

TRANSMISSION VERIFICATION REPORT

TIME : 08/25/2006 14:50
 NAME : CITY OF SACRAMENTO
 FAX : 9168085543
 TEL : 9168085656
 SER. # : BROH4J832840

DATE, TIME : 08/25 14:49
 FAX NO. /NAME : 94523439
 DURATION : 00:01:12
 PAGE(S) : 03
 RESULT : OK
 MODE : STANDARD
 ECM

CITY OF SACRAMENTO

Downtown - New City Hall
 915 I Street, 3rd Floor
 Sacramento, CA 95814

North Permit Center
 2101 Arena Blvd, Suite 200
 Sacramento, CA 95834

FEE SUMMARY
FOR PERMIT #0613053

Bldg Minor Permit
 as of 08-24-2006 Permit Status: READY

ISSUED
CITY OF SACRAMENTO
 AUG 25 2006
DOWNTOWN PERMIT CENTER

Site Address: 625 40TH ST SAC
 Parcel No: 004-0241-018
 Thomas Bros: 297H5

CONTRACTOR
 GARICK A/C SERVICE CO.
 2122 X ST UNIT B
 SACRAMENTO CA 95818
 Phone: 916-452-2477

OWNER
 MCDONALD JACQUELINE L
 625 40TH ST
 SACRAMENTO, CA 95819
 Phone:

ARCHITECT

Phone:

Nature of Work: HVAC INSTALLTION DUCTLESS MINI SPLIT SYSTEM* NO DUCT WORK*

Permit Valuation: \$3,847.00
 Square Footage: 0

Fee Details

Class #	Description	Item #	Total Fee	Prev Pymt	Balance Due
200	Permit--Building-Res	1100	175.00	.00	175.00
206	City Business Oper Tax	1730	1.54	.00	1.54
213	General Plan Surcharge	1760	2.36	.00	2.36
259	Bldg-Technology Surcharg	1750	7.00	.00	7.00

DAIR

City of Sacramento



Inspection Request # (916) 264-7622

Building Permit

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

Permit No: 0613053
Date Issued: 8-24-06
Total Amount: 4,185.90
Insp Area #: 1



CITY OF SACRAMENTO

***** Please Fill in the Following *****

Site Address: 625 40th Street Sacramento, CA. 95819
Nature of Work: HVAC-Installation Ductless Mini Split System
DOWNTOWN PERMIT CENTER

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: C-20 License Number: 582046 Date: 8/23/06 Signature: Warren T. Wright

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 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 for such projects with a contractor(s) licensed pursuant to the Contractors License Law).
I am exempt under Sec. B & PC for this reason:

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.

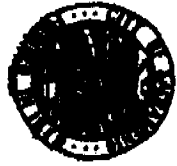
I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.
Date: 8/23/06 Applicant/Agent Signature: Warren T. Wright

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: Virginia Surety Co.
Policy Number: WYS 0012675-01 Expiration Date: 11-07
(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: 8/23/06 Applicant Signature: Warren T. Wright

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.

PBF10004



CITY OF SACRAMENTO
 PLANNING & BUILDING DEPARTMENT
 BUILDING DIVISION
 www.cityofsacramento.org
 Help Line: 1-916-808-5656 OR 1-800-EZ-PERMIT
 Inspection: 1-916-808-7822



North Permit Center
 2101 Arroyo Blvd., Suite 200, Sacramento, CA 95834

Fax # 916-808-4370

Fax # 916-808-1901
 Downtown Permit Center, New City Hall
 9151 Street, 3rd Floor, Sacramento, CA 95814

Activity # _____

FAXBACK PERMIT APPLICATION

(certain restrictions apply)

Date: 8/23/06

Faxed request must be received in this office by 3:00 P.M. to be processed the following workday. Contractors must have a current certificate of Worker's Compensation Insurance. Note: Work started before a Building Permit is issued will be subject to a fine.

Permits requiring Plan Review are not eligible for FAXBACK

IN ORDER TO PROCESS THIS REQUEST, ALL THE FOLLOWING INFORMATION MUST BE PROVIDED:

CREDIT CARD INFORMATION ON FILE? Yes No RESIDENTIAL APARTMENTS (4+ units per building) COMMERCIAL (limited)
 Job Address: 6025 40th Street Sacramento CA 95819 Unit # _____ Contract Price \$ 3,847.00
 Contact Person: Warren T. Wright Contact Phone: (916) 452-2477
 Property Owner: Jackie Mc Donald Contractor: Garrick Service Co. License # 582046
 Address: 6025 40th Street Address: 2122 X Street
 City/State/Zip: Sacramento, CA. 95819 City/State/Zip: Sacramento, CA. 95818
 Phone: (916) 719-7075 Phone: (916) 452-2477 Fax: (916) 452-3439
 Nature of Work: (Provide detailed description of work & indicate type of work in selections below).
 Description of Work: HVAC- Installation ductless mini split system *NO DUCT WORK*

<input type="checkbox"/> Reroof (excluding tile) <input type="checkbox"/> Tear-Off <input type="checkbox"/> Resheet <input type="checkbox"/> House <input type="checkbox"/> Garage # Stories: _____ # Squares: _____ Material: <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 (Residential Only) <input type="checkbox"/> Change-out <input type="checkbox"/> New <input type="checkbox"/> Heat Pump <input type="checkbox"/> Package <input checked="" 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"/> Other (describe below) Value of duct work: _____ Equipment \$ <u>1092.-</u> Cut-in: \$ _____	<input type="checkbox"/> Water Heater (Residential Only) <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 Rot or Termitis <input type="checkbox"/> Damage Repair (Describe Location Below)	<input type="checkbox"/> Minor Electric and/or Minor Plumbing (Residential Only) <input type="checkbox"/> Electric Service Change # amps <input type="checkbox"/> New electric circuits <input type="checkbox"/> Re-wire <input type="checkbox"/> Water Service Replacement <input type="checkbox"/> Sewer Service Replacement <input type="checkbox"/> Gas Line Replacement <input type="checkbox"/> Re-plumb <input type="checkbox"/> Water <input type="checkbox"/> Waste	<input type="checkbox"/> Public Utilities Safety Inspection (Residential and single apartment units Only) <input type="checkbox"/> SNAUD <input type="checkbox"/> PG&E NOTE: Correction Notice items will require an additional building permit
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PBF-10002

625 40th St
0612053

Gary L. Bullinch
(916) 452-2477

License # 502046

GARRICK
AIR
CONDITIONING
FURNACE HEAT PUMP
SERVICE
2122 X Street, Unit B
Sacramento, CA 95818

FACSIMILE TRANSMITTAL COVER SHEET

DATE SENT: 9/11/06 TIME 1:10 AM/PM (PM)

TELECOPY FROM: Warren Wright
TO: Jackie McDonald
SUBJECT: CFIR, CF-6RS - Please
show this to inspector.

NUMBER PAGES INCLUDING THIS COVER SHEET _____

If you do not receive all of the pages or if they are illegible, please call us at (916) 452-2477 as soon as possible.

OUR TELECOPIER NUMBER IS (916) 452-3439



ENERGY ANALYSIS and COMFORT SOLUTIONS INC.

PO Box 2233
Orangevale, CA
95662

Phone: 916-698-4185
Fax: 916-988-2387

Rater: _____
Date: _____
Time In: _____
Time Out: _____

Contractor Name Garick A/C		Contractor Address 2122 X Street		City Sacramento		ST CA		Zip 95818		Office Phone 916-452-2477		Office Fax 916-452-3439	
Documentation Author Warren Wright		Project Coordinator Warren Wright		Project Coordinator - Phone # 916-452-2477		Extension 582046		License # 582046		Company ID # 40015			
Owner's Name/ Project Title Jacobs McDonald				Address 625 40th Street				City Sacramento		ST CA		Zip 95818	
Contract Zone 12		County of Sacramento		SMUD		Rebate T24 Compliance Type		Bid Dept - Permit From 769-7075		Permit # 287-H4			
Project Type Alteration		Building Type Single Family Detached		# of Dwellings 1		# of Stories 1		City of Sacramento		Orientation W = 270		Ceiling Height 8	
Est Start Job 8/8/06		Est Complete Job 9/7/06		Contractor Job # 97706		Group Size 1		Plan # 40015		House # 1111		Group # 999	
Equipment Information													
Install Heat Equip? Yes		Heat System Type Heat Pump		Heat Capacity 18		Efficiency Rating 10.00		Efficiency Type HSPF		Configuration SPR		Heat Load Calc Cool Load Calc	
Install Cool Equip? Yes		Cool System Type A/C		Cool Capacity 18		SEER 10.00		EER		Configuration SPK		Cool Load Calc High EER?	
Install Ductwork? No		Duct Location 000		Type of Ducts 000		R-value 000		Duct Test? No		TXV or RCM? No		High EER? No	
Furnace or Air Handler Information													
MFG Model # Serial #		MFG Model # Serial #		SAMSUNG AO1BA6RC		MFG Model # Serial #		MFG Model # Serial #		Future Requirements		Future Requirements	
Special Issues N/A		Notes NO DUCT TEST REQ-DUCTLESS MINI											

CFBR forms ? _____
 Duct Test Performed? _____
 High EER Verified? _____
 New or Exist Ducts? _____
 Equip M# & S# OK? _____
 Stat on, Remove Tape? _____

Permit # Verified? _____
 Equip Air Flow - CFM _____
 Test Pressure _____
 CFM Leakage _____
 System % Leakage _____
 Smoke Tested? _____
 Stand By Time _____

Signature _____

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

Jackie McDonald
Project Title

625 40th Street Sacramento CA 95819
Project Address

Warren Wright 916-462-2477
Documentation Author Telephone

Prescriptive 12
Compliance Method (Prescriptive) Climate Zone

8/25/06

Date	
Building Permit #	
Plan Check / Date	
Field Check / Date	

Enforcement Agency Use Only

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 161-C Footnotes 7-14

GENERAL INFORMATION

Total Conditioned Floor Area (CFA) 750 ft² Average Ceiling Height: 8 ft

Maximum Allowed West Facing Fenestration Products Per Table 161-B or 161-C NA ft² (5% X CFA)

Maximum Allowed Total Fenestration Products Per Table 161-B or 161-C NA ft² (20% X CFA)

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 6.3.2 for Additions and 6.3.3 for Alterations.)

Number of Stories: 1 Number of Dwelling Units: 1

Floor Construction Type: 0 Slab/Raised Floor (circle one or both)

Front Orientation: W = 270 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, 8-16)

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 Ufactor (for wood, metal frame and mass assemblies) 1	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.

CERTIFICATE OF COMPLIANCE: RESIDENTIAL

(Page 2 of 5)

CF-1R

Jackie McDonald
Project Title

625 40th Street

8/25/06
Date

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)	Orientation, N, S, E, W1	Area (ft2)	U-factor2	U-factor Source3	SHGC4	SHGC Source6	Exterior Shading/Overhangs6, 7 Ck box if WS-3R is included

- 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 §161(7)(2)C 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 (APUE or HSPF)	Distribution Type and Location (ducts, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Configuration (split or package)
Heat Pump	10.00 HSPF	000	R 000	Programmable	Split
18 kBTU					

Cooling Equipment Type and Capacity (A/C, Heat Pump, Evap Cool)	Minimum Efficiency (SEER or EER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Configuration (split or package)
A/C	10.00 SEER 0.00 EER	000	R 000	Programmable	Split
18 kBTU					

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

Project Title: Jackie McDonald 625 40th Street Date: 8/25/06

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.

- Sealed Ducts (all climate zones) (installer testing and certification and HERS rater field verification required.)
- TXVs, readily accessible (climate zones 2 and 8-15 only) (installer testing and certification and HERS Rater field verification required.)
- Refrigerant Charge (climate zones 2 and 8-15 only) (installer testing and certification and HERS Rater field verification required.)

OR

- Alternative to Sealed Ducts and Refrigerant Charge /TXVs (See Package D Alternative Package Features for Project Climate Zone in the RM Appendix B Table 161-C, Footnotes 7-14.

OR

- 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 160(m) and duct insulation requirements of Package D.

WATER HEATING SYSTEMS

- 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.
- Check box when using Presapproved Alternative Water Heating table, Table 6-4 in Chapter 6 in the Residential Manual. No water heating calculations are required, and the system complies automatically.
- Check box if system does not meet criteria of "Standard" system, and does not comply with the Presapproved Alternative Water Heating table. In this case, the Performance Method must be used and must be included in the submittal.
- 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 ¹ (kW or Btu/hr)	Tank Capacity (gallons)	Energy Factor ¹ or Thermal Efficiency	Standby ¹ Loss (%)	Tank External Insulation R-Value

System serving multiple dwelling units

Water Heater Type/Fuel Type	Distribution Type	Number In System	Rated Input ¹ (kW or Btu/hr)	Tank Capacity (gallons)	Energy Factor ¹ or Thermal Efficiency	Standby ¹ 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 > 3/4 inches) All hot water pipes from the heating source to the kitchen fixtures that are 1/2 inches or greater in diameter shall be thermally insulated as specified by Section 160 (j) 2 A or 160 (j) 2 B.

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

Jackie McDonald
Project Title

625 40th Street

8/25/06
Date

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.

	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 CRRR 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.

	Feature	Required Forms (if applicable)	Description
<input 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 5 of 5)

CF-1R

Jackie McDonald
Project Title

625 40th Street

Date

8/25/06

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.

Designer or Owner (per Business and Professions Code)

Documentation Author

Name: Warren Wright	Name: Warren Wright
Title/Firm: Garick A/C	Title/Firm: Garick A/C
Address: 2122 X Street Sacramento CA 95819	Address: 2122 X Street Sacramento CA 95819
Telephone: 916-452-2477	Telephone: 916-452-2477
License #: 582048	
<i>Warren T. Wright</i> 8/25/06 (signature) (date)	<i>Warren T. Wright</i> (signature) (date)

Enforcement Agency

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

INSTALLATION CERTIFICATE

(Page 3 of 12)

CF-6R

625 40th Street Sacramento CA 95819 0
 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.) ¹ >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
Split	0	1	10.00 HSPF	000	R 000	0	18000
	0						

Cooling Equipment

Equip Typ (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
Split	SAMSUNG	1	10.00 SEER	000	R 000	0	18000
	AQ1BA6RC		0.00 EER				
Coll	0						
	0						

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.

Waven T. Wnigh

 Signature, Date

Garick A/C

 Installing Subcontractor (Co. Name) 40015
 OR General Contractor (Co. Name) OR Owner 1111

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

INSTALLATION CERTIFICATE

(Page 4 of 12)

CF-6R

625 40th Street

Sacramento CA 95819

Permit Number

Site Address

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:		Measured Values	
Duct Pressurization Test Results (CFM @ 25 Pa)			
1 Enter Tested Leakage Flow in CFM:			
2 Fan Flow: Calculated (Nominal: <input 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:			
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 < 16% [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))]			<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 160 (m) of the 2005 Building Energy Efficiency Standards.

Garick A/C

Signature

Date

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

40015
1111

INSTALLATION CERTIFICATE

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CF-6R

625 40th Street

Sacramento CA 95819

0

Site Address

Permit Number

THERMOSTATIC EXPANSION VALVE (TXV)

Procedures for field verification of thermostatic expansion valves are available in RACM, Appendix R1.

<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	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 -5 and +6°F)		F

Temperature Split Method Calculations for Adequate Airflow

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

Actual Temperature Split = Treturn, 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

INSTALLATION CERTIFICATE

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625 40th Street

Sacramento CA 95819

Permit Number

Site Address

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"/>	<input 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 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:		R
Manufacturer's Standard liquid line length:		R
Difference (Actual - Standard):		R
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"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	System Passes
--------------------------	--------------------------	--------------------------	-----	--------------------------	----	---------------

	Garick A/C	
Signature, Date	Installing Subcontractor (Co. Name) OR	40015
	General Contractor (Co. Name) OR Owner	1111

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

INSTALLATION CERTIFICATE

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CF-6R

625 40th Street

Sacramento CA 95819

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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"/>	RE3.2.1 Portable Watt Meter Measurement
<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"/>	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:				cfm/ton
<input type="checkbox"/>	Yes	<input type="checkbox"/>	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"/>	Yes	<input type="checkbox"/>	No	Adequate airflow verified (see adequate airflow credit)
2	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Refrigerant charge or TXV
3	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Duct leakage reduction credit verified
4	<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 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					
					<input type="checkbox"/> Pass <input type="checkbox"/> Fail

HIGH EER AIR CONDITIONER

Procedures for verification are available in RACM, Appendix RI.

1	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	EER values of installed systems match the CF-1R
2	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	For split system, indoor coil is matched to outdoor coil
3	<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 type="checkbox"/> Pass <input type="checkbox"/> Fail

Garick A/C

Tests

Signature, Date

Installing Subcontractor (Co. Name) OR

40015

Performed

General Contractor (Co. Name)

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COPY TO: Building Department, HERB Rater, Building Owner at Occupancy