

PERMIT SUMMARY DOCUMENT

Bldg Minor Permit
ISSUED

Address: **5656 JOHNS DR SAC**
Permit #: **0600539**

Area: 2
Date Issued: 01/13/2006

Location:
APN: 025-0141-003

Thomas Bros: 317D4
Fax Back: N

Owner: PRINGLETON MARY ANN
5656 JOHNS DR
SACRAMENTO, CA
95822
Phone: 916-428-2627

Contractor: SWITZERLAND AIR/LEWIS SNAVELY
3845 ATHERTON RD STE 4
ROCKLIN CA
CLASS C20, C36 95660
Phone: 916-442-5542

JOB DESCRIPTION: PAPERLESS PERMIT. C/O ROOF MOUNT HVAC PKG. 2005 ENERGY STANDARDS APPLY. COMPLIANCE DOC'S REQ'D @ FINAL.

DBA:

Occupancy:	R-3	Change of Use:	N	Zoning:	
Const Type:		Sub-Type:	RES	DR:	CITYWIDE
Fire Sprinkler?:		Activity Code:	M1	Fed Code:	1A
Flood Zone:	XS	Cert Req'd:	??	Balance:	\$0.00

VALUATION: \$9,053.00 Sq. Ft: 0 Reg San: School Fees Req'd:

BLDG N MECH Y PLBG N ELEC Y SITE FIRE

CONDITIONS:

*DOC'S
FINISH
2-10-06*

HTA

INSPECTION HISTORY

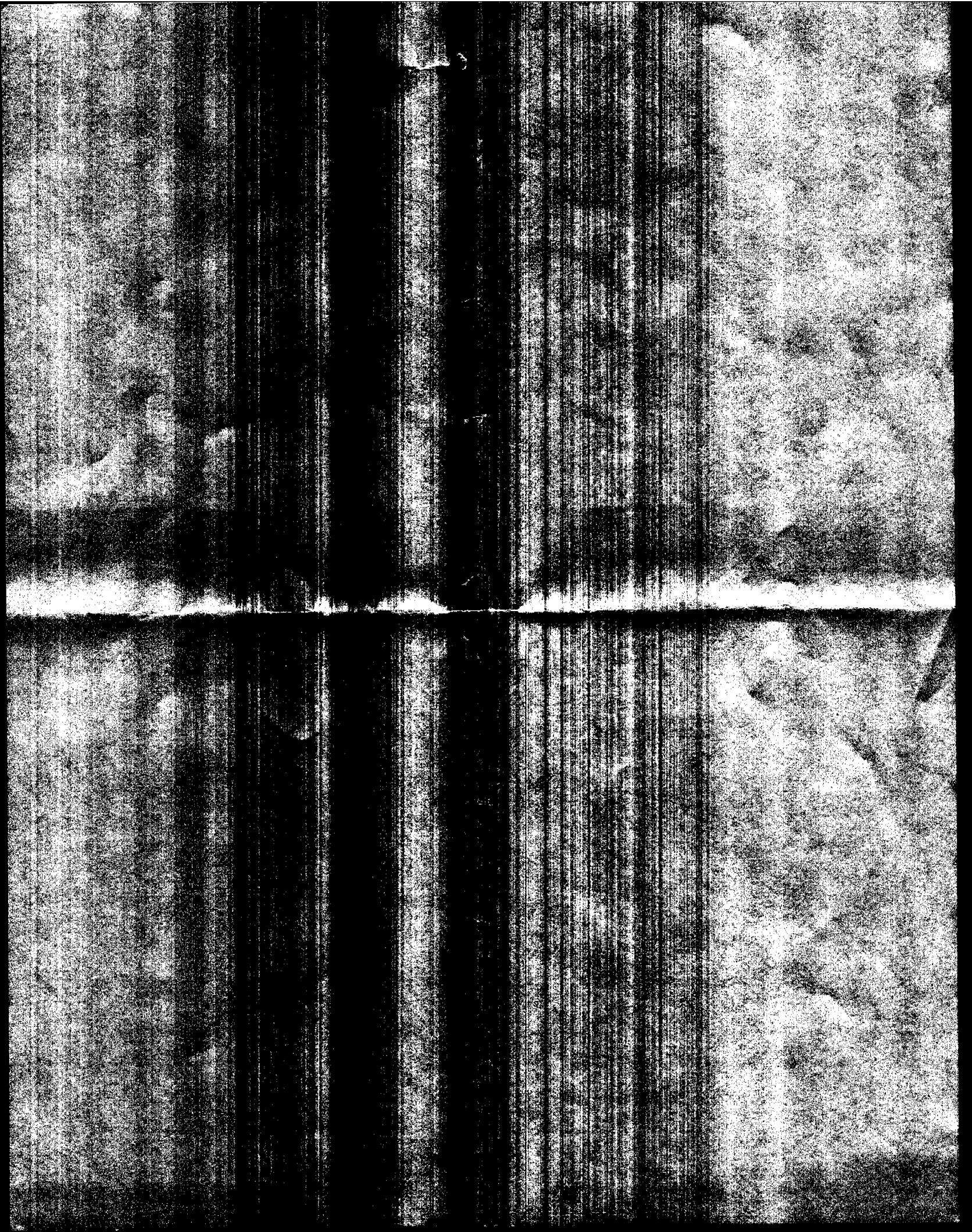
02-07-2006

3

5656 JOHNS DR SAC 0600539

Item: 00010 Bldg-Foundation Forms
Item: 00011 Bldg-Ufer (Residential)
Item: 00012 Bldg-Concrete Slab Forms
Item: 00013 Bldg-Floor Joists or Girders
Item: 00014 Bldg-Insulation Wall
Item: 00015 Bldg-Insulation Floor
Item: 00016 Bldg-Roof
Item: 00017 Bldg-Roof Plywood Nailing
Item: 00083 Bldg-Roof In Prog
Item: 00084 Bldg-Siding In Prog
Item: 00018 Bldg-Exterior Lath/Siding
Item: 00019 Bldg-Frame
Item: 00081 Frame Across-the-Board (BMPE)
Item: 00020 Bldg-Frame (Walls Only)
Item: 00021 Bldg-Frame Ceiling (T-Bar)
Item: 00022 Bldg-Sheetrock Nailing
Item: 00023 Bldg-BB
Item: 00024 Bldg-Tilt Up
Item: 00025 Bldg-Fire Sprinkler Location
Item: 00026 Bldg-Shear Nail
Item: 00030 Mech-Underfloor/Slab
Item: 00031 Mech-Top/Rough
Item: 00032 Mech-Condensate
Item: 00033 Mech-Gas Test
Item: 00040 Plmg-Underfloor/Slab
Item: 00041 Plmg-Top/Rough
Item: 00042 Plmg-Water Service
Item: 00043 Plmg-Sewer Service
Item: 00044 Plmg-Storm Drain
Item: 00045 Plmg-Irrigation Service Piping
Item: 00047 Plmg-Gas Test
Item: 00048 Plmg-Temp Gas
Item: 00060 Elec-Ufer (Commercial)
Item: 00061 Elec-Conduit/Underground
Item: 00062 Elec-Conduit/Slab
Item: 00063 Elec-Rough
Item: 00064 Elec-Rough (Walls Only)
Item: 00065 Elec-Rough (Ceiling Only)
Item: 00066 Elec-Service Undrgrnd Conduit
Item: 00067 Elec-Temp Power
Item: 00090 Release-Gas Company
Item: 00091 Release-Elect Company
Item: 00079 Elec-FINAL
Item: 00039 Mech-FINAL

02/07/2006 By: TAM Action: CN



MRS. PINGLETON

Project Title

5656 JOHNS DR SAC CA 95822

Project Address

MIKE ALLEN 916 442 5542

Documentation Author

Telephone

Prescriptive 12

Compliance Method (Prescriptive)

Climate Zone

AS JAN 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 151-C Footnotes 7-14

GENERAL INFORMATION

Total Conditioned Floor Area (CFA) 1100 ft² Average Ceiling Height: 8 ft
 Maximum Allowed West Facing Fenestration Products Per Table 151-B or 151-C — (5% X CFA) NA ft²
 Maximum Allowed Total Fenestration Products Per Table 151-B or 151-C — (20% X CFA) NA ft²
 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: W 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 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.

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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)	Orientation, N, S, E, W/1	Area (ft ²)	U-factor ²	U-factor Source ³	SHGC ⁴	SHGC Source ⁵	Exterior Shading/Overhangs ^{6, 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 §151(f)(3)(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 (AFUE or HSPF)	Distribution Type and Location (ducts, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Configuration (split or package)
G/E	0.80 AFUE	ATTIC	R4	Programable	Package
	0 HSPF				
BTU					

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)
G/E	14 SEER	ATTIC	R4	Programable	Package
	12 EER				
BTU					

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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 checked="" 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.)
OR	
<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.
OR	
<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 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 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 150 (j) 2 A or 160 (j) 2 B.

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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.

	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 N/A; Performance Calculation	
<input type="checkbox"/>	Cool Roof	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.

	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	

MRS. PINGLETON

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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: MIKE ALLEN	Name: MIKE ALLEN
Title/Firm: ONE HOUR HEAT AND AIR	Title/Firm: ONE HOUR HEAT AND AIR
Address: 3845 ATHERTON RD #4 ROCKLIN CA 95765	Address: 3845 ATHERTON RD #4 ROCKLIN CA 95765
Telephone: 916 442 5542	Telephone: 916 442 5542
License #: 588096	
<i>[Signature]</i> 25 JAN 06	<i>[Signature]</i> 25 JAN 06
(signature) (date)	(signature) (date)

Enforcement Agency

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

5656 JOHNS DR

SAC CA 95822

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

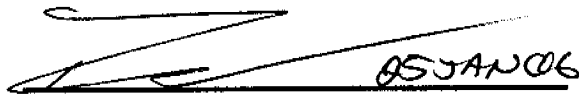
Equip Typ (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
Package	AMERICAN STANDARD	1	0.80 AFUE	ATTIC	R4	55K	
	YCY030GIMOA		0 HSPF				
G/E							

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)
Package		1	14.00 SEER	ATTIC	R4	28K	
			12 EER				
G/E							
Coil							

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

ONE HOUR HEAT AND AIR

Installing Subcontractor (Co. Name)

OR General Contractor (Co. Name) OR Owner

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

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 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:		10000	
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.		70	
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)]]		7%	<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)]]			<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 156 (m) of the 2005 Building Energy Efficiency Standards.

Signature: [Signature] Date: 25 JAN 06 ONE HOUR HEAT AND AIR
Installing Subcontractor (Co. Name) OR
General Contractor (Co. Name)

THERMOSTATIC EXPANSION VALVE (TXV)

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

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Access is provided for inspection. The procedure shall consist of visual verification that the TXV is installed on the system and installation of the specific equipment shall be verified.	
		Yes is a pass	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> 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 +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 -10°F)		F

5656 JOHNS DR

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Standard Charge Measurement Summary:

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

<input type="checkbox"/>	<input checked="" 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"/>	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	System Passes
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AS JAN 06
Signature, Date

ONE HOUR HEAT AND AIR
Installing Subcontractor (Co. Name) OR
General Contractor (Co. Name) OR Owner

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

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

HIGH EER AIR CONDITIONER

Procedures for verification are available in RACM, Appendix RI.

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

Tests Performed

[Signature] 25 JAN 06

Signature, Date

ONE HOUR HEAT AND AIR

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

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

Date/Time: Jan.27. 2006 12:21PM

File Mode	Destination	Pg (s)	Result	Page Not Sent
4926 Memory TX	9882387	P. 5	OK	

Reason for error
 m.1) Hang up or line fail
 m.3) No answer
 E.2) Busy
 E.4) No facsimile connection

INSTALLATION CERTIFICATE (Page 2 of 2) CF-6R

BOB JOHNS DR SAC CA 95222 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 or company, per Section 10-1000g)

HVAC SYSTEMS: Heating Equipment

Equip Type (Type, Model and Serial Number)	CFE Certified Wt. (Name, Model and Serial Number)	# of Installed Systems	Efficiency (AFUE, etc.) (APF, etc.)	Heat Location (Boiler, etc.)	Heat or Cooling Capacity	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
Package	AMERICAN STANDARD	1	86% AFUE	ATTIC	BTU	BTU	
Coil	YORK/BRAND	0	BTU				

Cooling Equipment

Equip Type (Type, Model and Serial Number)	CFE Certified Wt. (Name, Model and Serial Number)	# of Installed Systems	Efficiency (SEER, etc.) (EER, etc.)	Heat Location (Boiler, etc.)	Heat or Cooling Capacity	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
Package		1	14.00 SEER	ATTIC	BTU	BTU	
Coil		0	BTU				

1. * symbol inside greater than or equal to what is indicated on the CF-6R, which includes both SEER and EER. If compliance made for high SEER air conditioner is obtained.

1. See manufacturer, verify that equipment listed above is: 1) in the correct equipment installed, 2) equivalent to or more efficient than that specified in the worksheets of compliance (Form CF-10) submitted for compliance with the Energy Efficiency Standards for residential buildings, and 3) equipment that meets or exceeds the appropriate requirements for manufactured systems (from the Appliance Efficiency Regulations of Part 61, where applicable).

Signature, Date: [Signature] ONE HOUR HEAT AND AIR Installing Subcontractor (Co. Name) OR Licensed Contractor (Co. Name) OR Owner

COPY TO: Building Department HERS Rater (if applicable) Building Owner or Company

SO# 119470

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

CF-4R

5656 Johns Dr Project Address	ONE HOUR / Switzerland Air / 588096 Contractor Name / License No.
	06-00539 Permit Number
Contractor Contact John Gustason	Telephone 916-768-9459
HERS Rater <i>[Signature]</i>	Telephone 916-768-9459
January 31, 2006 Date	15449 Sample Group Number
CC14-1798356559 Certificate Number	
Energy Analysis and Comfort Solutions, Inc. P.O. Box 2233	HERS Provider: CalCERTS 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	Duct Pressurization Test Results (CFM @ 25 Pa)	
2	Enter Tested Leakage Flow in CFM:	N/A
3	Fan Flow: Calculated (Nominal <input checked="" type="radio"/> Cooling <input checked="" type="radio"/> Heating) or <input checked="" type="radio"/> Measured Enter Total Fan Flow in CFM:	1000
4	Pass if Leakage Percentage <= 6% [100 x (Line 2 / Line 3)]:	N/A
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out		
5	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.	
6	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.	71
7	Enter Reduction in Leakage for Altered Duct System [Line 4 - Line 5] - (Only if Applicable)	0
8	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)	
9	Entire New Duct System - Pass if Leakage Percentage <= 6% [100 x (Line 5 / Line 2)]:	<input checked="" 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:		
10	Pass if Leakage Percentage <= 15% [100 x (Line 5 / Line 2)]:	7.1% <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
11	Pass if Leakage to Outside Percentage <= 10% [100 x (Line 7 / Line 2)]:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
12	Pass if Leakage Reduction Percentage >= 60% [100 x (Line 6 / Line 4)] and Verification by Smoke Test and Visual Inspection	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
13	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection	<input checked="" 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