

CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0614172

Insp Area: 4

Thos Bros: 277F4

Site Address: 445 SENATOR AV SAC

Parcel No: 262-0061-009

PAID
CITY OF SACRAMENTO

Sub-Type: RES

Housing (Y/N): N

CONTRACTOR

ELITE CONSERVATION SERVICES
2701 DEL PASO RD.
#130-360 95835

OWNER

KAZEE LYNNE C/MARV
445 SENATOR AV
SACRAMENTO, CA 95833

ARCHITECT

SEP 15 2006
NEIGHBORHOODS PLANNING
AND DEVELOPMENT SERVICES

Nature of Work: C/O ROOF MOUNT PACKAGE HVAC SYSTEM

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 750199 Date 9-15-06 Contractor Signature [Signature]

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

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

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts 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 9-15-06 Applicant/Agent Signature [Signature]

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

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

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

Carrier STATE FUND Policy Number 1677392 Exp Date 02/01/2007

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

Date 9-15-06 Applicant Signature [Signature]

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

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

INSTALLATION CERTIFICATE

445 Senator Ave
Site Address

Sacramento

CA

95833

Permit Number: 0614172

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

HVAC SYSTEMS:

Heating Equipment

Equip. Type (pkg. heat)	CEC Certified Mfg. Name, Model, and Serial No.	# of Identical Systems	Efficiency (AFUE, etc) ¹ >(CF-1R value)	Duct Location	Duct or Piping R-Value	Heating Load (kBtu/hr)	Heating Capacity (kBtu/hr)
Package	HEIL	1	80.00 AFUE	Attic	6		40
Furnace	PGX3240K01A1						
	G060551030						

Cooling Equipment

Equip. Type (pkg. heat pump)	CEC Certified Mfg. Name, Model, and Serial No.	# of Identical Systems	Efficiency (AFUE, etc) ¹ >(CF-1R value)	Duct Location	Duct or Piping R-Value	Cooling Load (kBtu/hr)	Cooling Capacity (kBtu/hr)
Package	HEIL	1	13.00 SEER	Attic	6		39
A/C	PGX3240K01A1		11.00 EER				
	G060551030						
Coil	Same as Condenser Mfg						
	PGX3240K01A1						
	G060551030						

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.

If, 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.

ML 8/31/06
Signature and Date

Elite Conservation Services

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

5047-28

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

445 Senator Ave
Site Address

Sacramento

CA

95833

Permit Number: 0614172

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:	800		
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.	115		
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			
9 Pass If Leakage Percentage < 15% [100 x [<u>115</u> (Line # 5) / <u>800</u> Line # 2]]	14.4%	<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 # ^{All}]]		<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

Ed Choe, 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

Signature

Date

Elite Conservation Services

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

5047-28

INSTALLATION CERTIFICATE

445 Senator Ave Sacramento CA 95833
 Site Address Permit Number: 0614172

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 PROCEDURE
 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

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 - or, upon remeasurement, if between -3°F and -100°F)	3°F and +3°F	F

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FAN WATT DRAW

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

Method For Fan Watt Draw Measurement			
	RE3.2.1	Portable Watt Meter Measurement	
	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	Pass <input type="checkbox"/> Fail <input type="checkbox"/>

ADEQUATE AIRFLOW VERIFICATION

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

Method For Airflow Measurement			
	Yes	No	Duct design exists on plans
	RE4.1.1	Diagnostic Fan Flow Using Flow Capture Hood	
	RE4.1.2	Diagnostic Fan Flow Using Plenum Pressure Matching	
	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	
		Pass	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			
		Pass	Fail

HIGH EER AIR CONDITIONER

Procedures for verification are available in RACM, Appendix RI.

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

Tests Performed

Signature / Date

[Signature] 8/31/06

Elite Conservation Services

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

5047-28

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

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 1 of 8) CF-4R

445 Senator Ave - Sacramento, CA 95833		Elite Conservation Services / 750199	
Project Address		Contractor Name / License No.	
		614172	
Contractor Contact		Telephone	Permit Number
Patricia Siedentopf		916-410-5340	44694
HERS Rater		Telephone	Sample Group Number
<i>Patricia Siedentopf</i>		October 26, 2006	CC14-1798385282
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

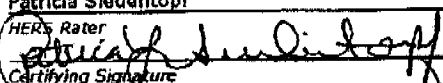
The house was Tested Approved as part of sample testing, but was not tested.
 As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form. The HERS rater must 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			
	Duct Pressurization Test Results (CFM @ 25 Pa)	Measured Values	
1	Enter Tested Leakage Flow in CFM:	N/A	
2	Fan Flow: Calculated (Nominal Cooling Heating) or Measured Enter Total Fan Flow in CFM:	800	
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.		
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.	93	
6	Enter Reduction in Leakage for Altered Duct System (Line 4 - Line 5) - (Only if Applicable)		
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)		
8	Entire New Duct System - Pass if Leakage Percentage < 6% [100 x (Line 5 / Line 2)]:		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out, use one of the following four Test or Verification Standards for compliance:			
9	Pass if Leakage Percentage <= 15% [100 x (Line 5 / Line 2)]:	11.60%	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
10	Pass if Leakage to Outside Percentage <= 10% [100 x (Line 7 / Line 2)]:		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
11	Pass if Leakage Reduction Percentage >= 60% [100 x (Line 6 / Line 4)] and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
12	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Pass if One of Lines #9 through #12 pass			<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

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

445 Senator Ave - Sacramento, CA 95833		Elite Conservation Services / 750199	
Project Address		Contractor Name / License No.	
		614172	
Patricia Siedentopf		Telephone	Permit Number
Contractor Contact		916-410-5340	44694
HERS Rater		Telephone	Sample Group Number
		October 26, 2006	CC14-1798385282
Certifying Signature		Date	Certificate Number
Firm:	Energy Analysis and Comfort Solutions, Inc.	HERS Provider: CalCERTS	
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Copies to: Homeowner, HERS Provider and Building Department
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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

HVAC JOB START-UP and COMPLETION FORM

Customer: KAZEE MARVIN Phone (H): 564 5860 (W): N/A
 Job Address: 445 SENATOR AVE City/State/ZIP: SACRAMENTO, CA 95833

EQUIPMENT INFORMATION

Model# _____
 Furnace/AirHand: N/A Condenser: _____ Coil: _____ Heat Pump? (Y/N) _____
 Serial# _____
 Furnace/AirHand: N/A Condenser: _____ Coil: _____
 Model# _____ Serial# _____ Heat Type: G E P Heat Size: 2 TON BTU KW
 Package Unit: PGX3240K01A1 Package Unit: G060551030

TECHNICAL DATA

FUSE TYPE: (B) = Breaker (C) = Cartridge Fuse (O) = Other
 Fuse Type/Size _____
 Furnace/AH _____ Condenser: _____ Package Unit: 25 C
 Refrigerant _____ AMPS _____ TYPE _____ AMPS _____ TYPE _____
 Line Sizes: SUCTION: 3/4" N/A LIQUID: _____
 Temperature Difference: Temp. at SUPPLY: 69.5 F Temp. at RETURN: 79.0 F
 Filter Location: IN UNIT Freon 410 # of LBS _____
 Size: 14 X 24 X 1 Return Air Filter Grille Recovery: 0 ADDED: 0

INSPECT and CHECK THE FOLLOWING and NOTE DEFECTS:

Duct System: Good Refrigerant Lines: N/A
 Thermostat Operation: Good Condensate Drain/Pump: Good
 Auxiliary Drain: Good Electrical Disconnects: Good
 Unit Secured to Code: Good Existing Electrical Service: N/A
 Permit Number (or, Not Required): See Permit
 COMMENTS: Customer responsible for final inspection

Customer instructed on maintenance and operation of unit...Heat and Cool, location of disconnects, filters and posted Service/Installation phone numbers. Customer has received all necessary paperwork. Customer Initial ✓ JCK

Certificate of Completion

Notice to Customer:

DO NOT SIGN THIS STATEMENT UNTIL THE INSTALLATION IS SATISFACTORILY COMPLETED.

To Sears, Roebuck and Co:

The installation of the above merchandise ordered by me has been satisfactorily completed.

✓ Lynne L. Kaze _____ ✓ 08/31/06 ✓ 08/31/06
 Customer Signature Date Sales Associate Name