

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 12/10/2024
Completed By: National TAB

PROJECT
12-09-24 CULVERS PRINCETON, MN

200 19th Ave N

Princeton , MN 55371

Client

Captive-Aire Region #60

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

Table Of Contents

Section	Page #
Summary	3
Issue Data	4
Balance Schedule	10
Checklist Data	11
AHU/RTU	23
FAN - Exhaust	28
Kitchen Hood Type I	33
GRD Layout	35

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)

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.

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.

General Exhaust Fans

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.

Issue List

- HOOD SMOKE CAPTURE
- RTU-2: Cookline Diffusers
- RTU-2: Missing Dampers



12-09-24 CULVERS PRINCETON, MN

Project Issue Information

Issue Name : HOOD SMOKE CAPTURE
Description : Due to incorrect diffuser placement, deviation from duct design, and missing dampers; smoke capture was poor on HD-1. Adjusted diffuser values on Cookline to improve hood capture. Individual diffusers not balanced to design as a result, however, smoke capture is much improved.

Created By : National TAB **Assigned To :** National TAB - Dan Hertenstein

Status : Open
Priority : InfoOnly **Asset Tag :**

Originated Date : 12/10/2024 - Michael McDonnell - National TAB

Project Issue File Details



12/10/2024



12-09-24 CULVERS PRINCETON, MN

Project Issue Information

Issue Name : RTU-2: Cookline Diffusers
Description : Cookline Diffuser 1-7 is not in correct position per plans. It's important cookline diffusers are installed per plan for hood capture. Several kitchen diffusers are also missing dampers. MC came to install missing dampers, but only brought 2 dampers. Several still missing. Additionally, return in incorrect location per plans.

Created By : National TAB **Assigned To :** National TAB - Dan Hertenstein

Status : Closed

Priority : Medium **Asset Tag :**

Originated Date : 12/09/2024 - Michael McDonnell - National TAB

Project Issue File Details



12/10/2024



12/10/2024



12/09/2024

Project Issue Response Details

- **12/11/2024 National TAB - Will Turnbough**
 - Diffuser moved per GC pictures



12/11/2024



12-09-24 CULVERS PRINCETON, MN

Project Issue Information

Issue Name : RTU-2: Missing Dampers
Description : Kitchen unit is missing dampers on several diffusers. Where necessary, flex was banded with drawband to reduce airflow. See issue regarding smoke capture; diffusers not balanced to design.
Created By : National TAB **Assigned To :** National TAB - Dan Hertenstein
Status : Closed
Priority : High **Asset Tag :** RTU2
Originated Date : 12/10/2024 - Michael McDonnell - National TAB

Project Issue File Details



12/10/2024

Project Issue Response Details

- **12/11/2024 National TAB - Will Turnbough**
 - Resolved per GC pics



12/11/2024

12/11/2024

12/11/2024

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	6150	6167	4400	4277	1750	1890	28.5%	30.6%						
RTU-2	KITCHEN	6150	6175	4450	4364	1700	1811	27.6%	29.3%						
PRV 2	HOOD2											1500	1619		
PRV 3	HOOD1											1500	1542		
PRV-1	RESTROOM													375	372
EFA1	MOP ROOM													75	81
TOTALS		12300	12342	8850	8641	3450	3701			0	0	3000	3161	450	453

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3450	3701
TOTAL EXHAUST	3450	3614
NET AIRFLOW	0	87

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.003
SIDE	0.003
REAR	0.004
AVERAGE	0.0033

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

- 01: RTUs/AHUs
- 02.EXHAUST FANS
- 03.HOOD 1
- 04.HOOD 2
- 05.FINAL TEST



12-09-24 CULVERS PRINCETON, MN

CheckList Information

Name : 01: RTUs/AHUs **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 12/05/2024 - Wale Odofin - National TAB
Completed Date : 12/10/2024 - Michael McDonnell - National TAB

CheckList Item Details

RTU's/AHU's

Thermostats installed and have power? Pass

Comment:

All diffusers and grilles are installed and match design? Pass

Comment:

Locations do not match design on the cookline, see ISSUE.

Cookline diffusers have at 12-18" of straight duct out of the top of the diffusers and a rigid 90 degree fitting? Pass

Comment:

Economizers are assembled and functional? Pass

Comment:

Motors are all operating below the FLA rating? Pass

Comment:

Are belts tight? N/A

Comment:

If direct drive unit is the speed controller working?

Pass

Comment:

Is gas piping installed and valves turned on?

Pass

Comment:

Unit free of noticeable noise and vibration

Pass

Comment:

Notes/Comments :

[1] OA damper positions lower than typical.

Date :12/10/2024



12-09-24 CULVERS PRINCETON, MN

CheckList Information

Name : 02.EXHAUST FANS **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 12/05/2024 - Wale Odofin - National TAB
Completed Date : 12/10/2024 - Michael McDonnell - National TAB

CheckList Item Details

EF's

Rotation is correct? Pass

Comment:

Belts are tight? N/A

Comment:

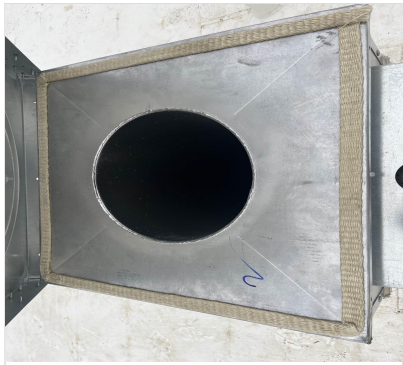
Fans are direct drive.

Hinge kit installed installed on hood fan? Pass

Comment:

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

Comment:



12/10/2024



12/10/2024

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

Pass

Comment:

There is no major leakage around base of fan?

Pass

Comment:

Is the motor operating below the motor FLA rating?

Pass

Comment:

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

Pass

Comment:



12/10/2024

Unit free of noticeable noise and vibration?

Pass

Comment:



12-09-24 CULVERS PRINCETON, MN

CheckList Information

Name : 03.HOOD 1 **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 12/05/2024 - Wale Odofin - National TAB
Completed Date : 12/10/2024 - Michael McDonnell - National TAB

CheckList Item Details

HD-1

Is the hood powered and free of alarms? Pass

Comment:

Does hood label match submittal? Pass

Comment:

Do hood dimensions match submittal? Pass

Comment:

Is the hood hung Level? Pass

Comment:

Are hood lights installed and are they powered? Pass

Comment:

Are temperature Sensors installed? Pass

Comment:

Are the correct number and size of filters installed, and are they installed correctly? Pass

Comment:

Is the grease cup installed?

Pass

Comment:

Document any other issues or discrepancies.

Comment:

none

HOOD CAPTURE TEST

List equipment turned on for testing:

Comment:

Fryer

Smoke Test Capture - Perimeter of Hood

Comment:

100%

Smoke Test Capture - Top of Cooking Surface

Comment:

90%-escaping out sides of hood

List smoke candle used:

Comment:

45 second smoke emitter



12-09-24 CULVERS PRINCETON, MN

CheckList Information

Name : 04.HOOD 2 **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 12/05/2024 - Wale Odofin - National TAB
Completed Date : 12/10/2024 - Michael McDonnell - National TAB

CheckList Item Details

HD-2

Is the hood powered and free of alarms? Pass

Comment:

Does hood label match submittal? Pass

Comment:

Do hood dimensions match submittal? Pass

Comment:

Is the hood hung Level? Pass

Comment:

Are hood lights installed and are they powered? Pass

Comment:

Are temperature Sensors installed? Pass

Comment:

Are the correct number and size of filters installed, and are they installed correctly? Pass

Comment:

Is the grease cup installed?

Pass

Comment:

Document any other issues or discrepancies.

Comment:

None

HOOD CAPTURE TEST

List equipment turned on for testing:

Comment:

Griddle

Smoke Test Capture - Perimeter of Hood

Comment:

100%

Smoke Test Capture - Top of Cooking Surface

Comment:

100%

List smoke candle used:

Comment:

45 second smoke emitter



12-09-24 CULVERS PRINCETON, MN

CheckList Information

Name : 05.FINAL TEST **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 12/05/2024 - Wale Odofin - National TAB

Completed Date : 12/10/2024 - Michael McDonnell - National TAB

CheckList Item Details

FINAL CHECKS

When hoods are turned off, verify the economizers shut Pass

Comment:

When hoods are turned on, verify the economizers open to the minimum position Pass

Comment:

Is space free of drafting? Pass

Comment:

Is space comfortable in all areas? Pass

Comment:

Is the space free of ventilation noise? Pass

Comment:

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

Fryer / Griddle

List smoke candle type used

Comment:

45 second smoke emitter

Smoke test capture % - Perimeter of hood

Comment:

HD-1: 100% HD-2: 100%

Smoke test capture % - Top of cooking surface

Comment:

HD-1: 90%-smoke escaping on ends of hood HD-2: 100%

WITNESS

Date test was completed

12/10/2024

Comment:

TAB tech name / Firm

Comment:

Michael McDonnell / National TAB

Site super name / Firm

Comment:

Justin / McCon

Owner representative name / Firm (if Applicable)

Comment:

NA

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)

Pass

Comment:

0.003"

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

System/Unit: AHU/RTU



Asset: RTU1

AREA:DINIING

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6938827
Model Num	CAS-HVAC1.400-24-20T	CAS-HVAC1.400-24-20T
Type	RTU	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Test Data		
	Design	Actual
SF CFM	6150	6167
SF RPM	-	1641
RA CFM	4400	4277
OA CFM	1750	1890
RL Voltage	-	183V @VFD
RL Amperage	-	22.6 @VFD
SF Rotation	-	CCW, CORRECT
SF System SetPt	-	56.1 HZ
RA Damper Position	-	MECHANICALLY LINKED
Min OA Damper Position	-	3.4V
Min OA Damper Type	-	ECONOMIZER

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	215T
Horsepower	-	10.0
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	24.3

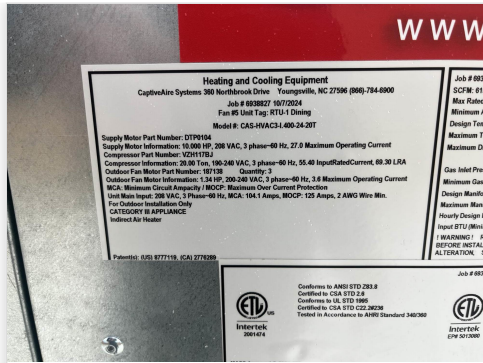
General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



12/10/2024



12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

AHU/RTU



Diffuser Supply (GRD)

RTU1/DINIING

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	ENTRY	SD3	8"	150	1.0	318	166	163	108.7
SGRD2	DINING	SD1	8"	150	1.0	263	188	161	107.3
SGRD3	DINING	SD1	8"	150	1.0	220	134	138	92.0
SGRD4	DINING	SD1	8"	150	1.0	166	109	139	92.7
SGRD5	DINING	SD1	8"	150	1.0	157	140	161	107.3
SGRD6	DINING	SD1	8"	150	1.0	60	183	164	109.3
SGRD7	DINING	SD1	8"	150	1.0	177	149	154	102.7
SGRD8	DINING	SD1	8"	150	1.0	143	175	160	106.7
SGRD9	DINING	SD1	8"	150	1.0	145	169	165	110.0
SGRD10	DINING	SD1	8"	150	1.0	196	185	163	108.7
SGRD11	DINING	SD1	8"	150	1.0	276	354	139	92.7
SGRD12	DINING	SD1	8"	150	1.0	164	279	159	106.0
SGRD13	DINING	SD1	8"	150	1.0	200	297	165	110.0
SGRD14	DINING	SD1	8"	150	1.0	249	320	147	98.0
SGRD15	DINING	SD1	8"	150	1.0	207	261	140	93.3
SGRD16	DINING	SD1	8"	150	1.0	154	238	157	104.7
SGRD17	DRINKS	SD1	10"	300	1.0	187	294	318	106.0
SGRD18	ENTRY	SD1	8"	150	1.0	110	175	139	92.7
SGRD19	SUNDAE	SD1	12"	500	1.0	224	344	455	91.0
SGRD20	OFFICE	SD1	10"	200	1.0	90	431	184	92.0
SGRD21	CUST.ORD	SD1	12"	450	1.0	277	318	438	97.3
SGRD22	CUST. SERV	SD1	10"	350	1.0	200	302	354	101.1
SGRD23	CUST. SERV	SD1	10"	350	1.0	199	320	345	98.6
SGRD24	CUST. SERV	SD1	10"	350	1.0	216	384	366	104.6
SGRD25	CUST. SERV	SD1	10"	350	1.0	405	562	356	101.7
SGRD26	HALL	SD1	12"	450	1.0	354	146	458	101.8
SGRD27	RR	SD4	8"	150	1.0	102	135	138	92.0
SGRD28	RR	SD4	8"	150	1.0		154	141	94.0
Total				6150		5459	6912	6167	100.28%

Completed By: Michael McDonnell on 12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

System/Unit: AHU/RTU



Asset: RTU2

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6938827
Model Num	CAS-HVAC1.300-24-20T	CAS-HVAC1.300-24-20T
Type	RTU	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	215T
Horsepower	-	10.0
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	24.3 [1]

Test Data		
	Design	Actual
SF CFM	6150	6175
SF RPM	-	1697
RA CFM	4450	4364
OA CFM	1700	1811
RL Voltage	-	186 @ VFD
RL Amperage	-	24.8 @ VFD [1]
SF Rotation	-	CCW, CORRECT
SF System SetPt	-	58.0 HZ
RA Damper Position	-	MECHANICALLY LINKED
Min OA Damper Position	-	3.4V
Min OA Damper Type	-	ECONOMIZER

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

Completed By: Michael McDonnell on 12/10/2024

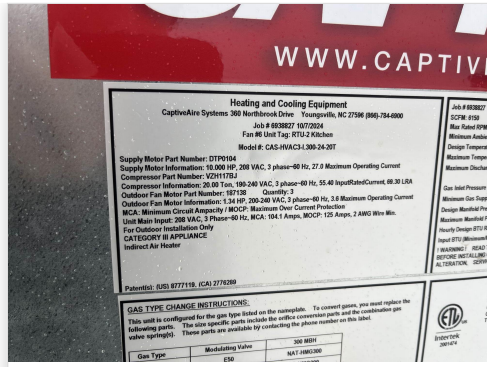
- Notes:
- [1] UNIT LABEL FLA 27.0 BASED ON UNIT VOLTAGE OF 184. WITHIN MOTOR SF.
 - [2] UNIT IS MISSING DAMPERS ON SEVERAL DIFFUSERS.
 - [3] DIFFUSERS BALANCED FOR HOOD CAPTURE.

Written By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



12/10/2024



12/10/2024

Heating and Cooling Equipment
 CaptiveAir Systems 366 Northbrook Drive Youngsville, NC 27596 (866) 734-6900
 Job # 893827 10/7/2024
 Fan 90 Unit Tag: RTLS-2-Kitchen
 Model #: CAS-HVAC1.309-24-20T

Supply Motor Part Number: 07P0104
 Supply Motor Information: 90.000 HP, 208 VAC, 3 phase-60 Hz, 27.9 Maximum Operating Current
 Compressor Part Number: VZ01178J
 Compressor Information: 26.50 Ton, 198-240 VAC, 3 phase-60 Hz, 55.40 Input/Run/Current, 68.38 LRA
 Outdoor Fan Motor Part Number: 187128 Quantity: 3
 Outdoor Fan Motor Information: 2.24 HP, 208-240 VAC, 3 phase-60 Hz, 5.8 Maximum Operating Current
 MCA, Minimum Circuit Ampacity / MOCP, Maximum Over Current Protection
 Unit Main Input: 208 VAC, 3 Phase-60 Hz, MCA: 194.1 Amps, MOCP: 152 Amps, 2 AWG Wire Min.
 For Outdoor Installation Only
 CATEGORY II APPLIANCE
 Indirect Air Heater

Patents: US 8,777,119, (CA) 277,629

GAS TYPE CHANGE INSTRUCTIONS:
 This unit is configured for the gas type listed on the nameplate. To convert gases, you must replace the following parts. The size specific parts include the orifice conversion parts and the combination gas valve spring(s). These parts are available by contacting the phone number on this label.

Gas Type	Modulating Valve	300 BHR
NAT	NAT-AMC300	
EW		

Job # 893827
 ECP# 8708
 Max Rated BPH: 1
 Minimum Ambient
 Design Temperature
 Maximum Temperature
 Minimum Discharge
 Gas Inlet Pressure (PSI)
 Minimum Gas Supply
 Design Manual Press
 Maximum Manual Press
 Input Energy (BTU) per
 (BTU/HR) (kW) (kW)
 APPROVED AND CALIBRATED BY
 INSTALLATION SERVICE

ETL
 LISTED
 3000V
 2004-14

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

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	SUNDAE	SD1	12"	600	1.0	432	540	495	82.5
SGRD2	SUNDAE	SD1	12"	600	1.0	397	481	399	66.5
SGRD3	KITCHEN	SD5	12"	200	1.0	159	184	282	141.0
SGRD4	KITCHEN	SD5	12"	375	1.0	383	371	240	64.0
SGRD5	KITCHEN	SD5	12"	400	1.0	429	423	150	37.5
SGRD6	KITCHEN	SD5	12"	400	1.0	345	417	406	101.5
SGRD7	KITCHEN	SD5	10"	250	1.0	361	396	431	172.4
SGRD8	KITCHEN	SD5	10"	275	1.0	434	376	385	140.0
SGRD9	TOILET	SD1	6"	75	1.0	128	79	70	93.3
SGRD10	HALL	SD5	8"	125	1.0	196	125	134	107.2
SGRD11	KITCHEN	SD5	12"	350	1.0	752	345	504	144.0
SGRD12	KITCHEN	SD5	12"	350	1.0	515	338	414	118.3
SGRD13	KITCHEN	SD5	12"	350	1.0	60	348	456	130.3
SGRD14	UTILITY RM.	SD1	12"	600	1.0	635	624	634	105.7
SGRD15	DRY GOODS	SD1	12"	600	1.0	335	487	546	91.0
SGRD16	DRY GOODS	SD1	12"	600	1.0	460	654	629	104.8
Total				6150		6021	6188	6175	100.41%

Completed By: Michael McDonnell on 12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

System/Unit: FAN - Exhaust



Asset: EFA1

AREA:MOP

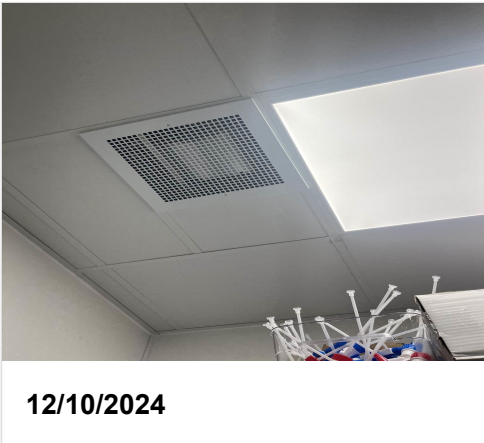
Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CFA 100CA	CFA 100CA
Serial Num	-	6938827
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	75	81
Fan RPM	493	DD
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	DD
System SetPt	-	SINGLE SPEED

Motor Data		
	Design	Actual
Motor MFG	-	BROAN
Horsepower	-	0.116
Motor Rpm	-	640
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.1

Completed By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

System/Unit: FAN - Exhaust



Asset: PRV1

AREA:RESTROOMS

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	693
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Horsepower	-	0.25
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.9

Test Data		
	Design	Actual
CFM	375	372
Fan RPM	1369	988
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	988
System SetPt	-	46%
RL Voltage	-	NR [1]
RL Amperage	-	NR [1]
Total ESP	0.50"	0.18"
Fan Inlet SP	-	-0.18"
Fan Discharge SP	-	ATM

Completed By: Michael McDonnell on 12/10/2024

Notes:

[1] COULD NOT ACCESS SAFELY, LIGHT SWITCH DISCONNECT.

Written By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

FAN - Exhaust



Diffuser Ret/Exh (GRD)

PRV1/RESTROOMS

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	M RR	EG1	8X8	150	1.0	195	143	147	98.0
EGRD2	W RR	EG1	8X8	150	1.0	234	180	144	96.0
EGRD3	TOILET	EG1	8X8	75	1.0	250	110	81	108.0
Total				375		679	433	372	99.2%

Completed By: Michael McDonnell on 12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

System/Unit: FAN - Exhaust



Asset: PRV2

AREA:HD-1 FRYER

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CFA 100CA	DU85HFA
Serial Num	-	6938827
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	1500	1619
Fan RPM	1406	1265
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	1265
System SetPt	-	63%
RL Voltage	-	117
RL Amperage	-	3.5
Total ESP	1.412	0.86"
Fan Inlet SP	-	-0.86"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Horsepower	-	1.0
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6

Completed By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



12/10/2024



12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN

System/Unit: FAN - Exhaust



Asset: PRV3

AREA:HD-2 GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CFA 100CA	DU85HFA
Serial Num	-	6938827
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	1500	1542
Fan RPM	1348	1238
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	1238
System SetPt	-	62%
RL Voltage	-	117
RL Amperage	-	3.5
Total ESP	1.25"	1.04"
Fan Inlet SP	-	-1.04"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Horsepower	-	1.0
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6

Completed By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



12/10/2024



12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN
System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:FRYER

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	3347BD-2	3347BD-2
Job / Serial Num	-	7095328
Type	TYPE I	TYPE I
Hood length	84"	84"
Hood Width	33"	33"

Test Data Exhaust		
	Design	Actual
Filter Type	SOLO FILTER	SOLO FILTER
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	7.65	7.65
Filter1 FPM	-	216
Filter2 FPM	-	218
Filter3 FPM	-	202
Filter4 FPM	-	208
Filter5 FPM	-	214
Filter Ave FPM(corr)	-	211.6
CFM	1500	1619

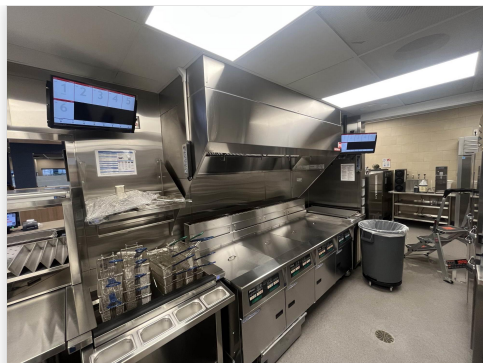
Cooking Equipment	
	Actual
Item 1	FRYER

Completed By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



12/10/2024



12/10/2024

National TAB

Project: 12-09-24 CULVERS PRINCETON, MN
System/Unit: Kitchen Hood Type I



Asset: HD2

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	3347BD-2	3347BD-2
Job / Serial Num	-	6938827
Type	TYPE I	TYPE I
Hood length	66"	66"
Hood Width	33"	33"

Test Data Exhaust		
	Design	Actual
Filter Type	SOLO FILTER	SOLO FILTER
Filter Size 1	16X16	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	6.12	6.12
Filter1 FPM	-	253
Filter2 FPM	-	243
Filter3 FPM	-	257
Filter4 FPM	-	255
Filter Ave FPM(corr)	-	252
CFM	1500	1542

Cooking Equipment	
	Actual
Item 1	GRIDDLE

Completed By: Michael McDonnell on 12/10/2024

Unit Data - PHOTO LOG



12/10/2024



12/10/2024

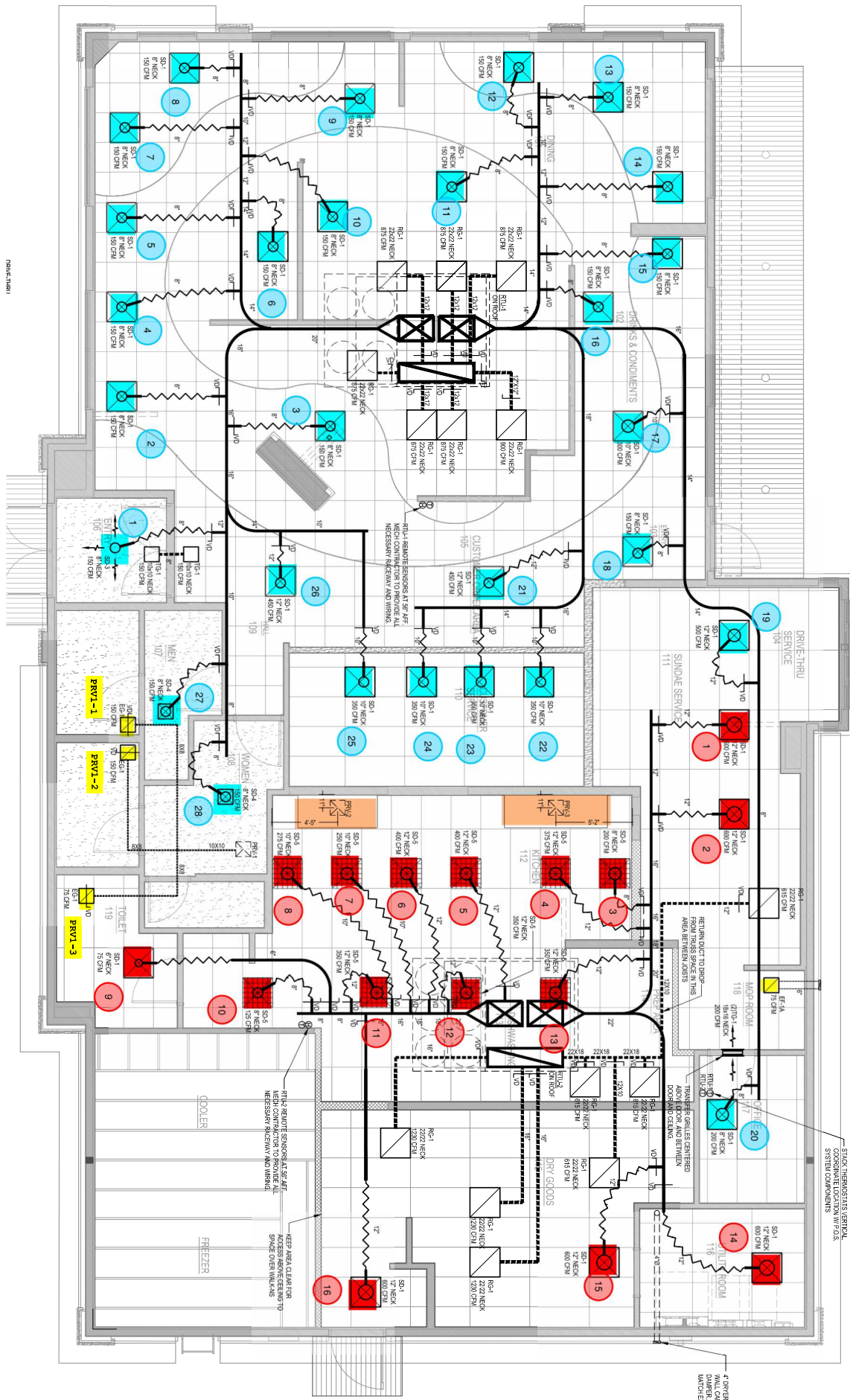


FIGURE 11-101

STOCK THERMOSTATS VERTICAL SYSTEM COMPONENTS

4. REFER BACK TO PROJECT DRAWING SHEET WALL C&10 MATCH EXTERIOR