

**Report By:**

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



**Report: TAB Report**  
**Function: Test, Adjust, & Balance**  
**Date: 06/11/2025**  
**Completed By: National TAB**

**PROJECT**  
**06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)**

801 W 10TH STREET

INDIANAPOLIS, IN 46202

**Client**

CAVA  
702 H ST NW  
2nd floor  
Washington, DC 20001

# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

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## Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report are further details 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.

### FCU's w/ Diffusers

Each of the FCU's were measured at their terminal devices utilizing a flow hood. The sum of these readings is equal to the total flow for that particular unit. The total flow of each FCU was then adjusted to within tolerance of the specified design. Each terminal diffuser was balanced to within tolerance of the engineer's design volume utilizing the provided hand damper located at the takeoff of the main & branch trunk line(s). Any equipment that fell outside of this 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.

### MUA (Make Up Air Unit) w/ PSP

Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

### Ceiling Exhaust Fans

The ceiling exhaust fans were measured using a flow hood. If speed adjustment was provided, the fan speed was adjusted to within design tolerance. 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-1 Alarms
- HOOD-1 HMI
- MUA-1 alarms



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

Project Issue Information

**Issue Name :** HOOD-1 Alarms  
**Description :** HOOD-1 alarms are showing “pressure switch fault” and “core #1 fault” this is usually due to the ansul system and fire suppression system not being completed. This should clear once fire suppression test is done.  
**Created By :** National TAB **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** Low **Asset Tag :**  
**Originated Date :** 06/11/2025 - Dylan Crisman - National TAB

Project Issue Response Details

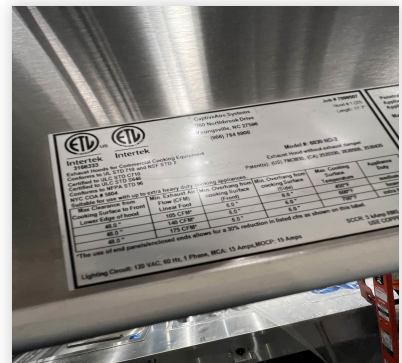
- **06/11/2025 National TAB - Dylan Crisman**
  - Updated with Photos



06/11/2025



06/11/2025



06/11/2025



### 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

#### Project Issue Information

**Issue Name :** HOOD-1 HMI  
**Description :** HD-1 HMI does not allow me to change speed setpoints. When changed, it reverts back to 76%. No change in airflow. CAS service confirmed they will look into this when they arrive to do their startups. Unit is set at 95% of design at 2496/2606 CFM.  
**Created By :** National TAB      **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** High      **Asset Tag :**  
**Originated Date :** 06/11/2025 - Dylan Crisman - National TAB

#### Project Issue File Details



06/11/2025



06/11/2025



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

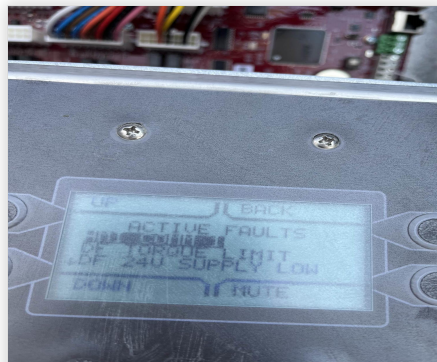
Project Issue Information

**Issue Name :** MUA-1 alarms  
**Description :** MUA has multiple alarms that keep going in and out, unable to get access to any of the menus to test heating and cooling stages, change setpoints per checklist specifications. CAS service is aware and is having the same issue remotely. Confirmed they will look into it when they arrive for start ups.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** High                                      **Asset Tag :**  
**Originated Date :** 06/11/2025 - Dylan Crisman - National TAB

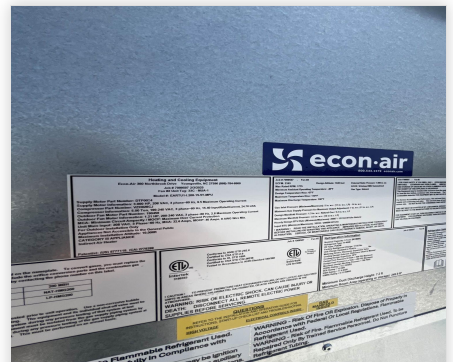
Project Issue File Details



06/11/2025



06/11/2025



06/11/2025

## CheckList List

- FIV - EF'S
- FIV - HOODS
- FIV - HVAC DUCTWORK
- FIV - MUA
- FIV - RTU'S
- FPT - BUILDING PRESSURE AND HOOD CONTAINMENT
- FPT - KEF'S
- FPT - MUA
- FPT - RTU's



**06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)**

**CheckList Information**

**Name :** FIV - EF'S **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 05/23/2025 - Tara Metcalf - National TAB  
**Completed Date :** 06/10/2025 - Dylan Crisman - National TAB

**CheckList Item Details**

**Unit Tag matches the design and submittal MFG and Model** Pass

**Comment:**

**Each exhaust fan is proper tagged for proper identification with tags sized and placed on the fan for visual ease** Pass

**Comment:**

**Fans are installed in the correct location and orientation** Pass

**Comment:**

**All packing, material and debris has been removed from the blower/wheel housing and the motor compartment** Pass

**Comment:**

**Fan wheels turn easily by hand (turn power off prior to testing)** Pass

**Comment:**

**Fans grease duct curb top plate is properly transitioned to the fan inlet and flush on top of the curb, sealed to the fan base to prevent leakage** Pass

**Comment:**

**Exhaust fans have external disconnects and are connected to allow full hinging of each exhaust fan**

Pass

**Comment:**

**Fan is properly hinged and supported when hinged fully back for grease duct access (for Halton fans, ensure the base mounted disconnect is not hitting the fan base/curb when fully hinged back)**

Pass

**Comment:**

**Grease cups are properly installed and connected to the fan base grease drain to prevent spilling outside of the grease cup**

Pass

**Comment:**

**Exhaust fans are located 5ft from parapet wall and 10ft from any fresh air intake.**

Pass

**Comment:**



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

CheckList Information

**Name :** FIV - HOODS **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 05/23/2025 - Tara Metcalf - National TAB

**Completed Date :** 06/11/2025 - Dylan Crisman - National TAB

CheckList Item Details

HOOD INSTALLATION DETAILS

Kitchen hoods tags match design and submitted information	Pass
---	------

Comment:

Kitchen hoods are hung Level using 1/2" threaded rod	Pass
--	------

Comment:

Kitchen hoods are supported using beam clamps and/or Unistrut per required structural and local AHJ requirements	Pass
--	------

Comment:

Kitchen hoods are hung level front to back and side to side	Pass
---	------

Comment:

Kitchen hoods are hung at 80" AFF	Pass
-----------------------------------	------

Comment:

Kitchen Hoods are flush against the wall along the bottom and each of it's side walls.	Pass
--	------

Comment:

Caulk is applied (less than 1/8" thick) from the hood against all wall surfaces or between connecting side to side hoods to prevent grease accumulation inside any crevice. Pass

**Comment:**

Hood connections to wall are grouted, not caulked.

There are no penetrations into the hood canopy other than fire system nozzles Pass

**Comment:**

The hood is in "As New" condition with no visible damage, rust, pitting, or other blemishes Pass

**Comment:**

All protective film has been peeled away from the wall or other areas of impingement to assure it can be easily and fully removed prior to cleaning. Pass

**Comment:**

**HOOD ACCESSORIES**

End panels are installed Pass

**Comment:**

Hood filters are installed Pass

**Comment:**

Grease cups are installed Pass

**Comment:**

Ceiling Wrappers are installed and the ceiling grid is fixed to the top of the ceiling wrappers Pass

**Comment:**

Hood control panel has been identified and is located as per plan, is accessible, and contains all components and temperature sensors to meet local interlock (normal and abnormal conditions) and heat auto on/off functionality. Pass

**Comment:**



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

**CheckList Information**

**Name :** FIV - HVAC DUCTWORK **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 05/23/2025 - Tara Metcalf - National TAB  
**Completed Date :** 06/11/2025 - Dylan Crisman - National TAB

**CheckList Item Details**

**KVS - GREASE DUCT (HOOD SYSTEM)**

**Grease duct is sized and routed per plan** Pass

**Comment:**

**Grease duct is properly supported** Pass

**Comment:**

**Grease duct has code required negative pitch from fan inlet back to the hood riser connection** Pass

**Comment:**

**Grease duct has required clean-out doors installed, labeled, and accessible for removal/cleaning. Doors are located as required by code** Pass

**Comment:**

**Grease duct clean-out doors are secured using tool less fasteners and seal fully when hand tightened** Pass

**Comment:**

**Grease duct is centered in the curb and transitions as required to ensure the fan inlet is fully covered by the grease duct opening. Duct top plate flanges to the edges of the curb and is secured and flat so that the fan sits flush and square.** Pass

Comment:

Grease duct is wrapped if welded duct, or is double wall round duct?

Pass

Comment:

Welded, Fyrewrapped.

**KVS - MUA DUCT (HOOD SYSTEM)**

MUA duct is routed and sized as per plan

Comment:

MUA duct is properly supported

Comment:

MUA duct seams are sealed air tight using proper sealant and application for SMACNA pressure rating of duct systems

Yes

Comment:

MUA duct is externally insulated and taped to prevent vapor barrier from being breached

Comment:

MUA duct drop box and transitions are done to encourage laminar flow and avoid restrictions

Pass

Comment:

Branch take-off's have accessible dampers exposed for the TAB team to adjust each line as necessary

Pass

Comment:

Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length

Pass

Comment:

Connection to the hood MUA plenum is secured and foil taped to prevent air leakage

Pass

Comment:

**RESTROOM DUCT**

<b>Restroom duct is routed and sized per plan</b>	Pass
<b>Comment:</b>	
<b>Restroom duct is properly supported</b>	Pass
<b>Comment:</b>	
<b>Duct seams are sealed</b>	Yes
<b>Comment:</b>	
<b>Dampers are accessible to TAB team for balancing</b>	Pass
<b>Comment:</b>	
<b>Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length</b>	Pass
<b>Comment:</b>	
<b>Duct is secured to exhaust register</b>	Pass
<b>Comment:</b>	
<b>Gravity damper is installed, opens and closes freely, and is sealed to prevent air leakage</b>	Pass
<b>Comment:</b>	
<b>Duct to curb transition is centered and sized to ensure it covers the entire fan inlet. Curb top plate is flush and secured to the ends of the curb.</b>	Pass
<b>Comment:</b>	
<b>HVAC DUCT</b>	
<b>Kitchen and Dining room duct is routed and sized as per plan</b>	Pass
<b>Comment:</b>	
<b>Ducts are properly supported</b>	Pass
<b>Comment:</b>	
<b>Ductwork is externally insulated</b>	Yes

**Comment:**

---

<b>Duct seams are sealed air tight using proper sealant and application for SMACNA pressure rating of duct systems</b>	<b>Pass</b>
--	-------------

---

**Comment:**

---

<b>Ducts are securely insulated as per specificatins and foil taped to prevent air barrier from being breached</b>	<b>Pass</b>
--	-------------

---

**Comment:**

---

<b>Takeoffs are installed to serve required terminal diffusers and are equipped with accessible dampers for TAB team access and can be opened or closed fully with no impingements</b>	<b>Pass</b>
--	-------------

---

**Comment:**

---

<b>Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length</b>	<b>Pass</b>
---	-------------

---

**Comment:**

---

<b>Takeoff to diffuser is installed securely to prevent slippage and air leakage</b>	<b>Pass</b>
--	-------------

---

**Comment:**

---

<b>All diffuser neck or opening sizes are installed as planned</b>	<b>Pass</b>
--	-------------

---

**Comment:**

---

<b>Supply and Return duct transitions to top of RTU curb, sized to full width and length of opening and is flashed fully to the sides of the curb.</b>	<b>Pass</b>
--	-------------

---

**Comment:**

---



## 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

### CheckList Information

**Name :** FIV - MUA **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 05/23/2025 - Tara Metcalf - National TAB  
**Completed Date :** 06/10/2025 - Dylan Crisman - National TAB

### CheckList Item Details

MUA Tag information matches design and submittal criteria Pass

Comment:

MUA Fan has a permanent tag for identification located on the unit located and sized for visual ease Pass

Comment:

MUA is installed in the proper location and orientation Pass

Comment:

MUA intake is a minimum 10ft from any exhaust, roof vent or dirty air source Pass

Comment:

Blower compartment and internal heater area is free of packing material, debris, and dirt Pass

Comment:

Blower wheel turns freely by hand (turn power off prior to testing) Pass

Comment:

All MUA compartment and control doors are fully accessible, minimum 36" clearance for service allowing the doors to fully open without restriction Pass

Comment:

MUA Electrical disconnect is external to the unit and properly wired

Pass

Comment:

Outdoor air awning is installed and fitted with proper OA mesh filters

Pass

Comment:

Condensate drain is installed (for cooling MUA's) with proper traps, clean-outs, and drain away from the unit to an acceptable roof drain

Pass

Comment:

Refrigeration line sets are installed and connected properly with adequate supports per specifications

Pass

Comment:

Condenser is installed away from any grease producing exhaust fans and located as per roof plan

Pass

Comment:

Condenser's electrical disconnect is external to the unit and properly wired (if applicable)

Pass

Comment:

Condenser hail guards are installed (if applicable)

Pass

Comment:

All Condenser compartment and control doors are fully accessible, minimum 36" clearance for service allowing the doors to fully open without restriction (if applicable)

Pass

Comment:

Gas line is installed per specification and properly supported

Pass

Comment:

Gas line is installed per specification and properly supported and contains maintenance shut-off valve, trap, and regulator (if line pressure requires it). MUA is equipped with inlet gas pressure gauge to validate incoming gas pressure is suitable

Pass

Comment:



**06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)**

**CheckList Information**

**Name :** FIV - RTU'S **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 05/23/2025 - Tara Metcalf - National TAB  
**Completed Date :** 06/11/2025 - Dylan Crisman - National TAB

**CheckList Item Details**

**RTU IDENTIFICATION, ORIENTATION & LOCATION**

**Each RTU is tagged for proper identification with tags sized and placed on the fan for visual ease** Pass

**Comment:**

**Identify and ensure the RTU label information and size is correct** Pass

**Comment:**

**Ensure proper location of unit** Pass

**Comment:**

**Ensure orientation of curb & RTU is per plan** Pass

**Comment:**

**Ensure Packing in the blower compartment has been removed** Pass

**Comment:**

**RTU - INSTALLATION DETAILS**

**With disconnect switch "off" spin the indoor and outdoor fan wheel's by hand and ensure they spin freely** Pass

Comment:

Ensure Roof Curb is fully flashed by roofing material and secured and curb is level

Pass

Comment:

Inspect the interior of the supply heat exchange compartment and return air compartment - validate that the duct is flashed and sealed to the top of the curb to prevent leakage or short cycling

Pass

Comment:

Hail guards installed on outdoor condenser coils

Pass

Comment:

#### RTU - ACCESSORIES

Power connected & disconnect installed

Pass

Comment:

Gas line connected per specification (size, painting, supports, shut-off valves, traps)

Pass

Comment:

OA hood & filters installed

Pass

Comment:

Economizer wired to control board

Pass

Comment:

Evaporator coil filters are properly installed with specified MERV rating

Fail

Comment:

Issue created, construction filters still presently installed.

Economizer damper is installed properly

Pass

Comment:

Economizer OA temperature / enthalpy sensors installed and wired

Pass

**Comment:**

---

**Thermostat and humidity (if applicable) control wires wired to RTU terminals**

Pass

---

**Comment:**

---

**Condensate drain installed per specification**

Pass

---

**Comment:**

---

**Condensate line drains away from unit to a approved roof drain**

Pass

---

**Comment:**

---

**Belts are tight?**

N/A

---

**Comment:**

Direct drive.

---

**Pulleys aligned?**

N/A

---

**Comment:**

---

**MERV rated filters are installed and are clean?**

Fail

---

**Comment:**

---



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

**CheckList Information**

**Name :** FPT - BUILDING PRESSURE AND HOOD CONTAINMENT **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 05/23/2025 - Tara Metcalf - National TAB  
**Completed Date :** 06/11/2025 - Dylan Crisman - National TAB

**CheckList Item Details**

**FINAL TESTS**

**HOOD CAPTURE TEST**

**List equipment turned on for testing**

**Comment:**

None

**List smoke candle type used**

**Comment:**

CE0163 45 sec 150CF

**Smoke test capture - Perimeter of hood (%)**

**Comment:**

100%

**Smoke test capture - Top of cooking surface (%)**

**Comment:**

100%

**WITNESS**

**Date test was completed**

06/11/2025

**Comment:**

---

**TAB tech name / Firm**

---

**Comment:**

Dylan Crisman / NTi

---

**Site super name / Firm**

---

**Comment:**

Doug Simkins / Dejager Construction

---

**Owner representative name / Firm (if Applicable)**

---

**Comment:**

---

**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)**

---

**Comment:**

---



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

CheckList Information

**Name :** FPT - KEF'S **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 05/23/2025 - Tara Metcalf - National TAB

**Completed Date :** 06/11/2025 - Dylan Crisman - National TAB

CheckList Item Details

Exhaust fans wheel rotation is correct Pass

Comment:

TAB firm has balanced the exhaust fans to proper design levels Pass

Comment:

All motor and electrical readings are below the full load rating of each fan Pass

Comment:

Exhaust Fans do not have any unusual noise or vibration while operating Pass

Comment:

Smoke and Grease from exhaust fans appear to properly elevate above the parapet wall and off the roof. Pass

Comment:

Hoods have been started up by the manufacturers rep? Pass

Comment:

Hoods free of alarms? Fail

**Comment:**

---

**Exhaust fans modulate to high speed when kitchen equipment is on and at cooking temperatures? If not, adjust modulation/offset down.**

Pass

---

**Comment:**

---



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

**CheckList Information**

**Name :** FPT - MUA **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 05/23/2025 - Tara Metcalf - National TAB  
**Completed Date :** 06/11/2025 - Dylan Crisman - National TAB

**CheckList Item Details**

TAB firm has balanced the MUA to within proper design limits Pass

Comment:

Blower wheel rotation is correct Pass

Comment:

MUA does not have any unusual noise or vibration while operating Pass

Comment:

Motor and electrical measurements are below the full load rating Pass

Comment:

Startup has been completed by the manufacturers rep? Fail

Comment:

Heater tested and is functional? N/A

Comment:

Unable to verify due to alarms.

Cooling is tested and is functional? N/A

**Comment:**

Unable to verify due to alarms.



06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

**CheckList Information**

**Name :** FPT - RTU's **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 05/23/2025 - Tara Metcalf - National TAB  
**Completed Date :** 06/11/2025 - Dylan Crisman - National TAB

**CheckList Item Details**

**THERMOSTAT PROGRAMMING AND CALIBRATION**

**Time is correct on the thermostats** Pass

**Comment:**

**Occupied Time = 7:30 AM** N/A

**Comment:**

Thermostat is not programmable.

**Occupied Heat setpoint = 68** Pass

**Comment:**

**Occupied Cooling setpoint = 72** Pass

**Comment:**

**Dehumidification Setpoint = 55%** N/A

**Comment:**

Thermostat is not programmable

**Occupied Fan = On** N/A

**Comment:**

Thermostat is not programmable

**Unoccupied Time = 12:00AM**

N/A

**Comment:**

Thermostat is not programmable

**Unoccupied Heat setpoint = 60**

N/A

**Comment:**

Thermostat is not programmable

**Occupied Cooling setpoint = 80**

N/A

**Comment:**

Thermostat is not programmable

**Unoccupied Fan = Auto**

N/A

**Comment:**

Thermostat is not programmable

**Actual measured temperature is within +/-1 degree of temperature displayed on thermostat. If not calibrate the sensor**

Pass

**Comment:**

**Actual measured RH is within +/-3 % of displayed RH at RTU or thermostat. If not calibrate the sensor**

Pass

**Comment:**

**CONTROL WIRING VALIDATION**

**Economizer Dry Bulb sensor wired**

Pass

**Comment:**

**Economizer Dry Bulb sensor operational**

Pass

**Comment:**

**OCP/OCC terminal wired correctly**

Pass

**Comment:**

Thermostat Wired correctly (R,C,Y1,Y2,W1,W2)

Pass

Comment:

Humidity Sensor Wired correctly

Pass

Comment:

**CALIBRATION & PROGRAMMING**

RTU OA DB StPt, Reading Accuracy (+/- 2 degrees / 10 minute time to calibrate to actual reading)

Pass

Comment:

RTU MAT StPt, Reading Accuracy (+/- 2 degrees / 10 minute time to calibrate to actual reading)

Pass

Comment:

RTU MAT Low StPt

Comment:

RTU-1 53F RTU-2 53F

RTU Low T Lockout

Comment:

RTU-1 32F RTU-2 32F

Economizer set to 28 BTU/lb enthalpy setpoint.

Pass

Comment:

Temperature tests

Outside air temperature / humidity

Comment:

84F/65.6RH

Full cooling LAT/H

Comment:

RTU-1:56.2F/68.5RH RTU-2: 56.9F/68.0RH

Full heating LAT/H

**Comment:**

RTU-1: 90.1F/70.8RH RTU-2: 88.9F/70.3RH

---

**OUTDOOR AIR / RELIEF DAMPER**

---

**If power exhaust installed, set point is higher than the OA damper setpoint** Pass

**Comment:**

---

**If power exhaust installed, open the OA damper above the power exhaust setpoint and ensure that the power exhaust turns on** Pass

**Comment:**

---

**If relief damper is installed, ensure that it is installed properly and can open freely.** N/A

**Comment:**

---

**OCCUPANCY VALIDATION**

---

**Place the thermostat in "unoccupied" - Does the OA damper close fully** Pass

**Comment:**

---

**Stage cooling and Heating in "unoccupied" - Does the unit properly stage and does the OA damper remain closed** Pass

**Comment:**

---

**Place the thermostat in "Occupied" - Does the OA damper open to the TAB preset minimum position in High speed** Pass

**Comment:**

---

**Place the thermostat in "Occupied" - Does the OA damper open to the TAB preset minimum position in Low speed (if applicable)** Pass

**Comment:**

---

### 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	KITCHEN	3500	3468	3075	3018	425	450	12.1%	13.0%						
RTU-2	DINING	3000	2993	2400	2349	600	644	20.0%	21.5%						
MUA-1	HOOD MUA									2163	2156				
KF-1	HOOD FAN											2606	2496		
CEF-1	WOMENS RR													125	83
CEF-2	MENS RR													125	87
<b>TOTALS</b>		6500	6461	5475	5367	1025	1094			2163	2156	2606	2496	250	170

#### NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3188	3250
TOTAL EXHAUST	2856	2666
<b>NET AIRFLOW</b>	<b>332</b>	<b>584</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.0045
SIDE	0.0087
REAR	0.0024
<b>AVERAGE</b>	<b>0.0052</b>

#### 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:

# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

System/Unit: AHU/RTU



Asset: RTU1

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	CARRIER	CARRIER
Serial Num	-	4224P64909
Model Num	48FCDN12	48FCDN12A3A5A8B4F0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	CARRIER
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	12.6

Test Data		
	Design	Actual
SF CFM	3500	3468
SF RPM	-	1841
RA CFM	3075	3018
OA CFM	425	450
RL Voltage	-	208/208/208
RL Amperage	-	5.7/5.6/5.4
SF Rotation	-	CW
SF System SetPt	-	8.0VDC
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	4.0V
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.84"
Fan Suction SP	-	-1.18"
Fan Discharge SP	-	0.17"
Total ESP	1.00"	1.01"
Fan Total SP	-	1.35"

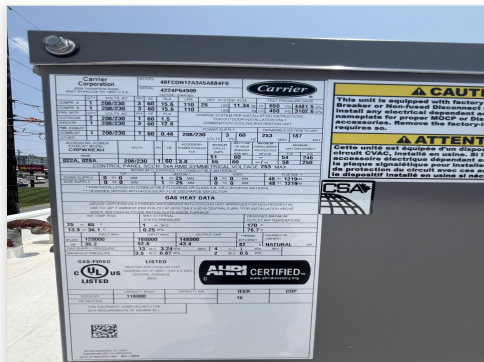
General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Dylan Crisman on 06/11/2025

## Unit Data - PHOTO LOG



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# National TAB

Project:06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

## 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	KITCHEN	D	10"	305	1.0	468	430	299	98.0
SGRD2	KITCHEN	D	10"	305	1.0	348	320	294	96.4
SGRD3	KITCHEN	D	10"	305	1.0	357	328	315	103.3
SGRD4	KITCHEN	D	10"	305	1.0	418	384	323	105.9
SGRD5	KITCHEN	A	10"	305	1.0	350	321	308	101.0
SGRD6	KITCHEN	A	10"	300	1.0	373	342	314	104.7
SGRD7	KITCHEN	A	10"	300	1.0	323	297	293	97.7
SGRD8	KITCHEN	A	10"	300	1.0	371	341	297	99.0
SGRD9	KITCHEN	A	10"	300	1.0	413	379	293	97.7
SGRD10	KITCHEN	ACPSP	152X6	776	4.94	459	422	719	92.7
Total				3501		3880	3564	3455	98.69%

Completed By: Dylan Crisman on 06/11/2025

# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

System/Unit: AHU/RTU



Asset: RTU2

AREA:DINING

Unit Data		
	Design	Actual
MFG	CARRIER	CARRIER
Serial Num	-	4224P6881
Model Num	48FCDN09	48FCDN09A2A5A8B4F0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	CARRIER
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	6.4

Test Data		
	Design	Actual
SF CFM	3000	2993
SF RPM	-	1657
RA CFM	2400	2349
OA CFM	600	644
RL Voltage	-	208/208/209
RL Amperage	-	4.3/4.5/4.4
SF Rotation	-	CW
SF System SetPt	-	7.8VDC
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	3.0V
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.70"
Fan Suction SP	-	-1.06"
Fan Discharge SP	-	0.21"
Total ESP	1.00"	0.91"
Fan Total SP	-	1.27"

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

Completed By: Dylan Crisman on 06/11/2025

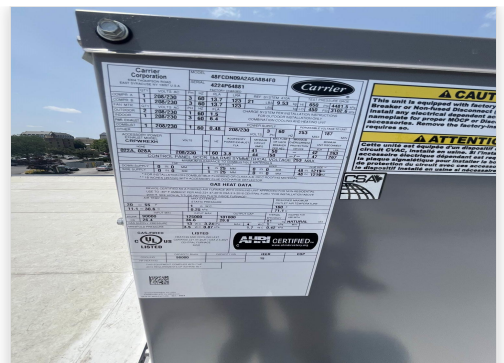
## Unit Data - PHOTO LOG



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**National TAB**  
 Project:06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)  
**AHU/RTU**



**Diffuser Supply (GRD)**

**RTU2/DINING**

<b>Asset</b>									
<b>Asset Name</b>	<b>Location</b>	<b>Type</b>	<b>Size</b>	<b>DESIGN CFM</b>	<b>AK</b>	<b>CFM(1)</b>	<b>CFM(2)</b>	<b>FINAL CFM</b>	<b>% to design</b>
SGRD1	DINING	E	24"	350	0.63	423	400	354	101.1
SGRD2	DINING	E	24"	300	0.63	372	359	320	106.7
SGRD3	DINING	E	22"	350	0.63	433	409	357	102.0
SGRD4	DINING	E	22"	300	0.63	368	347	308	102.7
SGRD5	DINING	E	20"	350	0.63	442	412	359	102.6
SGRD6	DINING	E	20"	300	0.63	379	358	296	98.7
SGRD7	DINING	E	16"	350	0.63	421	398	341	97.4
SGRD8	HALL	E	10"	400	1.0	213	201	372	93.0
SGRD9	WOMENS RESTROOM	E	6"	50	1.0	68	64	55	110.0
SGRD10	HALL	E	8"	200	1.0	107	101	184	92.0
SGRD11	MENS RESTROOM	E	6"	50	1.0	97	91	47	94.0
<b>Total</b>				3000		3323	3140	2993	99.77%

Completed By: Dylan Crisman on 06/11/2025

# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

## System/Unit: FAN - Exhaust



Asset: CEF1

AREA:WOMEN'S RESTROOM

Unit Data		
	Design	Actual
MFG	GREENHECK	BROAN
Model Num	SP-A250	L100E-A
Serial Num	-	42MH12H
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	125	83
Fan Rotation	-	CCW
System SetPt	-	HIGH SPEED
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	BROAN
Frame	-	L18
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	0.3

Completed By: Dylan Crisman on 06/11/2025

Notes:

Unit is set at max speed possible on speed dial and low on flow at 83/125CFM

Written By: Dylan Crisman on 06/11/2025

### Unit Data - PHOTO LOG



06/11/2025

# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

System/Unit: FAN - Exhaust



Asset: CEF2

AREA:MENS RESTROOM

Unit Data		
	Design	Actual
MFG	GREENHECK	BROAN
Model Num	SP-A250	L100E-A
Serial Num	-	42M12H
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	125	86
Fan Rotation	-	CCW
System SetPt	-	HIGH SPEED
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	BROAN
Frame	-	L18
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	0.3

Completed By: Dylan Crisman on 06/11/2025

Notes:  
Unit is set at max speed possible on speed dial and low on flow at 86/125CFM

Written By: Dylan Crisman on 06/11/2025

## Unit Data - PHOTO LOG



06/11/2025

# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

## System/Unit: FAN - Exhaust



Asset: KF1

AREA:HOOD FAN

Unit Data		
	Design	Actual
MFG	ECON-AIR	CAPTIVE-AIRE
Model Num	EADU85H	DU85HFA
Serial Num	-	7099507
Type	UPBLAST/CEILING	UPBLAST
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	2606	2496
Fan RPM	-	1368
Fan Rotation	-	CCW
Motor RPM	-	1368
System SetPt	-	76%
RL Voltage	-	119
RL Amperage	-	7.6/7.4
Total ESP	1.00"	0.72"
Fan Inlet SP	-	-0.72"
Fan Discharge SP	-	ATM

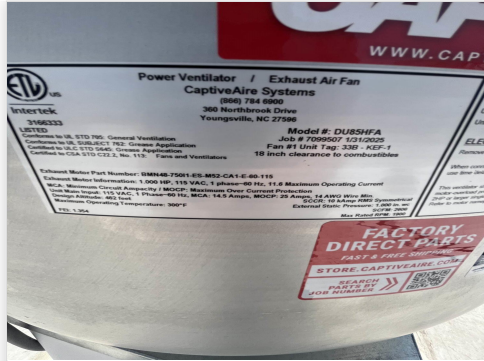
Motor Data		
	Design	Actual
Motor MFG	-	TELCO-GREEN
Horsepower	1	1.0
Motor Rpm	1657	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6
Service Factor	-	1.15

Completed By: Dylan Crisman on 06/11/2025

### Unit Data - PHOTO LOG



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# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

## System/Unit: FAN - Supply



Asset: MUA1

AREA:HOOD MUA

Unit Data		
	Design	Actual
MFG	ECON-AIR	ECON-AIR
Model Num	EARTU1-I.200-15-5T-MPU	EARTU1-I.200-15-5T-MPU
Serial Num	-	7099507
Type	MUA	MUA
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TECO-WESTINGHOUSE
Frame	-	182T
Horsepower	3	3.0
Motor Rpm	-	1755
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	8.60
Service Factor	-	1.15

Gas Heat		
	Design	Actual
Heater Operates (y/n)	-	N/A
Flame Status (pass/fail)	-	N/A
Inlet Air Temp SetPt	55	N/A
Discharge Air Temp SetPt	60	N/A

Test Data		
	Design	Actual
CFM	2163	2156
SF RPM	-	1661
Motor RPM	-	1661
SF System SetPt	-	56.8
RL Voltage	-	148@VFD
RL Amperage	-	6.2@VFD
Fan Discharge SP	-	ATM

General	
	Actual
Fan Rotation Correct	YES

Completed By: Dylan Crisman on 06/11/2025

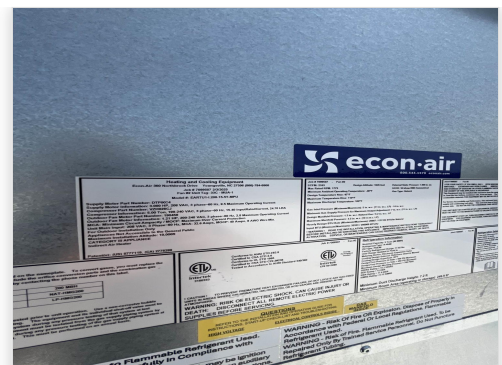
### Unit Data - PHOTO LOG



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# National TAB

Project: 06-09-25 CAVA INDIANAPOLIS, IN (IUPUI)

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA: KITCHEN HOOD

Unit Data		
	Design	Actual
MFG	ECON-AIR	CAPTIVE-AIRE
Model Num	6030 EX-2-ACPSP-F	6030 ND-2
Job / Serial Num	-	7099507
Type	TYPE I - CANOPY	TYPE I - CANOPY
Hood length	153"	139"
Hood Width	60"	60"
Supply Plenum Type	-	ACPSP
Supply Plenum Width	14"	14"
Supply Plenum Length	152"	152"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO
Filter Size 1	20X16	20X16
Filter Qty 1	8	8
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	16.64	16.64
Filter1 FPM	-	142
Filter2 FPM	-	144
Filter3 FPM	-	155
Filter4 FPM	-	164
Filter5 FPM	-	167
Filter6 FPM	-	145
Filter7 FPM	-	143
Filter8 FPM	-	138
Filter Ave FPM(corr)	-	150
CFM	2606	2496

Cooking Equipment	
	Actual
Item 1	STEAMER
Item 2	STOVE
Item 3	GRIDDLE
Item 4	FRYER

Test Data Supply		
	Design	Actual
Total Area	14.77	14.77
Kv factor (Vel)	.89	0.89
Num of Readings	-	14
Reading1 FPM	-	235
Reading2 FPM	-	221
Reading3 FPM	-	164
Reading4 FPM	-	131
Reading5 FPM	-	126
Reading6 FPM	-	162
Reading7 FPM	-	199
Reading8 FPM	-	183
Reading9 FPM	-	138
Reading10 FPM	-	100
Reading11 FPM	-	98
Reading12 FPM	-	184
Reading13 FPM	-	199
Reading14 FPM	-	168
Ave FPM(corr)	-	164
CFM	2163	2156

Completed By: Dylan Crisman on 06/11/2025



