



CITY OF SACRAMENTO

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

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

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

Permit No. **0615162**
 Date Applied **09/28/2006**
 Type **Residential**
 Subtype **New Building**
 Category **Single Family**

Permit Address **311 CANDELA CR SACRAMENTO CA**
 Site Location **CANDELA LOT #81**

Parcel No.

Valuation **\$ 102,425.68**

Fee Items	# of Each	Amount
Permit--Building-Res	1	\$1,094.49
Plan Ck--Building Res	1	\$229.85
Review--Grading ESC	1	\$70.00
Strong Motion	1	\$10.24
Construction Excise Tax	1	\$819.41
Residential Const Tax	1	\$385.00
City Business Oper Tax	1	\$40.97
Bldg-Technology Surcharge	1	\$52.97
General Plan Surcharge	1	\$60.77
Water Development Fee	1	\$2,305.00
Water Meter Fee	1	\$385.00
Res Const Water Use Fee	1	\$53.55
SAFCA CIEF Fee	1	\$221.87
N Natomas-Pub Fac	1	\$4,598.00
N Natomas-Transit	1	\$315.00
N Natomas-Reg Park	1	\$3,262.00
N Natomas-Drainage	1	\$1,025.00
N Natomas-Admin	1	\$285.00
Park Develop Impact Fee	1	\$4,493.00
North Natomas Public Facilities Fee Adjustment - 270	-4598	(\$4,598.00)
Total		\$15,109.12

LICENSED CONTRACTOR'S 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: B License Number: 087596
 Date: 1-02-07 Contractor: SHAM GAING

OWNER-BUILDER DECLARATIONS
 I hereby affirm that I am exempt from the Contractor's License Law (C.L.L.) for the following reason (Sec. 7031.5, B&P 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/she is licensed pursuant to the provisions of C.L.L. Chapter 9 (commencing with Sec. 7000) of Division 3 of the B&P Code) or that he/she is exempt there from and the basis for the alleged exemption. Any violation of Sec. 7031.5 by any applicant for a permit subjects the applicant to civil penalty of not more than five hundred dollars (\$500):

I, as 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 B&P Code: The C.L.L. does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his 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 did not build or improve for the purpose of sale.)

I, as owner of the property, am exclusively contracting with licensed contractor(s) to construct the project (Sec. 7044, B&P Code: The C.L.L. does not apply to an owner of property who holds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the C.L.L.)

I am exempt under Sec. _____ B & P.C. for this reason:
 Date: _____ Owner: _____

WORKERS COMPENSATION DECLARATION
 I hereby affirm that I have a certificate of consent to self-insure, or a Certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec 3800, Labor Code).
 Policy Number: _____ Company: _____
 Certified copy is hereby furnished.
 Certified copy is filed with the city building inspection department or city _____ department.
 Date: _____ Applicant: _____

I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to construction. I hereby authorize representatives of this city to enter upon the above mentioned property for inspection purposes.
 Date: 1-02-07 Applicant or Agent: [Signature]

Description of Work:
 MP1541 2 STORY 5 RM SFR

PAID
CITY OF SACRAMENTO

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

JAN 02 2007
 NORTH PERMIT CENTER

CITY OF SACRAMENTO
New City Hall, 915 I St., 3rd Floor, Sacramento, CA 95814

Permit No: 0615162

Insp Area: 4

Thos Bros:

Sub-Type: NSFR

N

Site Address: 311 CANDELA CR SAC
Parcel No: CANDELA LOT #81 Housing (Y/N):

CONTRACTOR
JOHN LAING HOMES
1536 EUREKA RD STE 100
ROSEVILLE CA. 95661

OWNER

ARCHITECT

Nature of Work: MP1541 2 STORY 5 RM SFR

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 687596 _____ 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 _____ 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 _____ Applicant/Agent 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 ZURICH AMERICAN INSURANCE COMP Policy Number wc367699402 Exp Date 05/15/2007

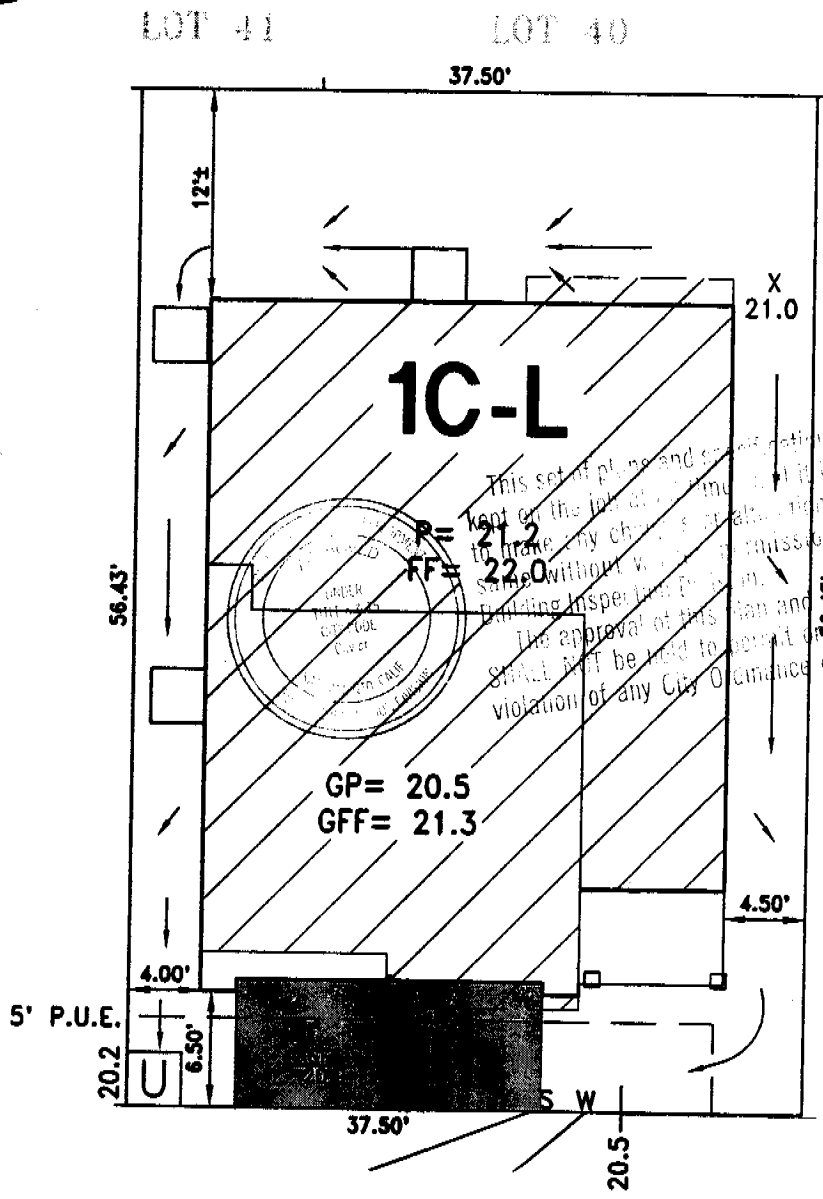
_____ (This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become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

Date _____ Applicant 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.

THIS PLOT PLAN IS NOT FOR SALES PURPOSES. THIS PLOT PLAN IS FOR THE PURPOSES OF INDICATING COMPLIANCE WITH ZONING SET BACKS, GENERAL DRAINAGE DIRECTION, AND APPROXIMATE UTILITY CONNECTION. ALL OTHER DATA SHOWN HEREON IS CONCEPTUAL. THIS PLOT PLAN DOES NOT REFLECT AS-BUILT CONDITION, RETAINING WALL ARE OPTIONAL AND MAY OR MAY NOT BE CONSTRUCTED.



LOT 0
311 CANDELA CIR

- LEGEND**
- STREET LIGHT
 - ▲ TRANSFORMER
 - U UTILITY BOX
 - SL STREET LIGHT SERVICE BOX
 - ≡ STREET SIGN
 - FIRE HYDRANT
 - DRAINAGE INLET
 - ⦿ BLOWOFF VALVE
- A.P.N.: 225 2120 081
 LOT AREA: 2116 S.F.
 ADDRESS: XX CANDELA CIRCLE

PLOT PLAN
LOT 81
 WESTLAKE
 PARCEL 31
 FOR
 JOHN LAING HOMES
 CITY OF SACRAMENTO CALIFORNIA

WOOD RODGERS
 engineering • planning • mapping • surveying
 1012 11th St. Suite 300 Modesto CA 95354
 Tel 209.549.7060 Fax 209.549.7064

DATE: JANUARY 2006	DRAWN: OME	CHECKED: JR	PROJECT NO: 1122.059
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J:\Jobs\1122-Westlake-Parcel-31\Westlake-Parcel-31-0A\Civil\Plot Plans\lot 81.dwg 1/08/06 11:00am Jaudabaugh

Lot# 81

311 Candela Cir #0615162

Sub-Candela @ West Lake

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 1 of 8) CF-4R	
Project Address 311 Candela Circle Sacramento CA 95835	Builder or Installer Name John Laing
Builder or Installer Contact Job# 10028166	Telephone Lot# 81
HERS Rater Chris Perez	Telephone 916-847-16514
Compliance Method (Prescriptive)	Plan/Permit (Additions or Alterations) Number Permit - 1
Certifying Signature Chris Perez	Sample Group Number
Firm ACS	Date 4-3-07
Street Address: 9524 Mesquite rd	Climate Zone
	Sample House Number
	HERS Provider CHEERS
	City/State/Zip: Dixonville CA 95667

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 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 CF-6R (Installation Certificate).
- New ducts are fully ducted (i.e., does not use building cavities as plenums or platform returns in lieu of ducts).
- New ducts with cloth backed, rubber adhesive duct tape is installed, mastic and draw bands 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

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 (CFM @ 25 Pa)	Measured Values	
1	Enter Tested Leakage Flow in CFM:	55	
2	Fan Flow: Calculated (Nominal: <input type="checkbox"/> Cooling <input checked="" type="checkbox"/> Heating) or <input type="checkbox"/> Measured Enter Total Fan Flow in CFM:	998	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3	Pass if Leakage Percentage < 6% [100 x [55 (Line # 1) / 998 (Line # 2)]]	5.5%	<input checked="" 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.		
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)]]		<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)]]		<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

Residential Compliance Forms

December 2005

Insulation Certificate

This is to certify that insulation has been installed in conformance with the current energy regulations, California Administration code. Title 24, State of California, in the building located at:

Site Address: 2301 (lot81) Candela Circle Sacramento CA
 Number Street City State

Ceilings:

Blow: Manufacturer Greenfiber Thickness 8.11" R / Value R-30
 Square Feet 1002 # Bags / Lbs. Per Bag 30

Batts: Manufacturer Johns Manville Thickness 10.25 R / Value R-30
 Batts: Manufacturer Johns Manville Thickness N/A R / Value N/A

Exterior Walls:

Manufacturer Johns Manville Thickness 6.5" R / Value R-19
 Manufacturer Johns Manville Thickness 3.5" R / Value R-13

Floor Insulation:

Manufacturer Johns Manville Thickness 6.5" R / Value R-19

Air Infiltration: (Title 24)

Yes No

Other: _____

General Contractor: John Laing Homes Lic. # _____

By: _____ Title: _____ Date: _____

Insulation Contractor: Gold Star Insulation, Inc. Lic. # 886354

By: Ariana Thaxter Title: Admin. Assistant Date: 4/09/07



Installation Card

Job Address

Stucco System Tradename: KWIK KOTE

CANDELA | Lot: 0000081

Name of Stucco Manufacturer: KWIK KOTE CORP.

311 CANDELA CIRCLE

ICC Evalutaion Service, Inc.

Evaluation Report ESR-1711

SACRAMENTO

Date of Job Completion

Stucco Contractor

Name: KENYON PLASTERING, INC.

Address: PO BOX 2077

North Highlands CA, 95660

Telephone Number: 916/349-8191

Approved Contract Number as issued by KWIK KOTE. 1001

This is to certify that the stucco system on the building exterior at the above address has been installed in accordance with the evaluation report specified above and the KWIK KOTE instructions.

Julian A. Alamy
Signature of authorized representative of stucco contractor

3-28-07
Date

April 2005

Residential Compliance Forms

Procedures for Determining Refrigerant Charge using the Standard Method are available in RACM, Appendix RD2. A copy of CF-6R (Installation Certificate) has been provided with refrigerant charge measurement documented.

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

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)

Verification for Required Refrigerant Charge for Split System Space Cooling Systems without Thermostatic Expansion Valves

REFRIGERANT CHARGE MEASUREMENT

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
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

THERMOSTATIC EXPANSION VALVE (TXV)

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.

HERS RATER COMPLIANCE STATEMENT

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

Project Address	311 Candeler Circle Sacramento CA 95835
Builder Contact	John Laing
Builder Telephone	916-81
Builder Plan Number	Plan-1
HERS Rater	Chris Perez
HERS Rater Telephone	916-847-6544
Compliance Method (Prescriptive)	
Certifying Signature	Chris Perez
Date	4-3-07
Sample House Number	
HERS Provider	CHERS
City/State/Zip	Roseville CA 95667

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

Sub-Candeler & Laing

Lot # 81

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

Signature: <i>[Signature]</i>	Date: 1/3/07
Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner <i>Beuter</i>	

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.

ALTERATIONS: Duct System and/or HVAC Equipment Change-Out	TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out	Use one of the following for Test or Verification Standards for compliance:
1	Enter Tested Leakage Flow in CFM: <i>55</i>	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
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: <i>998</i>	Pass if Leakage Percentage < 6% for Final or < 4% at Rough-in without air handle: <i>651%</i>
3	Pass if Leakage Percentage < 6% for Final or < 4% at Rough-in without air handle: <i>651%</i>	Pass if Leakage Percentage < 6% for Final or < 4% at Rough-in without air handle: <i>651%</i>
4	Enter Tested Leakage Flow in CFM from Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
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.	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
6	Enter Reduction in Leakage for Altered Duct System (Line # 4) Minus (Line # 5) - (Only if Applicable)	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
8	Enter New Duct System - Pass if Leakage Percentage < 6% for Final. (Line # 5) / (Line # 2)]	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
9	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
10	Pass if Leakage to Outside Percentage < 10% [100 x (Line # 7) / (Line # 2)]	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
11	Pass if Leakage Reduction Percentage > 60% [100 x (Line # 6) / (Line # 4)]	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]
12	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection and Verification by Smoke Test and Visual Inspection	Pass if Leakage Percentage < 15% [100 x (Line # 5) / (Line # 2)]

NEW CONSTRUCTION: Procedures for field verification and diagnostic testing of air distribution systems are available in RACM, Appendix RCA.3

DUCT LEAKAGE REDUCTION

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.

INSTALLATION CERTIFICATE	Site Address 311 Candela Circle Sacramento, CA 95835
(Page 4 of 12) CF-6R	Permit Number Job # 1002810

John Living / Candela @ West Lake / Lot # 81 / Blk. 1

INSTALLATION CERTIFICATE (Page 5 of 12) CF-6R

Site Address: 311 Candela Circle Sacramento, CA 95835
 Permit Number: TB# 1002864

THERMOSTATIC EXPANSION VALVE (TXV)
 Procedures for field verification of thermostatic expansion valves are available in RACM, Appendix RI.

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"/> Yes	<input type="checkbox"/> No
	<input 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 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

Residential Compliance Forms
 055 202 4/3/07
 Bechtel
 April 2005