

CITY OF SACRAMENTO

Permit No: 0511690

1231 I Street, Sacramento, CA 95814

Insp Area: 1
Thos Bros: 298E5

Site Address: 2636 LATHAM DR SAC
Parcel No: 293-0070-032

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

CONTRACTOR
MICHAEL LIGUORI
15000 REYNOSA
RANCHO MURIETA, CA 95683

OWNER
SACRAMENTO COUNTRY DAY SCHOOL
2636 LATHAM DR
SACRAMENTO, CA 95825

ARCHITECT

Nature of Work: INSTALL 2 PARTITION WALLS INTERIOR. c/o WINDOW, ADD OUTLETS MOVE PANEL & ADD DOOR building 6-a & 6-B

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

Lender's Name _____ Lender's Address _____

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

X License Class B License Number 793709 Date 9/8/2005 Contractor Signature Michael Liguori

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

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

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

I am exempt under Sec. _____ B & PC for this reason: _____
Date _____ Owner Signature _____

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

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

X Date 9/8/2005 Applicant/Agent Signature Michael Liguori

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.

X 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 the permit is issued. My workers' compensation insurance carrier and policy number are:

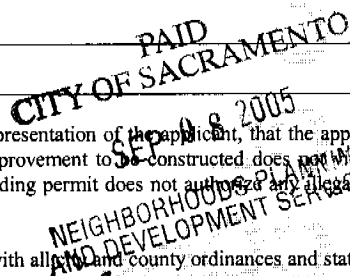
Carrier State Fund Policy Number 713-0013115 Exp Date 12-31-2005

(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.

X Date 9/8/2005 Applicant Signature Michael Liguori

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.





Cert. No. 2634

INDEPENDENT TEST & BALANCE OF AUBURN

Independent Test & Balance of Auburn, Inc.
1660 Crockett Road
Auburn California 95603
(530) 745-9818 Fax (530) 745-9820
Contractor's License # 609064

Microfilm

Completion Date

SEPTEMBER 15, 2005

Job No. 2063

Air System Balance Report

Job Name/Location: Sacramento Country Day School
Latham Drive
Sacramento, CA.

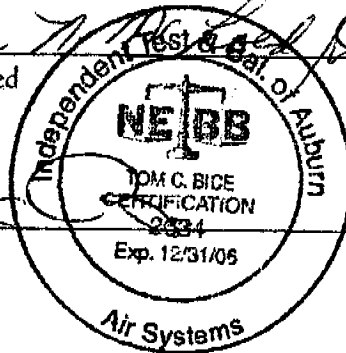
Contractor: Liguori Construction

Engineer:

Architect:

Tested By: *Dennis N. McLoed*
Dennis N. McLoed

Reviewed By: *Tom C. Bice*
Tom C. Bice



◆ Total System Balancing ◆



Cert. No. 2614

INDEPENDENT TEST & BALANCE OF AUBURN

Table of Contents

Section	Description
1	Remarks Concerning Balance Procedures
2.	AC-1, AC-2.



Code No. 26.14

INDEPENDENT TEST & BALANCE OF AUBURN

Job # 2063

Section One

1. The total air delivery each fan was established and does not include possible duct leakage. Duct pitot traverses were not obtainable.
2. Ceiling inlet and outlet quantities were measured by balometer, see data sheet this section.
3. CFM air quantity for OSA was set by anemometer traverse at the units OSA intake screen or duct.
4. Following this sheet is:
 - A. Symbol sheet
 - B. Calibration curve(s) balometer & anemometer.

SYMBOL SHEET

CFM	CUBIC FEET PER MINUTE
FPM	FEET PER MINUTE
SP	STATIC PRESSURE
SA	SUPPLY AIR
RA	RETURN AIR
OSA	OUTSIDE AIR
EA	EXHAUST AIR
CH.W.	CHILLED WATER
C.W.	CONDENSED WATER
H.W.	HOT WATER
CD	CEILING DIFFUSER
SAR	SUPPLY AIR REGISTER
SWR	SIDE WALL REGISTER
CR	CEILING RETURN
RR	RETURN REGISTER
CLG.	CEILING
AD	ACCESS DOOR
MVD	MANUAL VOLUME DAMPER
BV	BALANCE VALVE
G.V.	GATE VALVE
GL.V.	GLOBE VALVE
N.A.	NOT ACCESSIBLE
O.B.D.	OPPOSED BLADE DAMPER
EWT	ENTERING WATER TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
LAT	LEAVING AIR TEMPERATURE
DB	DRY BULB
W.B.	WET BULB
MIN S.P.	MINIMUM SET POINT

ALNOR

TSI Incorporated

CERTIFICATE OF CALIBRATIONTSI 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	74.7	°F
RELATIVE HUMIDITY	51.5	%
BAROMETRIC PRESSURE	28.8	in.Hg

MODEL	Standard Balometer® 534593100
SERIAL NO.	70527387

CALIBRATION STANDARDS USED
Capture Hood Calibration System 3

<input checked="" type="checkbox"/> AS LEFT	<input checked="" type="checkbox"/> IN TOLERANCE
<input type="checkbox"/> AS FOUND	<input type="checkbox"/> OUT OF TOLERANCE

CALIBRATION DATA

RANGE	AIR VELOCITY 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	1800	1740 - 1860	1800	1800	1740 - 1860
	1200	1210	1140 - 1260	1200	1175	1140 - 1260
400/1000	900	900	870 - 930	900	900	870 - 930
	600	610	570 - 630	600	605	570 - 630
100/500	450	452	435 - 465	450	460	435 - 465
	300	302	285 - 315	300	310	285 - 315
0/250	180	190	160 - 200	180	173	160 - 200
	100	108	80 - 120	100	99	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 1.3:1. 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	E002072	04-06-05	04-06-06
Thermometer	E000808	08-25-04	08-25-05
Pressure	E002082	03-16-05	09-16-05
Pressure	E002080	03-16-05	09-16-05

Calibration procedure used: 128000128


 Calibrated By

Jul. 25, 2005

Calibration Date

CERTIFICATE OF CALIBRATION AND TESTING

Alnor Model RVA+ Alnor Serial No. 70433115
 Description RVA+, Rotating Vane Anemometer
 Calibration Standard WIND TUNNEL CALIBRATION SYSTEM, SERIAL NO. 191

CALIBRATION VERIFICATION RESULTS

Calibration Standard	Instrument Output	Percent Difference	Error Compared to Tolerance	
			Tolerance Limit-	Tolerance Limit+
0.505 m/s	0.516 m/s	2.1		*
0.715 m/s	0.727 m/s	1.7		*
1.508 m/s	1.515 m/s	0.5		*
3.003 m/s	3.001 m/s	-0.1	*	
6.570 m/s	6.572 m/s	0.0	*	
11.645 m/s	11.631 m/s	-0.1	*	
20.255 m/s	20.269 m/s	0.1	*	
26.832 m/s	26.904 m/s	0.3	*	
23.8 °C	24.6 °C			

Tolerance Limits:
 ± {1% of reading
 + 0.020 m/s}

Velocity Corrected to Std Conditions of:
 Ambient Temperature: 21.1°C
 Barometric Pressure: 760.0 mmHg

Alnor Instrument Co. does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by Alnor and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. Furthermore, all test and calibration data supplied by Alnor has been obtained using standards whose accuracies are traceable to the National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants.

Applicable Test Report	Report Number	Date Last Verified
DC voltage	E000048	07-22-04
Barometric Pressure	E001329	05-04-04
Temperature (0°C)	E000822	07-22-04
(19-35°C)	E001807	07-22-04
(60°C)	E001806	07-22-04
Pressure	E001517	06-18-04
	E000808	03-16-04
Velocity	E002002	02-24-04
Dewpoint	E001319	10-28-03

Sadeburg
 Calibrated by _____ Final Function Check _____ Aug 23, 2004
 Alnor _____ Calibration Date

Mailing Address: P.O. Box 64394 St. Paul, MN 55164 USA
 Shipping Address: 500 Cardigan Road Shoreview, MN 55126 USA
 Phone: (800) 777-8356 or (651) 490-2711 Fax: (651) 490-2874



Cert No. 2034

INDEPENDENT TEST & BALANCE OF AUBURN

ITB JOB # 2063

SECTION 2 PAGE 1

FAN & OUTLET TEST DATA

LOCATION SACRAMENTO COUNTRY DAY SCHOOL

SYSTEM AC-2

MOTOR NAMEPLATE DATA

MFG _____ FR _____
 HP 1/3 V 208 FLA 4.0
 PH _____ SF _____ RTM _____

SHEAVE DATA

DIA _____ D/D _____ SHAFT _____ D/D _____
 ADJ MIN _____ MED _____
 MAX _____ FIXED _____

DATA ITEM	TEST 1	TEST 2	TEST 3
VOLTS	210	210	
AMPS	1.5	1.5	
BHP			
FAN RPM	DIRECT DRIVE	DIRECT DRIVE	
SP-	.20	.19	
SP+	.23	.25	
TSP ESP	.43	.44	
FILTER SP	.09	.09	
CFM TOTAL	800	800	
CFM OA	600	650	
CFM OA	200	150	

FAN NAMEPLATE DATA

MFG CARRIER
 MODEL 50HS-042
 TYPE _____
 SIZE _____

SHEAVE DATA (FAN)

DIA _____ D/D _____ SHAFT _____ D/D _____ HUB _____
 BELTS _____
 STARTER _____ SIZE _____
 HEATERS _____

FAN DESIGN DATA

OSA _____ TSP _____ BHP _____
 CFM _____ ESP _____ RPM _____

ROOM	OPENING			FACTOR	DESIGN		TEST 1		TEST 2		TEST 3	
	NO.	TYPE	SIZE		FPM	CFM	FPM	CFM	FPM	CFM	FPM	CFM
	3	CD	12X12	1.0				400		400		
	4	CD	12X12	1.0				340		400		
								800		800		
	R-3	CR	24X12	1.0				600		650		

REMARKS: OA DUCT 6"Ø= 196 SQ. FT. X 1018 FPM=200 CFM



INDEPENDENT TEST & BALANCE OF AUBURN

ITB JOB # 2063

SECTION 2 PAGE 2

FAN & OUTLET TEST DATA

LOCATION SACRAMENTO COUNTRY DAY CENTER

SYSTEM AC-1

MOTOR NAMEPLATE DATA

MFG _____ FR _____
 HP 1/3 V 208 FLA 3.3
 FH 1 SF _____ RPM _____
SHEAVE DATA
 DIA D/D SHAFT D/D
 ADJ MIN MED
 MAX FIXED

DATA ITEM	TEST 1	TEST 2	TEST 3
VOLTS	210	210	
AMPS	1.8	1.7	
BHP			
FAN RPM	DIRECT DRIVE	DIRECT DRIVE	
SP-	.12	.16	
SP+	.22	.25	
TSP ESP	.34	.41	
FILTER SP	.08	.08	
CFM TOTAL	1070	1000	
CFM RA	920	800	
CFM OA	150	200	

FAN NAMEPLATE DATA

MFG TRANE
 MODEL WCC042F3
 TYPE PKG
 SIZE _____

SHEAVE DATA FAN

DIA D/D SHAFT D/D HUB _____
 BELTS D/D
 STARTER _____ SIZE _____
 HEATERS _____

FAN DESIGN DATA

OSA _____ TSP _____ RHP _____
 CFM _____ ESP _____ RPM _____

ROOM	OPENING			FACTOR	DESIGN		TEST 1		TEST 2		TEST 3	
	NO.	TYPE	SIZE		FPM	CFM	FPM	CFM	FPM	CFM	FPM	CFM
6A	1	CD	12X12	1.0				470		500		
6C	2	CD	12X12	1.0				600		500		
								1070		1000		
6A	R-1	CR	24X12	1.0				460		400		
6C	R-2	CR	24X12	1.0				460		400		
								920		800		

SQ. FT. OA DUCT - 6"O=196 SQ. FT. X 1022 FPM = 200 CFM