Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 03/03/2026

Completed By: National TAB

PROJECT

03-02-26 QT #1410 PHOENIX, AZ

400 N 75TH AVE

PHOENIX, AZ

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

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

- HINGE INSTALLED INCORRECTLY
- RTUS NOT RESPONDING TO STORE PC
- SMOKE DETECTOR FAILS

03-02-26 QT #1410 PHOENIX, AZ

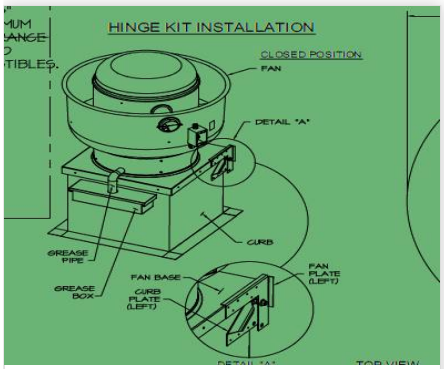
Project Issue Information

Issue Name : HINGE INSTALLED INCORRECTLY

Description : Hinge should be installed opposite the grease conduit/cup

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	EF3
Originated Date :	03/03/2026 - Christine Weale - National TAB		

Project Issue File Details



03/03/2026

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Project Issue Information

Issue Name :	RTUS NOT RESPONDING TO STORE PC		
Description :	All units - econ dampers are not responding to store PC settings. Manually set to 'Hood ON'.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Low	**Asset Tag :**	
Originated Date :	03/03/2026 - Christine Weale - National TAB		

03-02-26 QT #1410 PHOENIX, AZ

Project Issue Information

Issue Name :	SMOKE DETECTOR FAILS		
Description :	See Checklist for details. All Duct sensors show flashing red light and blinking amber light on control board. Recommend someone ensuring control board shows both Sensor lights blinking 'green' before testing time.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	High	**Asset Tag :**	
Originated Date :	03/04/2026 - Christine Weale - National TAB		

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

- Open QT_Balance_Schedule.xlsx

CheckList List

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

03-02-26 QT #1410 PHOENIX, AZ

CheckList Information

Name :	01: RTU’s/AHU’s	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/04/2026 - Trinity Dodds - National TAB		
Completed Date :	03/04/2026 - Christine Weale - 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:	

03-02-26 QT #1410 PHOENIX, AZ

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/04/2026 - Trinity Dodds - National TAB		
Completed Date :	03/04/2026 - Christine Weale - 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:	

03-02-26 QT #1410 PHOENIX, AZ

CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/04/2026 - Trinity Dodds - National TAB		
Completed Date :	03/04/2026 - Christine Weale - 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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CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/04/2026 - Trinity Dodds - National TAB		
Completed Date :	03/04/2026 - Christine Weale - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

All equipment was on

List smoke candle type used

Comment:

45s, S102

Smoke test capture % - Perimeter of hood

Comment:

100

Smoke test capture % - Top of cooking surface

Comment:

100

WITNESS

Date test was completed	03/02/2026

Comment:

TAB tech name / Firm

Comment:

Christine Weale, NTI

Site super name / Firm

Comment:

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)

Comment:

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CheckList Information

Name :	05: Smoke Detector	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/04/2026 - Trinity Dodds - National TAB		
Completed Date :	03/04/2026 - Christine Weale - National TAB		

CheckList Item Details

Smoke Detector Manufacturer:

Comment:

System Sensor

Smoke Detector Model:

Comment:

AD4S

Accpetable Pressure Range Rating:

Comment:

0.01 to 1.11" w.c.

Actual Measured Pressure Range:

Comment:

Only passing sensors measured: RTU1: 0.07" RTU2: 0.17" RTU3: 0.08" RTU4 (1 sensor only): 0.12"

Smoke Detector Shutdown? Fail

Comment:

RTU1: RTU2: RTU3: RTU4:

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	202103-ANEL22047
Model Num	RN-015-8-0-EA0A-162
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	5.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

Test Data		
	Design	**Actual**
SF CFM	5000	4467
SF RPM	-	49.98 HZ
OA CFM (Hoods On)	865	894
OA CFM (Hoods Off)	415	426
RL Voltage	-	174.5
RL Amperage	-	9.92
VFD Max SetPt	-	83.3
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.5"
OA Damper Position (Hoods Off)	-	3.0 GAP@BOTTOM

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.61"
Fan Suction SP	-	0.94"
Fan Discharge SP	-	0.22"
Total ESP	-	0.83"
Fan Total SP	-	1.16"

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

Completed By: Christine Weale on 03/03/2026

Unit Data - PHOTO LOG

03/02/2026

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	202103-ANEL22048
Model Num	RN-015-8-0-EA0A-162
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	5.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

Test Data		
	Design	**Actual**
SF CFM	5000	4949
SF RPM	-	49.98 HZ
OA CFM (Hoods On)	865	894
OA CFM (Hoods Off)	415	413
RL Voltage	-	174.4
RL Amperage	-	9.76
VFD Max SetPt	-	83.3
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.5"
OA Damper Position (Hoods Off)	-	3.0 GAP@BOTTOM

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.65"
Fan Suction SP	-	-0.98"
Fan Discharge SP	-	0.33"
Total ESP	-	0.98"
Fan Total SP	-	1.31"

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

Completed By: Christine Weale on 03/03/2026

Unit Data - PHOTO LOG

03/02/2026

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: AHU/RTU

Asset: RT-3 AREA:KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	202103-ANEK21921
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	3.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	-	4455
SF RPM	-	49.2 HZ
OA CFM (Hoods On)	865	896
OA CFM (Hoods Off)	415	413
RL Voltage	-	177.7
RL Amperage	-	8.45
VFD Max SetPt	-	82.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.5"
OA Damper Position (Hoods Off)	-	3.0 GAP@BOTTOM

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.72"
Fan Suction SP	-	-1.0"
Fan Discharge SP	-	0.40"
Total ESP	-	1.12"
Fan Total SP	-	1.4"

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

Completed By: Christine Weale on 03/03/2026

Notes:
[1] UNIT NOT OPERATING; UNABLE TO TAB, SEE ISSUE

Written By: on

Unit Data - PHOTO LOG

03/02/2026

National TAB

Project:03-02-26 QT #1410 PHOENIX, AZ

AHU/RTU

Diffuser Supply (GRD)

RT-3/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SALES	SI	12"	700	1	843	915	765	109.3
SGRD2	SUPPORT SERVICE	SI	12"	875	1	1018	890	925	105.7
SGRD3	SUPPORT SERVICE	SI	12"	875	1	826	877	915	104.6
SGRD4	SUPPORT SERVICE	SI	12"	875	1	1131	1035	950	108.6
SGRD5	SUPPORT SERVICE	ES	12"	875	1	847	890	900	102.9
Total				4200		4665	4607	4455	106.07%

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: AHU/RTU

Asset: RT-4 AREA:BOH

Unit Data	
	Actual
MFG	AAON
Serial Num	202104-AYEF04819
Model Num	RQ-006-8-V-EA09-132
Num OA Filters 1	1
OA Filter Size 1	12X15.5"
Num Final Filter 1	1
Final Filter Size 1	39X20X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	2.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	7.5

Test Data		
	Design	**Actual**
SF CFM	1800	1743
SF RPM	-	48 HZ
OA CFM (Hoods On)	160	161
OA CFM (Hoods Off)	160	161
RL Voltage	-	165.2
RL Amperage	-	4.19
VFD Max SetPt	-	80.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.125"
OA Damper Position (Hoods Off)	-	0.125"

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.51"
Fan Suction SP	-	-1.24"
Fan Discharge SP	-	0.30"
Total ESP	-	0.81"
Fan Total SP	-	1.54"

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

Completed By: Christine Weale on 03/03/2026

Notes:
Dampers 4-6 and 4-7 are inaccessible.

Written By: on

Unit Data - PHOTO LOG

03/02/2026

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: FAN - Exhaust

Asset: EF1 AREA:MEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	DR33HFA
Serial Num	-	4821067
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA (TELCO)
Frame	-	48
Horsepower	-	1/3
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	4.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	500	526
Fan RPM	-	1228
Fan Rotation	-	CCW
Motor RPM	-	1228
System SetPt	-	65P
RL Voltage	-	N/A
RL Amperage	-	1.17
Total ESP	-	0.29"
Fan Inlet SP	-	-0.29"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 03/03/2026

Notes:
[1] COULD NOT INCREASE AIRFLOW.

Written By: on

Unit Data - PHOTO LOG

03/02/2026

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: FAN - Exhaust

Asset: EF4 AREA:COMBI-OVEN

Unit Data	
	Actual
MFG	CAPTIVEAIRE
Model Num	N/A
Serial Num	N/A

Test Data		
	Design	**Actual**
CFM	150	193
RL Voltage	-	N/A
RL Amperage	-	N/A

Motor Data		
	Design	**Actual**
Motor MFG	-	N/A
Horsepower	-	N/A
Motor Rpm	-	N/A
Phase	-	N/A
Voltage (rated)	-	N/A
Amperage (rated)	-	N/A

Completed By: Christine Weale on 03/03/2026

Notes:
Fan/motor not accessible, no data given.

Written By: Christine Weale on 03/03/2026

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: FAN - Exhaust

Asset: EF2 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DR12HFA
Serial Num	-	4821067
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA (TELCO)
Frame	-	42
Horsepower	-	0.25
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	2.9
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	350	335
Fan RPM	-	825
Fan Rotation	-	CCW
Motor RPM	-	825
System SetPt	-	56P
RL Voltage	-	N/A
RL Amperage	-	0.69
Total ESP	-	0.16"
Fan Inlet SP	-	-0.16"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 03/03/2026

Notes:
[1] FAN NOT OPERATIONAL, NO POWER, AT TIME OF TAB

Written By: on

Unit Data - PHOTO LOG

03/02/2026

National TAB

Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8384989
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA (TELCO)
Frame	-	48
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	-	1195
Fan Rotation	-	CCW
Motor RPM	-	1195
System SetPt	-	52.8 HZ
RL Voltage	-	218.0
RL Amperage	-	1.3
Total ESP	0.75"	0.63"
Fan Inlet SP	-	-0.63"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 03/03/2026

Unit Data - PHOTO LOG

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Project: 03-02-26 QT #1410 PHOENIX, AZ

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:GRIDDLE

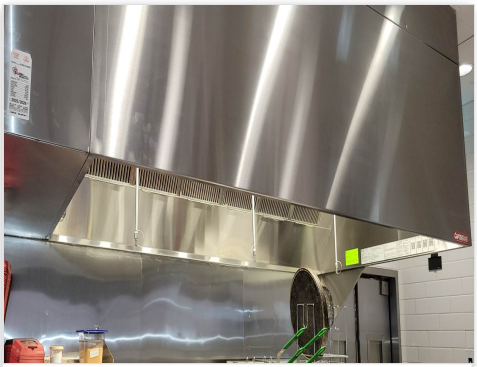
Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2	6030ND-2
Job / Serial Num	-	8384989
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	60"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO
Filter Size 1	20X16	16X20
Filter Qty 1	6	6
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	12.48	12.48
Filter1 FPM	-	116
Filter2 FPM	-	115
Filter3 FPM	-	116
Filter4 FPM	-	113
Filter5 FPM	-	110
Filter6 FPM	-	108
Filter Ave FPM(corr)	-	113
CFM	1350	1410

Cooking Equipment	
	Actual
Item 1	FRYERS
Item 2	DUAL-OVEN

Completed By: Christine Weale on 03/03/2026

Unit Data - PHOTO LOG



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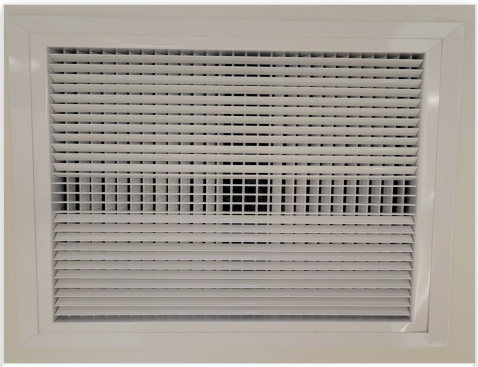

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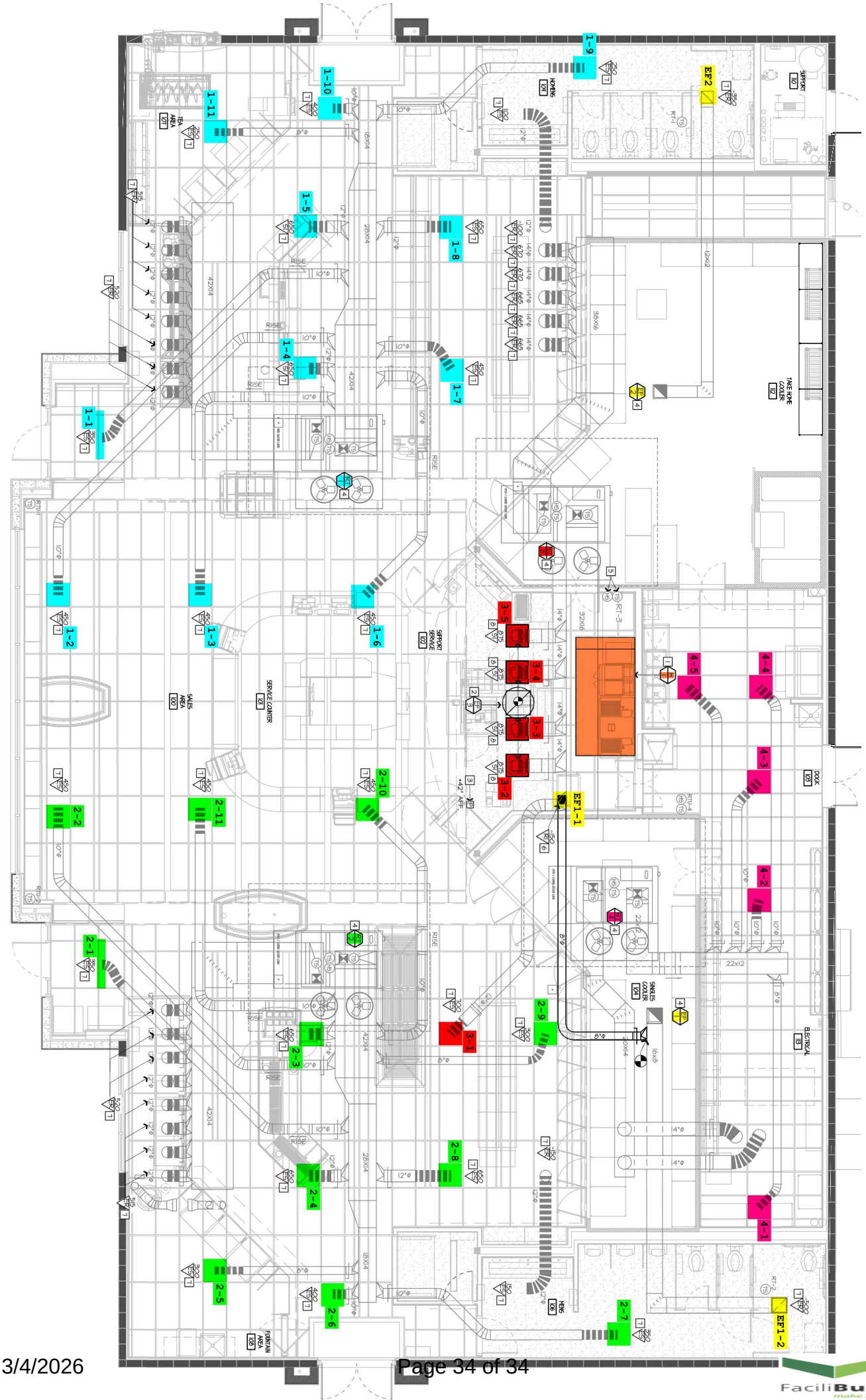
1-9
1-10
1-11
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EF2
SUPPORT
HOMEBS
TEA AREA
TAKE HOME COUNTER
SERVICE COUNTER
SALES AREA
SUPPORT SERVICE
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EF1-1
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DOCK
SINGLES COOLER
ELECTRICAL
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EF1-2
FOUNTAIN AREA
RT-1
RT-2
RT-3
RTU-4
RISE
42"Ø AFF