

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	6000	5796	4175	3950	1825	1846	30.4%	31.8%						
RTU-2	KITCHEN	6225	6001	4450	4221	1775	1780	28.5%	29.7%						
PRV-1	RESTROOM													300	294
PRV-2	HD1 GRIDDLE											1500	1469		
PRV-3	HD2 FRYER											1500	1538		
EF-1A(X2)	EMP.RR/MOP													150	145
TOTALS		12225	11797	8625	8171	3600	3626			0	0	3000	3007	450	439

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3600	3626
TOTAL EXHAUST	3450	3446
NET AIRFLOW	150	180

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.0035
SIDE	0.0016
REAR	0.0023
AVERAGE	0.0025

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:

OA taken under windy conditions

07-11 CULVERS - ELLISVILLE, MO

Project Issue Information

Issue Name : Diffuser note RTU1 SGRD 1-12 low on flow

Description : Branch is low on flow due to hard right angle coming out of one of the main duct lines. Diffuser is in an open space and should not create comfort issues

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Pending

Originated Date : 07/13/2022 - Jacob Davidson - National TAB

Project Issue File Details



Aboveceiling.jpeg



Belowceiling.jpeg

07-11 CULVERS - ELLISVILLE, MO

Project Issue Information

Issue Name : RTU2 diffusers for dry goods have no dampers

Description : Diffusers for dry goods do not have dampers. The 200 cfm diffuser is high and the 600 cfm diffuser is very low due to excess flex and ceiling restrictions. Since it is in an open area, I do not foresee it causing comfort issues.

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

Status : Pending

Originated Date : 07/13/2022 - Jacob Davidson - National TAB

Project Issue File Details



FuseIT81eab8d5c64a45b1a3235
0aa71778eb3.jpeg



FuseIT02554b2b7dfb48dbbccfa
e17e57cdad.jpeg



FuseIT8b5a4f5c90ce47538d3509
9b26af319d.jpeg

Project Issue Response Details

- **07/13/2022** **National TAB - Jacob Davidson**
 - Current airflow for each is 260/200 and 344/600. Pic is another angle looking for damper



FuseIT3b45930d299243e192
4652ecb385abb5.jpeg



Comfort. Under control.

07-11 CULVERS - ELLISVILLE, MO

CheckList Information

Name : REMARKS **Status :** NotSubmitted

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

CheckList Item Details

PRIORITY (HIGH/LOW/INFO ONLY)

INFO ONLY

INFO ONLY

INFO ONLY

INFO ONLY

Notes/Comments :



Comfort. Under control.

07-11 CULVERS - ELLISVILLE, MO

CheckList Information

Name : TECH - SITE PICTURES **Status :** NotSubmitted
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB

CheckList Item Details

STORE FRONT



FuseIT6118ff6921ac49349ad9
6ee1c9f222e2.jpeg

RTU-1



**FuseITbf16370ab8644423916
8a562d26e26fe.jpeg**

RTU-2



**FuseIT71cc7b11745846b8862
b33746bbf8d49.jpeg**

PRV-1



**FuseIT07c957eac1e54ce9882
a0c44f34e6516.jpeg**

PRV-2



**FuseIT44e5be38b91e45c29e6
c936cf2b45643.jpeg**

PRV-3



**FuseIT62a1e0c0c2924295adb
f7fc53d342299.jpeg**

EF-1A

Mop room fan



FuseITf3315d787eb74b.jpeg

EF-1A



**FuseIT3c05a9c33f42459eaa3
22cb74038dae1.jpeg**

HOOD 1

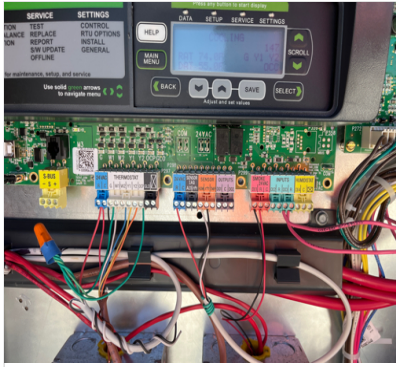


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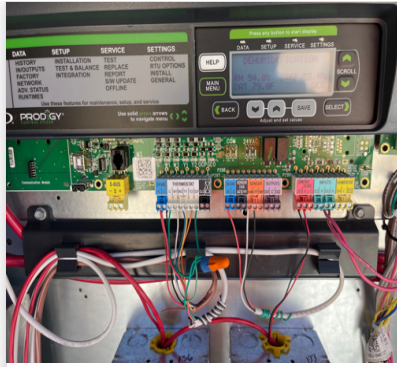
HOOD 2



FuseIT103001ada41048.jpeg

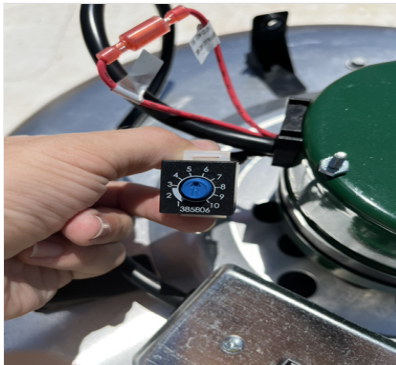


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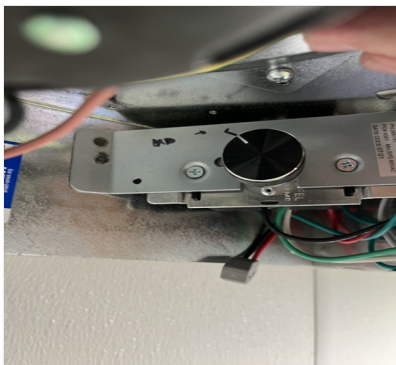
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b55d24ebc1c17.jpeg

PRV1 SETPOINT

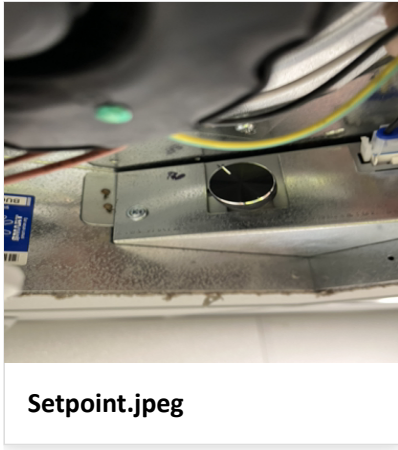


Setpoint.jpeg

EF-1A MOP ROOM SETPOINT



Setpoint.jpeg



Notes/Comments :



Comfort. Under control.

07-11 CULVERS - ELLISVILLE, MO

CheckList Information

Name : TECH - STEP 1: INITIAL WALKTHROUGH **Status :** NotSubmitted

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?	N/A
On the cookline diffusers neck is there 18" (12" minimum) straight rigid duct run attached?	YES

Notes/Comments :



Comfort. Under control.

07-11 CULVERS - ELLISVILLE, MO

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	Status :	NotSubmitted
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?

NO // 7-12-22 Economizer is installed, however full assembly for hood and OA filters has not arrived. OA read in open area as shown.



Makeshifhood.jpeg




FuseITe2394c818d3b41a1bfd56b388d5bf801.jpeg

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
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If direct drive unit is the speed controller working.	NA
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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?	Yes
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
	
<p>FuseIT9a391e7b6acb470e88a 2d2fba84fd65c.jpeg</p>	
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?	No

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 :



Comfort. Under control.

07-11 CULVERS - ELLISVILLE, MO

CheckList Information

Name : TECH - STEP 3: TEST, ADJUST AND BALANCE **Status :** NotSubmitted

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 :



Comfort. Under control.

07-11 CULVERS - ELLISVILLE, MO

CheckList Information

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

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing	None, cooking start ups have not been done yet.
List smoke candle type used	45 second smoke emitter
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%

WITNESS

Date test was completed	07/13/2022
TAB tech name / Firm	JACOB DAVIDSON / NATIONAL TAB
Site super name / Firm	CHUCK HERZOG / FICON CONSTRUCTION INC
Owner representative name / Firm (if Applicable)	DANIEL SIEMER / CULVER'S
Building pressure at front & back doors (All Systems On)	FRONT 0.0035 SIDE 0.0016 BACK 0.0023

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
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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 :



Comfort. Under control.

07-11 CULVERS - ELLISVILLE, MO

CheckList Information

Name :	TECH - STEP 5: FINAL DOCUMENTATION	Status :	NotSubmitted
Assigned Organization :	National TAB	Asset :	
Requesting Organization :	National TAB		

CheckList Item Details

FINAL DOCUMENTATION

Marked Data capture complete for all assets?	Yes
Picture file sent to processing team or uploaded?	Yes
Balance schedule complete and uploaded?	Yes
Prelim report generated and reviewed?	Yes

Notes/Comments :

National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622E01871
Model Num	LGH-210-H4B	LGH-210-H4BM3Y
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	[1]
OA Filter Size 1	-	[1]
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	-	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208/230	200-230
Rated Amperage	-	8.0-7.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	3.75"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	6 TURNS OUT
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20.75"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	6000	5796
SF RPM	-	723
RA CFM	4250	3950
OA CFM	1825	1846
RL Voltage	-	209/207/209
RL Amperage	-	6.1/6.8/6.8
SF Rotation	-	CCW
RA Damper Position	-	[1] 42%
Min OA Damper Position	-	[1] 42%
Min OA Damper Type	-	ECONOMIZER [1]
OA Enthalpy Setpt	-	19 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.34"
Fan Suction SP	-	-0.64"
Fan Discharge SP	-	0.23"
Total ESP	-	0.57"
Fan Total SP	-	0.87"

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

Completed By: Jacob Davidson

Notes:

National TAB

Project:07-11 CULVERS - ELLISVILLE, MO

AHU/RTU



Comfort. Under control.

Diffuser Supply (GRD)

RTU1/DINING

Asset	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
SGRD1	Dining	SD1	8"	150	1	208	140
	FINAL CFM	% to design					
	137	91.3					
SGRD2	Hall	SD1	12"	450	1	379	416
	FINAL CFM	% to design					
	427	94.9					
SGRD3	Customer Order Area	SD1	12"	450	1	389	404
	FINAL CFM	% to design					
	430	95.6					
SGRD4	Dining	SD1	8"	150	1	289	137
	FINAL CFM	% to design					
	147	98.0					
SGRD5	Dining	SD4	8"	150	1	170	144
	FINAL CFM	% to design					
	164	109.3					
SGRD6	Men	SD4	8"	150	1	132	164
	FINAL CFM	% to design					
	155	103.3					
SGRD7	Dining	SD4	8"	150	1	190	157
	FINAL CFM	% to design					
	156	104.0					
SGRD8	Dining	SD1	8"	150	1	196	141
	FINAL CFM	% to design					
	144	96.0					
SGRD9	Dining	SD1	8"	150	1	142	157
	FINAL CFM	% to design					
	156	104.0					
SGRD10	Dining	SD1	8"	150	1	149	159
	FINAL CFM	% to design					
	141	94.0					
SGRD11	Dining	SD1	8"	150	1	150	160
	FINAL CFM	% to design					

	146	97.3					
SGRD12	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	73	89
	FINAL CFM	% to design					
	93	62.0					
SGRD13	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	134	140
	FINAL CFM	% to design					
	153	102.0					
SGRD14	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	145	154
	FINAL CFM	% to design					
	157	104.7					
SGRD15	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	37	161
	FINAL CFM	% to design					
	142	94.7					
SGRD16	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	155	155
	FINAL CFM	% to design					
	146	97.3					
SGRD17	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	204	197
	FINAL CFM	% to design					
	147	98.0					
SGRD18	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	173	176
	FINAL CFM	% to design					
	155	103.3					
SGRD19	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dining	SD1	8"	150	1	200	141
	FINAL CFM	% to design					
	163	108.7					
SGRD20	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Drinks & Condiments	SD1	10"	300	1	349	376
	FINAL CFM	% to design					
	317	105.7					
SGRD21	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Entry	SD1	8"	150	1	220	145
	FINAL CFM	% to design					
	146	97.3					
SGRD22	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Customer Service	SD1	10"	350	1	192	194
	FINAL CFM	% to design					
	214	61.1					
SGRD23	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Customer Service	SD1	10"	350	1	334	349
	FINAL CFM	% to design					
	366	104.6					
SGRD24	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Customer Service	SD1	10"	350	1	315	319
	FINAL CFM	% to design					
	330	94.3					
SGRD25	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Customer Service	SD1	10"	350	1	330	362

	FINAL CFM	% to design					
	374	106.9					
SGRD26	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Drive Thru	SD1	12"	500	1	548	543
	FINAL CFM	% to design					
	493	98.6					
SGRD27	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Office	SD1	8"	200	1	178	180
	FINAL CFM	% to design					
	197	98.5					

Completed By: Jacob Davidson on

Asset	Notes
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National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU2

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622E01390
Model Num	LGH-240-H4B	LGH-240-H4BM4Y
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	3 METAL MESH
OA Filter Size 1	-	13X23
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Test Data		
	Design	Actual
SF CFM	6225	6001
SF RPM	-	789
RA CFM	4525	4221
OA CFM	1775	1780
RL Voltage	-	209/211/211
RL Amperage	-	8.1/8.2/8.3
SF Rotation	-	CCW
RA Damper Position	-	46%
Min OA Damper Position	-	46%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	19 mA

Motor Data		
	Design	Actual
Motor MFG	-	NIDEC MOTOR CORP
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208/230	208-230
Rated Amperage	-	13.8-13.0

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.36"
Fan Suction SP	-	-0.72"
Fan Discharge SP	-	0.33"
Total ESP	-	0.69"
Fan Total SP	-	1.05"

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP50BB
Motor Bore Size	-	1 1/8"
Motor Sheave SetPt	-	3 TURNS OUT
Fan Sheave Size	-	10"
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX61
Belt Alignment	-	VERIFIED

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

Completed By: Jacob Davidson

Notes:

National TAB

Project:07-11 CULVERS - ELLISVILLE, MO

AHU/RTU



Comfort. Under control.

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
SGRD1	Cook Line	SD5	10	200	1	50	280
	FINAL CFM	% to design					
	195	97.5					
SGRD2	Cook Line	SD5	12	375	1	66	467
	FINAL CFM	% to design					
	374	99.7					
SGRD3	Food Prep	SD5	12	350	1	651	475
	FINAL CFM	% to design					
	354	101.1					
SGRD4	Food Prep	SD5	12	400	1	79	324
	FINAL CFM	% to design					
	409	102.3					
SGRD5	Food Prep	SD5	12	400	1	85	298
	FINAL CFM	% to design					
	395	98.8					
SGRD6	Cook Line	SD5	10	250	1	553	503
	FINAL CFM	% to design					
	250	100.0					
SGRD7	Cook Line	SD5	10	275	1	98	502
	FINAL CFM	% to design					
	285	103.6					
SGRD8	Sundae Service	SD1	12	600	1	690	654
	FINAL CFM	% to design					
	591	98.5					
SGRD9	Sundae Service	SD1	12	600	1	684	527
	FINAL CFM	% to design					
	602	100.3					
SGRD10	Utility Room	SD1	12	600	1	776	699
	FINAL CFM	% to design					
	566	94.3					
SGRD11	Dry Goods	SD1	12	600	1	565	530
	FINAL CFM	% to design					

	601	100.2					
SGRD12	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Employee Restroom	SD4	6	75	1	172	157
	FINAL CFM	% to design					
	78	104.0					
SGRD13	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dish Washing	SD5	12	350	1	442	243
	FINAL CFM	% to design					
	347	99.1					
SGRD14	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dish Washing	SD5	12	350	1	705	376
	FINAL CFM	% to design					
	349	99.7					
SGRD15	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dry Goods	SD1	12	600	1	439	264
	FINAL CFM	% to design					
	344	57.3					
SGRD16	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Dry Goods	SD1	10	200	1	312	182
	FINAL CFM	% to design					
	261	130.5					

Completed By: Jacob Davidson on

Asset	Notes
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National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-A1

AREA:MOP ROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	19598731
Type	Celing	CEILING
Configuration	Vertical	VERTICAL

Test Data		
	Design	Actual
CFM	75	69
Fan RPM	885	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	SEE PIC
RL Voltage	-	120
RL Amperage	-	0.14
Total ESP	0.125"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO

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

Completed By: Jacob Davidson

Notes:

Asset	Notes

National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-A1

AREA:EMPLOYEE RESTROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	20569652
Type	Ceiling	CEILING
Configuration	Vertical	VERTICAL

Test Data		
	Design	Actual
CFM	75	76
Fan RPM	885	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	SEE PIC
RL Voltage	-	122
RL Amperage	-	0.15
Total ESP	0.125"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO

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

Completed By: Jacob Davidson

Notes:

Asset	Notes

National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV1

AREA:RESTROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095-6-V6-1-17-X
Serial Num	-	19602648
Type	Downblast	DOWNBLAST
Configuration	Horizontal	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	0.0667	1/6
Motor Rpm	1550	350-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	2.3/1.5/1.2
Service Factor	-	1

Test Data		
	Design	Actual
CFM	-	294
Fan RPM	1479	DD
Fan Rotation	-	CW
Motor RPM	-	DD
System SetPt	-	5 SEE PIC
RL Voltage	-	NOT SAFE
RL Amperage	-	NOT SAFE
Total ESP	0.5"	0.15"
Fan Inlet SP	-	-0.15"
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson

Notes:

National TAB

Project:07-11 CULVERS - ELLISVILLE, MO

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

PRV1/RESTROOM

Asset	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
EGRD1	Women RR	EG1	10x10	150	1	346	147
	FINAL CFM	% to design					
	148	98.7					
EGRD2	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	Men RR	EG1	10x10	150	1	324	144
	FINAL CFM	% to design					
	146	97.3					

Completed By: Jacob Davidson on

Asset	Notes

National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO
System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV2

AREA:HD1 GRILL

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRUB-160XP-15	XRUB-160XP-15-1-26-G
Serial Num	-	19602763
Type	Upblast	UPBLAST
Configuration	Vertical	VERTICAL

Test Data		
	Design	Actual
CFM	1500	1469
Fan RPM	2411	2398
Fan Rotation	-	CW
Motor RPM	-	1769
RL Voltage	-	209/210/211
RL Amperage	-	3.2/3.5/3.4
Suction ESP	-	-1.01
Discharge ESP	-	ATM
Total ESP	-	1.01

Motor Data		
	Design	Actual
Motor MFG	-	NIDEC
Frame	-	56
Horsepower	1.5	1.5
Motor Rpm	1725	1760
Phase	3	3
Voltage (rated)	208	230/460
Amperage (rated)	-	4.2/2.1
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	4.25"
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	1.5 TURNS OUT
Fan Sheave Size	-	3.25"
Fan Sheave Bore	-	1"
Belt CL Distance	-	5.75"
Num of Belts	-	1
Belt Size	-	AX-24

Completed By: Jacob Davidson

Notes:

Asset	Notes

National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO
System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV3

AREA:HD2 FRYER

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRUB-140-7	XRUB-140-7-1-26-G
Serial Num	-	19602805
Type	Ceiling	UPBLAST
Configuration	Vertical	VERTICAL

Test Data		
	Design	Actual
CFM	1500	1538
Fan RPM	1377	1025
Fan Rotation	-	CW
Motor RPM	-	1770
RL Voltage	-	209/210/210
RL Amperage	-	1.3/1.5/1.7
Suction ESP	-	-0.85"
Discharge ESP	-	ATM
Total ESP	-	0.85"

Motor Data		
	Design	Actual
Motor MFG	-	NIDEC
Frame	-	56
Horsepower	0.5	0.75
Motor Rpm	1725	1760
Phase	3	3
Voltage (rated)	208	230/460
Amperage (rated)	-	2.3/1.15
Service Factor	-	1.25

Drive Data		
	Design	Actual
Motor Sheave Size	-	3.25"
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	5 TURNS OUT
Fan Sheave Size	-	4"
Fan Sheave Bore	-	11/16"
Belt CL Distance	-	5.5"
Num of Belts	-	1
Belt Size	-	AP23

Completed By: Jacob Davidson

Notes:

Asset	Notes

National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO

System/Unit: Kitchen Hood Type I



Comfort. Under control.

Asset: HD1

AREA:Griddle

Unit Data		
	Design	Actual
MFG	Accurex	Accurex
Model Num	XGEP-64-S	XGEP-64.00-S
Job / Serial Num	-	19619653
Type	Type I Low Proximity	TYPE I LOW PROXIMITY
Hood length	64"	64"
Hood Width	23"	23"

Performance Data		
	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE EMITTER
Hood Capture %	-	100%
End Panels Installed (Y/N)	-	Y

Test Data Exhaust		
	Design	Actual
Filter Type	Grease Grabber	X- TRACTOR
Filter Size 1	16x16	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	6.12	6.12
Filter1 FPM	-	270
Filter2 FPM	-	225
Filter3 FPM	-	230
Filter4 FPM	-	235
Filter Ave FPM(corr)	-	240
CFM	-	1469

General		
	Design	Actual
Third Party Witness	-	DANIEL SIEMER
Third Party Company	-	CULVERS
Tech Witness	-	JACOB DAVIDSON

Cooking Equipment		
	Design	Actual
Item 1	-	GRIDDLE

Completed By: Jacob Davidson

Notes:

Asset	Notes

National TAB

Project: 07-11 CULVERS - ELLISVILLE, MO

System/Unit: Kitchen Hood Type I



Comfort. Under control.

Asset: HD2

AREA:Fryer

Unit Data		
	Design	Actual
MFG	Accurex	Accurex
Model Num	XXEP-83-S	XXEP-83.00-S
Job / Serial Num	-	19619652
Type	Type I Low Proximity	TYPE I LOW PROXIMITY
Hood length	83"	83"
Hood Width	23"	23"

Performance Data		
	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE EMITTER
Hood Capture %	-	100%
End Panels Installed (Y/N)	-	Y

Test Data Exhaust		
	Design	Actual
Filter Type	X-Tractor Stainless Steel	X- TRACTOR
Filter Size 1	16x16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	7.65	7.65
Filter1 FPM	-	213
Filter2 FPM	-	183
Filter3 FPM	-	185
Filter4 FPM	-	212
Filter5 FPM	-	213
Filter Ave FPM(corr)	-	201
CFM	-	1538

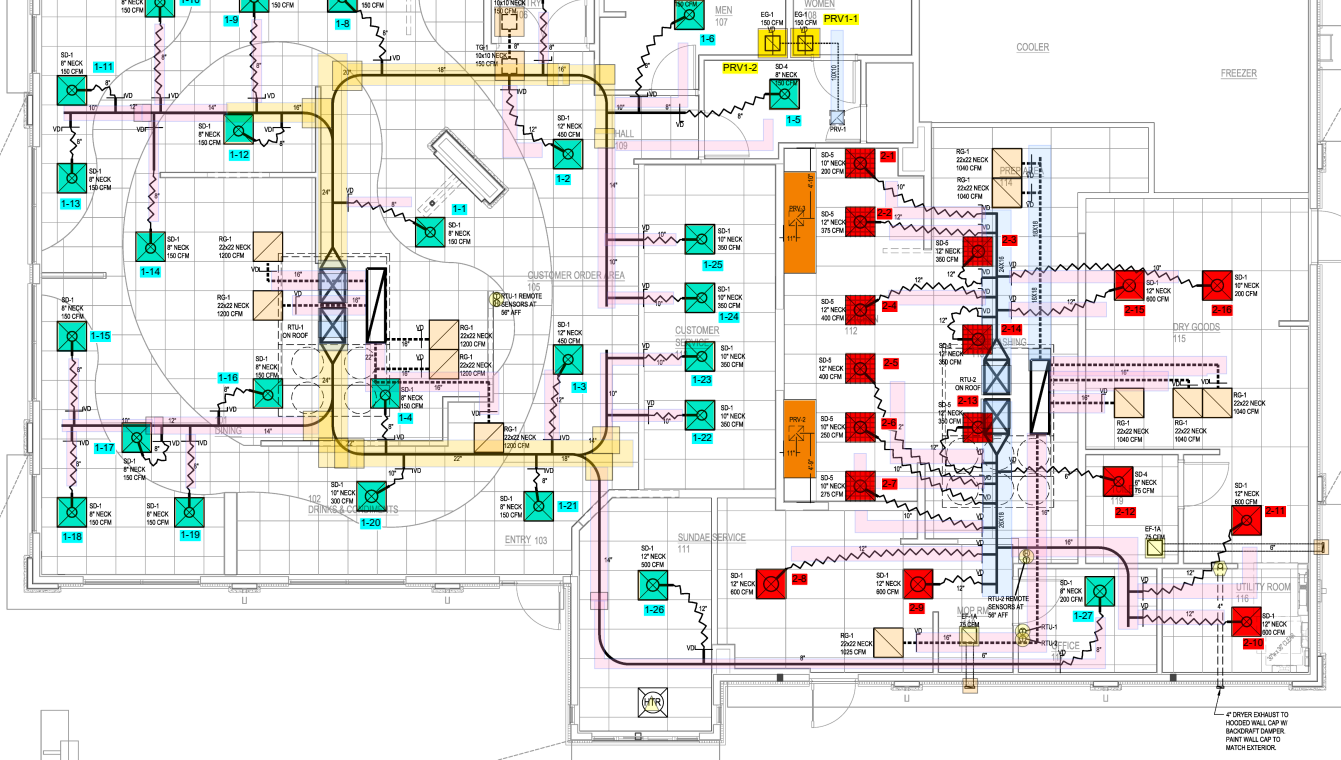
General		
	Design	Actual
Third Party Witness	-	DANIEL SIEMER
Third Party Company	-	CULVER'S
Tech Witness	-	JACOB DAVIDSON

Cooking Equipment		
	Design	Actual
Item 1	-	FRYERS

Completed By: Jacob Davidson

Notes:

Asset	Notes



COOLER
FREEZER

E5 HVAC PLAN
SCALE: 1/4" = 1'-0"

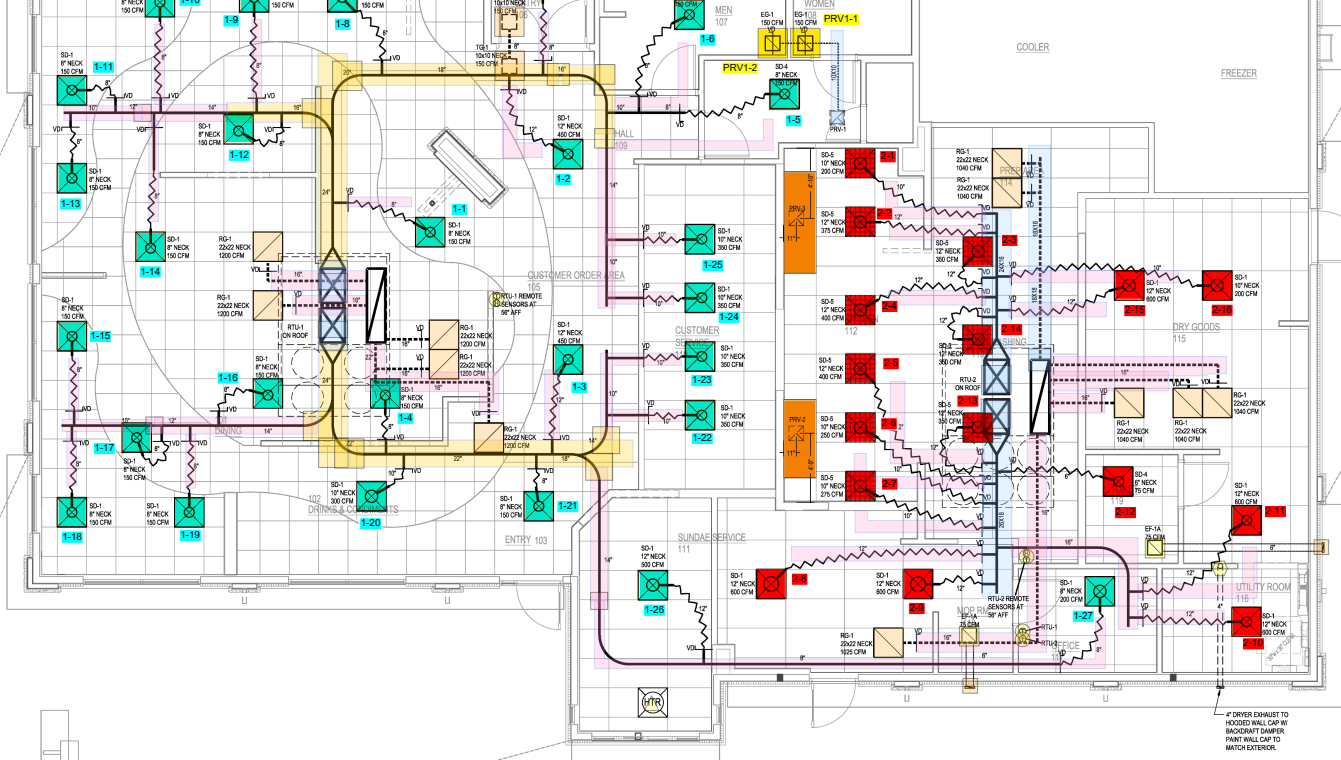
NOTE: ALL DUCTWORK TO BE LOCATED IN TRUSS SPACE WHERE POSSIBLE. SEE FRAMING PLAN.
HVAC SETPOINTS RECOMMENDED BY CORPORATE OPERATIONAL GUIDELINES:
1. DINING: HEATING 70 DEGF; COOLING 72 DEGF
2. KITCHEN: HEATING 68 DEGF; COOLING 74 DEGF



DIFFUSER, REGISTER, AND GRILLE

SUPPLY DUCTWORK SIZING TABLE*

ROUND	RECTANGULAR	
CFM RANGE	SIZE	CFM RANGE
115 - 235	8" x 8"	205 - 300
240 - 435	10" x 8"	305 - 450
440 - 710	10" x 10"	405 - 550
715 - 1,070	12" x 10"	555 - 700
1,075 - 1,530	12" x 12"	705 - 900
1,535 - 2,090	14" x 12"	905 - 1,305



COOLER
FREEZER

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SCALE: 1/4" = 1'-0"

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