

Report By:

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Charlotte, NC 28105



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 04/01/2026
Completed By: National TAB

PROJECT
03-30-26 QT #1052 CHARLOTTE, NC

3206 EASTWAY DR

CHARLOTTE, NC

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

National TAB

Project: 03-30-26 QT #1052 CHARLOTTE, NC

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Project: 03-30-26 QT #1052 CHARLOTTE, NC
Function: Test, Adjust, & Balance

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

- Cannot access dampers
- Door fan not running
- RTU 3 compressor door obstructed
- RTU 3 Econ not working
- RTU 3 in alarm



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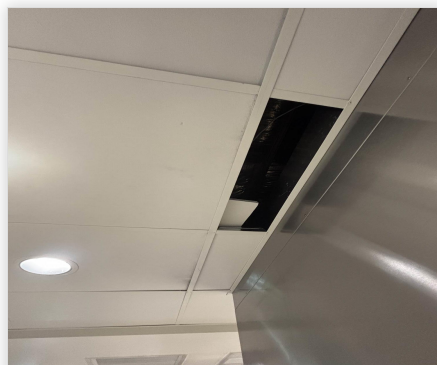
Project Issue Information

Issue Name : Cannot access dampers
Description : SGRD 1,2 and 5's dampers on RTU3 cannot be reached. The only ceiling tiles able to be moved are too thin and far from the dampers to be able to reach them. SGRD 5's damper is also on top of the duct making it farther to reach.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Urgent **Asset Tag :** RT-3
Originated Date : 04/01/2026 - Christian Moller - National TAB

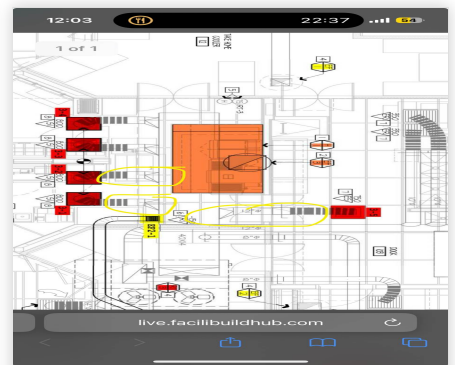
Project Issue File Details



04/01/2026



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Project Issue Information

Issue Name : Door fan not running
Description : The bug fan above the back door was left with its mechanical compartment door open and wires dangling. The fan does not turn on when the door is opened.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : InfoOnly **Asset Tag :**
Originated Date : 04/01/2026 - Christian Moller - National TAB

Project Issue File Details



04/01/2026



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Project Issue Information

Issue Name : RTU 3 compressor door obstructed
Description : The condensate drain pipe is obstructing the compressor access door from opening fully.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Medium **Asset Tag :** RT-3
Originated Date : 04/01/2026 - Christian Moller - National TAB

Project Issue File Details



04/01/2026



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Project Issue Information

Issue Name : RTU 3 Econ not working
Description : The economizer on RTU 3 does not respond to the Emerson board nor the manual dial on the actuator itself. With its position the screws could not be taken out to manually set outside air.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Urgent **Asset Tag :** RT-3
Originated Date : 04/01/2026 - Christian Moller - National TAB

Project Issue File Details



04/01/2026



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03-30-26 QT #1052 CHARLOTTE, NC

Project Issue Information

Issue Name : RTU 3 in alarm
Description : Upon arrival RTU 3 was in alarm, the VFD was flashing a 'bb' alarm. This means there is a communication issue, either telling the fan to not run or not sending a signal. The unit was put into override for balancing using the tstat and R1 relays, but set back to alarm once finished. The kitchen is getting very hot without this unit being on.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Urgent **Asset Tag :** RT-3
Originated Date : 04/01/2026 - Christian Moller - National TAB

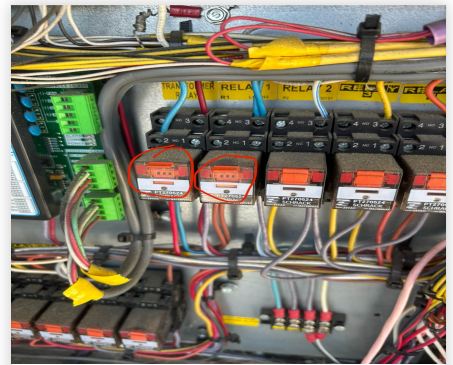
Project Issue File Details



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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	822	350	367				
RTU-2	SALES	800	768	350	339				
RTU-3	BOH/KITCHEN	800	0	350	0				
EF-1	WOMEN'S RR					225	213	225	213
EF-2	MEN'S RR					525	457	525	457
EF-3	HOOD					1350	1372	0	0
TOTALS		2400	1590	1050	706	2100	2042	750	670

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	1590
TOTAL EXHAUST	2100	2042
NET AIRFLOW	300	-452

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	-0.0046
SIDE	
REAR	-0.0055
AVERAGE	-0.0051

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	706
TOTAL EXHAUST	750	670
NET AIRFLOW	300	36

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0007
SIDE	
REAR	-0.001
AVERAGE	-0.0002

NOTES:

CheckList List

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



03-30-26 QT #1052 CHARLOTTE, NC

CheckList Information

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

Assigned Organization : National TAB Asset :

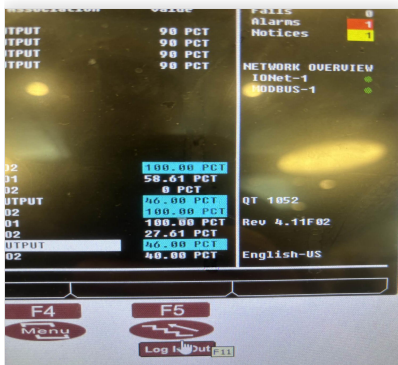
Requesting Organization : National TAB

Created Date : 02/10/2026 - Trinity Dodds - National TAB

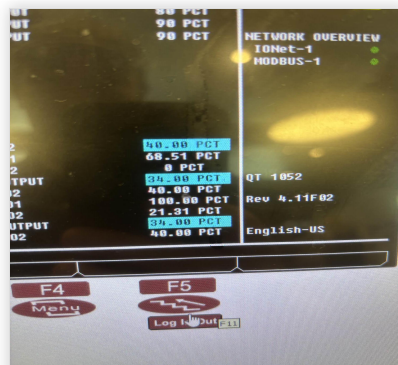
Completed Date : 04/01/2026 - Christian Moller - National TAB

CheckList Item Details

RTU's/AHU's



04/01/2026



04/01/2026

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:



03-30-26 QT #1052 CHARLOTTE, NC

CheckList Information

Name : 02: Exhaust Fans **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 02/10/2026 - Trinity Dodds - National TAB

Completed Date : 04/01/2026 - 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:



03-30-26 QT #1052 CHARLOTTE, NC

CheckList Information

Name : 03: Hoods **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 02/10/2026 - Trinity Dodds - National TAB
Completed Date : 04/01/2026 - 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:



03-30-26 QT #1052 CHARLOTTE, NC

CheckList Information

Name : 04: Final Tests **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 02/10/2026 - Trinity Dodds - National TAB

Completed Date : 04/01/2026 - Christian Moller - National TAB

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

Fryer, Pizza Oven

List smoke candle type used

Comment:

None - 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

04/01/2026

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: -0.0046" Back: -0.0055" HOOD OFF: Front: 0.0007" Back: -0.001"



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Project: 03-30-26 QT #1052 CHARLOTTE, NC

System/Unit: AHU/RTU

Asset: RT-1

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201407-ANEK10595
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
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4166
SF RPM	-	DD
OA CFM (Hoods On)	800	822
OA CFM (Hoods Off)	350	367
RL Voltage	-	209/208/207
RL Amperage	-	6.7/6.2/6.5
VFD Max SetPt	-	37Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	34%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.25"
Fan Suction SP	-	-0.43"
Fan Discharge SP	-	0.38"
Total ESP	-	0.68"
Fan Total SP	-	0.81"

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

Completed By: Christian Moller on 04/01/2026

Unit Data - PHOTO LOG



04/01/2026



National TAB

Project: 03-30-26 QT #1052 CHARLOTTE, NC

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201407-ANEK10596
Model Num	RN-013-8-0-EA0A
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
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4308
SF RPM	-	DD
OA CFM (Hoods On)	800	768
OA CFM (Hoods Off)	350	339
RL Voltage	-	207/208/207
RL Amperage	-	6.6/5.9/5.5
VFD Max SetPt	-	36Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	34%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.23"
Fan Suction SP	-	-0.36"
Fan Discharge SP	-	0.33"
Total ESP	-	0.59"
Fan Total SP	-	0.69"

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

Completed By: Christian Moller on 04/01/2026

Unit Data - PHOTO LOG



04/01/2026



National TAB

Project: 03-30-26 QT #1052 CHARLOTTE, NC

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201407-ANEK10597
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
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4019
SF RPM	-	DD
OA CFM (Hoods On)	800	0
OA CFM (Hoods Off)	350	0
RL Voltage	-	205/207/206
RL Amperage	-	7.8/7.5/8.1
VFD Max SetPt	-	40.8Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	0%
OA Damper Position (Hoods Off)	-	0%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.51"
Fan Suction SP	-	-0.79"
Fan Discharge SP	-	0.55"
Total ESP	-	1.3"
Fan Total SP	-	1.34"

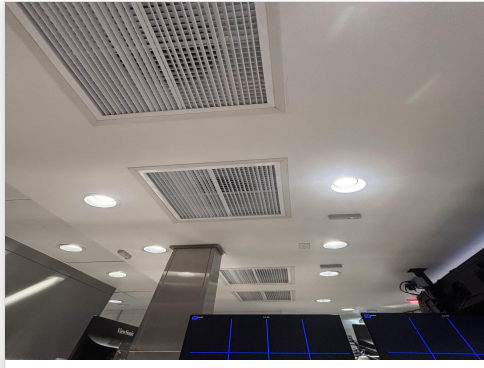
General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Christian Moller on 04/01/2026

Unit Data - PHOTO LOG



04/01/2026



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Project:03-30-26 QT #1052 CHARLOTTE, 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	14"	800	1	0	849	849	106.1
SGRD2	SUPPORT SERVICE	SI	14"	800	1	0	735	735	91.9
SGRD3	SUPPORT SERVICE	SI	14"	800	1	0	689	689	86.1
SGRD4	SUPPORT SERVICE	SI	14"	800	1	0	721	721	90.1
SGRD5	DOCK	ES	14"	750	1	0	853	853	113.7
SGRD6	WORKROOM	ES	8"	250	1	0	172	172	68.8
Total				4200		0	4019	4019	95.69%



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Project: 03-30-26 QT #1052 CHARLOTTE, 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	-	410SE13845- 00/0005505
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	COOK
Horsepower	-	0.125
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7

Test Data		
	Design	Actual
CFM	225	213
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER / MEDIUM SPEED
RL Voltage	-	113
RL Amperage	-	1.2
Total ESP	-	0.21"
Fan Inlet SP	-	-0.21"
Fan Discharge SP	-	ATM

Completed By: Christian Moller on 04/01/2026

Unit Data - PHOTO LOG



04/01/2026



National TAB

Project: 03-30-26 QT #1052 CHARLOTTE, NC

System/Unit: FAN - Exhaust

Asset: EF2

AREA: MEN'S RR/COMBI

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	120 ACE 120C15D
Serial Num	-	410SE152**-00/0007202
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	COOK
Horsepower	-	0.250
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.3

Test Data		
	Design	Actual
CFM	525	457
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER / MEDIUM SPEED
RL Voltage	-	111
RL Amperage	-	2.6
Total ESP	-	0.56"
Fan Inlet SP	-	-0.56
Fan Discharge SP	-	ATM

Completed By: Christian Moller on 04/01/2026

Notes:

** IN THE SERIAL NUMBER ARE OBSTRUCTED NUMBERS

Written By: Christian Moller on 04/01/2026

Unit Data - PHOTO LOG



04/01/2026



National TAB

Project:03-30-26 QT #1052 CHARLOTTE, NC

Diffuser Ret/Exh (GRD)

EF2/MEN'S RR/COMBI

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	COMBI-OVEN	RI	8"	150	1	83	148	148	98.7
Total				150		83	148	148	98.67%



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Project: 03-30-26 QT #1052 CHARLOTTE, NC

System/Unit: FAN - Exhaust

Asset: EF3

AREA:KITCHEN HD

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8262110
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	CAPTIVEAIRE
Horsepower	0.50	0.5
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.8

Test Data		
	Design	Actual
CFM	1350	1372
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	HMI / 54.8Hz
RL Voltage	-	210
RL Amperage	-	3.2
Total ESP	0.75"	0.81"
Fan Inlet SP	-	-0.81"
Fan Discharge SP	-	ATM

Completed By: Christian Moller on 04/01/2026

Unit Data - PHOTO LOG



04/01/2026



National TAB

Project: 03-30-26 QT #1052 CHARLOTTE, 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	-	8262110
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	60"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	BAFFLE FILTERS
Filter Size 1	20X16	20X16
Filter Qty 1	6	6
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	12.48	12.48
Filter1 FPM	-	104
Filter2 FPM	-	116
Filter3 FPM	-	128
Filter4 FPM	-	108
Filter5 FPM	-	105
Filter6 FPM	-	104
Filter Ave FPM(corr)	-	110
CFM	1350	1372

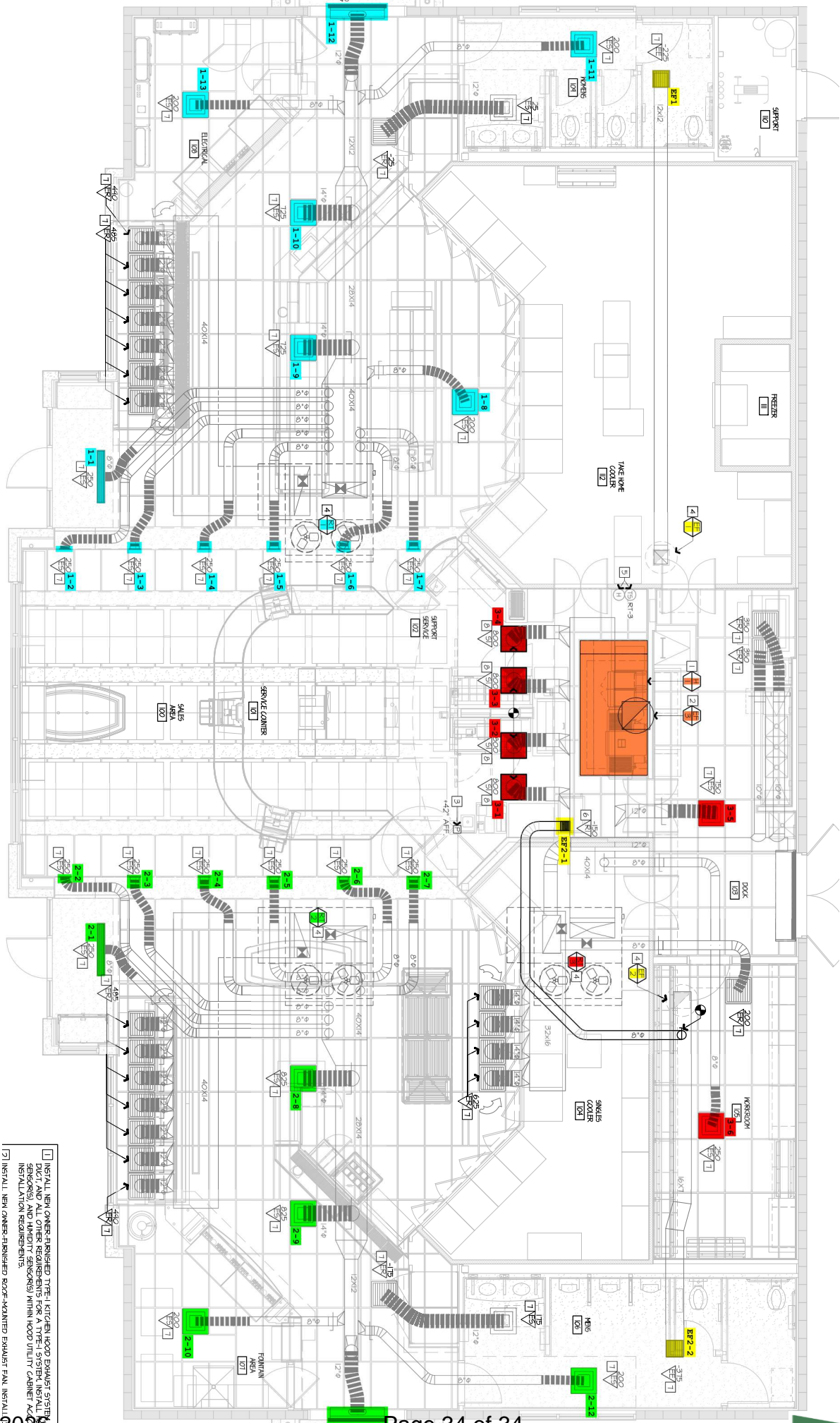
Cooking Equipment	
	Actual
Item 1	PIZZA OVEN
Item 2	FRYER

Completed By: Christian Moller on 04/01/2026

Unit Data - PHOTO LOG



04/01/2026



- [] INSTALL NEW OWNER PROVIDED TRIPLE VERTICAL HOOD EXHAUST SYSTEM WITH CAPTURE DUCT AND ALL OTHER REQUIREMENTS FOR A TRIPLE SYSTEM INSTALL INCLUDING CONTROLS, AND HANDITY SENSORS) WITHIN HOOD UTILITY CABINET ACCORDING TO INSTALLATION REQUIREMENTS.
- [] INSTALL NEW OWNER PROVIDED ROOF-MOUNTED EXHAUST FAN. INSTALL RELEASE