National TAB

Project: 10-20-25 QT #0847 GAINESVILLE, GA

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Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report are further details about your building performance including recommendations, asset data, and pictures. 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.

RTU's (Roof Top Units)
Each of the RTU's was measured with a flow hood to establish total flow. The total flow was then adjusted via the VFD so that airflow fell within design tolerances. All diffusers on the kitchen RTU were balanced to the engineer's design flow. The diffusers on the sales floor were only adjusted when there were noticeable issues present like drafting or dampers that were found completely closed. The Hoods On outside air rate was set by first establishing the typical QT set point at the Emerson controller and then making manually adjustments on the roof. The hoods off airflow setpoint was found by adjusting the damper position at the Emerson controller until the design airflow was achieved. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. After completion of TAB all overrides were released.

Kitchen Exhaust Hood & Associated Fans
The kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow.

Restroom Exhaust Fans
The restroom exhaust fans were measured with a flow hood. The total flow was balanced for the fan with the exception of the new grille over the combi-oven, which was balanced to the listed design.

Final Building Tests
After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report. The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

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- Open QT_0847_Balance_Schedule.xlsx

Issue List

- RTU-3: Kitchen Diffusers Incorrect Style
- RTU-3: Kitchen Supply Diffuser Ductwork Incorrect

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Project Issue Information

Issue Name : RTU-3: Kitchen Diffusers Incorrect Style

Description : Kitchen diffusers 3-1, 3-2, 3-3, and 3-4 are substitutes until the correct Titus Diffusers can be installed.

Created By : National TAB

Assigned To : National TAB - Dan Hertenstein

Status : Open

Priority : High

Asset Tag :

Originated Date : 10/23/2025 - Sagar Patel - National TAB

Project Issue File Details

10/23/2025

Project Issue Response Details

- **11/25/2025 National TAB - Sagar Patel**
  - Substitute diffusers are still in place of Titus diffusers.
- **11/04/2025 National TAB - Ben Searles**
  - DIFFUSERS REMAIN INCORRECT

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Project Issue Information

Issue Name : RTU-3: Kitchen Supply Diffuser Ductwork Incorrect

Description : RTU-3 Diffusers 3-1 and 3-4 in the kitchen are not connected to the supply duct. They are still connected to the return duct. This will need to be corrected. RTU 3 is balanced to total design airflow.

Created By : National TAB

Assigned To : National TAB - Dan Hertenstein

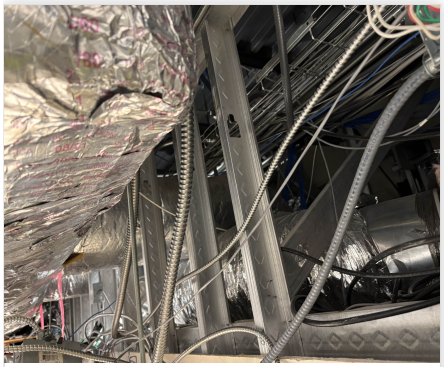
Status : Closed

Priority : Urgent

Asset Tag :

Originated Date : 10/23/2025 - Sagar Patel - National TAB

Project Issue File Details



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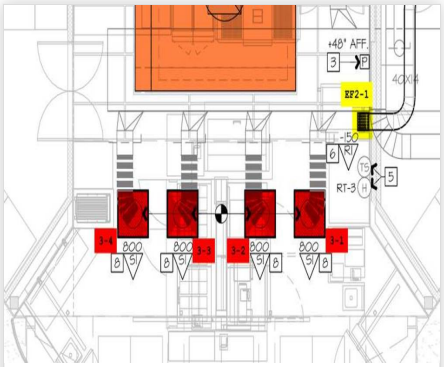

10/23/2025

CheckList List

- 01: RTU’s/AHU’s
- 02: Exhaust Fans
- 03: Hoods
- 04: Final Tests
- PLAN REVIEW

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CheckList Information

Name :	01: RTU’s/AHU’s	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/14/2025 - Trinity Dodds - National TAB		
Completed Date :	10/23/2025 - Sagar Patel - National TAB		

CheckList Item Details

RTU's/AHU's

Evaporator coils are clean?	Pass
Comment:	
Condenser coils are clean?	Pass
Comment:	
Gas piping is installed and valves are turned on?	N/A
Comment:	
Unit free of noticeable noise and vibration	Pass
Comment:	

10-20-25 QT #0847 GAINESVILLE, GA

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/14/2025 - Trinity Dodds - National TAB		
Completed Date :	10/23/2025 - Sagar Patel - National TAB		

CheckList Item Details

EF's

Hinge kit installed installed on hood fan?	Pass
Comment:	
Flex conduit is long enough so that fan can be completely tilted back?	Pass
Comment:	
No major leakage around the fan base	Pass
Comment:	
Unit is free of noise and vibration	Pass
Comment:	

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CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/14/2025 - Trinity Dodds - National TAB		
Completed Date :	10/23/2025 - Sagar Patel - National TAB		

CheckList Item Details

HOODS

Hood is free of alarms?	Pass
Comment:	
Hood is free of damage?	Pass
Comment:	
End panels are installed per prototype?	N/A
Comment:	

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CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/14/2025 - Trinity Dodds - National TAB		
Completed Date :	10/23/2025 - Sagar Patel - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

N/A

List smoke candle type used

Comment:

45 SECOND SMOKE EMITTER

Smoke test capture % - Perimeter of hood

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	10/23/2025

Comment:

TAB tech name / Firm

Comment:

SAGAR PATEL / NATIONAL TAB INTELLIGENCE

Site super name / Firm

Comment:

JEFF MORRIS / POWEHOUSE

Owner representative name / Firm (if Applicable)

Comment:

BUILDING PRESSURE

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	Pass

Comment:

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CheckList Information

Name :	PLAN REVIEW	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/14/2025 - Trinity Dodds - National TAB		
Completed Date :	10/14/2025 - Trinity Dodds - National TAB		

CheckList Item Details

Asset Requirements	
We have the latest set of construction drawings and are not working off the Bid or Permit Set:	N/A
Comment:	
Diffuser totals equal the scheduled airflow of each piece of equipment	Yes
Comment:	
Scheduled Hood airflow match scheduled EF and MAU airflows	N/A
Comment:	
Files to Upload	
A PDF summary is uploaded and matches the equipment/scope of the project	Yes
Comment:	
Balance schedule is uploaded?	Yes
Comment:	
Required account checklists are created	Yes

Comment:	
Mechanical drawings are uploaded	Yes
Comment:	
If job is a Revive, Pre-design, or Remodel. Check if we have an old report on sharepoint or the old FaciliBuild and upload to files section.	N/A
Comment:	
GRD Layout is uploaded	Yes
Comment:	
Jurisdiction Requirements	
Is job in Orlando, FL metro area or Phoenix metro area? If yes, a smoke detector checklist needs to be created for each RTU or AHU	No
Comment:	
Is job in Broward County, FL? If so, is Broward County on the permit (Ask the GC)? If Broward County is on the permit, then we CANNOT perform the balance.	No
Comment:	

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System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201312-ANEK09755
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4224
SF RPM	-	1232
OA CFM (Hoods On)	800	791
OA CFM (Hoods Off)	350	358
RL Voltage	-	126 VFD
RL Amperage	-	9.42 VFD
VFD Max SetPt	-	42 HZ
VFD Min SetPt	-	24 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	34%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.81”
Fan Suction SP	-	-0.99”
Fan Discharge SP	-	0.62”
Total ESP	-	1.43"
Fan Total SP	-	1.61"

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

Completed By: Sagar Patel on 10/21/2025

Unit Data - PHOTO LOG

10/21/2025

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Project: 10-20-25 QT #0847 GAINESVILLE, GA

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201312-ANEK09754
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	3922
SF RPM	-	1232
OA CFM (Hoods On)	800	820
OA CFM (Hoods Off)	350	337
RL Voltage	-	126 VFD
RL Amperage	-	9.21 VFD
VFD Max SetPt	-	42 HZ
VFD Min SetPt	-	24 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	28%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.60”
Fan Suction SP	-	-0.76”
Fan Discharge SP	-	0.84”
Total ESP	-	1.44"
Fan Total SP	-	1.60"

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

Completed By: Sagar Patel on 10/21/2025

Unit Data - PHOTO LOG

10/21/2025

10/21/2025

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Project: 10-20-25 QT #0847 GAINESVILLE, GA

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201312-ANEK09756
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4590
SF RPM	-	1232
OA CFM (Hoods On)	800	777
OA CFM (Hoods Off)	350	337
RL Voltage	-	126 VFD
RL Amperage	-	9.32 VFD
VFD Max SetPt	-	42 HZ
VFD Min SetPt	-	24 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	36%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.63”
Fan Suction SP	-	-0.77”
Fan Discharge SP	-	0.89”
Total ESP	-	1.52"
Fan Total SP	-	1.66"

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

Notes:
[1] INCORRECT DIFFUSERS INSTALLED FOR 1 THROUGH 4
[2] DIFFUSERS 3-1 & 3-4 ARE MISSING DAMPERS AND ARE LEAKING AIR INTO THE CEILING. UNIT TOTAL WAS BALANCED, BUT UNABLE TO BALANCE DIFFUSERS

Written By: Ben Searles on 11/04/2025

Unit Data - PHOTO LOG

10/21/2025

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Project:10-20-25 QT #0847 GAINESVILLE, GA

AHU/RTU

Diffuser Supply (GRD)

RT-3/BOH/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SUPPORT SERVICE	SI	12"	800	1	0	907		-
SGRD2	SUPPORT SERVICE	SI	12"	800	1	1232	909		-
SGRD3	SUPPORT SERVICE	SI	12"	800	1	1056	717		-
SGRD4	SUPPORT SERVICE	SI	12"	800	1	0	963		-
SGRD5	DOCK	ES	12"	750	1	924	645		-
SGRD6	WORKROOM	ES	8"	250	1	951	391		-
Total				4200		4163	4532	0	0%

Asset	Notes	Date	Written By
SGRD1	MISSING DAMPER AND DUCTWORK IS LEAKING AIR INTO THE CEILING. UNABLE TO BALANCE	11/04/2025	Ben Searles
SGRD4	MISSING DAMPER AND DUCTWORK IS LEAKING AIR INTO THE CEILING. UNABLE TO BALANCE	11/04/2025	Ben Searles

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Project: 10-20-25 QT #0847 GAINESVILLE, GA

System/Unit: FAN - Exhaust

Asset: EF1 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	LOREN COOK COMPANY
Model Num	NA	90 ACEH 90C15DH
Serial Num	-	050SE95843-00/0000701
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	48YZ
Horsepower	-	0.25
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	5.0
Service Factor	-	1.35

Test Data		
	Design	**Actual**
CFM	225	247
Fan Rotation	-	CCW
System SetPt	-	LOW
RL Voltage	-	[1]
RL Amperage	-	[1]
Total ESP	-	0.23”
Fan Inlet SP	-	-0.23”
Fan Discharge SP	-	1 ATM

Completed By: Sagar Patel on 10/23/2025

Notes:
[1] UNABLE TO READ VOLTS AND AMPS SAFELY

Written By: Sagar Patel on 10/23/2025

Unit Data - PHOTO LOG

10/21/2025

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Project: 10-20-25 QT #0847 GAINESVILLE, GA

System/Unit: FAN - Exhaust

Asset: EF2 AREA:MEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	LOREN COOK COMPANY
Model Num	NA	120 ACE 120C13D 33
Serial Num	-	050SE95843-00/0001901
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	FASCI
Frame	-	N/L
Horsepower	-	0.250
Motor Rpm	-	1300
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.2
Service Factor	-	N/L

Test Data		
	Design	**Actual**
CFM	525	567
Fan Rotation	-	CCW
System SetPt	-	LOW
RL Voltage	-	[1]
RL Amperage	-	[1]
Total ESP	-	0.21”
Fan Inlet SP	-	-0.21”
Fan Discharge SP	-	1 ATM

Completed By: Sagar Patel on 10/23/2025

Notes:
[1] UNABLE TO READ VOLTS AND AMPS SAFELY

Written By: Sagar Patel on 10/23/2025

Unit Data - PHOTO LOG

10/21/2025

Diffuser Ret/Exh (GRD)

EF2/MEN'S RR

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	SUPPORT SERVICE	RI	8"	150	1	158	158	158	105.3
Total				150		158	158	158	105.33%

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Project: 10-20-25 QT #0847 GAINESVILLE, GA

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	7644848
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	HSSA
Frame	-	48
Horsepower	1/2	0.5
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.6
Service Factor	-	N/L

Test Data		
	Design	**Actual**
CFM	1350	1360
Fan RPM	-	1199
Fan Rotation	-	CCW
Motor RPM	-	1199
System SetPt	-	52.8 HZ
RL Voltage	-	211
RL Amperage	-	1.8
Total ESP	-	0.34”
Fan Inlet SP	-	-0.34”
Fan Discharge SP	-	1 ATM

Completed By: Sagar Patel on 10/23/2025

Unit Data - PHOTO LOG

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Project: 10-20-25 QT #0847 GAINESVILLE, GA

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	7644848
Type	TYPE I CANOPY	TYPE 1 CANOPY
Hood length	-	108"
Hood Width	-	60"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE
Filter Size 1	-	16X20
Filter Qty 1	-	6
Filter AK factor size 1	-	2.08
Filter Total AK Area	-	12.48
Filter1 FPM	-	106
Filter2 FPM	-	108
Filter3 FPM	-	126
Filter4 FPM	-	107
Filter5 FPM	-	107
Filter6 FPM	-	101
Filter Ave FPM(corr)	-	109
CFM	1350	1360

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	GRITTLE

Completed By: Sagar Patel on 10/23/2025

Unit Data - PHOTO LOG

10/21/2025

1 INSTALL NEW OWNER-FURNISHED TYPE-I KITCHEN HOOD EXHAUST SYSTEM, FIRE SUPPRESSION DUCT, AND ALL OTHER REQUIREMENTS FOR A TYPE-I SYSTEM. INSTALL HOOD CONTROL PAN SENSOR(S), AND HUMIDITY SENSOR(S) WITHIN HOOD UTILITY CABINET ACCORDING TO MANUFA INSTALLATION REQUIREMENTS.

Date: 12/12/2025