Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 04/04/2024

PROJECT

LHM Dodge RTU Repl (Albuquerque, NM)

8528 Lomas Blvd NE

Albuquerque, NM 87110

Client

Metro Air Conditioning

8151 McCoy

Shawnee, KS 66227

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

Table Of Contents

Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints. This project was to TAB the total supply airflow and outside airflow of six new RTU's as well as nine new exhaust fans.

RTU (Roof Top Units)

Each RTU was measured at its supply drop via traverse. RTUs were adjusted to within tolerance of the engineer's design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report. Each RTU is controlled by a wall thermostat and is interlocked with CO2 monitoring. When the area each RTU serves reads above C02 setpoint, the interlocked EF energizes and the RTU fully economizes. This control was tested and is fully functional. RTU-1, serving the service receiving area, is inflating the surrounding roof membrane when operational. We suspect this is due to improper curb alignment, or a leak at the curb. We recommend this issue is addressed.

EXHAUST FANS

Each exhaust fan was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The exhaust fan was then adjusted to within tolerance of the engineer's design flow. Any equipment that fell outside of that tolerance is noted throughout the report. Several of the fans do not fit existing curbs, even with curb adapters installed. Lumber was used to fill in the gap between each curb and adapter. Despite this, all fans were able to be adjusted into design airflow.

Issue List

- EF-2: DEAD BIRDS AT FAN INTAKE
- EFs: CURB ADAPTERS INCORRECT SIZE
- EFs: ELECTRICAL CONDUIT ROUTING
- RTU-1 (B): CURB NOT PROPERLY SEALED
- RTUs: CONDENSATE DRAINS

LHM Dodge RTU Repl (Albuquerque, NM)

Project Issue Information

Issue Name :	EF-2: DEAD BIRDS AT FAN INTAKE		
Description :	There are two deceased pigeons laying on intake screen in the exhaust fan drop. Recommend they are removed.		
Created By :	National TAB	**Assigned To :**	National TAB - Michael McDonnell
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	
Originated Date :	04/04/2024 - Michael McDonnell - National TAB		

LHM Dodge RTU Repl (Albuquerque, NM)

Project Issue Information

Issue Name : EFs: CURB ADAPTERS INCORRECT SIZE

Description : Several EFs do not match existing curb sizes. EF submittals indicate curb adapters, but these are oversized, typically by 2". Untreated lumber used on fan curbs to fill gap.

Created By : National TAB

Assigned To : National TAB - Michael McDonnell

Status : Open

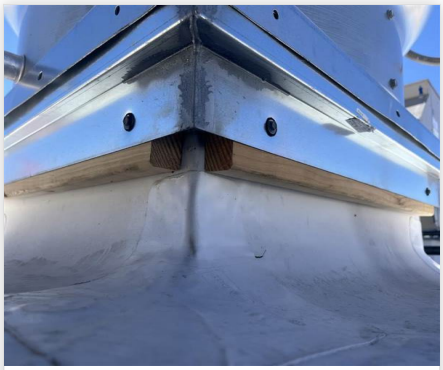
Priority : InfoOnly

Asset Tag :

Originated Date : 04/04/2024 - Michael McDonnell - National TAB

Project Issue File Details

EF_CURB
04/04/2024



EF_CURB_1
04/04/2024

LHM Dodge RTU Repl (Albuquerque, NM)

Project Issue Information

Issue Name : EFs: ELECTRICAL CONDUIT ROUTING

Description : Electrical Conduit to all exhaust fans was drilled through the fan housing to supply power. Per Greenheck, power should be routed through motor vent, no need to drill through fan housing.

Created By : National TAB

Assigned To : National TAB - Michael McDonnell

Status : Open

Priority : InfoOnly

Asset Tag :

Originated Date : 04/04/2024 - Michael McDonnell - National TAB

Project Issue File Details

Motor_Vent
04/04/2024

Conduit_Routing
04/04/2024

Conduit_Drilled
04/04/2024

LHM Dodge RTU Repl (Albuquerque, NM)

Project Issue Information

Issue Name : RTU-1 (B): CURB NOT PROPERLY SEALED

Description : When RTU is operating, the roof membrane inflates (see video). Suspect supply discharge is not properly sealed at curb and air is leaking into roof.

Created By :	National TAB	**Assigned To :**	National TAB - Michael McDonnell
Status :	Open		
Priority :	Medium	**Asset Tag :**	
Originated Date :	04/04/2024 - Michael McDonnell - National TAB		

Project Issue File Details

1. Open Roof_Membrane.mp4
   04/04/2024

LHM Dodge RTU Repl (Albuquerque, NM)

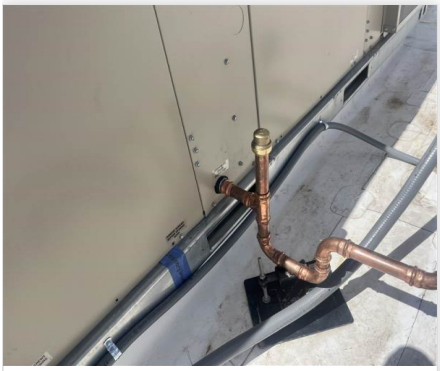
Project Issue Information

Issue Name : RTUs: CONDENSATE DRAINS

Description : Condensate drains for RTUs are not vented. Some drains have vents installed on the wrong side of the p-trap. These were covered. Recommend drains are properly vented to avoid potential issues during cooling season.

Created By :	National TAB	**Assigned To :**	National TAB - Michael McDonnell
Status :	Open		
Priority :	High	**Asset Tag :**	
Originated Date :	04/08/2024 - Michael McDonnell - National TAB		

Project Issue File Details



Vent_Covered_Wrong_Si..
04/08/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: AHU/RTU

Asset: RTU-1 AREA:SERVICE RECEIVING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623K02758
Model Num	KGC092S4M	KGC180S4M
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	13X23.25
Num PreFilter 1	-	6
PreFilter Size 1	-	24X24X2

Test Data		
	Design	**Actual**
SF CFM	6000	6144
SF RPM	801	726
RA CFM	5400	5522
OA CFM	600	622
RL Voltage	460	485/485/485
RL Amperage	4.8	3.4/3.4/3.5
OA Damper Position	-	4.1 V (22%)
Brake Horse Power	-	2.15

Motor Data		
	Design	**Actual**
Horsepower	3.0	3.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	460	460
Rated Amperage	4.8	4.8
Service Factor	-	1.15

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.29
Fan Suction SP	-	0.49"
Fan Discharge SP	-	0.38"
Total ESP	0.75	0.67"
Fan Total SP	0.85	0.87"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VL40
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	5.5 TURNS OPEN
Fan Sheave Size	-	BK72
Fan Sheave Bore	-	1"
Belt CL Distance	-	20.5"
Num of Belts	-	1
Belt Size	-	BX55

Completed By: Michael McDonnell on 04/04/2024

Notes:
[1] RTU SUPPLY IS INFLATING ROOF MEMBRANE; SEE ISSUE. SUSPECT LEAKAGE AT CURB CONNECTION.

Written By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: AHU/RTU

Asset: RTU-2 AREA:SERVICE SHOP WEST

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623J05383
Model Num	KGC092S4M	KGC240S4M
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	13.25X23
Num PreFilter 1	-	6
PreFilter Size 1	-	24X24X2

Test Data		
	Design	**Actual**
SF CFM	8000	7452
SF RPM	952	987
RA CFM	7200	6671
OA CFM	800	781
RL Voltage	460	485/487/488
RL Amperage	-	7.6/7.7/8.2
OA Damper Position	-	3.8V (19%)
Brake Horse Power	-	5.93

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	213T
Horsepower	7.5	7.5
Motor Rpm	-	1770
Phase	3	3
Rated Voltage	460	460
Rated Amperage	9.9	9.9
Service Factor	-	1.15

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.58"
Fan Suction SP	-	-0.95"
Fan Discharge SP	-	0.21"
Total ESP	0.75	0.79"
Fan Total SP	1.08	1.16"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65
Motor Bore Size	-	1-3/8"
Motor Sheave SetPt	-	2 TURNS OPEN
Fan Sheave Size	-	BK110H
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21.25"
Num of Belts	-	1
Belt Size	-	BX66

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: AHU/RTU

Asset: RTU-3 AREA:SERVICE SHOP CENTER

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623J05384
Model Num	KGC092S4M	KGC240S4M
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	13.25X23
Num PreFilter 1	-	6
PreFilter Size 1	-	24X24X2

Test Data		
	Design	**Actual**
SF CFM	8000	7637
SF RPM	952	960
RA CFM	7200	6818
OA CFM	800	819
RL Voltage	460	486/485/486
RL Amperage	-	7.5/7.3/7.7
OA Damper Position	-	3.4V
Brake Horse Power	-	5.68

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	213T
Horsepower	7.5	7.5
Motor Rpm	-	1770
Phase	3	3
Rated Voltage	460	460
Rated Amperage	9.9	9.9
Service Factor	-	1.15

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.62"
Fan Suction SP	-	-1.02"
Fan Discharge SP	-	0.19"
Total ESP	0.75	0.81"
Fan Total SP	1.08	1.21"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65
Motor Bore Size	-	1-3/8"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	BK110H
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX66

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: AHU/RTU

Asset: RTU-4 AREA:SERVICE SHOP EAST

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623J05385
Model Num	KGC092S4M	KGC240S4M
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	13.25X23
Num PreFilter 1	-	6
PreFilter Size 1	-	24X24X2

Test Data		
	Design	**Actual**
SF CFM	8000	7543
SF RPM	952	959
RA CFM	7200	6769
OA CFM	800	774
RL Voltage	460	486/486/485
RL Amperage	-	7.2/7.2/7.5
OA Damper Position	-	3.6V
Brake Horse Power	-	5.53

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	213T
Horsepower	7.5	7.5
Motor Rpm	-	1770
Phase	3	3
Rated Voltage	460	460
Rated Amperage	9.9	9.9
Service Factor	-	1.15

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.65"
Fan Suction SP	-	-1.05"
Fan Discharge SP	-	0.21"
Total ESP	0.75	0.86"
Fan Total SP	1.08	1.26"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65
Motor Bore Size	-	1-3/8"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	BK110H
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21.5"
Num of Belts	-	1
Belt Size	-	BX66

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: AHU/RTU

Asset: RTU-5 AREA:DETAILING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623K01363
Model Num	KGC092S4M	KGC092S4M
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14.25
Num PreFilter 1	-	4
PreFilter Size 1	-	20X25X2

Test Data		
	Design	**Actual**
SF CFM	3000	3206
SF RPM	748	650
RA CFM	2700	2896
OA CFM	300	310
RL Voltage	-	489/489/488
RL Amperage	-	1.6/1.6/1.5
OA Damper Position	-	4.1V
Brake Horse Power	-	1.08

Motor Data		
	Design	**Actual**
Motor MFG	-	U.S. MOTORS
Frame	-	56 HZ
Horsepower	2.0	2.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	460	460
Rated Amperage	2.9	2.9
Service Factor	-	1.15

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.19"
Fan Suction SP	-	-0.33"
Fan Discharge SP	-	0.30"
Total ESP	0.50	0.49"
Fan Total SP	0.73	0.63"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP34
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	4 TURNS OPEN
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	20.5"
Num of Belts	-	1
Belt Size	-	AX54

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: AHU/RTU

Asset: RTU-6 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623J06748
Model Num	KGC092S4M	KGC092S4M
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14.25X23
Num PreFilter 1	-	4
PreFilter Size 1	-	20X25X2

Test Data		
	Design	**Actual**
SF CFM	3000	3189
SF RPM	748	680
RA CFM	2700	2902
OA CFM	300	287
RL Voltage	-	489/489/488
RL Amperage	-	1.7/1.7/1.7
OA Damper Position	-	3.8V
Brake Horse Power	-	1.26

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	56 HZ
Horsepower	2.0	2.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	460	460
Rated Amperage	2.7	2.7
Service Factor	-	1.15

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.20"
Fan Suction SP	-	-0.35"
Fan Discharge SP	-	0.30"
Total ESP	0.50	0.50"
Fan Total SP	0.73	0.65"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP34
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	3.5 TURNS OPEN
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	AX54

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF1 AREA:SHOP SERVICE WEST

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-240-7-1-34-X
Serial Num	-	23948419
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	13.8
Service Factor	-	1.00

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	2.5 TURNS OPEN
Fan Sheave Size	-	AK74
Fan Sheave Bore	-	1"
Belt CL Distance	-	8"
Num of Belts	-	1
Belt Size	-	A30

Test Data		
	Design	**Actual**
CFM	5400	5209
Fan RPM	667	662
RL Voltage	-	115
RL Amperage	-	10.0
Suction ESP	-	-0.182"
Discharge ESP	-	ATM
Total ESP	0.25	0.182"
Brake Horse Power	-	0.54

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF2 AREA:SHOP SERVICE CENTER WEST

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-240-7-1-34-X
Serial Num	-	23948420
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	13.8
Service Factor	-	1.00

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	2.5 TURNS OPEN
Fan Sheave Size	-	AK74
Fan Sheave Bore	-	1"
Belt CL Distance	-	8"
Num of Belts	-	1
Belt Size	-	A30

Test Data		
	Design	**Actual**
CFM	5400	5417
Fan RPM	667	666
RL Voltage	-	115
RL Amperage	13.8	10.0
Suction ESP	-	-0.203"
Discharge ESP	-	ATM
Total ESP	0.25	0.203"
Brake Horse Power	-	0.54

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF3 AREA:SHOP SERVICE CENTER EAST

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-240-7-1-34-X
Serial Num	-	23948421
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	13.8
Service Factor	-	1.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	AK74
Fan Sheave Bore	-	1"
Belt CL Distance	-	8"
Num of Belts	-	1
Belt Size	-	A30

Test Data		
	Design	**Actual**
CFM	5400	5191
Fan RPM	667	721
RL Voltage	-	115
RL Amperage	13.8	12.0
Suction ESP	-	-0.20"
Discharge ESP	-	ATM
Total ESP	0.25	0.20"
Brake Horse Power	-	0.65

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF4 AREA:SHOP SERVICE EAST

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-240-7-1-34-X
Serial Num	-	23948422
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR-RELIANCE
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	13.8
Service Factor	-	1.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	AK74
Fan Sheave Bore	-	1"
Belt CL Distance	-	8"
Num of Belts	-	1
Belt Size	-	A30

Test Data		
	Design	**Actual**
CFM	5400	5297
Fan RPM	667	718
RL Voltage	-	115
RL Amperage	13.8	12.0
Suction ESP	-	-0.204"
Discharge ESP	-	ATM
Total ESP	0.25	0.204"
Brake Horse Power	-	0.65

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF5 AREA:SOUTH SERVICE

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-160-3
Serial Num	-	23948428
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	U.S. MOTORS
Horsepower	0.33	0.33
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	5.8
Service Factor	-	1.35

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	1/2"
Motor Sheave SetPt	-	0 TURNSOPEN
Fan Sheave Size	-	AK56
Fan Sheave Bore	-	3/4"
Belt CL Distance	-	5"
Num of Belts	-	1
Belt Size	-	4L240R

Test Data		
	Design	**Actual**
CFM	2400	2196
Fan RPM	901	961
RL Voltage	-	[1]
RL Amperage	7.2	[1]
Suction ESP	-	-0.101"
Discharge ESP	-	ATM
Total ESP	0.15	0.101"

Completed By: Michael McDonnell on 04/04/2024

Notes:
[1] COULD NOT SAFELY MEASURE

Written By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF6 AREA:DETAIL

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-200-3
Serial Num	-	23948429
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	U.S. MOTORS
Horsepower	0.33	0.33
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	5.8
Service Factor	-	1.35

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	1/2"
Motor Sheave SetPt	-	2 TURNS OPEN
Fan Sheave Size	-	AK79
Fan Sheave Bore	-	3/4"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt Size	-	AP28

Test Data		
	Design	**Actual**
CFM	3000	2816
Fan RPM	610	644
RL Voltage	-	115
RL Amperage	-	5.5
Suction ESP	-	-0.112"
Discharge ESP	-	ATM
Total ESP	0.15	0.112"
Brake Horse Power	-	0.31

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF7 AREA:OIL

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-200-5
Serial Num	-	23948430
Type	-	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	U.S. MOTORS
Horsepower	0.50	0.5
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	8.6
Service Factor	-	1.25

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	1/2"
Motor Sheave SetPt	-	0 TURNS OPEN
Fan Sheave Size	-	AK74
Fan Sheave Bore	-	3/4"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt Size	-	A27

Test Data		
	Design	**Actual**
CFM	3000	2911
Fan RPM	655	775
RL Voltage	-	115
RL Amperage	-	8.6
Suction ESP	-	-0.14"
Discharge ESP	-	ATM
Total ESP	0.25	0.14"
Brake Horse Power	-	0.5

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF8 AREA:SERVICE RECIEVING

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-200-3
Serial Num	-	23948431
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	U.S. MOTORS
Frame	-	NL
Horsepower	0.33	0.33
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	5.8
Service Factor	-	1.35

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	1/2"
Motor Sheave SetPt	-	4.5 TURNS OPEN
Fan Sheave Size	-	AK79
Fan Sheave Bore	-	3/4"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt Size	-	A28

Test Data		
	Design	**Actual**
CFM	3000	3044
Fan RPM	610	535
RL Voltage	-	115
RL Amperage	-	5.2
Suction ESP	-	-0.10"
Discharge ESP	-	ATM
Total ESP	0.15	0.10"
Brake Horse Power	-	0.30

Completed By: Michael McDonnell on 04/04/2024

National TAB

Project: LHM Dodge RTU Repl (Albuquerque, NM)

System/Unit: FAN - Exhaust

Asset: EF9 AREA:SERVICE RECEIVING

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-3	CUBE-200-3
Serial Num	-	23948432
Type	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	U.S. MOTORS
Horsepower	0.33	0.33
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	5.8
Service Factor	-	1.35

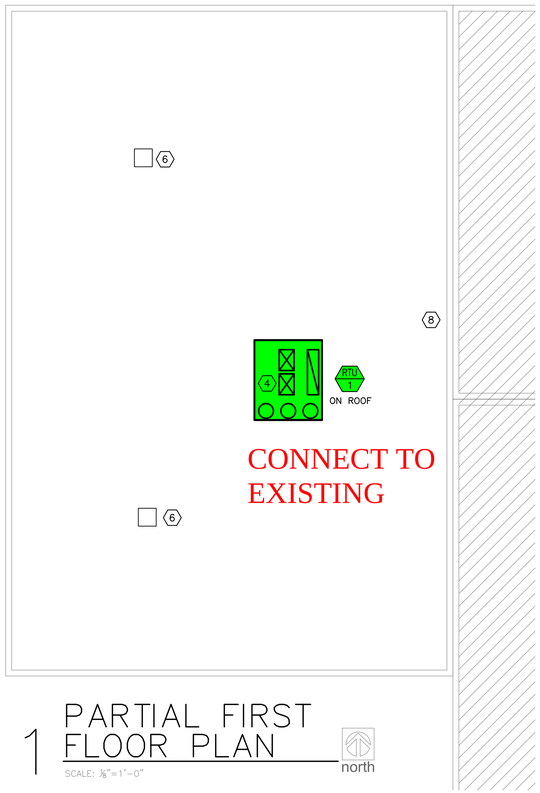
Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34S
Motor Bore Size	-	1/2"
Motor Sheave SetPt	-	4.5 TURNS OPEN
Fan Sheave Size	-	AK79
Fan Sheave Bore	-	3/4"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt Size	-	A28

Test Data		
	Design	**Actual**
CFM	3000	2939
Fan RPM	610	532
RL Voltage	-	115
RL Amperage	-	5.2
Suction ESP	-	-0.11"
Discharge ESP	-	ATM
Total ESP	0.15	0.11"
Brake Horse Power	-	0.295

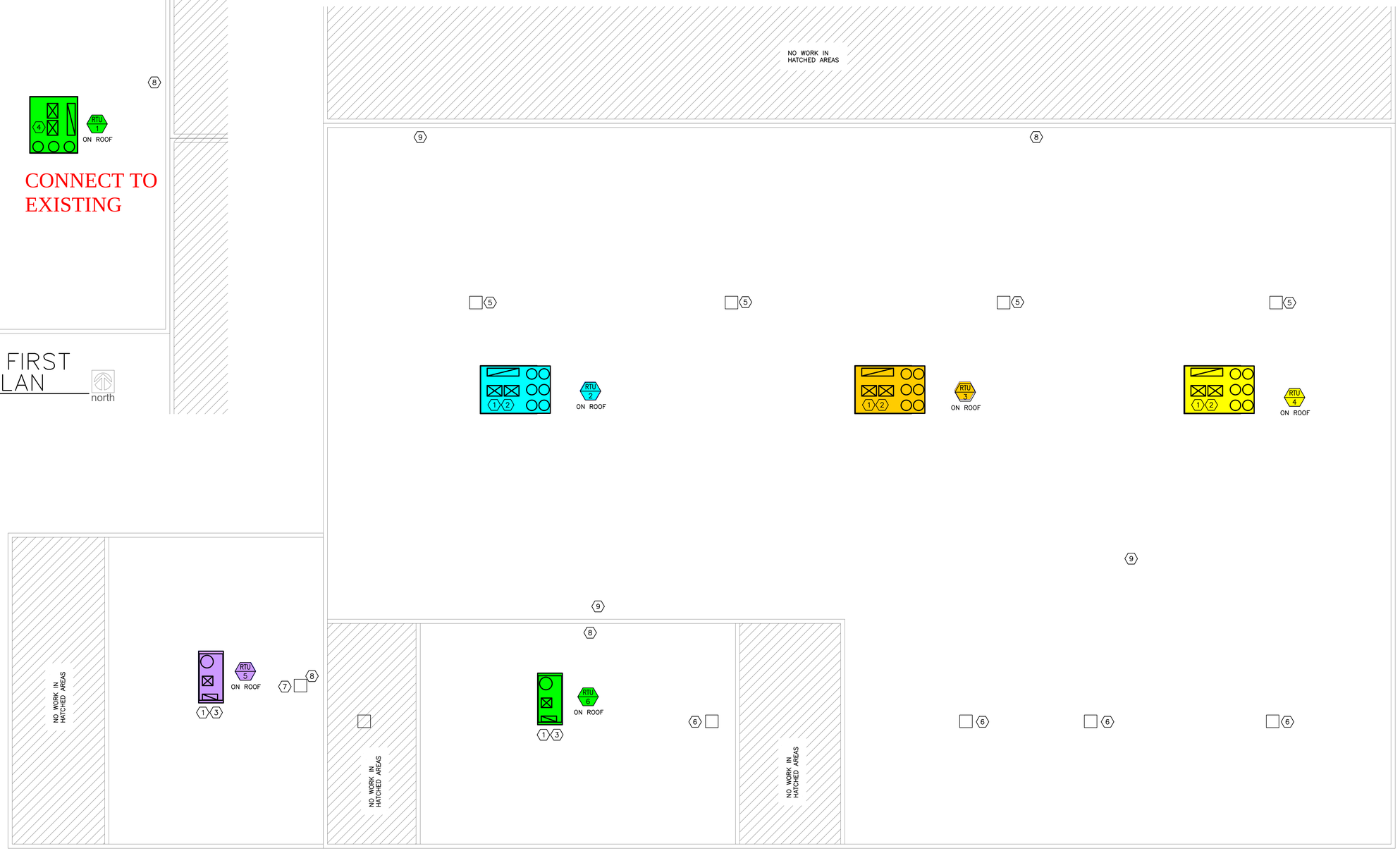
Completed By: Michael McDonnell on 04/04/2024

MECHANICAL PLAN NOTES:

1. DISCONNECT AND REMOVE EXISTING MAU AND EVAP COOLER. REMOVE PIPE AND CAP ABOVE ROOF. REMOVE ALL ASSOCIATED DUCT. COORDINATE LOCATION OF RTU WITH FIRE SUPPRESSION PIPING AND STRUCTURE. PROVIDE INTERNALLY LINED RETURN AIR DUCT DROP WITH MESH SCREEN.
2. PROVIDE SUPPLY AIR DISCHARGE DROP BOX DIFFUSER SIMILAR TO CURBS PLUS DLPD. NC TO BE UNDER 35 AT 8,000 CFM 4-WAY THROW. PROVIDE SUPPLY AIR TRANSITION FROM RTU OPENING TO DROPBOX DIFFUSER AS REQUIRED. MOUNT THERMOSTAT AT EXISTING LOCATION.
3. PROVIDE SUPPLY AIR DISCHARGE DROP BOX DIFFUSER SIMILAR TO CURBS PLUS DLPD. NC TO BE UNDER 35 AT 3,000 CFM 4-WAY THROW. PROVIDE SUPPLY AIR TRANSITION FROM RTU OPENING TO DROPBOX DIFFUSER AS REQUIRED. MOUNT THERMOSTAT AT EXISTING LOCATION.
4. DISCONNECT AND REMOVE EXISTING MAU AND EVAP COOLER. REMOVE PIPE AND CAP ABOVE ROOF. DUCT IS EXISTING TO REMAIN. REWORK DUCT FOR NEW UNIT CONNECTION. COORDINATE LOCATION OF RTU WITH FIRE SUPPRESSION PIPING AND STRUCTURE. PROVIDE INTERNALLY LINED RETURN AIR DUCT DROP WITH MESH SCREEN.
5. EXISTING 3/4 HP EXHAUST FAN. FURNISH AND INSTALL NEW CO/NO2 SENSOR, AND STARTER. AT SETPOINT SENSOR SHALL START ALL EF IN AREA ALONG WITH ENERGIZING RTU'S IN ECONOMIZER. ONE CONTROLLER SHALL BE INSTALLED PER ZONE. PROVIDE SENSORS AS REQUIRED FOR COVERAGE.
6. EXISTING 1/3 HP EXHAUST FAN. FURNISH AND INSTALL NEW CO/NO2 SENSOR, AND STARTER. AT SETPOINT SENSOR SHALL START ALL EF IN AREA ALONG WITH ENERGIZING RTU'S IN ECONOMIZER. ONE CONTROLLER SHALL BE INSTALLED PER ZONE. PROVIDE SENSORS AS REQUIRED FOR COVERAGE.
7. EXISTING 1/2 HP EXHAUST FAN. FURNISH AND INSTALL NEW CO/NO2 SENSOR, AND STARTER. AT SETPOINT SENSOR SHALL START ALL EF IN AREA ALONG WITH ENERGIZING RTU'S IN ECONOMIZER. ONE CONTROLLER SHALL BE INSTALLED PER ZONE. PROVIDE SENSORS AS REQUIRED FOR COVERAGE.
8. LOCATION OF CO/NO2 CONTROLLER
9. LOCATION OF CO/NO2 SENSOR



1 PARTIAL FIRST FLOOR PLAN
SCALE: ⅛"=1'-0"
north



2 PARTIAL FIRST FLOOR PLAN
SCALE: ⅛"=1'-0"
north

MetroAir
DESIGN/BUILD HVAC SHEETMETAL CONTROLS SERVICE
8151 McCOY • SHAWNEE, KANSAS 66227
PHONE (913)888-3991 • FAX (913)599-3808

JONATHAN LEE SCANTLIN
NEW MEXICO
25430
PROFESSIONAL ENGINEER
08.21.2023

LHM CDJ
8528 Lomas Blvd NE
Albuquerque, NM 87110

DATE
5.18.23
DRAWN BY
ewh
CHECKED BY
jdg
REVISIONS

SHEET NUMBER
M2.1

PROJECT NUMBER
23-xxxxx