Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 03/06/2024

PROJECT

Braxton Brewing (CVG)

3087 Terminal Dr

Hebron, KY 41048

Client

Fedders Construction

National TAB

Project: Braxton Brewing (CVG)

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CheckList List

- 1-INITIAL SITE WALKTHROUGH
- 2-UNIT DATA AND EVALUATION
- 3-TEST, ADJUST, AND BALANCE
- 4-FINAL TESTS
- 6-Pictures

Braxton Brewing (CVG)

CheckList Information

Name :	1-INITIAL SITE WALKTHROUGH	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/06/2024 - Austin McFall - National TAB		
Completed Date :	03/06/2024 - Austin McFall - National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	No
Comment: RTU UNIT WAS DESIGNED FOR 2025 CFM. PROPORTIONALLY SET DESIGN AIRFLOWS BASED OFF NEW TOTAL SUPPLY	
All hood filters installed and accounted for?	Yes
Comment:	
Hoods are wired and have power?	Yes
Comment:	
Hood is free of alarms?	Yes
Comment:	
Thermostats have power?	Yes
Comment:	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	

Comment:

Braxton Brewing (CVG)

CheckList Information

Name :	2-UNIT DATA AND EVALUATION	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/06/2024 - Austin McFall - National TAB		
Completed Date :	03/06/2024 - Austin McFall - 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
Comment:	
DCV Max damper opening position is set to minimum?	N/A
Comment:	
Free cooling enthalpy set point set for lowest setting (Typically "D")	N/A
Comment:	
Motors are all operating below the FLA rating?	Yes
Comment:	
Are belts tight?	
Comment: DIRECT DRIVE	
If direct drive unit is the speed controller working.	

Comment:

Is gas piping installed and valves turned on?	Yes

Comment:

Unit free of noticeable noise and vibration	Yes

Comment:

EF's

Rotation is correct?	Yes

Comment:

Belts are tight?	

Comment:

Grease cup installed on hood fan?	Yes

Comment:

Hinge kit installed installed on hood fan?	Yes

Comment:

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

Comment:

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

Comment:

There is no major leakage around base of fan?	Yes

Comment:

Is the motor operating below the motor FLA rating?	Yes

Comment:

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

Comment:

Unit free of noticeable noise and vibration?	N/A

Comment:

MUA

Rotation is correct?	Yes

Comment:

Gas piping is installed and valves are in on position?	Yes

Comment:

Heater tested and is functional?

Comment:

UNTEMPERED

Internal motorized damper is fully opening?

Comment:

Motor is operating below the FLA rating?	Yes

Comment:

Unit free of noticeable noise and vibration?	Yes

Comment:

HOODS

Kitchen equipment installed in proper places?	Yes

Comment:

Can kitchen equipment be turned on for final smoke test?	Yes

Comment:

DOCUMENTATION

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

Comment:

Braxton Brewing (CVG)

CheckList Information

Name :	3-TEST, ADJUST, AND BALANCE	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/06/2024 - Austin McFall - National TAB		
Completed Date :	03/06/2024 - Austin McFall - National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?	Yes
Comment:	
Is space comfortable in all areas?	Yes
Comment:	
Is the space free of ventilation noise?	Yes
Comment:	

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

Comment:

NA

Braxton Brewing (CVG)

CheckList Information

Name :	4-FINAL TESTS	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/06/2024 - Austin McFall - National TAB		
Completed Date :	03/06/2024 - Austin McFall - 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 SEC SMOKE EMITTER

Smoke test capture - Perimeter of hood

Comment:

100%

Smoke test capture - Top of cooking surface

Comment:

100%

Braxton Brewing (CVG)

CheckList Information

Name :	6-Pictures	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/06/2024 - Austin McFall - National TAB		
Completed Date :	03/06/2024 - Austin McFall - National TAB		

CheckList Item Details

MAU-1	Yes

Comment:

IMG_1067
03/06/2024

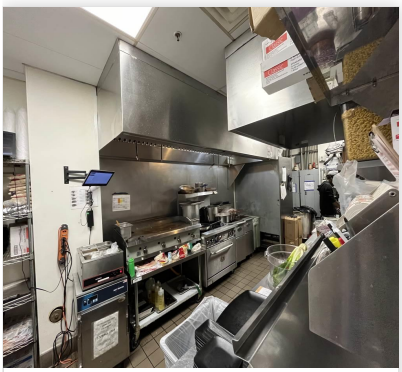
EF-1	Yes

Comment:

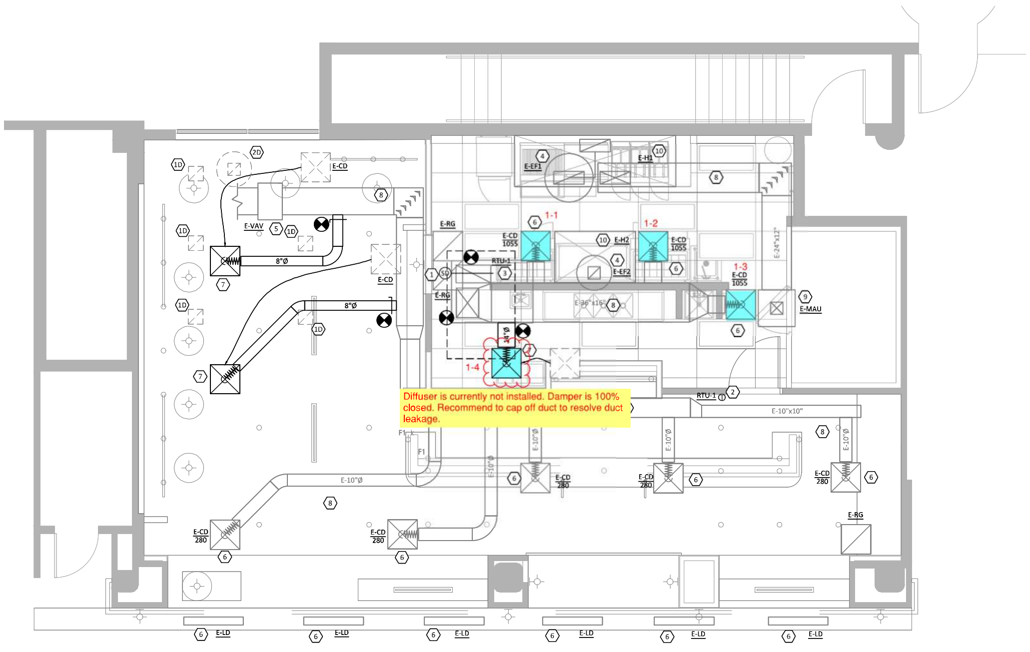
IMG_1075
03/06/2024

HOOD-1	Yes

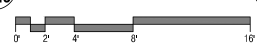
Comment:



IMG_2600
03/06/2024



1 / M1.0 **MECHANICAL PLAN**
1/4" = 1'-0"



N

KEYED NOTES

1. IF NOT EXISTING, EC TO FURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE COMPATIBLE REMOTE ANNUNCIATOR/TEST SWITCH. MC TO INSTALL SMOKE DETECTOR IN RETURN DUCT, PRIOR TO ANY OUTDOOR AIR CONNECTIONS. MC TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. EC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM, IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
2. EXISTING THERMOSTAT. FIELD VERIFY EXACT LOCATION.
3. REMOVE EXISTING ROOFTOP UNIT AND PROVIDE NEW ROOFTOP UNIT AND CURB ADAPTER ON EXISTING CURB. CONNECT EXISTING DUCTWORK FROM SUPPLY/RETURN DROPS TO NEW UNIT. CONNECT RTU TO EXISTING RTU CONTROLS IN SPACE. FIELD VERIFY EXACT LOCATIONS PRIOR TO BID. ROUTE CONDENSATE TO ROOF. BALANCE SUPPLY AND OUTSIDE AIRFLOW AS SCHEDULED. CONDENSATE DRAIN PIPING SHALL BE COPPER. CONDENSATE PIPING SHALL BE SUPPORTED WITH KCAB ACCEPTED ROOF HARDWARE.
4. EXISTING EXHAUST FAN TO REMAIN. MECHANICAL CONTRACTOR TO SERVICE FAN TO ASSURE IT IS OPERATING PROPERLY.
5. EXISTING VARIABLE AIR VOLUME BOX TO REMAIN. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BID AND SERVICE UNIT TO ASSURE IT IS OPERATING PROPERLY.
6. EXISTING DIFFUSER TO REMAIN IN LOCATION INDICATED. MECHANICAL CONTRACTOR TO CLEAN DIFFUSER TO "LIKE NEW" CONDITION. REPLACE DIFFUSER WITH NEW IF NECESSARY. PROTECT DURING CONSTRUCTION.
7. MEASURE AIRFLOW OF EXISTING AIR DEVICE PRIOR TO BEGINNING WORK. RELOCATE EXISTING AIR DEVICE AND REBALANCE TO MEASURED CFM. CAP DUCTWORK WITH SHEET METAL, SAME GAUGE AS EXISTING DUCTWORK, AND SEAL PER SMACNA GUIDELINES.
8. EXISTING DUCTWORK TO REMAIN. MECHANICAL CONTRACTOR FIELD VERIFY EXACT SIZE AND LOCATION. PROTECT DURING CONSTRUCTION.
9. EXISTING MAKEUP AIR UNIT TO REMAIN. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BID AND SERVICE UNIT TO ASSURE IT IS OPERATING PROPERLY.
10. EXISTING HOOD AND ASSOCIATED EXHAUST DUCTWORK TO REMAIN. HOOD AND DUCTWORK TO BE CLEANED BY PROFESSIONAL HAND CLEANERS AND ANY DAMAGED FIRE WRAP TO BE REPLACED NEW WITH 2 LAYERS OF 3M 615+ FIRE WRAP OR EQUIVALENT.

GENERAL NOTES

A. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE. EXACT LOCATIONS OF DEVICES AND ROUTING OF DUCTWORK SHALL BE DETERMINED BY CONTRACTOR AFTER COORDINATION WITH ALL OTHER TRADES AND FIELD DETERMINATION OF FINAL CONSTRUCTION DETAILS. MINOR ADJUSTMENTS TO DUCT ROUTING AND CONFIGURATION TO AVOID CONFLICT WITH BUILDING STRUCTURE OR OTHER TRADES SHALL BE INCLUDED IN CONTRACTOR'S PRICE. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL IN WRITING FOR ANY MODIFICATIONS TO SYSTEM DESIGN PRIOR TO INSTALLATION.
B. ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL RUN PARALLEL AND/ OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST-CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECTS OPINION, SHALL BE REDONE AT THE CONTRACTORS EXPENSE.
C. ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.
D. PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.
E. OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.
F. WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.
G. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.
H. CONTRACTOR SHALL COORDINATE ALL AIR DEVICES WITH ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.
I. COORDINATE LOCATION OF ALL EXTERIOR LOUVER OR OUTLET WITH ARCHITECTURAL ELEVATION PLAN.
J. COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.
K. INSTALL DUCTWORK AS HIGH AS POSSIBLE.
L. EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.
M. ALL DUCT OPENINGS AND OTHER AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION EXCEPT FOR TESTING AND INSPECTION.
N. PROVIDE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND WARRANTIES /WRITTEN GUARANTEE FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR TITLE 8 , SECTION 5142 AND OTHER RELATED REGULATIONS.
O. ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

ROOF WORK

COORDINATE ALL ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED. ROOF WORK MUST BE PERFORMED BY AN APPROVED CONTRACTOR SERVICES PROVIDER, BY THE ROOF MATERIAL MANUFACTURER

CVG NOTES

A. ENSURE THE AHU-5 RETURN AIR DUCT IS RAN FROM THE VENTILATION SHAFT TO THE EAST WALL OF THIS SPACE, WITHOUT BEING REDUCED IN SIZE AND DRAWS RETURN AIR FROM THE A-14 HOLDING AREA.
B. THE EXISTING PNEUMATIC VAV AND SPACE SENSORS ARE OBSOLETE. CVG FACILITIES WILL REPLACE THE EXISTING SYSTEM WITH KCAB AUTOMATED LOGIC DIGITAL SYSTEM. THIS NOTE INCLUDED FOR COORDINATION PURPOSES ONLY.

GENERAL DEMOLITION NOTES

A. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK. DUCT SIZES INDICATED ARE FOR REFERENCE ONLY. MECHANICAL CONTRACTOR SHALL VERIFY EXISTING DUCT SIZES THAT ARE AFFECTED BY THIS WORK, PRIOR TO BEGINNING WORK OR FABRICATING NEW DUCTWORK. DRAWINGS ARE ILLUSTRATIVE AND MAY NOT REFLECT EXACT CONDITIONS OR DIMENSIONS.
B. THE DEMOLITION DRAWINGS ARE INTENDED TO SHOW THE GENERAL INTENT OF THE EXISTING HEATING AND VENTILATION SYSTEM DEMOLITION WORK. THESE DRAWINGS WERE CREATED BY USING EXISTING DRAWINGS AND BY CASUAL SITE VISITS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ALL EXISTING PIPING, DUCTWORK, AND MISCELLANEOUS HARDWARE ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED UNLESS OTHERWISE INDICATED.
C. THE HVAC CONTRACTOR SHALL TURN OVER TO OWNER OR DISPOSE OF OFF SITE ACCORDING TO OWNERS DIRECTIONS ANY MECHANICAL ITEMS BEING REMOVED.
D. ANY OPENING IN WALLS OR ROOF LEFT WITH VOID SPACES BY THE REMOVAL OF ANY MECHANICAL EQUIPMENT, THE HVAC CONTRACTOR SHALL PATCH THEM TO MATCH ADJACENT SURFACES. ALL PATCHING & FINISHING SHALL BE DONE BY SKILLED WORKMEN IN THE TRADE.
E. NOTIFY THE OWNER IN WRITING AND FIELD VERIFY CONDITIONS BEFORE PERFORMING ANY SAW CUTTING, TRENCHING, CORING OR ANY OTHER STRUCTURAL MODIFICATIONS. INSURE THAT NO ADVERSE EFFECT TO THE BUILDING'S STRUCTURAL INTEGRITY WILL OCCUR.
F. ANY EXISTING CONDITION DISCOVERED DURING THE DEMOLITION OR CONSTRUCTION PROCESS WHICH, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICES, SHOULD BE REMEDIED, SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT IMMEDIATELY IN WRITING.
G. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN-UP AND TO REPAIR OR REPLACE ANYTHING DAMAGED DURING CONSTRUCTION ACTIVITIES. PROVIDE 1-YEAR WARRANTY FOR ALL REPAIR WORK.
H. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOOR PROTECTION TO PREVENT DAMAGE TO FLOORING DURING CONSTRUCTION ACTIVITIES.

DEMOLITION KEYED NOTES

1. REMOVE EXISTING EXHAUST GRILLE AND ALL ASSOCIATED DUCTWORK. CAP DUCTWORK WITH SHEET METAL, SAME GAUGE AS EXISTING DUCTWORK, AND SEAL PER SMACNA GUIDELINES.
2. ABANDON EXISTING ROOFTOP EXHAUST FAN AND CURB IN PLACE.

HVAC LEGEND

Symbol	Description
(1)	DRAWING NOTE SYMBOL
26x16	NEW RECTANGULAR DUCTWORK AND SIZE
10"Ø	NEW ROUND DUCTWORK AND SIZE
	BALANCING/VOLUME DAMPER
	FLEX DUCT
T	THERMOSTAT
CD-1 / 240	NEW SUPPLY AIR DIFFUSER AND CFM
	EXISTING EXHAUST GRILLE TO REMAIN
	EXISTING EXHAUST GRILLE TO BE REMOVED
	NEW EXHAUST FAN
	SUPPLY DUCT UP THROUGH ROOF
	RETURN/EXHAUST DUCT UP THROUGH ROOF
	CONNECT TO EXISTING

MARQUE ENGINEERING
2230 PARK AVE., STE. 100, CINCINNATI, OH 45206
513.457.7131 - WWW.MARQUEENG.COM
KY COA #4790

Braxton Brewing Co.

Cincinnati / Northern Kentucky International Airport
Concourse A | *Space A-006*
Hebron, Kentucky

Sheet M1.0

MECHANICAL PLAN
6 January 2023 | *Revision 3 - Airport 100% Review Comments*

Date: 3/6/2024

FaciliBuild make it easy

SDV Job #: 5890574 - Braxton Brewery (CVG)

Service Region:	361 - Cincinnati OH Service		
Service Person:	Dave King		
Customer Number:	866644	**Customer Name:**	NATIONAL TAB
Address:	CVG Airport 3087 Terminal Drive Concourse A Space A-006 (Braxton) Hebron, KY 41048		
Region Job #:	5842662		
Region Job Name:	Braxton Brewery (CVG)		
Sales Region:	120 - Air Solutions		
Sales Person:	Joe Hertenstein		
Created By:	Dave King	**Creation Date:**	3/30/2023 8:52 AM
Last Modified By:	Dave King	**Last Modified Date:**	4/10/2023 2:29 PM
Dining Room Pressure:	0.0	**Kitchen Pressure:**	0.0
Hours On Job:	0.0	**Extra Hours:**	0.0
Completed:	Yes	**Completed By:**	Dave King
Completion Date:	4/10/2023 2:29 PM		

UDS

NONE

Hood Group 1

Exhaust CFM: Design = 0 Initial = 0 Final = 0 (0.0% of design)

Hood 1 (Misc HD Items) (Misc HD Items) - NOT AVAILABLE!

Model: MISC-OPTIONS **Length:** 8' 0.00"
Exhaust CFM: Design = 0 Initial = 0 Final = 0 (0.0% of design)

Installation

Hung Using appropriate material to safely secure hood.	**N/A**
COOKING EQUIPMENT ON AND OPERATING	**N/A**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	**N/A**
END PANELS INSTALLED CORRECTLY	**N/A**
Was a smoke test performed on Hood System?	**N/A**

AQEs

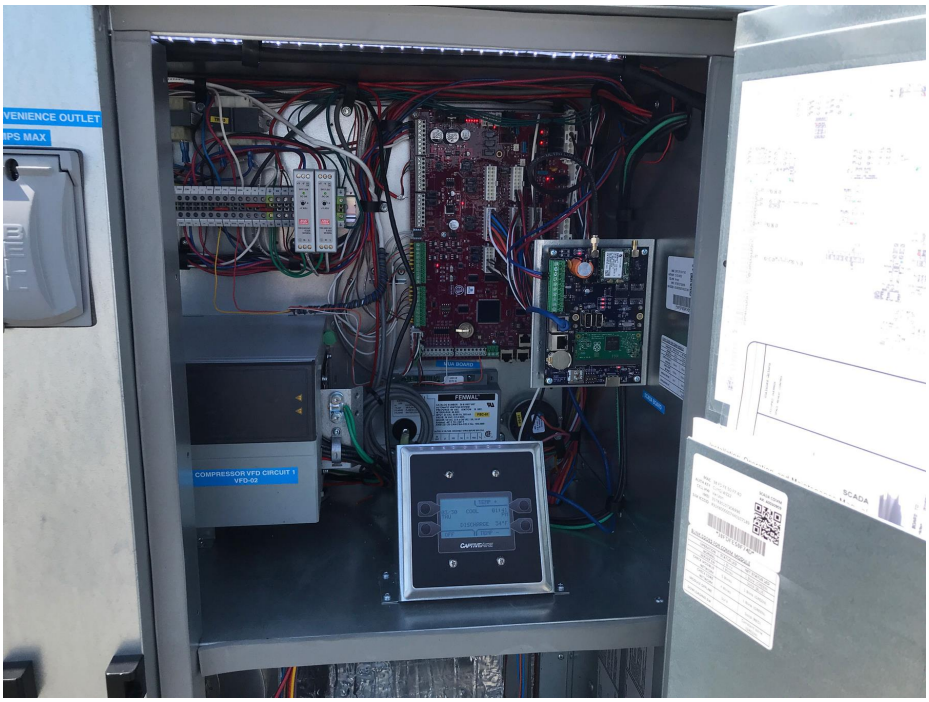
NONE

Fans

Fan 1 - CASRTU2-I.300-18-10T (RTU-DOAS1) (RTU-DOAS1)

Model: CASRTU2-I.300-18-10T
Other Notes:

N/A



Supply

Supply CFM: Design = 2500 Actual = 2500 (100.0% of design)

Installation Notes:

Sales office said they would handle doing cfm and setting OA for equipment as site wasn't fully ready for balancing on DOAS when CAS Service was on site.

VOLTS	Design:	**460**	Actual:	**489**
HP	Design:	**3**	Actual:	**3**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1285**	Actual:	**1491**
RPM - MAX	Design:	**1900**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**1600**	Actual:	**N/A**
Is blower door tamper switch operational? Does blower shut down when the door is opened?	Design:	**Yes**	Actual:	**Yes**
Record the VFD HZ			Actual:	**51**
How was supply airflow measured for the T&B?			Actual:	**Flowhood**
Design OA %	Design:	**8%**	Actual:	**N/A**
Design OA CFM	Design:	**200**	Actual:	**2000**
Damper voltage at design outside air?			Actual:	**7.5**
How was outside air measured?			Actual:	**Flowhood**
Blower motor actual amperage at design airflow?	Design:	**Less than or equal to 4.3**	Actual:	**4.2**
Record pressure off the sampling tube of the air proving switch. For MUA Board: Note the differential pressure displayed on the HMI.			Actual:	**0.66**
Modulate the blower to the minimum speed that will be required for the application. Modulate the damper to the minimum position required for the application. Calibrate the airflow	Design:	**Complete**	Actual:	**Complete**

proving.

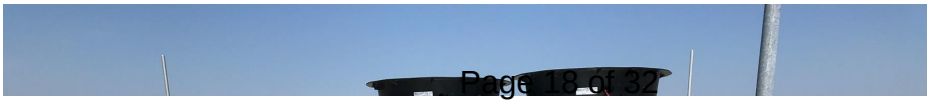
With the blower still at minimum speed and damper at minimum position, calibrate the clogged filter switch.	Design:	**Complete**	Actual:	**Complete**
Is the return duct installed and sealed to the unit?	Design:	**Yes**	Actual:	**Yes**
Design OA CFM at Interlock 1	Design:	**2025**	Actual:	**0**
Damper voltage at design Interlock 1			Actual:	**0**
Design OA CFM at Interlock 2	Design:	**2025**	Actual:	**0**
Damper voltage at design Interlock 2			Actual:	**0**
Design OA CFM at Interlock 3	Design:	**2025**	Actual:	**0**
Damper voltage at design Interlock 3			Actual:	**0**
Design OA CFM at Interlock 4	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 4			Actual:	**0**
Design OA CFM at Interlock 5	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 5			Actual:	**0**
Design OA CFM at Interlock 6	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 6			Actual:	**0**
Design OA CFM at Interlock 7	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 7			Actual:	**0**

DOAS

Take pictures of all four sides of the unit.	Design:	**Complete**	Actual:	**Complete**

Other Notes:

N/A



Duct properly sealed to curb base and not bypassing through openings?	Design:	**Yes**	Actual:	**Yes**
Electrical input properly run through base or side?			Actual:	**Base**
Incoming gauge of wire	Design:	**10 AWG**	Actual:	**10**
Verify breaker size is appropriate for unit. Breaker size should be greater than or equal to MCA and less than or equal to MOCP. Must include picture.			Actual:	**30**

Other Notes:

N/A

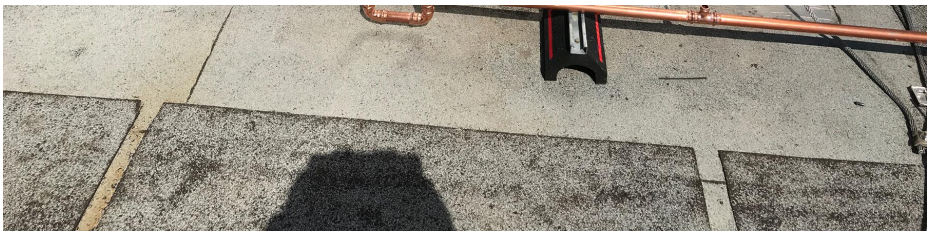
Other Notes:

Unit supplied by 30 amp fused disconnect

Unit within five miles from the coast?			Actual:	**No**
Was the CAS supplied condensate drain used in the installation?	Design:	**Yes**	Actual:	**No**

Other Notes:

N/A



Other Notes:

Site requires copper drains

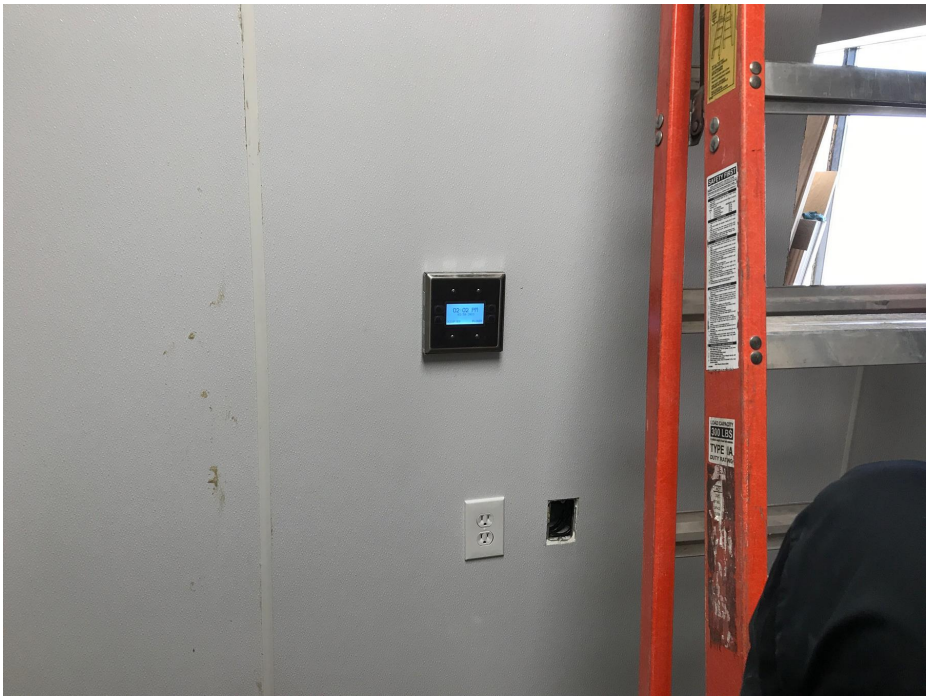
Is condensate pan float switch free of debris and able to slide up and down?	Design:	**Yes**	Actual:	**Yes**
Is there any damage to refrigerant piping, distributor lines, or coils?	Design:	**No**	Actual:	**No**
Confirm field wiring shown on wiring diagrams are complete and check for loose connections. Correct as needed.	Design:	**Complete**	Actual:	**Complete**
Program the list of setting changes through the HMI that were obtained from DOAS@captiveaire.com.			Actual:	**Complete**
Has SCADA been registered, activated and obtained a CASLink heartbeat?	Design:	**Yes**	Actual:	**Yes**

Temp Verification

Measure intake temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Measure return temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Measure evap coil temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Review intake humidity on HMI. Does it appear to be reporting correctly?	Design:	**Yes**	Actual:	**Yes**
Review discharge humidity on HMI. Does it appear to be reporting correctly?	Design:	**Yes**	Actual:	**Yes**
Are extra HMIs being used? Do not count the HMI in the unit. Upload picture of space HMI(s) and surrounding area.			Actual:	**Yes**

Other Notes:

N/A



Record number of extra HMI's used.			Actual:	**1**
Is HMI address 56 being used for space temperature and humidity readings?			Actual:	**No**
Is HMI address 57 being used for space temperature and humidity readings?			Actual:	**No**
Is HMI address 58 being used for space temperature and humidity readings?			Actual:	**No**
Is HMI address 59 being used for space temperature and humidity readings?			Actual:	**No**
Is wired space wall temp/humidity sensor (not HMI) being used?			Actual:	**No**
Measure space temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Record Humidity readout on HMI.			Actual:	**32**

Heater Gas

Gas Type	Design:	**Natural**	Actual:	**Natural**
Inlet Gas Pressure			Actual:	**11**
Set mod valve low fire setting using the IOM and STB20-1011. Record manifold gas pressure.	Design:	**0.15**	Actual:	**0.15**
Theoretical low fire temperature rise. Use STB20-1011 Calculator			Actual:	**14.8**
With unit maintaining steady state low fire, record intake temperature.			Actual:	**58**
With unit maintaining steady state low fire, record discharge temperature.			Actual:	**74**
Min Temp Rise. If the low fire temperature rise is not within 5 deg of the calculated theoretical, contact DOAS@captiveaire.com			Actual:	**16**
Set high fire pressure using test menu procedure in O&IM and record manifold gas pressure on pressure gauge.	Design:	**3.5" W.C.**	Actual:	**3.5**
Recorded Inlet Gas Pressure With Unit in high fire	Design:	**7" - 14" W.C.**	Actual:	**5**
Confirm the discharge air temp sensor is reading accurately in high fire. Reference STB20-1007 and modulate the burner to the highest capacity heat that can be achieved. Record the discharge air temp reading on the HMI.			Actual:	**155**
With unit still holding highest capacity heat, go into space and record discharge temp at the supply diffuser closest to unit using a handheld temp probe. Record Temperature.			Actual:	**160**
Difference between measured and actual temperature.			Actual:	**-5**

Cooling

Check status of Oil Sensor Level in HMI. Is status open or closed? Open means oil level is low. Do not operate compressor if the OLS is open.	Design:	**Closed**	Actual:	**Closed**
Measure the outside air temp and record the value.			Actual:	**58**
For IBT, verify superheat controller settings. For MUA, verify EEV model in settings match the valve install on the unit.	Design:	**Yes**	Actual:	**Yes**
Verify compressor VFD settings. Do settings match schematic?	Design:	**Yes**	Actual:	**Yes**
Place the system in evacuation mode and record the pressure at the suction service port with a gauge set.			Actual:	**168**
With the unit still in evacuation mode, record the suction pressure reading from HMI.			Actual:	**166**
With the unit still in evacuation mode, record the discharge pressure reading from HMI.			Actual:	**167**
For MUA controls, record the liquid pressure reading from the HMI. If the unit has IBT controls, write N/A.			Actual:	**166**
Difference between measured and actual?			Actual:	**2**

Over 50F

Start a cooling test. Do condensing fans turn on and modulate?	Design:	**Yes**	Actual:	**Yes**
Does EEV modulate to maintain 20F superheat?			Actual:	**Yes**
Does Compressor ramps up to max speed (200Hz or 330Hz) depending on model?	Design:	**Yes**	Actual:	**Yes**
Cooling superheat measured? (Target is 20)			Actual:	**20**
Record discharge pressure reading from HMI.			Actual:	**395**
Record liquid line pressure.			Actual:	**382**
Record liquid line temperature.			Actual:	**193**
Record Subcool reading. Contact DOAS Support if subcooling is outside of the range of 12F - 20F. Do not adjust refrigerant charge until directed to by DOAS Support.			Actual:	**18**

Final Checks

FINAL STEPS OF SDV. ONLY PERFORM FOLLOWING QUESTIONS IF REST OF SDV HAS BEEN COMPLETED!			Actual:	**Ok**
Is the fire alarm input (terminal F) wired and functional?			Actual:	**No**
Is either the wired occupied override or unit interlock being utilized and operational?			Actual:	**Occupied Override**
Once all SDV adjustments are complete, update the factory	Design:	**Complete**	Actual:	**Complete**

default settings through the service menu.

Once all SDV adjustments are complete, download the CAAL file from the board, label it with the fan number, software revision and upload it to the NOLA job docs.

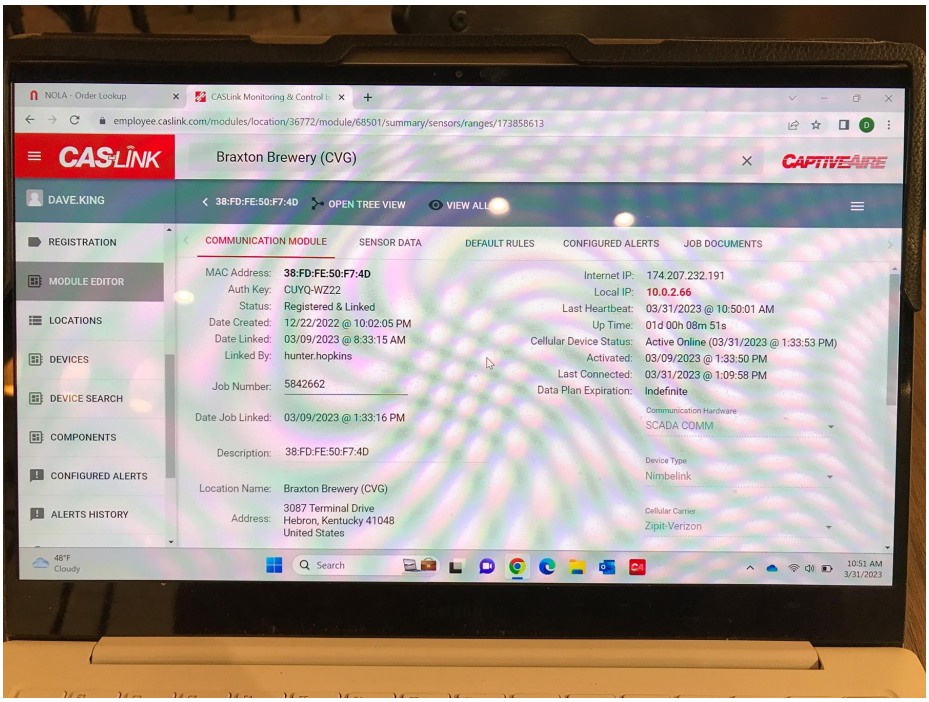
Actual: **Complete**

Take picture of CASLink showing last heartbeat.

Actual: **Complete**

Other Notes:

N/A



DOAS data is visible on CASLink, tagged unique from other equipment and matches field labeling

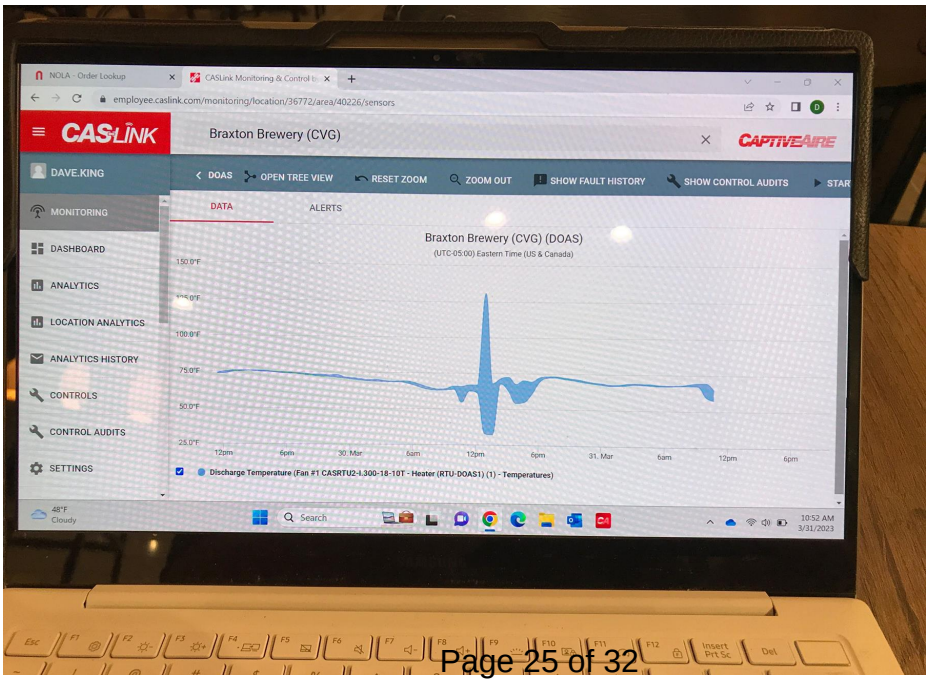
Actual: **Yes**

Take picture of CASLink showing DOAS data responding.

Actual: **Complete**

Other Notes:

N/A



All other equipment on job labeled and can see data on CASLink?	Actual:	**Yes**
Has someone from DOAS_support@captiveaire.com confirmed they are seeing data on this job?	Actual:	**Yes**

Fan 2 - DU200HFA (EF1) (EF1)

Model: DU200HFA

Other Notes:

N/A

Exhaust

Exhaust CFM: Design = 3800 Actual = 3800 (100.0% of design)

Installation Notes:

Sales office said they would handle doing cfm for equipment.

Record the VFD HZ			Actual:	**58.9**
VOLTS	Design:	**460**	Actual:	**487**
HP	Design:	**2**	Actual:	**2**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1129**	Actual:	**1128**
RPM - MAX	Design:	**1600**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**1450**	Actual:	**N/A**
FLA	Design:	**3.8**	Actual:	**3**
PHASE	Design:	**3**	Actual:	**3**
FAN WITHIN 5 MILES OF COAST			Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE	Design:	**No**	Actual:	**No**

ECPs

NONE

CORE

NONE

National TAB

Project: Braxton Brewing (CVG)

System/Unit: AHU/RTU

Asset: RTU1 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Serial Num	-	5842662
Model Num	CASRTU2-I.300-18-10T	CASRTU2-I.300-18-10T
Configuration	-	VERTICAL
Num OA Filters 1	-	8
OA Filter Size 1	-	16X20X2
Num PreFilter 1	-	8
PreFilter Size 1	-	16X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	ODP
Horsepower	3.0	3.0
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	460	460
Rated Amperage	4.3	4.3
Service Factor	-	1.15

Test Data		
	Design	**Actual**
SF CFM	2025	1824
RA CFM	-	1422
OA CFM	-	474
RL Voltage	-	477 V
RL Amperage	-	4.2
OA Damper Position	-	7.7 V

Completed By: Austin McFall on 03/06/2024

National TAB

Project:Braxton Brewing (CVG)

AHU/RTU

Diffuser Supply (GRD)

RTU1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
RTU1-SGRD1	KITCHEN	24X24	14	675	1	602		602	89.2
RTU1-SGRD2	KITCHEN	24X24	14	675	1	589		589	87.3
RTU1-SGRD3	KITCHEN	24X24	14	675	1	633		633	93.8
Total				2025		1824	0	1824	90.07%

National TAB

Project: Braxton Brewing (CVG)

System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	DU200HFA	DU200HFA
Serial Num	-	5842662
Type	-	UPBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	ODP
Horsepower	2.0	2.0
Motor Rpm	1150	1150
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	3.8
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	3800	3688
Fan RPM	1129	1095
Fan Rotation	-	CCW
Motor RPM	-	1150
System SetPt	-	58
RL Voltage	-	486/489/488
RL Amperage	-	3.8/3.2/3.0
Total ESP	-	1.10"
Fan Inlet SP	-	-1.10"
Fan Discharge SP	-	ATM

Completed By: Austin McFall on 02/16/2024

National TAB

Project: Braxton Brewing (CVG)

System/Unit: FAN - Supply

Asset: SF1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	100 KSP
Serial Num	-	007S762730
Type	-	MUA
Configuration	-	VERTICAL

Test Data		
	Design	**Actual**
CFM	1980	1850
SF RPM	869	813
Motor RPM	-	1760
RL Voltage	-	4846/484/485
RL Amperage	-	1.0/1.0/1.2

Motor Data		
	Design	**Actual**
Motor MFG	-	WEG
Frame	-	56
Horsepower	-	0.75
Motor Rpm	-	1760
Phase	-	3
Voltage (rated)	-	460
Amperage (rated)	-	1.15
Service Factor	-	1.0

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

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	
Motor Bore Size	-	
Fan Sheave Size	-	
Fan Sheave Bore	-	
Belt CL Distance	-	
Num of Belts	-	
Belt Size	-	
Belt Alignment Verified	-	

Completed By: Austin McFall on 03/06/2024

Notes:
UNTEMPERED MAKE UP AIR. NOT HEAT

Written By: Austin McFall on 02/16/2024

National TAB

Project: Braxton Brewing (CVG)

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	NA
Model Num	NA	NA
Job / Serial Num	-	NOT LISTED
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	132"	132"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	BAFFLE	BAFFLE
Filter Size 1	20X20	20X20
Filter Size 2	20X16	20X16
Filter Qty 1	5	5
Filter Qty 2	2	2
Filter AK factor size 1	2.68	2.68
Filters AK factor size 2	2.08	2.08
Filter Total AK Area	-	17.56
Filter1 FPM	-	199
Filter2 FPM	-	215
Filter3 FPM	-	232
Filter4 FPM	-	223
Filter5 FPM	-	211
Filter6 FPM	-	200
Filter7 FPM	-	188
Filter Ave FPM(corr)	-	210
CFM	3800	3688

Completed By: Austin McFall on 03/01/2024