

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0609233
Insp Area: 1
Thos Bros: 297C4

Site Address: 555 CAPITOL ML SAC
Parcel No: 006-0145-025 SUITE 300

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

CONTRACTOR
REINKE CONSTRUCTION
8196 BELVEDERE AVE., #150
SACRAMENTO CA 95826

OWNER
DOWNTOWN PLAZA TOWERS ASSOCIATES
555 CAPITOL ML #240
SACRAMENTO, CA 95814

ARCHITECT

Nature of Work: FFP: INTERIOR REMODEL OF EXISTING OFFICE SPACE & UPGRADE MECHANICAL SYSTEM; FIRE ALARM, SUITE 300 (PAPERLESS)

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-1 License Number 616274 Date 5-31-08 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).

PAID
CITY OF SACRAMENTO

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

Date _____ Owner Signature JUL 11 2006

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 ~~NEW CITY HALL~~ constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

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

X Date 7-11-06 Applicant/Agent Signature [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.

RB 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 INS FUND Policy Number 1404478 Exp Date 07/01/2007

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

X Date 7-11-06 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.

FINAL AIR BALANCE CO., INC
Testing & Balancing – Industrial & Environmental Systems
13020 Piper Hill Dr. Penn Valley, CA 95946
Ph: (530) 432-2226 Fax: (530) 432-2901

**CERTIFIED TEST, ADJUST, BALANCE REPORT
FOR**

Plaza 555 - Suite 300
East & West Towers

Architect:

Engineer: Frank M. Booth Design Build Co.
4220 Douglas Blvd.
Granite Bay, CA 95746
(916) 784-0777

Contractor: Plaza 555
555 Capitol Mall Suite 240
Sacramento, CA 95814

The data represented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the *NEBB Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems*. Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test, Adjust, Balance Report Summary.

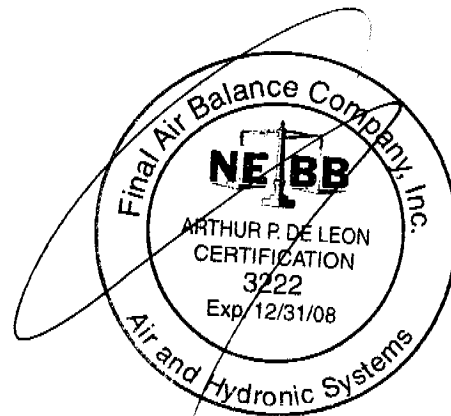
NEBB Certification: 3222

TABB Certification: BB104006C

Date : 1/19/07

FAB Job Number: 0607J696

Approved : Art De Leon



Testing Adjusting and Balancing Bureau



This certifies that

Final Air Balance Co., Inc.


is a certified Testing, Adjusting, and Balancing Contractor since

April 1, 2003

and has met all the qualifications for renewal on this date of

March 4, 2005


Labor Co-Chairman

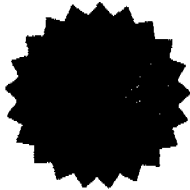

Administrator of TABB

BB104008C
Certification No.


Management Co-Chairman


Director of Certification

3/31/2007
Expiration Date



International Certification Board



**CERTIFIED
SUPERVISOR**

Sheet Metal and Air Conditioning Industry

This certifies that

Arthur De Leon

has completed the requirements of Certification as a

Testing, Adjusting and Balancing Supervisor

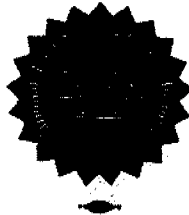
on

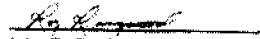
March 4, 2005

BB162002S
Certification #


March 4, 2005
Valid Date

March 31, 2007
Expiration Date




Labor Co-Chairman


Management Co-Chairman


Administrator of TABB

International Certification Board



Sheet Metal and Air Conditioning Industry

This Certifies that

Arthur DeLeon

has completed the Competency requirements for Certification as a
Sound and Vibration Engineer on

February 9, 2006

SV060106E
Certification#
Feb. 9, 2006
Valid Date
Mar. 31, 2008
Expiration Date



Valid during qualified employment

[Signature]
Labor Co-Chairman
[Signature]
Management Co-Chairman
[Signature]
Administrator of TABB



TESTING, ADJUSTING AND BALANCING BUREAU
THE PROFESSIONAL'S CHOICE™

This certifies that

Final Air Balancing Company

has completed the requirements of certification as a
Sound and Vibration Contractor

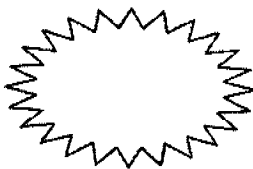
on

June 26, 2006

[Signature]
Labor Co-Chairman

[Signature]
ICB Co-Chairman

SV162002C
Certification No.



[Signature]
Management Co-Chairman

[Signature]
ICB Co-Chairman



TESTING, ADJUSTING AND BALANCING BUREAU
THE PROFESSIONAL'S CHOICE™

This certifies that
Final Air Balancing Co. Inc.
has completed the requirements of certification as a
Commissioning Contractor

on
August 8, 2006

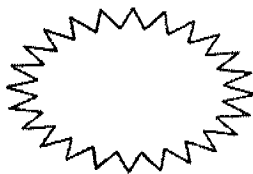
Michael J. Sullivan
Labor Co-Chairman

Ray R. Simpson
ICB Co-Chairman

CX0800808C
Certification No.

Al P. Puccio
Management Co-Chairman

David M. Kelly
ICB Co-Chairman



International Certification Board



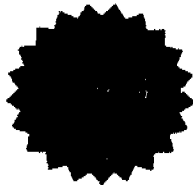
TESTING, ADJUSTING AND BALANCING BUREAU
THE PROFESSIONAL'S CHOICE™

Sheet Metal and Air Conditioning Industry

This Certifies that
Arthur De Leon
has completed the Competency requirements for Certification as a
Commissioning Supervisor on

August 10, 2006

CX0806406S
Certification#
August 10, 2006
Valid Date
September 30, 2008
Expiration Date



Valid during qualified employment

Ray R. Simpson
Labor Co-Chairman

Al P. Puccio
Management Co-Chairman

David M. Kelly
Administrator of TABB

FINAL AIR BALANCE CO., INC
Testing & Balancing – Industrial & Environmental Systems
13020 Piper Hill Dr. Penn Valley, CA 95946
Ph: (530) 432-2226 Fax: (530) 432-2901

Performance Guarantee

Pursuant to the agreement between

FINAL AIR BALANCE CO., INC.

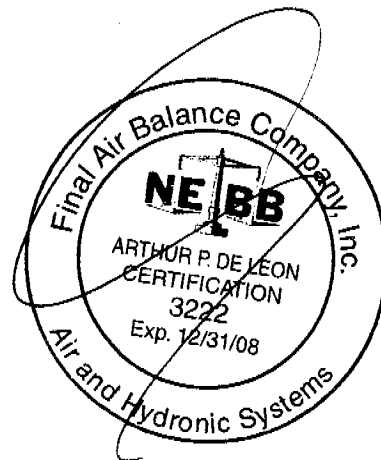
And

Plaza 555

All systems shall be balanced in accordance with the plans and specifications and to the optimum performance capabilities of the equipment and design. Testing and balancing shall be done in accordance with the standards published by the National Environmental Balancing Bureau.

Air Balance performed by Final Air Balance Co., Inc. shall be guaranteed for one year. This applies to all equipment and air distribution per specifications on the Certified Test, Adjust, Balance Report. Any problems will be investigated and corrected at no additional charge. This guarantee is void if the systems involved are changed in any way or adjusted by another person(s), facilities, or another air balance company.

Project Name Plaza 555 - Suite 300
Date 1/19/07
By Arthur De Leon



FINAL AIR BALANCE CO., INC
Testing & Balancing – Industrial & Environmental Systems
 13020 Piper Hill Dr. Penn Valley, CA 95946
 Ph: (530) 432-2226 Fax: (530) 432-2901

TEST AND BALANCE INSTRUMENTATION

The following **bold/italicized** instruments were used to successfully measure and set each device on this project. These instruments meet the National Environmental Balancing Bureau's minimum guidelines for accuracy and calibration.

Instrument	Manufacturer	Model	Serial number	Calibration Date
Air Data Multimeter	Shortridge	ADM870C	M02540	6/14/06
Air Data Multimeter	Shortridge	ADM870C	M00755	10/12/06
Amp/Volt Meter – Digital	Fluke	337 AC/DC True RMS	85910057	2/15/06
Amp/Volt Meter – Digital	Fluke	36 AC/DC True RMS	78203394	6/8/06
Amp/Volt Meter – Digital	Fluke	336 AC/DC True RMS	80904943	1/28/05
Duct Leakage Test Kit with Oriface Tube 4"	McGill Airflow	LTK-SCA	48608	N/A
Oriface Tube 4"		2"	2310-S	N/A
		1 1/16"	2861-S	N/A
Duct Leakage Test Kit	Energy Conservatory	DG-700	4676-4-700	2/6/06
Flow Hood – Analog	Alnor	6461	3845/1735	12/23/03
Flow Hood - Digital	Shortridge	8400	M02540	6/14/06
Flow Hood - Digital	Shortridge	8400	M00755	10/12/06
Hydronic Manometer	Alnor	HM650	393	10/14/06
Hydronic Manometer	Alnor	HM680	70536221	9/16/05
Hygrometer – Digital	Dwyer	485-1	0206	2/21/06
Manometer - Digital	Dwyer	475-1	N45N / 3209	7/22/05
Pitot Tube	Dwyer	18"	-----	N/A
Pitot Tube	Dwyer	36"	-----	N/A
Pitot Tube	Dwyer	48"	-----	N/A
Pitot Tube	Dwyer	60"	-----	N/A
Pressure Gauge – Digital	PSI-Tronix	PG2000CG	3208	2/15/06
Pressure Gauge – Digital	PSI-Tronix	PG2000CG	8024652-1	7/22/05
Rotating Vane – Digital	Alnor	RVA+	70549173	12/8/05
Rotating Vane – Digital	Alnor	RVA+	70549175	12/8/05
Sound Level Meter	CESVA	SC160	T225467	12/11/06
Sound Level Calibrator	BSWA	CA106	44076	10/14/06
Tachometer - Digital	Monarch	Tach-100	1354512	6/8/06
Tachometer - Digital	Monarch	Tach-100	1354509	1/28/05
Tachometer - Digital	Monarch	Tach-100	1355786	2/15/06
Thermo Anemometer - Digital	Dwyer	471-3	N-210	1/28/05
Thermometer – Non contact	Raytek	RAYST20	2039480201-0001	2/15/06
Thermometer – Thermocouple	Fluke	51-II	80390110	2/15/06

Definitions of Abbreviations, Terminology, and Symbols

A	Nameplate Amps	FD	Fire Damper
AHU	Air Handling Unit	FG	Floor Grille
AC or ACU	Air Conditioner or Air Conditioning Unit	FLA	Full Load Amperage
ACCU	Air-Cooled Condensing Unit	FLEX	Flexible
ACH	Air Changes per Hour	FLTS	Filters
ACV	Automatic Control Valve	FPB	Fan Powered Box
AMB	Ambient	FPM	Feet Per Minute
AMP	Ampere	FR	Floor Register
AP	Access Point or Panel	FSD	Fire Smoke Damper
AVG	Average	FTU	Fan Terminal Unit
BAD	Bypass Air Damper	GA	Gauge
BHP	Brake Horsepower	GPM	Gallons per Minute
BTU	British Thermal Unit	HC	Heating Coil
BTUH	British Thermal Units per Hour	HD	Head pressure measured in inches or feet of water
CAV	Constant or Continuous Air Volume	Heater O.L.	Thermal Overload protection for motors located at the motor starter
CC	Cooling Coil	HEPA	High Efficiency Particulate Air Filter
CD	Ceiling Diffuser	HOA	Hand/Off/Auto switch
CFM	Cubic Feet per Minute	HP	Horsepower
CG	Ceiling Grille	HPS	High Pressure Steam
CH	Chiller	HRC	Heat Recovery or Reclaim Coil
CHWR	Chilled Water Return	HVAC	Heating, Ventilating & Air Conditioning
CHWS	Chilled Water Supply	HWR	Hot Water Return or Heating Water Return
COP	Coefficient of Performance	HWS	Hot Water Supply or Heating Water Supply
CP	Circulating Pump	HX	Heat Exchanger
CR	Ceiling Register	Hydronic	Indicates the use of conveyance of liquid for Thermal transfer
CT	Cooling Tower	ID	Inside Diameter
CU	Condensing Unit	IV	Inlet Vanes
CUH	Cabinet Unit Heating	K	Correction Factor
CV	Control Valve	LAT	Leaving Air Temperature
CWR	Condenser Water Return	LD	Linear Slot Diffuser
CW or CWS	Condenser Water Supply	LDB	Leaving Dry Bulb
DAT	Discharge Air Temperature	LPS	Low Pressure Steam
DB	Dry Bulb	LRA	Locked Rotor Ampere
DD	Direct Drive	LV	Leaving
DIA	Diameter	LWB	Leaving Wet Bulb
Delta	Difference, net decrease or increase	LWG	Low Wall Grille
DNA	Data Not Available	LWR	Low Wall Register
DNL	Data Not Listed	LWT	Leaving Water Temperature
E	Existing	MAU / MUA	Make-up Air Unit or Make-up Air
EA	Exhaust Air	MAX	Maximum
EAT	Entering Air Temperature	MBH	Thousand BTU's per Hour
Economizer	Controls and componentry that allow an air handler to logically utilize outdoor air for cooling as opposed to the use of mechanical cooling.	MIN	Minimum
EDB	Entering Dry Bulb	MVD	Manual Volume Damper
EDC	Electric Duct Coil	(N)	New
EDH	Electric Duct Heater	N/A	Not applicable
EF	Exhaust Fan	N/L	Not Listed
EG	Exhaust Grille	NIC	Not in contract
EMS	Energy management System(s)	OBD	Opposed Blade Damper
EMCS	Energy Management Control System(s)	OD	Outside Diameter
ENT	Entering	OSA or OA	Outside Air
ER	Exhaust Register	OAT	Outside Air Temperature
ESP	External Static Pressure	P	Circulating Pump
EWB	Entering Wet Bulb	PF	Power Factor
EWT	Entering Water Temperature		

FCU	Fan Coil Unit	PH	Phase(s)
FCV	Flow Control Valve	PRV	Pressure Relief Valve
PSI	Pounds per Square Inch		
R	Return Air or Round (for sizes)		
RA	Return Air		
RAT	Return Air Temperature		
REQ	Required		
RF	Return Air Fan		
RG	Return Grille		
RHC	ReHeat Coil		
RLA	Running Load Amps		
RM	Room		
RPM	Revolutions per Minute		
S	Supply		
SA	Supply Air		
SAT	Supply Air Temperature		
SD	Supply Diffuser		
SEF	Smoke Exhaust Fan		
SF (air)	Supply Fan		
SF (elect)	Service Factor		
SHC	Steam Heating Coil		
SP	SetPoint		
SPF	Stairwell Pressurization Fan		
SP "WC"	Static Pressure resistance measured in inches Of Water Column		
SWG	Sidewall Grille		
SWR	Sidewall Register		
TAB	Testing, Adjusting, and Balancing		
TCP	Temperature Control Valve		
TP	Traverse Point or Test Point		
TSP	Total Static Pressure		
TV	Turning Vanes		
TYP	Typical		
UH	Unit Heater		
V	Volt or Voltage		
VAV	Variable Air Volume		
VD	Volume Damper		
VEL	Velocity		
VFD	Variable Frequency Drive (electric motor speed controller)		
VP	Velocity Pressure		
W	Watts		
W/	With		
WB	Wet Bulb		
WG	Water Gauge		
#	Symbol for PSI or pounds per square inch		



FINAL AIR BALANCE CO., INC
Testing & Balancing – Industrial & Environmental Systems

S U M M A R Y

The following conditions were noted during the process of balancing:

- 1) Refer to notes in the following report.



VAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - East Tower

SYSTEM: VAV-3-1E through VAV-3-4E

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
	VAV-3-1		10"								
(1)	1-1	CR	8 x 8	FH	FH	300	FH	312			
(1)	1-2	CR	8 x 8	FH	FH	300	FH	294			
(1)	1-3	CR	8 x 8	FH	FH	180	FH	179			
		Factor = 1.00				780		785	230	235	
	VAV-3-2		6"								
(1)	2-1	CR	10 x 10	FH	FH	300	FH	300			
		Factor = 0.92				300		300	80	80	
	VAV-3-3		6"								
(1)	3-1	CR	10 x 10	FH	FH	300	FH	302			
		Factor = 0.98				300		302	80	80	
	VAV-3-4		6"								
(1)	4-1	CR	10 x 10	FH	FH	300	FH	300			
		Factor = 1.00				300		300	80	80	

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

(1) Refer to drawing.



VAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - East Tower

SYSTEM: VAV-3-5E through VAV-3-7E

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
	VAV-3-5		8"								
(1)	5-1	CR	8 x 8	FH	FH	230	FH	216			
(1)	5-2	CR	8 x 8	FH	FH	150	FH	156			
(1)	5-3	CR	8 x 8	FH	FH	125	FH	130			
		Factor = 0.90				505		502	145	145	
	VAV-3-6		10"								
(1)	6-1	CR	8 x 8	FH	FH	180	FH	172			
(1)	6-2	CR	8 x 8	FH	FH	180	FH	183			
(1)	6-3	CR	8 x 8	FH	FH	180	FH	180			
(1)	6-4	CR	6 x 6	FH	FH	120	FH	117			
(1)	6-5	CR	8 x 8	FH	FH	140	FH	134			
(1)	6-6	CR	8 x 8	FH	FH	140	FH	131			
(1)	6-7	CR	8 x 8	FH	FH	140	FH	141			
		Factor = 1.20				1080		1058	230	226	
	VAV-3-7		6"								
(1)	7-1	CR	8 x 8	FH	FH	125	FH	129			
(1)	7-2	CR	8 x 8	FH	FH	125	FH	121			
		Factor = 0.83				250		250	80	80	

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

(1) Refer to drawing.



VAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - East Tower

SYSTEM: VAV-3-8E through VAV-3-10E

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
	VAV-3-8		8"								
(1)	8-1	CR	8 x 8	FH	FH	150	FH	155			
(1)	8-2	CR	8 x 8	FH	FH	150	FH	154			
(1)	8-3	CR	8 x 8	FH	FH	200	FH	198			
		Factor = 1.00				500		507	145	148	
	VAV-3-9		8"								
(1)	9-1	CR	8 x 8	FH	FH	120	FH	118			
(1)	9-2	CR	8 x 8	FH	FH	120	FH	119			
(1)	9-3	CR	8 x 8	FH	FH	150	FH	151			
(1)	9-4	CR	8 x 8	FH	FH	150	FH	150			
(1)	9-5	CR	8 x 8	FH	FH	150	FH	149			
		Factor = 1.00				690		687	145	141	
	VAV-3-10		10"								
(1)	10-1	CR	8 x 8	FH	FH	125	FH	122			
(1)	10-2	CR	8 x 8	FH	FH	200	FH	194			
(1)	10-3	CR	8 x 8	FH	FH	200	FH	203			
(1)	10-4	CR	8 x 8	FH	FH	200	FH	189			
		Factor = 1.00				725		708	200	205	

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

(1) Refer to drawing.



VAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - East Tower

SYSTEM: VAV-3-11E through VAV-3-13E and DDB-1E

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
	VAV-3-11		6"								
(1)	11-1	CR	8 x 8	FH	FH	200	FH	200			
		Factor = 1.00				200		200	80	80	
	VAV-3-12		8"								
(1)	12-1	CR	8 x 8	FH	FH	90	FH	93			
(1)	12-2	CR	8 x 8	FH	FH	160	FH	147			
(1)	12-3	CR	8 x 8	FH	FH	125	FH	118			
(1)	12-4	CR	8 x 8	FH	FH	150	FH	156			
		Factor = 1.10				525		514	110	105	
	VAV-3-13		6"								
(1)	13-1	CR	6 x 6	FH	FH	100	FH	92			
(1)	13-2	CR	8 x 8	FH	FH	150	FH	163			
		Factor = 0.92				250		255	100	103	
	DDB-1		10"								
(1)	1-1	CR	12 x 12	FH	FH	200	FH	201			
(1)	1-2	CR	14 x 14	FH	FH	200	FH	223			(2)
(1)	1-3	CR	14 x 14	FH	FH	200	FH	211			(2)
(1)	1-4	CR	14 x 14	FH	FH	200	FH	167			
		Factor = 1.00				Cold		802	230	230	
						Hot		305	0	0	

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

(1) Refer to drawing.

(2) No access to MVD above hard lid.



VAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - West Tower

SYSTEM: VAV-3-1W through VAV-3-2W

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
	VAV-3-1W		12"								
(1)	1-1	CR	8 x 8	FH	FH	210	FH	216			
(1)	1-2	CR	8 x 8	FH	FH	210	FH	214			
(1)	1-3	CR	8 x 8	FH	FH	210	FH	213			
(1)	1-4	CR	8 x 8	FH	FH	210	FH	209			
(1)	1-5	CR	8 x 8	FH	FH	210	FH	207			
(1)	1-6	CR	8 x 8	FH	FH	210	FH	212			
(1)	1-7	CR	8 x 8	FH	FH	210	FH	210			
(1)	1-8	CR	8 x 8	FH	FH	210	FH	209			
		Factor = 1.10				1680		1690	325	330	
	VAV-3-2W		12"								
(1)	2-1	CR	8 x 8	FH	FH	210	FH	218			
(1)	2-2	CR	8 x 8	FH	FH	210	FH	208			
(1)	2-3	CR	8 x 8	FH	FH	210	FH	211			
(1)	2-4	CR	8 x 8	FH	FH	210	FH	202			
(1)	2-5	CR	8 x 8	FH	FH	210	FH	222			
(1)	2-6	CR	8 x 8	FH	FH	210	FH	213			
(1)	2-7	CR	8 x 8	FH	FH	210	FH	216			
(1)	2-8	CR	8 x 8	FH	FH	210	FH	202			
		Factor = 1.20				1680		1692	325	330	

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

(1) Refer to drawing.



VAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - West Tower

SYSTEM: VAV-3-3W through VAV-3-6W

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
	VAV-3-3W		6"								
(1)	3-1	CR	8 x 8	FH	FH	250	FH	251			
		Factor = 1.00				250		251	80	80	
	VAV-3-4W		6"								
(1)	4-1	CR	8 x 8	FH	FH	250	FH	248			
		Factor = 1.00				250		248	80	80	
	VAV-3-5W		8"								
(1)	5-1	CR	8 x 8	FH	FH	210	FH	214			
(1)	5-2	CR	8 x 8	FH	FH	210	FH	212			
(1)	5-3	CR	10 x 10	FH	FH	210	FH	215			
		Factor = 1.10				630		641	145	150	
	VAV-3-6W		6"								
(1)	6-1	CR	10 x 10	FH	FH	300	FH	296			
		Factor = 1.00				300		296	80	80	

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

(1) Refer to drawing.



VAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - West Tower

SYSTEM: VAV-3-7W through VAV-3-9W

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
	VAV-3-7W		10"								
(1)	7-1	CR	8 x 8	FH	FH	150	FH	157			
(1)	7-2	CR	8 x 8	FH	FH	150	FH	147			
(1)	7-3	CR	8 x 8	FH	FH	150	FH	161			
(1)	7-4	CR	8 x 8	FH	FH	150	FH	153			
(1)	7-5	CR	8 x 8	FH	FH	150	FH	152			
		Factor = 1.00				750		770	230	240	
	VAV-3-8W		6"								
(1)	8-1	CR	10 x 10	FH	FH	240	FH	243			
		Factor = 1.00				240		243	80	80	
	VAV-3-9W		8"								
(1)	9-1	CR	8 x 8	FH	FH	150	FH	146			
(1)	9-2	CR	8 x 8	FH	FH	150	FH	149			
(1)	9-3	CR	8 x 8	FH	FH	150	FH	154			
(1)	9-4	CR	8 x 8	FH	FH	150	FH	159			
		Factor = 1.10				600		608	145	150	

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

(1) Refer to drawing.



CAV TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - East & West Tower

SYSTEM: CAV-3-1E, CAV-3-2E, CAV-3-3W, CAV-3-4W

Room No.	Terminal No.	Terminal		Effective Area	Max Design		Max Final		Minimum CFM		Notes
		Type	Size		FPM	CFM	FPM	CFM	Design	Final	
(1)	CAV-3-1E	----	14"	----	----	1450	----	1171	1450	1171	(2)
		Factor = 0.41									
(1)	(3)	(3)	(3)	FH	FH	150	FH	220	150	220	(3)
(1)	CAV-3-2E	----	14"	----	----	1950	----	1639	1950	1639	
		Factor = 0.93									
(1)	CAV-3-3W	----	12"	----	----	1400	----	1406	1400	1406	
		Factor = 1.20									
(1)	CAV-3-4W	----	14"	----	----	1800	----	1797	1800	1797	
		Factor = 1.00									

FH = Direct read with flow hood

Factor = Calibration Factor

Remarks:

- (1) Refer to drawing.
- (2) Input 16" into Carrier's program in order to calibrate controller.
- (3) Serves 3 existing IUs and 4 linear diffusers in elevator lobby. No access to duct or MVD's. Served from CAV-3-1E.

**AIR DISTRIBUTION TEST SHEET**

JOB NAME: Plaza 555 - Suite 300 - East Tower

SYSTEM: Perimeter Induction Units IU-1 through IU-23

Room No.	Terminal No.	Terminal		Effective Area	Design		Preliminary		Final		Notes
		Type	Size		FPM	CFM	Test 1	Test 2	FPM	CFM	
(1)	IU-1	CR	6 x 41	FH	FH	200	64		FH	124	
(1)	IU-2	CR	6 x 41	FH	FH	200	83		FH	170	
(1)	IU-3	CR	6 x 41	FH	FH	200	61		FH	168	
(1)	IU-4	CR	6 x 41	FH	FH	200	62		FH	174	
(1)	IU-5	CR	6 x 41	FH	FH	200	103		FH	188	
(1)	IU-6	CR	6 x 41	FH	FH	200	114		FH	198	
(1)	IU-7	CR	6 x 41	FH	FH	200	111		FH	189	
(1)	IU-8	CR	6 x 41	FH	FH	200	235		FH	187	
(1)	IU-9	CR	6 x 41	FH	FH	200	203		FH	170	
(1)	IU-10	CR	6 x 41	FH	FH	200	194		FH	162	
(1)	IU-11	CR	6 x 41	FH	FH	200	201		FH	156	
(1)	IU-12	CR	6 x 41	FH	FH	200	183		FH	142	
(1)	IU-13	CR	6 x 41	FH	FH	200	193		FH	157	
(1)	IU-14	CR	6 x 41	FH	FH	200	184		FH	152	
(1)	IU-15	CR	6 x 41	FH	FH	200	174		FH	159	
(1)	IU-16	CR	6 x 41	FH	FH	200	172		FH	153	
(1)	IU-17	CR	6 x 41	FH	FH	200	159		FH	151	
(1)	IU-18	CR	6 x 41	FH	FH	200	159		FH	149	
(1)	IU-19	CR	6 x 41	FH	FH	200	220		FH	167	
(1)	IU-20	CR	6 x 41	FH	FH	200	212		FH	175	
(1)	IU-21	CR	6 x 41	FH	FH	200	236		FH	196	
(1)	IU-22	CR	6 x 41	FH	FH	200	190		FH	165	
(1)	IU-23	CR	6 x 41	FH	FH	200	205		FH	184	
(1)	IU-23-A	CR	6 x 41	FH	FH	200	222		FH	175	

FH = Direct read with flow hood

Remarks:

(1) Refer to drawings.



AIR DISTRIBUTION TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - East Tower

SYSTEM: Perimeter Induction Units IU-24 through IU-46

Room No.	Terminal No.	Terminal		Effective Area	Design		Preliminary		Final		Notes
		Type	Size		FPM	CFM	Test 1	Test 2	FPM	CFM	
(1)	IU-24	CR	6 x 41	FH	FH	200	157		FH	143	
(1)	IU-25	CR	6 x 41	FH	FH	200	175		FH	159	
(1)	IU-26	CR	6 x 41	FH	FH	200	82		FH	151	
(1)	IU-27	CR	6 x 41	FH	FH	200	80		FH	157	
(1)	IU-28	CR	6 x 41	FH	FH	200	60		FH	174	
(1)	IU-29	CR	6 x 41	FH	FH	200	179		FH	158	
(1)	IU-30	CR	6 x 41	FH	FH	200	179		FH	163	
(1)	IU-31	CR	6 x 41	FH	FH	200	172		FH	159	
(1)	IU-32	CR	6 x 41	FH	FH	200	158		FH	147	
(1)	IU-33	CR	6 x 41	FH	FH	200	163		FH	151	
(1)	IU-34	CR	6 x 41	FH	FH	200	208		FH	168	
(1)	IU-35	CR	6 x 41	FH	FH	200	163		FH	157	
(1)	IU-36	CR	6 x 41	FH	FH	200	177		FH	171	
(1)	IU-37	CR	6 x 41	FH	FH	200	175		FH	170	
(1)	IU-38	CR	6 x 41	FH	FH	200	163		FH	158	
(1)	IU-39	CR	6 x 41	FH	FH	200	162		FH	160	
(1)	IU-40	CR	6 x 41	FH	FH	200	143		FH	151	
(1)	IU-41	CR	6 x 41	FH	FH	200	146		FH	154	
(1)	IU-42	CR	6 x 41	FH	FH	200	150		FH	156	
(1)	IU-43	CR	6 x 41	FH	FH	200	146		FH	152	
(1)	IU-44	CR	6 x 41	FH	FH	200	151		FH	159	
(1)	IU-45	CR	6 x 41	FH	FH	200	149		FH	156	
(1)	IU-46	CR	6 x 41	FH	FH	200	143		FH	155	

FH = Direct read with flow hood

Remarks:

(1) Refer to drawings.



AIR DISTRIBUTION TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - West Tower

SYSTEM: Perimeter Induction Units IU-1 through IU-23

Room No.	Terminal No.	Terminal		Effective Area	Design		Preliminary		Final		Notes
		Type	Size		FPM	CFM	Test 1	Test 2	FPM	CFM	
(1)	IU-1	CR	6 x 41	FH	FH	200	161	240	FH	217	(2)
(1)	IU-2	CR	6 x 41	FH	FH	200	162	218	FH	224	(2)
(1)	IU-3	CR	6 x 41	FH	FH	200	153	192	FH	193	(2)
(1)	IU-4	CR	6 x 41	FH	FH	200	155	215	FH	204	(2)
(1)	IU-5	CR	6 x 41	FH	FH	200	151	235	FH	226	(2)
(1)	IU-6	CR	6 x 41	FH	FH	200	172	228	FH	209	(2)
(1)	IU-7	CR	6 x 41	FH	FH	200	166	226	FH	216	(2)
(1)	IU-8	CR	6 x 41	FH	FH	200	157	215	FH	205	(2)
(1)	IU-9	CR	6 x 41	FH	FH	200	141	239	FH	228	(2)
(1)	IU-10	CR	6 x 41	FH	FH	200	171	256	FH	195	(2)
(1)	IU-11	CR	6 x 41	FH	FH	200	149	229	FH	168	(2)
(1)	IU-12	CR	6 x 41	FH	FH	200	182	246	FH	189	(2)
(1)	IU-13	CR	6 x 41	FH	FH	200	155	242	FH	187	(2)
(1)	IU-14	CR	6 x 41	FH	FH	200	134	203	FH	208	(2)
(1)	IU-15	CR	6 x 41	FH	FH	200	155	204	FH	201	(2)
(1)	IU-16	CR	6 x 41	FH	FH	200	151	198	FH	203	(2)
(1)	IU-17	CR	6 x 41	FH	FH	200	132	193	FH	198	(2)
(1)	IU-18	CR	6 x 41	FH	FH	200	143	219	FH	205	(2)
(1)	IU-19	CR	6 x 41	FH	FH	200	144	224	FH	205	(2)
(1)	IU-20	CR	6 x 41	FH	FH	200	166	204	FH	211	(2)
(1)	IU-21	CR	6 x 41	FH	FH	200	152	202	FH	201	(2)
(1)	IU-22	CR	6 x 41	FH	FH	200	146	197	FH	197	(2)
(1)	IU-23	CR	6 x 41	FH	FH	200	132	191	FH	200	(2)

FH = Direct read with flow hood

Remarks:

(1) Refer to drawings.

(2) Test 1 vs Test2: Test 1 are the readings when the deflection blades were closed at least 2/3.



BELL & GOSSETT TEST SHEET

JOB NAME: Plaza 555 - Suite 300 - East Tower

SYSTEM: Induction Units Chilled Water Coils

Location	Circuit Setter Valve Size	Actual Degree Setting	Actual Gauge Reading	Required G.P.M	Actual G.P.M	Remarks
V-1E	1" S	0	3.4'	6.0	6.8	(1)(2)
V-2E	1" S	0	3.2'	7.5	6.7	(1)(2)
V-3E	1" S	0	12.7'	7.5	13.0	(1)(2)
V-4E	1" S	0	6.4'	6.0	9.4	(1)(2)
V-5E	3/4" S	0	0.3'	1.5	1.8	(2)
V-6E	3/4" S	0	2.9'	6.0	3.9	(1)(2)
V-6AE	3/4" S	0	5.8'	4.5	5.4	(1)(2)
V-7E	1" S	0	4.2'	7.5	7.7	(1)(2)
V-8E	3/4" S	0	2.5'	1.5	3.6	(2)
V-9E	3/4" S	0	5.6'	3.0	5.4	(1)(2)
V-10E	3/4" S	0	8.7'	4.5	6.8	(1)(2)
V-11E	3/4" S	0	9.1'	4.5	6.9	(1)(2)
V-12E	1" S	0	4.8'	7.5	8.2	(1)(2)(3)
V-13E	1" S	0	8.1'	6.0	10.6	(1)(2)
V-14E	3/4" S	0	6.7'	3.0	5.9	(1)(2)
V-15E	3/4" S	0	3.7'	3.0	4.4	(1)(2)
V-16E	1 1/4" S	0	1.9'	10.5	11.0	(1)(2)
V-17E	1" S	0	5.9'	7.5	9.0	(1)(2)

Remarks:

- (1) Services multiple coils in series. Unable to verify each coil.
- (2) All control valves indexed to full flow simultaneously for balancing procedure.
- (3) Control valve and circuit setter on supply line, not on return line.

Certified Test, Adjust, Balance Report

MICROFILM AT FINAL

MICROFILM AT FINAL

Plaza 555 - Suite 300
East & West Towers

0609233

REVIEWED - NO EXCEPTIONS TAKEN

INCORPORATE COMMENTS IN CONSTRUCTION

REVISE AS NOTED AND RESUBMIT

Submittal was reviewed only for its conformance with the intent of the Design Development & Contract Documents.

Date 2-23-07 by SK

FMB FRANK M. BOOTH
Design Build Co.

Our Performance Builds Relationships



FINAL AIR BALANCE CO., INC

License# 777985

MICROFILM AT FINAL



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