Report By:

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

NATIONAL TAB

Comfort. Under control.

Report: FINAL TAB REPORT
Function: Test, Adjust, & Balance
Date: 7/25/2022

PROJECT

05-09 NIKE LIVE - CARY, NC

4 FENTON ST

CARY, NC

Client

Construction One
101 E. Town St
Suite 401
Columbus, OH 43215

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

Table Of Contents

Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

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.

Variable Air Volume (VAV) Terminals

The VAV's were calibrated in a call for max cooling and the correction factors are reported on the individual asset. While in a call for full cooling, the individual air devices were then balanced within design tolerance. The VAVs were then stroked to minimum cool and the airflow values reported. The VAV was then stroked to heating and the airflow values reported. It was verified that there was a sufficient temp rise on each VAV.

Outside Air Fan

The OAF provides ventilation air to HVAC units throughout the space. All equipment on the duct system was first turned on in a full fan speed condition. The total airflow was measured via traverse and then adjustment was made to bring the total flow within design tolerance. The individual branches to each unit were then traversed and balanced until they were within design tolerances. Once balancing was completed, the overrides were released

General Exhaust Fans

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

Final Building Tests

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

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05-09 NIKE LIVE - CARY, NC

Project Issue Information

Issue Name : EF1

Description : 1.EF1-1 DUCTWORK IS NOT FINISHED OR RUN TO GRILL. UNABLE TO BALANCE THIS GRILL OR FAN TILL DUCTWORK IS COMPLETED.

Created By : National TAB **Assigned To :** National TAB - Wendy Biggs

Status : Open

Originated Date : 07/07/2022 - Dale Wheeler - National TAB

Project Issue File Details

ef1_1_cary_.jpg

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Project Issue Information

Issue Name : FCU1

Description : 1. EMS CONTROLS DO NOT HAVE CONTROL OVER OA DAMPERS TO EACH UNIT. OA CANNOT BE SET UNTIL THEY ARE ABLE TO EST. CONTROLS WITH THESE OA DAMPERS. 2. SGRD2 IS CONNECT TO THE SF1 DUCTWORK. IT SHOULD BE CONNECTED TO THE FCU1 SUPPLY DUCT.

Created By : National TAB **Assigned To :** National TAB - Wendy Biggs

Status : Open

Originated Date : 07/07/2022 - Dale Wheeler - National TAB

Project Issue File Details

oa_fcu1.jpg

sgrd2_cary_.jpg

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Project Issue Information

Issue Name : FCU2

Description : 1. EMS CONTROLS DO NOT HAVE CONTROL OVER OA DAMPERS TO EACH UNIT. OA CANNOT BE SET UNTIL THEY ARE ABLE TO EST. CONTROLS WITH THESE OA DAMPERS. 2.CONFORT CONTROLS SYSTEM [EMS] IS NOT ABLE TO CONTROL/CALIBRATE THIS VAV BOX. EMS IS ONLY ABLE TO VIEW THE DAMPER VOLTAGE. THIS ISSUE WILL NEED TO BE RESOLVED BETWEEN CONFORT CONTROL SYSTEM AND THE MECH.

Created By : National TAB **Assigned To :** National TAB - Wendy Biggs

Status : Open

Originated Date : 07/07/2022 - Dale Wheeler - National TAB

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Project Issue Information

Issue Name : FCU3

Description : EMS CONTROLS DO NOT HAVE CONTROL OVER OA DAMPERS TO EACH UNIT. OA CANNOT BE SET UNTIL THEY ARE ABLE TO EST. CONTROLS WITH THESE OA DAMPERS.

Created By : National TAB **Assigned To :** National TAB - Wendy Biggs

Status : Open

Originated Date : 07/07/2022 - Dale Wheeler - National TAB

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05-09 NIKE LIVE - CARY, NC

Project Issue Information

Issue Name : FCU4

Description : 1.FCU4 EMS CONTROLS DO NOT HAVE CONTROL OVER OA DAMPERS TO EACH UNIT. OA CANNOT BE SET UNTIL THEY ARE ABLE TO EST. CONTROLS WITH THESE OA DAMPERS. 2.FCU4 FAN IS RUNNING IN HIGH SPEED. TO PLACE FAN INTO HIGH-SPEED WIRE TAPES WERE ADJUSTED VIA CARRIER TECH SUPPORT OVER THE PHONE AND EMS PLACED UNIT INTO FULL COOLING MODE. UNIT TOTAL IS LOW

Created By : National TAB **Assigned To :** National TAB - Wendy Biggs

Status : Open

Originated Date : 07/07/2022 - Dale Wheeler - National TAB

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Project Issue Information

Issue Name : FCU5

Description : 1. FCU5 EMS CONTROLS DO NOT HAVE CONTROL OVER OA DAMPERS TO EACH UNIT. OA CANNOT BE SET UNTIL THEY ARE ABLE TO EST. CONTROLS WITH THESE OA DAMPERS. 2. FCU5 FAN IS RUNNING IN HIGH SPEED. TO PLACE FAN INTO HIGH-SPEED WIRE TAPES WERE ADJUSTED VIA CARRIER TECH SUPPORT OVER THE PHONE AND EMS PLACED UNIT INTO FULL COOLING MODE. UNIT TOTAL IS LOW

Created By : National TAB **Assigned To :** National TAB - Wendy Biggs

Status : Open

Originated Date : 07/07/2022 - Dale Wheeler - National TAB

Project Issue File Details

fcu5_cary_.jpg

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05-09 NIKE LIVE - CARY, NC

Project Issue Information

Issue Name : SF1

Description : EMS HAS NO CONTROL OVER FAN SPEED, THEIR SYSTEM SAYS SF1 FAN WAS NOT RUNNING WHEN FAN WAS RUNNING 100%. THERE IS NO SPEED CONTROLLER INSTALLED ON FAN. FAN BLADES ARE ALSO GRINDING REALLY BAD, FAN WAS SHUT OFF TO PREVENT DAMAGE FROM OCCURRING. THESE ISSUES WILL NEED TO BE RESOLVED BETWEEN EMS AND MECHANICAL FIELD TECH WHO INSTALLED CONTROLS.

Created By : National TAB **Assigned To :** National TAB - Wendy Biggs

Status : Open

Originated Date : 07/07/2022 - Dale Wheeler - National TAB

Project Issue File Details

sf1_cary.jpg

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
FCU-1	BOH	1900	1732	1610	1732	290		15.3%	0.0%						
FCU-2	SALES	1400	1516	1095	1516	305		21.8%	0.0%						
FCU-3	SALES	1400	1542	1095	1542	305		21.8%	0.0%						
FCU-4	SALES	1400	1176	1095	1176	305		21.8%	0.0%						
FCU-5	SOLAR ZONE	1200	870	1200	870	0		0.0%	0.0%						
SF-1	FCU1-4									600	2021				
EF-1	RESTROOM													200	98
TOTALS		7300	6836	6095	6836	1205	0			600	2021	0	0	200	98

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1805	2021
TOTAL EXHAUST	200	98
NET AIRFLOW	1605	1923

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.
SIDE	
REAR	
AVERAGE	**0.**

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. ✓

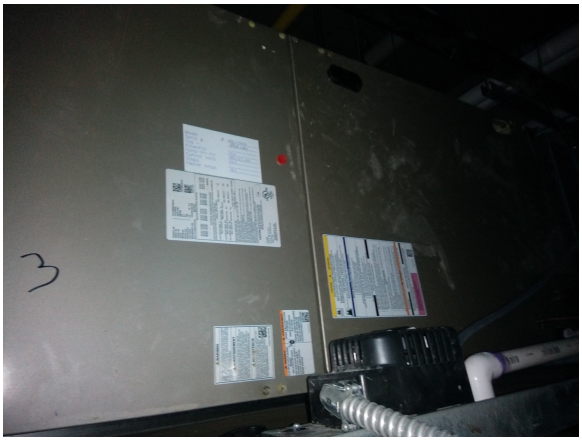
NOTES:

STORE FRONT

FCU5

FCU2

FCU3



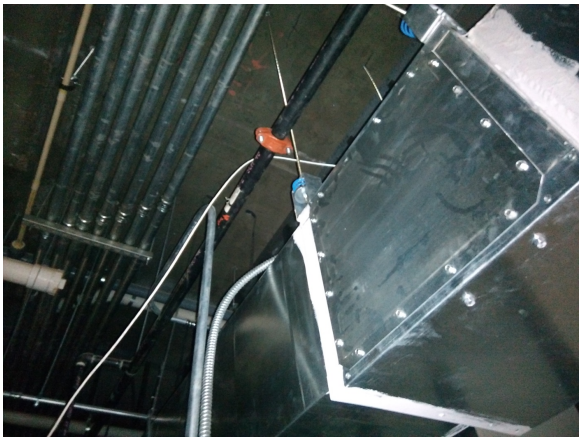
FCU1

SAlES SPACE

FCU4

FCU5

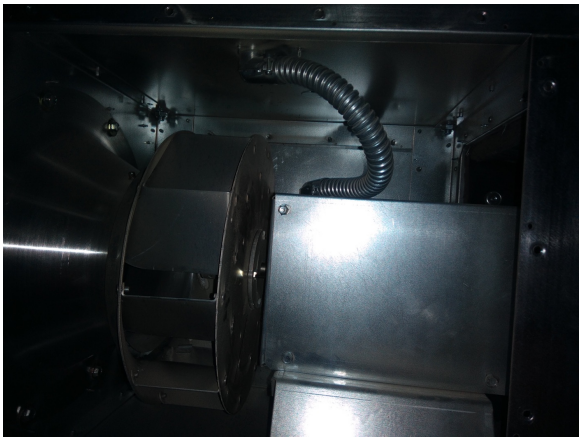
SF1



EF1

FCU1

SF1



FCU4

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05-09 NIKE LIVE - CARY, NC

CheckList Information

Name :	RETURN TRIP	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

REQUIRED INFO FOR RETURN TRIP SCHEDULING

INITIATOR OF RETURN (PERSON COMPLETING THIS CHECKLIST)	WILL
SCOPE OF RETURN	FULL JOB NEEDS TO BE BALANCED
TIME LEFT ON SITE (W/O TRAVEL)	2-3 DAYS
BILLABLE? IF SO, PRICE AND (IF POSSIBLE) CLIENT APPROVAL	YES
WHEN WAS RETURN ADDED TO RETURN LIST?	6/5
RETURN AT STANDARD LEAD TIME OR BY SPECIFIED DATE (PROVIDE DATE)?	STANDARD - BUT WAITING ON CLIENT TO APPROVE THAT IT IS READY
IS CoO HELD UP BY OUR RETURN?	NO
WHO DO WE NEED TO COORDINATE THE RETURN WITH?	TOWSON/GC
ADDITIONAL SPECIAL REQUIREMENTS (IE: LIFT?)	YES AND POSSIBLY A LADDER. THERE ARE A BUNCH OF FIXTURES/SHELVES IN THE WAY THAT TITUS SAID WOULD MAKE IT VERY DIFFICULT TO ACCESS OR MANUVER LIFT
INITIAL TECH ON SITE	TITUS
HAS CHECKLIST BEEN COMPLETE AND SENT TO SCHEDULER?	YES

Notes/Comments :

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CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

Review Plan Review Checklist, has it been signed off and meets our standards to start balancing? If not contact processor to ensure job is ready.	YES
All diffusers and grilles are installed and match design?	FCU1 SGRD2 SUPPLY GRILL IS CONNECTED TO THE OA DUCT NOT THE UNITS SUPPLY GRILL
Thermostats have power?	UNITS ARE CONTROLLED BY A THIRD PARTY CONTROLS COMPANY STATS WITHIN STORE SPACE ARE POWERED
All HVAC units and fans and powered and operational?	YES
VAV diffusers (if applicable) are powered and responding to adjustment at thermostat?	YES MECHANICAL DAMPERS ARE COMMUNICATING WITH THERMOSTATS IN ROOM FOR FCU1
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	STORE IS OPEN LOCATION ALL ISSUES WILL BE SENT OUT IN EMAIL AT THE END OF JOB

Notes/Comments :

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CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional?	OA DAMPERS ARE INSTALLED BUT NOT FUNCTIONING, 3RD PARTY EMS CONTROLS SYSTEM DOES NOT HAVE CONTROL OVER OA DAMPER POSITIONS, UNABLE TO SET OA SETPOINTS TILL THIS ISSUES IS FIXED FOR ALL UNITS.
Motors are all operating below the FLA rating?	YES
Are belts tight?	N/A
If direct drive unit is the speed controller working.	YES / FANS ARE CONTROLLED BY 3RD PARTY COMPANY FANS ARE FORCED INTO COOLING/ HIGH SPEED FOR BALANCE
Is gas piping installed and valves turned on?	N/A
Unit free of noticeable noise and vibration	UNITS AMPS HAD TO BE TAKEN WITH BLOWER FAN PANEL OFF

EF's

Rotation is correct?	EF1 FAN IS LOCATED ABOVE CEILING GRID AND IS NOT ACCESSIBLE / FAN IS RUNNING BUT CANNOT GAIN ACCESS TO THE INLINE FAN.
Belts are tight?	N/A
Grease cup installed on hood fan	N/A
Hinge kit installed installed on hood fan?	N/A
Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	N/A

Flex conduit is long enough so that fan can be completely tilted back?	N/A
There is no major leakage around base of fan?	N/A
Is the motor operating below the motor FLA rating?	N/A
For restroom fan(s) is the back draft damper installed and can it fully open?	N/A
Unit free of noticeable noise and vibration?	YES / EF1 NO / SF1 FAN WHEEL IS GRINDING UNABLE TO FIX THIS ISSUE. FAN HAS BEEN SHUT OFF TILL THIS ISSUE CAN BE RESOLVED. EMS DOES NOT HAVE COMMUNICATION WITH SF1

DOCUMENTATION

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	THIS IS A OPEN LOCATION, GC OR TRADES ARE NOT ON SITE. ALL ISSUES WILL BE SENT OUT IN EMAIL AT THE END OF JOB.

Notes/Comments :

EF1 FAN DUCTWORK IS NOT CONNECTED TO EF1-1 FLEX DUCT IS NOT RUN DOWN TO DIFFUSER DUCTWORK LOCATED ABOVE HARD CEILING.

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CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:	
DURING TESTING MAKE NOTE OF THE FOLLOWING:	
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
FABRIC DUCT STATIC PRESSURES (IF APPLICABLE)	
Take static pressures near takeoff for each fabric duct once balancing is completed. Input this into the "VEL (1)" field on the diffuser asset. If not a fabric duct then, put "N/A" into the "VEL (1)" field instead.	N/A

Notes/Comments :

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CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

FINAL TESTS	
BUILDING PRESSURE	
Building pressure at front & back doors (All Systems On)	FRONT DOOR -0.00'' / SF1 FAN IS NOT RUNNING
Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	SF1 HAD TO BE TURNED OFF DUE TO FAN GRINDING BADLY.
CARRIER VFD PARAMETERS (IF APPLICABLE)	
Use Carrier provided VFD cable to verify VFD speed parameters for each unit (Defaults - high speed = 60Hz, low speed = 40Hz). Can adjust high speed parameter for balancing but requires that the low speed is proportionally adjusted. Record VFD speeds on the individual assets	N/A
TEMPERATURES/HUMIDITIES	
Measure temperatures/humidities for outside air (taken in shade), return air, and supply air for each HVAC unit during full cooling and input into appropriate fields on the individual asset	FCU1 SUPPLY TEMP. 60F / 71% HUMIDITY / OA TEMP. 79F / HUMIDITY 82% FCU2 SUPPLY TEMP. 59F/ 72% HUMIDITY / OA TEMP. 79F / HUMIDITY 82% FCU3 SUPPLY TEMP. 56F/ 71% HUMIDITY / OA TEMP. 79F / HUMIDITY 82% FCU4 SUPPLY TEMP. 50F/ 70% HUMIDITY / OA TEMP. 79F / HUMIDITY 82% FCU5 SUPPLY TEMP. 49F / 71% HUMIDITY / OA TEMP. 79F / HUMIDITY 82% DID NOT HAVE TIME TO TAKE RETURN AIR TEMPS BEFORE STORE CLOSED, UNIT SPACE TEMP. WAS 72F
VAV DIFFUSERS (IF APPLICABLE)	
Each VAV-diffuser is calibrated for max airflow?	NO / THESE ARE NOT ABLE TO BE CALIBRATED DUE TO CONFORT CONTROLS NOT HAVE CONTROL OVER THIS VAV BOX

Each VAV diffuser is set for minimum airflow? Record value in notes on the individual diffuser asset	MAX AND MIN, ARE BOTH SET TO 300CFM

Notes/Comments :

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

System/Unit: AHU/RTU

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Asset: FCU1 AREA:BOH

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	4821F11375
Model Num	FV4CNB006	FV4CNB006
Configuration	-	HORIZONTAL
Num OA Filters 1	-	N/A
OA Filter Size 1	-	N/A
Num Final Filter 1	-	1
Final Filter Size 1	-	22X24X1

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	3/4	0.75
Motor Rpm	-	N/L
Phase	3	1
Rated Voltage	480	208/230
Rated Amperage	-	6.8

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	1900	1732
SF RPM	-	DD
RL Voltage	-	[4]
RL Amperage	-	2.5
SF Rotation	-	CCW
Min OA Damper Position	-	[3]

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.175"
Fan Suction SP	-	-0.519"
Fan Discharge SP	-	0.101"
Total ESP	0.65"	0.276"
Fan Total SP	-	0.62"

General		
	Design	**Actual**
Unit free of Damage	-	YES
Unit Completely Assembled	-	YES
Unit Leveled	-	YES
Controls Complete	-	YES
Unit Filters Clean	-	YES
Evap Coil Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Dale Wheeler

Notes:[1] FAN TOTAL HAD TO BE SET DUE TO NOT ENOUGH SPACE IN BACK OF STORE DUE TO SIZE OF LADDER AND AMOUNT OF PRODUCT TO MANEUVER 12FT STEP LADDER TO GET TO ALL DAMPER HANDLES. UNIT TOTAL IS WITHIN DESIGN. [2] SGRD2 IS DUCTED INTO THE SF1 DUCT, SHOULD BE DUCTED INTO 1FCU SUPPLY DUCT UNABLE TO BALANCE GRILL TILL THIS IS RESOLVED. SEE PIC [3] EMS CONFORT CONTROLS DO NOT HAVE CONTROLS OVER OA DAMPERS UNABLE TO SET DAMPER POSITIONS TILL CONTROLS ISSUE IS RESOLVED. OA DAMPER IS NOT WIRED. [4] UNABLE TO

Diffuser Supply (GRD)

FCU1/BOH

Asset							
SGRD1	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	IT ROOM	CSD3	10"	250	155	153	155
	% to design						
	62.0						
SGRD2	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	RESTROOM	CSD3	6"	75	0	0	0
	% to design						
	0.0						
SGRD3	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	FOH PIP	CSD2	8"	100	107	137	145
	% to design						
	145.0						
SGRD4	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	COACH'S OFFICE	CSD1	8"	200	181	181	183
	% to design						
	91.5						
SGRD5	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	HALLWAY	CSD2	8"	100	91	93	99
	% to design						
	99.0						
SGRD6	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	S&R	CSD2	8"	200	186	199	201
	% to design						
	100.5						
SGRD7	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	S&R	CSD2	8"	200	192	208	213
	% to design						
	106.5						
SGRD8	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	S&R	CSD2	8"	200	187	178	182
	% to design						
	91.0						
SGRD9	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	S&R	CSD2	8"	200	209	227	242
	% to design						
	121.0						
SGRD10	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	BREAKROOM	CSD1	8"	200	137	141	167
	% to design						
	83.5						
SGRD11	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	BREAKROOM	CSD1	8"	175	122	127	145
	% to design						

	82.9

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

System/Unit: AHU/RTU

Comfort. Under control.

Asset: FCU2 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	4821F11362
Model Num	FV4CNB006	FV4CNB006
Configuration	-	HORIZONTAL
Num OA Filters 1	-	N/A
OA Filter Size 1	-	N/A
Num Final Filter 1	-	1
Final Filter Size 1	-	22X24X1

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	3/4	0.75
Motor Rpm	-	N/L
Phase	3	1
Rated Voltage	480	230/208
Rated Amperage	-	6.8

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	1400	1516
SF RPM	-	DD
RL Voltage	-	[3]
RL Amperage	-	1.8
SF Rotation	-	CCW
OA Damper Type	-	[1]

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.12"
Fan Suction SP	-	-0.46"
Fan Discharge SP	-	0.11"
Total ESP	0.85"	0.23"
Fan Total SP	-	0.57"

General		
	Design	**Actual**
Unit free of Damage	-	YES
Unit Completely Assembled	-	YES
Unit Leveled	-	YES
Controls Complete	-	YES
Unit Filters Clean	-	YES
Evap Coil Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Dale Wheeler

Notes:[1] SF1 FAN WHEEL WAS GRINDING BADLY, FAN WAS SHUT OFF TO PREVENT DAMAGE. EMS DOES NOT HAVE CONTROL OF SF1 OR OA DAMPER POSITIONS OA COULD NOT BE SET. [2] AMPS HAD GO BE TAKEN WITH BLOWER DOOR OFF. [3] CONFORT CONTROLS SYSTEM [EMS] IS NOT ABLE TO CALIBRATE/CONTROL THIS VAV BOX. EMS IS ONLY ABLE TO VIEW THE DAMPER VOLTAGE. THIS ISSUE WILL NEED TO BE RESOLVED BETWEEN CONFORT CONTROL SYSTEM AND THE MECHANICAL FIELD TECH WHO INSTALLED THE CONTROLS. 1 HOUR SPENT ON THE PHONE TROUBLE SHOOTING ISSUE W

National TAB

Project:05-09 NIKE LIVE - CARY, NC

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

FCU2/SALES

Asset							
SGRD1	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	FOH PIP	CSD2	10"	225	270	270	270
	% to design						
	120.0						
SGRD2	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	FOH PIP	CSD2	10"	225	303	303	303
	% to design						
	134.7						
SGRD3	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	FOH PIP	CSD2	10"	225	347	347	347
	% to design						
	154.2						
SGRD4	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	FOH PIP	CSD2	10"	225	296	296	296
	% to design						
	131.6						
VAV1	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**
	VAV1		9"	500	300	300	300
	% to design						
	60.0						

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

System/Unit: AHU/RTU

Comfort. Under control.

Asset: FCU3 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	4821F11361
Model Num	FV4CNB006	FV4CNB006
Configuration	-	HORIZONTAL
Num OA Filters 1	-	N/A
OA Filter Size 1	-	N/A
Num Final Filter 1	-	1
Final Filter Size 1	-	22X24X1

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	3/4	0.75
Motor Rpm	-	N/L
Phase	3	1
Rated Voltage	480	208/230
Rated Amperage	-	6.8

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	1400	1542
SF RPM	-	DD
RL Voltage	-	[2]
RL Amperage	-	2.7
SF Rotation	-	CCW

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.132"
Fan Suction SP	-	-0.511"
Fan Discharge SP	-	0.14"
Total ESP	0.60"	0.272"
Fan Total SP	-	0.651"

General		
	Design	**Actual**
Unit free of Damage	-	YES
Unit Completely Assembled	-	YES
Unit Leveled	-	YES
Controls Complete	-	YES
Unit Filters Clean	-	YES
Evap Coil Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Dale Wheeler

Notes:[1] UNABLE TO READ SGRD1 & SGRD2 DUE TO GRILLS BEING DUE HANGING WOODEN GRID SUSPENDED FROM THE CEILING. [2] UNABLE TO LOCATED A SAFE PLACE TO TAKE VOLT [3] SF1 FAN WHEEL WAS GRINDING BADLY, FAN WAS SHUT OFF TO PREVENT DAMAGE. EMS DOES NOT HAVE CONTROL OF SF1 OR OA DAMPER POSITIONS [4] AMPS HAD GO BE TAKEN WITH BLOWER DOOR OFF. .

National TAB

Project:05-09 NIKE LIVE - CARY, NC

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

FCU3/SALES

Asset							
SGRD1	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		236
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		236	236	118.0			
SGRD2	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		236
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		236	236	118.0			
SGRD3	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1	225	225
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		216	217	108.5			
SGRD4	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1	237	237
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		201	214	107.0			
SGRD5	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1	199	199
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		227	209	104.5			
SGRD6	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1	192	192
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		183	211	105.5			
SGRD7	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1	287	287
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		256	219	109.5			

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

System/Unit: AHU/RTU

Comfort. Under control.

Asset: FCU4 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	4821F11378
Model Num	FV4CNB006	FV4CNB006
Configuration	-	HORIZONTAL
Num Final Filter 1	-	1
Final Filter Size 1	-	22X24X1

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	3/4	.75
Motor Rpm	-	N/L
Phase	3	1
Rated Voltage	480	208/230
Rated Amperage	-	6.8

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	1400	1176
SF RPM	-	DD
RL Voltage	-	[2]
RL Amperage	-	1.8
SF Rotation	-	CCW
Min OA Damper Position	-	[3]

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.12"
Fan Suction SP	-	-0.284"
Fan Discharge SP	-	0.11"
Total ESP	0.65"	0.23"
Fan Total SP	-	0.394"

General		
	Design	**Actual**
Unit free of Damage	-	YES
Unit Completely Assembled	-	YES
Unit Leveled	-	YES
Controls Complete	-	YES
Unit Filters Clean	-	YES
Evap Coil Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Dale Wheeler

Notes:FCU4 FAN IS RUNNING IN HIGH SPEED. TO PLACE FAN INTO HIGH-SPEED WIRE TAPES WERE ADJUSTED VIA CARRIER TECH SUPPORT OVER THE PHONE AND EMS PLACED UNIT INTO COOLING MODE. UNIT TOTAL IS LOW OF DESIGN CFM. [2] NO SAFE PLACE TO TAKE A VOLT READING [3] SF1 FAN WHEEL WAS GRINDING BADLY, FAN WAS SHUT OFF TO PREVENT DAMAGE. EMS DOES NOT HAVE CONTROL OF SF1 OR OA DAMPER POSITIONS. [4] SGRD1 & SGRED2 CANNOT PHYSICALLY BE REACHED IN STORE SPACE TO BE READ

National TAB

Project:05-09 NIKE LIVE - CARY, NC

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

FCU4/SALES

Asset							
SGRD1	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		-
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	-	-		-			
SGRD2	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		-
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	-	-		-			
SGRD3	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		153
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	153	153	153	76.5			
SGRD4	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		169
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	169	169	169	84.5			
SGRD5	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		200
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	200	200	200	100.0			
SGRD6	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		188
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	188	188	188	94.0			
SGRD7	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	SALES	DSG1	10X6	200	1		196
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	196	196	196	98.0			

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Asset	Notes

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

System/Unit: AHU/RTU

Comfort. Under control.

Asset: FCU5 AREA:SOLAR ZONE

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	5221F46291
Model Num	FV4CNB003	FV4CNF003
Configuration	-	HORIZONTAL
Num OA Filters 1	-	N/A
OA Filter Size 1	-	N/A
Num Final Filter 1	-	1
Final Filter Size 1	-	20x22x1

Test Data		
	Design	**Actual**
SF CFM	1200	870
SF RPM	-	DD
RA CFM	1200	-
OA CFM	-	-
RL Voltage	-	[2]
RL Amperage	-	0.14
SF Rotation	-	CCW
Min OA Damper Position	-	[3]

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	1/2	0.50
Motor Rpm	-	N/L
Phase	3	1
Rated Voltage	480	208/230
Rated Amperage	-	4.3

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.05"
Fan Suction SP	-	-0.191"
Fan Discharge SP	-	0.017"
Total ESP	0.65"	0.067"
Fan Total SP	-	0.208"

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

General		
	Design	**Actual**
Unit free of Damage	-	YES
Unit Completely Assembled	-	YES
Unit Leveled	-	YES
Controls Complete	-	YES
Unit Filters Clean	-	YES
Evap Coil Clean	-	YES
Condensate Drain Installed	-	YRS

Completed By: Dale Wheeler

Notes:FCU5 FAN IS RUNNING IN HIGH SPEED. TO PLACE FAN INTO HIGH-SPEED WIRE TAPES WERE ADJUSTED VIA CARRIER TECH SUPPORT OVER THE PHONE AND EMS PLACED UNIT INTO COOLING MODE. UNIT TOTAL IS LOW OF DESIGN CFM. STATIC PRESSURES ARE VERY LOW INDICATING UNIT MAY NOT BE RESPONDING TO CALLS FOR HIGH SPEED. [2] NO SAFE PLACE TO TAKE A VOLT READING [3] SF1 FAN WHEEL WAS GRINDING BADLY, FAN WAS SHUT OFF TO PREVENT DAMAGE. EMS DOES NOT HAVE CONTROL OF SF1 OR OA DAMPER POSITIONS.

National TAB

Project:05-09 NIKE LIVE - CARY, NC

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

FCU5/SOLAR ZONE

Asset							
SGRD1	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	WELCOME	DSG1	14X6	300	1		217
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	300	217	217	72.3			
SGRD2	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	WELCOME	DSG1	14X6	300	1		217
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
	3	217	217	72.3			
SGRD3	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	WELCOME	DSG1	14X6	300	1		218
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		218	218	72.7			
SGRD4	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**	**CFM(1)**
	WELCOME	DSG1	14X6	300	1		218
	VEL(2)	**CFM(2)**	**FINAL CFM**	**% to design**			
		218	218	72.7			

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Asset	Notes

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: EF1 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	SQ-080-VG	SQ-080-VG
Serial Num	-	N/A
Type	INLINE	INLINE
Configuration	HORIZONTAL	HORIZONTAL

Test Data		
	Design	**Actual**
CFM	200	98

Motor Data		
	Design	**Actual**

Drive Data		
	Design	**Actual**

Completed By: Dale Wheeler

Notes:[1] EF1-1 DUCTWORK ABOVE CEILING IS NOT CONNECT UNABLE TO BALANCE GRILL. SEE PIC [2] EF1 FAN IS NOT ACCESSIBLE IN CEILING CANNOT GET A TALL ENOUGH LADER INTO THE NARROW HALLWAY TO BE ABLE TO GET UP TO THE FAN TO GET UNIT + TEST DATA

National TAB

Project:05-09 NIKE LIVE - CARY, NC

FAN - Exhaust

Comfort. Under control.

Diffuser Ret/Exh (GRD)

EF1/RESTROOM

Asset							
EGRD1	**Model Num**	**MFG**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**
	NA	RETURN	CEG1	6"	75	1	
	CFM(1)	**VEL(2)**	**CFM(2)**	**FINAL CFM**	**% to design**		
	0	0	0	0	0.0		
EGRD2	**Model Num**	**MFG**	**Type**	**Size**	**DESIGN CFM**	**AK**	**VEL(1)**
	NA	RETURN	CEG1	8"	125	1	
	CFM(1)	**VEL(2)**	**CFM(2)**	**FINAL CFM**	**% to design**		
	98	98	98	98	78.4		

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-09 NIKE LIVE - CARY, NC

System/Unit: FAN - Supply

Comfort. Under control.

Asset: SF1 AREA:FCU1-4

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	SQ-120-VG	SQ-120-VG
Serial Num	-	N/L
Type	INLINE	INLINE
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	**Actual**
Motor MFG	-	N/A
Frame	-	N/A
Horsepower	1/2	N/A
Motor Rpm	-	N/A
Phase	1	N/A
Voltage (rated)	120	N/A
Amperage (rated)	-	N/A
Service Factor	-	N/A

Drive Data		
	Design	**Actual**

Gas Heat		
	Design	**Actual**
Heater Operates (y/n)	-	
Flame Status (pass/fail)	-	
Inlet Air Temp SetPt	-	
Discharge Air Temp SetPt	-	
Air Flow Switch SP Actual	-	

Electric Coil		
	Design	**Actual**

Hot Water Coil		
	Design	**Actual**

Steam Coil		
	Design	**Actual**

Condensor DX Coil		
	Design	**Actual**

Condensor Fan		
	Design	**Actual**

Test Data		
	Design	**Actual**
CFM	600	2021
SF RPM	1602	DD
Motor RPM	-	DD
SF System SetPt	-	HIGH
RL Voltage	-	[1]
RL Amperage	-	[1]
Total ESP	-	0.387"
Fan Inlet SP	-	-0.387"

Combustion Fan Motor Data		
	Design	**Actual**

Combustion Gas Duct		
	Design	**Actual**

Chilled Water Coil		
	Design	**Actual**

Evaporator DX Coil		
	Design	**Actual**

Evaporative Cooler		
	Design	**Actual**

Compressors		
	Design	**Actual**

General		
	Design	**Actual**
Fan Rotation Correct	-	

Completed By: Dale Wheeler

Notes:

Asset	Notes

VAV - Single Duct

EQUIPMENT/

Asset				
	Design Max CFM	**Max CFM**	**Min CFM**	**Damper SetPt**
VAV1	500	300	300	37V

Completed By:Dale Wheeler on

Asset	Notes