Report By:

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

NATIONAL TAB

Comfort. Under control.

Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 04/13/2023

PROJECT

04-10-23 CULVERS - WASHINGTON, MI

66233 VAN DYKE

WASHINGTON, MI 48095

Client

Accurex

PO Box 410

Schofield, WI 54476

National TAB

Project: 04-10-23 CULVERS - WASHINGTON, MI

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.

RTU's (Roof Top Units)
Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans
Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow.

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.
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.

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Project Issue Information

Issue Name : Dampers for Diffusers 1-3 RTU-1 Inaccesible

Description : Unable to balance diffusers 1-3 on RTU-1 due to dampers being located above hard ceiling, not to design according to MSET.

Created By : National TAB **Assigned To :** National TAB - Will Turnbough

Status : Open

Originated Date : 04/13/2023 - Jordan Best - National TAB

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04-10-23 CULVERS - WASHINGTON, MI

Project Issue Information

Issue Name : Diffuser 8 Missing Damper

Description : Diffuser #8 on RTU-2 is missing a damper. It's diectly under the supply duct so without a damper this diffuser will read extremely high and pull from others. I used a cardboard obstruction to act as a damper to get it within design while I balanced the rest of the unit.

Created By : National TAB **Assigned To :** National TAB - Will Turnbough

Status : Open

Originated Date : 04/13/2023 - Jordan Best - National TAB

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Project Issue Information

Issue Name : Inconsistent Air Flow RTU-1 Due to Duct Layout

Description : Duct work on RTU-1 varies from MSET in several different locations. Instances of flex being constricted in tight spots alo contrbuting to inconsistent flows. Will cause some diffusers to be outside design while unit total is still within design.

Created By : National TAB **Assigned To :** National TAB - Will Turnbough

Status : Open

Originated Date : 04/13/2023 - Jordan Best - National TAB

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AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	DINING	6150	6264	4250	4290	1900	1974	30.9%	46.0%						
RTU-2	\KITCHEN	6150	5963	4250	4107	1900	1856	30.9%	48.0%						
PRV-2	HOOD 1											1500	1559		
PRV-3	HOOD 2											1500	1652		
PRV-4/EF1A	HOOD 3											350	317		
PRV-1	RESTROOM													300	282
EF-1	MOP ROOM													75	73
TOTALS		12300	12227	8500	8397	3800	3830			0	0	3350	3528	375	355

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3800	3830
TOTAL EXHAUST	3725	3883
NET AIRFLOW	75	-53

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.014
SIDE	-0.001
REAR	0.014
AVERAGE	**0.009**

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:

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04-10-23 CULVERS - WASHINGTON, MI

CheckList Information

Name :	SITE PICTURES	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

STORE FRONT

StoreFront.jpeg

RTU-1

RTU-1.jpeg

RTU-2

RTU-2.jpeg

PRV-1

PRV-1.jpeg

PRV-2

PRV-2.jpeg

PRV-3

PRV-3.jpeg

PRV-4

PRV-4.jpeg

EF-1A

EF-1.jpeg

HOOD 1

HOOD-1.jpeg

HOOD 2

HOOD-2.jpeg

HOOD 3

HOOD-3.jpeg

PRODIGY BOARD WIRING

RTU-1BoardWiring.jpeg

RTU-2BoardWiring.jpeg

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

All diffusers and grilles are installed and match design?	YES
Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture)	YES
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 :

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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?	YES
Thermostat wire run from OCP on the RTU to the Ec terminal at the thermostat? If no, jumper can be installed from R to OCP temporarily. (The economizers will not open without OCP being energized.)	YES
Motors are all operating below the FLA rating?	YES
Are belts tight?	YES
If direct drive unit is the speed controller working.	NA
Is gas piping installed and valves turned on?	YES
Unit free of noticeable noise and vibration	YES
EF's	
Rotation is correct?	YES
Belts are tight?	YES
Grease cup installed on hood fan?	YES
Hinge kit installed installed on hood fan?	YES
Lean grease rated fans back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	YES

Flex conduit is long enough so that fan can be completely tilted back?	YES
There is no major leakage around base of fan?	NO
Is the motor operating below the motor FLA rating?	YES
For restroom fan(s) is the back draft damper installed and can it fully open?	YES
Unit free of noticeable noise and vibration?	YES
The hood exhaust fans are installed in correct positions and are not switched?	YES
HOODS	
Kitchen equipment installed in proper places?	YES
Can kitchen equipment be turned on for final smoke test?	YES
Second stage Grease Grabber filters are installed on the griddle hood?	YES
DOCUMENTATION	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	YES

Notes/Comments :

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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".	NA

Notes/Comments :

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04-10-23 CULVERS - WASHINGTON, MI

CheckList Information

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

CheckList Item Details

FINAL TESTS	
HOOD CAPTURE TEST	
List equipment turned on for testing	GRIDDLE
List smoke candle type used	S102
Smoke test capture - Perimeter of hood	YES
• Open SmokecaptureHD1.MOV	
Smoke test capture - Top of cooking surface	YES, VIDEOS UPLOADED TO OTHER CATEGORY
WITNESS	
Date test was completed	
TAB tech name / Firm	Jordan Best / NTAB
Site super name / Firm	Mike/Wolverine Building
Owner representative name / Firm (if Applicable)	NA/NA
Building pressure at front & back doors (All Systems On)	0.014 /.0019
ADDITIONAL	
Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	YES
Thermostats are programmed?	YES

PRODIGY SETTINGS FOR RTU'S	
Parameter 65 set to 0	YES
Parameter 78 set to 0	YES
Parameter 105 set to 6	YES
Parameter 156 set to 70 (Dining unit only)	YES
Parameter 156 set to 65 (Kitchen Unit Only)	YES
Parameter 170 set to 75 (Dining Unit Only)	YES
Parameter 170 set to 70 (Kitchen Unit Only)	YES
Parameter 131 set to the same % as OA minimum position?	YES
Parameter 117 set to the same % as OA minimum position?	YES

Notes/Comments :

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: AHU/RTU

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Asset: RTU1 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622F06872
Model Num	13H15	LGH180H4BS4Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24"X16"
Num Final Filter 1	-	6
Final Filter Size 1	-	24"X24"2"

Motor Data		
	Design	**Actual**
Motor MFG	-	INTERLINK
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	15.8-14.6

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	4"
Motor Sheave SetPt	-	5 TURNS OUT
Fan Sheave Size	-	7"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	GOOD

Test Data		
	Design	**Actual**
SF CFM	6150	6264
SF RPM	-	734
RA CFM	4250	4329
OA CFM	1900	1974
RL Voltage	-	214.9/216.9/212.7
RL Amperage	-	6.85/7.27/7.88
SF Rotation	-	CCW
RA Damper Position	-	54%
Min OA Damper Position	-	46%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	12

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.45"
Fan Suction SP	-	-0.72"
Fan Discharge SP	-	0.87"
Total ESP	-	1.32"
Fan Total SP	-	1.59"

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

Completed By: Jordan Best

Notes:

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Project:04-10-23 CULVERS - WASHINGTON, MI

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	ENTRY	CD13	8"	150	1	282	174	172	114.7
SGRD2	REST.RM	CD15	8"	150	1	220	207	193	128.7
SGRD3	REST.RM	CD15	8"	150	1	250	229	217	144.7
SGRD4	DINING	CD10	8"	150	1	221	245	188	125.3
SGRD5	DINING	CD10	8"	150	1	132	133	162	108.0
SGRD6	DINING	CD10	8"	150	1	235	200	189	126.0
SGRD7	DINING	CD10	8"	150	1	266	278	206	137.3
SGRD8	DINING	CD10	8"	150	1	266	211	179	119.3
SGRD9	DINING	CD10	8"	150	1	278	191	184	122.7
SGRD10	DINING	CD10	8"	150	1	242	241	227	151.3
SGRD11	DINING	CD10	8"	150	1	262	222	150	100.0
SGRD12	DINING	CD10	8"	150	1	312	258	232	154.7
SGRD13	DINING	CD10	8"	150	1	245	208	185	123.3
SGRD14	DINING	CD10	8"	150	1	215	192	177	118.0
SGRD15	DINING	CD18	10"	300	1	154	133	318	106.0
SGRD16	DINING	CD10	8"	150	1	182	154	134	89.3
SGRD17	DINING	CD10	12"	450	1	459	407	454	100.9
SGRD18	DINING	CD10	8"	150	1	303	262	198	132.0
SGRD19	DINING	CD10	8"	150	1	262	229	201	134.0
SGRD20	DINING	CD16	12"	450	1	475	419	387	86.0
SGRD21	C. SERVICE	CD17	10"	350	1	352	307	299	85.4
SGRD22	C. SERVICE	CD17	10"	350	1	373	303	313	89.4
SGRD23	C. SERVICE	CD17	10"	350	1	379	333	343	98.0
SGRD24	C. SERVICE	CD17	10"	350	1	356	282	304	86.9
SGRD25	DRIVE THRU	CD11	10"	500	1	370	313	464	92.8
SGRD26	OFFICE	CD12	12"	200	1	207	172	188	94.0

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: AHU/RTU

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Asset: RTU2 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622F07240
Model Num	13H15	LGH210H4BS3Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24"X16"
Num Final Filter 1	-	6
Final Filter Size 1	-	24"X24"X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NIDEC MOTOR CORP
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	15.8-14.6

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	5"
Motor Sheave SetPt	-	6 TURNS OUT
Fan Sheave Size	-	9.5"
Fan Sheave Bore	-	1"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX61
Belt Alignment	-	GOOD

Test Data		
	Design	**Actual**
SF CFM	6150	5963
SF RPM	-	687.8
RA CFM	4250	4107
OA CFM	1900	1856
RL Voltage	-	212.6/214.9/217.1
RL Amperage	-	7.22/7.33/8.63
SF Rotation	-	CCW
RA Damper Position	-	52%
Min OA Damper Position	-	48%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	12

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.36"
Fan Suction SP	-	-0.58"
Fan Discharge SP	-	0.67"
Total ESP	-	1.03"
Fan Total SP	-	1.25"

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

Completed By: Jordan Best

Notes:

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Project:04-10-23 CULVERS - WASHINGTON, MI

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU2/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	KITCHEN	CD	10"	200	1	363	290	204	102.0
SGRD2	KITCHEN	CD	12"	375	1	316	192	379	101.1
SGRD3	KITCHEN	CD	12"	400	1	736	505	438	109.5
SGRD4	KITCHEN	CD	12"	400	1	780	584	441	110.3
SGRD5	KITCHEN	CD	10"	250	1	313	257	243	97.2
SGRD6	KITCHEN	CD	10"	275	1	297	272	277	100.7
SGRD7	SUNDAE	CD	10"	600	1	421	350	552	92.0
SGRD8	KITCHEN	CD	10"	600	1	555	318	482	80.3
SGRD9	KITCHEN	CD	12"	350	1	370	531	412	117.7
SGRD10	KITCHEN	CD	12"	350	1	646	535	349	99.7
SGRD11	DISHWASHING	CD	12"	350	1	587	585	348	99.4
SGRD12	DRY GOODS	CD	12"	600	1	555	420	608	101.3
SGRD13	DRY GOODS	CD	8"	200	1	548	179	204	102.0
SGRD14	TOILET	CD	8"	75	1	257	169	70	93.3
SGRD15	UTILITY ROOM	CD	12"	600	1	181	321	451	75.2
SGRD16	UTILITY ROOM	CD	12"	600	1	422	428	511	85.2

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust

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Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	22002135
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	60HZ
Horsepower	-	NA
Motor Rpm	900	900
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.16
Service Factor	-	NA

Test Data		
	Design	**Actual**
CFM	75	73
Fan Rotation	-	CCW
System SetPt	-	5
RL Voltage	-	NA
RL Amperage	-	0.13
Fan Discharge SP	-	ATM

Completed By: Jordan Best

Notes:

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: PRV1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-090
Serial Num	-	21051685
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI GREEN
Frame	-	50/60HZ
Horsepower	0.0667	0.0667"
Motor Rpm	1550	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	2.1
Service Factor	-	NA

Drive Data		
	Design	**Actual**

Test Data		
	Design	**Actual**
CFM	300	282
Fan RPM	1479	881
Fan Rotation	-	CW
Motor RPM	-	881
RL Voltage	-	120.6
RL Amperage	-	0.33
Suction ESP	-	-0.13"
Discharge ESP	-	ATM
Total ESP	0.5"	-0.13"

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Notes:

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Project:04-10-23 CULVERS - WASHINGTON, MI

FAN - Exhaust

Comfort. Under control.

Diffuser Ret/Exh (GRD)

PRV1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	MENS RESTROOM	EG-2	8"	150	1	301	197	147	98.0
EGRD2	WO. RESTROOM	EG-2	8"	150	1	259	185	135	90.0

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust

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Asset: PRV2 AREA:HOOD 1

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCUE-140-VG	XCUE-140-VG
Serial Num	-	21051710
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VERI GREEN
Frame	-	50/60HZ
Horsepower	0.83	1
Motor Rpm	1725	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	11.5
Service Factor	-	NA

Test Data		
	Design	**Actual**
CFM	1500	1559
Fan RPM	1702	1157
Fan Rotation	-	CW
Motor RPM	-	1157
System SetPt	-	6.5 VDC
RL Voltage	-	123.8
RL Amperage	-	3.84
Total ESP	1.8"	0.67"
Fan Inlet SP	-	0.67"
Fan Discharge SP	-	ATM

Completed By: Jordan Best

Notes:

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust

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Asset: PRV3 AREA:HOOD 2

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCUE-140-VG	XCUE-140-VG
Serial Num	-	21051717
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VEFRTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI GREEN
Frame	-	50/60HZ
Horsepower	0.46	1
Motor Rpm	1725	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	11.5
Service Factor	-	NA

Test Data		
	Design	**Actual**
CFM	1500	1652
Fan RPM	1349	864
Fan Rotation	-	CW
Motor RPM	-	864
System SetPt	-	5 VDC
RL Voltage	-	123.8
RL Amperage	-	1.98
Total ESP	1.0"	0.30"
Fan Inlet SP	-	0.30"
Fan Discharge SP	-	ATM

Completed By: Wale Odofin

Notes: FAN 2 CFM OUT OF TOLERANCE, SET AT LOWEST POSSIBLE VCD SETTING

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: PRV4 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095
Serial Num	-	21051720
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI GREEN
Frame	-	50/60HZ
Horsepower	0.0667"	0.0667"
Motor Rpm	1550	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	2.1
Service Factor	-	NA

Test Data		
	Design	**Actual**
CFM	350	317
Fan Rotation	-	CW
System SetPt	-	4.5
RL Voltage	-	122.9
RL Amperage	-	0.38
Total ESP	0.6"	0.15"
Fan Inlet SP	-	0.15"
Fan Discharge SP	-	ATM

Completed By: Jordan Best

Notes:

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: Kitchen Hood Type I

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Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XGEP-5.33S	XGEP-64.00-S
Job / Serial Num	-	21102299
Type	TYPE I	I
Hood length	64	64"
Hood Width	23	26"

Test Data Exhaust		
	Design	**Actual**
Filter Type	GREASE GRABBER	X-TRACTOR
Filter Size 1	16X16	16"X16"
Filter Qty 1	4	4
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	6.12	6.12
Filter1 FPM	-	258
Filter2 FPM	-	255
Filter3 FPM	-	247
Filter4 FPM	-	259
Filter Ave FPM(corr)	-	254
CFM	1500	1559

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE

Completed By: Jordan Best

Notes:

National TAB

Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: Kitchen Hood Type I

Comfort. Under control.

Asset: HD2 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XXEP-FB-6.92-S	XXEP-FB-6.92-S
Job / Serial Num	-	21102294
Type	TYPE I	TYPE I
Hood length	83"	83"
Hood Width	23"	23"

Test Data Exhaust		
	Design	**Actual**
Filter Type	X-TRACTOR	X-TRACTOR
Filter Size 1	16X16	16"X16"
Filter Qty 1	5	5
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	7.65	7.65
Filter1 FPM	-	224
Filter2 FPM	-	221
Filter3 FPM	-	211
Filter4 FPM	-	205
Filter5 FPM	-	219
Filter Ave FPM(corr)	-	216
CFM	1500	1652

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

Completed By: Jordan Best

Notes:

National TAB

Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: Kitchen Hood Type II

Comfort. Under control.

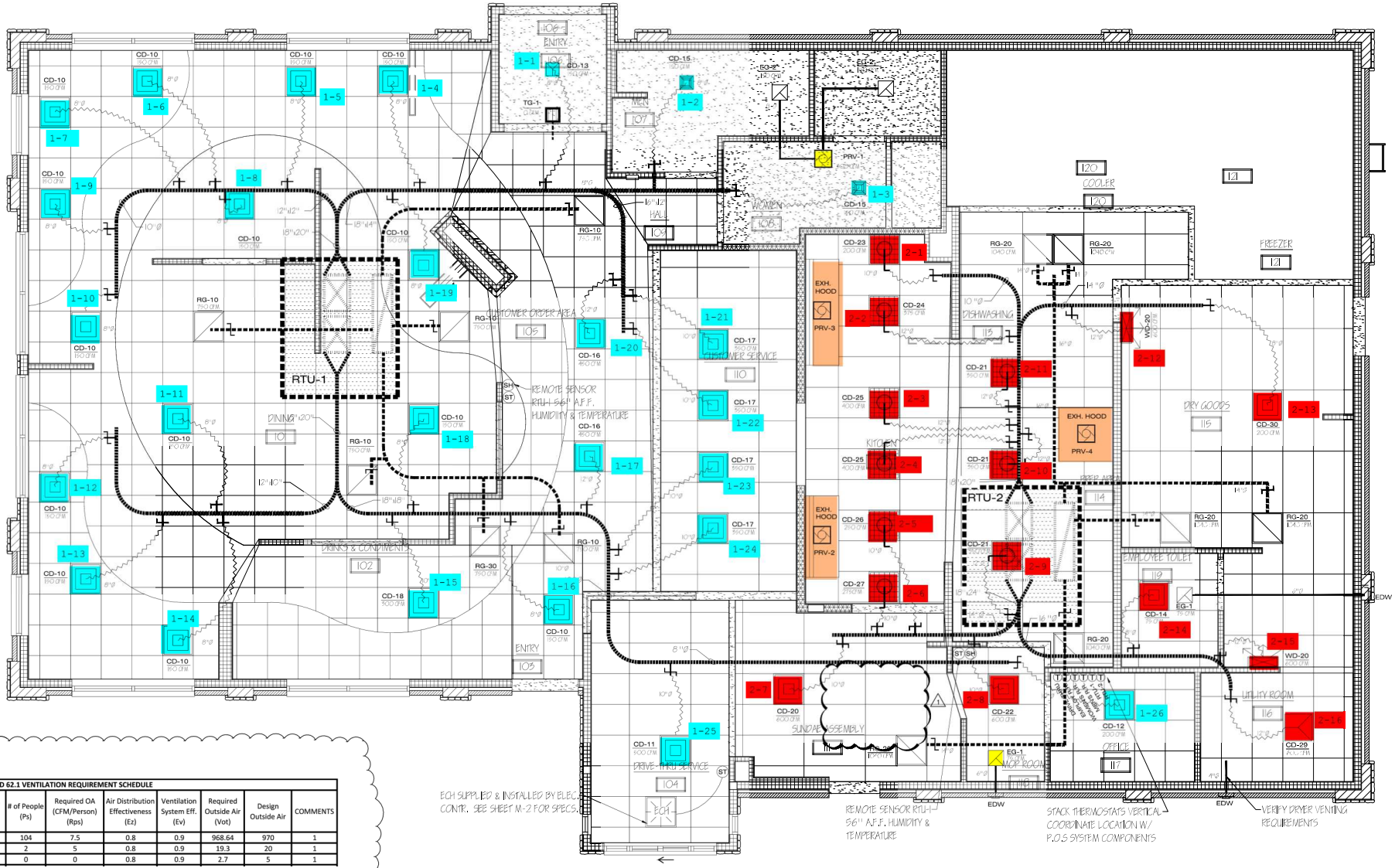
Asset: HD3 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XD3-3.5.S	XD3-42-.S
Serial Num	-	21102303
Type	TYPE II	TYPEII
Hood length	42	42"
Hood Width	42	42"

Test Data		
	Design	**Actual**
Exhaust CFM	350	317

Completed By: Jordan Best

Notes:



ASHRAE STANDARD 62.1 VENTILATION REQUIREMENT SCHEDULE

lame/#	Area	Required OA (CFM/SQ FT) (Ras)	# of People (Ps)	Required OA (CFM/Person) (Rps)	Air Distribution Effectiveness (Ez)	Ventilation System Eff. (Ev)	Required Outside Air (Vot)	Design Outside Air	COMMENTS
OOM 101	1048	0.18	104	7.5	0.8	0.9	968.64	970	1
DIMENTS 102	155	0.06	2	5	0.8	0.9	19.3	20	1
Y 103	45	0.06	0	0	0.8	0.9	2.7	5	1

Date: 4/13/2023