

Report By:

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KANSAS CITY, MO 64116**



**Report: TAB Submittal
Function: Test, Adjust, & Balance
Date: 07/18/2025
Completed By: National TAB**

**PROJECT
QUIKTRIP GEN3 TEMPLATE**

123 MAIN ST

ANYWHERE, MO 12345

Client

**QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134**

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Project: QUIKTRIP GEN3 TEMPLATE

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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) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted for comfort and hood performance. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans

Each 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. Any EF's that fell outside of this tolerance is noted throughout the report.

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.

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		350					
RTU-2	SALES	800		350					
RTU-3	BOH/KITCHEN	800		350					
EF-1	WOMEN'S RR					225		225	
EF-2	MEN'S RR					525		525	
EF-3	HOOD					1350		0	
TOTALS		2400	0	1050	0	2100	0	750	0

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	0
TOTAL EXHAUST	2100	0
NET AIRFLOW	300	0

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	
SIDE	
REAR	
AVERAGE	

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	0
TOTAL EXHAUST	750	0
NET AIRFLOW	300	0

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	
SIDE	
REAR	
AVERAGE	

NOTES:

CheckList List

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



QUIKTRIP GEN3 TEMPLATE

CheckList Information

Name : 01: RTU's/AHU's **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 07/18/2025 - Will Turnbough - National TAB

CheckList Item Details

RTU's/AHU's

All diffusers and grilles are installed and match design?

Comment:

Economizers are assembled and functional?

Comment:

Motors are all operating below the FLA rating?

Comment:

Are belts tight?

Comment:

Are filters clean? (If not, remove temporarily for balancing)

Comment:

Evaporator coils are clean?

Comment:

If direct drive unit is the speed controller working?

Comment:

Is gas piping installed and valves turned on?

Comment:

Unit free of noticeable noise and vibration

Comment:

Final outside air damper position is marked with permanent marker for each fan speed?

Comment:



QUIKTRIP GEN3 TEMPLATE

CheckList Information

Name : 02: Exhaust Fans **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 07/18/2025 - Will Turnbough - National TAB

CheckList Item Details

EF's

Rotation is correct?

Comment:

Belts are tight?

Comment:

Hinge kit installed installed on hood fan?

Comment:

Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?

Comment:

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

Comment:

There is no major leakage around base of fan?

Comment:

Is the motor operating below the motor FLA rating?

Comment:

For restroom fan(s) is a back draft damper installed and can it fully open?

Comment:

Unit free of noticeable noise and vibration?

Comment:



QUIKTRIP GEN3 TEMPLATE

CheckList Information

Name : 03: Hoods **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 07/18/2025 - Will Turnbough - National TAB

CheckList Item Details

HOODS

All hood filters installed and accounted for?

Comment:

Hoods are wired and have power?

Comment:

Hood is free of alarms?

Comment:

Hood is free of damage?

Comment:

Quarter or full vertical end panels are installed if specified?

Comment:



QUIKTRIP GEN3 TEMPLATE

CheckList Information

Name : 04: Final Tests **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 07/18/2025 - Will Turnbough - National TAB

CheckList Item Details

FINAL CHECKS

Is space free of drafting?

Comment:

Is space comfortable in all areas?

Comment:

Is the space free of ventilation noise?

Comment:

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:

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Project: QUIKTRIP GEN3 TEMPLATE

System/Unit: AHU/RTU



Asset: RT-1

AREA:SALES FLOOR

Unit Data		
	Design	Actual
MFG	NA	NA
Serial Num	-	
Model Num	NA	NA
Type	-	
Configuration	-	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Rated Voltage	-	
Rated Amperage	-	

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	
Belt Alignment	

Test Data		
	Design	Actual
SF CFM	4200	
SF RPM	-	
RA CFM	3400	
OA CFM	800	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
SF System SetPt	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	

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

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	

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 Project: QUIKTRIP GEN3 TEMPLATE
AHU/RTU



Diffuser Supply (GRD)

RT-1/SALES FLOOR

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	ENTRANCE	ES	8"	250					-
SGRD2	SALES	ES	8"	350					-
SGRD3	SALES	ES	8"	350					-
SGRD4	SALES	ES	6"	175					-
SGRD5	SALES	ES	6"	175					-
SGRD6	SALES	ES	6"	375					-
SGRD7	SALES	ES	6"	375					-
SGRD8	SALES	ES	8"	200					-
SGRD9	SALES	ES	14"	600					-
SGRD10	SALES	ES	14"	600					-
SGRD11	WOMENS RR	ES	12"	200					-
SGRD12	SIDE ENTRANCE	ES		380					-
SGRD13	ELECTRICAL	ES	8"	170					-
Total				4200		0	0	0	0%

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Project: QUIKTRIP GEN3 TEMPLATE

System/Unit: AHU/RTU



Asset: RT-2

AREA: SALES FLOOR

Unit Data		
	Design	Actual
MFG	NA	NA
Serial Num	-	
Model Num	NA	NA
Type	-	
Configuration	-	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Rated Voltage	-	
Rated Amperage	-	

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	
Belt Alignment	

Test Data		
	Design	Actual
SF CFM	4200	
SF RPM	-	
RA CFM	3400	
OA CFM	800	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
SF System SetPt	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	

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

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	

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Project: QUIKTRIP GEN3 TEMPLATE

AHU/RTU



Diffuser Supply (GRD)

RT-2/SALES FLOOR

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	ENTRANCE	ES	8"	250					-
SGRD2	SALES	ES	8"	350					-
SGRD3	SALES	ES	8"	350					-
SGRD4	SALES	ES	6"	175					-
SGRD5	SALES	ES	6"	175					-
SGRD6	SALES	ES	6"	375					-
SGRD7	SALES	ES	6"	375					-
SGRD8	SALES	ES	14"	700					-
SGRD9	SALES	ES	14"	700					-
SGRD10	FOUNTAIN AREA	ES	8"	170					-
SGRD11	SIDE ENTRANCE	ES		380					-
SGRD12	MENS RR	ES	8"	200					-
Total				4200		0	0	0	0%

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Project: QUIKTRIP GEN3 TEMPLATE

System/Unit: AHU/RTU



Asset: RT-3

AREA:BOH/KITCHEN

Unit Data		
	Design	Actual
MFG	NA	NA
Serial Num	-	
Model Num	NA	NA
Type	-	
Configuration	-	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Rated Voltage	-	
Rated Amperage	-	

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	
Belt Alignment	

Test Data		
	Design	Actual
SF CFM	4200	
SF RPM	-	
RA CFM	3400	
OA CFM	800	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
SF System SetPt	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	

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

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	

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 Project: QUIKTRIP GEN3 TEMPLATE
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	ES	12"	100					-
SGRD2	SALES	ES	12"	100					-
SGRD3	SUPPORT SERVICE	SI	12"	800					-
SGRD4	SUPPORT SERVICE	SI	12"	800					-
SGRD5	SUPPORT SERVICE	SI	12"	800					-
SGRD6	SUPPORT SERVICE	SI	12"	800					-
SGRD7	DOCK	ES	12"	650					-
SGRD8	WORK ROOM	ES	8"	150					-
Total				4200		0	0	0	0%

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Project: QUIKTRIP GEN3 TEMPLATE

System/Unit: FAN - Exhaust



Asset: EF1

AREA:WOMENS RESTROOM

Unit Data		
	Design	Actual
MFG	NA	NA
Model Num	NA	NA
Serial Num	-	
Type	-	
Configuration	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Voltage (rated)	-	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	225	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: QUIKTRIP GEN3 TEMPLATE

System/Unit: FAN - Exhaust



Asset: EF2

AREA:MENS RESTROOM

Unit Data		
	Design	Actual
MFG	NA	NA
Model Num	NA	NA
Serial Num	-	
Type	-	
Configuration	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Voltage (rated)	-	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	525	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: QUIKTRIP GEN3 TEMPLATE

FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF2/MENS RESTROOM

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	SUPPORT SERVICE	RI	8"	150					-
EGRD2	MENS RR	EE	12X12	375					-
Total				525		0	0	0	0%

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Project: QUIKTRIP GEN3 TEMPLATE

System/Unit: FAN - Exhaust



Asset: EF3

AREA:KITCHEN HOOD

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

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	1/2	
Motor Rpm	-	
Phase	-	
Voltage (rated)	-	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	1350	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: QUIKTRIP GEN3 TEMPLATE

System/Unit: Kitchen Hood Type I



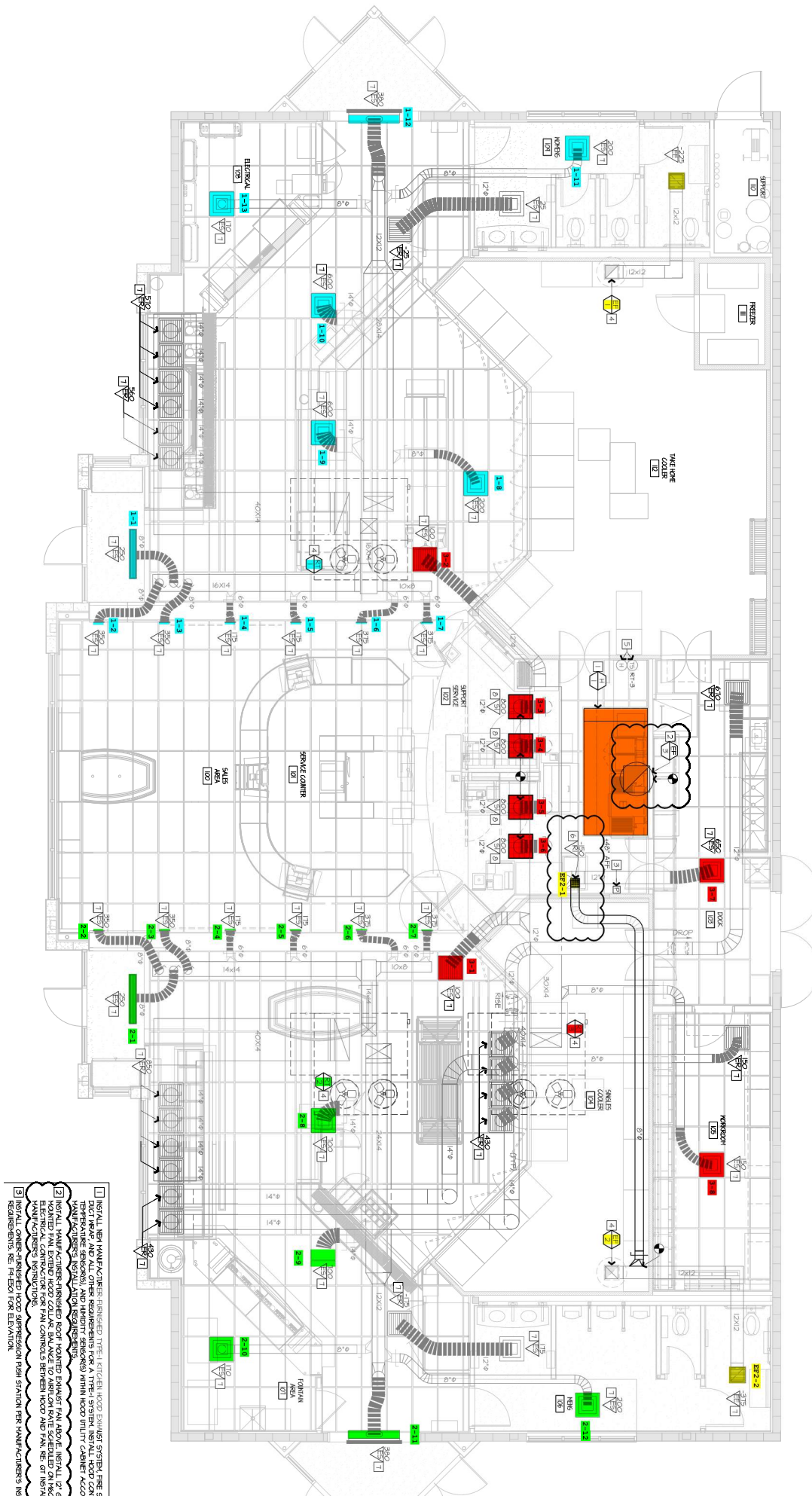
Asset: HD1

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030 ND-2-F	6030 ND-2-F
Job / Serial Num	-	
Type	-	
Hood length	-	
Hood Width	-	

Test Data Exhaust		
	Design	Actual
Filter Type	-	
Filter Size 1	-	
Filter Size 2	-	
Filter Qty 1	-	
Filter Qty 2	-	
Filter AK factor size 1	-	
Filters AK factor size 2	-	
Filter Total AK Area	-	
Filter1 FPM	-	
Filter2 FPM	-	
Filter3 FPM	-	
Filter4 FPM	-	
Filter5 FPM	-	
Filter6 FPM	-	
Filter7 FPM	-	
Filter8 FPM	-	
Filter9 FPM	-	
Filter10 FPM	-	
Filter11 FPM	-	
Filter12 FPM	-	
Filter Ave FPM(corr)	-	
CFM	1350	

Cooking Equipment	
	Actual
Item 1	
Item 2	



- 1 INSTALL NEW HANFACHER-FINISHED TYPICAL KITCHEN HOOD EXHAUST SYSTEM FIRE SUPPRESSION SYSTEM, EXISTING HOOD AND ALL OTHER REQUIREMENTS FOR A TYPICAL HANFACHER INSTALL HOOD CONTROL PANEL. HANFACHER'S INSTALLATION REQUIREMENTS.
- 2 INSTALL HANFACHER-FINISHED ROOF MOUNTED EXHAUST FAN ABOVE INSTALLED, 2" GROUND EXIST TO ROOF MOUNTED FAN. EXISTING HOOD COLLAR BALANCE TO AIRFLOW RATE SCHEDULED ON KCOO COORDINATE WITH ELECTRICAL CONTRACTOR FOR FAN CONTROLS BETWEEN HOOD AND FAN. SEE OTHER DRAWINGS AND HOOD REQUIREMENTS FOR FAN'S FAN ELEVATION.
- 3 INSTALL OWNER-FURNISHED ROOF SUPPRESSION RISER STATION PER HANFACHER'S INSTALLATION.