COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY / LAND DEVELOPMENT

WHITTIER (UNIC) # 0400
13523 TELEGRAPH ROAD
WHITTIER CA 90605
PHONE: (562) 946-1390 EXT:

ELECTRICAL PERMIT
EL 0400 1306100058

LEGAL ID:
TR: 22357 LT: 123

ASSESSOR INFORMATION NUMBER:
8039-007-003

TENANT:

OWNER: TEL. NO:
PATERNOSTRA, MICHELLE (562) 328-5600-
3084 WINDROSE CT

APPLICANT: TEL. NO:
ANGEL, GANDARA (714) 901-0500-
11330 KNOTT ST
G.G CA 92841

CONTRACTOR: TEL. NO:
A PLUS GENERAL CONTRACTORS (714) 901-0500-
11330 KNOTT ST LIC. NO
GARDEN GROVE CA 92841 763154

ARCHITECT OR ENGINEER: TEL. NO:
LIC. NO:

FEES PAID

FEE DESCRIPTION:	QUANTITY:	UOM:	AMOUNT:
A1 PERMIT ISSUANCE FEE			27.90
G1 OUTLETS-LGT,SW,RECP	3.00000	OUT	6.30
G2 LIGHTING FIXTURES	1.00000	LGT	2.10
HA FAU LESS 3HP	1.00	FAU	10.80
LA 100 AMP PANELS, MCC	1.00	PAN	39.20
	TOTAL FEES		86.30

REPORT ID: DPR265 ROUTE TO: BS0400

BUILDING ADDRESS:
15953 NORCREST DR
WHIT CA 906043545
NEAREST CROSS STREET:
THOMAS PAGE: 707 GRID: J6 LOCALITY: WHITTIER

ISSUED ON: PROCESSED BY: PLAN BY:
06/10/13 HK

FINAL DATE FINAL BY: CODE:
3-11-14

DESCRIPTION OF WORK
ADD NEW UNIT (3TN) CONVERT FURNANCE. UPGRADE PANEL TO 100 A

SPECIAL CONDITIONS:

APPROVALS	DATE	INSPECTOR SIGNATURE
TEMPORARY POWER POLE		
UNDERGROUND CONDUIT		
UFER GROUND		
ROUGH CONDUIT		
ROUGH WIRING		
MAIN WATER LINE PLASTIC Y/N METAL Y/N		
UTILITY COMPANY NOTIFIED		

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason(s) indicated below by the checkmark(s) I have placed next to the applicable item(s) (Section 7031.5, Business and Professions Code): Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure 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).):

(_) I, as owner of the property, or my employees with wages as their sole compensation, will do (✓) all of or (_) portions of the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the 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 it was not built or improved for the purpose of sale.).

(_) I, as owner of the property, am exclusively contracting with licensed Contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a licensed Contractor pursuant to the Contractors' State License Law).

(_) I am exempt from licensure under the Contractors' State License Law for the following reason:

_____

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following Web site: http://www.leginfo.ca.gov/calaw.html.

Date: 6/10/13

Signature of Property Owner or Authorized Agent

Angel Zelu

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 C20 License No. 743154

Date 6/10/13 Contractor Signature Angel Zelu

WORKERS' COMPENSATION DECLARATION

WARNING: FAILURE TO SECURE WORKERS' 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 FEES.

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, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

Policy No. _____

____ 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:

Castle Point 9034159 4-1-13

Carrier | Policy Number | Expiration Date

_____ _____

Name of Agent | Phone Number

___ 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

Angel Zelu 6/10/13

Signature of Applicant | Date

LOBBYIST ORDINANCE CERTIFICATION
Complete this section for permits in Unincorporated Los Angeles County only

This is to certify that I, as permit applicant, am familiar with the requirements of Los Angeles County Code Chapter 2.160 et seq., (relating to the Los Angeles County Lobbyist Ordinance) and that all persons acting on behalf of myself complied and will continue to comply therewith through the application process.

Angel Gundapa Angel Zelu

Applicant (Print Name) | Applicant Signature

DIYS 6/10/13

Company Name | Date

JOB ADDRESS
LOCALITY

HAZARDOUS MATERIAL DECLARATION

Will the applicant or future building occupant handle a hazardous material or a mixture containing a hazardous material equal to or greater than the amount specified on the hazardous materials information guide?

Yes ☐ No ☐

Will the intended use of the building by the applicant or future building occupant require a permit for construction or modification from the South Coast Air Quality Management District (SCAQMD)? See permitting checklist for guidelines.

Yes ☐ No ☐

I have read the hazardous materials information guide and the SCAQMD permitting checklist, I understand my requirements under the Los Angeles County Code Title 2, Chapter 220 Sections 220.100 through 220.140 concerning hazardous material reporting and for obtaining a permit from the SCAQMD.

ASBESTOS NOTIFICATION

☐ Notification letter sent to AQMD and/or EPA

☐ I declare that notification of asbestos removal is not applicable to addressed project.

DECLARATION REGARDING 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 (Section 3097, Civil Code).

Lender's Name

_____

Lender's Address

_____

By my signature below, I certify to each of the following:
I am the property owner or authorized to act on the property owner's behalf.
I have read this application and the information I have provided is correct.
I agree to comply with all applicable city and county ordinances and state laws relating to building construction.
I authorize representatives of this county to enter the above-identified property for inspection purposes.

Signature of Property Owner or Authorized Agent

Angel Zelu

Date 6/10/13

15953 NORCREST

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY / LAND DEVELOPMENT

WHITTIER (UNIC) # 0400
13523 TELEGRAPH ROAD
WHITTIER CA 90605
PHONE: (562) 946-1390 EXT:

PLUMBING PERMIT
PL 0400 1306100034

LEGAL ID:
TR: 22357 LT: 123

ASSESSOR INFORMATION NUMBER:
8039-007-003

TENANT:

OWNER: TEL. NO:
PATERNOSTRA, MICHELLE (562) 328-5600-
3084 WINDROSE CT

APPLICANT: TEL. NO:
ANGEL, GANDARA (714) 901-0500-
11330 KNOTT ST
G.G CA 92841

CONTRACTOR: TEL. NO:
A PLUS GENERAL CONTRACTORS (714) 901-0500-
11330 KNOTT ST LIC. NO
GARDEN GROVE CA 92841 763154

ARCHITECT OR ENGINEER: TEL. NO:
-
LIC. NO:

FEES PAID

FEE DESCRIPTION:	QUANTITY: UOM:	AMOUNT:
01 PERMIT ISSUANCE FEE		27.90
51 LOW PRS GAS LE5 OUTS	1.00 SYS	16.30
	TOTAL FEES	44.20

REPORT ID: DPR263 ROUTE TO: BS0400

BUILDING ADDRESS:
15953 NORCREST DR
WHIT CA 906043545
NEAREST CROSS STREET:
THOMAS PAGE: 707 GRID: J6 LOCALITY: WHITTIER

ISSUED ON: PROCESSED BY: PLAN BY:
06/10/13 HK

FINAL DATE FINAL BY: CODE:
3-11-14

DESCRIPTION OF WORK
ADD A/C UNIT AND CONVERT FAU

SPECIAL CONDITIONS:

APPROVALS	DATE	INSPECTOR SIGNATURE
UNDER SLAB WORK		
WATER SERVICE PLASTIC Y/N METAL Y/N		
ROUGH PLUMBING		
GAS PIPING		
GAS VENT		
HOT WATER HEATER		
PLUMBING FIXTURES		
LAWN SPRINKLERS		
GAS TEST		
UTILITY COMPANY NOTIFIED		
CWV		
GRAY WATER SYSTEM		

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason(s) indicated below by the checkmark(s) I have placed next to the applicable item(s) (Section 7031.5, Business and Professions Code): Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure 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).):

(_) I, as owner of the property, or my employees with wages as their sole compensation, will do (✓) all of or (_) portions of the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the 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 it was not built or improved for the purpose of sale.).

(_) I, as owner of the property, am exclusively contracting with licensed Contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a licensed Contractor pursuant to the Contractors' State License Law).

(_) I am exempt from licensure under the Contractors' State License Law for the following reason:

_____

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following Web site: http://www.leginfo.ca.gov/calaw.html.

Date: 6/6/13

Signature of Property Owner or Authorized Agent

Angel Zen

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 C-27B License No. 743154

Date 6/6/13 Contractor Signature Angel Zen

WORKERS' COMPENSATION DECLARATION

WARNING: FAILURE TO SECURE WORKERS' 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 FEES.

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, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

Policy No. _____

____ 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:

Castle Point 903501 6-7-13

Carrier Policy Number Expiration Date

_____ _____

Name of Agent Phone Number

___ 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

Angel Zen 6/6/13

Signature of Applicant Date

LOBBYIST ORDINANCE CERTIFICATION
Complete this section for permits in Unincorporated Los Angeles County only

This is to certify that I, as permit applicant, am familiar with the requirements of Los Angeles County Code Chapter 2.160 et seq., (relating to the Los Angeles County Lobbyist Ordinance) and that all persons acting on behalf of myself complied and will continue to comply therewith through the application process.

Angel Bandare Angel Zen

Applicant (Print Name) Applicant Signature

DNS 6/6/13

Company Name Date

JOB ADDRESS
LOCALITY

HAZARDOUS MATERIAL DECLARATION

Will the applicant or future building occupant handle a hazardous material or a mixture containing a hazardous material equal to or greater than the amount specified on the hazardous materials information guide?

Yes ☐ No ☐

Will the intended use of the building by the applicant or future building occupant require a permit for construction or modification from the South Coast Air Quality Management District (SCAQMD)? See permitting checklist for guidelines.

Yes ☐ No ☐

I have read the hazardous materials information guide and the SCAQMD permitting checklist, I understand my requirements under the Los Angeles County Code Title 2, Chapter 220 Sections 220.100 through 220.140 concerning hazardous material reporting and for obtaining a permit from the SCAQMD.

ASBESTOS NOTIFICATION

☐ Notification letter sent to AQMD and/or EPA

☐ I declare that notification of asbestos removal is not applicable to addressed project.

DECLARATION REGARDING 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 (Section 3097, Civil Code).

Lender's Name

_____

Lender's Address

_____

By my signature below, I certify to each of the following:
I am the property owner or authorized to act on the property owner's behalf.
I have read this application and the information I have provided is correct.
I agree to comply with all applicable city and county ordinances and state laws relating to building construction.
I authorize representatives of this county to enter the above-identified property for inspection purposes.

Signature of Property Owner or Authorized Agent

Angel Zen

Date 6/6/13

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY / LAND DEVELOPMENT

WHITTIER (UNIC) # 0400
13523 TELEGRAPH ROAD
WHITTIER CA 90605
PHONE: (562) 946-1390 EXT:

MECHANICAL PERMIT
ME 0400 1306100022

LEGAL ID:
TR: 22357 LT: 123

ASSESSOR INFORMATION NUMBER:
8039-007-003

TENANT:

OWNER: TEL. NO:
PATERNOSTRA, MICHELLE (562) 328-5600-
3084 WINDROSE CT

APPLICANT: TEL. NO:
ANGEL, GANDARA (714) 901-0500-
11330 KNOTT ST
G.G CA 92841

CONTRACTOR: TEL. NO:
A PLUS GENERAL CONTRACTORS (714) 901-0500-
11330 KNOTT ST LIC. NO
GARDEN GROVE CA 92841 763154

ARCHITECT OR ENGINEER: TEL. NO:
LIC. NO

FEES PAID

FEE DESCRIPTION:	QUANTITY:	UOM:	AMOUNT:
01 PERMIT ISSUANCE FEE			27.90
02 REFRIG COMP < 100 KB	1.00	COM	27.30
08 FURNACE/HEATER < 100	1.00	UNI	27.30
30 AIR INLETS/OUTLETS	8.00	IN/	34.40
	TOTAL FEES		116.90

REPORT ID: DPR264 ROUTE TO: BS0400

BUILDING ADDRESS:
15953 NORCREST DR
WHIT CA 906043545
NEAREST CROSS STREET:
THOMAS PAGE: 707 GRID: J6 LOCALITY: WHITTIER

ISSUED ON: PROCESSED BY: PLAN BY:
06/10/13 HK

FINAL DATE FINAL BY: CODE:
3-11-14 Dow B

DESCRIPTION OF WORK
ADD NEW A/C UNIT (3TN) CONVERT FURNACE TO ATTIC.

SPECIAL CONDITIONS:

APPROVALS	DATE	INSPECTOR SIGNATURE
FAU/WALL FURNACE		
COMBUSTION AIR OPENINGS		
DUCT WORK		
AC/COMPRESSOR		
THERMOSTAT		
FIRE DAMPERS		
SMOKE DETECTION DEVICES		
COMMERCIAL HOOD		

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason(s) indicated below by the checkmark(s) I have placed next to the applicable item(s) (Section 7031.5, Business and Professions Code): Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure 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).):

(_) I, as owner of the property, or my employees with wages as their sole compensation, will do (✓) all of or (_) portions of the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the 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 it was not built or improved for the purpose of sale.).

(_) I, as owner of the property, am exclusively contracting with licensed Contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a licensed Contractor pursuant to the Contractors' State License Law).

(_) I am exempt from licensure under the Contractors' State License Law for the following reason:

_____

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following Web site: http://www.leginfo.ca.gov/calaw.html.

Date: 4/6/13

Signature of Property Owner or Authorized Agent

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-2 B License No. 713154

Date 4/10 Contractor Signature

WORKERS' COMPENSATION DECLARATION

WARNING: FAILURE TO SECURE WORKERS' 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 FEES.

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Policy No. _____

____ 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:

CASTLE POINT 9034501 9/13

Carrier Policy Number Expiration Date

Name of Agent Phone Number

___ 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

4/10/13

Signature of Applicant Date

LOBBYIST ORDINANCE CERTIFICATION
Complete this section for permits in Unincorporated Los Angeles County only

This is to certify that I, as permit applicant, am familiar with the requirements of Los Angeles County Code Chapter 2.160 et seq., (relating to the Los Angeles County Lobbyist Ordinance) and that all persons acting on behalf of myself complied and will continue to comply therewith through the application process.

Angel Gandara

Applicant (Print Name) Applicant Signature

4 PMS 4/10/13

Company Name Date

JOB ADDRESS
LOCALITY

HAZARDOUS MATERIAL DECLARATION

Will the applicant or future building occupant handle a hazardous material or a mixture containing a hazardous material equal to or greater than the amount specified on the hazardous materials information guide?

Yes ☐ No ☐

Will the intended use of the building by the applicant or future building occupant require a permit for construction or modification from the South Coast Air Quality Management District (SCAQMD)? See permitting checklist for guidelines.

Yes ☐ No ☐

I have read the hazardous materials information guide and the SCAQMD permitting checklist, I understand my requirements under the Los Angeles County Code Title 2, Chapter 220 Sections 220.100 through 220.140 concerning hazardous material reporting and for obtaining a permit from the SCAQMD.

ASBESTOS NOTIFICATION

☐ Notification letter sent to AQMD and/or EPA

☐ I declare that notification of asbestos removal is not applicable to addressed project.

DECLARATION REGARDING 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 (Section 3097, Civil Code).

Lender's Name

_____

Lender's Address

_____

By my signature below, I certify to each of the following:
I am the property owner or authorized to act on the property owner's behalf.
I have read this application and the information I have provided is correct.
I agree to comply with all applicable city and county ordinances and state laws relating to building construction.
I authorize representatives of this county to enter the above-identified property for inspection purposes.

Signature of Property Owner or Authorized Agent

Date 4/10/13

Simplified Prescriptive Certificate of Compliance: 2008 *Residential HVAC Alterations* **CF-1R-ALT-HVAC**

Climate Zones 2, 9

Site Address:	**Enforcement Agency:**	**Date:**	**Permit #:**
15953 NORCREST DR Whittier, CA 90604	County of Los Angeles	Jun 10, 2013	

Equipment Type[1]	List Minimum Efficiency[2]		Duct insulation requirement	Conditioned Floor Area	Thermostat
☐ Package Unit ☒ Furnace ☒ Indoor Coil ☒ Condensing Unit ☒ Other > 40' Ducts	☒ AFUE 78% ☒ SEER 13.0 ☐ EER _____	☐ COP _____ ☐ HSPF _____ ☐ Resistance	☒ R 6 *(CZ 2 and 9)*	Served by system **1400** sf	☒ Setback *If not already present, must be installed)*

*1. **Equipment Type:** Choose the equipment being installed; if more than one system, use another CF-1R-ALT-HVAC for each system.*
*2. **Minimum Equipment Efficiencies:** 13 SEER, 78% AFUE, 7.7HSPF for typical residential systems.*

HERS VERIFICATION SUMMARY Listed below are FOUR HVAC alteration Options. The installer decides what work is being done and picks one of the appropriate Options. Each Option lists the HERS measures that must be conducted. A copy of the forms shall be left on site for final inspection and a copy given to the homeowner. At final, the inspector verifies that the work listed on this form was in fact the work completed by the installer. The inspector also verifies that each appropriate CF-6R and registered CF-4R forms (no hand filled CF-4Rs allowed) are filled out and signed.**Beginning October 1, 2010, a registered copy of the CF-1R and CF-6R shall also be on site for final inspection.**

☐ **1. HVAC Changeout**	**Required Forms:**
• All HVAC Equipment replaced	CF-6R forms: MECH-04, MECH-21-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH-21 and (for split systems) MECH-25
• Condenser Coil and /or • Indoor Coil and /or • Furnace	CF-6R forms: MECH-04, MECH-21-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH-21 and (for split systems) MECH-25

For Split Systems: Duct leakage < 15 percent; RC, CCA ≥ 300 CFM/ton, TMAH
For Packaged Units: Duct leakage < 15 percent
Exempted from duct leakage testing if:
- ☐ 1. Duct system was documented to have been previously sealed and confirmed through HERS verification, or
- ☐ 2. Duct systems with less than 40 linear feet in unconditioned space, or
- ☐ 3. Existing duct systems are constructed, insulated or sealed with asbestos
- ☐ 4. The system will not be Ducted (ie. Ductless Mini-Split System) (Also Exempt from Refrigerant Charge)

☒ **2. New HVAC System**	**Required Forms:**
• Cut in or Changeout with new ducts (all new ducting and all new equipment)	CF-6R forms: MECH-04, MECH-20-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH-20 and (for split systems) MECH-25

For Split Systems: Duct leakage < 6 percent; RC, CCA ≥ 300 CFM/ton, TMAH
~~**For Packaged Units:** Duct leakage < 6 percent~~

☐ **3. New Ducts With Replacement**	**Required Forms:**
• Includes replacing or installing **all** new ducting and/or outdoor condensing unit and/or indoor coil and/or furnace. Not all equipment changed.	CF-6R forms: MECH-04, MECH-21-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH 21 and (for split systems) MECH-25

For Split Systems: Duct leakage < 6 percent; RC, CCA ≥ 300 CFM/ton, TMAH
For Packaged Units: Duct leakage < 6 percent

☐ **4. New Ducting over 40 feet**	**Required Forms:**
• Includes adding or replacing more than 40 linear feet of duct in unconditioned space.	CF-6R forms: MECH-04, MECH-21-HERS CF-4R forms: MECH-21

For split system or packaged units: Duct leakage < 15 percent
☐ EXCEPTION: Existing duct systems constructed, insulated or sealed with asbestos.

Contractor (Documentation Author's /Responsible Designer's Declaration Statement)
- I certify that this Certificate of Compliance documentation is accurate and complete.
- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the design identified on this Certificate of Compliance.
- I certify that the energy features and performance specifications for the design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.
- The design features identified on this Certificate of Compliance are consistent with the information documented on other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with the permit application.

Name: Angel Gandara	Signature: *Angel Gandara*	
Company: A PLUS GENERAL CONTRACTORS INC		Date: Jun 10, 2013
Address: 11330 KNOTT STREET		License: 763154
City/State/Zip: GARDEN GROVE / CA / 92841		Phone: (714) 901-0500

CalCERTS, Inc.®

Simplified Prescriptive Certificate of Compliance: 2008 *Residential HVAC Alterations* **CF-1R-ALT-HVAC**

Climate Zones 2, 9

Site Address:	**Enforcement Agency:**	**Date:**	**Permit #:**
15953 NORCREST DR Whittier, CA 90604	County of Los Angeles	Dec 5, 2013	

Equipment Type[1]	List Minimum Efficiency[2]		Duct insulation requirement	Conditioned Floor Area	Thermostat
☒ Package Unit ☒ Furnace ☒ Indoor Coil ☒ Condensing Unit ☒ Other > 40' Ducts	☒ AFUE 78% ☒ SEER 13.0 ☒ EER _____	☒ COP _____ ☒ HSPF _____ ☒ Resistance	☒ R 6 *(CZ 2 and 9)*	Served by system **1400** sf	☒ Setback *If not already present, must be installed)*

*1. **Equipment Type:** Choose the equipment being installed; if more than one system, use another CF-1R-ALT-HVAC for each system.*
*2. **Minimum Equipment Efficiencies:** 13 SEER, 78% AFUE, 7.7HSPF for typical residential systems.*

HERS VERIFICATION SUMMARY Listed below are FOUR HVAC alteration Options. The installer decides what work is being done and picks one of the appropriate Options. Each Option lists the HERS measures that must be conducted. A copy of the forms shall be left on site for final inspection and a copy given to the homeowner. At final, the inspector verifies that the work listed on this form was in fact the work completed by the installer. The inspector also verifies that each appropriate CF-6R and registered CF-4R forms (no hand filled CF-4Rs allowed) are filled out and signed.**Beginning October 1, 2010, a registered copy of the CF-1R and CF-6R shall also be on site for final inspection.**

☒ **1. HVAC Changeout**	**Required Forms:**
• All HVAC Equipment replaced	CF-6R forms: MECH-04, MECH-21-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH-21 and (for split systems) MECH-25
• Condenser Coil and /or • Indoor Coil and /or • Furnace	CF-6R forms: MECH-04, MECH-21-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH-21 and (for split systems) MECH-25

For Split Systems: Duct leakage < 15 percent; RC, CCA ≥ 300 CFM/ton, TMAH
For Packaged Units: Duct leakage < 15 percent
Exempted from duct leakage testing if:
- ☒ 1. Duct system was documented to have been previously sealed and confirmed through HERS verification, or
- ☒ 2. Duct systems with less than 40 linear feet in unconditioned space, or
- ☒ 3. Existing duct systems are constructed, insulated or sealed with asbestos
- ☒ 4. The system will not be Ducted (ie. Ductless Mini-Split System) (Also Exempt from Refrigerant Charge)

☒ **2. New HVAC System**	**Required Forms:**
• Cut in or Changeout with new ducts: (all new ducting and all new equipment)	CF-6R forms: MECH-04, MECH-20-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH-20 and (for split systems) MECH-25

For Split Systems: Duct leakage < 6 percent; RC, CCA ≥ 300 CFM/ton, TMAH
~~**For Packaged Units:** Duct leakage < 6 percent~~

☒ **3. New Ducts with Replacement**	**Required Forms:**
• Includes replacing or installing **all** new ducting and/or outdoor condensing unit and/or indoor coil and/or furnace. Not all equipment changed.	CF-6R forms: MECH-04, MECH-21-HERS and (for split systems) MECH-25-HERS CF-4R forms: MECH 21 and (for split systems) MECH-25

For Split Systems: Duct leakage < 6 percent; RC, CCA ≥ 300 CFM/ton, TMAH
For Packaged Units: Duct leakage < 6 percent

☒ **4. New Ducting over 40 feet**	**Required Forms:**
• Includes adding or replacing more than 40 linear feet of duct in unconditioned space.	CF-6R forms: MECH-04, MECH-21-HERS CF-4R forms: MECH-21

For split system or packaged units: Duct leakage < 15 percent
☒ EXCEPTION: Existing duct systems constructed, insulated or sealed with asbestos.

Contractor (Documentation Author's /Responsible Designer's Declaration Statement)
- I certify that this Certificate of Compliance documentation is accurate and complete.
- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the design identified on this Certificate of Compliance.
- I certify that the energy features and performance specifications for the design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.
- The design features identified on this Certificate of Compliance are consistent with the information documented on other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with the permit application.

Name: Angel Gandara	Signature: *Angel Gandara*
Company: A PLUS GENERAL CONTRACTORS INC	Date: Jun 10, 2013
Address: 11330 KNOTT STREET	License: 763154
City/State/Zip: GARDEN GROVE / CA / 92841	Phone: (714) 901-0500

INSTALLATION CERTIFICATE		CF-6R-MECH-04
Space Conditioning Systems, Ducts and Fans		**(Page 1 of 2)**
Site Address: 15953 NORCREST DR, Whittier CA 90604 (System 1)	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Space Conditioning Systems

Heating Equipment

Equip Type (package-heat pump)	CEC Certified Mfr. Name and Model Number	ARI Reference Number2	# of Identical Systems	Efficiency (AFUE, etc.)1, 3 (>=CF-1R value)4	Duct Location (attic, crawl-space, etc.)	Duct R-value	Heating Load (kBtu/hr)	Heating Capacity (kBtu/hr)
Split Furnace	Lennox EL280UH090XP48B-01	5202448	1	80 AFUE	Attic	R-6	88	69 kBtu

Cooling Equipment

Equip Type (package heat pump)	CEC Certified Mfr. Name and Model Number	ARI Reference Number2	# of Identical Systems	Efficiency (SEER and EER) 1, 3 (>=CF-1R value)4	Duct Location (attic, crawl-space, etc.)	Duct R-value	Cooling Load (kBtu/hr)	Cooling Capacity (kBtu/hr)
Split A/C	Lennox		1	14 SEER	Attic	R-6	36	3 Tons

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1. If project is new construction, see Footnotes to Standards Table 151-B and Table 151-C for duct ceiling alternative compliance.
2. ARI Reference Number can be found by entering the equipment model number at http://www.aridirectory.org/ari/ac.php#
3. Listed efficiency on this page must be greater than or equal (?) to the value shown on the CF-1R form.
4. When CF-1R is reference it is also applicable to the CF-1R, CF-1R-AA or CF-1R-ALT

ALL BOXES MUST BE CHECKED TO BE A VALID FORM

- ☒ §110-§113: HVAC equipment is certified by the California Energy Commission.
- ☒ §150(h): Heating and/or cooling loads calculated in accordance with ASHRAE, SMACNA, or ACCA.
- ☒ §150(i): Setback Thermostat on all applicable heating and/or cooling systems meet the requirements of §112(c).
- ☒ §150(j)2: Pipe insulation for cooling system refrigerant suction, chilled water and brine lines meets minimum requirements of Table 150-B and includes a vapor retardant or is enclosed entirely in conditioned space.

INSTALLATION CERTIFICATE		CF-6R-MECH-04
Space Conditioning Systems, Ducts and Fans		**(Page 2 of 2)**
Site Address: 15953 NORCREST DR, Whittier CA 90604 (System 1)	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Ducts and Fans

— §150(m): Duct and Fans

— ☒ 1. All air-distribution system ducts and plenums installed, sealed and insulated to meet the requirements of CMC Sections 601, 602, 603, 604, 605 and Standard 6-5; supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-4.2 or enclosed entirely in conditioned space. Openings shall be sealed with mastic, tape or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape shall be used; and

— ☒ 1. Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.

— ☒ 2D. Joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.

☒ 7. Exhaust fan systems have back draft or automatic dampers.

☒ 8. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.

☒ Protection of Insulation. Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material.

☒ 10. Flexible ducts cannot have porous inner cores.

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DECLARATION STATEMENT

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- **I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy.**

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) **A Plus General Contractors Inc**		
Responsible Person's Name: **Ida Kane**		Responsible Person's Signature: **Ida Kane**
CSLB License: **763154**	Date Signed: **6/18/2013**	Position With Company (Title):

INSTALLATION CERTIFICATE		CF-6R-MECH-20-HERS
Duct Leakage Test – Completely New or Replacement Duct System		**(Page 1 of 2)**
Site Address: 15953 NORCREST DR, Whittier CA 90604 (System 1)	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Enter the Duct System Name or Identification/Tag: **System 1**
Enter the Duct System Location or Area Served: **Whole House**
Note: Submit one Installation Certificate for each duct system that must demonstrate compliance in the dwelling.

This certificate is required for compliance for completely new duct systems installed in new dwelling construction, and also for completely new or replacement duct systems in existing dwellings. For existing dwellings, a completely new or replacement duct system can also include existing parts of the original duct system (e.g., register boots, air handler, coil, plenums, etc.) if those parts are accessible and they can be sealed.

Duct Leakage Diagnostic Test - completely new or replacement duct system

Enter a value for the Allowed Leakage (CFM) for the duct system leakage verification. The value entered must be the VLLDCS criteria or one of the three calculated leakage rates described below.	
Verified Low Leakage Ducts in Conditioned Space (VLLDCS) Compliance Credit. If compliance credit for verified low leakage ducts in conditioned space is shown in the special features section of the CF-1R, the leakage to outside test method must be used to verify duct leakage (refer to RA3.1.4.3.4), and 25 CFM must be entered for Allowed Leakage.	Allowed Leakage (CFM)
Allowed leakage calculation – (select one calculation method from this section). Use 6% (*leakage factor* = 0.06) for calculations if tested at "final" or 4% (*leakage factor* = 0.04) if tested at "rough." When utilizing Low Leakage Air Handler (LLAH) credit, the allowed duct leakage may be specified by the CF-1R to be less than 6%, in which case the user-specified leakage rate must be used in the calculations below. For example, if the user-specified leakage (specified as a percentage of fan airflow) is reported on the CF-1R as 3%, then use a *leakage factor* of 0.03 in the calculations below. ☐ Cooling system method: Nominal capacity of condenser in Tons _____ x 400 x *leakage factor* = _____ CFM ☒ Heating system method: 21.7 x 69 Output Capacity in Thousands of Btu/hr x *leakage factor* = 89.84 CFM ☐ Measured airflow method (RA3.3): Enter measured fan flow in CFM here _____ x *leakage factor* = _____ CFM	
Enter value for **Actual** leakage (CFM) in the right column, from measurement using applicable duct leakage pressurization test procedure from Reference Residential Appendix RA3.1(CFM @ 25 Pa).	Actual Leakage (CFM)
List **Actual** Leakage from duct leakage test(CFM)	**70**
Pass if Actual Leakage is equal to or less than Allowed Leakage	☒ **Pass** ☐ **Fail**
For complete replacement of duct systems only, if the 6 percent leakage rate criteria cannot be met, a smoke test should be performed to verify that the excess leakage is coming only from a pre-existing furnace cabinet (air handler cabinet), and not from other accessible portions of the duct system. A HERS rater must verify the installation (No sampling allowed). List **Actual** Leakage from smoke test(CFM)	
Pass if all accessible leaks (except for existing air handler) are sealed using smoke	☐ **Pass** ☐ **Fail**

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INSTALLATION CERTIFICATE		CF-6R-MECH-20-HERS
Duct Leakage Test – Completely New or Replacement Duct System		**(Page 2 of 2)**
Site Address: 15953 NORCREST DR, Whittier CA 90604 (System 1)	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Compliance Method

This dwelling was: (select one of the following two choices):

☒ Tested at Final

☐ Tested at Rough-in (requires installer to complete the visual inspection at final construction stage described below)

Visual Inspection at Final Construction Stage (if applicable)

After installing the interior finishing wall and verifying that the above rough-in tests was completed, the following procedure must be performed:

☐ For all supply and return registers, 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.

☒ Outside air (OA) ducts for Central Fan Integrated (CFI) ventilation systems, shall not be sealed/taped off during duct leakage testing. CFI OA ducts that utilize controlled motorized dampers, that open only when OA ventilation is required to meet ASHRAE Standard 62.2, and close when OA ventilation is not required, may be configured to the closed position during duct leakage testing.

☒ All supply and return register boots must be sealed to the drywall

☒ New duct installations cannot utilize building cavities as plenums or platform returns in lieu of ducts.

☒ Mastic and draw bands must be used in combination with Cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

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DECLARATION STATEMENT

- **I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.**
- **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).**
- **I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.**
- I understand that a HERS rater will check the installation to verify compliance, and that that if such checking identifies defects, I am required to take corrective action at my expense. I understand that Energy Commission and HERS provider representatives will also perform quality assurance checking of installations, including those approved as part of a sample group but not checked by a HERS rater, and if those installations fail to meet the requirements of such quality assurance checking, the required corrective action and additional checking/testing of other installations in that HERS sample group will be performed at my expense.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- **I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy.** I will ensure that all Installation Certificates will come from a HERS provider data registry for multiple orientation alternatives, and beginning October 1, 2010, for all low-rise residential buildings.

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) **A Plus General Contractors Inc**		
Responsible Person's Name: **Ida Kane**		Responsible Person's Signature: *Ida Kane*
CSLB License: **763154**	Date Signed: **6/18/2013**	Position With Company (Title):
Is this installation monitored by a Third Party Quality Control Program (TPQCP)? ☐ Yes ☐ No		Name of TPQCP (if applicable):

INSTALLATION CERTIFICATE		CF-6R-MECH-25-HERS
Refrigerant Charge Verification - Standard Measurement Procedure		**(Page 1 of 6)**
Site Address: 15953 NORCREST DR, Whittier CA 90604	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Note: If installation of a Charge Indicator Display (CID) is utilized as an alternative to refrigerant charge verification for compliance, a MECH-24 Certificate (instead of this MECH-25 Certificate) should be used to demonstrate compliance with the refrigerant charge verification requirement. TMAH and STMS are not required for compliance when a CID is utilized for compliance.

As many as 4 systems in the dwelling can be documented for compliance using this form. Attach an additional form(s) for any additional systems in the dwelling as applicable.

Temperature Measurement Access Holes (TMAH) and Saturation Temperature Measurement Sensors (STMS)

Procedures for installing TMAH are specified in Reference Residential Appendix RA3.2. If refrigerant charge verification is required for compliance, TMAH are also required for compliance, unless the TMAH Compliance Option is chosen.

STMS are only required for completely new or replacement space-conditioning systems that utilize prescriptive compliance method.

TMAH - Access Holes in Supply and Return Plenums of Air Handler

	System Name or Identification/Tag	**System 1**			
	System Location or Area Served	**Whole House**			
1	5/16 inch (8 mm) access hole upstream of evaporative coil in the return plenum and labeled according to Figure in Section RA3.2.2.2.2.	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
1a	Return side of the duct system is located entirely within conditioned space and return airflow temperature to be measured at the return grille.	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
2	5/16 inch (8 mm) access hole downstream of evaporative coil in the supply plenum and labeled according to Figure in Section RA3.2.2.2.2.	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
The TMAH Compliance Option should be checked *only* if it is physically impossible to drill the TMAH as required by Section RA3.2.2.2.2. Using this Compliance Option requires the HVAC installer to annotate on the HERS Provider's data registry an explanation as to why the TMAH cannot be installed on the system, and photographs of the equipment on which the TMAH cannot be installed. Use of this Compliance Option also requires minimum airflow verification through the direct measurement of airflow per RA3.3 For more information see http://www.energy.ca.gov/title24/2008standards/special_case_appliance/					
	TMAH Compliance Option	☐	☐	☐	☐
	Yes to 1 *and* 2, *or* Yes to 1a *and* 2, *or* checking the TMAH Compliance Option, is a pass. Enter Pass or Fail	☒ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail

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STMS - Sensor on the Evaporator Coil

	System Name or Identification/Tag	System 1			
3	The sensor is factory installed, or field installed according to manufacturer's specifications, or is installed by methods/specifications approved by the Executive Director.				
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
4	The sensor wire is terminated with a standard mini plug suitable for connection to a digital thermometer. The sensor mini plug is accessible to the installing technician and the HERS rater without changing the airflow through the condenser coil				
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
5	The sensor measures the saturation temperature of the coil within 1.3 degrees F				
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
	Yes to 3, 4, and 5 is a pass. Enter N/A if STMS are not applicable. Otherwise enter Pass or Fail	☒ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail

STMS - Sensor on the Condenser Coil

	System Name or Identification/Tag	System 1			
6	The sensor is factory installed, or field installed according to manufacturer's specifications, or is installed by methods/specifications approved by the Executive Director.				
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
7	The sensor wire is terminated with a standard mini plug suitable for connection to a digital thermometer. The sensor mini plug is accessible to the installing technician and the HERS rater without changing the airflow through the condenser coil				
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
8	The sensor measures the saturation temperature of the coil within 1.3 degrees F				
		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
	Yes to 6, 7, and 8 is a pass. Enter N/A if STMS are not applicable. Otherwise enter Pass or Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail

Standard Charge Measurement Procedure (for use if outdoor air dry-bulb temperature is 55°F or above)

Procedures for determining Refrigerant Charge using the Standard Charge Measurement Procedure are available in Reference Residential Appendix RA3.2. As many as 4 systems in the dwelling can be documented for compliance using this form. Attach an additional form(s) for any additional systems in the dwelling as applicable.

- *The system should be installed and charged in accordance with the manufacturer's specifications before starting this procedure.*
- *The system must meet minimum airflow requirements as prerequisite for a valid refrigerant charge test.*
- *If outdoor air dry-bulb temperature is less than 55°F, the installer must use the RA3.2.3 Alternate Charge Measurement Procedure (Weigh-In Charging Method). If the Weigh-In Method is used, the dwelling cannot be included in a sample group for HERS verification compliance.)*

Space Conditioning Systems

System Name or Identification/Tag	**System 1**			
System Location or Area Served	**Whole House**			
Outdoor Unit Serial #	**5813E16846**			
Outdoor Unit Make	**Lennox**			
Outdoor Unit Model	**XC14-036-230-06**			
Nominal Cooling Capacity	**3 Tons**			
Date of Verification	**12/9/2013**			

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Calibration of Diagnostic Instruments

Date of Refrigerant Gauge Calibration	**12/2/2013**	(must be re-calibrated monthly)
Date of Thermocouple Calibration	**12/2/2013**	(must be re-calibrated monthly)

Measured Temperatures (°F)

System Name or Identification/Tag	**System 1**			
Supply (evaporator leaving) air dry-bulb temperature ($T_{supply, db}$)	**50**			
Return (evaporator entering) air dry-bulb temperature ($T_{return, db}$)	**71**			
Return (evaporator entering) air wet-bulb temperature ($T_{return, wb}$)	**57**			
Evaporator saturation temperature ($T_{evaporator, sat}$)	**32**			
Condensor saturation temperature ($T_{condensor, sat}$)	**70**			
Suction line temperature ($T_{suction}$)	**50**			
Liquid Line Temperature (T_{liquid})	**60**			
Condenser (entering) air dry-bulb temperature ($T_{condenser, db}$)	**59**			

Site Address:	**Enforcement Agency:**	**Permit Number:**
15953 NORCREST DR, Whittier CA 90604	County of Los Angeles	ME04001306100022

Minimum Airflow Requirement

Temperature Split Method Calculations for determining Minimum Airflow Requirement for Refrigerant Charge Verification. The temperature split method is specified in Reference Residential Appendix RA3.2.

System Name or Identification/Tag	**System 1**			
Calculate: Actual Temperature Split = $T_{return, db}$ - $T_{supply, db}$	**21.00**			
Target Temperature Split from Table RA3.2-3 using $T_{return, wb}$ and $T_{return, db}$	**19**			
Calculate difference: Actual Temperature Split - Target Temperature Split =	**2**			
Passes if difference is between -3°F and +3°F or, upon remeasurement, if between -3°F and -100°F **Enter Pass or Fail**	**PASS**			

Note: Temperature Split Method Calculation is not necessary if actual Cooling Coil Airflow is verified using one of the airflow measurement procedures specified in Reference Residential Appendix RA3.3. If actual cooling coil airflow is measured, the value must be equal to or greater than the Calculated Minimum Airflow Requirement in the table below.

Calculated Minimum Airflow Requirement (CFM) = Nominal Cooling Capacity (ton) X 300 (cfm/ton)

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System Name or Identification/Tag	**System 1**			
Calculated Minimum Airflow Requirement (CFM)				
Measured Airflow using RA3.3 procedures (CFM)				
Measurement Method				
Passes if measured airflow is greater than or equal to the calculated minimum airflow requirement. **Enter Pass or Fail**				

INSTALLATION CERTIFICATE		CF-6R-MECH-25-HERS
Refrigerant Charge Verification - Standard Measurement Procedure		**(Page 5 of 6)**
Site Address: 15953 NORCREST DR, Whittier CA 90604	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Superheat Charge Method Calculations for Refrigerant Charge Verification. This procedure is required to be used for fixed orifice metering device systems				
System Name or Identification/Tag	**System 1**			
Calculate: Actual Superheat = $T_{suction}$ - $T_{evaporator, sat}$				
Target Superheat from Table RA3.2-2 using $T_{return, wb}$ and $T_{condenser, db}$				
Calculate difference: Actual Superheat - Target Superheat =				
System passes if difference is between -5°F and +5°F **Enter Pass or Fail**				

Subcooling Charge Method Calculations for Refrigerant Charge Verification. This procedure is required to be used for thermostatic expansion valve (TXV) and electronic expansion valve (EXV) systems.				
System Name or Identification/Tag	**System 1**			
Calculate: Actual Subcooling = $T_{condenser, sat}$ - T_{liquid}	**10.0**			
Target Subcooling specified by manufacturer	**13**			
Calculate difference: Actual Subcooling - Target Subcooling =	**-3**			
System passes if difference is between -3°F and +3°F **Enter Pass or Fail**	**PASS**			

Metering Device Calculations for Refrigerant Charge Verification. This procedure is required to be used for thermostatic expansion valve (TXV) and electronic expansion valve (EXV) systems.				
System Name or Identification/Tag	**System 1**			
Calculate: Actual Superheat = $T_{suction}$ - $T_{evaporator, sat}$	**18.0**			
Enter allowable superheat range from manufacturer's specifications (or use range between 4°F and 25°F if manufacturer's specification is not available)	**18**			
System passes if actual superheat is within the allowable superheat range **Enter Pass or Fail**	**PASS**			

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INSTALLATION CERTIFICATE		CF-6R-MECH-25-HERS
Refrigerant Charge Verification - Standard Measurement Procedure		**(Page 6 of 6)**
Site Address: 15953 NORCREST DR, Whittier CA 90604	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Standard Charge Measurement Summary:
System shall pass both refrigerant charge criteria, metering device criteria (if applicable), and minimum cooling coil airflow criteria based on measurements taken concurrently during system operation. If corrective actions were taken, all applicable verification criteria must be re-measured and/or recalculated.

System Name or Identification/Tag	**System 1**			
System meets all refrigerant charge and airflow requirements. **Enter Pass or Fail**	**PASS**			

☒ Residential Appendix RA3.2.2 requires that if the outdoor temperature is between 55°F and 65°F the return air dry bulb temperature shall be maintained above 70°F during the Standard Charge Measurement Procedure. The signature of the Responsible Person in the declaration statement below certifies this requirement has been met for all applicable system verifications reported on this certificate.

DECLARATION STATEMENT

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I understand that a HERS rater will check the installation to verify compliance, and that that if such checking identifies defects, I am required to take corrective action at my expense. I understand that Energy Commission and HERS provider representatives will also perform quality assurance checking of installations, including those approved as part of a sample group but not checked by a HERS rater, and if those installations fail to meet the requirements of such quality assurance checking, the required corrective action and additional checking/testing of other installations in that HERS sample group will be performed at my expense.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- **I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy.** I will ensure that all Installation Certificates will come from a HERS provider data registry for multiple orientation alternatives, and beginning October 1, 2010, for all low-rise residential buildings.

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) **A Plus General Contractors Inc**		
Responsible Person's Name: **Ida Kane**		Responsible Person's Signature: **Ida Kane**
CSLB License: **763154**	Date Signed: **6/18/2013**	Position With Company (Title):
Is this installation monitored by a Third Party Quality Control Program (TPQCP)? ☐ Yes ☐ No		Name of TPQCP (if applicable):

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING		CF-4R-MECH-20
Duct Leakage Test - Completely New or Replacement Duct System		**(Page 1 of 2)**
Site Address: 15953 NORCREST DR, Whittier CA 90604 (System 1)	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Enter the Duct System Name or Identification/Tag: **System 1**

Enter the Duct System Location or Area Served: **Whole House**

Note: Submit one Installation Certificate for each duct system that must demonstrate compliance in the dwelling.

This certificate is required for compliance for completely new duct systems installed in new dwelling construction, and also for completely new or replacement duct systems in existing dwellings. For existing dwellings, a completely new or replacement duct system can also include existing parts of the original duct system (e.g., register boots, air handler, coil, plenums, etc.) if those parts are accessible and they can be sealed.

Duct Leakage Diagnostic Test - completely new or replacement duct system

Enter a value for the Allowed Leakage (CFM) for the duct system leakage verification. The value entered must be the VLLDCS criteria or one of the three calculated leakage rates described below.

	Allowed Leakage (CFM)
Verified Low Leakage Ducts in Conditioned Space (VLLDCS) Compliance Credit. If compliance credit for verified low leakage ducts in conditioned space is shown in the special features section of the CF-1R, the leakage to outside test method must be used to verify duct leakage (refer to RA3.1.4.3.4), and 25 CFM must be entered for Allowed Leakage.	
Allowed leakage calculation – (select one calculation method from this section). Use 6% (*leakage factor* = 0.06) for calculations. When utilizing Low Leakage Air Handler (LLAH) credit, the allowed duct leakage may be specified by the CF-1R to be less than 6%, in which case the user-specified leakage rate must be used in the calculations below. For example, if the user-specified leakage (specified as a percentage of fan airflow) is reported on the CF-1R as 3%, then use a *leakage factor* of 0.03 in the calculations below. ☐ Cooling system method: Nominal capacity of condenser in Tons _____ x 400 x *leakage factor* = _____ CFM ☒ Heating system method: 21.7 x 69 Output Capacity in Thousands of Btu/hr x *leakage factor* = 89.84 CFM ☐ Measured airflow method (RA3.3): Enter measured fan flow in CFM here _____ x *leakage factor* = _____ CFM	
Enter value for **Actual** leakage (CFM) in the right column, from measurement using applicable duct leakage pressurization test procedure from Reference Residential Appendix RA3.1(CFM @ 25 Pa).	Actual Leakage (CFM)
List **Actual** Leakage from duct leakage test(CFM)	**70**
Pass if Actual Leakage is less than Allowed Leakage	☒ **Pass** ☐ **Fail**
For complete replacement of duct systems only, if the 6 percent leakage rate criteria cannot be met, a smoke test should be performed to verify that the excess leakage is coming only from a pre-existing furnace cabinet (air handler cabinet), and not from other *accessible* portions of the duct system. A HERS rater must verify the installation (No sampling allowed). List **Actual** Leakage from smoke test(CFM)	
Pass if all accessible leaks (except for existing air handler) are sealed using smoke	☐ **Pass** ☐ **Fail**

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CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING		CF-4R-MECH-20
Duct Leakage Test - Completely New or Replacement Duct System		**(Page 2 of 2)**
Site Address: 15953 NORCREST DR, Whittier CA 90604 (System 1)	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

☒ Outside air (OA) ducts for Central Fan Integrated (CFI) ventilation systems, shall not be sealed/taped off during duct leakage testing. CFI OA ducts that utilize controlled motorized dampers, that open only when OA ventilation is required to meet ASHRAE Standard 62.2, and close when OA ventilation is not required, may be configured to the closed position during duct leakage testing.

☒ All supply and return register boots must be sealed to the drywall

☒ New duct installations cannot utilize building cavities as plenums or platform returns in lieu of ducts.

☒ Mastic and draw bands must be used in combination with cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

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DECLARATION STATEMENT

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am the certified HERS rater who performed the verification services identified and reported on this certificate (responsible rater).
- The installed feature, material, component, or manufactured device requiring HERS verification that is identified on this certificate (the installation) complies with the applicable requirements in Reference Residential Appendices RA2 and RA3 and the requirements specified on the Certificate(s) of Compliance (CF-1R) approved by the local enforcement agency.
- The information reported on applicable sections of the Installation Certificate(s) (CF-6R), signed and submitted by the person(s) responsible for the installation conforms to the requirements specified on the Certificate(s) of Compliance (CF-1R) approved by the enforcement agency.

Builder or Installer information as shown on the Installation Certificate (CF-6R)		
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) **A PLUS GENERAL CONTRACTORS INC**		
Responsible Person's Name: **Angel Gandara**	CSLB License: **763154**	
HERS Provider Data Registry Information		
Sample Group # (if applicable): **N/A**	☒ tested/verified dwelling	☐ not-tested/verified dwelling in a HERS sample group
HERS Rater Information CalCERTS Certificate # CC1-1798764625		
HERS Rater Company Name: **Alleluia Air**		
Responsible Rater's Name: **David Choo**	Responsible Rater's Signature: **David Choo**	
Responsible Rater's Certification Number w/ this HERS Provider: **CC2005954**	Date Signed: **12/9/2013**	

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING		CF-4R-MECH-25
Refrigerant Charge Verification - Standard Measurement Procedure		**(Page 1 of 6)**
Site Address: 15953 NORCREST DR, Whittier CA 90604	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Note: If installation of a Charge Indicator Display (CID) is utilized as an alternative to refrigerant charge verification for compliance, a MECH-24 Certificate (instead of this MECH-25 Certificate) should be used to demonstrate compliance with the refrigerant charge verification requirement. TMAH and STMS are not required for compliance, when a CID is utilized for compliance.

As many as 4 systems in the dwelling can be documented for compliance using this form. Attach an additional form(s) for any additional systems in the dwelling as applicable.

Temperature Measurement Access Holes (TMAH) and Saturation Temperature Measurement Sensors (STMS)

Procedures for installing TMAH are specified in Reference Residential Appendix RA3.2. If refrigerant charge verification is required for compliance, TMAH are also required for compliance, unless the TMAH Compliance Option is chosen.

STMS are only required for completely new or replacement space-conditioning systems that utilize prescriptive compliance method.

TMAH - Access Holes in Supply and Return Plenums of Air Handler

System Name or Identification/Tag		**System 1**			
System Location or Area Served		**Whole House**			
1	5/16 inch (8 mm) access hole upstream of evaporative coil in the return plenum and labeled according to Figure in Section RA3.2.2.2.2.	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
1a	Return side of the duct system is located entirely within conditioned space and return airflow temperature to be measured at the return grille.	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
2	5/16 inch (8 mm) access hole downstream of evaporative coil in the supply plenum and labeled according to Figure in Section RA3.2.2.2.2.	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
The TMAH Compliance Option should be checked *only* if the HERS Rater is able to confirm that it was physically impossible for the HVAC Installer to drill the TMAH as required by Section RA3.2.2.2.2. Using this Compliance Option requires the HVAC installer to annotate on the HERS Provider's data registry an explanation as to why the TMAH cannot be installed on the system, and photographs of the equipment on which the TMAH cannot be installed. Use of this Compliance Option also requires minimum airflow verification through the direct measurement of airflow per RA3.3. For more information see http://www.energy.ca.gov/title24/2008standards/special_case_appliance/					
TMAH Compliance Option		☐	☐	☐	☐
Yes to 1 *and* 2, *or* Yes to 1a *and* 2, *or* checking the TMAH Compliance Option, is a pass. Enter Pass or Fail		☒ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail

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Site Address:	Enforcement Agency:	Permit Number:
15953 NORCREST DR, Whittier CA 90604	County of Los Angeles	ME04001306100022

STMS - Sensor on the Evaporator Coil

System Name or Identification/Tag	**System 1**			
3	The sensor is factory installed, or field installed according to manufacturer's specifications, or is installed by methods/specifications approved by the Executive Director.			
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
4	The sensor wire is terminated with a standard mini plug suitable for connection to a digital thermometer. The sensor mini plug is accessible to the installing technician and the HERS rater without changing the airflow through the condenser coil			
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
5	When attached to a digital thermometer, the sensor provides an indication of the saturation temperature of the coil.			
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Yes to 3, 4, and 5 is a pass. Enter N/A if STMS are not applicable. Otherwise enter Pass or Fail	☒ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail

STMS - Sensor on the Condenser Coil

System Name or Identification/Tag	**System 1**			
6	The sensor is factory installed, or field installed according to manufacturer's specifications, or is installed by methods/specifications approved by the Executive Director.			
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
7	The sensor wire is terminated with a standard mini plug suitable for connection to a digital thermometer. The sensor mini plug is accessible to the installing technician and the HERS rater without changing the airflow through the condenser coil			
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
8	When attached to a digital thermometer, the sensor provides an indication of the saturation temperature of the coil.			
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Yes to 6, 7, and 8 is a pass. Enter N/A if STMS are not applicable. Otherwise enter Pass or Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail	☐ N/A ☐ Pass ☐ Fail

Site Address:	Enforcement Agency:	Permit Number:
15953 NORCREST DR, Whittier CA 90604	County of Los Angeles	ME04001306100022

Standard Charge Measurement Procedure (for use if outdoor air dry-bulb is above 55°F)

Procedures for determining Refrigerant Charge using the Standard Charge Measurement Procedure are available in Reference Residential Appendix RA3.2. As many as 4 systems in the dwelling can be documented for compliance using this form. Attach an additional form(s) for any additional systems in the dwelling as applicable.

- *The system should be installed and charged in accordance with the manufacturer's specifications before starting this procedure.*
- *The system must meet minimum airflow requirements as prerequisite for a valid refrigerant charge test.*
- *If outdoor air dry-bulb temperature is less than 55°F, the installer must use the RA3.2.3 Alternate Charge Measurement Procedure (Weigh-In Charging Method). If the Weigh-In Method is used, the dwelling cannot be included in a sample group for HERS verification compliance.)*

Space Conditioning Systems

System Name or Identification/Tag	**System 1**			
System Location or Area Served	**Whole House**			
Outdoor Unit Serial #	**5813E16846**			
Outdoor Unit Make	**Lennox**			
Outdoor Unit Model	**XC14-036-230-06**			
Nominal Cooling Capacity	**3 Tons**			
Date of Verification	**12/9/2013**			

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Calibration of Diagnostic Instruments

Date of Refrigerant Gauge Calibration	**12/2/2013**	(must be re-calibrated monthly)
Date of Thermocouple Calibration	**12/2/2013**	(must be re-calibrated monthly)

Measured Temperatures (°F)

System Name or Identification/Tag	**System 1**			
Supply (evaporator leaving) air dry-bulb temperature ($T_{supply, db}$)	**50**			
Return (evaporator entering) air dry-bulb temperature ($T_{return, db}$)	**71**			
Return (evaporator entering) air wet-bulb temperature ($T_{return, wb}$)	**57**			
Evaporator saturation temperature ($T_{evaporator, sat}$)	**32**			
Condensor saturation temperature ($T_{condensor, sat}$)	**70**			
Suction line temperature ($T_{suction}$)	**50**			
Liquid Line Temperature (T_{liquid})	**60**			
Condenser (entering) air dry-bulb temperature ($T_{condenser, db}$)	**59**			

Site Address:	**Enforcement Agency:**	**Permit Number:**
15953 NORCREST DR, Whittier CA 90604	County of Los Angeles	ME04001306100022

Minimum Airflow Requirement

Temperature Split Method Calculations for determining Minimum Airflow Requirement for Refrigerant Charge Verification. The temperature split method is specified in Reference Residential Appendix RA3.2.

System Name or Identification/Tag	**System 1**			
Calculate: Actual Temperature Split = $T_{return, db}$ - $T_{supply, db}$	**21.00**			
Target Temperature Split from Table RA3.2-3 using $T_{return, wb}$ and $T_{return, db}$	**19**			
Calculate difference: Actual Temperature Split - Target Temperature Split =	**2**			
Passes if difference is between -4°F and +4°F or, upon remeasurement, if between -4°F and -100°F **Enter Pass or Fail**	**PASS**			

Note: Temperature Split Method Calculation is not necessary if actual Cooling Coil Airflow is verified using one of the airflow measurement procedures specified in Reference Residential Appendix RA3.3. ***If actual cooling coil airflow is measured, the value must be equal to or greater than the Calculated Minimum Airflow Requirement in the table below.***

Calculated Minimum Airflow Requirement (CFM) = Nominal Cooling Capacity (ton) X 300 (cfm/ton)

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System Name or Identification/Tag				
Calculated Minimum Airflow Requirement (CFM)				
Measured Airflow using RA3.3 procedures (CFM)				
Measurement Method				
Passes if measured airflow is greater than or equal to the calculated minimum airflow requirement. **Enter Pass or Fail**				

INSTALLATION CERTIFICATE

Refrigerant Charge Verification - Standard Measurement Procedure

Site Address:	**Enforcement Agency:**	**Permit Number:**
15953 NORCREST DR, Whittier CA 90604	County of Los Angeles	ME04001306100022

Superheat Charge Method Calculations for Refrigerant Charge Verification. This procedure is required to be used for fixed orifice metering device systems

System Name or Identification/Tag				
Calculate: Actual Superheat = $T_{suction}$ - $T_{evaporator, sat}$				
Target Superheat from Table RA3.2-2 using $T_{return, wb}$ and $T_{condenser, db}$				
Calculate difference: Actual Superheat - Target Superheat =				
System passes if difference is between -6°F and +6°F **Enter Pass or Fail**				

Subcooling Charge Method Calculations for Refrigerant Charge Verification. This procedure is required to be used for thermostatic expansion valve (TXV) and electronic expansion valve (EXV) systems.

System Name or Identification/Tag	**System 1**			
Calculate: Actual Subcooling = $T_{condenser, sat}$ - T_{liquid}	**10.0**			
Target Subcooling specified by manufacturer	**13**			
Calculate difference: Actual Subcooling - Target Subcooling =	**-3**			
System passes if difference is between -4°F and +4°F **Enter Pass or Fail**	**PASS**			

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Metering Device Calculations for Refrigerant Charge Verification. This procedure is required to be used for thermostatic expansion valve (TXV) and electronic expansion valve (EXV) systems.

System Name or Identification/Tag	**System 1**			
Calculate: Actual Superheat = $T_{suction}$ - $T_{evaporator, sat}$	**18.0**			
Enter allowable superheat range from manufacturer's specifications (or use range between 3°F and 26°F if manufacturer's specification is not available)	**18**			
System passes if actual superheat is within the allowable superheat range **Enter Pass or Fail**	**PASS**			

INSTALLATION CERTIFICATE		CF-4R-MECH-25
Refrigerant Charge Verification - Standard Measurement Procedure		**(Page 6 of 6)**
Site Address: 15953 NORCREST DR, Whittier CA 90604	**Enforcement Agency:** County of Los Angeles	**Permit Number:** ME04001306100022

Standard Charge Measurement Summary:
System shall pass both refrigerant charge criteria, metering device criteria (if applicable), and minimum cooling coil airflow criteria based on measurements taken concurrently during system operation. If corrective actions were taken, all applicable verification criteria must be re-measured and/or recalculated.

System Name or Identification/Tag	**System 1**			
System meets all refrigerant charge and airflow requirements. **Enter Pass or Fail**	**PASS**			

☒ Residential Appendix RA3.2.2 requires that if the outdoor temperature is between 55°F and 65°F the return air dry bulb temperature shall be maintained above 70°F during the Standard Charge Measurement Procedure. The signature of the Responsible Person in the declaration statement below certifies this requirement has been met for all applicable system verifications reported on this certificate.

DECLARATION STATEMENT

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am the certified HERS rater who performed the verification services identified and reported on this certificate (responsible rater).
- The installed feature, material, component, or manufactured device requiring HERS verification that is identified on this certificate (the installation) complies with the applicable requirements in Reference Residential Appendices RA2 and RA3 and the requirements specified on the Certificate(s) of Compliance (CF-1R) approved by the local enforcement agency.
- The information reported on applicable sections of the Installation Certificate(s) (CF-6R), signed and submitted by the person(s) responsible for the installation conforms to the requirements specified on the Certificate(s) of Compliance (CF-1R) approved by the enforcement agency.

Builder or Installer information as shown on the Installation Certificate (CF-6R)		
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) **A PLUS GENERAL CONTRACTORS INC**		
Responsible Person's Name: **Angel Gandara**	CSLB License: **763154**	
HERS Provider Data Registry Information		
Sample Group # (if applicable): **N/A**	☒ tested/verified dwelling	☐ not-tested/verified dwelling in a HERS sample group
HERS Rater Information **CalCERTS Certificate # CC1-1798764625**		
HERS Rater Company Name: **Alleluia Air**		
Responsible Rater's Name: **David Choo**	Responsible Rater's Signature: **David Choo**	
Responsible Rater's Certification Number w/ this HERS Provider: **CC2005954**	Date Signed: **12/9/2013**	