

TRANSMISSION VERIFICATION REPORT

TIME : 01/26/2006 14:44  
 NAME : CITY OF SACRAMENTO  
 FAX : 9168085543  
 TEL : 9168085656  
 SER.# : BR0H4J832840

DATE, TIME 01/26 14:42  
 FAX NO./NAME 94513680  
 DURATION 00:01:40  
 PAGE(S) 03  
 RESULT OK  
 MODE STANDARD  
 ECM

**CITY OF SACRAMENTO  
 CASHIER'S WORKSHEET**

\*COPY\* 01/26/2006

RECEIPT NUMBER: R0601492

TRANSACTION DATE: 01/26/2006  
 TRANSACTION AMOUNT: 185.96  
 NOTATION:

**ISSUED  
 CITY OF SACRAMENTO  
 JAN 26 2006  
 DOWNTOWN PERMIT  
 CENTER**

**PAID  
 CITY OF SACRAMENTO  
 JAN 26 2006  
 NEW CITY HALL**

APD #: 0601077  
 SITE ADDRESS: 6409 SOMIS WY SAC  
 PARCEL: 040-0053-011

TYPE: Bldg Minor Permit  
 SUB-TYPE: RES  
 HOUSING: N  
 STATUS: **ISSUED**

Mixed Income Housing  
 Fee Program  
 ??

TRANSACTION LIST

Type	Method	Description	Pymt Amount
Payment	Credit C	TEETER	185.96

RECEIPT ACCOUNT ITEM LIST

Class #	Description	Item #	Total Fee	Prev Pymt	Current Pymt
200	Permit--Building-Res	1100	175.00	.00	175.00
206	City Business Oper Tax	1730	1.60	.00	1.60
213	General Plan Surcharge	1760	2.36	.00	2.36
259	Bldg-Technology Surcharg	1750	7.00	.00	7.00

City of Sacramento

**PAID**  
CITY OF SACRAMENTO

Building Permit



BUILDING DIVISION  
(916) 808-BLDG (2534)

JAN 26 2006 \*\*\*\*\* Office Use Only \*\*\*\*\* ISSUED \*\*\*\*\*

NEW CITY HALL

Permit No: \_\_\_\_\_  
Date Issued: \_\_\_\_\_  
Total Amount: \_\_\_\_\_

CITY OF SACRAMENTO

JAN 26 2006

DOWNTOWN PERMIT  
CENTER

\*\*\*\*\* Please Fill in the Following \*\*\*\*\*  
Site Address: 6409 Somis way  
Nature of Work: change out a pidge on the Roof

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. 3997, CMC).

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 5 of the Business and Professions Code and my license is in full force and effect.  
License Class: C20 License Number: 225095 Date: 11/26/06 Signature: [Signature]

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractor's License Law for the following reason (Sec. 7011.5, 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 5 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 7011.5 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 Professions Code). The Contractors License Law does not apply to an owner of property who builds or improves thereon, or 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. 7014, Business and Professions Code). The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor licensed pursuant to the Contractors License Law.

I am exempt under Sec. \_\_\_\_\_ B & PC for the reason: \_\_\_\_\_

Date: \_\_\_\_\_ Owner Signature: \_\_\_\_\_

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verifies all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law, private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of an 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 hereby authorize representative(s) of this city to enter upon the abovesubscribed property for inspection purposes.

Date: 1/26/06 Applicant/Agent Signature: [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 5700 of the Labor Code, the performance of work for which the permit is issued.

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: \_\_\_\_\_  
Policy Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

(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 do become subject to the workers' compensation provisions of Section 5700 of the Labor Code, I shall forthwith comply with those provisions.

Date: 1/26/06 Applicant Signature: [Signature]

WARNING: FAILURE TO SECURE WORKERS' 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 3700 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEES.

THIS PERMIT SHALL EXPIRE BY LIMITATION OF WORK IS NOT COMMENCED WITHIN 180 DAYS.



# FAXBACK PERMIT APPLICATION

(certain restrictions apply)

Faxed request received in this office before 3:00 p.m. will be processed the following work day. Contractors must have a current certificate of Worker's Compensation Insurance. Work started before a Building Permit is issued will be subject to quad fees.

Permits requiring plan review are not eligible for FAXBACK

**PLANNING BUILDING DEPARTMENT**  
BUILDING DIVISION  
Fax # (916) 264-1901

**PAID**  
CITY OF SACRAMENTO  
JAN 26 2006  
Fax Box # 1000  
COMMERCIAL (M) 1000

In order to process this request, ALL of the following information MUST be provided:

RESIDENTIAL  APARTMENTS (4+ units per building)

Address: 6409 Somis way	Contract Price \$ 4000.00	Unit # 1/1
Cell Number: 6409	CONTACT PHONE: 457-2229	
CONTACT PERSON: JOCELYN NADRA	Contractor: Arctic Heating License # 225095	
Property Owner: Phil Miller	Address: 4791 63rd St.	
Address: 6409 Somis way	City/State/Zip: SAC CA 95828	
City/State/Zip: SAC CA 95828	Phone: 457-2229	FAX: 457-3680
Phone: 386-2766		

NATURE OF WORK: (Provide detailed description of work & indicate type of work in selections below.)

0601077

Description of Work: insulation & unit. Package on the Roof.

<input type="checkbox"/> REROOF (excluding tile) <input type="checkbox"/> TEAR-OFF <input type="checkbox"/> RESHEET <input type="checkbox"/> HOUSE # SQUARES 1 2 3+ <input type="checkbox"/> SIDING <input type="checkbox"/> Wood <input type="checkbox"/> T-111 <input type="checkbox"/> Horiz <input type="checkbox"/> Vinyl <input type="checkbox"/> Stucco	<input checked="" type="checkbox"/> HVAC INSTALLATIONS <input type="checkbox"/> NEW <input checked="" type="checkbox"/> CHANGE-OUT <input type="checkbox"/> Heat Pump <input checked="" type="checkbox"/> Package <input type="checkbox"/> Split system <input type="checkbox"/> Roof mount <input type="checkbox"/> Cut-in <input type="checkbox"/> Heat pump or elect. unit to gas. <input type="checkbox"/> Wall furnace <input type="checkbox"/> Fire Place Insert <input type="checkbox"/> Other (describe below) Value of duct work: \$ Equipment: \$ Cut-in: \$	(Residential ONLY) <input type="checkbox"/> WATER HEATER <input type="checkbox"/> GAS <input type="checkbox"/> ELECTRIC <input type="checkbox"/> Change-out <input type="checkbox"/> Electric to Gas <input type="checkbox"/> Relocate <input type="checkbox"/> New <input type="checkbox"/> DRY ROTOR TERMITES DAMAGE REPAIR <input type="checkbox"/> Flooring/Joists <input type="checkbox"/> Roof Structure <input type="checkbox"/> Mudfill/Studs <input type="checkbox"/> Exterior * Design Review approval may be required. <input type="checkbox"/> PUBLIC UTILITIES SAFETY INSPECTION * (Residential and single apartment units ONLY) <input type="checkbox"/> SMUD <input type="checkbox"/> PG&E	(Residential ONLY) MINOR ELECTRIC and/or MINOR PLUMBING <input type="checkbox"/> Electric Service Change # amps <input type="checkbox"/> New electric circuits <input type="checkbox"/> Re-wire <input type="checkbox"/> Replacement <input type="checkbox"/> Water Service <input type="checkbox"/> Sewer Service <input type="checkbox"/> Gas Line <input type="checkbox"/> Re-plumb <input type="checkbox"/> Water <input type="checkbox"/> Waste
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NR, Faucet Permit updated 12/09/01

\*NOTE: Correction Notice items will require an additional building permit.

\* Design Review approval may be required.

6409 Somis Wy <i>Project Address</i>		Artic Heating / 823095 <i>Contractor Name / License No.</i>
		0601077 <i>Permit Number</i>
Contractor Contact Steven Vasa <i>HERS Rater</i>	Telephone 916-804-9165 Telephone February 24, 2006 <i>Date</i>	25059 <i>Sample Group Number</i> CC14-1798365641 <i>Certificate Number</i>
Street Address: 1709 Adonis Way		HERS Provider: CalCERTS City/State/Zip: Sacramento / CA / 95864

**Copies to: Homeowner, HERS Provider and Building Department**

This CF-4R has been registered with the CalCERTS® registry in accordance with the Title 24 & Title 20 of the CCR. CalCERTS® is an approved HERS provider by the California Energy Commission.

**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 the diagnostic tested compliance requirements as checked on this form. The HERS rater must check and verify that the new distribution system is fully ducted and correct tape is used before a CF-4R may be released on every tested building. The HERS rater must not release the CF-4R until a properly completed and signed CF-6R has been received for the sample and tested buildings.

- The installer has provided a copy of the CF-6R (Installation Certificate).
- New Distribution system is fully ducted (i.e., does not use building cavities as plenums or platform returns in lieu of ducts).
- New systems where cloth backed, rubber adhesive duct tape is installed, mastic and drawbands are used in combination with cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

**MINIMUM REQUIREMENTS FOR DUCT LEAKAGE REDUCTION COMPLIANCE CREDIT:**

**NEW CONSTRUCTION**

	Measured Values
Duct Pressurization Test Results (CFM @ 25 Pa)	N/A
1 Enter Tested Leakage Flow in CFM:	1519
2 Fan Flow: Calculated (Nominal * Cooling Heating) or Measured Enter Total Fan Flow in CFM:	N/A
3 Pass if Leakage Percentage <= 6% [ 100 x ( Line 1 / Line 2 ) ]:	N/A

**ALTERATIONS: Duct System and/or HVAC Equipment Change-Out**

4 Enter Tested Leakage Flow in CFM from CF-6R: Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.	
5 Enter Tested Leakage Flow in CFM: Final Test of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.	144
6 Enter Reduction in Leakage for Altered Duct System [Line 4 - Line 5] - (Only if Applicable)	
7 Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)	
8 Entire New Duct System - Pass if Leakage Percentage <= 6% [ 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 ) ]:	9.48%	<input checked="" 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
<b>Pass if One of Lines #9 through #12 pass</b>		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 8 of 8) CF-4R**

Project Address <b>6409 somis way</b>	Builders Name <b>arctic heating and air</b>
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<b>✓ ROOF/CEILING PREPARATION</b>			
<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	

<b>✓ ROOF/CEILING BATTS</b>			
<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 ¼ 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	

<b>✓ ROOF/CEILING LOOSE-FILL</b>			
<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 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).
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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).
Yes	No	NA	

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 7 of 8) CF-4R	
Project Address <b>6409 somis way</b>	Builder Name <b>arctic heating and air</b>
Builder Contact <b>joceline nadra</b> Telephone <b>457-2222</b>	Plan Number
HERS Rater <b>Steve Vasa</b> Telephone <b>916-804-9165</b>	Sample Group Number
Certifying Signature	Date
Firm <b>Capitol Energy Consultants</b>	HERS Provider <b>CalCerts</b>
Street Address: <b>1709 Adonis Way</b>	City/State/Zip: <b>Sacramento, CA 95864</b>

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 Installation of Insulation" protocols as specified in the Residential ACM, Appendix RH 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 "HIGH QUALITY INSTALLATION OF INSULATION" COMPLIANCE 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).

#### 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	
<input checked="" type="checkbox"/> WALLS			
<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"/>	Wall stud cavities caulked or foamed to provide an air tight envelope
Yes	No	NA	

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 6 of 8)		CF-4R
Project Address <b>6409 somis way</b>	Builder Name <b>arctic heating and air</b>	
Builder Contact <b>joceline nadra</b>	Telephone <b>457-2222</b>	Plan Number
HERS Rater <b>Steve Vasa</b>	Telephone <b>916-804-9165</b>	Sample Group Number
Certifying Signature	Date	Sample House Number
Firm <b>Capitol Energy Consultants</b>	HERS Provider <b>CalCerts</b>	
Street Address: <b>1709 Adonis Way</b>	City/State/Zip: <b>Sacramento, CA 95864</b>	

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 the diagnostic tested compliance requirements as checked on this form.

The installer has provided a copy of CF-6R (Installation Certificate).

FAN WATT DRAW

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

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: (enter watts here)		Watts
		Measured Fan Flow (Enter total cfm from airflow verification)		cfm
		Enter results of Watts/cfm:		Watts/cfm
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Calculated fan watt/cfm is equal to or lower than the fan watt/cfm draw documented in CF-1R	<input type="checkbox"/>	<input type="checkbox"/>
		Yes is a pass	Pass	Fail

### 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 the diagnostic tested compliance requirements as checked on this form.

The installer has provided a copy of CF-6R (Installation Certificate).

MINIMUM REQUIREMENTS FOR INFILTRATION REDUCTION COMPLIANCE CREDIT

Procedures for field verification and diagnostic testing of infiltration reduction are available in RACM Section 3.5.

#### Diagnostic Testing Results

	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Building Envelope Leakage (CFM @ 50 Pa) as measured by Rater:		
1.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Is 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.		
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pass if: a) Yes in line 1 and line 3, or b) Yes in line 1 and line2, 2a, and 2b, or c) Yes in line 1 and line 4, Otherwise Fail.				<input type="checkbox"/>	<input type="checkbox"/>
				Pass	Fail

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 5 of 8) CF-4R			
Project Address	6409 somis way	Builder Name	arctic heating and air
Builder Contact	joceline nadra	Telephone	457-2222
HERS Rater	Steve Vasa	Telephone	916-804-9165
Certifying Signature		Date	
Firm	Capitol Energy Consultants	HERS Provider	CalCerts
Street Address:	1709 Adonis Way	City/State/Zip:	Sacramento, CA 95864

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 the diagnostic tested compliance requirements as checked on this form.

The installer has provided a copy of CF-6R (Installation Certificate).

### ADEQUATE AIRFLOW VERIFICATION

Procedures for field verification and diagnostic testing of adequate airflow are available in RACM, Appendix RE4.1.

Method For Airflow Measurement			
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Duct design exists on plans
<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
			Measured Airflow: _____
			Rated Tons: _____
			Total CFM cfm/ton
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Measured airflow is greater than the criteria in Table RE-2
			Yes is a pass
			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 $\leq$ 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 $\leq$ to electrical input in the CF-1R.	
				Yes to 1, 2, and 3; and Yes to either 4 or 5 is a pass	
					<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
					<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	
3	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Time Delay Relay Verified (If Required)	
				Yes to 1 and 2; and 3 (If Required) is a pass	
					<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
					<input type="checkbox"/> <input type="checkbox"/>
					Pass Fail



**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 4 of 8) CF-4R**

Project Address <b>6409 somis way</b>	Builders Name arctic heating and air
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**Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT**

**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

**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
-------------------------------------	------------------------------	-----------------------------	---------------

**Alternative Charge Measurement (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, rater shall use the Standard Charge Measure Procedure:

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

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	A copy of CF-6R (Installation Certificate) has been provided with refrigerant charge measurement documented.
-------------------------------------	------------------------------	-----------------------------	--

**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 ounces) (“-“ = remove ounces)
---

**Alternative 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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**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 2 of 8) CF-4R**

Project Address **6409 somis way** Builders Name **arctic heating and air**

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

**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	Yes to all is a pass	<input checked="" type="checkbox"/> Pass	<input checked="" type="checkbox"/> Fail
<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			

**SUPPLY DUCTS SURFACE AREA REDUCTION COMPLIANCE CREDIT**

Attic	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"/>				
<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	Duct Surface Area matches Performance's CF-1R?						<input checked="" type="checkbox"/> Pass	<input checked="" type="checkbox"/> Fail
Yes to all is a pass							<input type="checkbox"/> Pass	<input type="checkbox"/> Fail	

**BURIED DUCTS ON THE CEILING COMPLIANCE CREDIT**

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Buried Ducts on the Ceiling	<input checked="" type="checkbox"/> Pass	<input checked="" type="checkbox"/> Fail
<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Verified High Insulation Installation Quality	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail
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"/> Pass	<input checked="" type="checkbox"/> Fail
<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Verified High Insulation Installation Quality	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail
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

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

<input checked="" type="checkbox"/> <b>Method For Fan Watt Draw Measurement</b>	
<input type="checkbox"/>	RE3.2.1 Portable Watt Meter Measurement
<input type="checkbox"/>	RE3.2.2 Utility Revenue Meter Measurement
Measured Fan Watt Draw _____ Watts	
Measured Fan Flow (enter total cfm from airflow verification) _____ cfm	
Enter results of 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	
Yes is a pass	
Pass	Fail

**ADEQUATE AIRFLOW VERIFICATION**  
*Procedures for measuring the airflow are available in RACM, Appendix RE3.1.*

<input checked="" type="checkbox"/> <b>Method For Airflow Measurement</b>	
<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: _____ Total cfm	
Rated Tons cfm/ton _____ cfm/ton	
✓ ✓	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Measured airflow is greater than the criteria in Table RE-2	
Yes is a pass	
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.	✓	✓
Yes to 1, 2, and 3; and Yes to either 4 or 5 is a pass					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	✓	✓
3	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Time Delay Relay Verified (If Required)	Pass	Fail
Yes to 1 and 2; and 3 (If Required) is a pass					Pass	Fail

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

**THERMOSTATIC EXPANSION VALVE (TXV)**  
*Procedures for field verification of thermostatic expansion valves are available in RACM, Appendix RI.*

<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>
			Yes is a pass	Pass	Fail

**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		
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 <b>6409 somis way</b>	Permit Number 0601077
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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:**

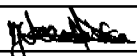
- Remove at least one supply and one return register, and verify that the spaces between the register boot and the interior finishing wall are properly sealed.
- If the house rough-in duct leakage test was conducted without an air handler installed, inspect the connection points between the air handler 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
- New Distribution system is fully ducted (i.e., does not use building cavities as plenums or platforms returns in lieu of ducts).

**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:	
2	Fan Flow: Calculated (Nominal: <input checked="" type="checkbox"/> Cooling <input 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:	✓    ✓
3	Pass if Leakage Percentage ≤ 6% for Final or ≤ 4% at Rough-in: [100 x [ _____ (Line # 1) / _____ (Line # 2)]]	<input 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)	✓    ✓
8	Entire New Duct System - Pass if Leakage Percentage ≤ 6% for Final [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
<b>Pass if One of Lines # 9 through # 12 pass</b>		<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: 2/24/06

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

**INSTALLATION CERTIFICATE**

(Page 3 of 12) CF-6R

Site Address <b>6409 somis way</b>	Permit Number <b>0601077</b>
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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.) <sup>1</sup> (≥CF-IR value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
pckg	APG13360701A	1	80	attic	4.2	70	70
amana							

**Cooling Equipment**

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name and Model Number	# of Identical Systems	Efficiency (SEER or EER) <sup>1</sup> (≥CF-IR value)	Duct Location (attic, etc.)	Duct R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
pckg	Same	1	13	attic	4.2	36	36

1. ≥ symbol reads *greater than or equal to what is indicated on the CF-IR 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-IR) 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: <i>[Signature]</i>	Date: 2/24/06

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

<b>CERTIFICATE OF COMPLIANCE: RESIDENTIAL</b> (Page 5 of 5) <b>CF-1R</b>	
Project Title <b>change out</b>	Date <b>1/26/2006</b>

**COMPLIANCE STATEMENT**

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall design responsibility. The undersigned recognizes that compliance using duct design, duct sealing, verification of refrigerant charge and TXVs, insulation installation quality, and building envelope sealing require installer testing and certification and field verification by an approved HERS rater.

<b>Designer or Owner (per Business and Professions Code)</b>	<b>Documentation Author</b>
Name: <b>joceline nadra</b>	Name: <b>SAME</b>
Title Firm: <b>arctic heating and air</b>	Title Firm:
Address: <b>4791 63rd st</b>	Address:
<b>sac ca 95820</b>	
Telephone: <b>457-2222</b>	Telephone:
License #: <b>95825</b>	
(signature) <i>[Signature]</i> <b>1/26/06</b> (date)	(signature) (date)

**Enforcement Agency**

Name: _____	Comments: _____ _____ _____ _____ _____
Title _____	
Agency: _____	
Telephone: _____	
_____	
(signature stamp) _____ (date)	

**CERTIFICATE OF COMPLIANCE: RESIDENTIAL (Page 4 of 5) CF-1R**

<i>Project Title</i> change out	<i>Date</i> 1/26/2006
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**SPECIAL FEATURES NOT REQUIRING HERS VERIFICATION** (add extra sheets if necessary)

Indicate which special features are part of this project. The list below represents special features relevant to the Prescriptive and Performance Method.

<input checked="" type="checkbox"/>	Feature	Required Forms (if applicable)	Description
<input type="checkbox"/>	Metal Framed Walls	CF-1R	
<input type="checkbox"/>	Radiant Barriers	CF-1R	
<input type="checkbox"/>	Exterior Shades	WS-4R	
<input type="checkbox"/>	Cool Roof	N/A: Performance Calculation Required. Attach CRRC Label to Forms.	
<input type="checkbox"/>	Dedicated Hydronic Heating System	Performance Calculation Required: Attach Run to Forms.	
<input type="checkbox"/>	Combined Hydronic System	Performance Calculation Required: Attach Run to Forms.	
<input type="checkbox"/>	Gas Cooling	N/A: Performance Calculation Required.	
<input type="checkbox"/>	Buried Ducts	N/A: Indicate on building plans.	
<input type="checkbox"/>	Kitchen Pipe Insulation	See Section 5.6.2 Distribution Systems in Residential Manual.	
<input type="checkbox"/>	Multiple Water Heaters Per Dwelling Unit	See Table 5-13 or use Performance Calculation and attach Run to Forms.	
<input type="checkbox"/>	Central Water Heating System Serving Multiple Dwellings	Performance Calculation and attach Run to Forms.	
<input type="checkbox"/>	Non-NAECA Large Water Heater	CF-1R	
<input type="checkbox"/>	Indirect Water Heater	See Table 5-13 or use Performance Calculation and attach Run to Forms	
<input type="checkbox"/>	Instantaneous Gas Water Heater	See Table 5-13 or use Performance Calculation and attach Run to Forms	
<input type="checkbox"/>	Solar Water Heating System	See Table 5-13 or use Performance Calculation and attach Run to Forms	
<input type="checkbox"/>	Wood Stove Boiler	Performance Calculation and attach Run to Forms	

**SPECIAL FEATURES REQUIRING HERS RATER VERIFICATION**

(add extra sheets if necessary) Indicate to the HERS Rater which credits are part of this project and need verification.

<input checked="" type="checkbox"/>	Feature	Required Forms (if applicable)	Description
<input checked="" type="checkbox"/>	Duct Sealing	CF-6R part 4 of 12	
<input type="checkbox"/>	Refrigerant Charge	CF-6R part 5 of 12	
<input type="checkbox"/>	Thermostatic Expansion Valve	CF-6R part 6 of 12	



**CERTIFICATE OF COMPLIANCE: RESIDENTIAL (Page 3 of 5) CF-1R**

<i>Project Title</i> change out	<i>Date</i> 1/26/2006
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**SEALED DUCTS and TXVs (or Alternative Measures)**

A signed CF-4R Form must be provided to the building department for each home for which the following are required.

<input checked="" type="checkbox"/>	Sealed Ducts (all climate zones) (Installer testing and certification and HERS rater field verification required.)
<input type="checkbox"/>	TXVs, readily accessible (climate zones 2 and 8-15 only) (Installer testing and certification and HERS Rater field verification required.)
<input type="checkbox"/>	Refrigerant Charge (climate zones 2 and 8-15 only) (Installer testing and certification and HERS Rater field verification required.)
<b>OR</b>	
<input type="checkbox"/>	Alternative to Sealed Ducts and Refrigerant Charge /TXVs (See Package D Alternative Package Features for Project Climate Zone in the RM Appendix B Table 151-C, Footnotes 7-14.)
<b>OR</b>	
<input type="checkbox"/>	For additions and alterations, duct systems that are not documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Residential ACM Manual and duct systems with more than 40 linear feet in unconditioned spaces shall meet the requirements of Section 150(m) and duct insulation requirements of Package D.

**WATER HEATING SYSTEMS**

<input checked="" type="checkbox"/>	
<input type="checkbox"/>	Check box if system meets criteria of a "Standard" system. Standard system is one gas-fired water heater per dwelling unit. If the water heater is a storage type, 50 gallons is the maximum capacity and recirculation system is not allowed.
<input type="checkbox"/>	Check box when using Preapproved Alternative Water Heating table, Table 5-4 in Chapter 5 in the Residential Manual. No water heating calculations are required, and the system complies automatically.
<input type="checkbox"/>	Check box if system does not meet criteria of "Standard" system, and does not comply with the Preapproved Alternative Water Heating table. In this case, the Performance Method must be used and must be included in the submittal.
<input type="checkbox"/>	Check box to verify that a time control is required for a recirculating system pump for a system serving multiple units

**Systems serving single dwelling units**

Water Heater Type/Fuel Type	Distribution Type	Number in System	Rated Input <sup>1</sup> (kW or Btu/hr)	Tank Capacity (gallons)	Energy Factor <sup>1</sup> or Thermal Efficiency	Standby <sup>1</sup> Loss (%)	Tank External Insulation R-Value

**System serving multiple dwelling units**

Water Heater Type	Distribution Type	Number in System	Rated Input <sup>1</sup> (kW or Btu/hr)	Tank Capacity (gallons)	Energy Factor <sup>1</sup> or Thermal Efficiency	Standby <sup>1</sup> Loss (%)	Tank External Insulation R-Value

1) For small gas storage water heaters (rated inputs of less than or equal to 75,000 Btu/hr), electric resistance, and heat pump water heaters, list Energy Factor. For large gas storage water heaters (rated input of greater than 75,000 Btu/hr), list Rated Input, Recovery Efficiency, Thermal Efficiency and Standby Loss. For instantaneous gas water heaters, list Rated Input and Thermal Efficiencies.

**Pipe Insulation** (kitchen lines  $\geq 3/4$  inches) All hot water pipes from the heating source to the kitchen fixtures that are  $3/4$  inches or greater in diameter shall be thermally insulated as specified by Section 150 (j) 2 A or 150 (j) 2 B.

**CERTIFICATE OF COMPLIANCE: RESIDENTIAL (Page 2 of 5) CF-1R**

<i>Project Title</i> change out	<i>Date</i> 1/26/2006
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**FENESTRATION PRODUCTS – U-FACTOR AND SHGC**

FENESTRATION MAXIMUM ALLOWED AREA WORKSHEET WS-4R –must be included for New Construction, Additions and Alterations.

Fenestration #/Type/Pos. (Front, Left, Rear, Right, Skylight)	Orien-tation, N, S, E, W <sup>1</sup>	Area (ft <sup>2</sup> )	U-factor <sup>2</sup>	U-factor Source <sup>3</sup>	SHGC <sup>4</sup>	SHGC Source <sup>5</sup>	Exterior Shading/Overhangs <sup>6,7</sup> ✓ box if WS-3R is included
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

- 1) Skylights are now included in West-facing fenestration area if the skylights are tilted to the west or tilted in any direction when the pitch is less than 1:12. See §151(f)3C and in Section 3.2.3 of the Residential Manual
- 2) Enter values in this column are either NFRC Rated value or from Standards default Table 116A.
- 3) Indicate source either from NFRC or Table 116A,
- 4) Enter values in this column from NFRC or from Standards Default Table 116B or adjusted SHGC from WS-3R.
- 5) Indicate source either from NFRC or Table 116B.
- 6) Shading Devices are defined in Table 3-3 in the Residential Manual and see WS-3R to calculate Exterior Shading devices.
- 7) See Section 3.2.4 in the Residential Manual.

**HVAC SYSTEMS**

Heating Equipment Type and Capacity (furnace, heat pump, boiler, etc.)	Minimum Efficiency (AFUE or HSPF)	Distribution Type and Location (ducts, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Configuration (split or package)
gas pack	70	attic	4.2	digital	pack

Cooling Equipment Type and Capacity (A/C, heat pump, evap. cooling)	Minimum Efficiency (SEER or EER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Configuration (split or package)
gas pack	13	attic	4.2	digital	pack

CERTIFICATE OF COMPLIANCE: RESIDENTIAL		(Page 1 of 5)	CF-1R
Project Title <b>change out</b>	Date <b>1/26/2006</b>	Building Permit # <b>0601077</b>	
Project Address <b>6409 somis way</b>		Plan Check / Date	
<b>sac ca 95828</b>		Field Check / Date	
Documentation Author <b>joceline nadra</b>	Telephone <b>457-2222</b>	Enforcement Agency Use Only	
Compliance Method (Prescriptive)	Climate Zone <b>12</b>		

Alternative Component Package Method: (check one)  C  D  D (Alternative)  
 \* Package C and Package D choices require HERS rater field verification and/or diagnostic testing (see CF-1R page 3)  
 For Package D Alternative see Appendix B Table 151-C Footnotes 7-14

### GENERAL INFORMATION

Total Conditioned Floor Area (CFA) 1200 ft<sup>2</sup>

Average Ceiling Height: 8 ft

Maximum Allowed West Facing Fenestration Products Per Table 151-B or 151-C --- (5% X CFA) \_\_\_\_\_ ft<sup>2</sup>

Maximum Allowed Total Fenestration Products Per Table 151-B or 151-C --- (20% X CFA) \_\_\_\_\_ ft<sup>2</sup>

Building Type: (check one or more)  Single Family  Multifamily  Addition  Alteration  
 (If adding fenestration fill out WS-4R, Fenestration Maximum Allowed Area Worksheet and see Section 8.3.2 for Additions and 8.3.3 for Alterations.)

Number of Stories: 1 Number of Dwelling Units: 1

Floor Construction Type: raised Slab/Raised Floor (circle one or both)

Front Orientation: \_\_\_\_\_ North / South / East / West / All Orientations (input front orientation in degrees from True North and circle one).

**RADIANT BARRIER** (required in climate zones 2, 4, 8-15)

### OPAQUE SURFACES INCLUDING OPAQUE DOORS

Component Type (Wall, Roof, Floor, Slab Edge, Doors)	Frame Type (Wood or Metal)	Cavity Insulation R-Value	Continuous Insulation R-Value	Assembly U-factor (for wood, metal frame and mass assemblies) <sup>1</sup>	Joint Appendix IV Reference	Roof Radiant Barrier Installed Yes or No	Location Comments (attic, garage, typical, etc.)

1) See Joint Appendix IV in Section IV.2, IV.3 and IV.4, which is the basis for the U-factor criterion. U-factors can not exceed prescriptive value to show equivalence to R-values.