

CITY OF SACRAMENTO

New City Hall, 915 I St., 3rd Floor, Sacramento, CA 95814

Permit No: 0614701

Insp Area: 2

Thos Bros: 337G2

Sub-Type: HSG

Housing (Y/N): Y

Site Address: 38 DE FER CR SAC

Parcel No: 049-0440-012

PERMIT EXPIRES IN 60 DAYS

CONTRACTOR

TUDOR CONSTRUCTION AN RESTORATION
10291 IRON ROCK WY
ELK GROVE, CA 95624

OWNER

P.O. BOX 2328
AUBURN, WA 98071

ARCHITECT

SANTANDER CORAZON A/ROSALIE A

Nature of Work: 06-009353--Fire repair; Repair/replace all fire damaged electrical wiring, heating unit, roof framing, damaged walls, plumbing fixtures and DWV lines. Install new windows & 30 yr dim lam comp.

CONSTRUCTION LENDING AGENCY : I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name _____ Lender's Address _____

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class B License Number 429045 Date 10/16/06 Contractor Signature [Signature]

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00);

____ I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

____ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts to do such projects with a contractor(s) licensed pursuant to the Contractors License Law).

____ I am exempt under Sec. _____ B & PC for this reason: _____

Date _____ Owner Signature _____

PAID
CITY OF SACRAMENTO
OCT 13 2006

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date _____ Applicant/Agent Signature _____

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

____ I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

R.F. I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier STATE FUND Policy Number 1796952-04 Exp Date 04/01/2007

____ (This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date _____ Applicant Signature _____

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.



INSULATION CONTRACTORS ASSOCIATION OF AMERICA

INSULATION CERTIFICATE
47152

0614701

1321 DUKE STREET, SUITE 303 • ALEXANDRIA, VA 22314 • (703) 739-0356

THIS IS TO CERTIFY THAT INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH CURRENT ENERGY REGULATIONS, CALIFORNIA ADMINISTRATIVE CODE, TITLE 24, STATE OF CALIFORNIA, IN THE BUILDING LOCATED AT:

LOT # _____ TRACT # _____
STREET 38 DeFer Circle CITY _____

EXTERIOR WALLS:

MANUFACTURER _____ THICKNESS/TYPE _____ R-VALUE 13/19

CEILINGS:

BATTS:
MANUFACTURER _____ THICKNESS/TYPE _____ R-VALUE 38

BLOWN IN:
MANUFACTURER Wool III MINIMUM THICKNESS _____ R-VALUE 38

SQUARE FOOTAGE COVERED 1428 NUMBER OF BAGS USED _____

FLOORS:
MANUFACTURER _____ THICKNESS/TYPE _____ R-VALUE _____

SLAB ON GRADE:
MANUFACTURER _____ THICKNESS/TYPE _____ R-VALUE _____

WIDTH OF INSULATION _____ INCHES

FOUNDATION WALLS:
MANUFACTURER _____ THICKNESS/TYPE _____ R-VALUE _____

GENERAL CONTRACTOR _____
CALIFORNIA CONTRACTORS LICENSE # _____ DATE _____

SIGNATURE TITLE

INSULATION CONTRACTOR **ARCADE INSULATION**
CALIFORNIA CONTRACTORS LICENSE #815286
NEVADA CONTRACTORS LICENSE #55201 DATE 12-20-06

SIGNATURE TITLE

INSTALLATION CERTIFICATE

(Page 1 of 12) CF-6R

Site Address 38 De Fir SAC.	Permit Number 0614701
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An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section 10-103(a).

WATER HEATING SYSTEMS:

Heater Type	CEC Certified Mfr Name & Model Number	Distribution Type (Std, Point-of-Use, etc)	If Recirculation, Control Type	# of Identical Systems	Rated Input (kW or Btu/hr) ¹	Tank Volume (gallons)	Efficiency (EF, RE) ²	Standby Loss (%) ²	External Insulation R-value ²
Gas	GE SMACT S11415	STD.		1	36,000	40	254		

- For small gas storage (rated input of less than or equal to 75,000 Btu/hr), electric resistance and heat pump water heaters, list Energy Factor (EF). For large gas storage water heaters (rated input of greater than 75,000 Btu/hr), list Recovery (RE), Thermal Efficiency, Standby Loss and Rated Input. For instantaneous gas water heaters, list Thermal Efficiency and Rated Input.
- R-12 external insulation is mandatory for storage water heaters with an energy factor of less than 0.58.

Kitchen Piping:

If indicated on the CF-1R, all hot water piping $\geq 3/4$ inches in diameter that runs from the hot water source to the kitchen fixtures is insulated.

Faucets & Shower Heads:

All faucets and showerheads installed are certified to the Energy Commission, pursuant to Title 24, Part 6, Section 111.

Central Water Heating in Buildings with Multiple Dwelling Units (required for prescriptive)

- All hot water piping in main circulating loop is insulated to requirements of §150(j)
 - Central hot water systems serving six or fewer dwelling units which have (1) less than 25' of distribution piping outdoors; (2) zero distribution piping underground; (3) no recirculation pump; and (4) insulation on distribution piping that meets the requirements of Section 150(j)
 - Central hot water systems serving more than 6 dwelling units - presence of either a time control or a time/temperature control
- I, the undersigned, verify that equipment listed above my signature is: 1) the actual equipment installed; 2) equivalent to or more efficient than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the *Energy Efficiency Standards* for residential buildings; and 3) equipment that meets or exceeds the appropriate requirements for manufactured devices (from the *Appliance Efficiency Regulations* or Part 6), where applicable.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	TUSOZ CONSTRUCTION
Signature:	Date: 5/4/07

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

INSTALLATION CERTIFICATE

(Page 3 of 12) CF-6R

Site Address 38 De Fir Circle Sae.	Permit Number 0614701
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An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section 10-103(a).

HVAC SYSTEMS:

Heating Equipment

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name and Model Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ (≥CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
SPLIT	YORK GV8S080A12411	1	80%	ATTIC	R-6	80,000	80,000

Cooling Equipment

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name and Model Number	# of Identical Systems	Efficiency (SEER or EER) ¹ (≥CF-1R value)	Duct Location (attic, etc.)	Duct R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
SPLIT	YORK DINP036N036	1	13 SEER	ATTIC	R-6	36,000	36,000

1. ≥ symbol reads *greater than or equal to what is indicated on the CF-1R value.*
 Include both SEER and EER if compliance credit for high EER air conditioner is claimed.

I, the undersigned, verify that equipment listed above is: 1) is the actual equipment installed, 2) equivalent to or more efficient than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the *Energy Efficiency Standards* for residential buildings, and 3) equipment that meets or exceeds the appropriate requirements for manufactured devices (from the *Appliance Efficiency Regulations* or Part 6), where applicable.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature:	Date:

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

INSTALLATION CERTIFICATE

Site Address 38 De Fir Circle Syc	Permit Number 0614701
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THERMOSTATIC EXPANSION VALVE (TXV)

Procedures for field verification of thermostatic expansion valves are available in RACM, Appendix RI.

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Access is provided for inspection. The procedure shall consist of visual verification that the TXV is installed on the system and installation of the specific equipment shall be verified.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				Yes is a pass	Pass

REFRIGERANT CHARGE MEASUREMENT

Verification for Required Refrigerant Charge and Adequate Airflow for Split System Space Cooling Systems without Thermostatic Expansion Valves

Outdoor Unit Serial #	
Location	N/A
Outdoor Unit Make	
Outdoor Unit Model	
Cooling Capacity	Btu/hr
Date of Verification	
Date of Refrigerant Gauge Calibration	(must be checked monthly)
Date of Thermocouple Calibration	(must be checked monthly)

Standard Charge Measurement Procedure (outdoor air dry-bulb 55°F and above):

Procedures for Determining Refrigerant Charge using the Standard Method are available in RACM, Appendix RD2.

Note: The system should be installed and charged in accordance with the manufacturer's specifications before starting this procedure.

Measured Temperatures

Supply (evaporator leaving) air dry-bulb temperature (Tsupply, db)		°F
Return (evaporator entering) air dry-bulb temperature (Treturn, db)		°F
Return (evaporator entering) air wet-bulb temperature (Treturn, wb)		°F
Evaporator saturation temperature (Tevaporator, sat)		°F
Suction line temperature (Tsuction, db)		°F
Condenser (entering) air dry-bulb temperature (Tcondenser, db)		°F

Superheat Charge Method Calculations for Refrigerant Charge

Actual Superheat = Tsuction, db - Tevaporator, sat		°F
Target Superheat (from Table RD-2)		°F
Actual Superheat - Target Superheat (System passes if between -5 and +5°F)		°F

Temperature Split Method Calculations for Adequate Airflow

Split Method Calculation is not necessary if Adequate Airflow credit is taken

Actual Temperature Split = T return, db Tsupply, db		°F
Target Temperature Split (from Table RD3)		°F
Actual Temperature Split Target Temperature Split (System passes if between -3°F and +3°F or, upon remeasurement, if between -3°F and -100°F)		°F

Site Address	Permit Number
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MISCELLANEOUS CREDITS

DIAGNOSTIC SUPPLY DUCT LOCATION, SURFACE AREA AND R-VALUE

Procedures for field verification and diagnostic testing for this group compliance credits are available in RACM, Appendix RC, RE & RH.

LESS THAN 12 LINEAL FEET OF SUPPLY DUCT OUTSIDE OF CONDITIONED SPACE

COMPLIANCE CREDIT

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Less than 12 lineal feet of supply duct outside of conditioned space.		
Yes to this compliance credit is a pass				<input checked="" type="checkbox"/> Pass	<input checked="" type="checkbox"/> Fail

SUPPLY DUCTS LOCATED IN CONDITIONED SPACE COMPLIANCE CREDIT

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Ducts are located within the conditioned volume of building.		
Yes to this compliance credit is a pass				<input checked="" type="checkbox"/> Pass	<input checked="" type="checkbox"/> Fail

Duct System Design verification is required for a compliance credit for the following:

1. Supply duct surface area reduction
2. Buried supply ducts on the ceiling
3. Deeply buried supply ducts

DUCT SYSTEM DESIGN VERIFICATION

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Adequate airflow verified		
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	The duct system design plan meets the requirements specified in RACM, Appendix RE, Section RE.4.2		
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	The duct system design plan exists on building plans		
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Duct sizes, duct system layout and locations of supply & return registers match the duct system design plan		
Yes to all is a pass				<input checked="" type="checkbox"/> Pass	<input checked="" type="checkbox"/> Fail

SUPPLY DUCTS SURFACE AREA REDUCTION COMPLIANCE CREDIT

	Crawl Space	Basement	Covered	Deeply Covered	Other	Duct Diameter	R-4.2 Surface Area	R-6.0 Surface Area	R-8.0 Surface Area
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Total Surface Area for Each R-Value =									
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Matches Performance's CF-1R?					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Yes to all is a pass							<input type="checkbox"/> Pass	<input type="checkbox"/> Fail	

BURIED DUCTS ON THE CEILING COMPLIANCE CREDIT

<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Buried Ducts on the Ceiling		
<input type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Verified High Insulation Installation Quality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Yes to duct system design, supply duct surface area reduction and this compliance credit is a pass				<input type="checkbox"/> Pass	<input type="checkbox"/> Fail

DEEPLY BURIED DUCTS COMPLIANCE CREDIT

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Deeply Buried Ducts		
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Verified High Insulation Installation Quality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Yes to duct system design, supply duct surface area reduction and this compliance credit is a pass				<input type="checkbox"/> Pass	<input type="checkbox"/> Fail

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

INSTALLATION CERTIFICATE

(Page 9 of 12) CF-6R

Site Address <i>N/A</i>	Permit Number
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An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section 10-103(a).

BUILDING ENVELOPE LEAKAGE DIAGNOSTICS

ENVELOPE SEALING INFILTRATION REDUCTION

Procedures for field verification and diagnostic testing of envelope leakage are available in RACM, Appendix RC.

Diagnostic Testing Results			
Building Envelope Leakage (CFM @ 50 Pa) as measured by Rater:			
1.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Measured envelope leakage less than or equal to the required level from CF-1R?
2.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Is Mechanical Ventilation shown as required on the CF-1R?
2a.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Mechanical Ventilation is required on the CF-1R ('Yes' in line 2), has it been installed?
2b.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Check this box 'yes' if mechanical ventilation is required ('Yes' in line 2) and ventilation fan watts are no greater than shown on CF-1R. Measured Watts =
3.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Check this box "yes" if measured building infiltration (CFM @ 50 Pa) is greater than the CFM @ 50 values shown for an SLA of 1.5 on CF-1R (If this box is checked no, mechanical ventilation is required.)
4.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Check this box "yes" if measured building infiltration (CFM @ 50 Pa) is less than the CFM @ 50 values shown for an SLA of 1.5 on CF-1R, mechanical ventilation is installed and house pressure is greater than minus 5 Pascal with all exhaust fans operating.
Pass if:			
a. Yes in line 1 and line 3, or			<input checked="" type="checkbox"/>
b. Yes in line 1 and line 2, 2a, and 2b, or			<input checked="" type="checkbox"/>
c. Yes in line 1 and Yes in line 4.			<input type="checkbox"/>
Otherwise fail.			<input type="checkbox"/>
			Pass
			Fail

I, the undersigned, verify that the building envelope leakage meets the requirements claimed for building leakage reduction below default assumptions as used for compliance on the CF-1R. This is to certify that the above diagnostic test results and the work I performed associated with the test(s) is in conformance with the requirements for compliance credit. (The builder shall provide the HERS provider a copy of the CF-6R signed by the builder employees or subcontractors certifying that diagnostic testing and installation meet the requirements for compliance credit.)

Test Performed	
Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature:	Date:

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE), BUILDING OWNER AT OCCUPANCY

INSTALLATION CERTIFICATE

(Page 11 of 12) CF-6R

Site Address	Permit Number
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✓ **ROOF/CEILING BATTS**

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

✓ **ROOF/CEILING LOOSE-FILL**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation uniformly covers the entire ceiling (or roof) area from the outside of all exterior walls.
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Baffles installed at eaves vents or soffit vents - maintain net free-ventilation area of eave vent
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attic access insulated
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recessed light fixtures covered
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation at proper depth -- insulation rulers visible and indicating proper depth and R-value
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loose-fill insulation meets or exceeds manufacturer's minimum weight and thickness requirements for the target R-value. Target R-value _____ . Manufacturer's minimum required weight for the target R-value _____ (pounds-per-square-foot). Manufacturer's minimum required thickness at time of installation _____ . Manufacturer's minimum required settled thickness _____ . Note: To receive compliance credit the HERS rater shall verify that the manufacturer's minimum weight and thickness has been achieved for the target R-value. (CF-6R only)
Yes	No	NA	

DECLARATION

✓ I hereby certify that the installation meets all applicable requirements as specified in the Insulation Installation Procedures.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature:	Date:

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE), BUILDING OWNER AT OCCUPANCY

INSTALLATION CERTIFICATE

(Page 12 of 12) CF-6R

Site Address	Permit Number
County Subdivision	Lot Number

Description of Insulation (Formerly IC-1 Form)

1. RAISED FLOOR

Material _____
 Thickness (inches) _____

Brand Name _____
 Thermal Resistance (R-Value) _____

2. SLAB FLOOR/PERIMETER

Material _____
 Thickness (inches) _____
 Perimeter Insulation Depth (inches) _____

Brand Name _____
 Thermal Resistance (R-Value) _____

3. EXTERIOR WALL

Frame Type _____

A. Cavity Insulation

Material _____
 Thickness (inches) _____

Brand Name _____
 Thermal Resistance (R-Value) _____

B. Exterior Foam Sheathing

Material _____
 Thickness (inches) _____

Brand Name _____
 Thermal Resistance (R-Value) _____

4. FOUNDATION WALL

Material _____
 Thickness (inches) _____

Brand Name _____
 Thermal Resistance (R-Value) _____

5. CEILING

Batt or Blanket Type _____

Thickness (inches) _____

Loose Fill Type _____

Contractor's min installed weight/ft² _____ lb

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

Brand Name _____

Thermal Resistance (R-Value) _____

Brand _____

Minimum thickness _____ inches

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

6. ROOF

Material _____

Thickness (inches) _____

Brand Name _____

Thermal Resistance (R-Value) _____

Declaration

I hereby certify that the above insulation was installed in the building at the above location in conformance with the current *Energy Efficiency Standards* for residential buildings (Title 24, Part 6, California Code of Regulations) as indicated on the Certificate of Compliance, where applicable.

Item #s (if applicable)	Signature	Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor
Item #s (if applicable)	Signature	Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor
Item #s (if applicable)	Signature	Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor

Site Address

Permit Number

Insulation Installation Quality Certificate

✓ 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 meets all applicable requirements as specified in the High Quality Insulation Installation Procedures (ACM, Appendix RH)

✓ FLOOR			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All floor joist cavity insulation installed to uniformly fit the cavity side-to-side and end-to-end
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation in contact with the subfloor or rim joists insulated
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation properly supported to avoid gaps, voids, and compression
Yes	No	NA	
✓ WALLS			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wall stud cavities caulked or foamed to provide an air tight envelope
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wall stud cavity insulation uniformly fills the cavity side-to-side, top-to-bottom, and front-to-back
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No gaps
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No voids over 3/4" deep or more than 10% of the batt surface area.
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hard to access wall stud cavities such as; corner channels, wall intersections, and behind tub/shower enclosures insulated to proper R-Value
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Small spaces filled
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rim-joists insulated
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loose fill wall insulation meets or exceeds manufacturer's minimum weight-per-square-foot requirement
Yes	No	NA	
✓ ROOF/CEILING PREPARATION			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All draft stops in place to form a continuous ceiling and wall air barrier
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All drops covered with hard covers
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All draft stops and hard covers caulked or foamed to provide an air tight envelope
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All recessed light fixtures IC and air tight (AT) rated and sealed with a gasket or caulk between the housing and the ceiling
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floor cavities on multiple-story buildings have air tight draft stops to all adjoining attics
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Eave vents prepared for blown insulation - maintain net free-ventilation area
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Knee walls insulated or prepared for blown insulation
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Area under equipment platforms and cat-walks insulated or accessible for blown insulation
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attic rulers installed
Yes	No	NA	

Site Address	Permit Number
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FAN WATT DRAW

Procedures for measuring the air handler watt draw are available in RACM, Appendix RE3.2.

<input checked="" type="checkbox"/> Method For Fan Watt Draw Measurement			
<input type="checkbox"/>	RE3.2.1	Portable Watt Meter Measurement	
<input type="checkbox"/>	RE3.2.2	Utility Revenue Meter Measurement	
		Measured Fan Watt Draw	
		Measured Fan Flow (enter total cfm from airflow verification)	
		Enter results of Watts/cfm	
			Watts cfm Watts/cfm
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Measured fan watt/cfm draw is equal to or lower than the fan watt/cfm draw documented in CF-1R	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		Yes is a pass	<input type="checkbox"/> <input type="checkbox"/> Pass Fail

ADEQUATE AIRFLOW VERIFICATION

Procedures for measuring the airflow are available in RACM, Appendix RE3.1.

<input checked="" type="checkbox"/> Method For Airflow Measurement			
<input type="checkbox"/>	RE4.1.1	Diagnostic Fan Flow Using Flow Capture Hood	
<input type="checkbox"/>	RE4.1.2	Diagnostic Fan Flow Using Plenum Pressure Matching	
<input type="checkbox"/>	RE4.1.3	Diagnostic Fan Flow Using Flow Grid Measurement	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Duct design exists on plans	
		Measured Airflow:	
		Rated Tons cfm/ton	
			Total cfm cfm/ton
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Measured airflow is greater than the criteria in Table RE-2	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		Yes is a pass	<input type="checkbox"/> <input type="checkbox"/> Pass Fail

MAXIMUM COOLING CAPACITY

Procedures for determining maximum cooling load capacity are available in RACM, Appendix RF3.

1	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Adequate airflow verified (see adequate airflow credit)		
2	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Refrigerant charge or TXV		
3	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Duct leakage reduction credit verified		
4	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Cooling capacities of installed systems are ≤ to maximum cooling capacity indicated on the Performance's CF-1R and RF-3.		
5	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If the cooling capacities of installed systems are > than maximum cooling capacity in the CF-1R, then the electrical input for the installed systems must be ≤ to electrical input in the CF-1R.	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Yes to 1, 2, and 3; and Yes to either 4 or 5 is a pass					<input type="checkbox"/> <input type="checkbox"/> Pass Fail	

HIGH EER AIR CONDITIONER

Procedures for verification are available in RACM, Appendix RI.

1	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	EER values of installed systems match the CF-1R		
2	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	For split system, indoor coil is matched to outdoor coil	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
3	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Time Delay Relay Verified (If Required)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Yes to 1 and 2; and 3 (If Required) is a pass					<input type="checkbox"/> <input type="checkbox"/> Pass Fail	

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature:	Date:

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

Site Address	Permit Number
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Standard Charge Measurement Summary:

System shall pass both refrigerant charge and adequate airflow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be remeasured and recalculated.

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	System Passes
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Alternate Charge Measurement Procedure (outdoor air dry-bulb below 55 °F)

Note: The system should be installed and charged in accordance with the manufacturer's specifications and installer verification shall be documented on CF-6R before starting this procedure. If outdoor air dry-bulb is 55 °F or above, installer shall use the Standard Charge Measure Procedure:

Procedures for Determining Refrigerant Charge using the Alternate Method are available in RACM, Appendix RD3.

Weigh-In Charging Method for Refrigerant Charge

Actual liquid line length:	_____	ft
Manufacturer's Standard liquid line length:	_____	ft
Difference (Actual - Standard):	_____	ft
Manufacturer's correction (ounces per foot) _____ x difference in length = _____ ounces (+ = add) (- = remove)		

Measured Airflow Method for Adequate Airflow Verification available in RACM, Appendix RD2.6

Calculated Airflow: Cooling Capacity (Btu/hr) _____ X 0.033 (cfm/Btu-hr) = _____ CFM
Measured Airflow is _____ CFM (Measured airflow must be greater than the calculated airflow).

Alternate Charge Measurement Summary:

System shall pass both refrigerant charge and adequate airflow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be remeasured and recalculated.

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	System Passes
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Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	_____
Signature:	Date:

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

Site Address 38 De FIR Circle Soc	Permit Number
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INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE

INSTALLER COMPLIANCE STATEMENT

The building was: Tested at Final Tested at Rough-in

INSTALLER VISUAL INSPECTION AT FINAL CONSTRUCTION STAGE:

- Remove at least one supply and one return register, and verify that the spaces between the register boot and the interior finishing wall are properly sealed.
- If the house rough-in duct leakage test was conducted without an air handler installed, inspect the connection points between the air handler and the supply and return plenums to verify that the connection points are properly sealed.
- Inspect all joints to ensure that no cloth backed rubber adhesive duct tape is used

DUCT LEAKAGE REDUCTION

Procedures for field verification and diagnostic testing of air distribution systems are available in RACM, Appendix RC4.3

NEW CONSTRUCTION:			
	Duct Pressurization Test Results (CFM @ 25 Pa)	Measured Values	
1	Enter Tested Leakage Flow in CFM:	83	
2	Fan Flow: Calculated (Nominal: <input checked="" type="checkbox"/> Cooling <input checked="" type="checkbox"/> Heating) or <input checked="" type="checkbox"/> Measured If Fan Flow is Calculated as 400 cfm/ton x number of tons or as 21.7 cfm/(kBtu/hr) x Heating Capacity in Thousands of Btu/hr, enter total calculated or measured fan flow in CFM here:	1736	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3	Pass if Leakage Percentage ≤ 6% for Final or ≤ 4% at Rough-in: [100 x [_____ (Line # 1) / _____ (Line # 2)]]	4.80%	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out			
4	Enter Tested Leakage Flow in CFM from Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.		
5	Enter Tested Leakage Flow in CFM from Final Test of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.		
6	Enter Reduction in Leakage for Altered Duct System [_____ (Line # 4) Minus _____ (Line # 5)] - (Only if Applicable)		
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
8	Entire New Duct System - Pass if Leakage Percentage ≤ 6% for Final or ≤ 4% at Rough-in [100 x [_____ (Line # 5) / _____ (Line # 2)]]		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out Use one of the following four Test or Verification Standards for compliance:			
9	Pass if Leakage Percentage ≤ 15% [100 x [_____ (Line # 5) / _____ (Line # 2)]]		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
10	Pass if Leakage to Outside Percentage ≤ 10% [100 x [_____ (Line # 7) / _____ (Line # 2)]]		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
11	Pass if Leakage Reduction Percentage ≥ 60% [100 x [_____ (Line # 6) / _____ (Line # 4)]] and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
12	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Pass if One of Lines # 9 through # 12 pass			<input type="checkbox"/> Pass <input type="checkbox"/> Fail

I, the undersigned, verify that the above diagnostic test results were performed in conformance with the requirements for compliance credit. I, the undersigned, also certify that the newly installed or retrofit Air-Distribution System Ducts, Plenums and Fans comply with Mandatory requirements specified in Section 150 (m) of the 2005 Building Energy Efficiency standards.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature:	Date:

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

INSTALLATION CERTIFICATE

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Site Address

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An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section 10-103(a).

FENESTRATION/GLAZING:

Item	Manufacturer/Brand Name (GROUP LIKE PRODUCTS)	Product U-factor ¹ (≤ CF-1R value) ²	Product SHGC ¹ (≤ CF-1R value) ²	# of Panes	Total Quantity of Like Product (Optional)	Area Square Feet	Exterior Shading Device or Overhang	Comments/Location/Special Features
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								

¹⁾ Use values from a fenestration product's NFRC label. For fenestration products without an NFRC label, use the default values from Section 116 of the Energy Efficiency Standards.

²⁾ Installed U-factor must be less than or equal to values from CF-1R. Installed SHGC must be less than or equal to values from CF-1R; or a shading device (exterior or overhang) is installed as specified on the CF-1R. Alternatively, installed weighted average U-factors for the total fenestration area are less than or equal to values from CF-1R. If using default table SHGC values from §116 identify whether tinted or not.

I, the undersigned, verify that the fenestration/glazing listed above my signature: 1) is the actual fenestration product installed; 2) is equivalent to or has a lower U-factor and lower SHGC than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the *Energy Efficiency Standards* for residential buildings; and 3) the product meets or exceeds the appropriate requirements for manufactured devices (from Part 6), where applicable.

Item #s (if applicable)	Signature	Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor
Item #s (if applicable)	Signature	Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor
Item #s (if applicable)	Signature	Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor

Copies to: Building Department, HERS Rater (if applicable) Building Owner at Occupancy