

**Report By:**

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



**Report: TAB Report**  
**Function: Test, Adjust, & Balance**  
**Date: 05/29/2025**  
**Completed By: National TAB**

**PROJECT**  
**05-26-25 CAVA WARWICK, RI**

989 CENTERVILLE ROAD

WARWICK, RI 02886

**Client**

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

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

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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**

- 1. RTUs On Incorrect Curbs
- Condensate Drains
- Grease Duct Not Secured to Curb
- Hood "Core #01 Fault"
- Incorrect Thermostats
- MAU Blower Access Door
- Remote Sensor Communication
- Rooftop Equipment Not Labeled





05-26-25 CAVA WARWICK, RI

**Project Issue Information**

**Issue Name :** Condensate Drains  
**Description :** All condensate drains on the rooftop terminate immediately after the P-Traps. The RTU P-Traps do not match the drawing on M401.  
**Created By :** National TAB      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** Low      **Asset Tag :**  
**Originated Date :** 05/29/2025 - Stephen Tassinaro - National TAB

Project Issue File Details



05/29/2025



05/29/2025



05/29/2025



05-26-25 CAVA WARWICK, RI

**Project Issue Information**

**Issue Name :** Grease Duct Not Secured to Curb  
**Description :** Duct top plate flanges to the edges of the curb, but it is not secured. This allows for movement of the grease duct and grease will accumulate.  
**Created By :** National TAB      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** Medium      **Asset Tag :**  
**Originated Date :** 05/29/2025 - Stephen Tassinaro - National TAB

Project Issue File Details

1. [Open](#) IMG\_6278.mp4  
05/29/2025
2. [Open](#) IMG\_6278.mp4  
05/29/2025



05/29/2025



05/29/2025



05-26-25 CAVA WARWICK, RI

**Project Issue Information**

**Issue Name :** Hood "Core #01 Fault"  
**Description :** The kitchen hood HMI is displaying "Core #01 Fault". This did not effect the balancing of the hood.  
**Created By :** National TAB                      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** InfoOnly                      **Asset Tag :**  
**Originated Date :** 05/27/2025 - Stephen Tassinaro - National TAB

Project Issue File Details



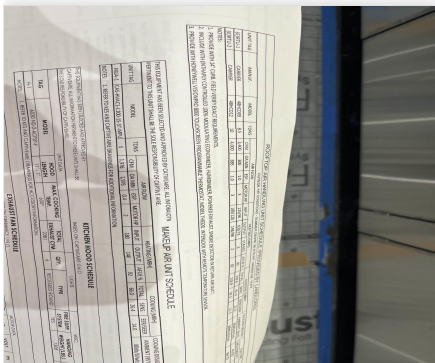
05/27/2025

05-26-25 CAVA WARWICK, RI

### Project Issue Information

**Issue Name :** Incorrect Thermostats  
**Description :** The currently installed thermostats are not the correct model and do not have all the desired functions (occupancy, humidity, remote sensors, exc). The current thermostats are can schedule just temperature setpoints.  
**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** High **Asset Tag :**  
**Originated Date :** 05/28/2025 - Stephen Tassinaro - National TAB

#### Project Issue File Details



05/28/2025



05/28/2025

#### Project Issue Response Details

- **05/29/2025 National TAB - Stephen Tassinaro**
  - Both new and original thermostats do not have an OCC terminal. Default Carrier RTU setup puts unit into occupied mode whenever the blower is running.
- **05/29/2025 National TAB - Stephen Tassinaro**
  - One thermostat has been changed as of 5/29. MC to replace second thermostat 5/30.



05-26-25 CAVA WARWICK, RI

**Project Issue Information**

**Issue Name :** MAU Blower Access Door  
**Description :** The MAU blower access door is stuck shut and not able to be opened without prying.  
**Created By :** National TAB      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** Low      **Asset Tag :**  
**Originated Date :** 05/29/2025 - Stephen Tassinaro - National TAB

Project Issue File Details



05/29/2025



05-26-25 CAVA WARWICK, RI

**Project Issue Information**

**Issue Name :** Remote Sensor Communication  
**Description :** The remote temperature sensors are not communicating with the thermostats. The stats are reading off their internal sensors only.  
**Created By :** National TAB      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** High      **Asset Tag :**  
**Originated Date :** 05/28/2025 - Stephen Tassinaro - National TAB

Project Issue File Details



05/28/2025

Project Issue Response Details

- **05/29/2025    National TAB - Stephen Tassinaro**
  - New RTU 1 thermostat is communicating. RTU 2 is not. Recommend retest once new thermostat is installed as the sensor wiring appears to be OK.



05-26-25 CAVA WARWICK, RI

**Project Issue Information**

|                          |                                                                                                                                             |                      |                               |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------|
| <b>Issue Name :</b>      | Rooftop Equipment Not Labeled                                                                                                               |                      |                               |
| <b>Description :</b>     | Each piece of equipment on the roof should be tagged for proper identification with tags sized and placed on the equipment for visual ease. |                      |                               |
| <b>Created By :</b>      | National TAB                                                                                                                                | <b>Assigned To :</b> | National TAB - Will Turnbough |
| <b>Status :</b>          | Open                                                                                                                                        |                      |                               |
| <b>Priority :</b>        | Low                                                                                                                                         | <b>Asset Tag :</b>   |                               |
| <b>Originated Date :</b> | 05/29/2025 - Stephen Tassinaro - National TAB                                                                                               |                      |                               |

### AIR BALANCE SCHEDULE

| UNIT   | AREA SERVED | HVAC SUPPLY |        | HVAC RETURN |        | HVAC OUTDOOR |        | OA %   |        | HOOD MAKE-UP |        | HOOD EXHAUST |        | GENERAL EXH. |        |
|--------|-------------|-------------|--------|-------------|--------|--------------|--------|--------|--------|--------------|--------|--------------|--------|--------------|--------|
|        |             | DESIGN      | ACTUAL | DESIGN      | ACTUAL | DESIGN       | ACTUAL | DESIGN | ACTUAL | DESIGN       | ACTUAL | DESIGN       | ACTUAL | DESIGN       | ACTUAL |
| RTU-1  | KITCHEN     | 3400        | 3991   | 3100        | 3707   | 300          | 284    | 8.8%   | 7.1%   |              |        |              |        |              |        |
| RTU-2  | DINING      | 4000        | 3428   | 3315        | 2760   | 685          | 668    | 17.1%  | 19.5%  |              |        |              |        |              |        |
| MUA-1  | HOOD MUA    |             |        |             |        |              |        |        |        | 1976         | 1960   |              |        |              |        |
| KEF-1  | HOOD FAN    |             |        |             |        |              |        |        |        |              |        | 2381         | 2388   |              |        |
| EF-2   | RESTROOM    |             |        |             |        |              |        |        |        |              |        |              |        | 125          | 129    |
| EF-3   | RESTROOM    |             |        |             |        |              |        |        |        |              |        |              |        | 125          | 117    |
| TOTALS |             | 7400        | 7419   | 6415        | 6467   | 985          | 952    |        |        | 1976         | 1960   | 2381         | 2388   | 250          | 246    |

#### NET BUILDING AIRFLOW CALCULATION

| TOTALS        | DESIGN | ACTUAL |
|---------------|--------|--------|
| TOTAL OA      | 2961   | 2912   |
| TOTAL EXHAUST | 2631   | 2634   |
| NET AIRFLOW   | 330    | 278    |

| DOOR TESTED | BUILDING PRESSURE MEASUREMENTS (IN. H2O) |
|-------------|------------------------------------------|
| FRONT       | 0.002                                    |
| SIDE        | 0.002                                    |
| REAR        | 0.001                                    |
| AVERAGE     | 0.0017                                   |

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



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - National TAB

### CheckList Item Details

Unit Tag matches the design and submittal MFG and Model Pass

**Comment:**

Data labels match prints

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

**Comment:**

No tags

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:



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - 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:

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:



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - 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:

Duct runs directly from hood to curb.

Grease duct has code required negative pitch from fan inlet back to the hood riser connection N/A

Comment:

N/A

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

Comment:

Grease duct clean-out doors are secured using tool less fasteners and seal fully when hand tightened N/A

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.

Fail

Comment:

Top plate is not secured to the curb.

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

N/A

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

N/A

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:

Sealed with draw band.

Dampers are accessible to TAB team for balancing

N/A

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.

N/A

Comment:

#### HVAC DUCT

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

Pass

Comment:

Ducts are properly supported

Fail

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:



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

**Name :** FIV - MUA **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - National TAB

### CheckList Item Details

MUA Tag information matches design and submittal criteria Pass

**Comment:**

Data label matches specs

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

**Comment:**

Not tagged

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 Fail

**Comment:**

Blower door stuck shut cannot verify

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

N/A

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

Fail

Comment:

Condensate drain terminates after P-trap

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

N/A

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)

N/A

Comment:

Condenser hail guards are installed (if applicable)

N/A

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)

N/A

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:



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - 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 Fail

**Comment:**

Not tagged.

Identify and ensure the RTU label information and size is correct Fail

**Comment:**

Units on wrong curbs.

Ensure proper location of unit Fail

**Comment:**

Units on wrong curbs.

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

Fail

Comment:

No hail guards. No note regarding hail guards located on plans.

#### 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

Fail

Comment:

Drains installed but not per specs.

Condensate line drains away from unit to a approved roof drain

Fail

Comment:

See above.

Belts are tight?

N/A

Comment:

Pulleys aligned?

N/A

Comment:

MERV rated filters are installed and are clean?

Pass

Comment:



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 05/22/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - National TAB

### CheckList Item Details

#### FINAL TESTS

#### HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

None

List smoke candle type used

Comment:

45s Smoke Emitter

Smoke test capture - Perimeter of hood (%)

Comment:

100%

Smoke test capture - Top of cooking surface (%)

Comment:

100%

#### WITNESS

Date test was completed

05/29/2025

**Comment:**

**TAB tech name / Firm**

**Comment:**

Stephen Tassinaro / NTi

**Site super name / Firm**

**Comment:**

N/A

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

**Comment:**

N/A

**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



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - 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:**

Cooking equipment startups not yet complete. Tested function with a lighter and the fans turned on. Currently temperature offset is set to 15F. This can be lowered if the hood does not turn on quick enough after cooking equipment is turned on.



05-26-25 CAVA WARWICK, RI

**CheckList Information**

**Name :** FPT - MUA **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - 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? Pass

Comment:

Heater tested and is functional? Pass

Comment:

Cooling is tested and is functional? Yes

Comment:



## 05-26-25 CAVA WARWICK, RI

### CheckList Information

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

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

**Requesting Organization :** National TAB

**Created Date :** 05/19/2025 - Tara Metcalf - National TAB

**Completed Date :** 05/29/2025 - Stephen Tassinaro - 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% Fail

Comment:

No humidity setting on thermostat.

Occupied Fan = On Fail

**Comment:**

RTU 1: Yes (New Thermostat installed) // RTU 2: No (New thermostat to be installed after TAB) Fan auto/on not set through scheduling. Only adjusted via the "Fan" option on Home Screen.

**Unoccupied Time = 12:00AM**

Pass

**Comment:****Unoccupied Heat setpoint = 60**

Pass

**Comment:****Occupied Cooling setpoint = 80**

Pass

**Comment:****Unoccupied Fan = Auto**

Fail

**Comment:**

RTU 1: Yes (New Thermostat installed) // RTU 2: No (New thermostat to be installed after TAB) Fan auto/on not set through scheduling. Only adjusted via the "Fan" option on Home Screen.

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

Fail

**Comment:**

RTU 1: Calibrated / RTU 2: Unable to calibrate this type of thermostat. Stat to be replaced after TAB is complete.

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

N/A

**Comment:****CONTROL WIRING VALIDATION****Economizer Dry Bulb sensor wired**

Pass

**Comment:****Economizer Dry Bulb sensor operational**

Pass

**Comment:****OCP/OCC terminal wired correctly**

Fail

**Comment:**

Units always in occupied when there is demand with current wiring. (No OCC wire from thermostats to units)

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

Pass

Comment:

Humidity Sensor Wired correctly

Fail

Comment:

No humidity sensors

#### CALIBRATION & PROGRAMMING

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

Pass

Comment:

RTU 1: 62F / 62.6F // RTU 2: 61F / 60.9F

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

N/A

Comment:

No MAT reading on Siemens controllers. Controller does display LAT which was tested as follows: RTU1: 72F / 70.1F // RTU 2: 63F / 62.2F

RTU MAT Low StPt

Comment:

45F

RTU Low T Lockout

Comment:

45F

Economizer set to 28 BTU/lb enthalpy setpoint.

Pass

Comment:

#### Temperature tests

Outside air temperature / humidity

Comment:

64.4F / 67.3% RH

Full cooling LAT/H

**Comment:**

RTU 1: 52.4F / 75.4% RH // RTU 2: 50.8F / 72.5% RH

**Full heating LAT/H****Comment:**

RTU 1: 95.9F / 35.7% RH // RTU 2: 103.0F / 52.1% RH

**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.

N/A

**Comment:****OCCUPANCY VALIDATION**

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

Fail

**Comment:**

No OCC wires.

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

Fail

**Comment:**

No OCC wires.

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)

N/A

**Comment:**

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## System/Unit: AHU/RTU



Asset: RTU1

AREA: KITCHEN

| Unit Data           |          |                    |
|---------------------|----------|--------------------|
|                     | Design   | Actual             |
| MFG                 | CARRIER  | CARRIER            |
| Serial Num          | -        | 4424P65710         |
| Model Num           | 48HCD09  | 48FCDN12B3A5A8W0A0 |
| 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      | -      | N/L     |
| Frame          | -      | N/L     |
| Horsepower     | -      | N/L     |
| Motor Rpm      | -      | N/L     |
| Phase          | 3      | 3       |
| Rated Voltage  | 208    | 208/230 |
| Rated Amperage | -      | 12.6    |

| Drive Data         |              |
|--------------------|--------------|
|                    | Actual       |
| Motor Sheave SetPt | DIRECT DRIVE |

| Test Data              |             |             |
|------------------------|-------------|-------------|
|                        | Design      | Actual      |
| SF CFM                 | 3400 (4000) | 3991        |
| SF RPM                 | -           | 1998        |
| RA CFM                 | 3700        | 3707        |
| OA CFM                 | 300         | 284         |
| RL Voltage             | -           | 208/208/207 |
| RL Amperage            | -           | 7.5/7.2/7.4 |
| SF Rotation            | -           | CORRECT     |
| SF System SetPt        | -           | 8.63VDC     |
| RA Damper Position     | -           | 6.8V        |
| Min OA Damper Position | -           | 3.2V        |
| Min OA Damper Type     | -           | ECONOMIZER  |
| OA Enthalpy Setpt      | -           | 28BTU       |

| Performance Data |        |           |
|------------------|--------|-----------|
|                  | Design | Actual    |
| MA Plenum SP     | -      | -0.96"    |
| Fan Suction SP   | -      | -1.43"    |
| Fan Discharge SP | -      | 1.06"     |
| Total ESP        | 1.00"  | 2.02" [2] |
| Fan Total SP     | -      | 2.49"     |

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

Completed By: Stephen Tassinaro on 05/29/2025

Notes:

[1] [1] 3400 Design CFM (4000 Adjusted CFM) - Due to incorrect unit being installed on this curb.

[2] Static pressures above design. Likely due in part to the incorrect unit being on this curb and airflow is higher than originally designed. Once units are swapped, pressures can be re-evaluated.

[3] ACPSP Readings (FPM): 163, 105, 116, 226, 215, 134, 122, 197 = 770CFM. Fan law increase to 869CFM.

Written By: Stephen Tassinaro on 05/29/2025

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## 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  | L1    | 10"   | 300        | 1    | 333    | 304    | 343       | 114.3       |
| SGRD2      | KITCHEN  | L1    | 10"   | 325        | 1    | 271    | 318    | 359       | 110.5       |
| SGRD3      | KITCHEN  | L1    | 10"   | 325        | 1    | 287    | 336    | 379       | 116.6       |
| SGRD4      | KITCHEN  | L1    | 10"   | 325        | 1    | 289    | 356    | 402       | 123.7       |
| SGRD5      | KITCHEN  | ACPSP | 149X6 | 728        | 4.84 | 644    | 770    | 869       | 119.4       |
| SGRD6      | KITCHEN  | D1    | 10"   | 200        | 1    | 401    | 205    | 231       | 115.5       |
| SGRD7      | KITCHEN  | D1    | 10"   | 265        | 1    | 285    | 287    | 324       | 122.3       |
| SGRD8      | KITCHEN  | D1    | 10"   | 265        | 1    | 267    | 299    | 337       | 127.2       |
| SGRD9      | KITCHEN  | D1    | 10"   | 265        | 1    | 294    | 277    | 313       | 118.1       |
| SGRD10     | KITCHEN  | D1    | 10"   | 350        | 1    | 376    | 385    | 434       | 124.0       |
| Total      |          |       |       | 3348       |      | 3447   | 3537   | 3991      | 119.21%     |

Completed By: Stephen Tassinaro on 05/29/2025

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## System/Unit: AHU/RTU



Asset: RTU2

AREA:DINING

| Unit Data           |          |                    |
|---------------------|----------|--------------------|
|                     | Design   | Actual             |
| MFG                 | CARRIER  | CARRIER            |
| Serial Num          | -        | 4424P65710         |
| Model Num           | 48HCD12  | 48FCDN09B3A5A8W0A0 |
| 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      | -      | N/L     |
| Frame          | -      | N/L     |
| Horsepower     | -      | N/L     |
| Motor Rpm      | -      | N/L     |
| Phase          | 3      | 3       |
| Rated Voltage  | 208    | 208/230 |
| Rated Amperage | -      | 7.5     |

| Drive Data         |              |
|--------------------|--------------|
|                    | Actual       |
| Motor Sheave SetPt | DIRECT DRIVE |

| Test Data              |             |             |
|------------------------|-------------|-------------|
|                        | Design      | Actual      |
| SF CFM                 | 4000 (3400) | 3428        |
| SF RPM                 | -           | 1489        |
| RA CFM                 | 2715        | 2760        |
| OA CFM                 | 685         | 668         |
| RL Voltage             | -           | 206/206/207 |
| RL Amperage            | -           | 3.7/3.4/3.4 |
| SF Rotation            | -           | CORRECT     |
| SF System SetPt        | -           | 6.42VDC     |
| RA Damper Position     | -           | 4.8V        |
| Min OA Damper Position | -           | 5.2V        |
| Min OA Damper Type     | -           | ECONOMIZER  |
| OA Enthalpy Setpt      | -           | 28BTU       |

| Performance Data |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| MA Plenum SP     | -      | -0.47" |
| Fan Suction SP   | -      | -0.90" |
| Fan Discharge SP | -      | 0.19"  |
| Total ESP        | 1.00"  | 0.66"  |
| Fan Total SP     | -      | 1.09"  |

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

Completed By: Stephen Tassinaro on 05/29/2025

Notes:  
 [1] 4000 Design CFM (3400 Adjusted CFM) - Due to incorrect unit being installed on this curb.

Written By: Stephen Tassinaro on 05/27/2025

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU2/DINING

| Asset      |          |      |      |            |      |        |        |           |             |
|------------|----------|------|------|------------|------|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK   | CFM(1) | CFM(2) | FINAL CFM | % to design |
| SGRD1      | DINING   | R1   | 16"  | 300        | 0.66 | 322    | 285    | 240       | 80.0        |
| SGRD2      | DINING   | R1   | 16"  | 350        | 0.66 | 407    | 388    | 327       | 93.4        |
| SGRD3      | DINING   | R1   | 16"  | 300        | 0.66 | 294    | 288    | 243       | 81.0        |
| SGRD4      | DINING   | R1   | 16"  | 350        | 0.66 | 322    | 338    | 286       | 81.7        |
| SGRD5      | DINING   | R1   | 16"  | 300        | 0.66 | 299    | 304    | 257       | 85.7        |
| SGRD6      | DINING   | R1   | 16"  | 300        | 0.66 | 269    | 310    | 262       | 87.3        |
| SGRD7      | DINING   | R1   | 16"  | 300        | 0.66 | 298    | 313    | 264       | 88.0        |
| SGRD8      | DINING   | R1   | 16"  | 300        | 0.66 | 361    | 293    | 247       | 82.3        |
| SGRD9      | DINING   | R1   | 16"  | 300        | 0.66 | 341    | 317    | 268       | 89.3        |
| SGRD10     | DINING   | R1   | 16"  | 300        | 0.66 | 416    | 331    | 279       | 93.0        |
| SGRD11     | DINING   | R1   | 16"  | 300        | 0.66 | 298    | 321    | 270       | 90.0        |
| SGRD12     | DINING   | R1   | 16"  | 300        | 0.66 | 231    | 276    | 233       | 77.7        |
| SGRD13     | DINING   | D2   | 6"   | 50         | 1    | 119    | 48     | 41        | 82.0        |
| SGRD14     | DINING   | D2   | 6"   | 100        | 1    | 123    | 105    | 89        | 89.0        |
| SGRD15     | DINING   | D2   | 6"   | 100        | 1    | 114    | 96     | 81        | 81.0        |
| SGRD16     | DINING   | D2   | 6"   | 50         | 1    | 110    | 49     | 41        | 82.0        |
| Total      |          |      |      | 4000       |      | 4324   | 4062   | 3428      | 85.7%       |

Completed By: Stephen Tassinaro on 05/29/2025

| Asset  | Notes                                                                                                       | Date       | Written By        |
|--------|-------------------------------------------------------------------------------------------------------------|------------|-------------------|
| SGRD12 | Airflow turbulent. Diffuser in close proximity to the supply drop & 90 degree transition. Damper squeaking. | 05/28/2025 | Stephen Tassinaro |

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## System/Unit: FAN - Exhaust



Asset: EF2

AREA:RESTROOM FAN

| Unit Data     |           |            |
|---------------|-----------|------------|
|               | Design    | Actual     |
| MFG           | GREENHECK | LOREN COOK |
| Model Num     | SP-A290   | GEMINI 180 |
| Type          | CEILING   | CEILING    |
| Configuration | VERTICAL  | VERTICAL   |

| Motor Data       |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| Motor MFG        | -      | QUEACE |
| Frame            | -      | N/L    |
| Horsepower       | 1.00   | 50W    |
| Motor Rpm        | -      | 1350   |
| Phase            | 1      | 1      |
| Voltage (rated)  | 120    | 115    |
| Amperage (rated) | -      | 1.0    |
| Service Factor   | -      | N/L    |

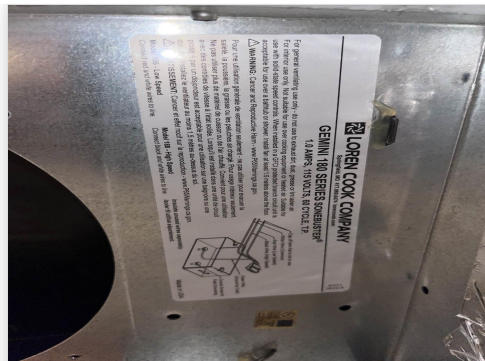
| Test Data    |        |                  |
|--------------|--------|------------------|
|              | Design | Actual           |
| CFM          | 125    | 129              |
| Fan RPM      | -      | DD               |
| Fan Rotation | -      | CORRECT          |
| Motor RPM    | -      | DD               |
| System SetPt | -      | SPEED CONTROLLER |
| RL Voltage   | -      | 119              |
| RL Amperage  | -      | 0.67             |

Completed By: Stephen Tassinaro on 05/28/2025

### Unit Data - PHOTO LOG



05/28/2025



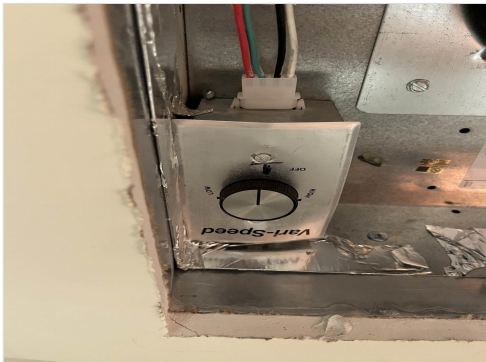
05/28/2025

## Motor Data - PHOTO LOG



05/28/2025

## Test Data - PHOTO LOG



05/28/2025

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## System/Unit: FAN - Exhaust



Asset: EF3

AREA:RESTROOM FAN

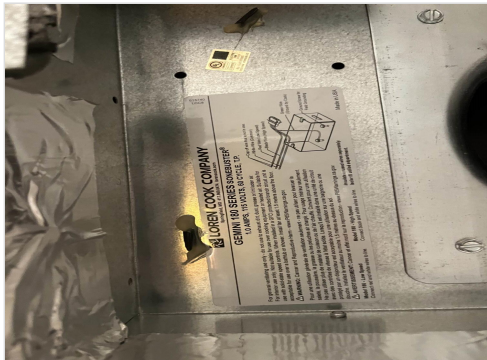
| Unit Data     |           |            |
|---------------|-----------|------------|
|               | Design    | Actual     |
| MFG           | GREENHECK | LOREN COOK |
| Model Num     | SP-A290   | GEMINI 180 |
| Type          | CEILING   | CEILING    |
| Configuration | VERTICAL  | VERTICAL   |

| Motor Data       |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| Motor MFG        | -      | QUEACE |
| Frame            | -      | N/L    |
| Horsepower       | -      | 50W    |
| Motor Rpm        | -      | 1350   |
| Phase            | 1      | 1      |
| Voltage (rated)  | 120    | 115    |
| Amperage (rated) | -      | 1.0    |
| Service Factor   | -      | N/L    |

| Test Data    |        |                  |
|--------------|--------|------------------|
|              | Design | Actual           |
| CFM          | 125    | 117              |
| Fan RPM      | -      | DD               |
| Fan Rotation | -      | CORRECT          |
| Motor RPM    | -      | DD               |
| System SetPt | -      | SPEED CONTROLLER |
| RL Voltage   | -      | 120              |
| RL Amperage  | -      | 0.72             |

Completed By: Stephen Tassinaro on 05/29/2025

### Unit Data - PHOTO LOG

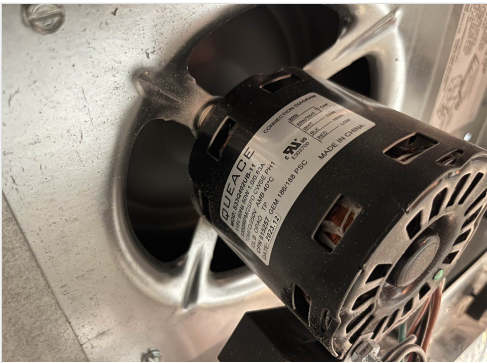


05/28/2025



05/28/2025

Motor Data - PHOTO LOG



05/28/2025

Test Data - PHOTO LOG



05/28/2025

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## System/Unit: FAN - Exhaust



Asset: KEF1

AREA:HOOCD FAN

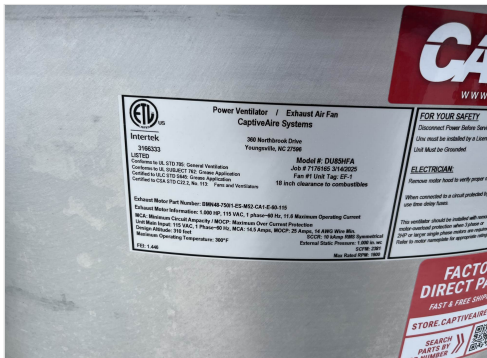
| Unit Data     |                 |              |
|---------------|-----------------|--------------|
|               | Design          | Actual       |
| MFG           | GREENHECK       | CAPTIVE AIRE |
| Model Num     | DU180HFA        | DU85HFA      |
| Serial Num    | -               | 7176165      |
| Type          | UPBLAST/CEILING | CENTRIFUGAL  |
| Configuration | VERTICAL        | UPBLAST      |

| Motor Data       |        |                |
|------------------|--------|----------------|
|                  | Design | Actual         |
| Motor MFG        | -      | TELCO INTERCON |
| Frame            | -      | 48             |
| Horsepower       | 1.00   | 1.0            |
| Motor Rpm        | 1572   | 1800           |
| Phase            | 1      | 1              |
| Voltage (rated)  | 115    | 115            |
| Amperage (rated) | -      | 11.6           |
| Service Factor   | -      | N/L            |

| Test Data        |        |         |
|------------------|--------|---------|
|                  | Design | Actual  |
| CFM              | 2381   | 2388    |
| Fan RPM          | -      | 1350    |
| Fan Rotation     | -      | CCW     |
| Motor RPM        | -      | 1350    |
| System SetPt     | -      | 75% ECM |
| RL Voltage       | -      | 119     |
| RL Amperage      | -      | 9.6     |
| Total ESP        | 1.00"  | 0.85"   |
| Fan Inlet SP     | -      | -0.85"  |
| Fan Discharge SP | -      | ATM     |

Completed By: Stephen Tassinaro on 05/29/2025

### Unit Data - PHOTO LOG



05/29/2025



05/29/2025

Motor Data - PHOTO LOG



05/29/2025



05/29/2025

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## System/Unit: FAN - Supply



Asset: MUA1

AREA:HOOD MUA

| Unit Data            |                                   |                            |
|----------------------|-----------------------------------|----------------------------|
|                      | Design                            | Actual                     |
| <b>MFG</b>           | CAPTIVEAIRE                       | ECON AIR                   |
| <b>Model Num</b>     | CAS-HVAC1-<br>I.200-15-5T-<br>MPU | EARTU1-I.200-<br>15-5T-MPU |
| <b>Serial Num</b>    | -                                 | 7276165                    |
| <b>Type</b>          | MUA                               | MUA                        |
| <b>Configuration</b> | VERTICAL                          | VERTICAL                   |

| Motor Data              |        |        |
|-------------------------|--------|--------|
|                         | Design | Actual |
| <b>Motor MFG</b>        | -      | [1]    |
| <b>Frame</b>            | -      | [1]    |
| <b>Horsepower</b>       | 2.00   | 2.0    |
| <b>Motor Rpm</b>        | 1976   | [1]    |
| <b>Phase</b>            | 3      | 3      |
| <b>Voltage (rated)</b>  | 208    | 208    |
| <b>Amperage (rated)</b> | -      | 6.1    |
| <b>Service Factor</b>   | -      | [1]    |

| Gas Heat                        |        |        |
|---------------------------------|--------|--------|
|                                 | Design | Actual |
| <b>Heater Operates (y/n)</b>    | -      | YES    |
| <b>Flame Status (pass/fail)</b> | -      | PASS   |
| <b>Inlet Air Temp SetPt</b>     | -      | 55     |
| <b>Discharge Air Temp SetPt</b> | -      | 60     |

| Test Data               |        |          |
|-------------------------|--------|----------|
|                         | Design | Actual   |
| <b>CFM</b>              | 1976   | 1960     |
| <b>SF RPM</b>           | -      | [1]      |
| <b>Motor RPM</b>        | -      | [1]      |
| <b>SF System SetPt</b>  | -      | 43.6Hz   |
| <b>RL Voltage</b>       | -      | 113V VFD |
| <b>RL Amperage</b>      | -      | 3.8A VFD |
| <b>Fan Discharge SP</b> | -      | 0.26"    |

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

Completed By: Stephen Tassinaro on 05/29/2025

Notes:

[1] BLOWER ACCESS DOOR NOT OPENING. STUCK SHUT.

Written By: Stephen Tassinaro on 05/29/2025

# National TAB

Project: 05-26-25 CAVA WARWICK, RI

## System/Unit: Kitchen Hood Type I



Asset: HD1

AREA: KITCHEN HOOD

| Unit Data            |                   |                  |
|----------------------|-------------------|------------------|
|                      | Design            | Actual           |
| MFG                  | CAPTIVEAIRE       | CAPTIVEAIRE      |
| Model Num            | 6030 ND-2-ACPSP-F | 6030 ND-2        |
| Job / Serial Num     | -                 | 7176165          |
| Type                 | TYPE I - CANPOPY  | TYPE I - CANPOPY |
| Hood length          | 127"              | 127"             |
| Hood Width           | 60"               | 60"              |
| Supply Plenum Type   | -                 | ACPSP            |
| Supply Plenum Width  | 14"               | 14"              |
| Supply Plenum Length | 140"              | 139"             |

| Test Data Supply |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| Total Area       | 13.51  | 13.51  |
| Kv factor (Vel)  | 0.89   | 0.89   |
| Num of Readings  | -      | 6      |
| Reading1 FPM     | -      | 141    |
| Reading2 FPM     | -      | 151    |
| Reading3 FPM     | -      | 130    |
| Reading4 FPM     | -      | 175    |
| Reading5 FPM     | -      | 172    |
| Reading6 FPM     | -      | 207    |
| Ave FPM(corr)    | -      | 163    |
| CFM              | 1976   | 1960   |

| Test Data Exhaust       |                      |                      |
|-------------------------|----------------------|----------------------|
|                         | Design               | Actual               |
| Filter Type             | CAPTRATE SOLO FILTER | CAPTRATE SOLO FILTER |
| Filter Size 1           | 20X16                | 20X16                |
| Filter Qty 1            | 7                    | 7                    |
| Filter AK factor size 1 | 2.08                 | 2.08                 |
| Filter Total AK Area    | 14.56                | 14.56                |
| Filter1 FPM             | -                    | 169                  |
| Filter2 FPM             | -                    | 168                  |
| Filter3 FPM             | -                    | 167                  |
| Filter4 FPM             | -                    | 173                  |
| Filter5 FPM             | -                    | 170                  |
| Filter6 FPM             | -                    | 146                  |
| Filter7 FPM             | -                    | 153                  |
| Filter Ave FPM(corr)    | -                    | 164                  |
| CFM                     | 2381                 | 2388                 |

| Cooking Equipment |         |
|-------------------|---------|
|                   | Actual  |
| Item 1            | OVEN    |
| Item 2            | STOVE   |
| Item 3            | GRIDDLE |
| Item 4            | FRYER   |

Completed By: Stephen Tassinaro on 05/27/2025

