Report By:

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

NATIONAL TAB

Comfort. Under control.

Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 01/18/2023

PROJECT

01-16-23 FREDDY'S - CLARKSVILLE, TN

900 MLK BLVD

CLARKSVILLE, TN

Client

FFC Kentucky LLC

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

Table Of Contents

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.

DOAS w/ Diffusers

Each of the DOAS were measured at their terminal devices or via traverse to establish a total flow for that unit. Each DOAS 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.

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.

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.

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01-16-23 FREDDY'S - CLARKSVILLE, TN

Project Issue Information

Issue Name : KEF1 HD1 low flow

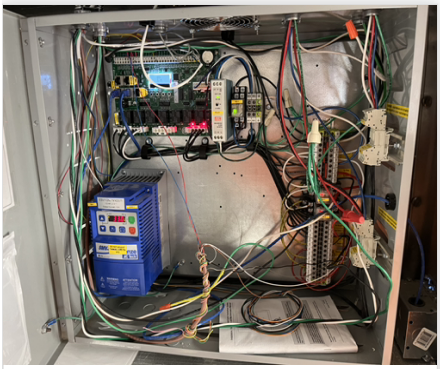
Description : Hood is reading 1200 of 1600 design at FLA of 4.0A of 4.03A. Rotation on motor is correct as well. On arrival to site, Captive Aire was still working on the motor on the roof, but tech did not get a chance to talk to them before they left site. On looking above ceiling, there appears to be daylight coming through where fan sits on curb.

Created By : National TAB **Assigned To :** National TAB - Jacob Davidson

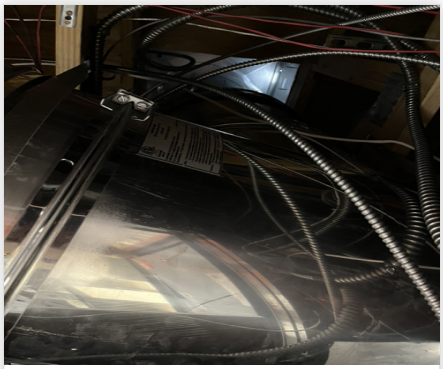
Status : Open

Originated Date : 01/16/2023 - Jacob Davidson - National TAB

Project Issue File Details



Hoodpanel.jpeg



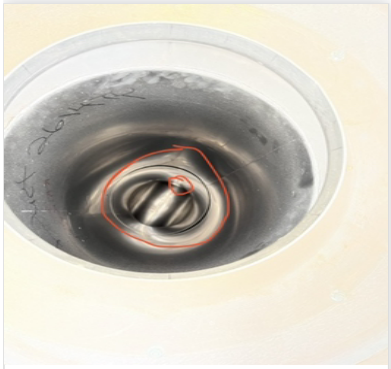
Lightfromroof.jpeg

Project Issue Response Details

- **01/18/2023 National TAB - Will Turnbough**
  - Alignment on fan is off by about 2". This is effectively reducing the duct size from 14" to 12". The alignment needs to be corrected. There is leakage at the base of the fan partially due to the misalignment that needs to be corrected by installing gasket under the base of the fan. Looking down the duct there are seams visible where leakage could occur and grease could accumulate. These need to be corrected.

- **01/18/2023 National TAB - Jacob Davidson**
  - Hood captured 100% with heat from griddle off even with flow out of design.

- **01/18/2023 National TAB - Jacob Davidson**
  - Daylight from roof was vented curb, which is normal. Tech was not able to find any obstructions that would limit flow. Tech is unable to increase flow anymore than where it is without risk of damaging the motor.



Duct.jpeg

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01-16-23 FREDDY'S - CLARKSVILLE, TN

Project Issue Information

Issue Name : KEF1 missing butterfly bolts for motor cover

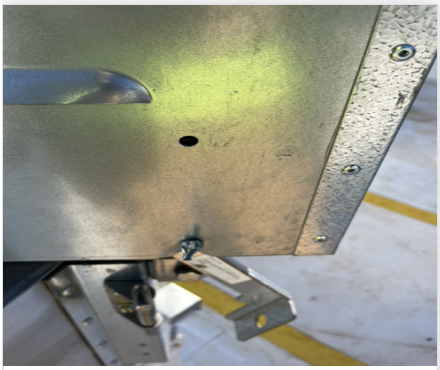
Description : Motor cover is missing the butterfly bolts that keep the cover attached. None extra were found by the unit.

Created By : National TAB **Assigned To :** National TAB - Jacob Davidson

Status : Open

Originated Date : 01/18/2023 - Jacob Davidson - National TAB

Project Issue File Details



Missing.jpeg

Full.jpeg

Comfort. Under control.

01-16-23 FREDDY'S - CLARKSVILLE, TN

Project Issue Information

Issue Name : KEF1 no grease cup

Description : Grease cup is not attached to the fan so grease that builds up will drip on the roof.

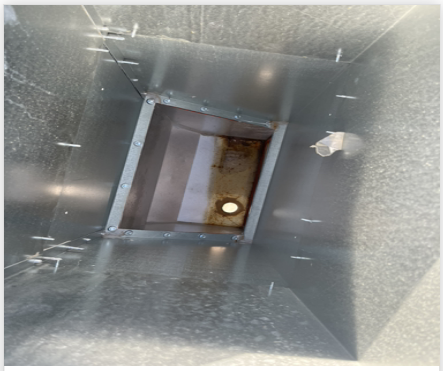
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson

Status : Open

Originated Date : 01/18/2023 - Jacob Davidson - National TAB

Project Issue File Details

Bottomofchute.jpeg



Topofchute.jpeg

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01-16-23 FREDDY'S - CLARKSVILLE, TN

Project Issue Information

Issue Name : RTU1 diffuser 8 broken damper

Description : Damper is broken and free spinning in the duct. For balancing, tech taped the handle down and marked where it needs to be when it is replaced.

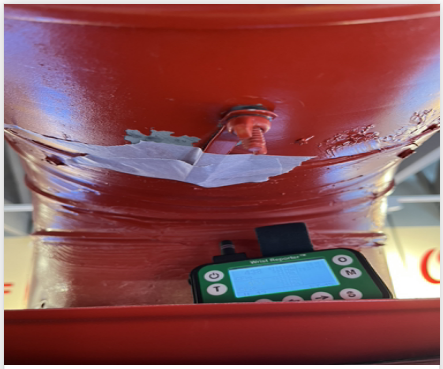
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson

Status : Open

Originated Date : 01/17/2023 - Jacob Davidson - National TAB

Project Issue File Details

Below.jpeg



Damper.jpeg

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01-16-23 FREDDY'S - CLARKSVILLE, TN

Project Issue Information

Issue Name : RTU1 thermostat issue

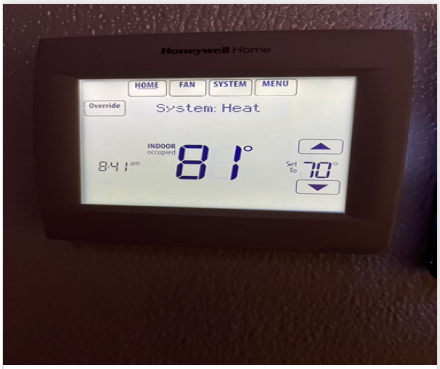
Description : Thermostat reads that space is 81 degrees and does not need heat, however when measuring the space with psychrometer, temperature was only 65.5

Created By : National TAB **Assigned To :** National TAB - Jacob Davidson

Status : Open

Originated Date : 01/18/2023 - Jacob Davidson - National TAB

Project Issue File Details



Thermostat.jpeg

Psy.jpeg

Project Issue Response Details

- **01/18/2023 National TAB - Will Turnbough**
  - Recommend the mechanical contractor service.

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	5000	4814	4100	4357	900	457	18.0%	9.5%						
DOAS-1	KITCHEN	2650	2655	0	0	2650	2655	100.0%	100.0%						
KEF-1	HOOD 1											1600	1223		
KEF-2	HOOD 2											775	792		
KEF-3	HOOD 3											525	540		
EF-1	RESTROOM													75	82
EF-2	RESTROOM													75	80
TOTALS		7650	7469	4100	4357	3550	3112			0	0	2900	2555	150	162

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3550	3112
TOTAL EXHAUST	3050	2717
NET AIRFLOW	500	395

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0049
SIDE	0.0086
REAR	0.0079
AVERAGE	**0.0071**

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:

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01-16-23 FREDDY'S - CLARKSVILLE, TN

CheckList Information

Name :	TECH - SITE PICTURES	**Status :**	NotSubmitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

STORE FRONT

Fromt.jpeg

RTU-1

RTU1.jpeg

DOAS-1

DOAS1.jpeg

KEF-1

WF1.jpeg

KEF-2

EF2.jpeg

KEF-3

EF3.jpeg

EF-1

MensRR.jpeg

EF-2

WomensRR.jpeg

HOOD-1

Hd1.jpeg

HOOD-2

HD2.jpeg

HOOD-3

HD3.jpeg

Notes/Comments :

Comfort. Under control.

01-16-23 FREDDY'S - CLARKSVILLE, TN

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	NotSubmitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	YES
All hood filters installed and accounted for?	YES
Hoods are wired and have power?	YES
Hood is free of alarms?	YES
Thermostats have power?	YES
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	NA

Notes/Comments :

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01-16-23 FREDDY'S - CLARKSVILLE, TN

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	NotSubmitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	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?	YES
DCV Max damper opening position is set to minimum?	YES
Free cooling enthalpy set point set for lowest setting (Typically "D")	YES, E
Motors are all operating below the FLA rating?	YES
Are belts tight?	YES
If direct drive unit is the speed controller working.	YES
Is gas piping installed and valves turned on?	YES
Unit free of noticeable noise and vibration	YES

EF's

Rotation is correct?	YES
Belts are tight?	NA
Grease cup installed on hood fan?	NOT INSTALLED ON EF1

Cup.jpeg

Hinge kit installed installed on hood fan?	YES
Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	YES
Flex conduit is long enough so that fan can be completely tilted back?	YES
There is no major leakage around base of fan?	SMALL LEAKAGE. TECH TAPED THE SEAM.

Seam.jpeg

Is the motor operating below the motor FLA rating?	YES
For restroom fan(s) is the back draft damper installed and can it fully open?	NA
Unit free of noticeable noise and vibration?	YES

MUA

Rotation is correct?	NA
Gas piping is installed and valves are in on position?	NA

Heater tested and is functional?	NA
Internal motorized damper is fully opening?	NA
Motor is operating below the FLA rating?	NA
Unit free of noticeable noise and vibration?	NA
HOODS	
Kitchen equipment installed in proper places?	YES
Can kitchen equipment be turned on for final smoke test?	NO
Griddle is completely centered underneath hood?	YES
DOCUMENTATION	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	YES
PICTURES TAKEN OF:	
All Issues	YES
Each Piece of equipment	YES
Each Hood	YES
Front of Store	YES

Notes/Comments :

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01-16-23 FREDDY'S - CLARKSVILLE, TN

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	NotSubmitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?	YES
Is space comfortable in all areas?	YES
Is the space free of ventilation noise?	YES
If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".	

Notes/Comments :

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01-16-23 FREDDY'S - CLARKSVILLE, TN

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	NotSubmitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

FINAL TESTS	
HOOD CAPTURE TEST	
List equipment turned on for testing	HOODS. COOKING START UPS NOT DONE
List smoke candle type used	45 SECOND SMOKE EMITTER
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%
WITNESS	
Date test was completed	01/18/2023
TAB tech name / Firm	Jacob Davidson / NATIONAL TAB
Site super name / Firm	SEAN / OLYMPIAN CONSTRUCTION
Owner representative name / Firm (if Applicable)	NA
Building pressure at front & back doors (All Systems On)	0.0079" BACK 0.0049" FRONT 0.0086" SIDE
ADDITIONAL	
Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	YES
Thermostats are programmed?	YES
Thermostats Schdedules: Program all thermostats to following settings:	

All three thermostats have correct time/date? (if not set correctly)	YES
Occupied Time: 8am-11:55pm	YES
Occupied Fan ON	YES
Occupied cooling 74	YES
Occupied heating 68	YES
Unoccupied Time 11:55pm-8am	YES
Unoccupied Fan Auto	YES
Unoccupied cooling 79	YES
Unoccupied heating 63	YES
Set a Partial Screen Lock for Thermostats (i.e., make sure temperature is adjustable but not schedule)	YES
Password is set to 999 for Partial Screen Lock?	UNABLE TO CHANGE PASSWORD FROM 3346

Password.jpeg

RTU Economizers

Note: These instructions are for Lennox units. There are similar settings for other OEMs. Call office for assistance if needed.

Enthalpy is set to "D" for all three units	YES, E
"DCV Set" dials turned all the way to the left (counter clockwise)	YES
"DCV Max" dials turned all the way to the left (counter clockwise)	YES

Notes/Comments :

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: AHU/RTU

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Asset: DOAS1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	4994659
Model Num	CASRTU3-I.300-18-20T-DOAS	CASRTU3-I.300-18-20T-DOAS
Type	DOAS	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4 METAL MESH
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	145T
Horsepower	2	2
Motor Rpm	-	1165
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	7.51/3.76	7.51/3.76

Drive Data		
	Design	**Actual**

Test Data		
	Design	**Actual**
SF CFM	2650	2655
SF RPM	-	1243
RA CFM	0	0
OA CFM	2650	2655
RL Voltage	-	168
RL Amperage	-	6.3
SF Rotation	-	CCW
RA Damper Position	-	DOAS
Min OA Damper Position	-	DOAS
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.34”
Fan Suction SP	-	-0.45”
Fan Discharge SP	-	0.85”
Total ESP	0.5"	1.19”
Fan Total SP	-	1.3”

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

Completed By: Jacob Davidson

Notes:

National TAB

Project:01-16-23 FREDDY'S - CLARKSVILLE, TN

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

DOAS1/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	CUSTOMER SERVICE	SD3	12"	250	1	199	277	244	97.6
SGRD2	CUSTOMER SERVICE	SD2	12"	250	1	172	228	235	94.0
SGRD3	DRIVE THRU	SD3	12"	250	1	285	381	262	104.8
SGRD4	KITCHEN	SD3	12"	250	1	263	339	271	108.4
SGRD5	KITCHEN	SD2	12"	250	1	272	361	263	105.2
SGRD6	KITCHEN	SD2	12"	246	1	178	253	262	106.5
SGRD7	DRIVE THRU	SD2	12"	250	1	172	232	226	90.4
SGRD8	KITCHEN	SD3	12"	250	1	276	355	242	96.8
SGRD9	KITCHEN	SD3	12"	250	1	207	309	246	98.4
SGRD10	OFFICE	SD4	8"	154	0.349	50	93	155	100.6
SGRD11	KITCHEN	SD3	12"	250	0.473	182	212	249	99.6

Completed By: Jacob Davidson on

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: AHU/RTU

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Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	TRANE
Serial Num	-	222410236D
Model Num	LGH150H4M	YHD150G3RHD19D0C1A200B0AA
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1 METAL MESH
OA Filter Size 1	-	16X60
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	4
Final Filter Size 2	-	20X25X2

Test Data		
	Design	**Actual**
SF CFM	5000	4814
SF RPM	-	720
RA CFM	4100	4357
OA CFM	900	457
RL Voltage	-	214/215/215
RL Amperage	-	7.6/7.8/8.1
SF Rotation	-	CW
RA Damper Position	-	15%
Min OA Damper Position	-	15%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	E

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	5	3
Motor Rpm	-	1725/1425
Phase	3	3
Rated Voltage	208	208-230/460
Rated Amperage	-	9.4-9.2/4.6

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.52"
Fan Suction SP	-	-0.68"
Fan Discharge SP	-	0.60"
Total ESP	1.0"	1.12”
Fan Total SP	-	1.28”

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP50X
Motor Bore Size	-	7/8”
Motor Sheave SetPt	-	1 TURN OUT
Fan Sheave Size	-	10.5”
Fan Sheave Bore	-	1-3/16”
Belt CL Distance	-	22” WITH TENSIONER
Num of Belts	-	1
Belt Size	-	BX68
Belt Alignment	-	VERIFIED GOOD

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

Completed By: Jacob Davidson

Notes:

National TAB

Project:01-16-23 FREDDY'S - CLARKSVILLE, TN

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU1/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	DINING	SD1	12"	475	1	259	328	437	92.0
SGRD2	DINING	SD1	12"	475	1	532	448	460	96.8
SGRD3	DINING	SD1	12"	475	1	542	430	479	100.8
SGRD4	CUSTOMER ORDERING	SD1	12"	475	1	507	621	450	94.7
SGRD5	CUSTOMER ORDERING	SD1	12"	425	1	579	408	449	105.6
SGRD6	DINING	SD1	12"	475	1	332	383	503	105.9
SGRD7	DINING	SD1	12"	475	1	510	564	469	98.7
SGRD8	DINING	SD1	12"	475	1	503	618	448	94.3
SGRD9	DINING	SD1	12"	475	1	525	442	495	104.2
SGRD10	DINING	SD1	12"	475	1	478	541	479	100.8
SGRD11	RR VESTIBULE	SD5	6"	50	1	103	48	54	108.0
SGRD12	RESTROOM	SD5	6"	50	1	71	33	46	92.0
SGRD13	RESTROOM	SD5	6"	50	1	106	26	45	90.0

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National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: EF1 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	COOK	COOK
Model Num	GC-146	GC-146
Serial Num	-	NA
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	QUEACE
Frame	-	NL
Horsepower	30.3W	15W
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.4/0.22
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	75	82
Fan RPM	900	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	LOW
RL Voltage	-	120V
RL Amperage	-	0.31A
Total ESP	0.25"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO

Completed By: Jacob Davidson

Notes:

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: EF2 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	COOK	COOK
Model Num	GC-146	GC-146
Serial Num	-	NA
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	QUEACE
Frame	-	NL
Horsepower	30.3W	15W
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.4/0.22
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	75	80
Fan RPM	900	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	LOW
RL Voltage	-	121
RL Amperage	-	0.32
Total ESP	0.25"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO

Completed By: Jacob Davidson

Notes:

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: KEF1 AREA:HOOD 1

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CASRE18DD	CASRE18DD
Serial Num	-	4994659
Type	UTILITY	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	145T
Horsepower	1	1.5
Motor Rpm	-	1740
Phase	3	3
Voltage (rated)	208	230/460
Amperage (rated)	-	4.03/2.02
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	1600	1223
Fan RPM	1105	957
Fan Rotation	-	CCW
Motor RPM	-	957
System SetPt	-	33HZ
RL Voltage	-	68V
RL Amperage	-	4.0A
Total ESP	1.4"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO

Completed By: Jacob Davidson

Notes:

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: KEF2 AREA:HOOD 2

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU50HFA	DU50HFA
Serial Num	-	4994659
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	0.5	1/2
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	6.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	775	792
Fan RPM	1532	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	61% ECM
RL Voltage	-	124
RL Amperage	-	2.9
Total ESP	1.250"	0.94"
Fan Inlet SP	-	-0.94"
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson

Notes:

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: KEF3 AREA:HOOD 3

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU33HFA	DU33HFA
Serial Num	-	4994659
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	0.333	1/3
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	4.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	525	540
Fan RPM	1500	819
Fan Rotation	-	CCW
Motor RPM	-	819
System SetPt	-	46P
RL Voltage	-	124V
RL Amperage	-	0.6A
Total ESP	0.8"	0.21"
Fan Inlet SP	-	-0.21"
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson

Notes:

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: Kitchen Hood Type I

Comfort. Under control.

Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	4994659
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	96"	96"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	8.1	8.1
Filter1 FPM	-	158
Filter2 FPM	-	158
Filter3 FPM	-	155
Filter4 FPM	-	144
Filter5 FPM	-	138
Filter Ave FPM(corr)	-	151 AT FLA
CFM	1600	1223

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE 1
Item 2	-	GRIDDLE 2

Completed By: Jacob Davidson

Notes: FAN IS AT FLA WITH MOTOR GOING THE CORRECT DIRECTION. UNABLE TO INCREASE FLOW ANYMORE. HOOD CAPTURE IS 100%

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: Kitchen Hood Type I

Comfort. Under control.

Asset: HD2 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	4994659
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	60"	60"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	3	3
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	4.86	4.86
Filter1 FPM	-	157
Filter2 FPM	-	167
Filter3 FPM	-	165
Filter Ave FPM(corr)	-	163
CFM	775	792

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYERS

Completed By: Jacob Davidson

Notes:

National TAB

Project: 01-16-23 FREDDY'S - CLARKSVILLE, TN

System/Unit: Kitchen Hood Type II

Comfort. Under control.

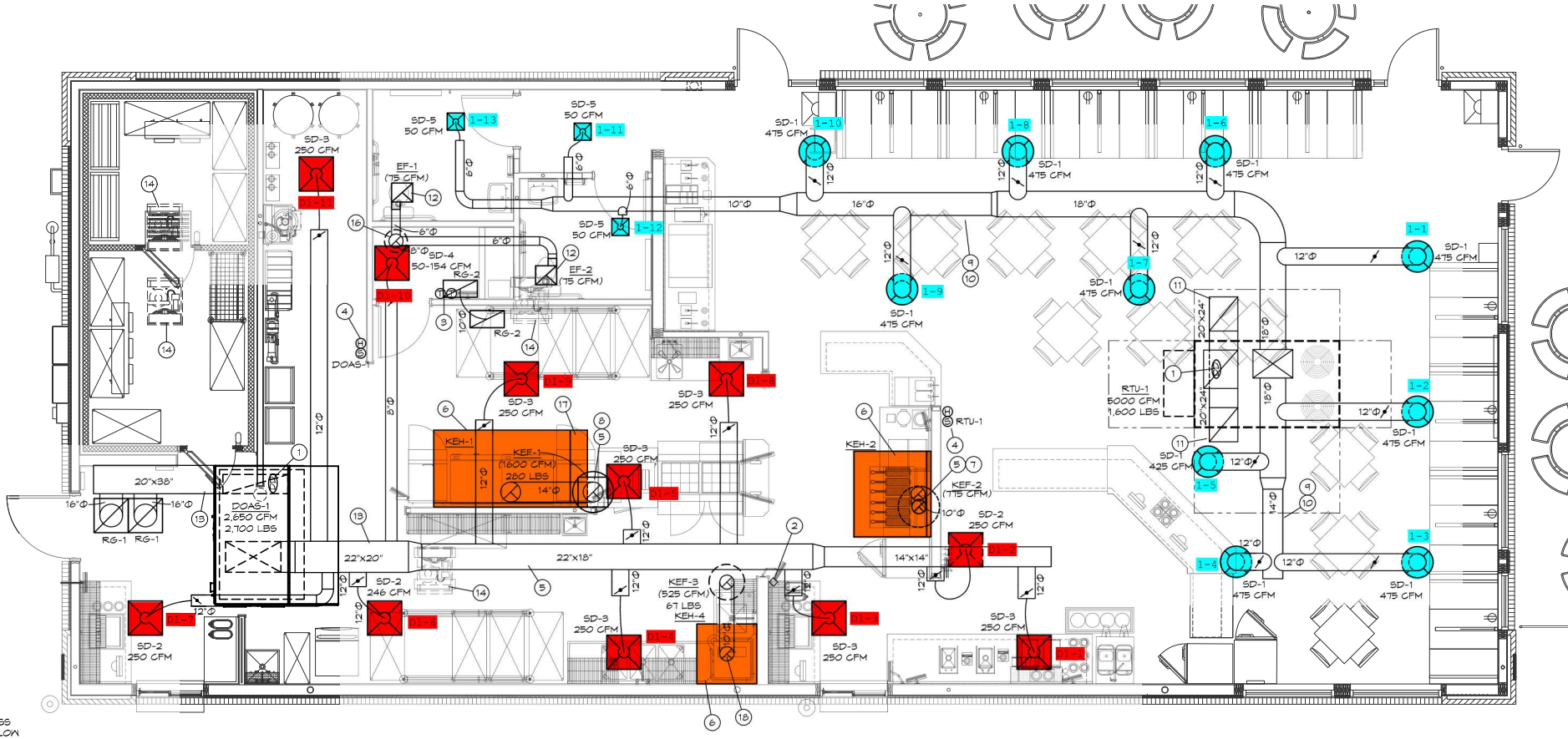
Asset: HD3 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4224- VHB-G	4224- VHB-G
Serial Num	-	4994659
Type	TYPE II CANOPY	TYPE II CANOPY
Hood length	42"	42"
Hood Width	42"	42"

Test Data		
	Design	**Actual**
Exhaust CFM	525	540

Completed By: Jacob Davidson

Notes:



NORTH

MECHANICAL FLOOR PLAN

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

SORS

(DN)

DAMPER

GHTING TRACK
MOUNT DUCT AS HIGH AS TRUSS
OR LIGHTING TRACK WILL ALLOW

SUPPLY AIR DUCT

Date: 1/18/2023