Report By:

National TAB
105 Stone Village Drive
Fort Mill, SC 29708

Report: TAB Reports

Function: Test, Adjust, & Balance

Date: 02/18/2026

Completed By: National TAB

PROJECT

02-16-26 QT #1074 MONROE, NC

603 W ROOSEVELT BLVD

MONROE, NC

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 02-16-26 QT #1074 MONROE, NC

Table Of Contents

Project Summary

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.

Issue List

- EF-2 speed controller doesn't work
- RTU 3 economizer not working

02-16-26 QT #1074 MONROE, NC

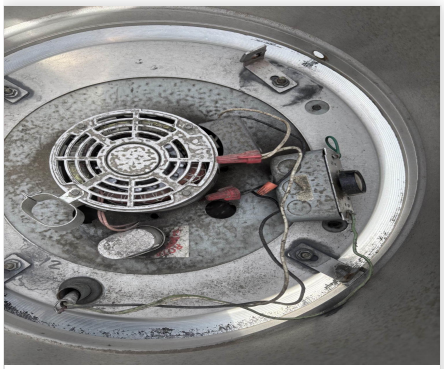
Project Issue Information

Issue Name : EF-2 speed controller doesn't work

Description : The speed controller on EF-2 does not work. The combi oven grille is under design, and the men's restroom cannot spare enough air to bring it to design. The fan must be sped up.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	High	**Asset Tag :**	EF2
Originated Date :	02/18/2026 - Christian Moller - National TAB		

Project Issue File Details



02/18/2026

02/18/2026

02-16-26 QT #1074 MONROE, NC

Project Issue Information

Issue Name : RTU 3 economizer not working

Description : The economizer on RTU 3 does not respond to the Emerson board setpoints. For balancing purposes, the OA was set and left at the high speed position so is bringing in extra when the hood is off. Position was physically marked in the unit.

Created By : National TAB

Assigned To : National TAB - Dan Hertenstein

Status : Open

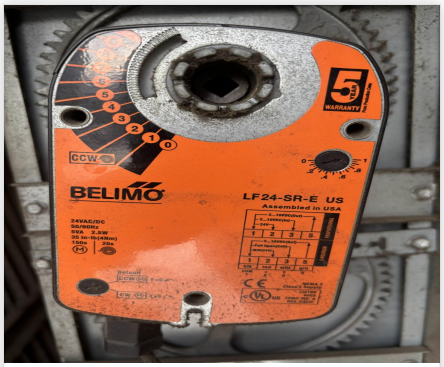
Priority : Urgent

Asset Tag : RT-3

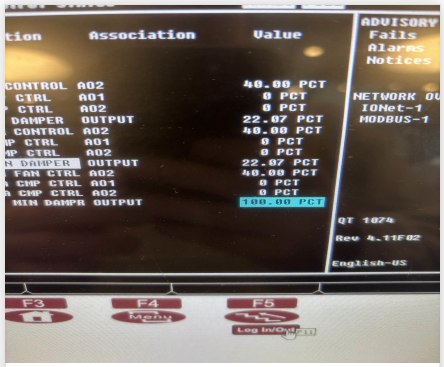
Originated Date : 02/18/2026 - Christian Moller - National TAB

Project Issue File Details

02/18/2026



02/18/2026



02/18/2026

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AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HOOD ON OA		HOOD OFF OA		HOOD ON EXHAUST		HOOD OFF EXHAUST	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU 1	SALES	800	769	350	362				
RTU-2	SALES	800	831	350	343				
RTU-3	BOH/KITCHEN	800	795	350	632				
EF-1	WOMEN'S RR					225	247	225	247
EF-2	MEN'S RR					525	367	525	367
EF-3	HOOD					1350	1322	0	0
TOTALS		2400	2395	1050	1337	2100	1936	750	614

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2395
TOTAL EXHAUST	2100	1936
NET AIRFLOW	300	459

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.018
SIDE	
REAR	0.016
AVERAGE	**0.017**

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1337
TOTAL EXHAUST	750	614
NET AIRFLOW	300	723

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.024
SIDE	
REAR	0.023
AVERAGE	**0.0235**

NOTES:

CheckList List

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

02-16-26 QT #1074 MONROE, NC

CheckList Information

Name : 01: RTU's/AHU's **Status :** Completed

Assigned Organization : National TAB **Asset :**

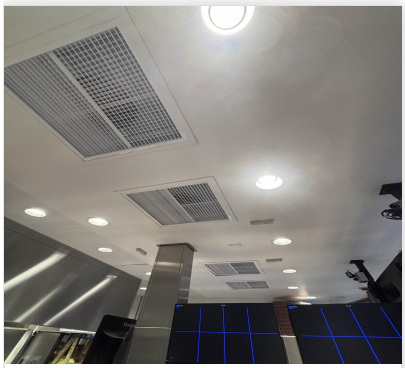
Requesting Organization : National TAB

Created Date : 09/23/2025 - Trinity Dodds - National TAB

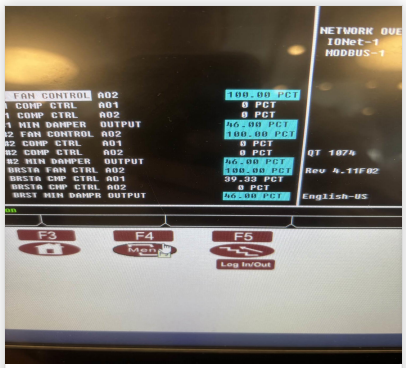
Completed Date : 02/18/2026 - Christian Moller - National TAB

CheckList Item Details

RTU's/AHU's



02/18/2026



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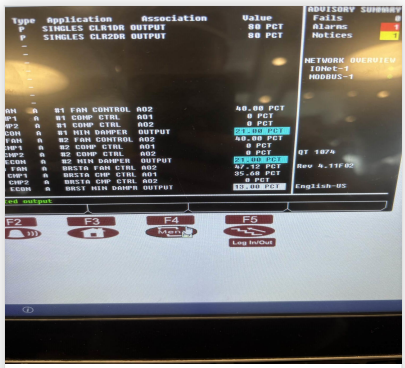

02/18/2026

Evaporator coils are clean?	Pass
Comment:	

Condenser coils are clean?	Pass
Comment:	

Gas piping is installed and valves are turned on?	Pass
Comment:	

Unit free of noticeable noise and vibration	Pass

Comment:

02-16-26 QT #1074 MONROE, NC

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/23/2025 - Trinity Dodds - National TAB		
Completed Date :	02/18/2026 - Christian Moller - 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:	

02-16-26 QT #1074 MONROE, NC

CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/23/2025 - Trinity Dodds - National TAB		
Completed Date :	02/18/2026 - Christian Moller - 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?	Pass
Comment:	

02-16-26 QT #1074 MONROE, NC

CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/23/2025 - Trinity Dodds - National TAB		
Completed Date :	02/18/2026 - Christian Moller - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

Pizza oven, Fryer

List smoke candle type used

Comment:

Only cooking was observed.

Smoke test capture % - Perimeter of hood

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	02/18/2026

Comment:

TAB tech name / Firm

Comment:

Christian Moller / NTAB

Site super name / Firm

Comment:

Randy Edmonds / Ascent Construction

Owner representative name / Firm (if Applicable)

Comment:

N/A

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:

HOOD ON: Front: 0.018" Back: 0.016" HOOD OFF: Front: 0.024" Back: 0.023"

National TAB

Project: 02-16-26 QT #1074 MONROE, NC

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201401-ANEK09702
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X24
Num Final Filter 1	2
Final Filter Size 1	56X45

Motor Data	
	Actual
Motor MFG	AAON
Frame	NL
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4005
SF RPM	-	DD
OA CFM (Hoods On)	800	769
OA CFM (Hoods Off)	350	362
RL Voltage	-	216/216/215
RL Amperage	-	5.1/5.1/5.3
VFD Max SetPt	-	33.6Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	21%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.25"
Fan Suction SP	-	-0.38"
Fan Discharge SP	-	0.33"
Total ESP	-	0.63"
Fan Total SP	-	0.71"

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

Completed By: Christian Moller on 02/18/2026

Unit Data - PHOTO LOG

02/18/2026

National TAB

Project: 02-16-26 QT #1074 MONROE, NC

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201401-ANEK09703
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X24
Num Final Filter 1	2
Final Filter Size 1	56X45

Motor Data	
	Actual
Motor MFG	AAON
Frame	NL
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4342
SF RPM	-	DD
OA CFM (Hoods On)	800	831
OA CFM (Hoods Off)	350	343
RL Voltage	-	214/215/216
RL Amperage	-	5.0/4.6/4.5
VFD Max SetPt	-	32.8Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	21%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.25"
Fan Suction SP	-	-0.37"
Fan Discharge SP	-	0.33"
Total ESP	-	0.62"
Fan Total SP	-	0.70"

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

Completed By: Christian Moller on 02/18/2026

Unit Data - PHOTO LOG

02/18/2026

National TAB

Project: 02-16-26 QT #1074 MONROE, NC

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201401-ANEK09704
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X24
Num Final Filter 1	2
Final Filter Size 1	56X45

Motor Data	
	Actual
Motor MFG	AAON
Frame	NL
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4382
SF RPM	-	DD
OA CFM (Hoods On)	800	795
OA CFM (Hoods Off)	350	632
RL Voltage	-	214/215/215
RL Amperage	-	5.9/5.7/5.6
VFD Max SetPt	-	35Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	46%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.33"
Fan Suction SP	-	-0.48"
Fan Discharge SP	-	0.51"
Total ESP	-	0.81"
Fan Total SP	-	0.99"

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

Completed By: Christian Moller on 02/18/2026

Notes:
[2] Economizer does not respond to the Emerson Board, OA manually set and left at high speed setpoint. SEE ISSUES.

Written By: Christian Moller on 02/18/2026

Unit Data - PHOTO LOG

02/18/2026

National TAB

Project:02-16-26 QT #1074 MONROE, NC

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	426	853	853	106.6
SGRD2	SUPPORT SERVICE	SI	12"	800	1	394	869	869	108.6
SGRD3	SUPPORT SERVICE	SI	12"	800	1	409	836	836	104.5
SGRD4	SUPPORT SERVICE	SI	12"	800	1	396	844	844	105.5
SGRD5	DOCK	ES	12"	750	1	322	714	714	95.2
SGRD6	WORKROOM	ES	8"	250	1	112	266	266	106.4
Total				4200		2059	4382	4382	104.33%

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Project: 02-16-26 QT #1074 MONROE, NC

System/Unit: FAN - Exhaust

Asset: EF1 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	90 ACEH 90C15DH
Serial Num	-	410SE96156-00/0000702
Type	-	DOWBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	COOK
Frame	-	NL
Horsepower	-	1/8
Motor Rpm	-	1600
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	225	247
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER / MEDIUM SPEED
RL Voltage	-	113
RL Amperage	-	1.1
Total ESP	-	0.21"
Fan Inlet SP	-	-0.21"
Fan Discharge SP	-	ATM

Completed By: Christian Moller on 02/18/2026

Unit Data - PHOTO LOG

02/18/2026

National TAB

Project: 02-16-26 QT #1074 MONROE, NC

System/Unit: FAN - Exhaust

Asset: EF2 AREA:MEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	120 ACE 120C15D
Serial Num	-	410SE81189-00/0002903
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	COOK
Frame	-	NL
Horsepower	-	1/4
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	525	367
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	SINGLE SPEED
RL Voltage	-	112
RL Amperage	-	1.8
Total ESP	-	0.39"
Fan Inlet SP	-	-0.39"
Fan Discharge SP	-	ATM

Completed By: Christian Moller on 02/18/2026

Notes:
[1]Speed controller is not working. SEE ISSUES.

Written By: Christian Moller on 02/18/2026

Unit Data - PHOTO LOG

02/18/2026

National TAB

Project:02-16-26 QT #1074 MONROE, NC

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	COMBI-OVEN	RI	8"	150	1	98	98	98	65.3
Total				150		98	98	98	65.33%

National TAB

Project: 02-16-26 QT #1074 MONROE, NC

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8424865
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	CAPTIVEAIRE
Frame	-	NL
Horsepower	1/2	0.5
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.8
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	1350	1322
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	HMI/51.8Hz
RL Voltage	-	212
RL Amperage	-	2.7
Total ESP	-	0.68"
Fan Inlet SP	-	-0.68"
Fan Discharge SP	-	ATM

Completed By: Christian Moller on 02/18/2026

Unit Data - PHOTO LOG

02/18/2026

National TAB

Project: 02-16-26 QT #1074 MONROE, NC

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2
Job / Serial Num	-	8424865
Type	-	TYPE I CANOPY
Hood length	-	108"
Hood Width	-	60"

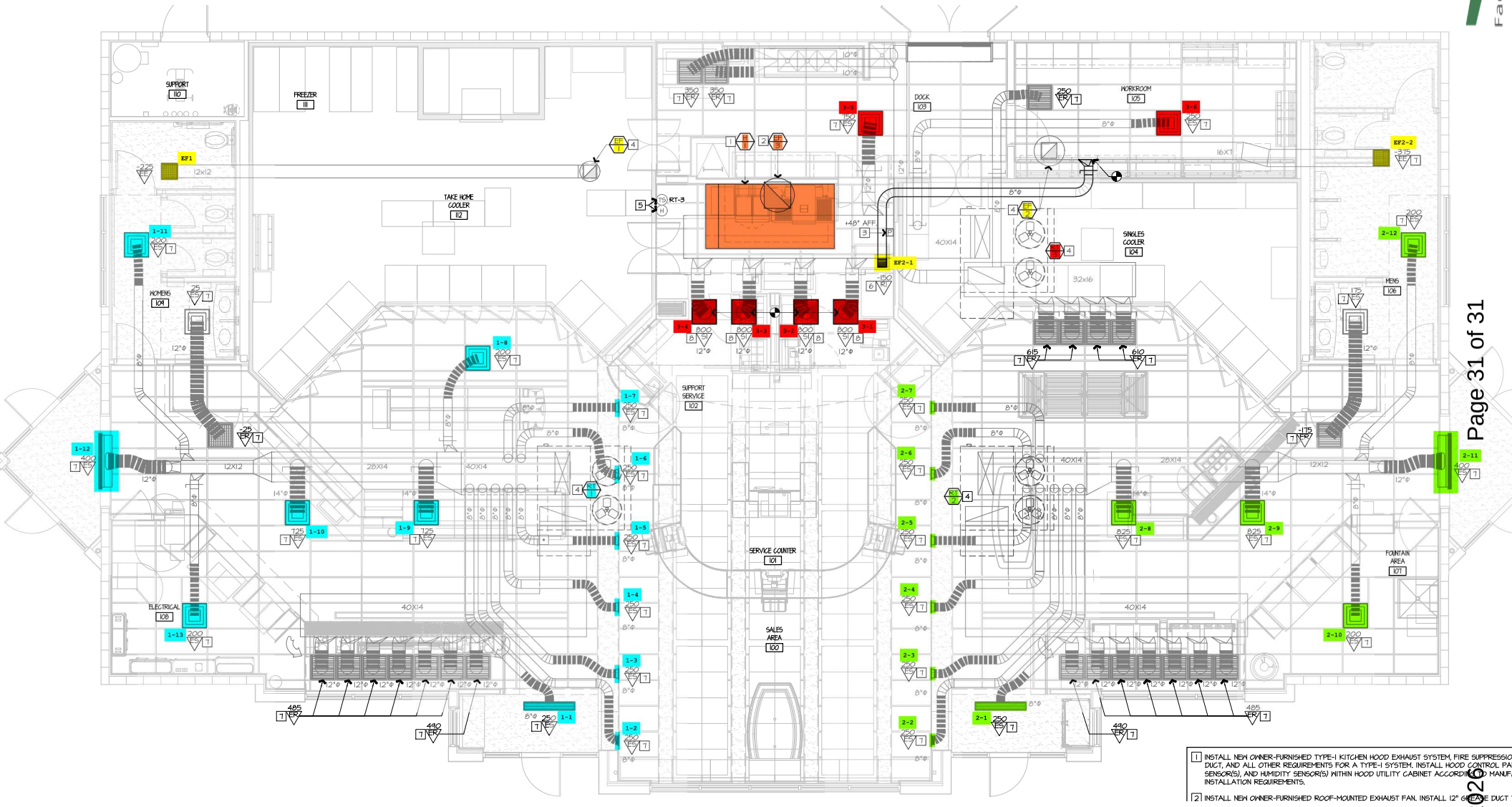
Test Data Exhaust		
	Design	**Actual**
Filter Type	-	BAFFLE FILTERS
Filter Size 1	-	16X20
Filter Qty 1	-	6
Filter AK factor size 1	-	2.08
Filter Total AK Area	-	12.48
Filter1 FPM	-	86
Filter2 FPM	-	98
Filter3 FPM	-	114
Filter4 FPM	-	116
Filter5 FPM	-	125
Filter6 FPM	-	101
Filter Ave FPM(corr)	-	106
CFM	1350	1322

Cooking Equipment	
	Actual
Item 1	PIZZA OVEN
Item 2	FRYER

Completed By: Christian Moller on 02/18/2026

Unit Data - PHOTO LOG

02/18/2026



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

[2] INSTALL NEW OWNER-FURNISHED ROOF-MOUNTED EXHAUST FAN. INSTALL 12" GREASE DUCT

Date: 2/18/2026