Report By:

National TAB
105 Stone Village Drive
Fort Mill, SC 29708

NATIONAL TAB
INTELLIGENCE

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 02/23/2026

Completed By: National TAB

PROJECT

02-09-26 QT #1132 SPARTANBURG, SC

448 E. ST JOHN STR

SPARTANBURG, SC

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

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Project: 02-09-26 QT #1132 SPARTANBURG, SC

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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

- RTU 2 door lock broken
- RTU 2 fan rotation wrong
- RTU 2 no OA set
- RTU 3 not working
- Wrong cook line diffusers

02-09-26 QT #1132 SPARTANBURG, SC

Project Issue Information

Issue Name : RTU 2 door lock broken

Description : The compressor door lock is broken. A cinder block is holding the door shut temporarily.

Created By : National TAB

Assigned To : National TAB - Dan Hertenstein

Status : Open

Priority : Low

Asset Tag :

Originated Date : 02/23/2026 - Christian Moller - National TAB

Project Issue File Details

02/23/2026

02/23/2026

02-09-26 QT #1132 SPARTANBURG, SC

Project Issue Information

Issue Name : RTU 2 fan rotation wrong

Description : RTU 2 is not getting much airflow due to the rotation of the fan. Rotation is wrong and will need to be corrected for full balance.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	RT-2
Originated Date :	02/23/2026 - Christian Moller - National TAB		

Project Issue File Details

02/23/2026

02-09-26 QT #1132 SPARTANBURG, SC

Project Issue Information

Issue Name : RTU 2 no OA set

Description : Due to the low flow an accurate OA that will work when the unit is running properly could not be set. Once the fan is fixed OA can be set.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	RT-2
Originated Date :	02/23/2026 - Christian Moller - National TAB		

Project Issue File Details

02/23/2026

02-09-26 QT #1132 SPARTANBURG, SC

Project Issue Information

Issue Name : RTU 3 not working

Description : RTU 3 has power however the fan is not running. Unit was hard reset to verify the problem as well as put in hand and still is not working. Amperage was 0.1 at the VFD. Unit was left off. NEEDS IMMEDIATE MAINTENANCE.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	RT-3
Originated Date :	02/23/2026 - Christian Moller - National TAB		

Project Issue File Details

02/23/2026

02/23/2026

02-09-26 QT #1132 SPARTANBURG, SC

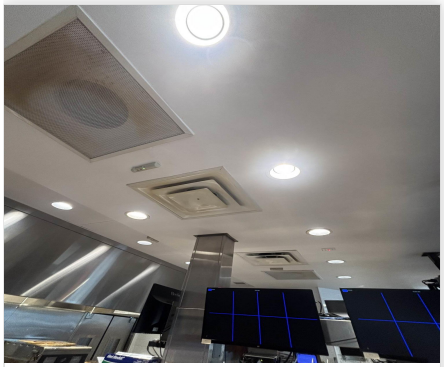
Project Issue Information

Issue Name : Wrong cook line diffusers

Description : RTU 3’s cook line diffusers are incorrect. TITUS Louvered supply grilles with adjustable deflectors are the correct diffusers to be installed.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	RT-3
Originated Date :	02/23/2026 - Christian Moller - National TAB		

Project Issue File Details



02/23/2026

NATIONAL TAB

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	841	350	348				
RTU-2	SALES	800	823	350	347				
RTU-3	BOH/KITCHEN	800	0	350	0				
EF-1	WOMEN'S RR					225	215	225	215
EF-2	MEN'S RR					525	520	525	520
EF-3	HOOD					1350	1410	0	0
TOTALS		2400	1664	1050	695	2100	2145	750	735

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	1664
TOTAL EXHAUST	2100	2145
NET AIRFLOW	300	-481

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	-0.017
SIDE	
REAR	-0.016
AVERAGE	**-0.0165**

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	695
TOTAL EXHAUST	750	735
NET AIRFLOW	300	-40

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	-0.009
SIDE	
REAR	-0.009
AVERAGE	**-0.009**

NOTES:

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CheckList List

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

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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 :	01/30/2026 - Trinity Dodds - National TAB		
Completed Date :	02/23/2026 - Christian Moller - 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?	Pass
Comment:	
Unit free of noticeable noise and vibration	Pass
Comment:	

02-09-26 QT #1132 SPARTANBURG, SC

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/30/2026 - Trinity Dodds - National TAB		
Completed Date :	02/23/2026 - 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:	

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CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/30/2026 - Trinity Dodds - National TAB		
Completed Date :	02/23/2026 - 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:	

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02-09-26 QT #1132 SPARTANBURG, SC

CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/30/2026 - Trinity Dodds - National TAB		
Completed Date :	02/23/2026 - 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	02/23/2026

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Comment:

TAB tech name / Firm

Comment:

Christian Moller / NTAB

Site super name / Firm

Comment:

Randy Edmonds / QT project Manager

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: -0.017" Back: -0.016" HOOD OFF: Front: -0.009" Back: -0.009"

National TAB

Project: 02-09-26 QT #1132 SPARTANBURG, SC

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201206-ANEK06807
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	4279
SF RPM	-	DD
OA CFM (Hoods On)	800	841
OA CFM (Hoods Off)	350	348
RL Voltage	-	205/208/208
RL Amperage	-	5.0/5.6/5.7
VFD Max SetPt	-	36Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	17%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.31”
Fan Suction SP	-	-0.42”
Fan Discharge SP	-	0.41”
Total ESP	-	0.73”
Fan Total SP	-	0.83”

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

Completed By: Christian Moller on 02/23/2026

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Unit Data - PHOTO LOG

02/23/2026

National TAB

Project: 02-09-26 QT #1132 SPARTANBURG, SC

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201206-ANEK06808
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	1800
SF RPM	-	DD
OA CFM (Hoods On)	800	823
OA CFM (Hoods Off)	350	347
RL Voltage	-	204/207/208
RL Amperage	-	7.2/6.9/5.2
VFD Max SetPt	-	36Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	17%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.027”
Fan Suction SP	-	-0.056”
Fan Discharge SP	-	0.068”
Total ESP	-	0.083”
Fan Total SP	-	0.124”

General	
	Actual
Fan Rotation Correct	NO
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Christian Moller on 02/23/2026

Notes:
[1] Fan spinning backwards giving low air flow. SEE ISSUES.

[2] Due to low flow OA was not set. SEE ISSUES.

[3] Compressor door lock broken. SEE ISSUES.

Written By: Christian Moller on 02/23/2026

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Unit Data - PHOTO LOG

02/23/2026

National TAB

Project: 02-09-26 QT #1132 SPARTANBURG, SC

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201206-ANEK06809
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	0
SF RPM	-	DD
OA CFM (Hoods On)	800	0
OA CFM (Hoods Off)	350	0
RL Voltage	-	204/208/208
RL Amperage	-	0.1 @ VFD
VFD Max SetPt	-	36Hz
VFD Min SetPt	-	24Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	17%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	0”
Fan Suction SP	-	0”
Fan Discharge SP	-	0”
Total ESP	-	0”
Fan Total SP	-	0”

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

Completed By: Christian Moller on 02/23/2026

Notes:
[4] Unit not running. SEE ISSUES.

[5] Wrong cook line diffusers. SEE ISSUES.

Written By: Christian Moller on 02/23/2026

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Unit Data - PHOTO LOG

02/23/2026

National TAB

Project:02-09-26 QT #1132 SPARTANBURG, SC

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					-
SGRD2	SUPPORT SERVICE	SI	12"	800					-
SGRD3	SUPPORT SERVICE	SI	12"	800					-
SGRD4	SUPPORT SERVICE	SI	12"	800					-
SGRD5	DOCK	ES	12"	750					-
SGRD6	WORKROOM	ES	8"	250					-
Total				4200		0	0	0	0%

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Project: 02-09-26 QT #1132 SPARTANBURG, SC

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	-	410SE18515-00/0004108
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	COOK
Frame	-	NL
Horsepower	-	0.125
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	1.7
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	225	215
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER / MEDIUM SPEED
RL Voltage	-	112
RL Amperage	-	1.3
Total ESP	-	0.22”
Fan Inlet SP	-	-0.22”
Fan Discharge SP	-	ATM

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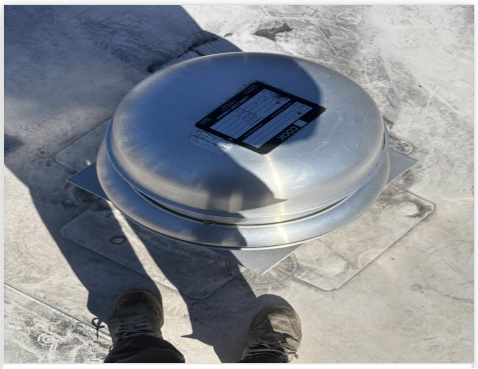
Unit Data - PHOTO LOG



02/23/2026

National TAB

Project: 02-09-26 QT #1132 SPARTANBURG, SC

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	-	410SE18515-00/0001705
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	COOK
Frame	-	NL
Horsepower	-	0.25
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	525	520
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER /MEDIUM SPEED
RL Voltage	-	115
RL Amperage	-	2.5
Total ESP	-	0.46”
Fan Inlet SP	-	-0.46”
Fan Discharge SP	-	ATM

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Unit Data - PHOTO LOG

02/23/2026

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	SUPPORT SERVICE	RI	8"	150	1	213	213	162	108.0
Total				150		213	213	162	108%

National TAB

Project: 02-09-26 QT #1132 SPARTANBURG, SC

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8318559
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

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

Test Data		
	Design	**Actual**
CFM	1350	1410
Fan RPM	-	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	HMI / 53.8Hz
RL Voltage	-	213
RL Amperage	-	2.4
Total ESP	0.75"	0.62”
Fan Inlet SP	-	-0.62”
Fan Discharge SP	-	ATM

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Unit Data - PHOTO LOG

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National TAB

Project: 02-09-26 QT #1132 SPARTANBURG, SC

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	-	8318559
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	-	103
Filter2 FPM	-	116
Filter3 FPM	-	127
Filter4 FPM	-	116
Filter5 FPM	-	111
Filter6 FPM	-	109
Filter Ave FPM(corr)	-	113
CFM	1350	1410

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	PIZZA OVEN

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Unit Data - PHOTO LOG

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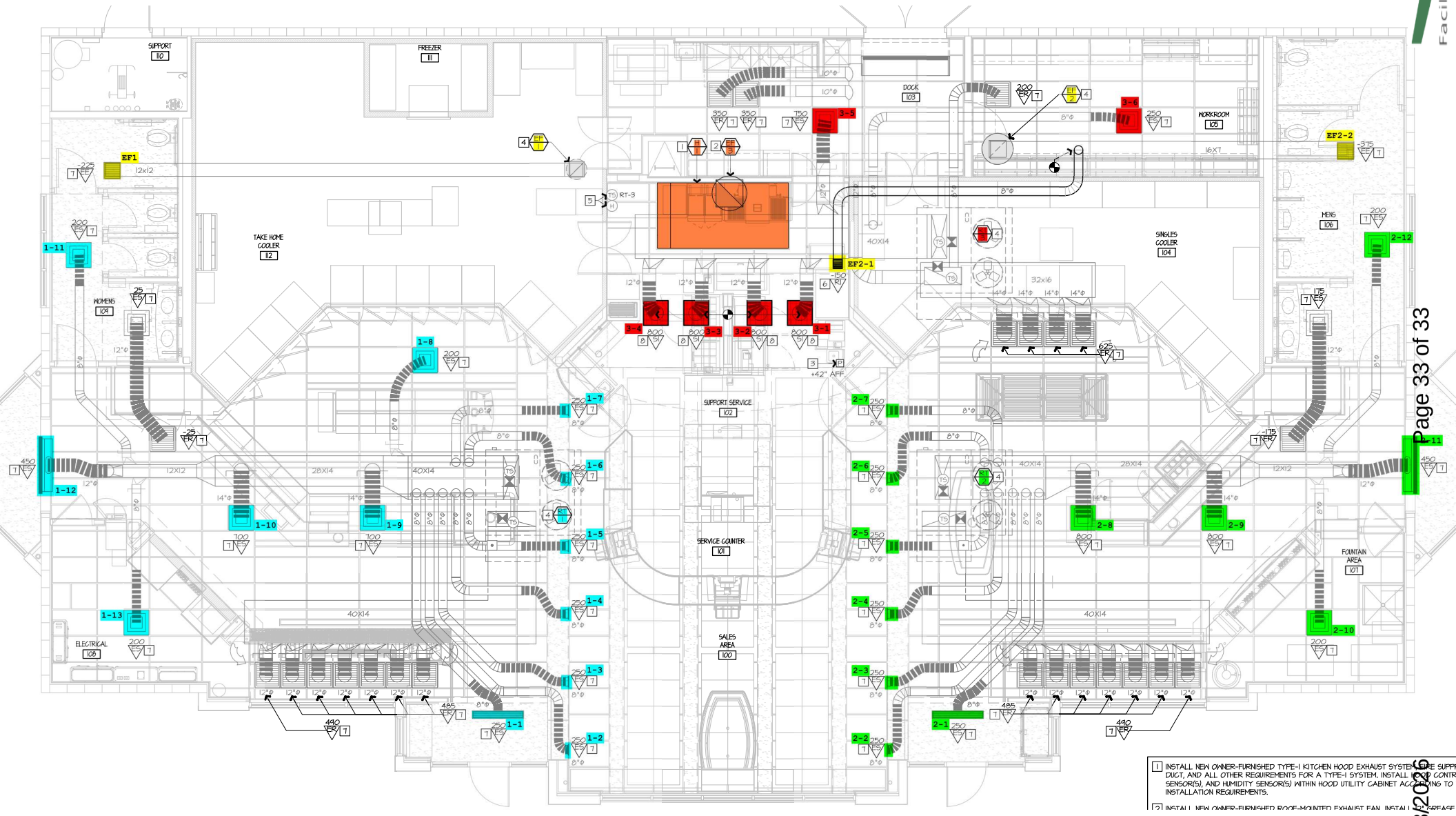

1 INSTALL NEW OWNER-FURNISHED TYPE-I KITCHEN HOOD EXHAUST SYSTEM. PROVIDE SUPPL DUCT, AND ALL OTHER REQUIREMENTS FOR A TYPE-I SYSTEM. INSTALL HOOD CONTR SENSOR(S), AND HUMIDITY SENSOR(S) WITHIN HOOD UTILITY CABINET ACCORDING TO INSTALLATION REQUIREMENTS.

2 INSTALL NEW OWNER-FURNISHED ROOF-MOUNTED EXHAUST FAN. INSTALL GREASE

Date: 2/23/2026