity side-to-side and end-to-end
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Insulation in contact with the subfloor. An air barrier installed at any exposed edges of insulation. Cantilevered floor framing completely filled with insulation or insulation shall be in contact with subfloor. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Insulation in contact with the air-barrier (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Insulation properly supported to avoid gaps, voids, and compression (thermal bypass checklist)
<input checked="" type="checkbox"/> WALLS			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Wall stud cavity insulation uniformly fills the cavity side-to-side, top-to-bottom, and front-to-back.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	No gaps
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	No voids over 3/4" deep or more than 10% of the batt surface area.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Hard to access wall stud cavities such as; corner channels, wall intersections, and behind tub/shower enclosures insulated to proper R-Value. This may have to be done prior to the installation of the exterior sheathing or the stucco lath. Exterior walls surrounding tub/shower enclosures have an air barrier installed on the interior side of the insulation and the cavity is <u>filled</u> with insulation. (thermal bypass checklist)

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<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Small spaces filled
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Rim-joists insulated
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Wall stud cavities caulked or foamed to provide an air tight envelope to the outdoors, attic, garage and crawl space. Special attention paid to plumbing and wiring penetrations through the top plates, electrical boxes that penetrate the sheathing, and the sheathing seal to the bottom plate, air-tight framing behind fireplace walls, staircase framing at exterior walls, the intersection of porch roofs and exteriors walls and the intersection of gypsum shaft walls and structural framing between duplex and multi-family dwelling units. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	The house side of the insulation is in contact with the drywall or other wall finish.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Installation of air-tight framing behind fireplace walls, staircase framing at exterior walls, the intersection of porch roofs and exteriors walls and the intersection of gypsum shaft walls and structural framing between duplex and multi-family dwelling units. (thermal bypass checklist)

✓ ROOF/CEILING PREPARATION

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	All draft stops in place to form a continuous ceiling and wall air barrier. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	All drops covered with hard covers. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	All draft stops and hard covers caulked or foamed to provide an air tight envelope. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	All recessed light fixtures that penetrate the ceiling are IC and air tight (AT) rated and sealed with a gasket or caulk between the housing and the ceiling. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Floor cavities on multiple-story buildings have air tight draft stops to all adjoining attics. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Eave vents prepared for blown insulation - maintain net free-ventilation area
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Kneewalls insulated or prepared for blown insulation. Insulation supported so that it will not fall down by either fitting to the framing, stapling in place with minimal compression, or using other support such as netting. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	An air barrier installed on the attic side of insulated kneewalls. Continuous top and bottom plates or blocking between truss members installed. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Kneewalls and skylight shafts insulated to a minimum of R-19. If loose fill insulation is used it is properly supported with netting or other support material. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	House side of the insulation for kneewalls and skylight shafts in contact with the drywall or other wall finish. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	For steel-framed kneewalls and skylight shafts, external surfaces of steel studs covered with batts or rigid foam unless otherwise specified on the CF-1R using correct U-factors from Joint Appendix IV, Table IV-11 (or U-factors approved by the CEC Executive Director).
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Kneewall or skylight shaft insulation installed without gaps and with minimal compression.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Area under equipment platforms and cat-walks insulated or accessible for blown insulation
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Attic rulers installed
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Hard covers or draft stops placed over all drop ceiling areas and interior wall cavities to keep insulation in place and stop air movement. If hard covers or draft stops are missing or incomplete, they shall be completed before insulation is installed. (thermal bypass checklist)

✓ ROOF/CEILING GENERAL

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Rigid foam or a batt of insulation permanently attached to the access door using adhesive or mechanical fastener and fits snugly in the framed opening. Access door fully gasketed for an airtight fit. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Whole-house fans have an insulated cover that is gasketed or sealed to the opening from either the attic side or ceiling side of the fan. (thermal bypass checklist)

✓ ROOF/CEILING BATTS

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<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	No gaps
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	No voids over 3/4 in. deep or more than 10% of the batt surface area
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Insulation in contact with the air-barrier. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Recessed light fixtures covered
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Net free-ventilation area maintained at eave vents

✓ ROOF/CEILING LOOSE-FILL

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Insulation uniformly covers the entire ceiling (or roof) area from the outside of all exterior walls
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Baffles installed at eaves vents or soffit vents - maintain net free-ventilation area of eave vent
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Recessed light fixtures covered
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Insulation at proper depth – insulation rulers visible and indicating proper depth and R-value
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Loose-fill mineral fiber insulation meets or exceeds manufacturer's minimum weight and thickness requirement for the target R-value. Target R-value _____ Manufacturer's minimum required weight for the target R-value _____ (pounds-per-square foot). Sample weight _____ (pounds per square foot).
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Manufacturer's minimum required thickness at time of installation _____ (inches) Manufacturer's minimum required settled thickness _____ (inches). Number of days since loose-fill insulation was installed _____ (days). At the time of installation, the insulation shall be greater than or equal to the manufacturer's minimum initial insulation thickness. If the HERS rater does not verify the insulation at the time of installation, and if the loose-fill insulation has been in place less than seven days the thickness shall be greater than the manufacturer's minimum required thickness at the time of installation less 1/2 inch to account for settling. If the insulation has been in place for seven days or longer the insulation thickness shall be greater than or equal to the manufacturer's minimum required settled thickness. Minimum thickness measured (inches).

✓ PENETRATIONS

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Duct shaft openings to unconditioned space sealed with solid blocking and any remaining gaps sealed with caulk or sealant. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Openings around flue shafts sealed with flashings, and any remaining gaps sealed with fire-rated caulk or sealant. Combustion clearance between flue and combustible materials properly closed with UL-approved metal collars. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Penetrations from wiring sealed with caulk or sealant. (thermal bypass checklist)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	Piping shaft openings fully sealed with flashings, and any remaining gaps sealed with caulk or sealant. (thermal bypass checklist)