Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 11/12/2025

Completed By: National TAB

PROJECT

01-26-26 QT #0492 BUCKEYE, AZ

1850 SOUTH MILLER RD

BUCKEYE, AZ

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 01-26-26 QT #0492 BUCKEYE, AZ

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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

- GRD RTU- 1 and 2 discrepancies
- RTU-3 Missing diffusers

01-26-26 QT #0492 BUCKEYE, AZ

Project Issue Information

Issue Name : GRD RTU- 1 and 2 discrepancies

Description : SGRD 1-8 and 4-1 are in different places than marked on the GRD as seen in the picture provided

Created By : National TAB

Assigned To : National TAB - Dan Hertenstein

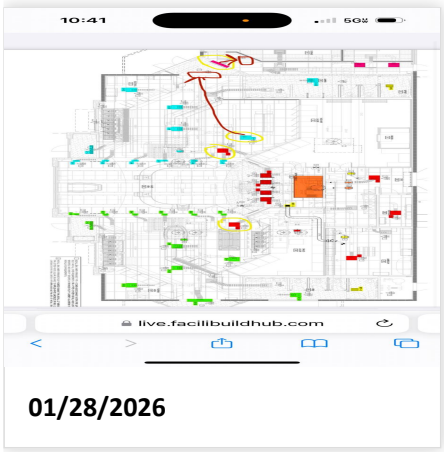
Status : Open

Priority : InfoOnly

Asset Tag :

Originated Date : 01/28/2026 - Ethan Van Orden - National TAB

Project Issue File Details



01/28/2026

01-26-26 QT #0492 BUCKEYE, AZ

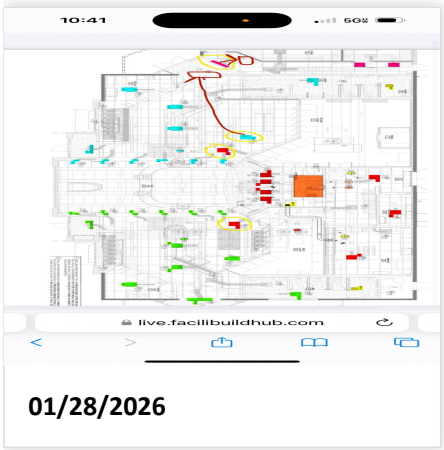
Project Issue Information

Issue Name : RTU-3 Missing diffusers

Description : Diffusers 3-1 and 3-2 are not installed. the missing 200 CFM was added to the other diffusers and did not affect overall balancing of the unit.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	RT-3
Originated Date :	01/28/2026 - Ethan Van Orden - 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	821	350	351				
RTU-2	SALES	800	811	350	358				
RTU-3	BOH/KITCHEN	800	831	350	358				
EF-1	WOMEN'S RR					225	234	225	234
EF-2	MEN'S RR					525	531	525	531
EF-3	HOOD					1350	1397	0	0
TOTALS		2400	2463	1050	1067	2100	2162	750	765

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2463
TOTAL EXHAUST	2100	2162
NET AIRFLOW	300	301

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0019
SIDE	0.0067
REAR	0.0173
AVERAGE	**0.0086**

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1067
TOTAL EXHAUST	750	765
NET AIRFLOW	300	302

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0023
SIDE	0.0074
REAR	0.0129
AVERAGE	**0.0075**

NOTES:

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 :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/12/2025 - Trinity Dodds - National TAB		

CheckList Item Details

RTU's/AHU's

Evaporator coils are clean?

Comment:

Condenser coils are clean?

Comment:

Gas piping is installed and valves are turned on?

Comment:

Unit free of noticeable noise and vibration

Comment:

01-26-26 QT #0492 BUCKEYE, AZ

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/12/2025 - Trinity Dodds - National TAB		

CheckList Item Details

EF's

Hinge kit installed installed on hood fan?

Comment:

Flex conduit is long enough so that fan can be completely tilted back?

Comment:

No major leakage around the fan base

Comment:

Unit is free of noise and vibration

Comment:

01-26-26 QT #0492 BUCKEYE, AZ

CheckList Information

Name :	03: Hoods	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/12/2025 - Trinity Dodds - National TAB		

CheckList Item Details

HOODS

Hood is free of alarms?

Comment:

Hood is free of damage?

Comment:

End panels are installed per prototype?

Comment:

01-26-26 QT #0492 BUCKEYE, AZ

CheckList Information

Name :	04: Final Tests	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/12/2025 - Trinity Dodds - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

List smoke candle type used

Comment:

Smoke test capture % - Perimeter of hood

Comment:

Smoke test capture % - Top of cooking surface

Comment:

WITNESS

Date test was completed

Comment:

TAB tech name / Firm

Comment:

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:

National TAB

Project: 01-26-26 QT #0492 BUCKEYE, AZ

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	20121-ANEL07378
Model Num	RN-015-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22.5
Num Final Filter 1	2
Final Filter Size 1	44X20

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	5
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

Test Data		
	Design	**Actual**
SF CFM	4200	4365
SF RPM	-	1173
OA CFM (Hoods On)	800	821
OA CFM (Hoods Off)	350	351
RL Voltage	-	115@VFD
RL Amperage	-	9.0@VFD
VFD Max SetPt	-	40HZ
VFD Min SetPt	-	24HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	22%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.44”
Fan Suction SP	-	-0.58”
Fan Discharge SP	-	0.85”
Total ESP	-	1.29"
Fan Total SP	-	1.43"

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

Completed By: Ethan Van Orden on 01/28/2026

Unit Data - PHOTO LOG

01/27/2026

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Project: 01-26-26 QT #0492 BUCKEYE, AZ

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201211-ANEL07377
Model Num	RN-015-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22.5
Num Final Filter 1	2
Final Filter Size 1	44X20

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	5
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

Test Data		
	Design	**Actual**
SF CFM	4200	4288
SF RPM	-	1114
OA CFM (Hoods On)	800	811
OA CFM (Hoods Off)	350	358
RL Voltage	-	103@VFD
RL Amperage	-	9.0@VFD
VFD Max SetPt	-	38HZ
VFD Min SetPt	-	24HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.46”
Fan Suction SP	-	-0.66”
Fan Discharge SP	-	0.53”
Total ESP	-	0.99"
Fan Total SP	-	1.19"

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

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Unit Data - PHOTO LOG

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Project: 01-26-26 QT #0492 BUCKEYE, AZ

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201211-ANEK07379
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22.5
Num Final Filter 1	2
Final Filter Size 1	44X20

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

Test Data		
	Design	**Actual**
SF CFM	4200	4351
SF RPM	-	1232
OA CFM (Hoods On)	800	831
OA CFM (Hoods Off)	350	358
RL Voltage	-	136@VFD
RL Amperage	-	8.7@VFD
VFD Max SetPt	-	42HZ
VFD Min SetPt	-	24HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	24%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.57”
Fan Suction SP	-	-0.61”
Fan Discharge SP	-	0.62”
Total ESP	-	1.19"
Fan Total SP	-	1.23"

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

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Unit Data - PHOTO LOG

01/27/2026

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National TAB

Project:01-26-26 QT #0492 BUCKEYE, AZ

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	SALES	SI	12"	100					-
SGRD2	SALES	SI	12"	100					-
SGRD3	SUPPORT SERVICE	SI	12"	800	1	774	875	875	109.4
SGRD4	SUPPORT SERVICE	SI	12"	800	1	856	876	876	109.5
SGRD5	SUPPORT SERVICE	ES	12"	800	1	856	865	865	108.1
SGRD6	SUPPORT SERVICE	ES	12"	800	1	754	871	871	108.9
SGRD7	DOCK	ES	12"	500	1	764	548	548	109.6
SGRD8	WORKROOM	ES	8"	150	1	194	152	152	101.3
SGRD9	WORKROOM	ES	8"	150	1	249	164	164	109.3
Total				4200		4447	4351	4351	103.6%

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Project: 01-26-26 QT #0492 BUCKEYE, AZ

System/Unit: FAN - Exhaust

Asset: EF1 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	100 ACEH 100C15DH
Serial Num	-	100SE43025-00/0001901
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	CENTURY
Frame	-	NL
Horsepower	-	0.250
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	225	234
Fan RPM	-	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
System SetPt	-	LOW
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	-	0.15”
Fan Inlet SP	-	-0.15”
Fan Discharge SP	-	ATMS

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Unit Data - PHOTO LOG

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Project: 01-26-26 QT #0492 BUCKEYE, AZ

System/Unit: FAN - Exhaust

Asset: EF2 AREA:MEN'S RR/COMBI

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	120 ACEH 120015D
Serial Num	-	100SE43025-00/0000701
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	CENTURY
Frame	-	NL
Horsepower	-	0.125
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	525	531
Fan RPM	-	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
System SetPt	-	HI
RL Voltage	-	115
RL Amperage	-	0.88
Total ESP	-	0.23”
Fan Inlet SP	-	-0.23”
Fan Discharge SP	-	ATMS

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Unit Data - PHOTO LOG

01/27/2026

National TAB

Project:01-26-26 QT #0492 BUCKEYE, AZ

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	148	148	148	98.7
Total				150		148	148	148	98.67%

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National TAB

Project: 01-26-26 QT #0492 BUCKEYE, AZ

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8257616
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	NL
Horsepower	1/2	0.500
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	2
Amperage (rated)	-	3.8
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	1350	1397
Fan RPM	-	1165
Fan Rotation	-	CCW
Motor RPM	-	1165
System SetPt	-	49.8
RL Voltage	-	210
RL Amperage	-	2.1
Total ESP	-	0.62
Fan Inlet SP	-	0.62”
Fan Discharge SP	-	ATMS

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Unit Data - PHOTO LOG

01/27/2026

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Project: 01-26-26 QT #0492 BUCKEYE, AZ

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	-	8257616
Type	-	TYPE I CANOPY
Hood length	-	108”
Hood Width	-	60”

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	BAFFLE
Filter Size 1	-	16X20
Filter Qty 1	-	6
Filter AK factor size 1	-	2.08
Filter Total AK Area	-	12.48
Filter1 FPM	-	119
Filter2 FPM	-	110
Filter3 FPM	-	109
Filter4 FPM	-	123
Filter5 FPM	-	108
Filter6 FPM	-	106
Filter Ave FPM(corr)	-	112
CFM	1350	1397

Cooking Equipment	
	Actual
Item 1	FYRYER
Item 2	OVEN

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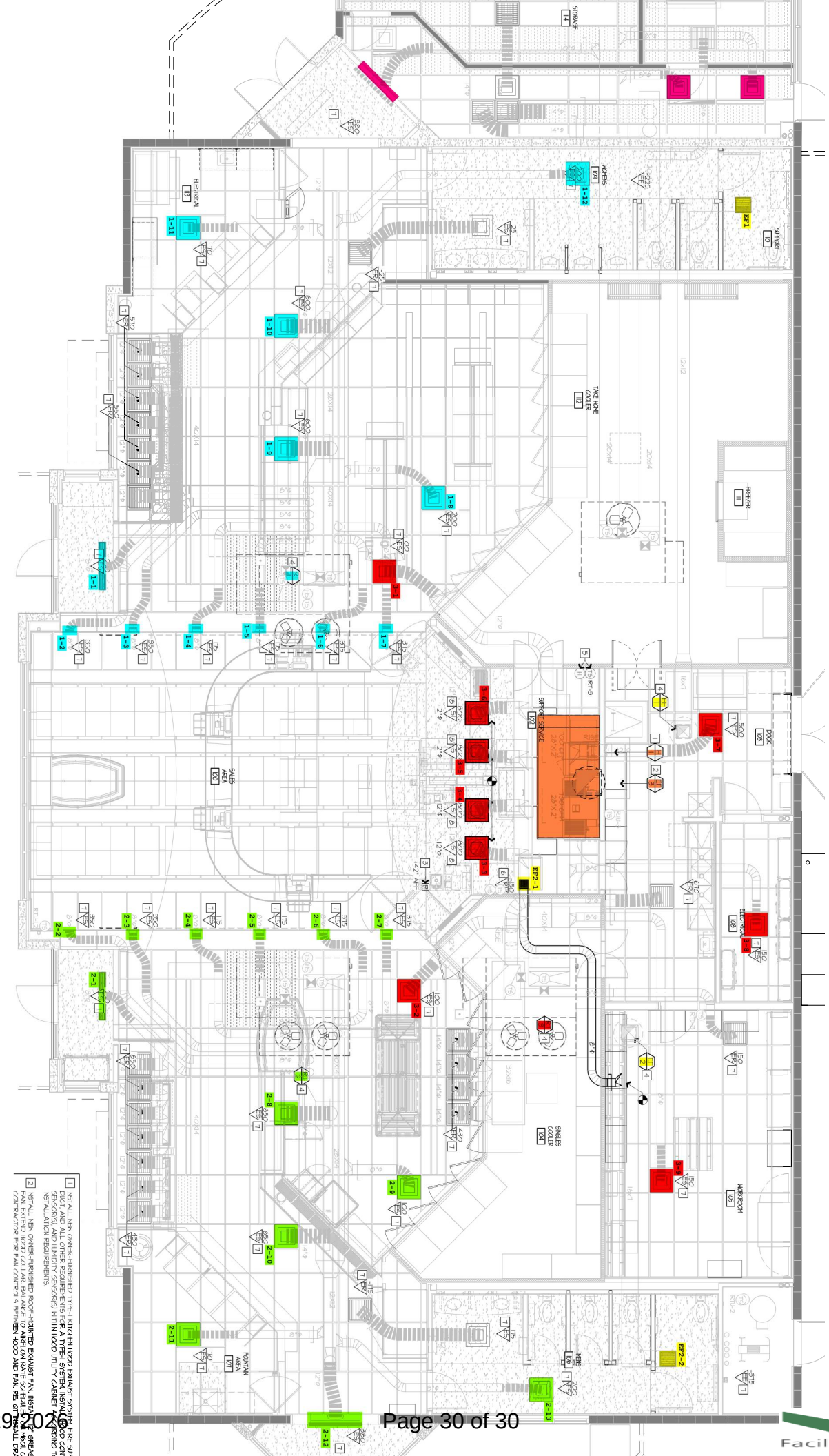
Unit Data - PHOTO LOG

01/27/2026



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

2. INSTALL NEW OWNER-FURNISHED ROOF-MOUNTED EXHAUST FAN, INSTALL 12" GREASE DUCT, FAN, EXTEND HOOD COLLAR, BALANCE TO AIRFLOW RATE SCHEDULED. HOOD CONTRACTOR TO INSTALL CURB. CONTRACTOR FOR FAN CONTROLS BETWEEN HOOD AND FAN. RE: GT1 FOR ALL DRAWINGS