

Permit

COPY

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

CF-4R

4900 73rd street - sacramento, CA 95820		Perfection Home Systems Inc. / 464658	
Project Address		Contractor Name / License No.	
		0608376	
Contractor Contact		Telephone	Permit Number
Brian Nichols		916-922-7796	36902
HERS Rater		Telephone	Sample Group Number
<i>Brian Nichols</i>		September 15, 2006	CC14-1798378240
Certifying Signature		Date	Certificate Number
Firm: All Year		HERS Provider: CalCERTS	
Street Address: 801 Plaza Ave.		City/State/Zip: Sacramento / CA / 95815	

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.

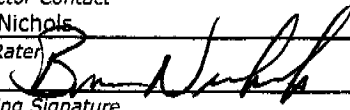
MINIMUM REQUIREMENTS FOR DUCT LEAKAGE REDUCTION COMPLIANCE CREDIT: Main System

NEW CONSTRUCTION			
		Measured Values	
1	Duct Pressurization Test Results (CFM @ 25 Pa)	N/A	
2	Enter Tested Leakage Flow in CFM:		
3	Fan Flow: Calculated (Nominal <input checked="" type="radio"/> Cooling <input type="radio"/> Heating) or <input type="radio"/> Measured	Not Tested	
4	Enter Total Fan Flow in CFM:		
5	Pass if Leakage Percentage < 6% [100 x (Line 1 / Line 2)]:	N/A	N/A
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out			
6	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.	Not Tested	
7	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.	Not Tested	
8	Enter Reduction in Leakage for Altered Duct System [Line 4 - Line 5] - (Only if Applicable)	Not Tested	
9	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)	Not Tested	
10	Entire New Duct System - Pass if Leakage Percentage < 6% [100 x (Line 5 / Line 2)]:	Not Tested	<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:			
11	Pass if Leakage Percentage <= 15% [100 x (Line 5 / Line 2)]:	Not Tested	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
12	Pass if Leakage to Outside Percentage <= 10% [100 x (Line 7 / Line 2)]:	Not Tested	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
13	Pass if Leakage Reduction Percentage >= 60% [100 x (Line 6 / Line 4)] and Verification by Smoke Test and Visual Inspection	Not Tested	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
14	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

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CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 5 of 8)

CF-4R

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Project Address		Contractor Name / License No.	
		0608376	
Contractor Contact		Telephone	Permit Number
Brian Nichols		916-922-7796	36902
HERS Rater		Telephone	Sample Group Number
		September 15, 2006	CC14-1798378240
Certifying Signature		Date	Certificate Number
Firm:	All Year	HERS Provider: CaICERTS	
Street Address: 801 Plaza Ave.		City/State/Zip: Sacramento / CA / 95815	

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).

HIGH EER AIR CONDITIONER: Main System

Procedures for verification are available in RACM, Appendix RI.

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

Project Title: Debra Naves	Date: 6-7-06	© CalCERTS 2005
Project Address: 4900 73rd Street Sacramento CA 95820	Climate Zone: 12	Enforcement Agency Use Only Building Permit #
Documentation Author: Teri Jones	Telephone: 916-565-0658	Plan Check Date
Company Name: Perfection Home Systems, Inc.		Field Check Date

IMPORTANT: This CF-1R-ALT form is only for use when an HVAC-only alteration is made to an existing home. Use one form for each system being altered. This is system # ' ' of ' ' systems altered in this house.

Check all lines that apply. Check only lines that apply.

Scope of Alterations:

1 An Air Handler is to be installed or replaced. Duct sealing to be determined. Continue to next line.

2 A Furnace Heat exchanger is to be installed or replaced. Duct sealing to be determined. Continue to next line.

3 An outdoor condensing unit is to be installed or replaced. Duct Sealing and/or TXV(RCA) to be determined. Continue to next line.

4 A cooling or heating coil is to be installed or replaced. Duct Sealing and/or TXV(RCA) to be determined. Continue to next line.

5 More than 40 feet of new or replacement duct are to be installed in unconditioned space. Duct sealing to be determined.
 Check here if the entire duct system is also to be new or replaced. Continue to next line.

6 If none of lines 1-5 are checked, neither Duct Sealing nor TXV(RCA) are required. Go to Section 5.

Section 1 - Duct Sealing (Only if any of Lines 1, 2, 3, 4 or 5 are checked. Skip if Line 6 is checked.)

7 This system is in Climate Zone 1, 3, 4, 5, 6, 7, or 8. No duct sealing is required. Go to Section 2.

8 This system has less than 40 feet of ducts in unconditioned space. No duct sealing is required. Go to Section 2.

9 This system was previously sealed and tested, and was certified by a HERS rater. No duct sealing is required. Attach previous CF-4R form. Go to Section 2.

10 This duct system is sealed or insulated with asbestos. No duct sealing is required. Go to Section 2.

Note: If the entire duct system is to be new or replaced, Lines 11-14 do not apply.

11 In Climate Zones 2, 12 and 16: An 0.92 AFUE furnace will be installed in lieu of duct sealing (and TXV, if applicable).

12 In Climate Zones 10, 13 and 15: An SEER 14 AND EER 12 condenser will be installed with TXV(RCA) AND added duct insulation (R-4 wrap on existing ducts, R-8 new ducts) in lieu of duct sealing. Go to Section 2.

13 In Climate Zones 9, 10, 11, 13, 14, or 15: An SEER 14 AND EER 12 condenser will be installed with TXV(RCA) AND a 0.92 AFUE furnace will be installed in lieu of duct sealing. Go to Section 2.

14 In Climate Zones 2, 9, 11, 12, 14 or 16: An SEER 14 AND EER 12 condenser will be installed with TXV(RCA) AND an 0.82 AFUE furnace will be installed with increased duct insulation in lieu of duct sealing. Go to Section 2.

15 None of lines 7-14 above are checked. Duct Sealing is Required. Continue.

Section 2 - TXV(RCA) (Only if Lines 3 or 4 are checked, otherwise got to Section 3)

16 The system being altered is a package unit. No TXV(RCA) is required. Go to Section 3.

17 This system is in Climate Zone 8 and a 14 SEER air conditioner or 0.82 AFUE furnace is being installed. No TXV(RCA) is required. Go to Section 3.

18 This system is in Climate Zone 1, 3, 4, 5, 6, or 7. No TXV(RCA) is required. Go to Section 3.

19 This system is in Climate Zone 16 and line 14 is not checked. No TXV(RCA) is required. Go to Section 3.

20 This system is in Climate Zone 16 and line 14 is checked and not line 16. TXV(RCA) is required. Go to Section 3.

21 This system is in Climate Zone 2 or 8-15 and line 11, 16 or 17 is not checked. TXV(RCA) is required. Go to Section 3.

Section 3 - HERS Rater verification

22 If line 15 is checked, HERS verification is required for Duct Sealing.

23 If line 12, 13, 14, 20 or 21 are checked and not line 16 or 17, HERS verification is required for TXV(RCA).

24 If line 12, 13 or 14 are checked, HERS verification is required for 12 EER.

Section 4 - Equipment Efficiencies

25 If lines 11, 12, 13, 14 or 17 are checked, upgraded equipment efficiencies are required. List in Section 6.

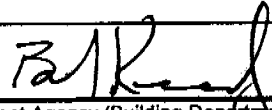
Section 5- Duct R-Values

26 If more than 40 feet of duct is being installed or replaced, duct R-value must meet or exceed Package D requirements.

27 If less than 40 feet of duct is being installed or replaced, duct R-value must meet or exceed R-4.2


Section 6 - see next page

Certificate of Compliance Prescriptive Method - HVAC-only Alteration CF-1R-ALT

Project Title: Debra Naves		Date:	© CalCERTS 2005
IMPORTANT: This CF-1R-ALT form is only for use when an HVAC-only alteration is made to an existing home Use one form for each system being altered. This is system # ' ' of ' ' systems altered in this house.			
Section 6 - Minimum Requirements for Equipment to be Installed/Altered. Installed equipment must match type/location and meet or exceed efficiencies/R-values.			
28	Configuration: <input type="checkbox"/> Split system <input checked="" type="checkbox"/> Package Unit		
29 <input type="checkbox"/>	Air Handler	<input checked="" type="checkbox"/> Gas furnace, AFUE: _____	<input type="checkbox"/> Heatpump FAU <input type="checkbox"/> Hydronic FAU <input type="checkbox"/> Other _____
30 <input type="checkbox"/>	Heat Exchanger		
31 <input type="checkbox"/>	Outdoor Condensing Unit	<input checked="" type="checkbox"/> A/C <input type="checkbox"/> Heatpump	Efficiency SEER/HSPF: _____ EER (if reqd): _____
32 <input checked="" type="checkbox"/>	Cooling or heating coil	<input checked="" type="checkbox"/> A/C <input type="checkbox"/> Heatpump <input type="checkbox"/> Hydronic	
33 <input type="checkbox"/>	Ducts	Location: _____	Length (ft): _____ R-value: _____
All mandatory measures apply to any altered component. See MF-1R - ALT form.			
Compliance Statement: This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall project responsibility. The undersigned recognizes that compliance using duct sealing, verification of refrigerant charge, and TXV require installer testing and certification and verification by an approved HERS rater.			
Home Owner or Authorized Agent		Documentation Author	
Name: Bob Kennedy		Name: Teri Jones	
Address: 2430 Grand Avenue #D		Company Name: Perfection Home Systems, Inc.	
City/State/Zip: Sacramento, CA 95838		Address: 2430 Grand Avenue #D	
Phone: 916-565-0658		City/State/Zip: Sacramento, CA 95838	
		Phone: 916-565-0658	
Signature: 		Signature:	
Enforcement Agency (Building Department)		Notes/Comments:	
Name:			
Title:			
Department:			
Phone #:			
Fax #:			
Signature or Stamp:			
Required forms: CF-1R-ALT: by anyone. Required at time of permit application. Copies to home owner, enforcement agency, HERS rater. CF-6R-ALT: by installing contractor. Required to close permit. Copies to home owner, enforcement agency, HERS rater. CF-4R-ALT: by HERS rater. Required to close permit. Copies to home owner, enforcement agency, installer. The CF-4R forms for a sample group shall not be released until all testing and verification is completed and passed for the entire group.			

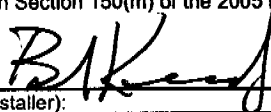
Project Title: Debra Naves		Date: 6-7-06	© CalCERTS 2005
Project Address: 4900 73rd Street Sacramento CA 95820		Climate Zone: 12	Enforcement Agency Use Only Building Permit #
Documentation Author: Teri Jones		Telephone: 916-565-0658	Plan Check Date
Company Name: Perfection Home Systems, Inc.		Field Check Date	
<p>IMPORTANT: This CF-1R-ALT form is only for use when an HVAC-only alteration is made to an existing home. Use one form for each system being altered. This is system # 1 of 1 systems altered in this house.</p>			
<p>Check all lines that apply. Check only lines that apply.</p>			
Scope of Alterations:			
1	<input type="checkbox"/> An Air Handler is to be installed or replaced. Duct sealing to be determined. Continue to next line.		
2	<input type="checkbox"/> A Furnace Heat exchanger is to be installed or replaced. Duct sealing to be determined. Continue to next line.		
3	<input type="checkbox"/> An outdoor condensing unit is to be installed or replaced. Duct Sealing and/or TXV(RCA) to be determined. Continue to next line.		
4	<input type="checkbox"/> A cooling or heating coil is to be installed or replaced. Duct Sealing and/or TXV(RCA) to be determined. Continue to next line.		
5	<input type="checkbox"/> More than 40 feet of new or replacement duct are to be installed in unconditioned space. Duct sealing to be determined. <input type="checkbox"/> Check here if the entire duct system is also to be new or replaced. Continue to next line.		
6	<input type="checkbox"/> If none of lines 1-5 are checked, neither Duct Sealing nor TXV(RCA) are required. Go to Section 5.		
Section 1 - Duct Sealing (Only if any of Lines 1, 2, 3, 4 or 5 are checked. Skip if Line 6 is checked.)			
7	<input type="checkbox"/> This system is in Climate Zone 1, 3, 4, 5, 6, 7, or 8. No duct sealing is required. Go to Section 2.		
8	<input type="checkbox"/> This system has less than 40 feet of ducts in unconditioned space. No duct sealing is required. Go to Section 2.		
9	<input type="checkbox"/> This system was previously sealed and tested, and was certified by a HERS rater. No duct sealing is required. Attach previous CF-4R form. Go to Section 2.		
10	<input type="checkbox"/> This duct system is sealed or insulated with asbestos. No duct sealing is required. Go to Section 2.		
Note: If the entire duct system is to be new or replaced, Lines 11-14 do not apply.			
11	<input type="checkbox"/> In Climate Zones 2, 12 and 16: An 0.92 AFUE furnace will be installed in lieu of duct sealing (and TXV, if applicable).		
12	<input type="checkbox"/> In Climate Zones 10, 13 and 15: An SEER 14 AND EER 12 condenser will be installed with TXV(RCA) AND added duct insulation (R-4 wrap on existing ducts, R-8 new ducts) in lieu of duct sealing. Go to Section 2.		
13	<input type="checkbox"/> In Climate Zones 9, 10, 11, 13, 14, or 15: An SEER 14 AND EER 12 condenser will be installed with TXV(RCA) AND a 0.92 AFUE furnace will be installed in lieu of duct sealing. Go to Section 2.		
14	<input type="checkbox"/> In Climate Zones 2, 9, 11, 12, 14 or 16: An SEER 14 AND EER 12 condenser will be installed with TXV(RCA) AND an 0.82 AFUE furnace will be installed with increased duct insulation in lieu of duct sealing. Go to Section 2.		
15	<input type="checkbox"/> None of lines 7-14 above are checked. Duct Sealing is Required. Continue.		
Section 2 - TXV(RCA) (Only if Lines 3 or 4 are checked, otherwise got to Section 3)			
16	<input type="checkbox"/> The system being altered is a package unit. No TXV(RCA) is required. Go to Section 3.		
17	<input type="checkbox"/> This system is in Climate Zone 8 and a 14 SEER air conditioner or 0.82 AFUE furnace is being installed. No TXV(RCA) is required. Go to Section 3.		
18	<input type="checkbox"/> This system is in Climate Zone 1, 3, 4, 5, 6, or 7. No TXV(RCA) is required. Go to Section 3.		
19	<input type="checkbox"/> This system is in Climate Zone 16 and line 14 is not checked. No TXV(RCA) is required. Go to Section 3.		
20	<input type="checkbox"/> This system is in Climate Zone 16 and line 14 is checked and not line 16. TXV(RCA) is required. Go to Section 3.		
21	<input type="checkbox"/> This system is in Climate Zone 2 or 8-15 and line 11, 16 or 17 is not checked. TXV(RCA) is required. Go to Section 3.		
Section 3 - HERS Rater verification			
22	<input type="checkbox"/> If line 15 is checked, HERS verification is required for Duct Sealing.		
23	<input type="checkbox"/> If line 12, 13, 14, 20 or 21 are checked and not line 16 or 17, HERS verification is required for TXV(RCA).		
24	<input type="checkbox"/> If line 12, 13 or 14 are checked, HERS verification is required for 12 EER.		
Section 4 - Equipment Efficiencies			
25	<input type="checkbox"/> If lines 11, 12, 13, 14 or 17 are checked, upgraded equipment efficiencies are required. List in Section 6.		
Section 5- Duct R-Values			
26	<input type="checkbox"/> If more than 40 feet of duct is being installed or replaced, duct R-value must meet or exceed Package D requirements.		
27	<input type="checkbox"/> If less than 40 feet of duct is being installed or replaced, duct R-value must meet or exceed R-4.2		
Section 6 - see next page			

Certificate of Compliance Prescriptive Method - HVAC-only Alteration CF-1R-ALT

Project Title: Debra Naves		Date:	© CalCERTS 2005
IMPORTANT: This CF-1R-ALT form is only for use when an HVAC-only alteration is made to an existing home Use one form for each system being altered. This is system # 1 of 1 systems altered in this house.			
Section 6 - Minimum Requirements for Equipment to be Installed/Altered. Installed equipment must match type/location and meet or exceed efficiencies/R-values.			
28	Configuration: <input type="checkbox"/> Split system <input checked="" type="checkbox"/> Package Unit		
29 <input type="checkbox"/>	Air Handler	x <input type="checkbox"/> Gas furnace, AFUE: _____	<input type="checkbox"/> Heatpump FAU <input type="checkbox"/> Hydronic FAU <input type="checkbox"/> Other _____
30 <input type="checkbox"/>	Heat Exchanger		
31 <input type="checkbox"/>	Outdoor Condensing Unit	x <input type="checkbox"/> A/C <input type="checkbox"/> Heatpump	Efficiency SEER/HSPF: _____ EER (if reqd): _____
32 x <input type="checkbox"/>	Cooling or heating coil	x <input type="checkbox"/> A/C <input type="checkbox"/> Heatpump <input type="checkbox"/> Hydronic	
33 <input type="checkbox"/>	Ducts	Location: _____	Length (ft): _____ R-value: _____
All mandatory measures apply to any altered component. See MF-1R - ALT form.			
Compliance Statement: This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall project responsibility. The undersigned recognizes that compliance using duct sealing, verification of refrigerant charge, and TXV require installer testing and certification and verification by an approved HERS rater.			
Home Owner or Authorized Agent		Documentation Author	
Name: Bob Kennedy		Name: Teri Jones	
Address: 2430 Grand Avenue #D		Company Name: Perfection Home Systems, Inc.	
City/State/Zip: Sacramento, CA 95838		Address: 2430 Grand Avenue #D	
Phone: 916-565-0658		City/State/Zip: Sacramento, CA 95838	
		Phone: 916-565-0658	
Signature: 		Signature:	
Enforcement Agency (Building Department)		Notes/Comments:	
Name:			
Title:			
Department:			
Phone #:			
Fax #:			
Signature or Stamp:			
Required forms: CF-1R-ALT: by anyone. Required at time of permit application. Copies to home owner, enforcement agency, HERS rater. CF-6R-ALT: by installing contractor. Required to close permit. Copies to home owner, enforcement agency, HERS rater. CF-4R-ALT: by HERS rater. Required to close permit. Copies to home owner, enforcement agency, installer. The CF-4R forms for a sample group shall not be released until all testing and verification is completed and passed for the entire group.			

Project Title: Debra Naves		Date: 6-7-06	© 2005 CalCERTS
<p>IMPORTANT: This CF-6R form is only for use when an HVAC-only alteration is made to an existing home. Use one form for each system being altered. This is system # <u>1</u> of <u>1</u> systems altered in this house. Copies to: Homeowner, HERS Rater, and Building Department</p>			
Duct Leakage test Results (If duct testing is required per CF-1R-ALT form)			
Step 1 - Pre-test: Leakage of the system before any alterations. This test is optional and is only used for the 60% reduction option			
1	Pre-test leakage:	112	CFM25
2	Line 1 x 0.4 = _____ target for 60% reduction		
Step 2 - Determine Total System Fan Flow: Use any of these methods. Use values for equipment after alterations.			
3	Cooling: Condenser tonnage: _____ tons x 400 CFM/ton =	1200	CFM
4	Heating: Furnace output: _____ Btuh x .0217 CFM/Btuh =		CFM
5	Measured: (refer to ACM Manual Appendix RE, section 4.1) = _____ CFM		
6	Measurement method: <input type="checkbox"/> flow hood <input type="checkbox"/> plenum pressure matching <input type="checkbox"/> flow grid		
7	Total system fan flow value to be used:	1200	CFM may use highest of lines 3, 4, or 5.
Step 3 - Determine Targets:			
3a	Total System fan flow (line 7 from above) x 0.06 =	72	CFM25 = 6% leakage target (new duct systems)
3b	Total System fan flow (line 7 from above) x 0.15 =		CFM25 = 15% leakage target
3	Total System fan flow (line 7 from above) x 0.10 =		CFM25 = 10% leakage to outside target
Step 4 - Alterations: Must be consistent with the CF-1R form.			
10	<input type="checkbox"/> Seal all new connections with approved materials.		
11	<input type="checkbox"/> No newly constructed portions of the system can have unducted building cavities to convey system air.		
12	<input type="checkbox"/> If adding or replacing more than 40 feet of duct, insulate new ducts per package D for that climate zone		
Step 5 - Final Leakage (regular duct leakage test, for 15% total and 60% reduction)			
13	leakage =	51	CFM25 refer to 2005 ACM appendix RC, Sections RC 4.3.1
14a	<input type="checkbox"/> If line 13 is less than line 3a, house passes the 6% leakage requirement. Go to Step 9.		
14b	<input checked="" type="checkbox"/> If line 13 is less than line 3b, house passes the 15% leakage requirement. Go to Step 9.		
15	<input type="checkbox"/> If line 13 is less than line 2, house passes the 60% reduction requirement. continue.		
16	<input type="checkbox"/> If either of lines 14a, 14b or 15 are checked, HERS verification is required. Sampling can be used.		
17	<input type="checkbox"/> If line 15 is checked, but not 14a or 14b, Smoke Test and Visual Inspection of Accessible Duct Sealing is required. Go to Step 8		
Step 6 - Leakage to Outside: Similar to a regular duct blaster test but the house is pressurized to 25 pascals at the same time.			
18	leakage =		CFM25 refer to 2005 ACM appendix RC, Sections RC 4.3.3
19	<input type="checkbox"/> If line 18 is less than line 3, house passes the 10% leakage to outside requirement.		
20	<input type="checkbox"/> If line 19 passes, HERS verification is required. Sampling can be used.		
Step 7 - If the house does not pass any of lines 14, 15 or 19.			
21	<input type="checkbox"/> Smoke Test and Visual Inspection of Accessible Duct Sealing is required. See Step 8.		
22	<input type="checkbox"/> Install required label per ACM Appendix RC, Sections RC.4.3.5.		
Step 8 - Smoke Test and Visual Verification (See 2005 Residential ACM Appendix RC, Sections RC 4.3.5-7)			
23	<input type="checkbox"/> Perform smoke test per ACM Appendix RC, Sections RC 4.3.6.		
24	<input type="checkbox"/> Perform Visual Inspection and repair of excessively damaged ducts per ACM Appendix RC, Sections RC 4.3.7.		
25	<input type="checkbox"/> Seal register boots to surrounding material per ACM Appendix RC, Sections RC 4.3.7.		
HERS Verification			
26	<input checked="" type="checkbox"/> If line 14 is checked. 15% leakage to be verified by HERS rater. Sampling is allowed.		
27	<input type="checkbox"/> If line 15 is checked. 60% leakage reduction to be verified by HERS rater (post test only) AND Smoke Test and Visual Verification to be performed by HERS Rater. Sampling is allowed.		
28	<input type="checkbox"/> If line 19 is checked. 10% leakage to outside to be verified by HERS rater. Sampling is allowed.		
29	<input type="checkbox"/> If none of lines 14, 15 or 19 are checked Smoke Test and fix all accessible leaks. No sampling allowed.		
Sampling - Only if house passes on lines 14, 15 or 19.			
30	<input checked="" type="checkbox"/> 1.) Homeowner chooses to be put into a group of homes for random third party HERS sampling. 2.) Homeowner, installer and rater must sign the three-party agreement. 3.) All above tests must be completed by the installer or their representative, not the third party rater.		
No Sampling - House does not pass by lines 14, 15 or 19; OR homeowner chooses not to be part of a sample group			
31	<input type="checkbox"/> 1.) House to be tested by a third party HERS rater selected by installer. 2.) Homeowner, installer and rater must sign the three-party agreement. 3.) All above tests may be completed by the installer or their representative, and then verified by a third party rater. OR, all above tests may be performed solely by the third party rater.		
32	<input type="checkbox"/> 1.) House to be tested by third party HERS rater selected by homeowner. 2.) All above tests may be completed by the installer or their representative, and then verified by a third party rater. OR, all above tests may be performed solely by the third party rater.		

Installation Certificate Prescriptive Method - HVAC-only Alteration CF-6R-ALT

Project Title: Debra Naves		Date: 6-7-06	© 2005 CalCERTS		
Project Address: 4900 73rd Street Sacramento, CA 95820		Climate Zone: 12	Enforcement Agency Use Only		
Installing Contractor: Perfection Home Systems Inc.		Telephone: 916-565-0658	Building Permit #		
Company Name: Perfection Home Systems, Inc.			Plan Check Date		
			Field Check Date		
<p>IMPORTANT: This CF-6R form is only for use when an HVAC-only alteration is made to an existing home Use one form for each system being altered. This is system # 1 of 1 systems altered in this house. Copies to: Homeowner, HERS Rater, and Building Department</p> <p>List the specifications for the newly installed equipment. These must match the installed equipment exactly. Installed equipment must match type/location and meet or exceed efficiencies/R-values from CF-1R.</p>					
Equipment Type	Manufacturer	Model Number	Efficiency	Load**	Capacity***
Furnace			AFUE		
Heat Exchanger			N/A		
Heat Pump fan coil			N/A		
Hydronic fan coil			N/A		
Other FAU					
Describe Package gas/AC	Trane	YCY036G1MOA	AFUE ^{no} SEER ^{14/12}		3 TON
Package heatpump			HSPF SEER EER*		
A/C Condenser			SEER		
Heatpump Condenser			HSPF SEER		
Indoor DX coil			EER*		
Hydronic coil					
<p>* Provide EER if needed for compliance (line 24 of CF-1R-ALT). Installer must provide adequate documentation to verify EER. In some cases the specific furnace may need to be verified in order to achieve a specific EER. In some cases a time delay relay and/or TXV may need to be verified in order to achieve a specific EER. ** Loads are sensible for cooling. *** Capacities are sensible at design conditions for cooling and adjusted (altitude, downflow, etc.) output for heating.</p>					
<p>TXV: <input type="checkbox"/> If TXV is required by the CF-1R form (line 23 on CF-1R-ALT form), it has been installed and access has been provided for visual verification by HERS rater. Sampling is allowed for TXV verification.</p>					
<p>Entirely New Duct System: (Line 5 of CF-1R ALT) <input checked="" type="checkbox"/> For Entirely new duct systems, the required leakage is 6% rather than 15% for altered systems. The alternative to duct sealing by increasing the efficiency of the equipment is not an option for entirely new duct systems.</p>					
<p>I, the undersigned, verify that the equipment listed above is: 1) the actual equipment installed in the home; 2) equal to or more efficient than required by the Certificate of Compliance (CF-1R-ALT Form); and 3) equipment that meets or exceeds the appropriate requirements for manufactured devices (Appliance Efficiency Standards), where applicable. I, the undersigned, verify that diagnostic test results listed on this form were performed in conformance with the requirements for compliance and that the newly installed or retrofitted mechanical system components conform with the Mandatory requirements specified in Section 150(m) of the 2005 Building Energy Efficiency Standards.</p>					
Signed (Installer): 		Date: 6-7-06			
Notes:					