

**Report By:**

National TAB  
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**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 10/08/2024**  
**Completed By: National TAB**

**PROJECT**  
**09-30-24 CAVA SAGINAW, TX (OLD**  
**DECATUR)**

1424 N OLD DECATUR RD

SAGINAW, TX 76179

**Client**

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

# National TAB

Project: 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

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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 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) w/ Diffusers

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. . 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.

### General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

### Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of  $-0.02''$  wc to  $+0.02''$  wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

## Issue List

- RTU-1 DINING ROOM DIFFUSERS

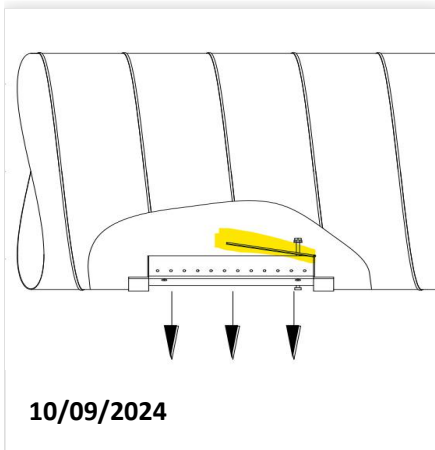


**09-30-24 CAVA SAGINAW, TX (OLD DECATUR)**

**Project Issue Information**

**Issue Name :** RTU-1 DINING ROOM DIFFUSERS  
**Description :** Total flow for RTU-1 is balanced, but individual diffusers cannot all be balanced. The dampers on the spiral duct are installed as spec'd but are scoop type dampers which do not cover the entire face of the grille. Closing them does not significantly change airflow. Not anticipated to be any comfort issues since it's an open dining room.  
**Created By :** National TAB                      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** Low    **Asset Tag :** RTU1  
**Originated Date :** 10/08/2024 - Bayley Morvant - National TAB

Project Issue File Details



### 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	4330	4702	3655	4038	675	664	15.6%	14.1%						
RTU-2	KITCHEN	2950	2902	2600	2539	350	363	11.9%	12.5%						
MUA-1	COOKLINE									1976	1865				
EF-1	KITCHEN HD											2381	2416		
EF-2	RESTROOMS													250	232
<b>TOTALS</b>		7280	7604	6255	6577	1025	1027			1976	1865	2381	2416	250	232

**NET BUILDING AIRFLOW CALCULATION**

TOTALS	DESIGN	ACTUAL
TOTAL OA	3001	2892
TOTAL EXHAUST	2631	2648
<b>NET AIRFLOW</b>	<b>370</b>	<b>244</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.0013
SIDE	NA
REAR	0.002
<b>AVERAGE</b>	<b>0.0017</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:

## CheckList List

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



09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

CheckList Information

**Name :** FIV - EF'S **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/02/2024 - Bayley Morvant - 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:**

---



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### 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

#### CheckList Information

**Name :** FIV - HVAC DUCTWORK **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/02/2024 - Bayley Morvant - 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:

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

MUA duct is routed and sized as per plan Pass

Comment:

MUA duct is properly supported Pass

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 Pass

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**

---

Restroom duct is routed and sized per plan

Pass

Comment:

---

Restroom duct is properly supported

Pass

Comment:

---

Duct seams are sealed

Yes

Comment:

---

Dampers are accessible to TAB team for balancing

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:

---

Duct is secured to exhaust register

Pass

Comment:

---

Gravity damper is installed, opens and closes freely, and is sealed to prevent air leakage

Pass

Comment:

---

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.

Pass

Comment:

---

**HVAC DUCT**

---

Kitchen and Dining room duct is routed and sized as per plan

Pass

Comment:

---

Ducts are properly supported

Pass

Comment:

Ductwork is externally insulated

Yes

Comment:

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

Pass

Comment:

Ducts are securely insulated as per specificatins and foil taped to prevent air barrier from being breached

Pass

Comment:

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

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:

Takeoff to diffuser is installed securely to prevent slippage and air leakage

Pass

Comment:

All diffuser neck or opening sizes are installed as planned

Pass

Comment:

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.

Pass

Comment:



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### 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

#### CheckList Information

**Name :** FIV - RTU'S **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/02/2024 - Bayley Morvant - 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 Fail

Comment:

UNITS ARE ORIENTATED DIFFERENTLY ON ROOF THAN WHAT PLANS CALL FOR.

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** Pass

**Comment:**

**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:**

---

**Pulleys aligned?**

N/A

---

**Comment:**

---

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

Pass

---

**Comment:**

---



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### 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

#### CheckList Information

**Name :** FIV – HOODS **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/02/2024 - Bayley Morvant - 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.** Fail

**Comment:**

CAULKING STILL HAD TO BE APPLIED TO HOOD SEAMS ALONG WALL WHILE ON SITE. GC CONFIMRED THIS WAS ALREADY SCHEDULED TO BE DONE.

**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.** Fail

**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:



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### 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

#### CheckList Information

**Name :** FIV – MUA **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/02/2024 - Bayley Morvant - 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:**

---



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### 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

#### CheckList Information

**Name :** FPT - BUILDING PRESSURE AND HOOD CONTAINMENT **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/04/2024 - Bayley Morvant - National TAB

#### CheckList Item Details

##### FINAL TESTS

##### HOOD CAPTURE TEST

- [Open](#) CAVA\_SAGINAW\_HOOD\_CAPTURE\_TEST\_991942374.mp4  
10/04/2024

##### List equipment turned on for testing

##### Comment:

NONE. NOT ALL COOKING EQUIPMENT WAS ON SITE WHEN TEST WAS DONE.

##### List smoke candle type used

##### Comment:

45 SECOND CARTRIDGE

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

##### Comment:

100%

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

**Comment:**

100%

---

**WITNESS**

---

**Date test was completed**

10/04/2024

---

**Comment:**

---

**TAB tech name / Firm**

---

**Comment:**

Bayley Morvant / National TAB

---

**Site super name / Firm**

---

**Comment:**

NA / NA

---

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

---

**Comment:**

NA / 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)**

---

**Comment:**

YES



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### 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

#### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/02/2024 - Bayley Morvant - 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?**

Pass

---

**Comment:**

---

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

Pass

---

**Comment:**

---



**09-30-24 CAVA SAGINAW, TX (OLD DECATUR)**

**CheckList Information**

**Name :** FPT - RTU's **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/04/2024 - Bayley Morvant - National TAB

**CheckList Item Details**

**THERMOSTAT PROGRAMMING AND CALIBRATION**

**Time is correct on the thermostats** Pass

**Comment:**

**Occupied Time = 7:30 AM** Pass

**Comment:**

**Occupied Heat setpoint = 68** Pass

**Comment:**

**Occupied Cooling setpoint = 72** Pass

**Comment:**

**Dehumidification Setpoint = 55%** Pass

**Comment:**

**Occupied Fan = On** Pass

Comment:

Unoccupied Time = 12:00AM

Pass

Comment:

Unoccupied Heat setpoint = 60

Pass

Comment:

Occupied Cooling setpoint = 80

Pass

Comment:

Unoccupied Fan = Auto

Pass

Comment:

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:

N/A

RTU Low T Lockout

Comment:

N/A

Economizer set to 28 BTU/lb enthalpy setpoint.

Pass

Comment:

**Temperature tests**

Outside air temperature / humidity

Comment:

94 / 35%

Full cooling LAT/H

Comment:

RTU-1: 53 / 80% RTU-2: 54 / 80%

Full heating LAT/H

**Comment:**

TO HOT TO TEST HEATING

---

**OUTDOOR AIR / RELIEF DAMPER**

---

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

N/A

**Comment:**

---

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

N/A

**Comment:**

---

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

Pass

**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:**

---



**Comment:**

---

**Cooling is tested and is functional?**

Yes

---

**Comment:**

---

**09-30-24 CAVA SAGINAW, TX (OLD DECATUR)**

**CheckList Information**

**Name :** TECH - SITE PICTURES **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 10/02/2024 - Brianna Biggs - National TAB

**Completed Date :** 10/02/2024 - Bayley Morvant - National TAB

**CheckList Item Details**

RTU-1

Comment:



10/02/2024

RTU-2

Comment:



10/02/2024

---

**KEF-1**

**Comment:**



10/02/2024

---

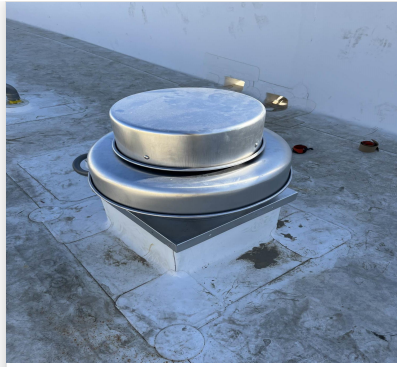
**EF-1**

**Comment:**

INCLUDES EF-2



10/02/2024



10/02/2024

---

**MUA-1**

**Comment:**



10/02/2024

---

**HD-1**

**Comment:**



10/02/2024



# National TAB

Project: 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## System/Unit: AHU/RTU

NATIONAL TAB

INTELLIGENCE



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Asset: RTU1

AREA:

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	241412063L
Model Num	YSJ150A3S0L	YSJ150B3S0L
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36X15
Num Final Filter 1	-	3
Final Filter Size 1	-	18X24X2
Num Final Filter 2	-	3
Final Filter Size 2	-	18X18X2

Test Data		
	Design	Actual
SF CFM	4330	4702
SF RPM	ND	DD
RA CFM	3655	4038
OA CFM	675	664
RL Voltage	-	213/215/214
RL Amperage	-	2.9/3.0/3.0
SF Rotation	-	CCW
SF System SetPt	-	61%
RA Damper Position	-	65% OPEN
Min OA Damper Position	-	35% OPEN
Min OA Damper Type	-	SINGLE BLADE
OA Enthalpy Setpt	-	28 BTU/LB

Motor Data		
	Design	Actual
Motor MFG	-	ND
Frame	-	ND
Horsepower	4.6	5.0
Motor Rpm	-	ND
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	11.0

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.21
Fan Suction SP	-	-0.50
Fan Discharge SP	-	0.40
Total ESP	1.10"	0.61
Fan Total SP	-	0.90

Drive Data	
	Actual
Motor Sheave Size	DIRECT DRIVE
Motor Bore Size	DIRECT DRIVE
Motor Sheave SetPt	DIRECT DRIVE
Fan Sheave Size	DIRECT DRIVE
Fan Sheave Bore	DIRECT DRIVE
Belt CL Distance	DIRECT DRIVE
Num of Belts	DIRECT DRIVE
Belt Size	DIRECT DRIVE
Belt Alignment	DIRECT DRIVE

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

Completed By: Bayley Morvant on 10/04/2024

### Notes:

Total flow for RTU-1 is balanced, but individual diffusers cannot all be balanced. The dampers on the spiral duct are installed as spec'd but are scoop type dampers which do not cover the entire face of the grille. Closing them does not significantly change airflow. Not anticipated to be any comfort issues since it's an open dining room.

Written By: Will Turnbough on 10/09/2024



# National TAB

Project:09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## AHU/RTU

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### Diffuser Supply (GRD)

#### RTU1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	DINING	R1	20X6	310	183	257	82.9
SGRD2	DINING	R1	20X6	310	206	357	115.2
SGRD3	DINING	R1	20X6	310	449	336	108.4
SGRD4	DINING	R1	20X6	310	392	267	86.1
SGRD5	DINING	R1	20X6	310	322	345	111.3
SGRD6	DINING	R1	20X6	310	461	297	95.8
SGRD7	DINING	R1	20X6	310	446	285	91.9
SGRD8	DINING	R1	20X6	310	498	365	117.7
SGRD9	DINING	R1	20X6	310	518	366	118.1
SGRD10	DINING	R1	20X6	310	488	390	125.8
SGRD11	QUEUE	R1	20X6	310	506	402	129.7
SGRD12	QUEUE	R1	20X6	310	400	344	111.0
SGRD13	QUEUE	R1	20X6	310	500	494	159.4
SGRD14	HALL	D2	6"	100	56	51	51.0
SGRD15	HALL	D2	6"	100	49	45	45.0
SGRD16	WOMENS RR	D2	6"	50	51	50	100.0
SGRD17	MENS RR	D2	6"	50	46	51	102.0
Total				4330	5571	4702	108.59%



# National TAB

Project: 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## System/Unit: AHU/RTU

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Asset: RTU2

AREA:

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	241412184L
Model Num	YSJ102A3S0L	YSJ102A3S0L
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36X15
Num Final Filter 1	-	16X24X2
Final Filter Size 1	-	16X24X2
Num Final Filter 2	-	2
Final Filter Size 2	-	18X24X2

Motor Data		
	Design	Actual
Motor MFG	-	ND
Frame	-	ND
Horsepower	3	3.0
Motor Rpm	-	ND
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.8

Drive Data	
	Actual
Motor Sheave Size	DIRECT DRIVE
Motor Bore Size	DIRECT DRIVE
Motor Sheave SetPt	DIRECT DRIVE
Fan Sheave Size	DIRECT DRIVE
Fan Sheave Bore	DIRECT DRIVE
Belt CL Distance	DIRECT DRIVE
Num of Belts	DIRECT DRIVE
Belt Size	DIRECT DRIVE
Belt Alignment	DIRECT DRIVE

Test Data		
	Design	Actual
SF CFM	2950	2902
SF RPM	ND	DD
RA CFM	2600	2539
OA CFM	350	363
RL Voltage	-	214/212/214
RL Amperage	-	3.9/4.0/4.1
SF Rotation	-	CCW
SF System SetPt	-	60%
RA Damper Position	-	85% OPEN
Min OA Damper Position	-	15% OPEN
Min OA Damper Type	-	SINGLE BLADE
OA Enthalpy Setpt	-	28 BTU/LB

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.27
Fan Suction SP	-	-0.60
Fan Discharge SP	-	0.43
Total ESP	1.50"	0.70
Fan Total SP	-	1.03

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

Completed By: Bayley Morvant on 10/04/2024



# National TAB

Project:09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## AHU/RTU

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### Diffuser Supply (GRD)

#### RTU2/

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
SGRD1	FRONT KITCHEN	L1	10"	200	0	216	193	96.5
SGRD2	FRONT KITCHEN	L1	10"	200	0	287	214	107.0
SGRD3	FRONT KITCHEN	L1	10"	200	0	273	207	103.5
SGRD4	FRONT KITCHEN	L1	10"	200	0	225	188	94.0
SGRD5	PICK UP WINDOW	L1	10"	200	0	288	219	109.5
SGRD6	KITCHEN	L1	10"	200	0	298	204	102.0
SGRD7	KITCHEN	L1	10"	200	0	204	194	97.0
SGRD8	KITCHEN	L1	10"	200	0	196	199	99.5
SGRD9	KITCHEN HOOD	ACPSP	140X6	780	4.55	887	746	95.6
SGRD10	OFFICE	D1	8"	170	0	178	162	95.3
SGRD11	BACK KITCHEN	D1	8"	200	0	338	194	97.0
SGRD12	BACK KITCHEN	D1	8"	200	0	370	182	91.0
Total				2950		3760	2902	98.37%



# National TAB

Project: 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## System/Unit: FAN - Exhaust

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Asset: EF2

AREA:

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	G-080-VG	G-080-VG-1-17-X
Serial Num	-	25147213
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	BROAD-OCEAN
Frame	-	ND
Horsepower	0.05	1/10
Motor Rpm	-	300-1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	ND

Test Data		
	Design	Actual
CFM	250	232
Fan RPM	300-1750	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	10/10
RL Voltage	-	122
RL Amperage	-	1.2
Total ESP	0.3"	0.09
Fan Inlet SP	-	-0.09
Fan Discharge SP	-	ATM

Completed By: Bayley Morvant on 10/02/2024



# National TAB

Project:09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## FAN - Exhaust

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### Diffuser Ret/Exh (GRD)

EF2/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
EGRD1	WOMENS RR	G1	6X6	125	118	118	94.4
EGRD2	MENS RR	G1	6X6	125	114	114	91.2
Total				250	232	232	92.8%



# National TAB

Project: 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

System/Unit: FAN - Exhaust

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Asset: KEF1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	6539093
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	INTERTEK
Frame	-	ND
Horsepower	1	1.00
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6
Service Factor	-	ND

Test Data		
	Design	Actual
CFM	2381	2416
Fan RPM	1800	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	80%
RL Voltage	-	122
RL Amperage	-	9.5
Total ESP	1.0"	1.56"
Fan Inlet SP	-	-1.56"
Fan Discharge SP	-	ATM

Completed By: Bayley Morvant on 10/02/2024



# National TAB

Project: 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## System/Unit: FAN - Supply



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Asset: MUA1

AREA:

Unit Data		
	Design	Actual
<b>MFG</b>	CAPTIVEAIRE	CAPTIVEAIRE
<b>Model Num</b>	A1-D.250-15D-MPU	A1-D.250-15D-MPU
<b>Serial Num</b>	-	6539093
<b>Type</b>	MUA	MUA
<b>Configuration</b>	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
<b>Motor MFG</b>	-	TECO
<b>Frame</b>	-	145T
<b>Horsepower</b>	2	2.00
<b>Motor Rpm</b>	-	1745
<b>Phase</b>	3	3
<b>Voltage (rated)</b>	208	230
<b>Amperage (rated)</b>	-	5.64
<b>Service Factor</b>	-	1.15

Gas Heat		
	Design	Actual
<b>Heater Operates (y/n)</b>	-	Y
<b>Flame Status (pass/fail)</b>	-	PASS
<b>Inlet Air Temp SetPt</b>	55	55
<b>Discharge Air Temp SetPt</b>	60	60
<b>Air Flow Switch SP Actual</b>	-	0.34

Test Data		
	Design	Actual
<b>CFM</b>	1976	1865
<b>SF RPM</b>	1745	DD
<b>Motor RPM</b>	-	DD
<b>SF System SetPt</b>	-	60.1 Hz
<b>RL Voltage</b>	-	213/211/213
<b>RL Amperage</b>	-	3.8/3.7/3.8
<b>Total ESP</b>	-	0.32
<b>Fan Discharge SP</b>	-	0.32

General	
	Actual
<b>Fan Rotation Correct</b>	YES

Completed By: Bayley Morvant on 10/04/2024



# National TAB

Project: 09-30-24 CAVA SAGINAW, TX (OLD DECATUR)

## System/Unit: Kitchen Hood Type I



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Asset: HD1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030 ND-2-ACPSP-F	6030 ND-2-ACPSP-F
Job / Serial Num	-	6539093
Type	TYPE I CANOPY	TYPE 1 CANOPY
Hood length	127"	127"
Hood Width	60"	60"
Supply Plenum Type	-	PSP
Supply Plenum Width	14"	14"
Supply Plenum Length	140"	140"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X20	16X20
Filter Qty 1	7	7
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	14.56	14.56
Filter1 FPM	-	157
Filter2 FPM	-	175
Filter3 FPM	-	180
Filter4 FPM	-	177
Filter5 FPM	-	181
Filter6 FPM	-	153
Filter7 FPM	-	141
Filter Ave FPM(corr)	-	166
CFM	2381	2416

Cooking Equipment	
	Actual
Item 1	OVEN

Test Data Supply		
	Design	Actual
Total AK Area	13.61	13.61
Kv factor (Vel)	0.89	0.89
Num of Readings	-	12
Reading1 FPM	-	137
Reading2 FPM	-	130
Reading3 FPM	-	122
Reading4 FPM	-	142
Reading5 FPM	-	151
Reading6 FPM	-	157
Reading7 FPM	-	175
Reading8 FPM	-	155
Reading9 FPM	-	173
Reading10 FPM	-	167
Reading11 FPM	-	174
Reading12 FPM	-	167
Ave FPM(corr)	-	154
CFM	1976	1865

Completed By: Bayley Morvant on 10/02/2024

