Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 07/14/2023

PROJECT

07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

15090 KENSINGTON PARK DRIVE

TUSTIN, CA 92782

Client

Anaheim Refrigeration Inc.

3309 E Miraloma Ave

#101

Anaheim, CA

Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail 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 to within tolerance of the design flow. 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.

General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment 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 of -0.02" wc to +0.02" wc 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.

NATIONAL TAB

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	DINING	2400	2486	1900	1997	500	489	20.8%	19.7%						
RTU-2	KITCHEN	3000	2894	2400	2296	600	598	20.0%	20.7%						
EF-1	KITCHEN HD											750	781		
EF-2	RESTROOMS													150	157
TOTALS		5400	5380	4300	4293	1100	1087			0	0	750	781	150	157

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1100	1087
TOTAL EXHAUST	900	938
NET AIRFLOW	200	149

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0077
SIDE	0.0091
REAR	0.0061
AVERAGE	**0.0076**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

CheckList List

- TECH - SITE PICTURES
- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS
- TECH - STEP 4B: HOOD AND OVEN EVALUATION

07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

CheckList Information

Name :	TECH - SITE PICTURES	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/06/2023 - Brianna Biggs - National TAB		

CheckList Item Details

STORE FRONT

Comment:

20230713_131941
07/13/2023

RTU-1

Comment:

20230713_131516
07/13/2023

20230713_131618
07/13/2023

RTU-2

Comment:

20230713_131520
07/13/2023

20230713_131615
07/13/2023

EF-1

Comment:

20230713_131522
07/13/2023

EF-2

Comment:

20230712_143521
07/13/2023

07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/06/2023 - Brianna Biggs - National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

Review Plan Review Checklist, has it been signed off and meets our standards to start balancing? If not contact processor to ensure job is ready.

Comment:

YES

All diffusers and grilles are installed and match design?

Comment:

YES

All hood filters installed and accounted for?

Comment:

YES

Hoods are wired and have power?

Comment:

YES

Hood is free of alarms?

Comment:

N/A

Thermostats have power?

Comment:

YES

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

YES

07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/06/2023 - Brianna Biggs - National TAB		

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional?

Comment:

YES

DCV Max damper opening position is set to minimum?

Comment:

YES

Free cooling enthalpy set point set for lowest setting (Typically "D")

Comment:

YES

Motors are all operating below the FLA rating?

Comment:

YES

Are belts tight?

Comment:

YES

If direct drive unit is the speed controller working.

Comment:

N/A

Is gas piping installed and valves turned on?

Comment:

YES

Unit free of noticeable noise and vibrat

Comment:

YES

EF's

Rotation is correct?

Comment:

YES

Belts are tight?

Comment:

N/A

Grease cup installed on hood fan?

Comment:

N/A

Hinge kit installed installed on hood fan?

Comment:

N/A

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

Comment:

N/A

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

Comment:

N/A

There is no major leakage around base of fan?

Comment:

YES

Is the motor operating below the motor FLA rating?

Comment:

YES

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

Comment:

YES

Unit free of noticeable noise and vibration?

Comment:

YES

MUA

Rotation is correct?

Comment:

N/A

Gas piping is installed and valves are in on position?

Comment:

N/A

Heater tested and is functional?

Comment:

N/A

Internal motorized damper is fully opening?

Comment:

N/A

Motor is operating below the FLA rating?

Comment:

N/A

Unit free of noticeable noise and vibration?

Comment:

N/A

HOODS

Kitchen equipment installed in proper places?

Comment:

YES

Can kitchen equipment be turned on for final smoke test?

Comment:

NO

DOCUMENTATION

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

YES

AIR PURIFICATION INSPECTION	Yes

Comment:

PHI Air purifiers are installed?

Comment:

YES

Are they installed after the evaporator coil or in the supply duct?

Comment:

EVAPORATOR COIL

Are they powered?

Comment:

YES

If PKG installed inside of the blower compartment, is the wiring exposed to UV light protected with split loom or conduit?

Comment:

NO

If Reme Halo, is it installed so that the air flow arrow is pointing correct direction?

Comment:

N/A

Is a UV warning sticker installed?

Comment:

YES

Take picture of each air purifier and include in the report

Comment:

YES

07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/06/2023 - Brianna Biggs - National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?

Comment:

YES

Is space comfortable in all areas?

Comment:

YES

Is the space free of ventilation noise?

Comment:

YES

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:

N/A

07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/06/2023 - Brianna Biggs - National TAB		

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

NONE

List smoke candle type used

Comment:

45 SECONDS

Smoke test capture - Perimeter of hood

Comment:

N/A

Smoke test capture - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	Yes

Comment:

N/A

TAB tech name / Firm	Yes

Comment:

N/A

Site super name / Firm	Yes

Comment:

ROBERT / AMERICANO BUILDERS

Owner representative name / Firm (if Applicable)	N/A

Comment:

Building pressure at front & back doors (All Systems On)	Yes

Comment:

0.0076"

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Comment:

YES

Thermostats are programmed?

Comment:

YES

07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

CheckList Information

Name :	TECH - STEP 4B: HOOD AND OVEN EVALUATION	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/06/2023 - Brianna Biggs - National TAB		

CheckList Item Details

HOOD AND OVEN EVALUATION

Is the oven covered by a hood?

Comment:

NO

What is the hood overhang over the front of the hood?

Comment:

N/A

What is hood overhang over the left and right sides of the oven?

Comment:

N/A

If vertical end panels are specified, are they installed?

Comment:

N/A

SMOKE TEST AT HOOD

Comment:

N/A

If oven is capable of turning on, it is required to be turned on for smoke test. Was oven on for smoke test?

Comment:

NO

Smoke test the oven at the flue on the top of the hood - Capture %?

Comment:

N/A

Smoke test the oven at perimeter of the oven - capture %?

Comment:

100%

Smoke test the oven at the perimeter of the hood - capture %?

Comment:

100%

IF NO HOOD IS INSTALLED ABOVE THE OVEN

If no hood is installed above the oven, and it is only a grille, smoke test at the top of the oven at the flue and note the capture %. If smoke capture is very poor, hold the candle up by the grille after a few seconds so that the smoke alarms don't get set off.

Comment:

100%

SMOKE TEST AT OVEN

Confirm that the internal fan turns on as you open the oven door?

Comment:

N/A

Smoke test at the oven doors as you are opening the door - capture %?

Comment:

100%

Smoke test at the oven doors when the doors are shut - capture %?

Comment:

100%

EXHAUST DISCHARGE AND OA INTAKES

Identify where the exhaust air is discharged and take pictures

Comment:

YES

Are there are any outside air intakes nearby that would be able to re-entrain the exhaust smoke? Take pictures

Comment:

NO

Are there any building entrances or windows near the exhaust discharge where smoke that will cause smoke to enter unwanted spaces?

Comment:

NO

National TAB

Project: 07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

System/Unit: AHU/RTU

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5617C00713
Model Num	KGA092S4M	KGA092S4MS3Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	-	2
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	200/230
Rated Amperage	-	6.0/5.7

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	6"
Motor Bore Size	-	1"
Motor Sheave SetPt	-	5 TURNS OPEN
Fan Sheave Size	-	3"
Fan Sheave Bore	-	7/8"
Belt CL Distance	-	22"
Num of Belts	-	1
Belt Size	-	AX54
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	2400	2486
SF RPM	-	NA
RA CFM	1900	1997
OA CFM	500	489
RL Voltage	-	196/199/197
RL Amperage	-	3.65/3.7/3.8
SF Rotation	-	CCW
RA Damper Position	-	80%
Min OA Damper Position	-	20%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	ES5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.11"
Fan Suction SP	-	-0.19"
Fan Discharge SP	-	0.31"
Total ESP	1.00"	0.42"
Fan Total SP	-	0.50"

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

Completed By: Zack Eismin on 07/13/2023

National TAB

Project:07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

AHU/RTU

Diffuser Supply (GRD)

RTU1/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SERVELINE	PSD1	10"	375	1	431	401	401	106.9
SGRD2	SERVELINE	PSD1	10"	375	1	310	379	379	101.1
SGRD3	SERVELINE	PSD1	10"	375	1	290	389	389	103.7
SGRD4	SERVELINE	PSD1	10"	375	1	351	357	357	95.2
SGRD5	SERVELINE	PSD1	10"	375	1	401	410	410	109.3
SGRD6	SERVELINE	PSD1	10"	375	1	329	393	393	104.8
SGRD7	HALLWAY	WSG1	8X8	150	1	392	157	157	104.7
Total				2400		2504	2486	2486	103.58%

Completed By: Zack Eismin on 07/13/2023

National TAB

Project: 07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

System/Unit: AHU/RTU

Asset: RTU2 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5617C03251
Model Num	KGA092S4M	KGA092S4MS3Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTOR
Frame	-	56HZ
Horsepower	-	2
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	200/230
Rated Amperage	-	6.0/5.7

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	3"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	2 TURNS OPEN
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	22"
Num of Belts	-	1
Belt Size	-	AX54
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	3000	2894
SF RPM	-	NA
RA CFM	2400	2296
OA CFM	600	598
RL Voltage	-	199/198/198
RL Amperage	-	4.4/4.6/4.1
SF Rotation	-	CCW
RA Damper Position	-	80%
Min OA Damper Position	-	20%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	ES5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.31"
Fan Suction SP	-	-0.54"
Fan Discharge SP	-	0.52"
Total ESP	1.08"	0.83"
Fan Total SP	-	1.06"

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

Completed By: Zack Eismin on 07/13/2023

National TAB

Project:07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

AHU/RTU

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	BOH KITCHEN	CSD1	10"	360	1	339	341	341	94.7
SGRD2	BOH KITCHEN	CSD1	10"	360	1	455	331	331	91.9
SGRD3	BOH KITCHEN	CSD1	10"	240	1	264	247	247	102.9
SGRD4	WAREWASH	CSD1	10"	200	1	235	210	210	105.0
SGRD5	PREP	CSD2	8"	200	1	213	193	193	96.5
SGRD6	PREP	CSD2	8"	200	1	45	181	181	90.5
SGRD7	PERP	CSD2	8"	200	1	157	191	191	95.5
SGRD8	OLO LINE	CSD2	8"	200	1	178	187	187	93.5
SGRD9	OLO LINE	CSD2	8"	200	1	215	211	211	105.5
SGRD10	OLO LINE	CSD2	8"	200	1	207	203	203	101.5
SGRD11	OLO LINE	CSD2	8"	200	1	257	214	214	107.0
SGRD12	OLO LINE	CSD2	8"	200	1	179	201	201	100.5
SGRD13	OLO LINE	CSD2	8"	200	1	185	184	184	92.0
Total				2960		2929	2894	2894	97.77%

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National TAB

Project: 07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

System/Unit: FAN - Exhaust

Asset: EF1 AREA:KITCHEN HOOD

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	USBI11DD-RM	USBI11DD-RM
Serial Num	-	5629235
Type	UTILITY	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN L
Frame	-	NL
Horsepower	0.50	0.5
Motor Rpm	-	2400
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	6.3
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	750	781
Fan RPM	1354	1234
Fan Rotation	-	CCW
Motor RPM	-	1234
System SetPt	-	65%
RL Voltage	-	114
RL Amperage	-	1.5
Total ESP	0.5"	0.25"
Fan Inlet SP	-	-0.25"
Fan Discharge SP	-	ATM

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National TAB

Project: 07-10-23 SWEETGREEN - TUSTIN, CA (TAB, IAQ)

System/Unit: FAN - Exhaust

Asset: EF2 AREA:RESTROOMS

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	SIF10DD	SIF10DD
Serial Num	-	5629235
Type	INLINE	INLINE
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	0.25	0.25
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	2.9
Service Factor	-	1.15

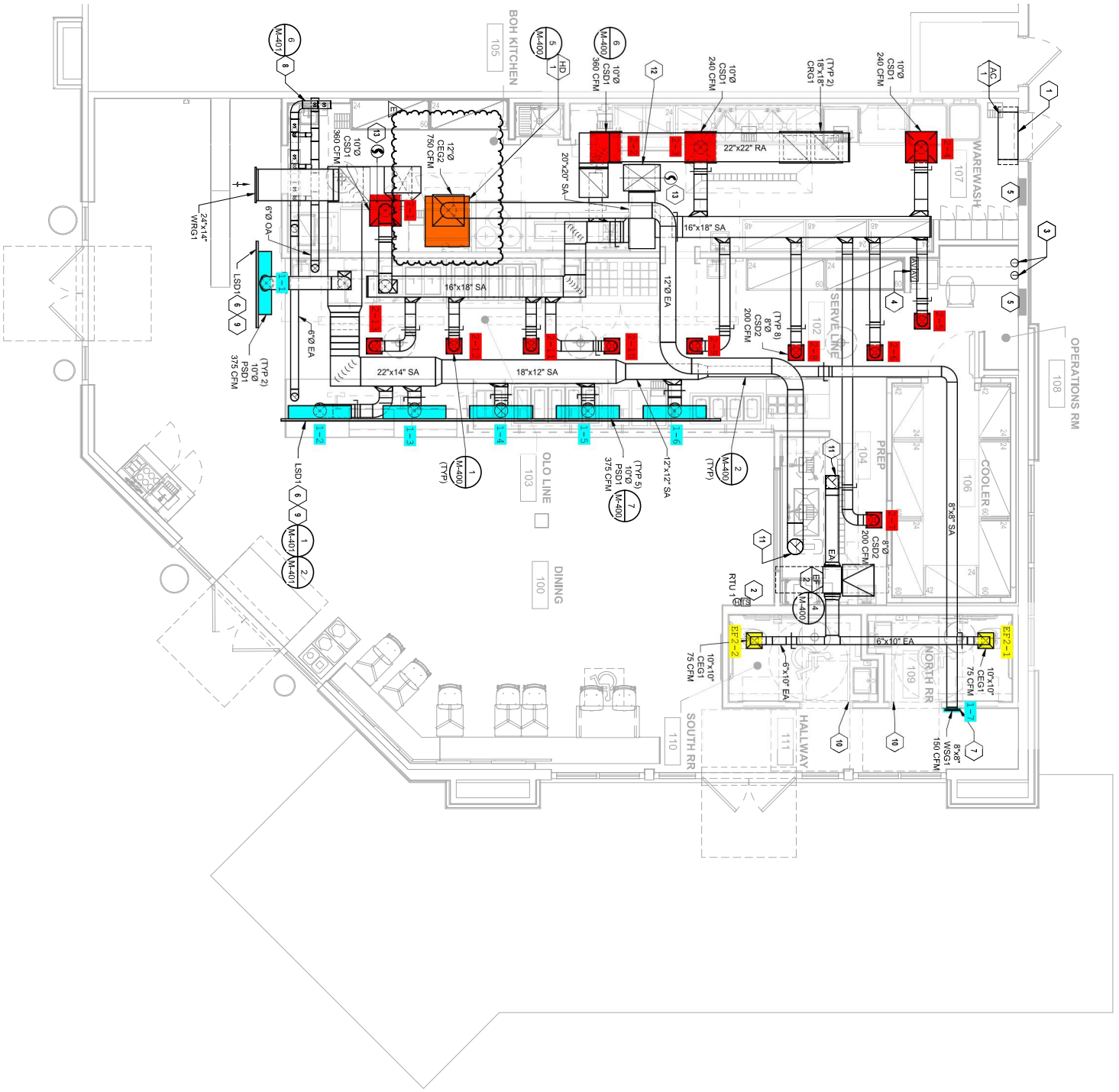
Test Data		
	Design	**Actual**
CFM	150	157
Fan RPM	1220	603
Fan Rotation	-	CCW
Motor RPM	-	603
System SetPt	-	47%
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.5"	0.41"
Fan Inlet SP	-	0.23"
Fan Discharge SP	-	0.18"

Completed By: Zack Eismin on 07/13/2023

Diffuser Ret/Exh (GRD)

EF2/RESTROOMS

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1				75	1	157	78	78	104.0
EGRD2				75	1	156	79	79	105.3
Total				150		313	157	157	104.67%


BOH KITCHEN
105
WAREWASH
107
SERVE LINE
102
OPERATIONS RM
108
PREP
104
COOLER
106
OLO LINE
103
DINING
100
NORTH RR
109
SOUTH RR
110
HALLWAY
111
22"x22" RA
16"x18" SA
20"x20" SA
12"Ø EA
22"x14" SA
18"x12" SA
12"x12" SA
6"x10" EA
8"x8" SA
6"Ø OA
6"Ø EA
10"Ø CSD1 240 CFM
10"Ø CSD1 360 CFM
12"Ø CEG2 750 CFM
(TYP 2) 16"x18" CRG1
24"x14" WRG1
LSD1
(TYP 2) 10"Ø PSD1 375 CFM
(TYP 5) 10"Ø PSD1 375 CFM
(TYP 8) 8"Ø CSD2 200 CFM
RTU 1
EF 2
EF 2-1
EF 2-2
10"x10" CEG1 75 CFM
8"x8" WSG1 150 CFM
AC 1
HD 1