

TRANSMISSION VERIFICATION REPORT

TIME : 09/14/2006 14:59  
NAME : CITY OF SACRAMENTO  
FAX : 9168085543  
TEL : 9168085656  
SER.# : BROH4J832840

DATE, TIME 09/14 14:58  
FAX NO./NAME 93812839  
DURATION 00:00:41  
PAGE(S) 03  
RESULT OK  
MODE STANDARD  
ECM

*Pacific H/A*

**CITY OF SACRAMENTO  
CASHIER'S WORKSHEET**

RECEIPT NUMBER: R0617067  
TRANSACTION DATE: 09/14/2006  
TRANSACTION AMOUNT: 189.92  
NOTATION:

**ISSUED  
CITY OF SACRAMENTO  
SEP 14 2006  
DOWNTOWN PERMIT  
CENTER**

APD #: **0614247**  
SITE ADDRESS: 7008 13TH ST SAC  
PARCEL: 029-0414-010

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

Mixed Income Housing  
Fee Program  
??

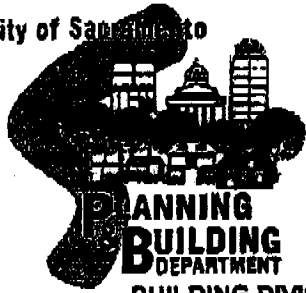
TRANSACTION LIST

Type	Method	Description	Pymt Amount
Payment	Credit C	TEETER	189.92

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	3.20	.00	3.20
213	General Plan Surcharge	1760	4.72	.00	4.72
259	Bldg-Technology Surchar	1750	7.00	.00	7.00

City of Sacramento



PLANNING BUILDING DEPARTMENT BUILDING DIVISION (916) 808-BLDG (2534)

Building Permit

\*\*\*\*\* Office Use Only \*\*\*\*\*

Permit No: 0614247 Date Issued: 9/14/06 Total Amount: \$189.92

ISSUED CITY OF SACRAMENTO SEP 14 2006

\*\*\*\*\* Please Fill in the Following \*\*\*\*\* DOWNTOWN PERMIT CENTER Site Address: Nature of Work:

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 C20 License Number 708888 Date 9-13-06 Signature E. J. J...

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 3 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 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, 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 for 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

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 hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 9-13-06 Applicant/Agent Signature E. J. J...

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.

X 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 713-02-00822 Expiration Date 01-01-06

(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 9-13-06 Applicant Signature E. J. J...

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.

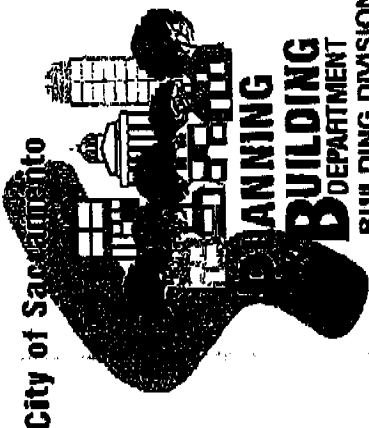
THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.

# 06 14247

# 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.



Fax # (916) 808-1901  
808-1901

Permits requiring plan review are not eligible for FAXBACK

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

RESIDENTIAL  APARTMENTS (4+ units per building)  COMMERCIAL (limited)

Job Address: 7008 13th Street	Contract Price \$	Unit #
Parcel Number:	CONTACT PHONE: 916-381-8310	
CONTACT PERSON: EIRINE - P.H. & A.R.	Contractor: Pacific Heat & Air	License # 702888
Property Owner: Adell Rogers	Address: 3317 Jallard Dr. S.B.S.	
Address: 7008 13th Street	City/State/Zip: SAC., CA 95826	
City/State/Zip: Sacramento, CA	Phone: 916-381-8310	FAX: 916-381-2839
Phone: (916) 422-5575		

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

Description of Work:			
<input type="checkbox"/> REROOF (excluding tile) <input type="checkbox"/> TEAR-OFF <input type="checkbox"/> RESHEET <input type="checkbox"/> HOUSE # SQUARES 1 2 3+ Material:	<input checked="" type="checkbox"/> HVAC INSTALLATIONS <input type="checkbox"/> NEW CHANGE-OUT <input type="checkbox"/> Heat Pump <input type="checkbox"/> Package <input checked="" type="checkbox"/> Split system <input type="checkbox"/> Roof mount <input type="checkbox"/> Curt-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)	(Residential ONLY) <input type="checkbox"/> WATER HEATER <input type="checkbox"/> GAS <input type="checkbox"/> CHANGE-OUT <input type="checkbox"/> Electric to Gas <input type="checkbox"/> Relocate <input type="checkbox"/> New <input type="checkbox"/> DRY ROT OR TERMITES DAMAGE REPAIR <input type="checkbox"/> Flooring/Joists <input type="checkbox"/> Roof Structure <input type="checkbox"/> Exterior <input type="checkbox"/> Mudsill/Sluds <input type="checkbox"/> Design Review approval may be required.	(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
<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	Value of direct work: Equipment: \$ Out-in: \$ * Design Review approval may be required.	* PUBLIC UTILITIES SAFETY INSPECTION * (Residential and single apartment units ONLY) <input type="checkbox"/> SMUD <input type="checkbox"/> PG&E *NOTE: Correction Notice items will require an additional building permit.	I/R Faxback Form updated 12/09/01

7008 13TH ST

SACRAMENTO CA 95831

0614947

Site Address

Permit Number

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 Typ (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) <sup>1</sup> >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
Split	TRANE	1	80.00 AFUE	Attic	R 4.2	0	80000
	TDD100R9V4						

Cooling Equipment

Equip Typ (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) <sup>1</sup> >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
Split	TRANE	1	14.00 SEER	Attic	R 4.2	0	48000
	4TTX4048		12.00 EER				
Coll	ADP						
	TE50660						

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.



Signature, Date

Pacific Heat & Air, Inc.

Installing Subcontractor (Co. Name)

30003

OR General Contractor (Co. Name) OR Owner

1080

COPY TO: Building Department  
HERS Rater (if applicable)  
Building Owner at Occupancy

7008 13TH ST

SACRAMENTO CA 95831

0614297

Site Address

Permit Number

## INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE

Copies to: Builder, HERS Rater, Building Owner at Occupancy and Building Department

### 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:		
2 Fan Flow: Calculated (Nominal: <input checked="" type="checkbox"/> Cooling <input type="checkbox"/> Heating) or <input 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:	1600	
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 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 [ 171 (Line # 5) / 1600 (Line # 2)]]	10.6%	<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 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.

*SKM*

9-19-06

Pacific Heat & Air, Inc.

Signature

Date

Installing Subcontractor (Co. Name) OR  
General Contractor (Co. Name)

30003  
1080

7008 13TH ST

SACRAMENTO CA 95831 0

Site Address

Permit Number



**THERMOSTATIC EXPANSION VALVE (TXV)**

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

<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.							
Yes is a pass			<table border="1" style="width: 100%;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">Pass</td> <td style="width: 33%;"></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Fail</td> </tr> </table>		Pass				Fail
	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 55oF 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 -6 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

7008 13TH ST

SACRAMENTO CA 95831 0

Site Address

Permit Number

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

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 oF 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 type="checkbox"/>	Yes	<input type="checkbox"/>	No	System Passes
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\_\_\_\_\_  
Signature, Date

**Pacific Heat & Air, Inc.**

Installing Subcontractor (Co. Name) OR  
General Contractor (Co. Name) OR Owner

30003  
1080

COPY TO: Building Department  
HERS Rater (if applicable)  
Building Owner at Occupancy

7008 13TH ST

SACRAMENTO CA 95831 0

Site Address

Permit Number

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

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

**MAXIMUM COOLING CAPACITY**

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

1	<input type="checkbox"/>	<input type="checkbox"/>	Yes	No	Adequate airflow verified (see adequate airflow credit)
2	<input type="checkbox"/>	<input type="checkbox"/>	Yes	No	Refrigerant charge or TXV
3	<input type="checkbox"/>	<input type="checkbox"/>	Yes	No	Duct leakage reduction credit verified
4	<input type="checkbox"/>	<input type="checkbox"/>	Yes	No	Cooling capacities of installed systems are ≤ to maximum cooling capacity indicated on the Performance's CF-1R and RF-3.
5	<input type="checkbox"/>	<input type="checkbox"/>	Yes	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					
				<input type="checkbox"/> Pass	<input type="checkbox"/> Fail

**HIGH EER AIR CONDITIONER**

Procedures for verification are available in RACM, Appendix RI.

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

✓  
Tests  
Performed

*[Signature]* 2-19-06  
Signature, Date

Pacific Heat & Air, Inc.  
Installing Subcontractor (Co. Name) OR 30003  
General Contractor (Co. Name) 1080



**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 1 of 8)**

CF-4R

<b>2006 13TH ST - SACRAMENTO, CA 95831</b>		<b>PACIFIC HEAT AND AIR, INC. / 702889</b>	
Project Address		Contractor Name / License No.	
		06-14247	
Contractor Contact		Telephone	Permit Number
Michael McDermott		916-704-2810	41718
HERS Rater	Telephone	Sample Group Number	
<i>Michael McDermott</i>	September 21, 2006	CC14-1798382304	
Certifying Signature		Date	Certificate Number
Firm:	Energy Analysis and Comfort Solutions, Inc.	HERS Provider: CalCERTS	
Street Address:	PO Box 2233	City/State/Zip: Orangevale / CA / 95662	

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	
1	Enter Tested Leakage Flow in CFM:	N/A	
2	Fan Flow: Calculated (Nominal <input checked="" type="radio"/> Cooling <input type="radio"/> Heating) or <input type="radio"/> Measured Enter Total Fan Flow in CFM:	Not Tested	
3	Pass if Leakage Percentage < 6% [ 100 x ( Line 1 / Line 2 ) ]:	N/A	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.	Not Tested	
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.	Not Tested	
6	Enter Reduction in Leakage for Altered Duct System (Line 4 - Line 5) - (Only if Applicable)	Not Tested	
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)	Not Tested	
8	Entire New Duct System - Pass if Leakage Percentage < 6% [ 100 x ( Line 5 / Line 2 ) ]:	Not Tested	<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 ) ]:	Not Tested	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
10	Pass if Leakage to Outside Percentage <= 10% [ 100 x ( Line 7 / Line 2 ) ]:	Not Tested	<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	Not Tested	<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 checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

<https://www.calcerts.com/cf4r> print certificate.cfm?lots=0,41721,41719,41718,41724,41720,417... 9/23/2006

**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 3-4 of 8)**

**CF-4R**

<b>7008 13TH ST - SACRAMENTO, CA 95831</b> Project Address	<b>PACIFIC HEAT AND AIR, INC. / 702888</b> Contractor Name / License No.	
Contractor Contact Michael McDermott	Telephone 916-704-2810	Permit Number 06-14247
HERS Rater <i>Mike McDermott</i>	Telephone September 21, 2006	Sample Group Number CC14-1798382304
Certifying Signature	Date	Certificate Number
Firm: Energy Analysis and Comfort Solutions, Inc.		HERS Provider: <b>CalCERTS</b>
Street Address: PO Box 2233		City/State/Zip: <b>Orangevale / CA / 95662</b>

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

**THERMOSTATIC EXPANSION VALVE (TXV):**

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.

HVAC System TXV  Pass  Fail

[https://www.calcerts.com/cf4r\\_print\\_certificate.cfm?lots=0,41721,41719,41718,41724,41720,417...](https://www.calcerts.com/cf4r_print_certificate.cfm?lots=0,41721,41719,41718,41724,41720,417...) 9/23/2006