CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0519725
Insp Area: 3
Thos Bros: 318H6

Site Address: 4 WAYNE CT SAC
Parcel No: 062-0060-114 BLDG # 9

Sub-Type: REM
Housing (Y/N): N

CONTRACTOR
F D THOMAS, INC.
PO BOX 4663
MEDFORD, OR 97501

OWNER
DAN THOMAS FD THOMAS, INC.
P.O. BOX 4663
MEDFORD,OR 97501

ARCHITECT
ARKTEGRAF INC.
1800 27TH ST
SACRAMENTO CA 95816

Nature of Work: CONVERT 398 SQ FT TO OFFICE SPACE FROM EXISTING WAREHOUSE

CONSTRUCTION LENDING AGENCY : I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name_____ Lender'sAddress_____

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class B License Number 610403 Date 4/4/06 Contractor Signature [signature]

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500.00);

____ I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

____ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

____ I am exempt under Sec._____ B & PC for this reason_____

Date_____ Owner Signature_____

PAID
CITY OF SACRAMENTO
APR 04 2006
NEIGHBORHOOD PLANNING AND DEVELOPMENT SERVICES

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings so that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date_____ Applicant/Agent Signature_____

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:
____ I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

____ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier STATE COMPENSATION Policy Number 012 0015139 Exp Date 10/01/2006

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

Date 4/4/06 Applicant Signature [signature]

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

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

CITY OF SACRAMENTO

CERTIFICATE OF OCCUPANCY

For Information Contact (916) 808-5716

Building Address: 4 WAYNE CT # 9 Permit No.: 0519725

Building Use: OFFICE Occupancy: B

Building Owner: DAN THOMAS FD THOMAS INC Construction Type: VN

Owner Address: MEDFORD, OR Sprinkled? [X] Yes [] No

Portion of Building Occupied: OFFICE IN WAREHOUSE Area: 398 Sq. Ft.

11/15/06 Carolyn Cooper **CARL HEFNER**

Date By: (Print) Sign ASSISTANT BUILDING OFFICIAL

[Finaled By: DSP,DJP,PL,MCM,GRS]

This Certificate, issued pursuant to the requirements of Section 109 of the Uniform Building Code, certifies that at time of issuance the described portion of the building has been inspected for compliance with the Uniform Building Code, as adopted per Title 15 of the Sacramento City Code for the group and division of occupancy and use for which the proposed occupancy is classified. Issuance of this certificate shall not be construed as an approval of a violation of any Codes, or Federal, State and City Laws or Ordinances. Certificates presuming to give authority to such violation shall not be valid. This certificate shall be posted in a conspicuous place on the premises and shall not be removed except by the Chief Building Official. No changes shall be made in the character of occupancy or use without approval of the Chief Building Official.

POST IN A CONSPICUOUS PLACE

POST THIS CARD IN A CONSPICUOUS PLACE!

SACRAMENTO CITY FIRE DEPARTMENT
2101 ARENA BLVD., STE 200
SACRAMENTO, CA 95834

INSPECTION SERVICES
24 HOUR INSPECTIONS REQUEST LINE ..... CALL (916) 808-1643
MINIMUM OF 48 HOURS NOTICE REQUIRED FOR INSPECTIONS / APPOINTMENTS

PERMIT 031925 CHECKED BY DBT DATE 8/06
SCOPE OF WORK
ADDRESS 4 Wagon Ct Bldg 9
JOB NAME ED Thomas Inc.
CONTRACTOR PHONE

NOTE:

1) Do not cover walls or ceiling or bury piping until the following items are signed off.
2) An all weather (paved) emergency access roadway and operating fire hydrants shall be provided prior to any combustible storage or construction on site.

SITE

INSPECTIONS		INITIALS	DATE
Underground Fire Mains/Visual (Class 200)	201		
Hydrostatic test of Fire Main (Class 200)	201		
Flushing of Fire Main (Class 200)	201		
Access/Fire Lane/Striping	701		
Gates/Fences/Knox	701		
Above ground tank	500		

FIRE & LIFE SAFETY

INSPECTIONS	INITIALS	DATE
Fire Doors		
Smoke Venting		
High Piled Stock		
Flammable liquids		
Hazardous Materials		
Special Hazards		
Posted signs for occupant load		

EQUIPMENT

INSPECTIONS		INITIALS	DATE
Fire Sprinkler System Piping/Visual	200	[illegible]	11-15-06
Fire Sprinkler Hydrostatic Test	200		
Standpipes	200		
Fire Alarms	100		
Fire Sprinkler Monitoring System	101		
Fire Alarm Monitoring System	102		
Kitchen Hood & Duct System	311		
Special Extinguishing System	308		
Fire Extinguishers	194	[illegible]	11-15-06
Fire Pumps	202		

SPECIAL REQUIREMENTS

FINAL APPROVAL

Fire Department Approval	[illegible]	11-15-06

NOTICE: Failure to comply with an order of the Fire Department may result in the issuance of a citation and/or discontinued use of the building or premises.

ORIGINAL CARD TO BE POSTED AT THE WORK SITE

KEEP THIS CARD FOR REFERENCE–THIS IS YOUR RECORD OF FIELD INSPECTIONS

There is a $25.00 fee for replacement/lost cards

Permit # 0519725 4 Wayne Ct Bldg 9

2005 ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE

Lighting Control Acceptance Document

LTG-2-A

Form __ of __

PROJECT NAME: FD Thomas	DATE: 11-3-06
PROJECT ADDRESS: 4 Wayne Ct. Bldg 9 75829	
TESTING AUTHORITY: AGRI Electric	TELEPHONE: 530 342-4203
LIGHTING CONTROL SYSTEM NAME / DESIGNATION: Sensormatic occ. Sensor	

Intent: Lights are turned off when not needed per 119(d) & 131(d).

Construction Inspection

1 Instrumentation to perform test includes, but not limited to:
- a. Light meter
- b. Hand-held amperage and voltage meter
- c. Power meter

2 Occupancy Sensor Construction Inspection
- ☒ Occupancy sensor has been located to minimize false signals
- ☒ Occupancy sensors do not encounter any obstructions that could adversely effect desired performance
- ☒ Ultrasonic occupancy sensors do not emit audible sound (119a) 5 feet from source

3 Manual Daylighting Controls Construction Inspection
- ☐ If dimming ballasts are specified for light fixtures within the daylit area, make sure they meet all the Standards requirements, including "reduced flicker operation" for manual dimming control systems

N/A

4 Automatic Time Switch Controls Construction Inspection

a. Automatic time switch control is programmed for (check all):

N/A
- ☐ Weekdays
- ☐ Weekend
- ☐ Holidays

b. Document for the owner automatic time switch programming (check all):

N/A
- ☐ Weekdays settings
- ☐ Weekend settings
- ☐ Holidays settings
- ☐ Set-up settings
- ☐ Preference program setting

- ☐ Verify the correct time and date is properly set in the time switch
- ☐ Verify the battery is installed and energized
- ☐ Override time limit is no more than 2 hours

Certification Statement: I certify that all statements are true on this LTG-2-A form including the PASS/FAIL Evaluation.

I affirm I am eligible to sign this form under the provisions described in the Statement of Acceptance on form LTG-1-A

Name: Rick Adkins

Company: AGRI Electric

Signature: [signature] Date: 11-3-06

:

Permit # 05197J5

2005 ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE

Lighting Control Acceptance Document

LTG-2-A

Form __ of __

PROJECT NAME: FD Thomas

DATE: 11-3-06

A. Select Acceptance Test (Indicate lighting control systems Names/Designations by the applicable tests below)

☐	1	Occupancy Sensor
☐	2	Manual Daylighting Controls
☐	3	Automatic Time Switch Controls

B. Equipment Testing Requirements	Applicable Lighting Control Systems		
Check and verify those items applicable to selected system:	1	2	3
Occupancy Sensor - Step 1: Simulate an unoccupied condition			
a. Lights controlled by occupancy sensors turn off within a maximum of 30 minutes from start of an unoccupied condition per Standard Section 119(d)	(Y) / N		
b. The occupant sensor does not trigger a false "on" from movement in an area adjacent to the controlled space or from HVAC operation	(Y) / N		
c. Signal sensitivity is adequate to achieve desired control	(Y) / N		
Step 2: Simulate an occupied condition			
a. Status indicator or annunciator operates correctly	(Y) N		
b. Lights controlled by occupancy sensors turn on when immediately upon an occupied condition *OR* (this requirement is mutually exclusive with Step 2.c.)	(Y) N		
c. Sensor indicates space is "occupied" and lights turn on manually	(Y) N		
Step 3: System returned to initial operating conditions	(Y) N		
Manual Daylighting Controls - Step 1: Manual switching control			
a. At least 50% of lighting power in daylit areas is separately controlled from other lights		(Y) N	
b. The amount of light delivered to the space is uniformly reduced		(Y) N	
Step 2: System returned to initial operating conditions		(Y) N	
Automatic Time Switch Controls - Step 1: Simulate occupied condition			
a. All lights can be turned on and off by their respective area control switch			(Y) N
b. Verify the switch only operates lighting in the ceiling-height partitioned area in which the switch is located			(Y) N
Step 2: Simulate unoccupied condition			
a. All non-exempt lighting turn off per Section 131(d)1			(Y) N
b. Manual override switch allows only the lights in the selected ceiling height partitioned space where the override switch is located, to turn on or remain on until the next scheduled shut off occurs			(Y) N
c. All non-exempt lighting turns off			(Y) N
Step 3: System returned to initial operating conditions			(Y) N

Note: Shaded areas do not apply for particular test procedure

C. PASS / FAIL Evaluation (check one):

X	PASS: All applicable **Construction Inspection responses** are complete and all applicable **Equipment Testing Requirements** responses are positive (Y - yes)
☐	FAIL: Any applicable **Construction Inspection responses** are incomplete *OR* there is one or more negative (N - no) responses in any applicable **Equipment Testing Requirements** section. Provide explanation below. Use and attach additional pages if necessary.

IES Indoor Environmental Services

0519725

October 24, 2006

PGL

Air Balance Report

FD Thomas
4 Wayne Court #9
Sacramento, CA 95829

~~Job Information~~:
FD Thomas
4 Wayne Court #9
Sacramento, CA 95829

Contractor: Indoor Environmental Services

Engineer: Indoor Environmental Services

Technician Name: B. Torngren

Test Checked:

Ken Hill

"Offering Our Customers Facility Solutions"

MSCA STAR QUALIFIED

Corporate Office: 1512 Silica Avenue • Sacramento, CA 95815 • (916) 988-8808 Fax (916) 348-3020
Santa Rosa: 1604 Airport Boulevard • Santa Rosa, CA 95403 • (707) 571-7480 Fax (707) 571-7483
www.ies-hvac.com License #646794

IES Indoor Environmental Services

Table of Contents

IES Indoor Environmental Services

Clarifications

1) The test sheets correspond to the mechanical plans for each Air Outlet.

2) The total air delivery of each zone was established by outlet total and does not include possible duct leakage.

3) Outlet Air Quantities were measured by specially designed Air Flow-Hood. See data sheet.

INDOOR ENVIRONMENTAL SERVICES
SYMBOL KEY

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BHP	Brake Horsepower	▲P	Differential Pressure
CFM	Cubic Feet Per Minute	▲T	Differential Temp
CRR	Ceiling Return Register	C.W.	Condenser Water
CSD	Ceiling Supply Diffuser	CCI	Chilled Water
D.A.	Direct Acting	CDI	Ceiling Diffuser
D.D.C.	Direct Digital Control	CHW	Chilled Water
E.T.S.P.	External Total Static Pressure	CR	Ceiling Return
F.L.A.	Full Load Amps	E.A.T.-DB	Entering Air Temp – Dry Bulb
FACTOR	Balance Factor – Sq. Ft.	E.A.T.-WB	Entering Air Temp – Wet Bulb
FPM	Feet Per Minute	E.D.H.	Electronic Duct Heater
HP	Horse Power	E.W.T.	Entering Water Temp
LSD	Linear Slot Diffuser	H.C.	Heating Coil
LT	Light Troffer	H.D.	Head Feet of Water
N/A	Not Accessible	H.W.	Heating Water
N/I	Not Installed	L.A.T.-DB	Leaving Air Temp– Dry Bulb
N/L	Not Listed	L.A.T.-WB	Leaving Air Temp – Web Bulb
OSA	Outside Air	L.W.T.	Leaving Water Temp
R.A.	Reversing Action	M.A.T.	Mixed Air Temp
RA	Return Air	N.A.	Not Available
RG	Return Grille	O.A.T.	Outside Air Temp
SP-	Negative Static Pressure	O.A.T.-DB	Outside Air Temp – Dry Bulb
SP+	Positive Static Pressure	P.D.	Pressure Drop
T.G.	Transfer Grille	P.HC	Preheat Coil
T.S.P.	Total Static Pressure	P.P.	Pete's Plug
T-STAT	Thermostat	R.A.T.	Return Air Temp
V.P.	Velocity Pressure	R.H.C.	Reheat Coil
VAV	Variable Air Volume Box	SC	Steam Coil
WR	Wall Register	W.C.	Water Column
CE	Ceiling Exhaust	W.G.	Water Gauge

CERTIFICATE OF CALIBRATION

ALNOR
TSI Incorporated

TSI Incorporated, Alnor Products, 500 Cardigan Road, Shoreview, MN 55126 USA
TEL:1-800-424-7427 1-651-490-2811 FAX: 1-651-490-3824 www.alnor.com

TEMPERATURE	73.8	°F
RELATIVE HUMIDITY	43.7	%
BAROMETRIC PRESSURE	28.8	in.Hg

MODEL	Standard Balometer® 6465
SERIAL NO.	70433080

CALIBRATION STANDARDS USED
Capture Hood Calibration System 2

☒ AS LEFT	☒ IN TOLERANCE
☐ AS FOUND	☐ OUT OF TOLERANCE

CALIBRATION DATA

RANGE	AIR VOLUME MEASURED IN ft^3/min *Tolerance: ± (3% of full scale, except ± 20 CFM on 250 scale)*					
	SUPPLY DATA			RETURN DATA		
	CALIBRATION STANDARD	INSTRUMENT OUTPUT	ALLOWABLE RANGE	CALIBRATION STANDARD	INSTRUMENT OUTPUT	ALLOWABLE RANGE
800/2000	1800	**1810**	1740 -1860	1800	**1810**	1740 -1860
	1200	**1185**	1140 -1260	1200	**1200**	1140 -1260
400/1000	900	**900**	870 - 930	900	**900**	870 - 930
	600	**600**	570 - 630	600	**600**	570 - 630
100/500	450	**455**	435 - 465	450	**465**	435 - 465
	300	**300**	285 - 315	300	**303**	285 - 315
0/250	180	**180**	160 - 200	180	**172**	160 - 200
	100	**102**	80 - 120	100	**97**	80 - 120

** Indicates out of tolerance condition*

Standard Conditions: Ambient Temperature = 21.1 °C, Barometric Pressure = 760.0 mmHg

Recommended Next Calibration Date:

TSI Incorporated does hereby certify that the above described instrument conforms to the original manufacturer's specifications (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technology within the limitations of NIST's calibration services or have been derived from accepted values of natural physical constants or have been derived by the ratio type of self calibration techniques. The calibration ratio for this instrument is at least 1.4:1. TSI's calibration system meets ISO-9001:2000 and complies with ISO 10012:2003, Quality Assurance Requirements for Measuring Equipment. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

Measurement Variable	System ID Number	Date Last Calibrated	Calibration Due Date
DC Voltage	E002065	01-10-06	01-10-07
Thermometer	E000808	10-28-05	10-28-06
Pressure	E002083	09-05-06	03-05-07
Pressure	E002081	09-05-06	03-05-07

Calibration procedure used: 128000128-02

Abay Gebre
Calibrated By

Sep. 7, 2006
Calibration Date

INDOOR ENVIRONMENTAL SERVICES

AIR BALANCE REPORT

Tech: Brett Torngren

Job Name: FD Thomas Job #: 21.1170 Date: 23-Oct-06

Contractor: Brett Torngren

Air Hood: Alnor Analog#1

		OPENING				DESIGN		TEST1	TEST2	TEST3	CLG MIN	HTG
UNIT	OUTLET	NO.	TYPE	SIZE(in)	FACTOR	MAX	MIN	CFM	CFM	CFM	CFM	CFM
HP #3 (1)												
	1		CD	8"	1.0	200		250	225	220		
	2		CD	8"	1.0	200		220	220	220		
	3		CD	8"	1.0	200		190	215	220		
				Totals:		600		660	660	660		
				OSA		80		75				
				RA		520		580				

SIGNATURES - TECHNICIAN: **PROJECT MANAGER:**

2005 CERTIFICATE OF ACCEPTANCE (Part 1 of 2) MECH-1-A

PROJECT NAME		DATE
FD THOMAS		10-17-2006
PROJECT ADDRESS		
4 WAYNE COURT		
TESTING AUTHORITY	TELEPHONE	
INDOOR ENVIRONMENTAL SERVICES	983-8908	

GENERAL INFORMATION

DATE OF BLDG. PERMIT	PERMIT #	BLDG. CONDITIONED FLOOR AREA	CLIMATE ZONE
12/02/05	0519725	~375 Sq. FT	

BUILDING TYPE	☒ NONRESIDENTIAL	☐ HIGH RISE RESIDENTIAL		☐ HOTEL/MOTEL GUEST ROOM
PHASE OF CONSTRUCTION	☐ NEW CONSTRUCTION		☒ ADDITION ☐ ALTERATION	☐ UNCONDITIONED

STATEMENT OF ACCEPTANCE

This Certificate of Acceptance summarizes the results of the acceptance tests related to building mechanical requirements per Title 24, Part 6. (Sections 10-103.b, 121.f, 122.h, 125.a, 125.b, 125.c, 125.c.5, 125.d)

Please check one:

☐ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for it's preparation; and that I am licensed in the State of California as a civil engineer or mechanical engineer, or I am a licensed architect.

☑ I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

☐ I affirm that I am eligible under the exemption to Division 3 of the business and Professions Code to sign this document because it pertains to a structure or type of work described pursuant to Business and Professions Code sections 5537, 5538, and 6737.1.

(These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

TESTING AUTHORITY - NAME	SIGNATURE	DATE	LIC.#
I.E.S.	Brad Tarry	10-23-06	646794

INSTRUCTIONS TO APPLICANT

For Detailed instructions on the use of this and all Energy efficiency Standards acceptance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

Part 1 of 2 - Statement of Acceptance

Part 2 of 2 - Summary of Acceptance Tests

2005 CERTIFICATE OF ACCEPTANCE (Part 2 of 2) MECH-1-A

PROJECT NAME	DATE
FD THOMAS	10-17-2006

SUMMARY OF ACCEPTANCE TESTS

SYSTEM ACCEPTANCE DOCUMENT (Form 1 of 1)	TESTING AUTHORITY	DATE OF TEST	PASS / FAIL	NOTES Bldg. Dept. Use
MECH. 2-A	I.E.S.	10-23-06	PASS	
MECH 3-A	I.E.S.	10-23-06	PASS	
MECH 5-A	I.E.S.	10-23-06	PASS	

NOTE: Use additional sheets as necessary

2005 ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE

Ventilation System Acceptance Document — MECH-2-A

NJ.3.1, NJ.3.2 — Form 1 of 2

PROJECT NAME: FD THOMAS	DATE: 10-17-2006
PROJECT ADDRESS: 4 WAYNE COURT	[redacted]
TESTING AUTHORITY: INDOOR ENVIRONMENTAL SERV.	TELEPHONE: (916) 988-8808
VENTILATION SYSTEM NAME / DESIGNATION: HP. 1	

Intent: Verify measured outside airflow CFM is within ± 10% of the total required outside airflow value found in the Standards Mechanical Plan (MECH-3, Column I), per 121(f).

Construction Inspection

1 Instrumentation to perform test includes, but not limited to:

a. Watch

b. Means to measure airflow (hot wire anemometer or pitot tube)

2 Check one of the following:

☐ Variable Air Volume (VAV) - Check as appropriate:

a. Sensor used to control outdoor air flow must have calibration certificate or be field calibrated

☐ Calibration certificate (attach calibration certification)

☐ Field calibration (attach results)

☑ Constant Air Volume (CAV) - Check as appropriate:

☑ System is designed to provide a fixed minimum OSA when the unit is on

Certification Statement: I certify that all statements are true on this MECH-2-A form including the PASS/FAIL Evaluation. I affirm I am eligible to sign this form under the provisions described in the Statement of Acceptance on form MECH-1-A

Name: BRETT TORVIKEN

Company: IES

Signature: Brett Torviken Date: 10-23-06

2005 ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE

Ventilation System Acceptance Document — MECH-2-A

NJ.3.1, NJ.3.2 — Form 2 of 2

PROJECT NAME	DATE
FD THOMAS	10-17-2006

A. Equipment Testing			CAV	VAV
a.		Constant or Variable Air Volume (CAV or VAV) - check appropriate column	✓	
b.		Verify unit is not in economizer mode during test - check appropriate column	✓	
Step 1: CAV and VAV testing at full supply airflow			✓	
	1	Drive boxes open (check)		
	2	Measured outdoor airflow (cfm)	75	
	3	Required outdoor airflow (cfm) *(from MECH-3, column I)*	80	
	4	Time for outside air damper to stabilize after VAV boxes open (minutes)		
	5	Return to initial conditions (check)		
Step 2: VAV testing at reduced supply airflow				
	1	Drive boxes to minimum (check)		
	2	Measured outdoor airflow (cfm)		
	3	Required outdoor airflow (cfm) *(from MECH-3, column I)*		
	4	Time for outside air damper to stabilize after VAV boxes open (minutes)		
	5	Return to initial conditions (check)		

B. Testing Calculations & Results	CAV	VAV
Step 1: % Outdoor Air = Measured outside air /Required outside air (Step1:2/Step1:3)	94 %	%
90%< %Outdoor Air > 110% to 90% = %Outoor Air = 110%	Ⓨ / N	Y / N
Outside air damper position stabilizes within 15 minutes (Step 1:4 < 15 minutes)	Ⓨ / N	Y / N
Step 2: % Outdoor Air = Measured outside air /Required outside air (Step2:2/Step2:3)		
90%< %Outdoor Air > 110% to 90% = %Outoor Air = 110%		Y / N
Outside air damper position stabilizes within 15 minutes (Step 2:4 < 15 minutes)		Y / N

Note: Shaded areas do not apply for particular test procedure

C. PASS / FAIL Evaluation (check one):	
☑	PASS: All **Construction Inspection** responses are complete and **Testing Calculations & Results** responses are positive (Y - yes)
☐	FAIL: Any **Construction Inspection** responses are incomplete *OR* there is one or more negative (N - no) responses in **Testing Calculations & Results** section. Provide explanation below. Use and attach additional pages if necessary.

2005 ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE

Packaged HVAC Systems Acceptance Document	MECH-3-A
NJ.4.1	Form 1 of 1

PROJECT NAME: FD THOMAS	DATE: 10-17-2006
PROJECT ADDRESS: 4 WAYNE CT.	[redacted]
TESTING AUTHORITY: I.E.S. / TELEPHONE: 988-8808	
PACKAGED HVAC NAME / DESIGNATION: HP-1	

Intent: Verify that under a specific load whether in occupied or unoccupied condition, the system meets a specific sequence of operation.

Construction Inspection

1 Instrumentation to perform test includes, but not limited to:

a. None required

2 Installation

☑ Thermostat or zone temperature sensor is located within the zone that the HVAC system serves

☑ Thermostat or sensor is wired to the HVAC system correctly

3 Programming (check all of the following)

☑ Heating and cooling thermostats are capable of a 5°F deadband where cooling and heating are at a minimum (§122b3)

☑ Occupied, unoccupied, and holiday schedule have been programmed.

☐ Pre-occupancy purge (at least lesser of minimum outside air or 3 ACH for one hour prior to occupancy) programmed (§121.c.2)

☑ Set up and set back setpoints have been programmed as required

Certification Statement: I certify that all statements are true on this MECH-3-A form including the PASS/FAIL Evaluation. I affirm I am eligible to sign this form under the provisions described in the Statement of Acceptance on form MECH-1-A

Name: BRETT TORNGREN

Company: IES

Signature: Brett Torngren Date: 10-23-06

2005 ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE

Packaged HVAC Systems Acceptance Document — **MECH-3-A**

NJ.4.1 — Form 1 of 1

PROJECT NAME: FD THOMAS

DATE: 10-17-2006

B. Equipment Testing Requirements — **Operating Modes**

Check and verify the following for each simulation mode required		A	B	C	D	E	
	1 Supply fan operates continually	☑	☑			☑	☑
	2 Supply fan turns off				☑		
	3 Supply fan cycles on and off			☑			☑
	4 System reverts to "occupied" mode to satisfy any condition					☑	
	5 System turns off when manual override time period expires					☑	
	6 Gas-fired furnace, heat pump, or electric heater stages on	☑		☑			
	7 Neither heating or cooling is provided by the unit		☑		☑		
	8 No heating is provided by the unit		☑		☑	☑	☑
	9 No cooling is provided by the unit	☑	☑	☑	☑		
	10 Compressor stages on					☑	☑
	11 Outside air damper is open to minimum position	☑	☑			☑	☑
	12 Outside air damper closes completely				☐		
	13 System returned to initial operating conditions after all tests have been completed (Y)N						

Heating load during occupied condition | No-load during occupied condition | Heating load during unoccupied condition | No-load during unoccupied condition | Manual override

Note: Shaded areas do not apply for particular test procedure

C. Testing Results

Indicate if Passed (P), Failed (F), or Not Applicable (X), fill in appropriate letter	P	P	P	P	P	P

D. PASS / FAIL Evaluation (check one):

☑	PASS: All **Construction Inspection** responses are complete and all applicable **Testing Results** responses are "Passed" (P)
☐	FAIL: Any **Construction Inspection** responses are incomplete *OR* there is one or more "Failed" (F) responses in **Testing Results** section. Provide explanation below. Use and attach additional pages if necessary.

2005 ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE	MECH-5-A
NJ.5.1Air Distribution Acceptance Document	**Part 1 of 3**

PROJECT NAME	DATE	TELEPHONE
FD THOMAS	10-24-06	916-988-8808
PROJECT ADDRESS: 4 WAYNE COURT #9		[redacted]
TESTING AUTHORITY: IES		
AIR DISTRIBUTOR NAME / DESIGNATION: LENNOX HP-1	PERMIT NUMBER: 0519725	For Agency/Date Enforcement Agency Use

Intent:	New single zone supply ductwork shall not exceed a 6% leakage rate per §144(k) or §149D i, existing single zone ductwork shall not exceed 15% leakage or other compliance path per §149D ii or §149E.

Construction Inspection

1	Scope of test – New Buildings – this test required on New Buildings only if all checkboxes 1(a) through 1(c) are checked		
	Existing Buildings – this test required if 1(a) through 1(d) are checked		
	Ductwork conforms to the following (note if any of these are not checked, then this test is not required):		
	☑	1a) Connected to a constant volume, single zone air conditioners, heat pumps, or furnaces	
	☑	1b) Serves less than 5000 square feet of floor area	
	☑	1c) Has more than 25% duct surface area located in one or more of the following spaces	
		- Outdoors	
		- A space directly under a roof where the U-factor of the roof is greater than U-factor of the ceiling	
		- A space directly under a roof with fixed vents or openings to the outside or unconditioned spaces	
		- An unconditioned crawlspace	
	☑	- Other unconditioned spaces 1d) A duct is extended or any of the following replaced: air handler, outdoor condensing unit of a split system, cooling or heating coil, or the furnace heat exchanger.	
2	Instrumentation to perform test includes:		
	a. Duct Blaster		
3	Material and Installation. Complying new duct systems shall have a checked box for all of the following categories a through f.		
	a. Choice of drawbands (check one of the following)		
	☐	Stainless steel worm-drive hose clamps	
	☑	UV-resistant nylon duct ties	
☑	b. Flexible ducts are not constricted in any way		
☑	c. Duct leakage tests performed before access to ductwork and connections are blocked		
☑	d. Joints and seams are not sealed with cloth back rubber adhesive tape unless used in combination with Mastic and drawbands		
☑	e. Duct R-values are verified R-8 per 124(a)		
☑	f. Ductwork located outdoors has insulation that is protected from damage and suitable for outdoor service		

Certification Statement

I certify that all statements are true on this MECH-5-A form including the PASS/FAIL Evaluation. I affirm I am eligible to sign this form under the provisions described in the Statement of Acceptance on form MECH-1-A

Name:	BRETT TORVGREN	
Company:	IES	
Signature:	BRETT TORVGREN	Date: 10-24-06

INSTALLER CERTIFICATION

Part 2 of 3 **MECH-5-A**

PROJECT NAME	DATE
FD THOMAS	10-24-06
SITE ADDRESS	**PERMIT NUMBER**
4 WAYNE CT	0519725

COPY TO: Building Department, Builder, Building Owner at Occupancy, HERS Provider

VERIFIED DUCT TIGHTNESS BY INSTALLER

The installing contractor must pressure test every new HVAC systems that meet the requirements of Section 144(k) and every retrofit to existing HVAC systems that meet the requirements of section 149 D or E (see Scope of Test under Construction Inspection)

RATED FAN FLOW (applies to all systems)		Measured Values	
1	Cooling capacity or for heating only units heating capacity	2 TON	
	a) Cooling capacity (for all units but heating only units) in tons	2 TON	
	b) Heating capacity (for heating only units) kBtu/h	N/A	
2	Fan flow calculation a) Cooling capacity in tons [2 (Line # 1a) x 400 cfm/ton] b) Heating only cap. kBtu/h [N/A (Line # 1b) x (21.7 cfm/kBtu/h)]	800	
3	**Total calculated supply fan flow 2(a) or 2(b) cfm**	800	
NEW CONSTRUCTION OR ENTIRE NEW DUCT SYSTEM ALTERATION:			
	Duct Pressurization Test Results (CFM @ 25 Pa)		
4	Enter Tested Leakage Flow in CFM:	45	✓ ✓
5	Pass if Leakage Percentage ☑ 6%: [45 (Line # 4) / 800 (Line # 3)] x 100	.056 %	☑ Pass ☐ Fail
ALTERATIONS: Pre-existing Duct System with Duct Alteration and/or HVAC Equipment Change-Out			
6	Enter Tested Leakage Flow in CFM: **Pre-Test** of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.	N/A	
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.	N/A	
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out Use one of the following Three Tests or Verification Standards for compliance:			
			✓ ✓
8	Pass if Leakage Percentage ☐ 15% [(Line # 7) / (Line # 3)] x 100	%	☐ Pass ☐ Fail
9	Pass if Leakage Reduction Percentage ☐ 60% Leakage reduction = [1 - [(Line#7) / (Line#6)]} x 100	%	☐ Pass ☐ Fail
10	Pass if all Accessible Leaks are sealed as confirmed by Visual Inspection and Verification by HERS rater (sampling rate 100%)		☐ Pass ☐ Fail
	Pass if One of Lines #8 through # 10 pass		☐ Pass ☐ Fail

INSTALLER COMPLIANCE STATEMENT

The building was: ✓ ☑ Tested at Final ☐ Tested at Rough-in

✓ ☑ I, the undersigned, verify that the above diagnostic test results and the work I performed associated with the test(s) is in conformance with the requirements for compliance credit. I, the undersigned, also certify that the newly installed or retrofit Air-Distribution System Ducts, Plenums and Fans comply with Mandatory requirements specified in Section 124 of the 2005 Building Energy Efficiency Standards.

Name:	BRENT TORVGREN		
Company:	IES		
Signature:	Brent Torvgren	Date:	10-24-06

INSTALLER CERTIFICATION — Part 3 of 3 MECH-5-A

HERS Rater: Telephone:	Sample Group Number:
Certifying Signature:	Sample building Number:
Firm:	HERS Provider:

Copies to: Builder, Building Owner at Occupancy, Building Department (wet signature), HERS Provider

For new buildings the HERS rater must test and field verify the first individual single zone package space conditioning equipment unit of each building. After the first unit passes the builder shall identify a group of up to seven package units in the building from which one sample will be selected for testing. If this first sampled unit fails the HERS rater must pick another package unit from the group for testing. If the second unit in the group does not pass the HERS rater must test all package units in the group.

For existing buildings the HERS rater must pressure test one out of every seven units a contractor changes. Same rules apply for sampling above.

This page must be filled out by the HERS rater for all tested and sampled buildings. If the installer has not tested every system and provided a MECH-5-A to the HERS rater sampling must not occur.

The unit 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 building identified on this form complies with the diagnostic tested compliance requirements as checked ✓ on this form. The HERS rater must verify the distribution system on every new TESTED system to make sure that it is fully ducted and correct tape is used before a MECH-5-A may be released.

- ☐ The installer has provided a completed MECH-5-A for every system in the group
- ☐ New distribution systems are fully ducted (i.e., does not use building cavities as plenums or platform returns in lieu of ducts).
- ☐ In new duct systems, where cloth backed, rubber adhesive duct tape is installed, mastic and draw bands are used in combination with cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

	RATED FAN FLOW (applies to all systems)	Measured Values	
1	Cooling capacity or for heating only units heating capacity		
	a) Cooling capacity (for all units but heating only units) [_____ tons x 400 cfm/ton]		
	b) Heating capacity (for heating only units) [_____ kBtuh x 21.7 cfm/kBtuh]		
2	**Total calculated supply fan flow 1(a) or 1(b) cfm**		
NEW CONSTRUCTION OR ENTIRE NEW DUCT SYSTEM ALTERATION:			
3	Duct Pressurization Test Results (CFM @ 25 Pa) Enter Tested Leakage Flow in CFM:		✓ ✓
4	Pass if Leakage Percentage☐ 6%: [_____**(Line # 3)** / _____**(Line # 2)**] x 100	%	☐ Pass ☐ Fail
ALTERATIONS: Pre-existing Duct System with Duct Alteration and/or HVAC Equipment Change-Out			
5	Enter Tested Leakage Flow in CFM: **Final Test** of **New** Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.		
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out, Use one of the following Three Tests or Verification Standards for compliance:			
6	Pass if Leakage Percentage ☐ 15% [_____**(Line # 5)** / _____**(Line # 2)**] x 100	%	☐ Pass ☐ Fail
7	For systems certified by the installer as reducing leakage, pass if Leakage Reduction ☐ 60%. $\text{LeakageReduction} = 1 - \frac{\text{(Line\#5 HERS Tested Leakage)}}{\text{(Line\#6 Installer's Certified Pre-Test Leakage)}} \times 100$	%	☐ Pass ☐ Fail
8	Pass if all Accessible Leaks are sealed as confirmed by Visual Inspection and Verification by HERS rater (sampling rate 100%)		☐ Pass ☐ Fail
	Pass if One of Lines # 6 through # 8 pass		☐ Pass ☐ Fail

INSTALLER CERTIFICATION (Part 3 of 3) MECH-5-A

HERS Rater: Donald M Bryant Telephone: 916 826-3858	Sample Group Number:
Certifying Signature:	Sample building Number:
Firm: Reliable Air Duct Cleaning	HERS Provider: Cheers

Copies to: Builder, Building Owner at Occupancy, Building Department (wet signature), HERS Provider

For new buildings the HERS rater must test and field verify the first individual single zone package space conditioning equipment unit of each building. After the first unit passes the builder shall identify a group of up to seven package units in the building from which one sample will be selected for testing. If this first sampled unit fails the HERS rater must pick another package unit from the group for testing. If the second unit in the group does not pass the HERS rater must test all package units in the group.

For existing buildings the HERS rater must pressure test one out of every seven units a contractor changes. Same rules apply for sampling above.

This page must be filled out by the HERS rater for all tested and sampled buildings. If the installer has not tested every system and provided a MECH-5-A to the HERS rater sampling must not occur.

The unit 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 building identified on this form complies with the diagnostic tested compliance requirements as checked ✓ on this form. The HERS rater must verify the distribution system on every new TESTED system to make sure that it is fully ducted and correct tape is used before a MECH-5-A may be released.

- ☑ The installer has provided a completed MECH-5-A for every system in the group
- ☑ New distribution systems are fully ducted (i.e., does not use building cavities as plenums or platform returns in lieu of ducts).
- ☑ In new duct systems, where cloth backed, rubber adhesive duct tape is installed, mastic and draw bands are used in combination with cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

	RATED FAN FLOW (applies to all systems)	Measured Values	
1	Cooling capacity or for heating only units heating capacity		
	a) Cooling capacity (for all units but heating only units) [2 tons x 400 cfm/ton]	800	
	b) Heating capacity (for heating only units) [kBtuh x 21.7 cfm/kBtuh]		
2	**Total calculated supply fan flow 1(a) or 1(b) cfm**	800	
	NEW CONSTRUCTION OR ENTIRE NEW DUCT SYSTEM ALTERATION:		
3	Duct Pressurization Test Results (CFM @ 25 Pa) Enter Tested Leakage Flow in CFM:	40	✓ ✓
4	Pass if Leakage Percentage☐ 6%: [40 (Line # 3) / (Line # 2)] x 100	5 %	☑ Pass ☐ Fail
	ALTERATIONS: Pre-existing Duct System with Duct Alteration and/or HVAC Equipment Change-Out		
5	Enter Tested Leakage Flow in CFM: **Final Test** of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.		
	TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out, Use one of the following Three Tests or Verification Standards for compliance:		
6	Pass if Leakage Percentage ☐ 15% [(Line # 5) / (Line # 2)] x 100	%	☐ Pass ☐ Fail
7	For systems certified by the installer as reducing leakage, pass if Leakage Reduction ☐ 60%. LeakageReduction = 1 − [(Line#5 HERS Tested Leakage) / (Line#6 Installer's Certified Pre-Test Leakage)] x 100	%	☐ Pass ☐ Fail
8	Pass if all Accessible Leaks are sealed as confirmed by Visual Inspection and Verification by HERS rater (sampling rate 100%)		☐ Pass ☐ Fail
	Pass if One of Lines # 6 through # 8 pass		☐ Pass ☐ Fail