397-6021 – Cell #
394-9424 Tenent
– Adella

Permit/Title 24 Routing List

#0518367

Name: Alex Chan

Address: 1613 Akron Way Sacramento, CA

Type Of Installation: Split

Set 8:00 – 10:00
3/2/06

CY	Complete permit application & fax
CY	Receive permit
CY	Title 24 data entry completed & emailed to Max
CY	Receive email with CF6R forms
CY	Print correct pages & include with job packet
CY	Schedule job
CY	Complete job
CY	Fax CF6R forms to Max- ensure these are signed & filled
	Receive faxed CF4R form
	Make copies of CF4R, CF6R, permit & send to owner
LM w/Tenant 4/23/06	Call to arrange for final inspection
	Complete any correction if required
	Call for re-inspection
	Document final if possible

Equipment out of stock

When ready to mut with inspector and tenent.

Garick Air Conditioning Service

WORK ORDER

2122 X Street, Sacramento, CA 95818

...RNACES • AIR CONDITIONING • HEAT PUMPS • CONTROLS • AIR FILTRATION • EM

2477
3439
32046

0970605770
GARICK AIR CONDITIONING
2122 X STREET
SACRAMENTO, CA 95818
916-452-2477

Phone Order

NTENANCE

ID: 00000001 00:39:57
12/05/05 AVS Code: N
Batch #: 000050

VISA XXXXXXXXXXX3087M Exp: 03/07
CVV2 Code: M
Appr Code: 000014 Invoice#: 000793
Total: $ 6460.65

I agree to pay above total amount according to card issuer agreement (Merchant agreement if credit voucher)

X

Merchant Copy
THANK YOU!!

...stomer:
ALEX CHAN
1613 AKRON WAY
Sacramento, CA 95822

C: (918) 939-7855

Acct. No: 100534 Terms: 5
Cross St: FREEPORT
Map Coord: 317 C4 Billing COD PM

...te: 11/23/2005
...lered By: ALEX CHAN
...ECH.

...rvice Instructions:
...EPLACE WITH 3 TON 11 SEER HEATPUMP PER
...UOTE: $6,460 65

Service Report: Date
MODEL SERIAL
SYSTEM STATUS: AMPS: IBM
TEMP: O.D. I.D.
PERM:
464-4127

INSTALLED Air HANDLER
11 SEER HEATPUMP PER QUOTE.

...commendations:

...uired ☐
...ount/Ext.

Part#	Description		
AIR HANDLER	M=CB30M-46-4P S=5805L09935	ENTERED DEC 14 2005 COMPLETED	6,460 65
HEAT PUMP	M=HP29-036-7P S=5805L09008		
	Filter 12x24		

Paid by VISA 4771 4480 0038 3087 3/07 265

BRAND	MOD #	SER #

	MECH	DATE	TRAV	HRS	TOTAL
LABOR	ROB	12/1/05		8	8
	RICH	12/1/05		8	8
	ROB	12/2/05			
	RICH	12/2/05			
			Total:		

TOTAL MATERIAL	
DISCOUNT-PM ☐ SC ☐	
SUB TOTAL	
TAX	
SERVICE CHARGE	
LABOR____HOURS X $	
FREIGHT/SPECIAL	
HAZARDOUS WASTE CHG.	
TOTAL AMOUNT:	6,460 65

...B STATUS: DATE
...ts On Order ☐
...ts Received: ☐
...) Rescheduled: ☐
...) Complete: ☐
...tl. Cost: 1688
...)or Cost:
...ne: 0
...mit: 188
...: HERS
...er: DuctVER. 200

The Above charges cover this specific repair job only. We guarantee all above parts installed by us for ninety days after date of repair, but do not guarantee or pretend to guarantee other parts not installed or listed above. If additional repairs become necessary in the future they are subject to our regular rates. We guarantee the item or items to be in good operating condition at the time of delivery, except when necessary repairs have been omitted at the request of the customer. No other warranty is expressed or implied.
Acknowledgement of completed work and/or delivery of item or items listed above.

Customer Signature Date

CITY OF SACRAMENTO
CASHIER'S WORKSHEET

RECEIPT NUMBER: R0522373

TRANSACTION DATE: 11/18/2005
TRANSACTION AMOUNT: 188.63
NOTATION: Chan

APD #: **0518367**
SITE ADDRESS: [redacted]
PARCEL: [redacted]

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

Mixed Income Housing
Fee Program
??

TRANSACTION LIST

Type	Method	Description	Pymt Amount
Payment	Cash		188.63

RECEIPT ACCOUNT ITEM LIST

Class #	Description	Item #	Total Fee	Prev Pymt	Current Pymt
200	Permit--Building-Res	1100	175.00	.00	175.00
206	City Business Oper Tax	1730	2.50	.00	2.50
213	General Plan Surcharge	1760	4.13	.00	4.13
259	Bldg-Technology Surcharg	1750	7.00	.00	7.00

PAID
CITY OF SACRAMENTO
NOV 18 2005
NEW CITY HALL

INSTALLATION CERTIFICATE (Page 4 of 12) CF-6R

1513 AKRON WAY SACRAMENTO CA 95822 05 18369

Site Address Permit Number

INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE

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

INSTALLER COMPLIANCE STATEMENT

The building was: ☐ Tested at Final ☐ Tested at Rough-In

INSTALLER VISUAL INSPECTION AT FINAL CONSTRUCTION STAGE:

☐ Remove at least one supply and one return register, and verify that the spaces between the register boot and the interior finishing wall are properly sealed.

☐ If the house rough-in duct leakage test was conducted without an air handler installed, inspect the connection points between the air handler and the supply and return plenums to verify that the connection points are properly sealed.

☐ Inspect all joints to ensure that no cloth backed rubber adhesive duct tape is used

☐ DUCT LEAKAGE REDUCTION

Procedures for field verification and diagnostic testing of air distribution systems are available in RACM, Appendix RC4.3

NEW CONSTRUCTION: Duct Pressurization Test Results (CFM @ 25 Pa)	Measured Values	
1 Enter Tested Leakage Flow in CFM:		
2 Fan Flow: Calculated (Nominal: ☐ Cooling ☐ Heating) or ☐ 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:	1200 CFM	
3 Pass if Leakage Percentage < 6% for Final or < 4% at Rough-In: [100 x [_____ (Line # 1)] / _____ (Line # 2)] =		☐ Pass ☐ 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.	857 CFM	
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)] =		☐ Pass ☐ 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 [57 (Line # 5)] / 1200 (Line # 2)] =	4.75 %	☐ Pass ☐ Fail
10 Pass if Leakage to Outside Percentage < 15% [100 x [_____ (Line # 7)] / _____ (Line # 2)] =		☐ Pass ☐ Fail
11 Pass if Leakage Reduction Percentage < 50% [100 x [_____ (Line # 6)] / _____ (Line # 4)] =		☐ Pass ☐ Fail
and Verification by Smoke Test and Visual Inspection		☐ Pass ☐ Fail
12 Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		☐ Pass ☐ Fail
Pass if One of Lines # 9 through # 12 pass		

☐ I, the undersigned, verify that the above diagnostic test results were performed in conformance with the requirements for compliance credit. I, the undersigned, also certify that the newly installed or retrofit Air-Distribution System Ducts, Plenums and Fans comply with Mandatory requirements specified in Section 150 (m) of the 2005 Building Energy Efficiency Standards.

Signature Date 12/7/05

Garick Air Conditioning Service
Installing Subcontractor (Co. Name) OR

INSTALLATION CERTIFICATE (Page 3 of 12) CF-6R

1613 AKRON WAY SACRAMENTO CA 95822 05193671
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 pum	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)
	Lennox	1	80.00 AFUE	ATTIC	R4	35142	65000
Split Sys	G50UH-36A-070		0 HSPF				
G/E	0						

Cooling Equipment

Equip Typ (pkg. heat pum	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)
	Lennox	1	11.00 SEER	ATTIC	R4	26923	37500
Split Sys	H529-036		9.35 EER				
G/E	0						
	ASPEN						
Coil	SV124-36A						
	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.

12/7/05
Signature, Date

Garick Air Conditioning Service
Installing Subcontractor (Co. Name)
OR General Contractor (Co. Name) OR Owner

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

CF- 6R

INSTALLATION CERTIFICATE
1613 AKRON WAY SACRAMENTO CA 95822 05183a7 #
Site Address Permit Number

☐ THERMOSTATIC EXPANSION VALVE (TXV)

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

☐ Yes ☐ 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 +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 -166°F)		F

INSTALLATION CERTIFICATE (Page 6 of 12) CF-6R

1613 AKRON WAY SACRAMENTO CA 95822 (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.

☐ Yes ☐ No System Passes

Alternate Charge Measurement Procedure (outdoor air dry-bulb below 65 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 65 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 RD2.5

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.

☐ Yes ☐ No System Passes

Signature, Date 12/7/05

Garick Air Conditioning Service
Installing Subcontractor (Co. Name) OR
General Contractor (Co. Name) OR Owner

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

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

1613 Akron Way *Project Address*	Garick Air Conditioning Service / 582046 *Contractor Name / License No.*
Contractor Contact *Telephone*	0518367 *Permit Number*
Max McKinney (916) 698-4185	12469
HERS Rater *Telephone*	*Sample Group Number*
December 8, 2005	CC14-1798353051
Certifying Signature *Date*	*Certificate Number*

Firm: Energy Analysis and Comfort Solutions, Inc. HERS Provider: **CalCERTS**

Street Address: P.O. 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:** Main System

	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:	1200	
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.	57	
6	Enter Reduction in Leakage for Altered Duct System [Line 4 - Line 5] - (Only if Applicable)	0	
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)]:		☐ Pass ☒ 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)]:	4.75%	☑ Pass ☐ Fail
10	Pass if Leakage to Outside Percentage <= 10% [100 x (Line 7 / Line 2)]:		☐ Pass ☒ Fail
11	Pass if Leakage Reduction Percentage >= 60% [100 x (Line 6 / Line 4)] and Verification by Smoke Test and Visual Inspection		☐ Pass ☒ Fail
12	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		☐ Pass ☒ Fail
	Pass if One of Lines #9 through #12 pass		☑ Pass ☐ Fail

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

1613 Akron Way *Project Address*	Garick Air Conditioning Service / 582046 *Contractor Name / License No.*
	0518367
Contractor Contact *Telephone*	*Permit Number*
Max McKinney (916) 698-4185	12469
HERS Rater *Telephone*	*Sample Group Number*
December 8, 2005	CC14-1798353051
Certifying Signature *Date*	*Certificate Number*

Firm: Energy Analysis and Comfort Solutions, Inc.

HERS Provider: **CalCERTS**

Street Address: P.O. Box 2233

City/State/Zip: Orangevale / CA / 95662

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

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HERS RATER COMPLIANCE STATEMENT

The house was ☐ Tested ☐ Approved as part of sample testing, but was not tested.

As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form.

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

THERMOSTATIC EXPANSION VALVE (TXV): Main System

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.	
Main System HVAC System TXV	☑ Pass ☐ Fail