Report By:

National TAB
1329 E Kemper Rd, Ste 4210
Cincinnati, OH 45246

Report: **Test and Balance**
Date: **9/23/2020**

PROJECT

CHICK-FIL-A #01815 PHENIX CITY FSU (PHENIX CITY, AL)

3711 US HWY 280
PHENIX CITY, AL 36867

Client

CHICK-FIL-A (CFA)
5200 BUFFINGTON ROAD
ATLANTA, GA 30349-2998

National TAB

Project: CHICK-FIL-A #01815 PHENIX CITY FSU (PHENIX CITY, AL)

Table Of Contents

REMARKS

Assigned Organization: National TAB

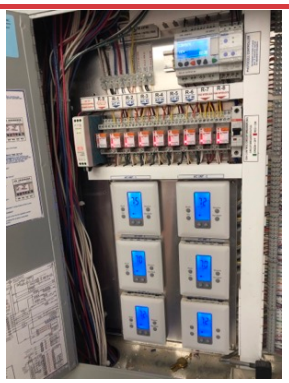
Status: Not Submitted

Asset:

CRITICAL = Unable to perform T&B scope until GC corrects	
REVIEW + RECTIFY = Review Deficiency w/ engineer, owner, GC, to determine action required.	
NON-CRITICAL = Proceed with T&B scope & note as deficiency	
- -	
NON-CRITICAL	High voltage cable routing compartment for Suncoast panel is not yet installed. All high voltage wiring should be run up left side of panel and the labeled sheet metal panel should be installed over the wiring.
REVIEW + RECTIFY	Hood 4 pin and sleeve outlet is not yet wired. Electrician is to complete. Required for fryer operation. See Pin & Sleeve Box Detail Sheet E-2.3
REVIEW + RECTIFY	Grease duct access doors are not built as shown on plans. These doors may need to be replaced with doors that are built as designed in order to ensure CFA can properly cleanout ductwork in the future. See sheet M-3.1 detail 9.
REVIEW + RECTIFY	GFI outlets have no power. Electrician should ensure that power has been brought to the outlets at the RTUs. outlets may be faulty and may need to be replaced.
REVIEW + RECTIFY	Humidistat wiring is not landed at the RTU as shown in the mechanical drawings. GND wire and shielded wires are landed at C, but should be landed at drain terminal. See M-4.1 detail 3 for correct wiring diagram.
INFO ONLY	No backdraft damper is installed in the duct for EF3, the restroom exhaust fan. This fan is also not secured to the curb. The fan is existing and installation of the backdraft damper is not in the scope of work. Listing as an issue since it is a deviation from typical CFA spec.
INFO ONLY	Some existing diffusers do not have hard elbow. Typical CFA design is for all diffusers to have a rigid 90 degree fitting installed per SAG/RAG/Grille Take-off Drawing Sheet M-3.1. Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.
REVIEW + RECTIFY	Diffusers in Mechanical area and kitchen are not placed exactly where shown on plans. Recommend installing per plan on M101.MOD

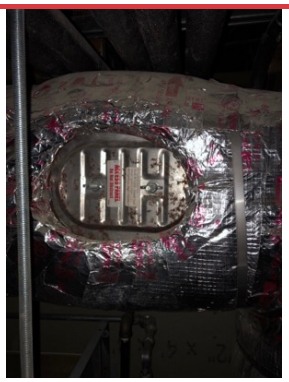
INFO ONLY	Existing ductwork has dampers on bottom of duct with no ribbon. Typical CFA design is for all damper handles to be be installed on left or right side of duct and marked with fluorescent ribbon, per Start Collar Drawing Sheet M-3.1. Insulation completely covers dampers on existing ductwork. Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.
INFO ONLY	There is no hard pipe after start collar on some existing ductwork. Typical CFA design is for all diffuser take-offs to have at the minimum 1' of hard duct installed per Start Collar Drawing Sheet M-3.1. Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.
INFO ONLY	Existing ductwork uses more than 4' of flex in places. Typical CFA design is for a maximum of 48" of flex duct for each diffuser run per SAG/RAG/Grill Take-off Drawing Sheet M-3.1. Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.
CRITICAL	AC1 return drop has a hard 90 installed that is not shown in drawings. Supply airflow is 89% AC1 and this deviation appears to be a source of restriction. See M-3.1 detail 6 for how duct should be installed. Appears the duct was installed this way due to lack of space above the ceiling. IF the duct cannot be installed per design, recommend consulting the engineer of record to determine next steps.
REVIEW + RECTIFY	More than 4' of flex on AHU1 diffusers. Plans specify a maximum of 48" of flex duct for each diffuser run per SAG/RAG/Grill Take-off Drawing. See sheet M3.1 detail 6.
REVIEW + RECTIFY	AHU1 has dampers on bottom on horizontal duct. Plans call for all damper handles to be be installed on left or right side of duct and marked with fluorescent ribbon, per Start Collar Drawing. Vertically installed dampers can restrict airflow. See sheet M3.1 detail 6.
REVIEW + RECTIFY	AC2 annunciator is not labeled. Other labels do not meet specification. Install labels per Smoke Detector and Annunciator Wiring Diagram Sheet M-4.1
REVIEW + RECTIFY	No dampers installed in existing ductwork for restroom diffusers. Women's RR airflow is high and cannot be decreased because there is no damper for the individual diffuser. Airflow in women's restroom is 285 CFM out of 180 CFM design. This is higher than the exhaust rate, and is therefore positively pressurizing the restroom. Recommend installing dampers for diffusers in both the women's and men's restrooms.

Notes/Comments:



CABLE ROUTING COMPARTMENT IS NOT YET INSTALLED

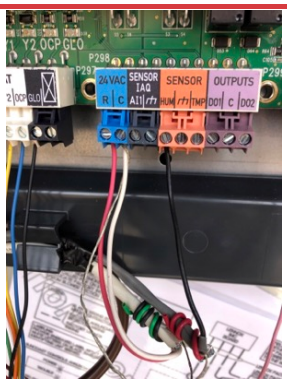
HOOD 4 PIN AND SLEEVE OUTLET IS NOT YET WIRED



ACCESS DOORS ARE NOT EXACTLY WHAT IS SHOWN ON PLANS

Different access doors need to be replaced with access doors on plans if CFA does not approve of different access doors. See sheet M-3.1 detail 9.

GFI OUTLETS HAVE NO POWER



WIRES AND SHIELD WIRES ARE NOT LANDED TO DRAIN TERMINAL

See M-4.1 Detail 3 for correct wiring diagram.

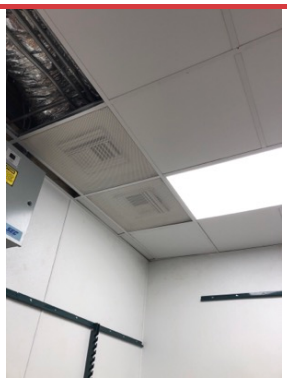
NO BACKDRAFT DAMPER IN RR EXHAUST FAN

Fan is also not secured to curb.

The fan is existing and installation of the back draft damper is not in the scope of work. Listing as an issue since it is a deviation from typical CFA spec.

SOME EXISTING DIFFUSERS DO NOT HAVE HARD ELBOW

Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.



DIFFUSERS IN MECHANICAL AREA AND KITCHEN ARE NOT PLACED EXACTLY WHERE SHOWN ON PLANS.

Recommend installing per plan on M101.MOD

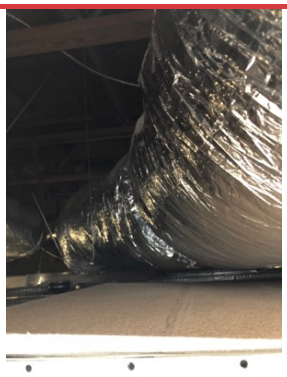
EXISTING DUCTWORK HAS DAMPERS ON BOTTOM OF DUCT WITH NO RIBBON

Insulation completely covers dampers on existing ductwork.

Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.

THERE IS NO HARD PIPE AFTER START COLLAR ON SOME EXISTING DICTWORK

Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.

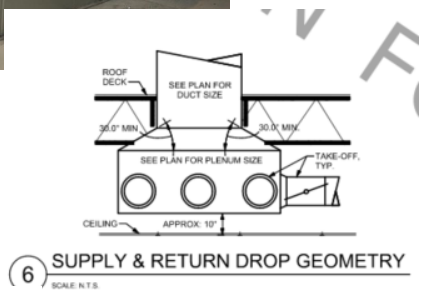


EXISTING DUCTWORK USES MORE THAN 4’ OF FLEX IN PLACES

Existing ductwork in dining room area is outside of the scope of construction. Listed as it is a deviation from typical CFA spec.

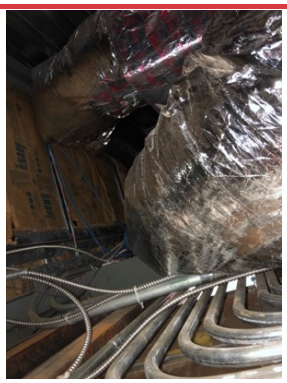
AC1 RETURN DROP IS A HARD 90 WITHOUT GRADUAL ANGLE

Airflow is low on AC1 and return drop is a hard 90. See M-3.1 detail 6. There does not appear to be room in the ceiling for proper transition.



6 SUPPLY & RETURN DROP GEOMETRY
SCALE: N.T.S.

See detail 6 on sheet M3.1. This is the largest deviation to specification that was noted.



MORE THAN 4’ OF FLEX ON AHU1 DIFFUSERS

See sheet M3.1 detail 6.

EXPANSION HAS DAMPERS ON BOTTOM ON HORIZONTAL DUCT

See sheet M3.1 detail 6.

HOOD 3 IS HUNG AT 63.5”

See M-6.1, detail 2, which specs 76” from floor. However, Halton hood sheets specify 64” from floor. There are two conflicting dimensions on the plans.

AC2 ANNUNCIATOR IS NOT LABELLED

NO DAMPERS IN EXISTING DUCTWORK FOR RESTROOM DIFFUSERS

Women’s RR airflow is high and cannot be cut because there is no damper for the individual damper.

Airflow in women's restroom is 285 CFM out of original design of 180 CFM which is higher than the exhaust rate.

Recommend installing dampers in both the women's and men's restrooms.

Project Summary

The summary below provides a quick understanding of how well your HVAC systems balanced in respect to the design criteria. The summary concludes with a quick understanding of your building environment and possible suggestions for each of your systems after testing has been performed. 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. Our focus is 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. Also, enclosed are pictures of building assets and items listed below that will provide your team with more insight.

Facility Identification and TAB Requirements
The mechanical equipment to be tested, adjusted, and balanced includes: All Roof Top Units (RTU), All Exhaust Fans (EF), All Kitchen Hoods, and all associated air devices.

Inspections and Commissioning Light
The HVAC equipment, ductwork, and other building assets were inspected per Chick Fil A requirements. The results of this inspection is included in checklists within the report. Operational tests were also performed on the HVAC controls to ensure occupied and unoccupied sequence of operation.

RTU's
Each of the RTU’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 RTU was then adjusted to +/-10% of the specified design. Each terminal diffuser was balanced to within +/-10% of the engineer’s design volume utilizing the provided hand damper located at the takeoff of the main & branch trunk line(s).

Kitchen Exhaust Hood & Associated Fans
Each kitchen exhaust fan was measured by taking static pressure at the exhaust plenum and comparing to OEM performance data. The total flow of the exhaust was then adjusted to +/-10% of the engineers design flow.

General Exhaust Fans
The restroom exhaust fan was measured by reading each air device with a flow hood. The total airflow for this fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within +/-10% of design. Each terminal device was balanced to within +/-10% of the design volume using the installed volume dampers.

Final Building Tests
After completing the test and balance, the final building pressure was recorded at +0.01” W.C. average. This pressure falls within the recommended tolerances by the International Mechanical Code of +0.02” W.C. to -0.02” W.C. The building is designed for a net positive pressure and this measurement coincides with that requirement.
The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat off and 100% capture was observed.

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
AC-1	KITCHEN	9500	8478	7695	6764	1805	1714	19.0%	20.2%						
AC-2	SIDE DINING	3150	3236	2551	2597	599	639	19.0%	19.7%						
AC-3	SERVING	2710	2683	3240	1887	760	796	28.0%	29.7%						
AC-4	DINING	4000	3540	2195	3045	515	495	12.9%	14.0%						
AC-5	PLAY AREA	1800	1643	1458	1296	342	347	19.0%	21.1%						
AHU-1	NEW ADDITION	1200	1261	972	1051	228	210	19.0%	16.7%						
EF-1	HD1 L&R PRESS COOKER											1912	1820		
EF-2	HD3 FRYER											701	701		
EF-3	RESTROOMS													500	474
EF-4	HD4 FRYER											390	391		
TOTALS		22360	20841	18111	16640	4249	4201					3003	2912	500	474

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	4249	4201
TOTAL EXHAUST	3503	3386
NET AIRFLOW	746	815

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.01
SIDE	0.01
REAR	0.01
AVERAGE	**0.01**

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:

Store Front

AC1

AC2

AC3

AC4

AC5

AHU1

Hood EF

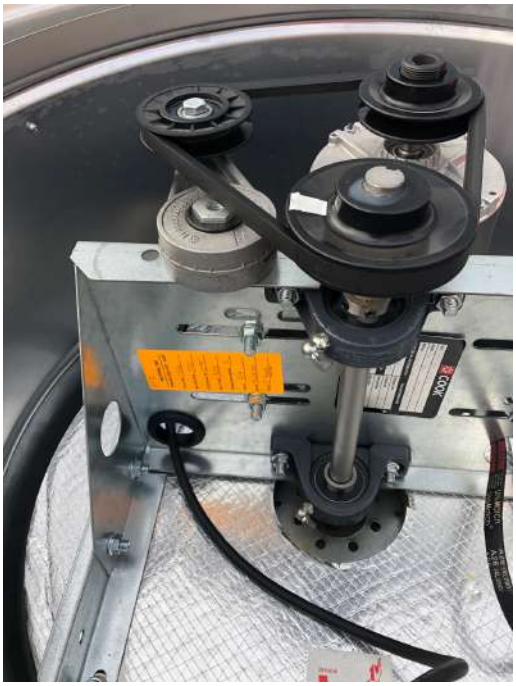
Hood EF

Hood EF

RR EF

Label

Label



Label

Label

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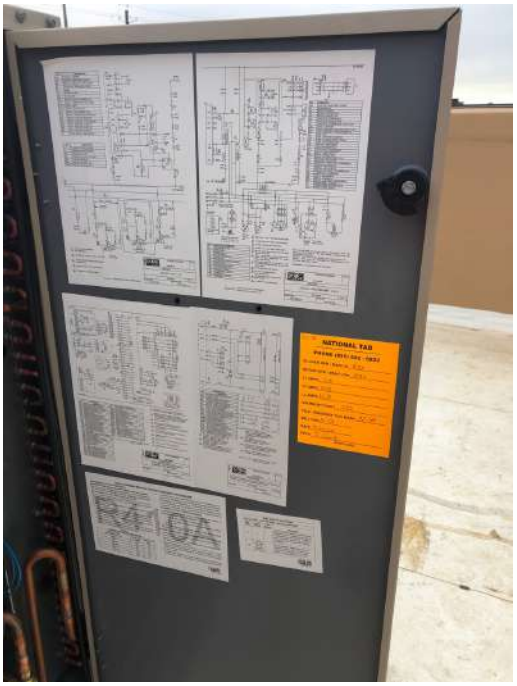


Marked Damper

Marked Economizer

Capture Jet

Capture Jet

Capture Jet

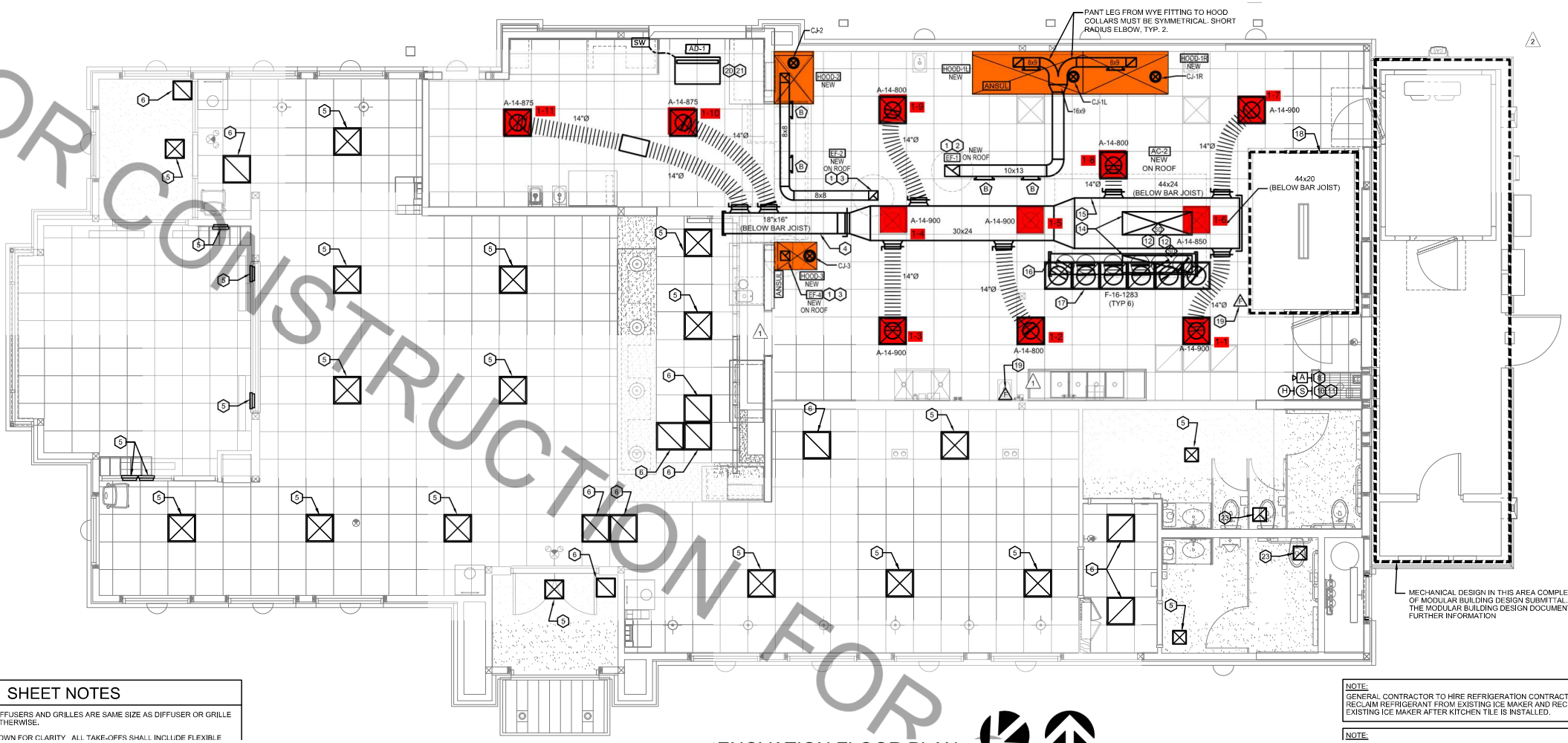
Capture Jet

Side Capture Jet

Hood

Hood

Hood



SHEET NOTES

FFUSERS AND GRILLES ARE SAME SIZE AS DIFFUSER OR GRILLE
THERWISE.

OWN FOR CLARITY. ALL TAKE-OFFS SHALL INCLUDE FLEXIBLE

RENOVATION FLOOR PLAN

TRUE NORTH

PLAN NORTH

NOTE:
GENERAL CONTRACTOR TO HIRE REFRIGERATION CONTRACT
RECLAIM REFRIGERANT FROM EXISTING ICE MAKER AND REC
EXISTING ICE MAKER AFTER KITCHEN TILE IS INSTALLED.

NOTE:

F2F & OMD CANOPY NO

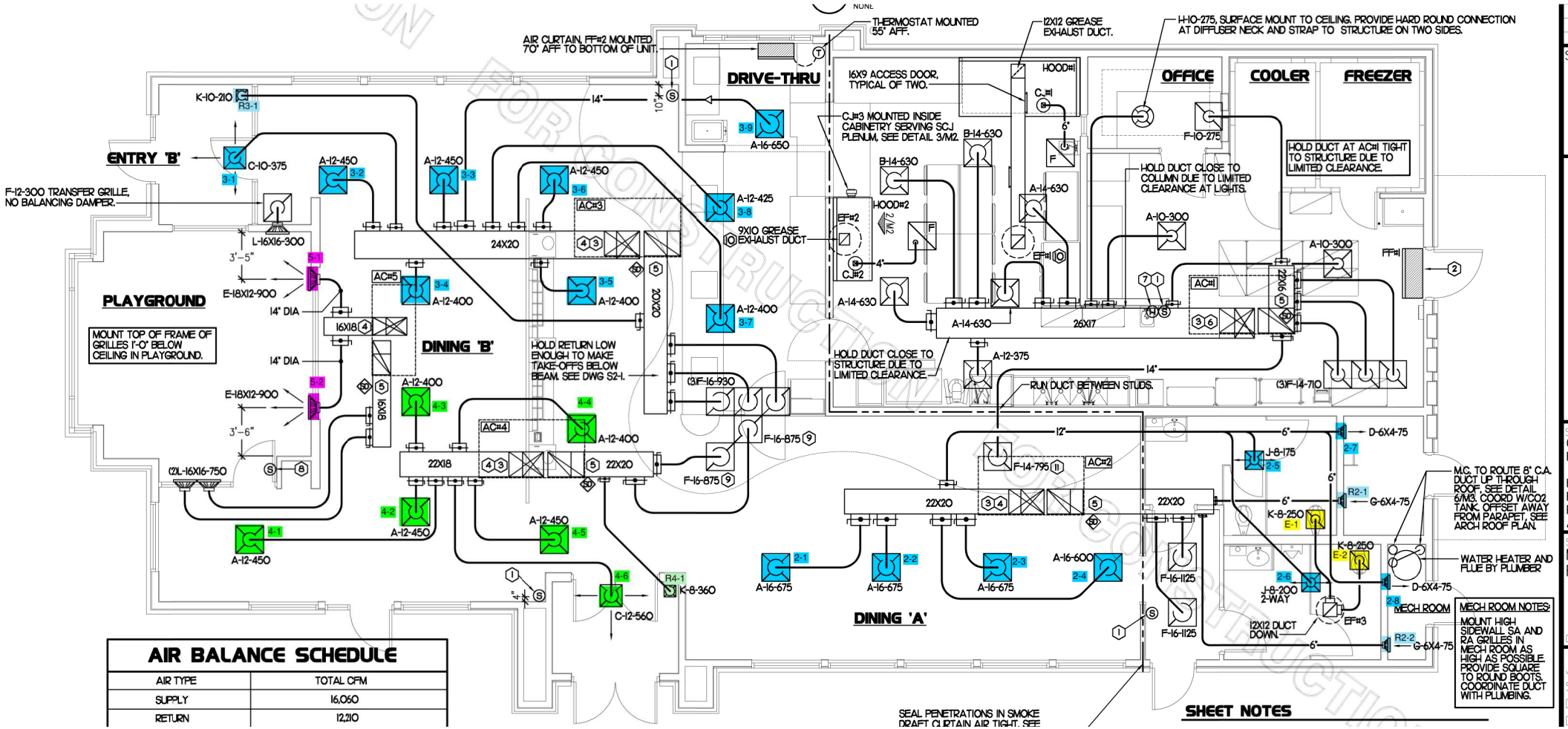
1. REFER TO SHEET M1.3 FOR FURTHER INFORMATION REG
CANOPY SCOPE. MECHANICAL CONTRACTOR TO PURCH
MOUNT NEW CIRCULATION FANS & HEATERS. COORDINA
NUMBER OF FANS & HEATERS WITH CANOPY MANUFACT

(TYPICAL).

HVAC KEY NOTES

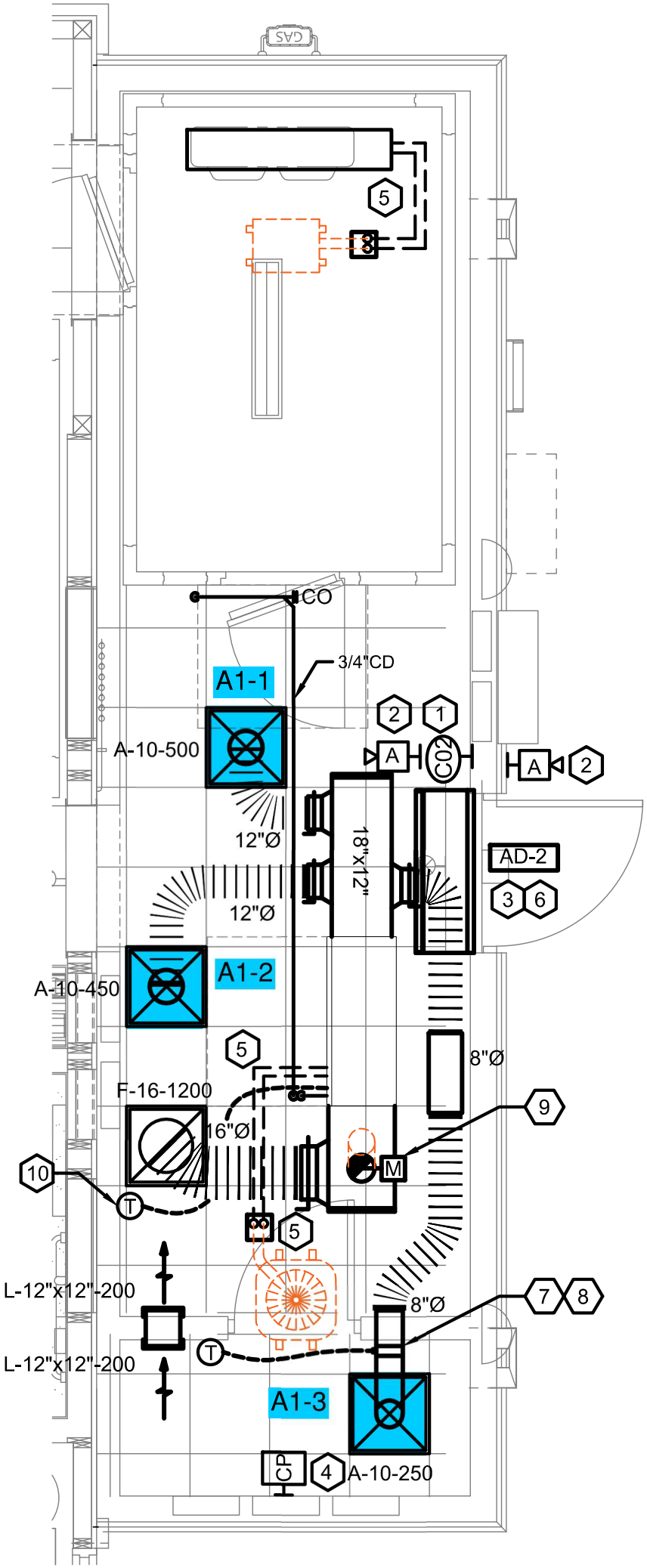
YSTEMS SHALL SUPPLY AND INSTALL CO2 ANNUNCIATOR MOUNTED AT 60"
TRICAL CONTRACTOR TO PROVIDE SINGLE-GANG J-BOX WITH 1/2" CONDUIT

(14) 60x20 SUPPLY AIR RTU DROP AND 60x18 RETURN AIR DROP FROM NEW KI



AIR BALANCE SCHEDULE

AIR TYPE	TOTAL CFM
SUPPLY	16,060
RETURN	12,210


GAS
5
3
CO
3/4"CD
A1-1
A-10-500
2
1
A
CO2
A
2
12"Ø
18"x12"
AD-2
3
6
12"Ø
A1-2
A-10-450
5
8"Ø
F-16-1200
16"Ø
9
10
T
M
5
L-12"x12"-200
8"Ø
7
8
L-12"x12"-200
T
A1-3
CD
4
A-10-250

TECH - INSPECTION: CONTROLS

Assigned Organization: National TAB

Status: Not Submitted

Asset:

Picture document all issues with full description. Needs to include the location of the specification (example: Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the mechanical contractor on site.	
SENSORS	
-Temperature and humidity sensors are installed where shown on the drawing?	YES, EXCEPT WHERE WALL LOCATIONS ARE MOVED FROM ORIGINAL DRAWINGS.
-Temperature sensors are wired to the correct thermostat? (Check by having someone hold a lighter under the sensor from a safe distance and verifying temperature rise on the thermostat)	YES
-Sensors labeled on wall (preferably not on the sensors themselves) with exact verbiage on Controls sheet (AC#X HUMIDITY SENSOR, AC#X TEMP SENSOR)	YES
-Covers of humidstats are secured?	YES
-For all humidstats: 2 conductor shielded cable has one wire landed to Vin, one to COM, and the shield wire is not connected.	YES
-For all humidstats: For second shielded cable, one wire is landed to Vout and the shield wire is not connected.	YES
PANEL	
-High voltage wiring is run through the cable routing compartment?	NO, NOT YET.
-Low voltage wiring installed at all terminals shown on specification for each RTU—E1, DI-1, G, Y2, Y1, W2, W1, R, C, RS2, RS1, RSGRD	YES FOR ALL EXCEPT AC6, WHICH HAS NOTHING LANDED TO E1, DI-1, Y-2, OR W-2.
-Thermostats are powered?	YES

Notes/Comments:

TECH - INSPECTION: EXHAUST FANS

Assigned Organization: National TAB

Status: Not Submitted

Asset:

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RESTROOM EXHAUST FAN	
-Rectangular duct is lined and has 10”x10” free area?	YES
-Round duct is externally insulated?	YES
-Backdraft damper is installed in duct and operates correctly?	NO, NO BACKDRAFT DAMPER INSTALLED
-Flexible conduit is run up through duct to raceway in fan?	YES
-Fan is secured to the curb with screws?	NO
-Speed controller installed and wired?	YES
-Birdscreen installed?	YES
UTILITY SET GREASE FANS	
-1’ high nozzle is installed. Extends at least 2” above parapet walls, RTU’s, and condensing units?	N/A
-Joint between the nozzle and the exhaust fan has welded bead (not tack weld) so that grease will not accumulate? Caulking not preferred as it falls off.	N/A
-Grease duct is painted white in a professional manner?	N/A
-Grease duct is supported at 6’ intervals maximum with supports shown in specification?	N/A
-Drip guard is installed and drain is piped to center of the guard?	N/A
-Transition from duct to fan is bolted to fan and has gasket?	N/A
-Bottom of transition is minimum of 24” from top of roof?	N/A

-Service disconnect is installed on the outside of the fan and functional?	N/A
-Belts are properly tensioned? (rotated to 2 tick marks)	N/A
-PVC grease drains pieces are glued together?	N/A
-Pulleys are aligned?	N/A
-Spare belt provided for each fan?	N/A
UPBLAST GREASE FANS	
-Curb extensions installed?	YES
-Grease duct is terminated flush with top of curb?	YES
-Fire caulking around the grease duct flange on top of curb?	YES
-Drip guard is installed and drain is piped to center of the guard?	YES
-Conduit is long enough so that fan can fully hinge back?	YES
-Fan hinges towards the front of the building?	YES
-Service disconnect is installed and functional?	YES
-Belts are properly tensioned? (rotated between 2-3 tick marks)	YES
-PVC gease drains pieces are glued together?	YES
-Pulleys are aligned?	YES
-Spare belt provided for each fan?	YES

Notes/Comments:

TECH - INSPECTION: HOOD/GREASE DUCT

Assigned Organization: National TAB

Status: Not Submitted

Asset:

Picture document all issues with full description. Needs to include the location of the specification (example: Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the mechanical contractor on site.	
-Are hoods 1 and 2 hung 64” AFF (check spec for exact dimension)?	YES
-Is hood 3 hung at 76” AFF (check spec for exact dimension)?	HUNG AT 63.5”
-Unifrax Fyrewrap brand is used on all grease ductwork	YES
-Make sure pin and sleeve electrical box is assembled correctly on all hoods	YES ON HOOD 2, HOOD 3 IS NOT YET WIRED.
-Take filters out of bank. Are there any parts laying in the grease trough and if so do they need to be installed?	PARTS TAKEN OUT OF TROUGH AND GIVEN TO MECHANICAL CONTRACTOR.
-Side brackets installed on between hoods and counters?	YES
-Any threaded holes underneath hood canopy are filled?	YES
-All turns in grease duct are long radius type elbows and follow equation Radius = (3 * W) / 2. Unless specified otherwise on drawings. No mitered fitting allowed. (Both in space and on roof)	YES
-Curb caps secured to the curb where roof top grease duct penetrates into space? (if no roof top grease duct put N/A)	N/A
-EF-1 main drop is equal distance between both risers.	NO. GREASE DUCT IS NOT DESIGNED TO BE SYMMETRICAL AROUND HOOD 1. DUCT IS INSTALLED AS SHOWN IN PLANS.
-Check that grease cleanout doors meet specifications and are assembled correctly	DIFFERENT GREASE CLEANOUT DOORS ARE USED THAN SPEC SHOWS.
-Grease cleanout doors are installed in the location shown on drawing?	YES
-All hoods supported at factory support points with threaded rod (3/8” typ.)?	YES
-If threaded rod is exposed is it inside tubing?	N/A

-ANSUL pull stations are labeled?	YES
-Hood end panels are installed where specified.	YES
-Capture jet fans are hard piped?	YES
-Capture jet speed controllers are wired and functional.	YES
-Capture jet fans are installed the correct direction (so they supply air to hood canopy and do NOT exhaust)	YES
-Side Capture jet (if applicable) is installed with fan guard.	YES
-Hoods are secured to the wall at all pre-punch hole locations?	YES

Notes/Comments:

TECH - INSPECTION:
HVAC DUCTWORK

Assigned Organization: National TAB

Status: Not Submitted

Asset:

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MAIN TRUNKS	
-All ductwork (w/ exception of RR fan) is externally insulated. No liners are allowed and must be removed.	YES
-Ductwork insulation has minimum 6 R-Value installed?	YES
-Canvas connector installed between the main supply & return drops and RTU's.	YES
-Turning vanes on main supply drop should be single thickness and not double thickness (not necessary in returns)?	SINGLE
-Ducts 24" or wider have stick pins and stick pins are covered with duct tape or mastic?	YES, COVERED WITH MASTIC
-All seams in insulation are taped?	YES
GRILLE TAKEOFFS	
-Damper handles are located on the left or right of the duct?	YES
-Fluorescent ribbon is attached to each damper handle?	NO. DAMPERS FOR NEW AC1 DIFFUSERS ARE MARKED WITH FLUORESCENT RIBBON AS DESIGNED. MOST DAMPERS FOR DIFFUSERS ON EXISTING DUCTWORK ARE INSULATED OVER AND UNMARKED. DAMPERS FOR AHU1 ARE UNMARKED.
-Minimum 1' rigid duct after start collar?	YES FOR DUCTWORK IN KITCHEN ON AC1, NO FOR MUCH OF EXISTING DUCTWORK AND AHU1 IN BACK.
-Flex duct is installed on each duct run after rigid duct and is less than 48" in length?	EXISTING DUCTWORK HAS FLEX RUNS LONGER THAN 48". AHU1 HAS FLEX RUNS RUNS LNGER THAN 48".
-Rigid hard pipe with 90 degree fitting and riser connecting to the grille?	AC1 DIFFUSERS HAVE RIGID FITTINGS. MANY EXISTING DIFFUSERS DO NOT HAVE RIGID FITTINGS.
-Drawband is used to secure inner core of the flex duct? (Spot check)	YES
-Drawband or tape is used on outer jacket?	YES

-Tops of diffusers are insulated?	YES
-Mastic at rigid connections to diffuser?	YES

Notes/Comments:

TECH - INSPECTION: OTHER

Assigned Organization: National TAB

Status: Not Submitted

Asset:

Picture document all issues with full description. Needs to include the location of the specification (example: Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the mechanical contractor on site.	
AIR DOORS	
-Installed in proper location?	YES
-Correct model/manufacturer?	YES
-Timer is set to minimum position (0)?	YES
-They are operating correctly?	YES
-Is thermostat for drive thru installed at the air door? If so, recommend it be installed in a more accessible location on the wall.	NO, GOOD.
-Drive thru air door is adjusted so it is not noisey and directed at the center of the drive thru window?	YES
COMBUSTION AIR VENT	
-Completely assembled on roof?	N/A
-Birdscreen is installed?	N/A
-Minimum 18” away from parapet?	N/A
-Chrome escutcheon is installed at ceiling penetration?	N/A

Notes/Comments:

TECH - INSPECTION: ROOF TOP UNITS

Assigned Organization: National TAB

Status: Not Submitted

Asset:

Picture document all issues with full description. Needs to include the location of the specification (example: Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the mechanical contractor on site.	
MECHANICAL CHECKS	
-OA filters are installed?	YES
-Caulking at corners of “hinge” on the OA hood?	YES
-Units are level? (Use a bubble level)	YES
-GFI outlet (if installed) is wired and operational?	NO, NO POWER TO OUTLET.
-Grommets installed for GFI outlet wiring? (If applicable)	YES
-Transformers are set to the correct voltage (typ. 208)	YES
-Condensate drains are installed and have union on both sides of P-trap? (per plumbing drawings)	YES
-Gas piping installed and valves turned on?	YES
-Gas piping grommets are installed?	YES
-Piping (condensate and gas) does not obstruct doors or access panels?	YES, NO OBSTRUCTION.
-Gas piping is painted with coat Aluminum base paint (should also have a coat of zinc rust primer but likely won't be visible). As per Plumbing specs	YES
-Condensate drains have at least 2" rise between connection to unit and the pipe after the P-trap?	YES
-Condensate drains are properly pitched to drain away from the units?	YES
-Belts are all aligned?	YES
-Hail Guards are installed on the condenser coils	YES

-Condensor coil is clean and fins are straight?	YES
-Economizers are functional?	YES
-Evaporator coil is clean and fins are straight?	YES
-All doors and panels are free from damage?	YES
-Any other physical damage to note?	NO, NO DAMAGE.
-Turn off unit and spot check high voltage wiring lugs are tight, no loose wires, etc.	GOOD
-Belts are properly tensioned? (Rotated to 3 tick marks)	YES
-Are tensioner pulleys at an adequate angle? If fully horizontal or fully vertical notify Will so that new belts can be shipped to site ASAP and installed by NT technician.	YES
-Pulleys are aligned?	YES
-Walk around unit. Is there any damage to the unit (Bent doors, dents, etc.). Note any problems	NO
LOW VOLTAGE WIRING	
-Low voltage wiring is ran through wire hub?	YES
-Grommets are installed around penetrations for wiring that is not in conduit?	YES
-Wire landed to OCP (and not jumpered)?	YES
-Wires landed to R, G, Y1, Y2, W1, W2, C on thermostat terminal strip?	YES
-Wire from terminal GND in the panel as well as both shield wires are landed at the drain terminal?	NO, LANDED TO C INSTEAD.
-Wire is landed to HUM?	YES
-Wire for humidstats is landed at 24VAC R terminal on the “Sensor” strip?	YES
-Wire landed to DI-1 smoke detector?	YES
OTHER	
-Laminated copy of the control wiring is included in each RTU electrical cabinet as per the Controls M Sheet	YES
-Has mechanical contractor provided a second set of filters for owner (should be stored in space somewhere)	NO
-Annunciators are the specified Suncoast Keyless type?	YES
-All annunciators are labeled?	YES EXCEPT FOR AC2, WHICH IS MISSING ITS LABEL.

Notes/Comments:

TECH - STEP 1: INITIAL WALKTHROUGH

Assigned Organization: National TAB

Status: Not Submitted

Asset:

INITIAL SITE WALKTHROUGH	
Inspection checklists are completed?	YES
All diffusers and grilles are installed and match design?	INSTALLED, BUT MANY DIFFUSERS ARE NOT PLACED IN THE LOCATIONS SHOWN ON DRAWINGS. IN KITCHEN, DIFFUSERS IN CENTER OF ROOM ON DRAWING ARE OFFSET TO SIDE OF ROOM.
All hood filters installed and accounted for?	YES
Hoods are wired and have power?	YES
Thermostats have power?	YES
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	YES

Notes/Comments:

TECH - STEP 2: UNIT DATA AND EVAL

Assigned Organization: National TAB

Status: Not Submitted

Asset:

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:	
RTU's/AHU's	
Motors are all operating below the FLA rating?	YES
If direct drive unit is the speed controller working	YES (AC5)
Unit free of noticeable noise and vibration	YES
EF's	
Rotation is correct?	YES
Belts are tight?	YES
There is no major leakage around base of fan?	NO LEAKAGE
Is the motor operating below the motor FLA rating?	YES
Unit free of noticeable noise and vibration?	YES
HOODS	
Kitchen equipment installed in proper places?	YES
Can kitchen equipment be turned on for final smoke test?	NO
DOCUMENTATION	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	YES

Notes/Comments:

TECH - STEP 3: TEST, ADJUST AND BALANCE

Assigned Organization: National TAB

Status: Not Submitted

Asset:

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:	
DURING TESTING MAKE NOTE OF THE FOLLOWING:	
Ensure that deflectors for diffusers in side entry and RR vesibule are closed as shown on the mechanical plan.	ENSURED
Look at plans and adjust pattern deflectors to throw straight down for diffusers near hood where noted	NOT NOTED ON THESE PLANS.
Adjust pattern deflectors for any other diffusers where noted on plans	N/A
Is space free of drafting?	YES
Is space comfortable in all areas?	YES
Is the space free of ventilation noise?	YES
If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".	N/A
All balancing dampers final position marked with permanent marker after balancing complete?	YES

Notes/Comments:

TECH - STEP 4: FINAL TESTS

Assigned Organization: National TAB

Status: Not Submitted

Asset:

Picture document all issues with full description. Needs to include the location of the specification (example: Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the mechanical contractor on site.	
AIR DOORS	
-Installed in proper location?	YES
-Correct model/manufacturer?	YES
-Timer is set to minimum position (0)?	YES
-They are operating correctly?	YES
-Is thermostat for drive thru installed at the air door? If so, recommend it be installed in a more accessible location on the wall.	SWITCH IS ACCESSIBLE
-Drive thru air door is adjusted so it is not noisey and directed at the center of the drive thru window?	YES
FINAL TESTS	
HOOD CAPTURE TEST	
List equipment turned on for testing	N/A
List smoke candle type used	45 SECOND SMOKE CANDLE
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%
WITNESS	
Date test was completed	9/22/2020
TAB tech name / Firm	J SMITH/NATIONAL TAB
Site super name / Firm	J CROSS/ STANSELL
Owner representative name / Firm (if Applicable)	N/A
Video taken of smoke tests?	YES
BUILDING PRESSURE TEST	

Building pressure at front & back doors (All Systems On)	0.01"
Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	YES
VELOCITY OF SERVING WINDOW	
Transfer velocity for Serving Window (window between kitchen and serving) is 50-80FPM	67 FPM

Notes/Comments:

TECH - STEP 5:
COMMISSIONING LIGHT

Assigned Organization: National TAB

Status: Not Submitted

Asset:

OCCUPIED / UNOCCUPIED SEQUENCE OF OPERATION	
Turn switch on Suncoast panel to occupied mode and check the following for all RTU's:	
All blowers turn on (I.e., signal to G)? (Except the Playroom unit which will stay in auto blower)	YES
All economizers open to minimum position? (I.e., signal to OCP terminal)	YES
Temperatures on thermostats at occupied settings (73 cooling / 69 heating)	YES
Hood exhaust and Capture Jets turn on?	YES
Turn switch on Suncoast panel to unoccupied mode and check the following for all RTU's:	
All blowers go to auto mode?	YES
All economizers close? (I.e., no signal to the OCP terminal)	YES
Temperatures on thermostats at unoccupied settings (80 cooling / 55 heating). Unoccupied cooling may need to be manually changed to 80.	YES
Hood exhaust and Capture Jets turn off?	YES
HUMIDISTATS	
Review wiring diagrams and balance procedure pictures for details. Check the following for each humidistat:	
All humidistats and thermostats are installed in locations shown on drawing?	YES, WHERE DRAWINGS APPLY.
"Vin" terminals wired?	YES
"Com" ternimals wired?	YES
"Vout" terminals wired?	YES
Shield wires are not in use?	YES
TEMPERATURES	
Measured temperature at each sensor matches actual temperature on thermostat?	YES
Measured temperature at each zone damper thermostat matches displayed temeprature?	N/A

Notes/Comments:

TECH - STEP 5B: COMMISSIONING LIGHT

Assigned Organization: National TAB

Status: Not Submitted

Asset:

PRODIGY BOARD SETTINGS (MECHANICAL CONTRACTOR TO COMPLETE, TAB TO VERIFY AND CORRECT AS REQUIRED)	
Note any alarms present on the prodigy board:	NONE
For all AC's EXCEPT the kitchen RTU, change parameter 65 to 0 (58 on LCH Units). This will cause the OA damper to open on "occupied" start. At kitchen AC (LGH Type) leave the setting at the default value so the OA damper will remain closed for the first 60 minutes after occupied start. At kitchen AC (LCH Type) change the value to 5400 so the OA damper will remain closed for the first 90 minutes after occupied start.	DONE
At Humiditrol RTU's, set the Prodigy M3 Board control parameter #105 for dehumidification operation to a value of 7	DONE
At Humiditrol RTU's, set the Prodigy M3 Board control parameter 106 to value of 60	DONE
At Humiditrol RTU's, set the Prodigy M3 Board control parameter 107 to value of 2.	DONE
Set TSTAT COM Switch on prodigy board to open position. (Newer Prodigy will not have this setting--put N/A)	N/A
Enthalpy offset set to 5.0 for all AC's?	YES
Free cooling supply air setpoint set to 55.0 F?	YES
Damper max opening set to the same position as min position?	YES
Power exhaust on by econ travel set higher than min damper position (typ. 50%)?	YES
Fresh air cooling enable FAC = No?	YES
FAH = Yes (On units with fresh air tempering only. (If not applicable put N/A)	N/A
If FAH, change prodigy parameter 156 to a value of 66	N/A
If FAH, change prodigy parameter 157 to a value of 14	N/A
If FAH, change prodigy parameter 158 to a value of 300	N/A

If FAH, is the discharge sensor installed AFTER the first elbow on main supply drop?	N/A
If FAH, is the wiring harness connected to the sensor wiring?	N/A
At MSAV Units, set the MSAV Low speed setting to the same value as the high speed setting after TAB is completed. (If not applicable put N/A)	DONE
PRODIGY INSTALL MENU SETTINGS (GO TO SETTINGS > INSTALL)	
Language = English?	YES
Date/Time is correct?	YES
Display units F/C set to Farenheit?	YES
Model Number correct?	YES
Configuration ID 1 & 2 is correct? (On white sticker titled "Original factory unit configuration" on right side of control box	YES
Catalog number is correct (Located on the unit nameplate)	YES
Serial number is correct?	YES
Set to Control type to "Wired Thermostat"	YES
PRODIGY NETWORK INTEGRATION (GO TO SETUP > NETWORK INTEGRATION)	
Set Network = L-Connection/Address-2/Monitor Only	YES
FIRMWARE UPDATE	
If RTU was manufactured in 2015 or earlier and has Prodgy 2.0, check that the firmware version is newer than 08.02.0143. If it is older contact Will immediately for instructions on how to update.	N/A

Notes/Comments:

System/Unit: AHU/RTU

Asset: AC1 AREA: KITCHEN

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Model Num	LGA	LGH300S4BS4Y
Serial Num	-	5620G08650
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23.25X13
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	N/A
Final Filter Size 2	-	N/A

Motor Data		
	Design	**Actual**
Motor MFG	-	NIDEC MOTOR CORP.
Frame	-	215TZ
Horsepower	10	10
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	26.3

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP60B
Motor Bore Size	-	1.375”
Motor Sheave SetPt	-	3 OUT
Fan Sheave Size	-	BK94H
Fan Sheave Bore	-	1.1875”
Belt CL Distance	-	21.75”
Num of Belts	-	1
Belt Size	-	BX64
Belt Alignment	-	GOOD

Test Data		
	Design	**Actual**
SF CFM	9500	8478
SF RPM	-	1143
RA CFM	7695	6764
OA CFM	1805	1714
RL Voltage	-	207/208/209
RL Amperage	-	25.9/24.9/25.5
SF Rotation	-	CCW
RA Damper Position	-	66%
Min OA Damper Position	-	34%
Min OA Damper Type	-	OBD

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.74”
Fan Suction SP	-	-1.70”
Fan Discharge SP	-	0.74”
Total ESP	0.80"	1.48"
Fan Total SP	-	2.44"

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

Completed By: Jeremiah Smith on 09/23/2020

Notes: Fan is below design tolerance for airflow. Fan motor is operating near FLA and fan cannot be sped up. The return for this unit is not built to design and may be increasing static pressure. Diffusers are balanced proportionally and there is no drafting in the area served.

MOTOR RPM 1741

Diffuser Supply (GRD)

AC1 / KITCHEN

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DISHWASH	A	14"	900	1	720	786	756	84.0
SGRD2	DISHWASH	A	14"	800	1	622	662	770	96.3
SGRD3	DISHWASH	A	14"	900	1	736	789	754	83.8
SGRD4	HD3 COOKLINE	A	14"	900	1	665	703	801	89.0
SGRD5	PREP	A	14"	900	1	628	660	793	88.1
SGRD6	PREP	A	14"	850	1	896	953	740	87.1
SGRD7	HD1 COOKLINE	A	14"	900	1	762	862	820	91.1
SGRD8	HD1 COOKLINE	A	14"	800	1	789	827	725	90.6
SGRD9	HD2 COOKLINE	A	14"	800	1	691	720	707	88.4
SGRD10	DRIVE THRU	A	14"	875	1	678	724	841	96.1
SGRD11	DRIVE THRU	A	14"	875	1	632	682	771	88.1

Completed By: Jeremiah Smith on 09/23/2020

Asset	Area Served	Notes

System/Unit: AHU/RTU

Asset: AC2 AREA: SIDE DINING

Unit Data

	Design	Actual
MFG	LENNOX	LENNOX
Model Num	LGA	LGH102H4BH4Y
Serial Num	-	5620G08989
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	N/A
Final Filter Size 2	-	N/A

Motor Data

	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	2	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.0

Drive Data

	Design	Actual
Motor Sheave Size	-	4”
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	3 OUT
Fan Sheave Size	-	7.5"
Fan Sheave Bore	-	1”
Belt CL Distance	-	25”
Num of Belts	-	1
Belt Size	-	BX66
Belt Alignment	-	GOOD

Test Data

	Design	Actual
SF CFM	3150	3236
SF RPM	-	894
RA CFM	2551	2597
OA CFM	599	639
RL Voltage	-	209/209/208
RL Amperage	-	7.0/7.0/7.2
SF Rotation	-	CCW
RA Damper Position	-	73%
Min OA Damper Position	-	27%
Min OA Damper Type	-	OBD

Performance Data

	Design	Actual
MA Plenum SP	-	-0.47”
Fan Suction SP	-	-0.91”
Fan Discharge SP	-	0.74”
Total ESP	0.65"	1.21”
Fan Total SP	-	1.65”

General

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

Completed By: Jeremiah Smith on 09/23/2020

Notes: DAMPER IS MISSING FROM EXISTING DUCTWORK TO WOMEN'S RR. DAMPER TO ENTIRE BRANCH IS PRESENT BUT TO PROPERLY BALANCE ALL DIFFUSERS AN INDIVIDUAL DIFFUSER DAMPER IS NECESSARY.

Diffuser Supply (GRD)

AC2 / SIDE DINING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	SIDE DINING	A	16"	691	1	867	-	714	103.3
SGRD2	SIDE DINING	A	16"	691	1	846	-	637	92.2
SGRD3	SIDE DINING	A	16"	691	1	476	-	720	104.2
SGRD4	SIDE DINING	A	16"	615	1	563	-	593	96.4
SGRD5	WOMENS RR	J	8"	180	1	115	-	285	158.3
SGRD6	MENS RR	J	8"	205	1	121	-	203	99.0
SGRD7	EXTERIOR MECHANICAL	D	6X4	77	1	80	-	84	109.1

Completed By: Jeremiah Smith on 09/22/2020

Asset	Area Served	Notes

Diffuser Ret/Exh (GRD)

AC2 / SIDE DINING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD2	EXTERIOR MECHANICAL	G	6X4	75	1	61	-	72	96.0

Completed By: Jeremiah Smith on 09/22/2020

Asset	Area Served	Notes

System/Unit: AHU/RTU

Asset: AC3 AREA: DINING

Unit Data

	Design	Actual
MFG	LENNOX	LENNOX
Model Num	LGA	LGH092H4BH4Y
Serial Num	-	5620G08991
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14X23
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	N/A
Final Filter Size 2	-	N/A

Motor Data

	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	3	2
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	6.0

Drive Data

	Design	Actual
Motor Sheave Size	-	4”
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	3 OUT
Fan Sheave Size	-	9”
Fan Sheave Bore	-	1”
Belt CL Distance	-	25”
Num of Belts	-	1
Belt Size	-	BX68
Belt Alignment	-	GOOD

Completed By: Jeremiah Smith on 09/23/2020

Notes: MOTOR RPM 1742

Test Data

	Design	Actual
SF CFM	2710	2683
SF RPM	-	790
RA CFM	3240	1887
OA CFM	760	796
RL Voltage	-	206/208/208
RL Amperage	-	4.9/4.5/4.7
SF Rotation	-	CCW
RA Damper Position	-	62%
Min OA Damper Position	-	38%
Min OA Damper Type	-	OBD

Performance Data

	Design	Actual
MA Plenum SP	-	-0.20”
Fan Suction SP	-	-0.54”
Fan Discharge SP	-	0.44”
Total ESP	0.65"	0.64"
Fan Total SP	-	0.98"

General

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

Diffuser Supply (GRD)

AC3 / DINING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DINING	A	12"	450	1	448	-	453	100.7
SGRD2	DINING	A	12"	450	1	473	-	463	102.9
SGRD3	DINING	A	12"	400	1	405	-	367	91.8
SGRD4	QUEUE	A	12"	400	1	266	-	386	96.5
SGRD5	DINING	A	12"	450	1	335	-	447	99.3
SGRD6	ENTRY	C	12"	560	1	455	-	567	101.3

Completed By: Jeremiah Smith on 09/22/2020

Asset	Area Served	Notes

Diffuser Ret/Exh (GRD)

AC3 / DINING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AC3-EGRD1	VESTIBULE	R4	8	360	1	278	-	341	94.7

Completed By: Jeremiah Smith on 09/22/2020

Asset	Area Served	Notes

System/Unit: AHU/RTU

Asset: AC4 AREA: DINING AND SERVING

Unit Data

	Design	Actual
MFG	LENNOX	LENNOX
Model Num	LGA	LGH120H4BH4Y
Serial Num	-	5620G09109
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	N/A
Final Filter Size 2	-	N/A

Motor Data

	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	2	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.0

Drive Data

	Design	Actual
Motor Sheave Size	-	4”
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	3 OUT
Fan Sheave Size	-	7.5”
Fan Sheave Bore	-	1”
Belt CL Distance	-	25”
Num of Belts	-	1
Belt Size	-	BX66
Belt Alignment	-	GOOD

Test Data

	Design	Actual
SF CFM	4000	3540
SF RPM	-	977
RA CFM	2195	3045
OA CFM	515	495
RL Voltage	-	209/209/207
RL Amperage	-	7.8/7.8/7.6
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	OBD

Performance Data

	Design	Actual
MA Plenum SP	-	-0.16”
Fan Suction SP	-	-0.76”
Fan Discharge SP	-	0.80”
Total ESP	0.65"	0.96”
Fan Total SP	-	1.56”

General

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

Completed By: Jeremiah Smith on 09/23/2020

Notes: MOTOR RPM 1723

Fan is below design tolerance for airflow. Fan motor is operating near FLA and fan cannot be sped up. Diffusers are balanced proportionally and there is no drafting in the area served.

Diffuser Supply (GRD)

AC4 / DINING AND SERVING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AC4-SGRD1	DINING AND SERVING	C	10	612	1	378	449	504	82.4
AC4-SGRD2	DINING AND SERVING	A	12	735	1	749	811	688	93.6
AC4-SGRD3	DINING AND SERVING	A	12	653	1	534	576	589	90.2
AC4-SGRD4	DINING AND SERVING	A	12	653	1	511	572	586	89.7
AC4-SGRD5	DINING AND SERVING	A	12	694	1	517	547	646	93.1
AC4-SGRD6	DINING AND SERVING	A	12	653	1	432	465	527	80.7

Completed By: Jeremiah Smith on 09/22/2020

Asset	Area Served	Notes

Diffuser Ret/Exh (GRD)

AC4 / DINING AND SERVING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AC4-EGRD1	DINING AND SERVING	K	10	210	1	249	-	229	109.0

Completed By: Jeremiah Smith on 09/22/2020

Asset	Area Served	Notes

System/Unit: AHU/RTU

Asset: AC5 AREA: PLAY AREA

Unit Data

	Design	Actual
MFG	LENNOX	LENNOX
Model Num	LGA	LGH060H4EH5Y
Serial Num	-	5620G09227
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	N/A
Final Filter Size 2	-	N/A

Motor Data

	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	1.5	1
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	208	240
Rated Amperage	-	6.13

Drive Data

	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Completed By: Jeremiah Smith on 09/23/2020

Notes:

Test Data

	Design	Actual
SF CFM	1800	1643
SF RPM	-	HIGH SPEED
RA CFM	1458	1296
OA CFM	342	347
RL Voltage	-	209
RL Amperage	-	2.5
SF Rotation	-	CW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	OBD

Performance Data

	Design	Actual
MA Plenum SP	-	-0.45
Fan Suction SP	-	-0.73”
Fan Discharge SP	-	0.63”
Total ESP	0.65"	1.08"
Fan Total SP	-	1.36"

General

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

Diffuser Supply (GRD)

AC5 / PLAY AREA

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	PLAY AREA	E	18X12	900	1	587	-	812	90.2
SGRD2	PLAY AREA	E	18X12	900	1	600	-	831	92.3

Completed By: Jeremiah Smith on 09/22/2020

Asset	Area Served	Notes

National TAB

Project: CHICK-FIL-A #01815 PHENIX CITY FSU (PHENIX CITY, AL)

System/Unit: AHU/RTU

Asset: AHU1 AREA: NEW ADDITION

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Model Num	LGA	CBA38MV-036
Serial Num	-	1620F16048
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	NA
OA Filter Size 1	-	NA
Num Final Filter 1	-	1
Final Filter Size 1	-	29X20X1
Num Final Filter 2	-	N/A
Final Filter Size 2	-	N/A

Motor Data		
	Design	**Actual**
Motor MFG	-	NIDEC
Frame	-	NL
Horsepower	0.5	0.75
Motor Rpm	-	NL
Phase	1	1
Rated Voltage	208	240
Rated Amperage	-	5.2

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

Test Data		
	Design	**Actual**
SF CFM	1200	1261
SF RPM	-	HIGH
RA CFM	972	1051
OA CFM	228	210
RL Voltage	-	207
RL Amperage	-	NA
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	N/A
Min OA Damper Type	-	SINGLE BLADE WITH ACTUATOR

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.45”
Fan Suction SP	-	NA
Fan Discharge SP	-	0.67”
Total ESP	0.75"	1.12”
Fan Total SP	-	NA

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

Completed By: Jeremiah Smith on 09/23/2020

Notes:

Diffuser Supply (GRD)

AHU1 / NEW ADDITION

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	NEW ADDITION	A	10"	500	1	180	-	523	104.6
SGRD2	NEW ADDITION	A	10"	450	1	171	-	476	105.8
SGRD3	NEW ADDITION	A	10"	250	1	114	-	262	104.8

Completed By: Wendy Biggs on

Asset	Area Served	Notes

System/Unit: FAN - Exhaust

Asset: EF1

AREA: HD1 L&R PRESSURE COOKER

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	NA	165 VCRH
Serial Num	-	050S184745
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	BLADOR
Frame	-	56
Horsepower	3/4	0.75
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	8.2
Service Factor	-	1.25

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	MVL34B
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	2 OUT
Fan Sheave Size	-	MA33
Fan Sheave Bore	-	0.75”
Belt CL Distance	-	5.75”
Num of Belts	-	1
Belt Size	-	A26

Test Data		
	Design	**Actual**
CFM	1912	1820
Fan RPM	1078	1325
Fan Rotation	-	CCW
Motor RPM	-	1754
RL Voltage	-	122
RL Amperage	-	8.2
Suction ESP	-	-0.55”
Discharge ESP	-	ATM
Total ESP	0.75"	0.55”

Completed By: Jeremiah Smith on 09/23/2020

Notes:

System/Unit: FAN - Exhaust

Asset: EF2 AREA: HD2 FRYER

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	NA	150VCRH
Serial Num	-	050SI84745
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	1/3	0.33
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	6.0
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	MVL34B
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	3 OUT
Fan Sheave Size	-	MA33
Fan Sheave Bore	-	0.75"
Belt CL Distance	-	5.5"
Num of Belts	-	1
Belt Size	-	A26

Test Data		
	Design	**Actual**
CFM	701	701
Fan RPM	1295	1436
Fan Rotation	-	CCW
Motor RPM	-	1710
RL Voltage	-	121
RL Amperage	-	5.9
Suction ESP	-	-0.79”
Discharge ESP	-	ATM
Total ESP	0.75"	0.79”

Completed By: Jeremiah Smith on 09/23/2020

Notes:

System/Unit: FAN - Exhaust

Asset: EF3 AREA: RESTROOMS

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	90 ACEH
Serial Num	-	050SE54371
Type	-	CENTRIFUGAL
Configuration	-	DOWNBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	FASCO
Frame	-	NL
Horsepower	-	0.125
Motor Rpm	-	1600
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	500	474
Fan RPM	-	1600
Fan Rotation	-	CCW
Motor RPM	-	1600
System SetPt	-	HIGH
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	-	0.27”
Fan Inlet SP	-	-0.27"
Fan Discharge SP	-	ATM

Completed By: Jeremiah Smith on 09/23/2020

Notes:

Diffuser Ret/Exh (GRD)

EF3 / RESTROOMS

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	WOMENS	K	8"	250	1	286	235	235	94.0
EGRD2	MENS	K	8"	250	1	0	239	239	95.6

Completed By: Jeremiah Smith on 09/23/2020

Asset	Area Served	Notes

System/Unit: FAN - Exhaust

Asset: EF4 AREA: HD3 GRIDDLE

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	NA	150VCRH
Serial Num	-	050SI84745-00/0004301
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	0.109	0.33
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	6.0
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	MVL34B
Motor Bore Size	-	0.625"
Motor Sheave SetPt	-	3 OUT
Fan Sheave Size	-	MA33
Fan Sheave Bore	-	0.75"
Belt CL Distance	-	5.5"
Num of Belts	-	1
Belt Size	-	A26

Test Data		
	Design	**Actual**
CFM	390	391
Fan RPM	1016	1025
Fan Rotation	-	CCW
Motor RPM	-	1762
RL Voltage	-	122
RL Amperage	-	5.2
Suction ESP	-	-0.51”
Discharge ESP	-	ATM
Total ESP	0.63"	0.51”

Completed By: Jeremiah Smith on 09/23/2020

Notes:

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA: LEFT PRESSURE COOKER

Unit Data

	Design	Actual
MFG	HALTON	HALTON
Model Num	KVL-	KVL-2
Job / Serial Num	-	102413-447
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	96	96
Hood Width	37	37

Test Data Exhaust

	Design	Actual
Filter Size 1	SS FILTER KSA	SS FILTERS KSA
Filter Size 2	1/2 SS FILTER KSA	1/2 SS FILTERS KSA
Filter Qty 1	4	4
Filter Qty 2	1	1
Plenum SP	-	0.117"
CFM	1080	1041

Cooking Equipment

	Design	Actual
Item 1	-	PRESSURE COOKERS
Item 2	-	-

Test Data Supply

	Design	Actual
Plenum SP	0.30"	0.29”

Performance Data

	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE BOMB
Hood Capture %	-	100%

General

	Design	Actual
Third Party Witness	-	VIDEO RECORDED
Third Party Company	-	VIDEO RECORDED
Tech Witness	-	J SMITH
Tech Company	-	NATIONAL TAB

Completed By: Jeremiah Smith on 09/22/2020

Notes: DESIGN EXHAUST BALANCE POINT: 0.1259"

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA: RIGHT PRESSURE COOKER

Unit Data

	Design	Actual
MFG	HALTON	HALTON
Model Num	KVL-	KVL-2
Job / Serial Num	-	102413-496
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	74	74
Hood Width	37	37

Test Data Exhaust

	Design	Actual
Filter Size 1	SS FILTER KSA	SS FILTER KSA
Filter Size 2	1/2 SS FILTER KSA	1/2 SS FILTER KSA
Filter Qty 1	3	3
Filter Qty 2	1	1
Plenum SP	-	0.11"
CFM	832	779

Cooking Equipment

	Design	Actual
Item 1	-	PRESSURE COOKERS
Item 2	-	-

Test Data Supply

	Design	Actual
Plenum SP	0.30"	0.28”

Performance Data

	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE BOMB
Hood Capture %	-	100%

General

	Design	Actual
Third Party Witness	-	VIDEO RECORDED
Third Party Company	-	VIDEO RECORDED
Tech Witness	-	J SMITH
Tech Company	-	NATIONAL TAB

Completed By: Jeremiah Smith on 09/22/2020

Notes: DESIGN EXHAUST BALANCE POINT: 0.1255"

National TAB

Project: CHICK-FIL-A #01815 PHENIX CITY FSU (PHENIX CITY, AL)

System/Unit: Kitchen Hood Type I

Asset: HD3 AREA: FRYER

Unit Data		
	Design	**Actual**
MFG	HALTON	HALTON
Model Num	KVL-	KVL-2
Job / Serial Num	-	102413-548
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	42	42
Hood Width	34	34

Test Data Exhaust		
	Design	**Actual**
Filter Size 1	SS FILTER KSA	SS FILTER KSA
Filter Size 2	1/2 SS FILTER KSA	N/A
Filter Qty 1	2	2
Filter Qty 2	0	0
Plenum SP	-	0.295”
CFM	701	701

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYERS
Item 2	-	-

Test Data Supply		
	Design	**Actual**
Plenum SP	0.29"	0.286”

Performance Data		
	Design	**Actual**
Smoke Generation Type	-	45 SECOND SMOKE BOMB
Hood Capture %	-	100%

General		
	Design	**Actual**
Third Party Witness	-	VIDEO RECORDED
Third Party Company	-	VIDEO RECORDED
Tech Witness	-	J SMITH
Tech Company	-	NATIONAL TAB

Completed By: Jeremiah Smith on 09/22/2020

Notes: DESIGN EXHAUST BALANCE POINT: 0.2948"

National TAB

Project: CHICK-FIL-A #01815 PHENIX CITY FSU (PHENIX CITY, AL)

System/Unit: Kitchen Hood Type I

Asset: HD4 AREA: GRIDDLE

Unit Data		
	Design	**Actual**
MFG	HALTON	HALTON
Model Num	KVL-	KVL-D
Job / Serial Num	-	102413-596
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	24	24
Hood Width	31	31

Test Data Exhaust		
	Design	**Actual**
Filter Size 1	SS FILTER KSA	SS FILTER KSA
Filter Size 2	1/2 SS FILTER KSA	N/A
Filter Qty 1	1	1
Filter Qty 2	0	0
Plenum SP	-	0.366”
CFM	390	391

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER
Item 2	-	-

Test Data Supply		
	Design	**Actual**
Plenum SP	0.30"	0.29”

Performance Data		
	Design	**Actual**
Smoke Generation Type	-	45 SECOND SMOKE BOMB
Hood Capture %	-	100%

General		
	Design	**Actual**
Third Party Witness	-	VIDEO RECORDED
Third Party Company	-	VIDEO RECORDED
Tech Witness	-	J SMITH
Tech Company	-	NATIONAL TAB

Completed By: Jeremiah Smith on 09/22/2020

Notes: DESIGN EXHAUST BALANCE POINT: 0.3644"

System/Unit: Kitchen Hood Type I

Asset: SIDE CAPTURE JET1 AREA: HOOD4

Unit Data		
	Design	**Actual**
MFG	HALTON	HALTON
Supply Plenum Type	SIDE CAPTURE JET	SIDE CAPTURE JET

Test Data Supply		
	Design	**Actual**
Plenum SP	0.35"	0.325”

Completed By: Jeremiah Smith on 09/22/2020

Notes: