

**CITY OF SACRAMENTO**

**Permit No: 0604596**

**1231 I Street, Sacramento, CA 95814**

**Insp Area: 3**

**Thos Bros: 317H2**

**PAID  
CITY OF SACRAMENTO**

**Site Address: 3540 44TH ST SAC**

**MAY 08 2006**

**Sub-Type: ASFR**

**Parcel No: 014-0248-006**

**Housing (Y/N): N**

**CONTRACTOR**

**OWNER NEIGHBORHOODS PLANNING  
WILLIAMS DEVELOPMENT SERVICES  
9330 ROGERS RD  
SACRAMENTO, CA 95829**

**ARCHITECT**

**Nature of Work: ADD 482 SF @ REAR OF SFD (M.BED/BATH, 4TH BEDROOM, LAUNDRY)**

**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 \_\_\_\_\_ License Number \_\_\_\_\_ Date \_\_\_\_\_ Contractor 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 5-08-06 Owner Signature Mike Williams

**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 5-08-06 Applicant/Agent Signature Mike Williams

**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	Policy Number	Exp Date
<u>6</u>		

(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 5-08-06 Applicant Signature Mike Williams

**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.**



CITY OF SACRAMENTO

www.cityofsacramento.org
Help Line: 1-916-808-5656 OR 1-866-EZ-PERMIT
Inspection: 1-916-808-7622

Downtown Permit Center
1231 I Street, Suite 200
Sacramento, CA 95814

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

OWNER BUILDER VERIFICATION

1. Check one below - I or my immediate family (parent, spouse, or child) will perform:

- A - [X] all the work authorized by this permit.
B - [ ] a portion of the work.
C - [ ] none of the work.

If B or C is checked, complete 2 or 3 below.

2. A State licensed contractor (\*) will be hired to do:

- [ ] all of the authorized work. [ ] a portion of the authorized work.

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

Type of Work \_\_\_\_\_

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

Type of Work \_\_\_\_\_

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

Type of Work \_\_\_\_\_

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

Type of Work \_\_\_\_\_

3. [ ] I will utilize unlicensed person(s) other than my immediate family to perform all or portions of the authorized work. A Certificate of Workers Compensation must be on file at this office.

I declare under penalty of perjury that the above is true and correct. I have read and understand the owner-builder information on the reverse side of this form.

Signed: Property Owner MICHAEL WILLIAMS. [Signature]

Date 5-8-06 Case No. Permit No. 0604596

Job Address 3540 44TH STREET

Note: \* Information regarding unknown contractors or change in subcontractors shall be submitted to the Building Inspection field office.



CITY OF SACRAMENTO

[www.cityofsacramento.org](http://www.cityofsacramento.org)

Help Line: 1-916-808-5656 OR 1-866-EZ-PERMIT  
 Inspection: 1-916-808-7622

Downtown Permit Center  
 1231 I Street, Suite 200  
 Sacramento, CA 95814

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

**SITE DRAINAGE AND ENCROACHMENT QUESTIONNAIRE**

PARCEL # 014 - 0248 - 006 PERMIT # 0604596  
 SITE ADDRESS 3540 44<sup>th</sup> St ACREAGE \_\_\_\_\_

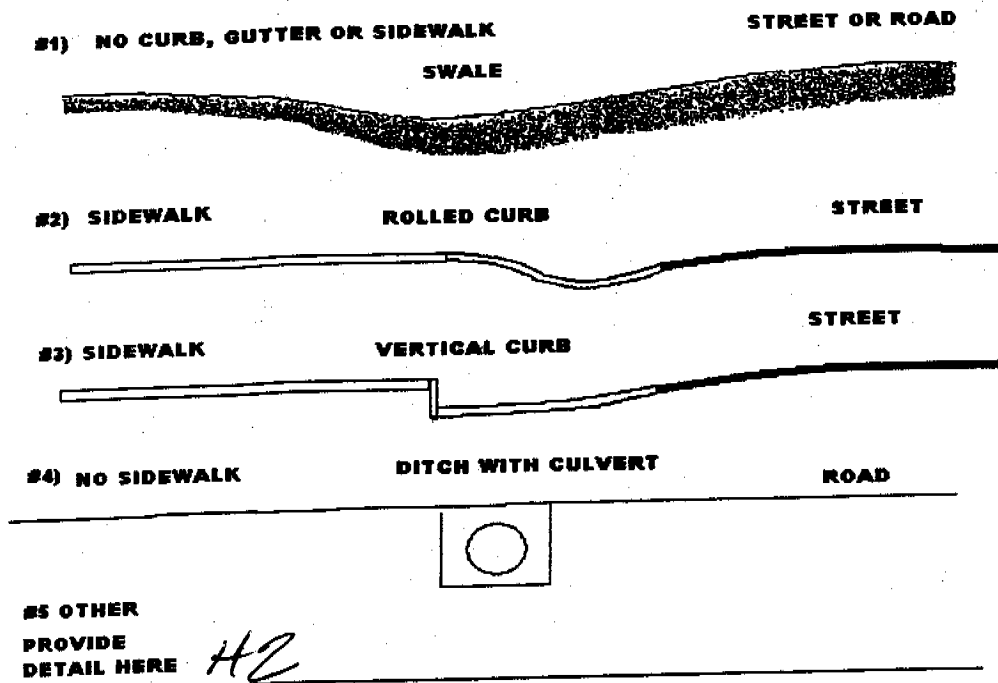
The City of Sacramento requires a building site to be graded to drain correctly and site drainage routed to an approved location. To help us understand the site drainage for your project and determine if a driveway permit or an encroachment permit is required please answer the following questions. All questions must be answered.

- |  |                                    |   |
|--|------------------------------------|---|
| 1. Are there existing structures on the site?                                      | Y                                  | N   |
| 2. Is there an existing concrete or paved driveway to this parcel from the street? | <input checked="" type="radio"/> Y | *N  |
| 3. Will the existing access to this parcel be changed in any way for this project? | *Y                                 | <input checked="" type="radio"/> N                                      |
| 4. Are all portions of the lot higher than the crown of the street?                | <input checked="" type="radio"/> Y | *N  |
| 5. Are all portions of the lot higher than the back of the sidewalk?               | <input checked="" type="radio"/> Y | *N  |
| 6. Is there a curb and gutter at the street level?                                 | <input checked="" type="radio"/> Y | N   |
| 7. Is there a sidewalk with a curb and gutter at the street?                       | <input checked="" type="radio"/> Y | N   |
| 8. Is the curb at the street square?   | *Y                                 | N <input checked="" type="radio"/> N/A                                  |
| 9. Is there a rolled curb at the street?   | <input checked="" type="radio"/> Y | N <input checked="" type="radio"/> N/A                                  |
| 10. Is there a drainage ditch or culvert at the street?                            | Y                                  | *N <input checked="" type="radio"/> N/A                                 |
| 11. Does the lot drain from back to front?   | <input checked="" type="radio"/> Y | *N  |
| 12. Does the lot drain from front to rear?   | <input checked="" type="radio"/> Y | *N  |
| 13. Does another lot drain across this parcel?                                     | *Y                                 | <input checked="" type="radio"/> N                                      |
| 14. Does the lot drain from side to side?  | <input checked="" type="radio"/> Y | N   |
| 15. Does the site have an existing low area or drainage swale?                     | *Y                                 | <input checked="" type="radio"/> N                                      |
| 16. Does the drainage swale drain to an adjacent parcel?                           | *Y                                 | <input checked="" type="radio"/> N <input checked="" type="radio"/> N/A |
| 17. Does the drainage swale drain to the street?                                   | <input checked="" type="radio"/> Y | *N <input checked="" type="radio"/> N/A                                 |
| 18. Will existing drainage be re-routed?   | *Y                                 | <input checked="" type="radio"/> N                                      |
| 19. Will drainage ditches or culverts be constructed or modified?                  | *Y                                 | <input checked="" type="radio"/> N <input checked="" type="radio"/> N/A |
| 20. Did this project require approval from the Zoning Administrator?               | *Y                                 | <input checked="" type="radio"/> N                                      |
| 21. Did the project require approval from the Planning Administrator?              | *Y                                 | <input checked="" type="radio"/> N                                      |

# SITE DRAINAGE AND ENCROACHMENT QUESTIONNAIRE

- |   |    |          |
|---|----|----------|
| 22. Is there any tree, telephone pole, guy wire or similar obstruction located at the front of the property adjacent to the street or road? | *Y | (N)      |
| 23. Is this a corner lot?   | *Y | (N)      |
| 24. Is the posted speed limit on this street greater than 25 MPH?   | *Y | (N)      |
| 25. Is this parcel located on a four-lane street?   | *Y | (N)      |
| 26. If site is greater than 1/2 acre has an erosion and sediment control plan been submitted?   | Y  | *N (N/A) |
| 27. If site disturbs 1 acre or more has a copy of the State General Permit NOI and SWPPP been submitted?                                    | Y  | *N (N/A) |
| 28. If site is part of a larger subdivision greater than 1 acre has a copy of the State General Permit NOI and SWPPP been submitted?        | Y  | *N (N/A) |

**CIRCLE THE DRAWING NUMBER BELOW THAT BEST ILLUSTRATES THE EXISTING CONDITION AT THE LOCATION OF THE PROPOSED DRIVEWAY OR SITE ACCESS.**



The information provided on this document is accurate. I understand that if this form is incomplete, contains inaccurate or misleading information, the project located at this address may be delayed until any drainage or encroachment issues are resolved to the satisfaction of the City of Sacramento.

SIGNED *Mark Willard*      DATE 4-19-06

TITLE OWNER

PHONE NO. 916-242-5343 OR CONTACT PERSON PAT DELGADO  
916-247-8266



**CITY OF SACRAMENTO**

www.cityofsacramento.org

Help Line: 1-916-808-5656 OR 1-866-EZ-PERMIT  
Inspection: 1-916-808-7622

New City Hall  
975 I Street, 3rd Floor  
Sacramento, CA 95814  
**CITY OF SACRAMENTO  
NORTH PERMIT  
CENTER**

APR 10 2006  
North Permit Center  
2101 Arena Blvd., Suite 200  
Sacramento, CA 95834

**RECEIVED**

**RESIDENTIAL APPLICATION**  
1-916-264-5656 OR 1-866-EZ-PERMIT

3540 44TH STREET SACTO, CA 95820.		#3
BUILDING SITE ADDRESS	SUITE	INSP. AREA
014-0248-006.		0604596
ASSESSOR'S PARCEL NO.	COMMUNITY PLAN NO.	PLAN CHECK NO.

NAME OF APPLICANT	ADDRESS	ZIP CODE	PHONE NO.
LICENSED CONTRACTOR			
CONTRACTOR'S LICENSE NO.:			
PROPERTY OWNER			
MIKE WILLIAMS	3540 44TH STREET SACTO, CA 95820.		916-212-5343.
ARCHITECT/ENGINEER			
CONTACT - PAT DELCANTO 916-247-8126 or 568-1572			

No. of Stories	No. of Rooms	Roof Covering	Area 1 <sup>ST</sup> Floor	Total Area	Garage Area	Patio Area
1	2	Comp.	482	1466.	NA	

THIS PERMIT IS FOR:

- BUILDING  
  MECHANICAL  
  PLUMBING  
  ELECTRICAL  
  SITE  
  FIRE

NATURE OF WORK IN DETAIL

482 SQFT ROOM ADDITION, WITH A LAUNDRY RM AND A MASTER BATH RM.

\$ 29,000<sup>00</sup>  
VALUATION

City of Sacramento  
Development Services Department  
**PLANNING REVIEW FOR BUILDING PERMIT SUBMITTAL**

ADDRESS: 3540 44 <sup>th</sup> STREET	APN: 014 0248 006
DRPB AREA / PUD / SPD: OAK PARK DESIGN REVIEW	ZONING: R-1
EXISTING LAND USE: SFR	
PROPOSED USE: ADDITION TO SFR	CITY OF SACRAMENTO NORTH PERMIT CENTER
PLANNING STAFF WILL CHECK ONE OR MORE OF THE ITEMS BELOW:	APR 10 2006
<input type="checkbox"/> Planning review is NOT required.	<b>RECEIVED</b>
<input type="checkbox"/> Use is NOT allowed; applicant CANNOT submit for plan check.	
<input checked="" type="checkbox"/> Requires APPLICATION(s): PC      ZA      IR      ER      DR   X   PB	
Required Planning application must be approved <i>before</i> project can be submitted for plan check	
<input type="checkbox"/> Application(s) IN PROGRESS:    File Number:	
Application must be approved before project can be submitted for plan check.	
<input checked="" type="checkbox"/> Application(s) COMPLETED:    File Number & approval date:    DR05-395 APPROVED 3/20/06	
Building permit must conform to approved plans and comply with all conditions of approval. Do NOT accept applications for a building permit prior to the end of the 10-day appeal period.	
<input checked="" type="checkbox"/> Plans may be submitted for plan check. Plan checker(s) shall confirm compliance with Zoning Ordinance requirements and all applicable development standards <i>prior to issuance</i> of building permit.	
<input checked="" type="checkbox"/> Meets setback & lot coverage requirements as shown on site plan provided.	
<input checked="" type="checkbox"/> Plans to be submitted have been stamped/signed by Planning counter staff.	
<input type="checkbox"/> Route to SITE for plan check and inspection.	
<input type="checkbox"/> Route to SITE for inspection only, plan check not required.	
<input type="checkbox"/> Preliminary review <b>ONLY</b> ; the information on this form must be reviewed again and confirmed at the time of building permit submittal.	
<p>CONDITIONS AND COMMENTS:    <b>MUST MEET CONDITIONS OF APPROVAL FOR DR05-395 – ATTACHED TO APPROVED PLANS</b></p> <p>Applicant proposes to add 482 square feet to existing house. Existing house, addition and new planter box would be a total of 1482 sq. ft. Lot coverage is 1482 / 5227 = 28%. Meets all lot coverage and setback requirements. Building height is good. Front yard paving is 18%, which is within the Zoning Code. No planning entitlements are apparent. Any changes to approved plans must be reviewed by Design Review staff.</p>	
DATE: 04/04/06	BY: BONNIE SURGEON

<b>INSTALLATION CERTIFICATE</b>		<b>(Page 3 of 12) CF-6R</b>
Site Address <b>3540 44th St</b>	Permit Number <b>45817</b>	Permit Number <b>0604596</b>

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 pump)	CEC Certified Mfr. Name and Model Number	# of Identical Systems	Efficiency (AFUE, etc.) <sup>1</sup> (≥CF-IR value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
<i>split</i>	<i>Goodman GM500741B20</i>	<i>1</i>	<i>80%</i>	<i>attic</i>	<i>R-4</i>		

*Cooling Equipment*

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name and Model Number	# of Identical Systems	Efficiency (SEER or EER) <sup>1</sup> (≥CF-IR value)	Duct Location (attic, etc.)	Duct R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
<i>split</i>	<i>Goodman GRT42-1</i>	<i>1</i>	<i>13 seer</i>	<i>attic</i>	<i>R-4</i>	<i>40,000</i>	<i>9,000</i>

1. ≥ symbol reads *greater than or equal to what is indicated on the CF-IR 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.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature: <i>Michael J. [Signature]</i>	Date: <i>3/08/07</i>

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

INSTALLATION CERTIFICATE

Site Address

Permit Number

INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE

INSTALLER COMPLIANCE STATEMENT

The building was:  Tested at Final  Tested at Rough-in

INSTALLER VISUAL INSPECTION AT FINAL CONSTRUCTION STAGE FOR NEW DUCTS:

- 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 on new ducts.

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 checked="" type="checkbox"/> Heating) or <input checked="" 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:	1400	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3	Pass if Leakage Percentage < 6% for Final or < 4% at Rough-in without air handle: [100 x [(Line # 1) / (Line # 2)]]		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<b>ALTERATIONS: Duct System and/or HVAC Equipment Change-Out</b>			
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.	82	
6	Enter Reduction in Leakage for Altered Duct System [(Line # 4) Minus (Line # 5)] - (Only if Applicable)		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
8	Entire New Duct System - Pass if Leakage Percentage < 6% for Final. [100 x [(Line # 5) / (Line # 2)]]	51	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
<b>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:</b>			
9	Pass if Leakage Percentage < 15% [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)]] 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
<b>Pass if One of Lines # 9 through # 12 pass</b>			

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.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature: <i>Michael J. [Signature]</i>	Date: 3/8/07

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY



**INSTALLATION CERTIFICATE**

(Page 5 of 12) CF-6R

Site Address	Permit Number
--------------	---------------

**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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 55°F 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 = 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**

(Page 6 of 12) CF-6R

Site Address	Permit Number
--------------	---------------

**Standard Charge Measurement Summary:**

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

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	System Passes
-------------------------------------	------------------------------	-----------------------------	---------------

**Alternate Charge Measurement Procedure** (outdoor air dry-bulb below 55 °F)

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 °F 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 checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	System Passes
-------------------------------------	------------------------------	-----------------------------	---------------

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature: <i>Mamad 3/18/07</i>	Date: <i>3/18/07</i>

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

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

Project Address 3540 44th St 95817	Builder or Installer Name Kora H/A
Builder or Installer Contact Kora (916)	Telephone 95817
Plan/Permit (Additions or Alterations) Number	Sample Group Number
HERS Rater Rebecca Christead	Telephone (916) 257-7777
Compliance Method (Prescriptive)	Climate Zone 12
Certifying Signature <i>[Signature]</i>	Date 3/8/07
Firm Christead HERS Raters	HERS Provider CHEERS
Street Address 7513 6th St	City/State/Zip Rio Linda, Ca 95673

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

**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 indicated on this form. The HERS rater must check and verify that the new distribution system is fully ducted and correct tape is used. The CF-4R may be released on every tested building. The HERS rater must not release the CF-4R until a properly completed designed CF-6R has been received for the sample and tested buildings.

- The installer has provided a copy of CF-6R (Installation Certificate).
- New ducts are fully ducted to the house building envelope as shown on the form returns in lieu of ducts).
- New ducts with cloth backed tape and duct tape is installed, and duct tape bands are used in combination with cloth backed, rubber adhesive sealants at all connections.

**MINIMUM REQUIREMENTS FOR DUCT LEAKAGE REDUCTION COMPLIANCE CREDIT**

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

**Duct Diagnostic Leakage Testing Results**

NEW CONSTRUCTION:			
	Duct Pressurization Test Results (at 50 Pa)	Measured Values	
1	Enter Tested Leakage Flow in CFM:		
2	Fan Flow: Calculated (Nominal: <input checked="" type="checkbox"/> <input type="checkbox"/> Measured) Enter Total Fan Flow in CFM:	1400	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3	Pass if Leakage Percentage < 6% [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 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.	84	
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)		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
8	Entire New Duct System: Pass if Leakage Percentage < 6% [100 x [(Line # 5) / (Line # 2)]]	5%	<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:			
9	Pass if Leakage Percentage < 15% [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)]] and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
	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

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 3 of 8)		CF-4R
Project Address 3510 44th St 95817	Builder Name K...H/A	
Builder Contact Kurt	Telephone	Plan Number
HERS Rater Rebecca Olmstead	Telephone (916) 257 6777	Sample Group Number
Compliance Method (Prescriptive)		Climate Zone 17
Certifying Signature <i>[Signature]</i>	Date 3/2/07	Sample House Number
Firm Olmstead HERS Raters	HERS Provider CHEERS	
Street Address: 7513 6th St	City/State/Zip: Rio Linda, LA 95673	

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

### 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 CF-6R (Installation Certificate).

### THERMOSTATIC EXPANSION VALVE (TXV)

Procedures for field verification of TXV installation shall be in accordance with Appendix RI.

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Access is provided for inspection. The procedure shall consist of visual inspection of the TXV is installed on the unit and installation of the specific equipment is completed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				is a pass	Pass Fail

### REFRIGERANT CHARGE MEASUREMENT

Verification for Required Refrigerant Charge for 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 (outdoor air dry-bulb 55 °F and above).

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 below 55 °F rater shall use the Alternative Charge Measure Procedure

Procedures for Determining Refrigerant Charge using the Standard Method are available in RACM, Appendix RD2.

<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A copy of CF-6R (Installation Certificate) has been provided with refrigerant charge measurement documented.
---	--