

**Report By:**

National TAB  
1329 E. KEMPER ROAD  
SUITE 4210  
CINCINNATI, OH 45246



**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 10/21/2024**  
**Completed By: National TAB**

**PROJECT**  
**J Crew (Folsom, CA)**

13000 Folsom Blvd

Folsom, CA 95630

**Client**

B&M Builders, Inc.  
11330 Sunrise Park Drive  
Suite C  
Rancho Cordova, CA 95742

# National TAB

Project: J Crew (Folsom, CA)

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# CERTIFICATION

**PROJECT:** J Crew (Folsom, CA)

The data presented 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 Project Summary.

The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

**NEBB TAB FIRM:** National TAB-Southeast

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**REGISTRATION NO:** 3755

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**CERTIFIED BY:** J. Scott Springer 23312

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**DATE:** 10/21/2024

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The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

**NEBB TAB FIRM:** National TAB-Southeast

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**REGISTRATION NO:** 3086

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**CERTIFIED BY:** J. Scott Springer 23312

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**DATE:**

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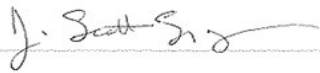
## Submitted and Certified by:

**NEBB TAB FIRM:** National TAB-Southeast

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**TAB PROFESSIONAL:** J. Scott Springer

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**SIGNATURE:** 

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**REGISTRATION NO:** 3755 (NTAB) / 23312

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**CERTIFICATION EXP:** 12/31/2024

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# National TAB

Testing, Adjusting, and Balancing Equipment



Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/18/2024	9/18/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/18/2024	9/18/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Shimpo DT 207Lp S/N D1690029R	9/18/2024	9/18/2025

## Abbreviation List

A = Area (ft <sup>2</sup> )	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A <sub>k</sub> = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T <sub>ma</sub> = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T <sub>oa</sub> = Outside Air Temperature
CD = Ceiling Diffuser	T <sub>ra</sub> = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO <sub>2</sub> = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C <sub>v</sub> = Flow Constant	K <sub>v</sub> = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T <sub>ra</sub> = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% <sub>ra</sub> = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio

REV	DATE	DESCRIPTION
XX	XX/XX/2024	ISSUANCE

DATE: 2024/04/22  
SCALE: AS NOTED  
DRAWN BY: RT  
REVIEWED BY: KL  
PROJECT NUMBER: JCF-105

SHEET TITLE:  
**MECHANICAL PLAN**

SHEET NUMBER:  
**M-100**

- MECHANICAL DUCTWORK KEY NOTES**
- 1 PROVIDE ROOF TOP UNIT ON ROOF ABOVE TENANT SPACE. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH LANDLORD AND LOCAL CODE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. INDICATED LOCATION IS REPRESENTATIVE ONLY AND SHOWN AS SUCH FOR CLARITY. INSTALL ROOF TOP UNIT TO MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. ROOF TOP UNIT SHALL BE LABELED WITH TENANT NAME AND SPACE NUMBER WITH A TWO INCH, BLACK, CAS, ON BOLD, VINYL, LETTERS LABELS.
  - 2 PROVIDE CEILING MOUNTED EXHAUST FAN, AND TERMINATE EXHAUST DUCT ON ROOF WITH GOOSENECK. COORDINATE FINAL LOCATION OF FAN WITH LANDLORD AND LOCAL CODE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. INDICATED LOCATION IS REPRESENTATIVE ONLY AND SHOWN AS SUCH FOR CLARITY. INSTALL DUCT TERMINATION 10 FEET AWAY FROM ANY AIR INTAKE INTO THE TENANT SPACE OR BUILDING.
  - 3 ROUTE NEW 6" ROUND EXHAUST DUCTWORK UP TO ROOF WITH GOOSE NECK TERMINATION. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH LANDLORD PRIOR TO COMMENCEMENT OF WORK FOR EXACT DUCT ROUTE AND ROOF PENETRATION REQUIREMENT.
  - 4 PROVIDE DUCT WRAP INSULATION FOR DUCTWORK LOCATED IN THE BACK OF HOUSE AREA AND DUCT INTERNAL LINING INSULATION FOR DUCTWORK LOCATED IN THE SALES FLOOR (FRONT OF HOUSE) AREA PER SPECIFICATIONS.
  - 5 PROVIDE DUCT LINER IN RETURN DUCTWORK PER SPECIFICATIONS FOR SOUND ATTENUATION. COVER RETURN INLET WITH 1/2" GALVANIZED STEEL BIRD SCREEN.
  - 6 PROVIDE THERMOSTAT BY LIGHTSTAT (OR APPROVED EQUIVALENT) THAT IS COMPATIBLE WITH BUTTON-TYPE TEMPERATURE SENSOR AND HUMIDISTAT INTEGRATION. THERMOSTAT SHALL HAVE THE CAPABILITY TO INTERFACE WITH BUILDING AUTOMATION SYSTEM (BAS) WITH QUALITY AND FEATURES AS INDICATED IN SPECIFICATIONS. LIGHTSTAT THERMOSTAT SHALL BE INSTALLED ADJACENT TO THE LIGHTSTAT PANEL. COORDINATE EXACT LOCATION OF THE DEVICE IN FIELD AND WITH ARCHITECT PRIOR TO ROUGH-IN.
  - 7 PROVIDE ACI BUTTON-TYPE REMOTE TEMPERATURE SENSOR. TEMPERATURE SENSOR SHALL BE WIRED TO AND COMPATIBLE WITH THERMOSTAT LOCATED IN THE BACK OF HOUSE AREA. SENSOR SHALL BE BUTTON-TYPE WITH PLASTIC FINISH, FIELD PAINTABLE. COORDINATE EXACT LOCATION OF DEVICE WITH ARCHITECT PRIOR TO ROUGH-IN.
  - 8 PROVIDE TIME CLOCK FOR CONTROL OF HVAC EQUIPMENT. COORDINATE MOUNTING LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
  - 9 PROVIDE CARBON DIOXIDE (CO2) SENSOR FOR DEMAND CONTROL VENTILATION (DCV) CONTROL OF HVAC EQUIPMENT. COORDINATE MOUNTING LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
  - 10 COORDINATE ROUTING OF DUCTWORK WITH LIGHT HOUSINGS, ELECTRICAL CONDUIT, PIPING ETC. DUCTWORK SHALL BE AT LEAST 6" FROM LIGHT HOUSINGS AT 12'-0" A.F.F.
  - 11 ROUTE DUCTWORK AS TIGHT TO STRUCTURE/CEILING AS POSSIBLE. COORDINATE IN FIELD AND FLATTEN DUCTWORK AS REQUIRED TO AVOID CONFLICT WITH LIGHT FIXTURE AT 12'-0" A.F.F. IN SALE FLOOR.
  - 12 DO NOT ROUTE DUCTWORK OR PIPING OVER ELECTRICAL / TECHNOLOGY / AV EQUIPMENT. COORDINATE DUCT AND PIPE ROUTING WITH ALL TRADES.
  - 13 ARROW INDICATES DIRECTION OF AIRFLOW. ADJUST DIFFUSER PATTERN DEFLECTOR TO DIRECT AIRFLOW AS SHOWN.
  - 14 LIGHTSTAT PANEL FOR THERMOSTAT INTEGRATION. COORDINATE IN FIELD FOR EXACT LOCATION.
  - 15 PROVIDE AIR CURTAIN ABOVE ENTRANCE DOOR AS SHOWN ON PLAN. FIELD VERIFY AND COORDINATE EXACT LOCATION PRIOR TO COMMENCEMENT OF WORK. INSTALL AIR CURTAIN AS PER MANUFACTURER'S RECOMMENDATIONS AND MAINTAIN UNIT SERVICE CLEARANCE.



**1 MECHANICAL PLAN**  
SCALE: 1/4" = 1'-0"



# National TAB

Project: J Crew (Folsom, CA)  
System/Unit: AHU/RTU



Asset: RTU-1

AREA:

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5624F04540
Model Num	NA	LGT156H4MM1Y
Configuration	-	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23X13
Num PreFilter 1	-	6
PreFilter Size 1	-	24X24X2

Test Data		
	Design	Actual
SF CFM	5800	5967
SF RPM	-	785
RA CFM	4860	5010
OA CFM	940	957
RL Voltage	208	208/208/208
RL Amperage	-	7.07/7.01/7.05
OA Damper Position	-	20%
Brake Horse Power	2.77	2.64

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	3.0	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	200/230
Rated Amperage	-	8.0/7.8
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.47"
Fan Suction SP	-	-0.76"
Fan Discharge SP	-	0.44"
Total ESP	0.80	0.91"
Fan Total SP	0.94	1.20"

Drive Data	
	Actual
Motor Sheave Size	3-3/4"
Motor Bore Size	7/8"
Motor Sheave SetPt	1 TURN OPEN
Fan Sheave Size	7"
Fan Sheave Bore	1-3/16"
Belt CL Distance	21"
Num of Belts	1
Belt Size	BX55

Completed By: Zack Eismin on 10/15/2024



### Diffuser Supply (GRD)

#### RTU-1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	STOCK	DSG1	12X6	200	237	218	109.0
SGRD2	STOCK	DSG1	10X6	100	117	102	102.0
SGRD3	STOCK	DSG1	10X6	100	105	103	103.0
SGRD4	STOCK	DSG1	10X6	100	81	97	97.0
SGRD5	STOCK	DSG1	10X6	100	101	103	103.0
SGRD6	STOCK	DSG1	12X6	200	209	207	103.5
SGRD7	OFFICE	CSD1	8	150	175	157	104.7
SGRD8	RESTROOM	DSG1	6	50	181	54	108.0
SGRD9	FITTING RM	DSG1	10X6	175	221	171	97.7
SGRD10	FITTING RM	DSG1	10X6	175	201	179	102.3
SGRD11	FITTING RM	DSG1	10X6	175	179	182	104.0
SGRD12	FITTING RM	DSG1	10X6	175	151	179	102.3
SGRD13	SALES	DSG1	10X6	100	77	101	101.0
SGRD14	SALES	DSG1	10X6	150	199	156	104.0
SGRD15	SALES	DSG1	10X6	150	182	149	99.3
SGRD16	SALES	DSG1	10X6	150	168	160	106.7
SGRD17	SALES	DSG1	10X6	150	171	150	100.0
SGRD18	SALES	DSG1	10X6	150	142	153	102.0
SGRD19	SALES	DSG1	10X6	150	131	144	96.0
SGRD20	SALES	DSG1	10X6	150	141	160	106.7
SGRD21	SALES	DSG1	10X6	150	122	149	99.3
SGRD22	SALES	DSG1	10X6	100	141	107	107.0
SGRD23	SALES	DSG1	10X6	150	131	141	94.0
SGRD24	SALES	DSG1	10X6	150	121	148	98.7
SGRD25	SALES	DSG1	10X6	150	168	153	102.0
SGRD26	SALES	DSG1	10X6	150	191	163	108.7
SGRD27	SALES	DSG1	10X6	150	201	161	107.3
SGRD28	SALES	DSG1	10X6	150	151	157	104.7
SGRD29	SALES	DSG1	10X6	150	134	151	100.7
SGRD30	SALES	DSG1	10X6	150	126	157	104.7
SGRD31	SALES	DSG1	10X6	100	111	99	99.0
SGRD32	SALES	DSG1	10X6	100	109	103	103.0
SGRD33	SALES	DSG1	12X6	200	169	189	94.5
SGRD34	SALES	DSG1	12X6	200	189	203	101.5
SGRD35	SALES	DSG1	12X6	200	209	213	106.5
SGRD36	SALES	DSG1	10X6	100	88	103	103.0
SGRD37	SALES	DSG1	12X6	200	231	215	107.5
SGRD38	SALES	DSG1	12X6	200	229	219	109.5
SGRD39	SALES	DSG1	12X6	200	241	211	105.5
Total				5800	6231	5967	102.88%

Completed By: Zack Eismin on 10/15/2024



# National TAB

Project: J Crew (Folsom, CA)

## System/Unit: FAN - Exhaust



Asset: EF1

AREA:RESTROOM

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-A390-VG-QD
Serial Num	-	24908089
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	150	157
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.70	0.51"

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL
Service Factor	-	NL

Completed By: Zack Eismin on 10/18/2024