Report By:

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

Report: Preliminary Report

Function: Test, Adjust, & Balance

Date: 03/08/2024

PROJECT

03-18-24 CAVA - SEMINOLE, FL

11165 PARK BLVD

SEMINOLE, FL 33772

Client

CAVA

702 H ST NW

2nd floor

Washington, DC 20001

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Project: 03-18-24 CAVA - SEMINOLE, FL

Table Of Contents

Section	Page #
Balance Schedue	3
AHU/RTU	4
FAN - Exhaust	8
FAN - Supply	12
Kitchen Hood Type I	13
GRD	15

National TAB

Project: 03-18-24 CAVA - SEMINOLE, FL

- Open BALANCE_SCHEDULE_LARGE_JOBS_31_.xlsx

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Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: AHU/RTU

Asset: RTU1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	2821P82348
Model Num	50HCD09	50HC-D09A2N5A6W1M0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	N/A
Motor Rpm	-	1670
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	6.7-6.8

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	4.0”
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	1 TURN OUT
Fan Sheave Size	-	AFD74
Fan Sheave Bore	-	1.0”
Belt CL Distance	-	16.5”
Num of Belts	-	1
Belt Size	-	A48
Belt Alignment	-	GOOD

Test Data		
	Design	**Actual**
SF CFM	3000	2967
SF RPM	-	N/A
RA CFM	2637	2577
OA CFM	363	390
RL Voltage	-	209/210/211
RL Amperage	-	6.2/5.4/5.4
SF Rotation	-	CCW
RA Damper Position	-	6.75 V
Min OA Damper Position	-	3.25 V
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	ES3

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.98”
Fan Suction SP	-	-1.24”
Fan Discharge SP	-	0.45”
Total ESP	1.0"	1.43"
Fan Total SP	-	1.69"

General		
	Design	**Actual**
Fan Rotation Correct	-	YES
Unit Filters Clean	-	CONSTRUCTION FILTERS
Condensate Drain Installed	-	NO

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Project:03-18-24 CAVA - SEMINOLE, FL

AHU/RTU

Diffuser Supply (GRD)

RTU1/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	FRONT KITCHEN	B	10"	300	1	242	253	282	94.0
SGRD2	FRONT KITCHEN	B	10"	250	1	306	263	240	96.0
SGRD3	FRONT KITCHEN	B	10"	250	1	92	319	241	96.4
SGRD4	FRONT KITCHEN	B	10"	300	1	242	344	307	102.3
SGRD5	FRONT KITCHEN	B	10"	300	1	296	327	290	96.7
SGRD6	FRONT KITCHEN	B	10"	250	1	230	232	271	108.4
SGRD7	FRONT KITCHEN	B	10"	250	1	228	222	262	104.8
SGRD8	BACK KITCHEN	A	10"	250	1	196	227	235	94.0
SGRD9	BACK KITCHEN	A	8"	200	1	153	180	186	93.0
SGRD10	MANAGERS OFFICE	A	6"	100	1	0	103	105	105.0
SGRD11	UNFINISHED AREA	E	10"	275	1	242	280	283	102.9
SGRD12	UNFINISHED AREA	E	10"	275	1	227	269	265	96.4
Total				3000		2454	3019	2967	98.9%

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System/Unit: AHU/RTU

Asset: RTU2 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	1422P99632
Model Num	50TCQD12	50TCQD12B2A5A5W3G0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	N/A
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	9.2

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	4.75”
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	3 TURNS OUT
Fan Sheave Size	-	AFD74
Fan Sheave Bore	-	1.0”
Belt CL Distance	-	16.75”
Num of Belts	-	1
Belt Size	-	AX49
Belt Alignment	-	GOOD

Test Data		
	Design	**Actual**
SF CFM	3200	3180
SF RPM	-	N/A
RA CFM	2496	2557
OA CFM	704	683
RL Voltage	-	212/212/212
RL Amperage	-	8.6/8.6/9.0
SF Rotation	-	CCW
RA Damper Position	-	5.5 V
Min OA Damper Position	-	4.5 V
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	ES3

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.52”
Fan Suction SP	-	-0.93”
Fan Discharge SP	-	0.33”
Total ESP	1.0"	0.85"
Fan Total SP	-	1.26"

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

Completed By: Ian Fuller on 03/13/2024

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Project:03-18-24 CAVA - SEMINOLE, FL

AHU/RTU

Diffuser Supply (GRD)

RTU2/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	DINING	E	10"	260	1	383	314	283	108.8
SGRD2	DINING	E	10"	260	1	381	302	270	103.8
SGRD3	DINING	E	10"	260	1	402	359	258	99.2
SGRD4	DINING	E	10"	250	1	474	379	251	100.4
SGRD5	DINING	E	8"	190	1	154	123	179	94.2
SGRD6	DINING	E	8"	190	1	220	179	171	90.0
SGRD7	DINING	E	8"	190	1	98	117	174	91.6
SGRD8	DINING	E	10"	250	1	85	102	266	106.4
SGRD9	DINING	E	8"	160	1	201	241	164	102.5
SGRD10	DINING	E	8"	190	1	149	179	190	100.0
SGRD11	DINING	E	8"	200	1	136	163	184	92.0
SGRD12	DINING	E	8"	200	1	143	172	181	90.5
SGRD13	CORRIDOR	A	12"	500	1	294	352	396	79.2
SGRD14	WOMENS RR	D	6"	50	1	104	125	109	218.0
SGRD15	MENS RR	D	6"	50	1	94	112	104	208.0
Total				3200		3318	3219	3180	99.38%

Asset	Notes	Date	Written By
SGRD4	MISSING DIFFUSSER, READ CFM AT DUCT WITH A TRAVERSE	03/13/2024	Ian Fuller
SGRD8	MISSING DIFFUSSER, READ CFM AT DUCT WITH A TRAVERSE	03/13/2024	Ian Fuller
SGRD13	DIFFUSER IS BELOW DESIGN CFM. SHOULD GO INTO DESIGN CFM ONCE DAMPERS IN STALLED ON BOTH RESTROOM SUPPLY DIFFUSERS.	03/13/2024	Ian Fuller
SGRD14	NO DAMPER ATTACHED UNABLE TO BALANCE WITHIN DESIGN CFM	03/13/2024	Ian Fuller
SGRD15	NO DIFFUSER INSTALLED UNABLE TO BALANCE DIFFUSER WITHIN DESIGN CFM	03/13/2024	Ian Fuller

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Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: FAN - Exhaust

Asset: CEF1 AREA:

Unit Data		
	Design	**Actual**
MFG	COOK	GREENHECK
Model Num	GC-148	SP-B150-QD
Serial Num	-	174522309-0019
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	N/A
Horsepower	-	N/A
Motor Rpm	-	1050
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.8
Service Factor	-	N/A

Test Data		
	Design	**Actual**
CFM	100	99
Fan RPM	-	1050
Fan Rotation	-	CCW
Motor RPM	-	1050
System SetPt	-	SINGLE SPEED
RL Voltage	-	121
RL Amperage	-	1.0
Total ESP	0.3"	N/A
Fan Inlet SP	-	N/A
Fan Discharge SP	-	N/A

Completed By: Ian Fuller on 03/08/2024

Notes:
COULD NOT TAKE FAN PRESSURES - HARD CEILING

Written By: Ian Fuller on 03/08/2024

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Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: FAN - Exhaust

Asset: CEF2 AREA:

Unit Data		
	Design	**Actual**
MFG	COOK	GREENHECK
Model Num	GC-148	SP-B150-QD
Serial Num	-	174522309-0027
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	N/A
Horsepower	-	N/A
Motor Rpm	-	1050
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.8
Service Factor	-	N/A

Test Data		
	Design	**Actual**
CFM	100	96
Fan RPM	-	1050
Fan Rotation	-	CCW
Motor RPM	-	1050
System SetPt	-	SINGLE SPEED
RL Voltage	-	121
RL Amperage	-	1.0
Total ESP	0.3"	N/A
Fan Inlet SP	-	N/A
Fan Discharge SP	-	N/A

Completed By: Ian Fuller on 03/08/2024

Notes:
COULD NOT TAKE FAN PRESSURES - HARD CEILING

Written By: Ian Fuller on 03/08/2024

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Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: FAN - Exhaust

Asset: KEF1 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	6292943
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	N/A
Horsepower	0.750	0.75
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	8.9
Service Factor	-	N/A

Test Data		
	Design	**Actual**
CFM	1444	1425
Fan RPM	1371	882
Fan Rotation	-	CCW
Motor RPM	-	882
System SetPt	-	49%
RL Voltage	-	115
RL Amperage	-	1.8
Total ESP	1.400"	0.24"
Fan Inlet SP	-	-0.24”
Fan Discharge SP	-	ATM

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Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: FAN - Exhaust

Asset: KEF2 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	6292943
Type	DOWNBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	N/A
Horsepower	0.750	0.75
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	8.9
Service Factor	-	N/A

Test Data		
	Design	**Actual**
CFM	1269	1348
Fan RPM	1327	882
Fan Rotation	-	CCW
Motor RPM	-	882
System SetPt	-	49%
RL Voltage	-	119
RL Amperage	-	2.1
Total ESP	1.400"	0.27"
Fan Inlet SP	-	-0.27”
Fan Discharge SP	-	ATM

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Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: FAN - Supply

Asset: MUA1 AREA:COOKLINE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	A2-D.250-20D-MPU	A2-D.250-20D-MPU
Serial Num	-	6292943
Type	MUA	MUA
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	182T
Horsepower	1.5	1.5
Motor Rpm	-	1170
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	6.01
Service Factor	-	1.15

Gas Heat		
	Design	**Actual**
Heater Operates (y/n)	-	Y
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	55	55
Discharge Air Temp SetPt	60	60
Air Flow Switch SP Actual	-	0.42”

Test Data		
	Design	**Actual**
CFM	2185	2219
SF RPM	1298	1261
Motor RPM	-	1261
SF System SetPt	-	59.7 HZ
RL Voltage	-	210/208/209
RL Amperage	-	5.0/5.2/5.0
Total ESP	-	0.51”
Fan Discharge SP	-	0.51”

General		
	Design	**Actual**
Fan Rotation Correct	-	YES

Completed By: Ian Fuller on 03/13/2024

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Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	HOOD DEPOT
Model Num	NA	NDF-C:0904830116
Job / Serial Num	-	H-13826010117
Type	-	TYPE 1 LOW PROXIMITY
Hood length	-	47.75"
Hood Width	-	89"
Supply Plenum Type	-	PSP
Supply Plenum Width	-	14"
Supply Plenum Length	-	101"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	BAFFLE
Filter Size 1	-	20X20
Filter Qty 1	-	4
Filter AK factor size 1	-	2.68
Filter Total AK Area	-	10.72
Filter1 FPM	-	132
Filter2 FPM	-	140
Filter3 FPM	-	136
Filter4 FPM	-	124
Filter Ave FPM(corr)	-	133
CFM	1444	1425

Cooking Equipment		
	Design	**Actual**
Item 1	-	RICE COOKER
Item 2	-	OVEN

Test Data Supply		
	Design	**Actual**
Total AK Area	-	18.47
Kv factor (Vel)	-	0.89
Num of Readings	-	16
Reading1 FPM	-	165
Reading2 FPM	-	186
Reading3 FPM	-	168
Reading4 FPM	-	146
Reading5 FPM	-	156
Reading6 FPM	-	148
Reading7 FPM	-	158
Reading8 FPM	-	109
Reading9 FPM	-	114
Reading10 FPM	-	122
Reading11 FPM	-	114
Reading12 FPM	-	105
Reading13 FPM	-	103
Reading14 FPM	-	93
Ave FPM(corr)	-	120
CFM	2185	2219

Completed By: Ian Fuller on 03/13/2024

Notes:
RIGHT HOOD
15TH READING: 104 FPM
16TH READING: 109 FPM

Written By: Ian Fuller on 03/08/2024

National TAB

Project: 03-18-24 CAVA - SEMINOLE, FL

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	HOOD DEPOT
Model Num	NA	H-13828020117
Job / Serial Num	-	NDF:09000820115
Type	-	TYPE 1 LOW PROXIMITY
Hood length	-	89"
Hood Width	-	47.75"
Supply Plenum Type	-	PSP
Supply Plenum Width	-	14"
Supply Plenum Length	-	89"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	BAFFLE
Filter Size 1	-	20X20
Filter Qty 1	-	4
Filter AK factor size 1	-	2.68
Filter Total AK Area	-	10.72
Filter1 FPM	-	123
Filter2 FPM	-	130
Filter3 FPM	-	134
Filter4 FPM	-	116
Filter Ave FPM(corr)	-	125
CFM	1269	1348

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRILL
Item 2	-	GRIDDLE
Item 3	-	FRYER

Test Data Supply		
	Design	**Actual**
Total AK Area	-	18.47
Kv factor (Vel)	-	0.89
Num of Readings	-	16
Reading1 FPM	-	165
Reading2 FPM	-	186
Reading3 FPM	-	168
Reading4 FPM	-	146
Reading5 FPM	-	156
Reading6 FPM	-	1148
Reading7 FPM	-	158
Reading8 FPM	-	109
Reading9 FPM	-	114
Reading10 FPM	-	122
Reading11 FPM	-	114
Reading12 FPM	-	105
Reading13 FPM	-	103
Reading14 FPM	-	93
Ave FPM(corr)	-	120
CFM	2185	2219

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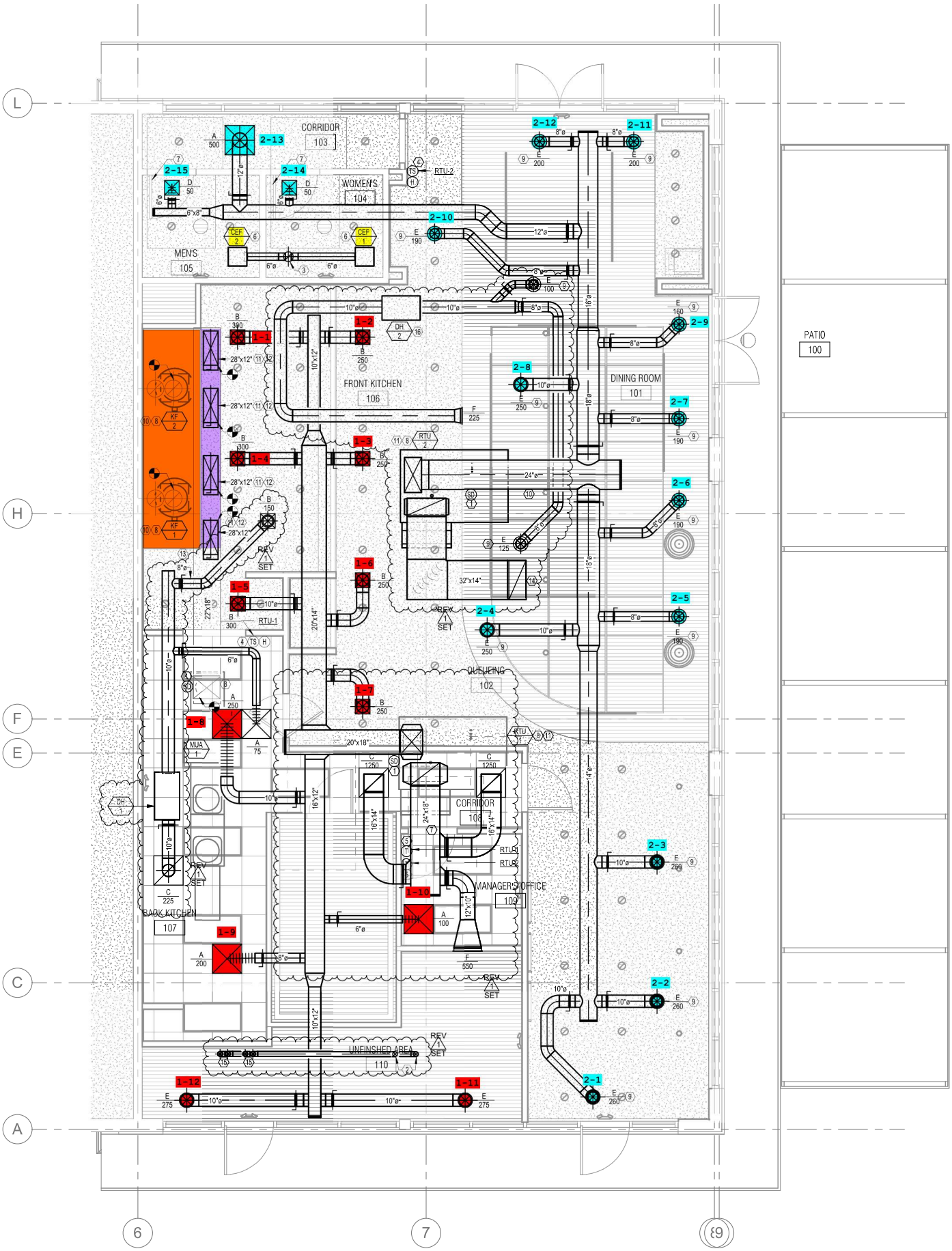
Notes:
LEFT HOOD
15TH READING: 104 FPM
16TH READING: 109 FPM

Written By: Ian Fuller on 03/08/2024



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MECHANICAL PLAN

SCALE: 1/4" = 1'-0"