

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 07/31/2023

PROJECT

**07-24-23 HIGHLAND PLAZA KANSAS CITY,
MO**

973 N.ASH AVENUE,
KANSAS CITY , MO 64157

Client

Oliphant Heating
208 WOLLARD BLVD
RICHMOND, MO

National TAB

Project: 07-24-23 HIGHLAND PLAZA KANSAS CITY, MO

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Project Summary

The scope for TAB was to balance total supply and outside air for (4) RTU's. The airflow was measured by fully opening the outside air damper on the roof and traversing the outside air intake with a velocity grid at the filter opening. Outside air was then set to the designs on the plans. The fan speed was found to be modulating and was locked into single speed to ensure better throw and air circulation for the sales floor.

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Project: 07-24-23 HIGHLAND PLAZA KANSAS CITY, MO

System/Unit: AHU/RTU



Asset: RTU1

AREA:SALES

Unit Data		
	Design	Actual
MFG	LENNOX	CARRIER
Serial Num	-	1023P13686
Model Num	LGH120H4M3Y	48LCD012B2 M5A0B1A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	22.5x25
Num Final Filter 1	-	3
Final Filter Size 1	-	18x24x2
Num Final Filter 2	-	3
Final Filter Size 2	-	18x24x2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	NL
Motor Rpm	1750	1750
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	-	9.2/4.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	4 1/2"
Motor Bore Size	-	1 1/8"
Fan Sheave Size	-	9"
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20 1/2"
Num of Belts	-	1
Belt Size	-	AX56

Test Data		
	Design	Actual
SF CFM	4000	3790
SF RPM	-	730
RA CFM	3050	2820
OA CFM	950	970
RL Voltage	-	208
RL Amperage	-	4.1
SF Rotation	-	CCW
Min OA Damper Position	-	4.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.29"
Fan Discharge SP	-	0.37"
Total ESP	0.40"	0.66"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

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Project: 07-24-23 HIGHLAND PLAZA KANSAS CITY, MO

System/Unit: AHU/RTU



Asset: RTU2

AREA:SALES

Unit Data		
	Design	Actual
MFG	LENNOX	CARRIER
Serial Num	-	1023P13683
Model Num	LGH120H4M3Y	48LCD012B2 M5A0B1A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	22.5x25
Num Final Filter 1	-	3
Final Filter Size 1	-	18x24x2
Num Final Filter 2	-	3
Final Filter Size 2	-	18x24x2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	NL
Motor Rpm	1750	1750
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	-	9.2/4.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	4 1/2"
Motor Bore Size	-	1 1/8"
Fan Sheave Size	-	9"
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20 1/2"
Num of Belts	-	1
Belt Size	-	AX56

Test Data		
	Design	Actual
SF CFM	4000	3800
SF RPM	-	750
RA CFM	3050	2826
OA CFM	950	974
RL Voltage	-	208
RL Amperage	-	4.3
SF Rotation	-	CCW
Min OA Damper Position	-	4.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.32"
Fan Suction SP	-	0.30"
Fan Discharge SP	-	0.36"
Total ESP	0.40"	0.68"
Fan Total SP	-	.675

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

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Project: 07-24-23 HIGHLAND PLAZA KANSAS CITY, MO

System/Unit: AHU/RTU



Asset: RTU3

AREA:SALES

Unit Data		
	Design	Actual
MFG	LENNOX	CARRIER
Serial Num	-	1023P13684
Model Num	LGH120H4M3Y	48LCD012B2 M5A0B1A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	22.5x25
Num Final Filter 1	-	3
Final Filter Size 1	-	18x24x2
Num Final Filter 2	-	3
Final Filter Size 2	-	18x24x2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	NL
Motor Rpm	1750	1750
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	-	9.2/4.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	4 1/2"
Motor Bore Size	-	1 1/8"
Fan Sheave Size	-	9"
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20 1/2"
Num of Belts	-	1
Belt Size	-	AX56

Test Data		
	Design	Actual
SF CFM	4000	3700
SF RPM	-	715
RA CFM	3050	2740
OA CFM	950	960
RL Voltage	-	208
RL Amperage	-	4
SF Rotation	-	CCW
Min OA Damper Position	-	4.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.31"
Fan Suction SP	-	0.30"
Fan Discharge SP	-	0.38"
Total ESP	0.20"	0.69"
Fan Total SP	-	.68

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

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Project: 07-24-23 HIGHLAND PLAZA KANSAS CITY, MO

System/Unit: AHU/RTU



Asset: RTU4

AREA:SALES

Unit Data		
	Design	Actual
MFG	LENNOX	CARRIER
Serial Num	-	1023P13685
Model Num	LGH120H4M3Y	48LCD012B2 M5A0B1A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	22.5x25
Num Final Filter 1	-	3
Final Filter Size 1	-	18x24x2
Num Final Filter 2	-	3
Final Filter Size 2	-	18x24x2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	NL
Motor Rpm	1750	1750
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	-	9.2/4.6

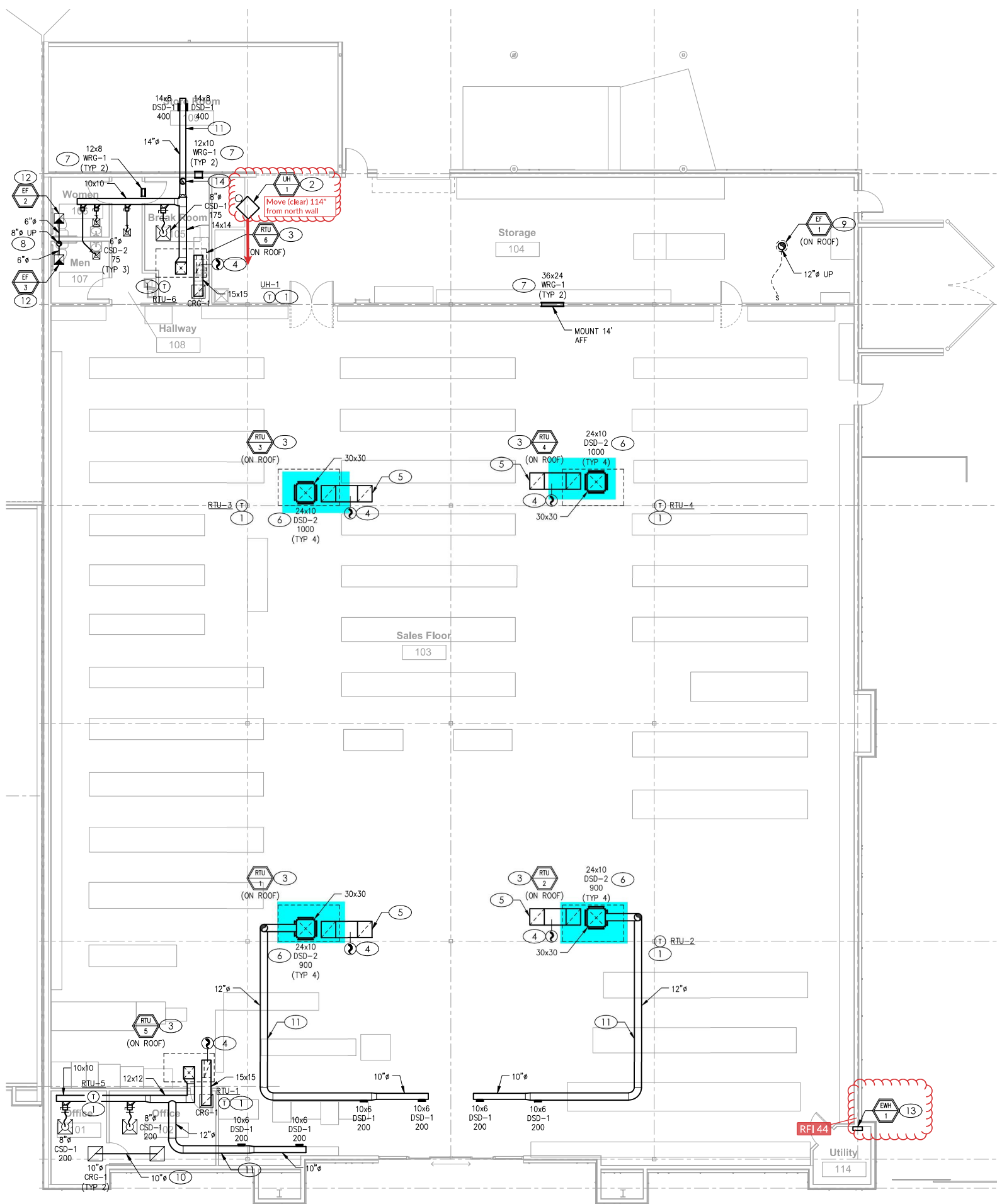
Drive Data		
	Design	Actual
Motor Sheave Size	-	4 1/2"
Motor Bore Size	-	1 1/8"
Fan Sheave Size	-	9"
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20 1/2"
Num of Belts	-	1
Belt Size	-	AX56

Test Data		
	Design	Actual
SF CFM	4000	3750
SF RPM	-	708
RA CFM	3050	2785
OA CFM	950	965
RL Voltage	-	208
RL Amperage	-	4.4
SF Rotation	-	CCW
Min OA Damper Position	-	4.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.30"
Fan Suction SP	-	0.29"
Fan Discharge SP	-	0.37"
Total ESP	0.20"	0.67"
Fan Total SP	-	.664

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

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Date: 8/4/2023

MECHANICAL PLAN
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